Trajectories of Affective Organizational and Occupational Commitment: The Case of Public Service Employees

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ABSTRACT

Trajectories of Affective Organizational and Occupational Commitment: The Case of Public Service Employees

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The goal of this dissertation is to document the evolution of affective organizational and occupational commitment trajectories among public service employees. To this end, three longitudinal person-centered studies were conducted to identify the main types of commitment trajectories identified among three independent samples of participants (i.e., school principals, nurses, military recruits), and to assess how these trajectories were related to a variety of antecedents and outcomes. A first study focused on the occupational commitment trajectories of 661 established school principals (42% males) followed over a period of two years. A second study focused on the organizational commitment trajectories of 4859 military recruits (68.4% males) followed across basic training (3 months) and their first nine months of employment in the Canadian Armed Forces. A third study had a dual focus on the organizational and occupational commitment of 659 early career nurses (12% males), recruited within their first three year of employment, and followed over the course of two years (allowing us to estimate trajectories covering their first five years in the nursing occupation). All three studies identified profiles of employees following persistently high commitment trajectories, persistently low or decreasing commitment trajectories (both of which were identified among school principals) and increasing commitment trajectories. Among school principals and nurses, a persistently moderate commitment trajectory was also identified. Moreover, our results demonstrated the benefits of efficient socialization practices (military recruits, nurses), basic psychological need fulfillment (school principals, nurses), realistic job previews (military recruits) and satisfaction with the implications of military life for work-life balance (military recruits), as well as the harmful nature of experiencing identity conflicts (military recruits). Finally, our results demonstrated the benefits of higher and increasing commitment trajectories for a variety of outcomes, including lower levels of burnout (school principals), psychological distress (nurses), psychosomatic symptoms (nurses), turnover intention (school principals, military recruits), transition intention (military recruits), and higher levels of satisfaction (school principals, military recruits, nurses) and quality of care (nurses). These results suggest multiple avenues to foster desirable

commitment trajectories and its associated benefits, which will be highlighted in each of the chapters as well as in the general discussion.

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Contributions of Authors

The study presented in Chapter 2 is now published in the *Journal of Vocational Behavior*. The complete reference of this publication is:

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The study presented in Chapter 3 will soon be submitted for publication in a journal still to be determined. The authorship list, and title are:

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The study presented in Chapter 4 has been accepted for publication and is currently in press (we just finalized correcting the page proofs) in the Journal of Business and Psychology. The current reference is:

Houle, S.A., Morin, A.J.S., & Fernet, C. (2024, In Press). Nurses' early career organizational and occupational commitment trajectories: A dual target growth mixture investigation. *Journal of Business & Psychology.* https://doi.org/10.1007/s10869-024-09934-x

Simon Houle was responsible for preparing and writing this thesis, as well as all three publications that are part of it. More precisely, he was in charge of developing all three theoretical proposals and data analytic plans, handling cleaning and managing each dataset, conducting all analyses, and writing each of the papers.

This work was conducted under the supervision of **Alexandre J.S. Morin**, PhD., who contributed by providing analytical and theoretical guidance, as well as ongoing support through the publication process.

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Chapter 1

General Introduction

Workplace affective commitment can be defined as an emotional attachment to a specific work-related target (Meyer et al., 1993; Meyer & Allen, 1991). Initially conceptualized to explain employee retention, affective commitment to work-related targets (e.g., organization, occupation, supervisor, etc.) has since been found to be associated with wide ranging benefits for individuals and organizations (Meyer & Maltin, 2010; Spurk et al., 2019). For this reason, this emotional bond is often seen as underpinning employees' motivation to engage in goal directed behaviour directed at the target(s) of their commitment (Meyer, 2016; Meyer et al., 2004).

Given these benefits, from a societal perspective, it is critical to consider how to nurture, foster, and support the emergence and evolution of affective commitment among public service employees working within occupations that are of vital importance to the smooth functioning of society (Houle et al., 2020). In this context, it is important to carefully consider which targets of commitment are most likely to be associated with employees' continued desire to perform their social service. However, although affective commitment is theoretically conceptualized as intimately linked to the progressive internalization of the target of commitment within employees' professional identity (Meyer, 2016; Meyer et al., 2006) through a process that unfolds throughout the span of their careers (Spurk et al., 2019), longitudinal investigations of commitment's evolution (i.e., the shape, antecedents, and outcomes of commitment trajectories) remain scarce.

The current dissertation thus seeks to better document the nature of affective occupational and/or organizational commitment trajectories among three distinct samples of employees working in socially critical occupations for the functioning of Canadian society. A first study monitors established school principals' occupational commitment trajectories over a two-year period. The social value of school principals is tied to their ongoing occupational membership regardless of the school they are currently employed in, making occupational commitment a central target in this profession (Houle et al., 2020). From this initial consideration of established employees, a second study monitors the emergence and evolution of organizational commitment among a sample of military recruits and officer cadets followed at the start of their career over the course of their basic training (3 months) and their subsequent 9 months of employment. As military newcomers are expected, and even encouraged, to evolve in their occupational roles so long as they remain members of the Canadian Armed Forces, organizational commitment seems to be highly relevant to this

specific group of employees.

      Finally, a third study was designed to jointly consider the evolution of employees' commitment to both targets (the organization and occupation) among a sample of early career nurses. Moreover, whereas study 2 was limited by a consideration of a fairly short time span following entry into the workforce, study 3 focuses on commitment trajectories encompassing the first five years of employment in the nursing occupation. From a societal perspective, it is vital to retain as many nurses as possible within the nursing occupation in order to maintain an efficient health care system. However, each time a nurse joins a different health care organization, an important period of adaptation is required to learn the ropes of working in this new organization. It is thus also critical to retain nurses within the same organization for lengthy periods of time to ensure the stability of operations and the quality of care offered to patients. Thus, for nurses, both occupational and organizational commitment can be viewed as critical indicators of employees' adaptation to their work-life that serve as strong precursors to voluntary turnover (Meyer et al., 1993) and well-being (Meyer & Maltin, 2010). In all instances (i.e., nurses, school principals, military recruits), voluntary attrition has the potential for negative economic, health, and educational consequences for the Canadian society, making it important to better understand how to foster a strong emotional attachment between these employees and their occupation and/or organization, and consequently improve retention and employee well being (Meyer et al., 1993; Meyer & Maltin, 2010).

Commitment Theory: The Need for Longitudinal Research

      Commitment theory positions affective commitment as a self-defining emotional bond between employees and a target that contributes to motivate goal-directed behaviour beneficial to the continuation of their relationship with the target over time (Klein et al., 2012; Meyer et al., 2004, 2006). Theoretically speaking, commitment can be seen as intricately related to the extent to which the target of commitment (the occupation and/or organization in the present study) has become progressively internalized into employees' professional identity (Gagné & Howard, 2016; Meyer et al., 2006). According to commitment theory (Meyer et al., 2004, 2006) and Self-Determination Theory (SDT; Gagné & Howard, 2016; Ryan & Deci, 2017), commitments are expected to be stronger when their target possess characteristics that align with employees' core values, leading to a sustained course of action likely to facilitate the internalization of the target within their professional identity. Commitment is also a dynamic construct that continuously evolves over the span of employees' career, requiring the adoption of a lifespan perspective to adequately capture its evolution (Spurk et al., 2019). For these reasons, longitudinal research is needed to adequately capture the shape, critical drivers

(i.e., predictors) and desirability (i.e., outcomes) of commitment trajectories across distinct samples and temporal periods of interest.

Past longitudinal research has demonstrated the presence of substantial heterogeneity in the shape of employees' organizational (Solinger et al., 2013; Vandenberghe et al., 2011, 2017, 2021) and occupational (Salzmann et al., 2018) commitment trajectories. However, a single study, focused on a small sample ($n = 72$) of Ph.D. graduates followed over their first six months of employment has sought to identify the presence of subpopulations of participants following distinctively shaped commitment trajectories (Solinger et al., 2013). In this study, Solinger et al. (2013) hypothesized and found that their sample was best characterized by five subpopulations, or profiles, of participants following distinct organizational commitment trajectories. Three of these profiles displayed consistently *Low*, *Average*, or *High* levels of organizational commitment over time. These three trajectories were hypothesized to emerge when employees experienced a strong match between their organizational expectations (i.e., which can either be good, neutral, or bad) and their work reality (Solinger et al., 2013). In a fourth profile, which the authors referred to as corresponding to a *Honeymoon-Hangover* socialization scenario, participants displayed initially high levels of organizational commitment followed by a steep decrease, hypothesized to occur as initially enthusiastic employees became increasingly disappointed with their work. Lastly, a profile characterized by an increasing organizational commitment trajectory was identified, which the authors interpreted as reflecting a *Learning to Love* socialization scenario, in which initial expectations were exceeded following organizational entry. A first objective of this dissertation is to replicate, and expand upon, this previous study by identifying profiles of public service employees at different stages of their career (i.e., established school principals, military recruits, and early career nurses) following distinct organizational and/or occupational commitment trajectories.

Based on SDT (Deci & Ryan, 1985; Ryan & Deci, 2017) the development of affective commitment is expected to be connected to the progressive internalization of the target of commitment into their professional identity (Gagné & Howard, 2016; Meyer et al., 2004). Once internalized, employees should experience of persistently high levels of commitment to that target, and these levels should be fairly resilient to internal or external changes. The idea that a stronger sense of identity should result in a more resilient affective commitment cannot, however, be entirely captured by the sole consideration of employees' commitment trajectories. Indeed, based on the self-equilibrium hypothesis (Morin et al., 2013, 2017), which is intimately connected to SDT (Ryan & Deci, 2017), a stronger sense of identity is not

only defined by higher levels, but also by fewer fluctuations (time-specific fluctuations around employees' commitment trajectories). From this perspective, we can posit that stronger commitment trajectories should also be more stable (i.e., less time-specific fluctuations) over time. This is because employees having achieved a greater internalization of the commitment target to their sense of identity will not need to re-evaluate their commitment when faced with contextual or personal changes, as long as these changes are not major enough to lead them to redefine their professional identity. Conversely, weaker commitments to targets that have not yet become a part of one's sense of identity should remain primarily driven by internal and external contingencies and should thus be more likely to fluctuate over time. From this perspective, a second objective of this dissertation is to monitor whether self-equilibrium processes underpin the evolution of occupational and organizational commitment trajectories at different stages of employees' career.

In this regard, the adoption of such a longitudinal person-centered perspective, as operationalized by Growth Mixture Analyses (GMA; Muthen, 2002), to monitor commitment trajectories makes it possible to investigate factors differentially associated with long-term trait-like processes (membership into different profiles and inter-individual differences in average commitment levels and changes over time in these levels observed within each of the profiles) versus short-term state-like fluctuations in commitment levels. This analytical approach thus helps us to identify the best factors to target for interventions seeking to nurture, support, enhance, or change commitment levels at one specific point in time, versus at the trajectory level.

Predicting the Longitudinal Evolution of Commitment

Affective organizational and occupational commitment have a rather large nomological network (Leet et al., 2002; Meyer, 2016; Meyer et al., 2002; Spurk et al., 2019) allowing us to consider a rich set of potential predictors. From an applied perspective, it is critical to identify actionable levers of commitment to support managers and organizations seeking to nurture, support, or increase the organizational and/or occupational commitment of their employees. From a theoretical perspective, the inclusion of predictors is also critical to the demonstration of the construct validity of the identified profiles (Meyer & Morin, 2016; Morin et al., 2018). For these reasons, the predictors included in the current dissertation were carefully selected based on their theoretical and applied relevance and can be seen as falling under two main theoretical frameworks: Socialization theory and SDT.

Socialization Theory

Socialization theory focuses on the process via which organizational or occupational

newcomers adapt to their new work reality to become contributing members of their organization and occupation while decreasing their initial feelings of uncertainty (Louis, 1980; Van Maanen & Schein, 1979). Past research has demonstrated that learning (i) how to perform one's task, (ii) how the organization functions, and (iii) how to develop good social relationships with other members of the organization could all benefit employees' integration into their new work role (Bauer et al., 2007; Perrot & Campoy, 2009; Saks et al., 2007). Moreover, it has also shown that a successful socialization process should go beyond the simple learning of a new occupational, organizational, and social role to also encompass the internalization of these roles to one's professional identity (Perrot & Campoy, 2009). This second component makes socialization an ideal predictor to consider in the current dissertation. While ample evidence exists for the benefits of socialization for organizational commitment (Bauer et al., 2007; Saks et al., 2007), very little evidence has considered the links between socialization and occupational commitment (e.g., Cunningham et al., 2001; Lee et al., 2000). Moreover, for organizational and occupational commitment, most current evidence remains cross-sectional, leading us to speculate about which socialization domains (i.e., task, organization, and relationships) may have the greatest long-term effects on the development and internalization of a strong affective commitment to each of these targets. Thus, another objective of this dissertation is to document the longitudinal effects of socialization (i.e., learning and internalizing one's tasks, organization, and social relationships) on the development of newcomers' organizational (nurses and military) and occupational (nurses) commitment over time. We also capitalize on the rich set of information available within the military dataset to consider the role of specific factors (perceived realism of job previews, Bauer et al., 2007; satisfaction with the implications of military life for work-life balance; Haar & Brougham, 2022; identity conflict; Kümmel, 2018; Lancaster & Hart) likely to further contribute to the efficacy of newcomers' socialization experiences.

Self-Determination Theory

SDT (Deci & Ryan, 1985; Ryan & Deci, 2017) highlights how employees internalize various aspects of their work lives, including their occupation and organization, to their sense of identity, assuming that a core driver of internalization will be the extent to which they see these aspects as contributing to the fulfilment of their basic psychological needs for competence (the need to feel able to influence, and succeed in, one's environment), autonomy (the need to experience a sense of volition in one's environment), and relatedness (the need to feel a sense of connection and belonging in one's environment). As the development of a strong affective commitment to the organization or to the occupation is theoretically expected

to be connected to the degree to which each of these targets have been internalized into employees' professional identity (Gagné & Howard, 2016; Meyer et al., 2004), basic need fulfilment should also represent a core driver of commitment. Supporting this assertion, previous studies have reported positive associations between autonomy supportive work conditions and occupational (e.g., Lee et al., 2000) and organizational (e.g., Galletta et al., 2011; Holliman et al., 2021) commitment. Likewise, positive associations have been found between positive work relationships and employees' organizational (e.g., Epitropaki, & Martin, 2005; Greguras & Diefendorff, 2009; Van den Broeck et al., 2010) and occupational (e.g., Houle et al., 2020) commitment. Finally, feelings of competence and self-efficacy (i.e., an indicator of whether one's need for competence is satisfied; Ryan & Deci, 2017) have also been found to share positive associations with occupational (e.g., Numminen et al., 2015) and organizational (e.g., Meyer et al., 2002; Rigotti et al., 2008) commitment. Unfortunately, the bulk of current evidence remains cross-sectional, making it impossible to differentiate between long-term, short-term, or purely artefactual cross-sectional associations. Another objective of this dissertation is thus to document the short- and long-term effects of basic psychological need fulfilment on occupational (school principals, nurses) and organizational (nurses) commitment trajectories.

By investigating multiple predictors tied to the social (i.e., socialization processes) and individual (i.e., basic psychological needs) functioning of employees, we hope to uncover beneficial avenues for interventions targeting the improvement of affective organizational and/or occupational commitment among Canadian public sector employees. Importantly, validated interventions procedures designed to improve both predictors already exist (e.g., Gagné et al., 2022; Slemp et al., 2021; Wanberg, 2012), making is easier for organizations to capitalize on the knowledge that will be generated in this dissertation. Planned organizational changes seeking to improve work conditions are often costly and can thus benefit from knowledge of the most likely avenues to pursue to increase specific employee outcomes such as commitment. That is, various socialization (i.e., task, organizational, and social learning) and psychological factors (i.e., fulfilment of the basic need for autonomy, competence, and relatedness) are likely to have differential short-term and/or long-term effects worth exploring to determine which factors should be targeted to achieve more widespread benefits.

On the Desirability of Distinct Commitment Trajectories

To clearly understand the potential widespread benefits of employees' organizational and occupational commitment, it is critical to document the associations between commitment trajectories and theoretically relevant outcomes. Beyond helping further document the

construct validity of our profiles, this consideration will also help organizations select which profiles of employees could benefit from targeted interventions (Meyer & Morin, 2016; Morin et al., 2018).

In accordance with commitment theory (Meyer et al., 1993, 2004, 2006) and based on a lifespan perspective of commitment (Spurk et al., 2019), the development and maintenance of strong affective commitment to a target should be associated with benefits for both employees and their organizations. Through the identification of profiles of employees following distinct commitment trajectories it becomes possible to monitor time-structured outcome associations, allowing for the determination of the short- and long- term benefit of these profiles. In this dissertation, we focus on outcomes relevant to optimal individual and organizational functioning.

Satisfaction

In all three studies, we consider the association between employees' organizational and/or occupational commitment trajectories and their levels of job/work satisfaction. Satisfaction with one's job/work represents a core component of employees' psychological well-being at work thought to develop through a positive appraisal of one's work life (Locke, 1976). Based on SDT (Ryan & Deci, 2017) and the self-equilibrium hypothesis (Morin et al., 2013, 2017), the development of a strong (i.e., high and/or increasing levels of commitment) and resilient (i.e., low time-specific fluctuations) commitment trajectory can be seen as connected to the positive internalization of a core component of their work within employees' identity (Meyer et al., 2006), and should be intimately related to their experience of higher levels of work/job satisfaction. Supporting this assertion, there is ample evidence, albeit primarily cross-sectional, demonstrating positive associations between occupational (e.g., Cooper & Viswesvaran, 2005; Lee et al., 2000; Houle et al., 2020; Meyer et al., 2019) and organizational (Xu et al., 2023) commitment and work/job satisfaction. Based on these considerations, we consider work/job satisfaction as a core outcome of commitment trajectories, while expanding our knowledge by adopting a longitudinal person-centered perspective.

Intention to Leave

Turnover intention has always been considered as a focal outcome of commitment (Lee et al., 2002; Meyer & Allen, 1991; Meyer & Herscovitch, 2001), and thus represent another critical outcome to consider when seeking to establish the construct validity of our profiles. Based on the strong empirical and theoretical link between commitment and turnover intention (Gagné & Howard, 2016; Lee et al., 2001; Meyer & Allen, 1991; Meyer et al.,

1993), commitment represents an actionable lever to improve retention over time. From a theoretical standpoint, the internalization of employees' occupation and/or organization within their professional identity, as reflected by stronger and more resilient commitment trajectories, should increase their desire to maintain their bond with each of these targets (i.e., lower turnover intention; e.g., Gagné & Howard, 2016). We thus consider turnover intention as another focal outcome of commitment trajectories in studies 1 (school principals) and 2 (military recruits). In particular, turnover intention is important to consider from an applied standpoint in study 2, as voluntary attrition is a key hindrance to the ability of the Canadian Armed Forces to grow and meet its objectives (Laplante et al., 2016; Government of Canada, 2022). In addition, in study 2, we consider transition intention as a similar, yet far more desirable, outcome, based on the underlying premise that organizational commitment should lead employees to have a greater desire to transition within their organization as opposed to leaving it.

Study Specific Outcomes: Burnout, Perceived Performance, Psychological Distress, Somatization, and Quality of Care

To further ascertain the desirability of the identified profiles within each study, we finally consider outcomes that are contextually relevant to the type of employees considered in each study. First, in study 1, we consider the associations between occupational commitment trajectories and school principals' burnout (i.e., emotional exhaustion and cynicism). As burnout is a work-related syndrome expected to emerge from the repeated exposure to detrimental work conditions (Maslach et al., 1996-2018; Schaufeli, 2021), we sought to assess whether persistently low levels of commitment would be associated with higher levels of burnout among established school principals. In doing so we sought to demonstrate the long-term repercussions of maintaining employment in an occupation with which one has little emotional attachment. Second, in study 2, we consider the associations between organizational commitment trajectories and perceived performance at the end of basic military training, allowing us to monitor the benefits of fostering organizational commitment during this early training period. Third, in study 3, we consider the associations between organizational and occupational commitment trajectories and three outcomes highly relevant to the optimal functioning of nurses and healthcare institutions: (i) psychological distress, (ii) somatization, and (iii) quality of care. The goal is to demonstrate that fostering both organizational and occupational commitment can help employees adapt to their work reality and allow them to reach higher levels of functioning that support well-being, and to the sustainability and improvement of the Canadian health care system.

Synopsis of the Present Thesis

In summary, the current dissertation was designed to investigate public sector employees' affective organizational and/or occupational commitment trajectories by modelling their shape, stability, and associations with antecedents and outcomes of theoretical and applied relevance. To this end, we present the results from a series of three studies, conducted among three distinct samples of Canadian public sector employees studied at different stages of their career: (study 1) established school principals; (study 2) military recruits and officer cadets; (study 3) early career nurses. Using longitudinal person-centered analyses (i.e., GMA), we estimate profiles of employees following distinct commitment trajectories over time. Across all studies, we report time-structured associations between these commitment trajectories and a set of predictors and outcomes selected based on their applied and theoretical value. In doing so, we want to help guide interventions seeking to strengthen employees' emotional bond with their organization and/or occupation, and by extension improve employee retention and well-being in the Canadian public sector.

Chapter 2

Longitudinal Trajectories of Affective Commitment to the Occupation Among School Principals: A Person-Centered Perspective

Occupational commitment, defined as a psychological bond between an employee and his or her occupation (e.g., Klein et al., 2012; Meyer & Herscovitch, 2001), is a core component of employees' professional identity throughout their career and has been proposed to represent a key mechanism underlying their motivation to engage in goal-directed behavior (Meyer et al., 2004, 2006, 2008; Spurk et al., 2019). Occupational commitment is particularly relevant to consider for public sector employees (e.g., nursing, police, teaching), who usually remain in the same occupation for a significant part of, if not all, their career, and provide valued services to society in the process. These occupations often require years of training and socialization, which limits mobility across occupations, even though the typical career path of many public servants may take them across a variety of organizations (Houle et al., 2020). Moreover, as the true value of public servants lies in the service that they provide to society, irrespective of the organization in which they perform these duties, fostering and maintaining occupational commitment amongst public sector employees should be a top priority for society in general. Despite the recent interest in considering occupational commitment from a lifespan perspective (Spurk et al., 2019), little is currently known about the factors that contribute to influence the development of occupational commitment as it evolves over time, and the psychological and organizational implications associated with different AOC trajectories for high-level public sector managers. This is preoccupying when we consider that a primary purpose of commitment research should be to provide actionable information to help employees develop, maintain and even improve their commitment over time. Rather, a significant part of commitment research seems to have stagnated on studying the intricacies of how commitment is experienced at any given point in time, without giving much thought to its dynamic evolution.

The present study was designed to address these limitations through the investigation of AOC trajectories experienced by a sample of school principals followed over the course of two years. Specifically, through the adoption of a person-centered approach (Meyer & Morin, 2016; Morin et al., 2018), the present study seeks to identify subpopulations (i.e., profiles) of school principals following qualitatively distinct AOC trajectories. This approach makes it possible to obtain a finer-grained understanding of the dynamic nature of AOC trajectories (Spurk et al., 2019), their drivers (e.g., basic psychological need satisfaction), and their implications for psychological and work-related outcomes (e.g., burnout, job satisfaction,

turnover intentions). By helping us to achieve a better understanding of AOC trajectories from a motivational perspective, as well as their key determinants and outcomes, this study hopes to help guide organizations in fostering the development of strong and resilient occupational identities among key public sector employees (Meyer et al., 2008; Spurk et al., 2019).

AOC as an Evolving Component of Identity Involved in Goal-Directed Behaviors

Occupational commitment can be experienced as a sense of emotional attachment to one's occupation (affective), as a perceived obligation to remain in this occupation (normative), or as an impression of lack of choice or need to remain in this occupation (continuance) (Meyer et al., 1993). However, research generally indicates that affective occupational commitment (AOC) carries the greatest benefits in terms of work-related intentions, attitudes, and behaviors (Cooper-Hakim & Viswesvaran, 2005; Spurk et al., 2019; Wang et al., 2019). As a core component of employees' social identities at work (Meyer et al., 2006), commitment has been theoretically proposed to play a central role in employees' motivation to engage in goal-related behavior of relevance to the target of the commitment (e.g., the occupation in the present context) (Meyer et al., 2004). From this perspective, we rely on the Organismic Integration Theory (OIT) component of Self-Determination Theory (SDT: Deci & Ryan, 1985; Ryan & Deci, 2000) to better understand the nature and implications of AOC (Meyer et al., 2004). OIT, as a sub-theory of SDT, focuses on the process of internalization whereby initially externally driven motives or objectives become progressively integrated into one's professional identity. Within OIT, the process of internalization is specified to vary along a continuum, going from purely externally controlled behaviors (entirely driven by external contingencies, such as seeking rewards or avoiding negative consequences), to introjected forms of behavioral regulations (when behaviors are driven by internal contingencies, such as the avoidance of negative emotions, such as guilt, or the pursuit of positive emotions, such as pride). The next position on the continuum entails identified forms of behavioral regulations (when behaviors are volitionally undertaken because employees want to achieve objectives that are aligned with their personal goals and values) and is then followed by integrated forms of behavioral regulations (when behaviors come to be integrated to employees' identity and seen as fully consistent with their other goals and values). Although SDT also acknowledge that some behaviors might be driven by purely intrinsic motives (i.e., pleasure), intrinsic motivation is seen as distinct from the process of internalization whereby externally driven behaviors come to be progressively integrated to one's professional identity.

Due to its affective nature, AOC has been theoretically proposed to reflect a sense of

complete internalization (Gagné, & Howard, 2016; Meyer et al., 2004). More precisely, employees who feel that their occupation serves an important purpose (i.e., identified regulation) which they come to share as their own to become a core part of their professional identity (i.e., integrated motivation) should develop a stronger emotional bond to their occupation. Empirical evidence supports the idea that self-determined goal-directed behaviors share significant positive associations with AOC (Fernet et al., 2012, 2017, 2021). However, despite the theoretical expectation that AOC is a dynamic and malleable construct (Klein et al., 2012) influenced by employees' adaptation to ongoing changes occurring in their professional (Sullivan & Baruch, 2009) or personal (Spurk et al., 2019) situations, very little is known about how this dynamic bond truly evolves over time.

To our knowledge, only three sources of evidence support a representation of AOC as a dynamic, malleable, construct. First, in their review of AOC research, Spurk et al. (2019) reported rank-order stability coefficients supporting the presence of both stability and change in AOC levels over periods of time ranging from 7 weeks to 3 years. Second, Salzmann et al. (2018) relied on latent growth models to investigate intra-individual AOC trajectories among vocational trainees followed over a period of three years. Their results indicated a small average decreasing tendency in the entire sample but revealed substantial inter-individual variability in initial levels of AOC (i.e., the intercept of the trajectories) and in the evolution of these trajectories over time (i.e., the slope of the trajectories). This last observation suggests that average tendencies are incapable of appropriately capturing AOC evolution, and that alternative methods (i.e., person-centered analyses, see Morin et al., 2018) would be better suited to uncovering subpopulations of employees for whom AOC levels increase, decrease, or remain stable over time. Lastly, Houle et al. (2020) identified distinct profiles of school principals characterized by qualitatively distinct configurations of affective, normative, and continuance commitment to their occupation separately at two time points, two years apart. Their results revealed that high levels of AOC might be less stable (i.e., show a greater tendency to fluctuate over time) than lower levels of AOC or to levels of normative or continuance commitment, and could thus be more reactive to intra-individual or contextual changes, hence reinforcing the need to better grasp the work-related drivers of stability or change in AOC trajectories.

To date, no study has yet attempted to explicitly study inter-individual heterogeneity in the shape of AOC trajectories. Importantly, the presence of a substantial level of inter-individual heterogeneity in the shape of AOC trajectories (e.g., Salzmann et al., 2018) highlights the importance of considering the possible presence of distinct subpopulations of

employees characterized by qualitatively distinct AOC trajectories, as these subpopulations may potentially react differently to their work environment and display differentiated patterns of adjustment. The present study addresses this issue by relying on person-centered analyses (Meyer & Morin, 2016; Morin et al., 2018). More precisely, we rely on growth mixture analyses (GMA; Muthén, 2002) to identify profiles of school principals following qualitatively and quantitatively distinct longitudinal trajectories of AOC over a period of two years (4 measurement occasions). By focusing on a sample of school principals already established in their occupation, this approach allows us to uncover whether and how AOC levels normatively fluctuate over time among distinct subpopulations of workers engaged in an occupation where changes are slow to unfold. Moreover, GMA make it possible to partition AOC into a trait-like component, reflecting principals' average AOC trajectories over time, and into a state-like component, reflecting principals' deviations from their average trajectory at each specific point in time. This differentiation allows us to achieve a more in-depth representation of AOC trajectories more aligned with the theoretically dynamic nature of this construct (e.g., Klein et al., 2012; Spurk et al., 2019), and allowing us to differentiate between factors able to influence AOC trajectories in a more (trait: factors able to influence individual trajectories) or less (state: factors able to predict temporary deviations from one's trajectory) persistent manner. To guide our hypotheses, we first consider the unique characteristics of the school principal occupation and draw upon OIT/SDT to position the existence of profiles characterized by distinct AOC trajectories (trait). We then introduce the self-equilibrium hypothesis to further guide our expectations in terms of within-profile deviations (state).

Expected Trait-Like Trajectories of AOC Among School Principals: A SDT Perspective

The journey to becoming a school principal (in the Canadian province of Quebec, but also in many developed countries) entails a lengthy process. First, almost all school principals hold an academic degree that typically corresponds to a Master's, although some older school principals only completed an undergraduate degree. Second, most school principals previously worked as teachers for a number of years and obtained a position as a principal in a school different from the one in which they worked as a teacher. Third, becoming a principal involves entering an occupation that is far more administrative in nature than teaching, even though the bulk of training required to occupy this position remains teaching focused for most principals. Yet, becoming a principal remains a logical progression in the educational system for any teacher aspiring to climb the ranks. In Canada, the average age of principals is approximately 50 years old, and their average occupational tenure is approximately 22 years

(Cattonar et al., 2007). For many principals, this will be their final occupation prior to retirement. However, some principals might also use this occupation as a stepping-stone toward hierarchically higher public occupations (e.g., school board or ministry administrators). As a dynamic bond that lasts for the duration of one's occupational tenure, AOC has been positioned as an important indicator of how well employees are able to adapt to their occupational careers (Baltes et al., 2014; Spurk et al., 2019) and is thus uniquely suited to provide a glimpse (i.e., 2 years) of how well school principals have adapted to an occupation that they are likely to hold for a long time.

Positioning AOC as an indicator that the bond between a principal and his/her occupation has been properly internalized (Gagné, & Howard, 2016; Meyer et al., 2004) suggests that employees experiencing diverse, and changing, levels of internalization and adaptation to the changing nature of their occupational career could experience qualitatively and quantitatively distinct AOC trajectories. Indeed, a successful process of internalization of an occupation that is able to fulfill principals' expectations should result in a stable trajectory characterized by moderate to high levels of AOC, whereas being in an occupation that systematically fails to meet their expectations should lead to an incomplete process of internalization, resulting trajectories characterized by persistently low levels of AOC. Given the lengthy process involved in becoming principal, which typically represents a change relative to one's prior professional trajectory, as well as the many social and economic benefits associated with this new role, it may be particularly difficult for principals to change occupation yet again (Houle et al., 2020), thus allowing them to persist in a role with which they share no emotional connection. Beyond these two more stable trajectories, it is also important to consider scenarios within which principals' sense of connection with their occupation, and their resulting feelings of internalization, may also grow or decrease over time, leading to increasing or decreasing AOC trajectories (Spurk et al., 2019). Although many mechanisms may be involved in the emergence of these increasing or decreasing trajectories (e.g., external changes in the characteristics of the work environment, principals' efforts to modify their work environment, principals' progressive internalization of the characteristics of their role, principal's progressive rejection of role), knowledge of these mechanisms is not necessary to support the expectation that trajectories reflecting progressively increasing, or decreasing, levels of internalization should also be evidenced. Work characteristics, just like individual expectations, are both known to evolve over time in a way that makes it likely for some principals to develop an increased level of affinity, or emotional bond, with their occupation and for some other principals to experience an increasing level of discomfort with this

occupation (Spurk et al., 2019). However, for most principals, previous research suggests that changes are unlikely to be particularly quick or pronounced (Houle et al., 2020; Salzmann et al., 2018; Spurk et al., 2019). From this perspective, we propose the following hypothesis:

> **Hypothesis 1.** At least four profiles will be identified reflecting *Slowly Increasing*, *Slowly Decreasing*, *Moderate to High*, and *Low* AOC trajectories.

The Self-Equilibrium Hypothesis and State-Like Within-Profile Fluctuations

Closely connected to SDT from its inception, the self-equilibrium hypothesis (Morin et al., 2013, 2017; Mund & Neyer, 2016) highlights the importance for individuals to achieve a form of balance or equilibrium with their environment to experience life positively (e.g., Ryan & Deci, 2017). From this perspective, the presence of a strong core sense of identity that remains stable over time is assumed to represent a key indicator of whether individuals have achieved this balance (Morin et al., 2013, 2017). More precisely, this hypothesis expects that more desirable trait-like trajectories (e.g., higher or increasing levels of AOC over time) should be closely associated with higher levels of stability in these trajectories (as expressed by smaller time-related fluctuations around participants' global "trait-like levels), consistent with the idea that these trajectories reflect a process of ongoing adaptation to a well-internalized occupational situation. In contrast, less desirable trait-like trajectories (lower or decreasing levels of AOC over time) should also display more pronounced state-like fluctuations, consistent with an occupational environment that has not yet been fully internalized into a strong sense of professional identity. Although this hypothesis has traditionally been investigated in relation to adolescents (Morin et al., 2013, 2017) or adults (Mund & Neyer, 2016) self-concepts, emerging evidence suggests that it might also apply to job burnout, another construct known to be closely related to one's sense of professional identity (Authors, under review). As such, the self-equilibrium hypothesis appears to be highly relevant to the consideration of AOC, as conceptualized as a core component of employees' professional identity (Meyer et al., 2006) involved in goal-directed behavior (Meyer et al., 2004), to help explain how different school principals come to internalize their role.

GMA make it possible to achieve a state-trait disaggregation of school principals' dynamic trajectories of AOC, where the shape of these trajectories (*Slowly Increasing*, *Slowly Decreasing*, *Moderate to High*, and *Low*) reflects evolution occurring at the trait-level. Beyond these individual trait-like trajectories, GMA also estimate the extent to which principals' time-specific levels of AOC deviate from their own trait-like AOC trajectory (Morin et al., 2013, 2017). These state-like deviations (i.e., the within-profile time-specific

residuals) reflect the extent to which time-specific circumstances, perceptions, emotions, or interpretations may lead principals to experience temporarily higher, or lower, levels of AOC than would be expected by the consideration of their own trait-like trajectories. Moreover, these levels of state-like deviations can themselves differ across profiles. As such, state-like deviations can be used as statistical evidence for, or against, the self-equilibrium hypothesis. From the perspective adopted so far, which positions AOC as a core component of school principals' occupational identity reflecting a high level of internalization, we propose that:

Hypothesis 2. Profiles characterized by higher trait-like levels of AOC levels across time points will also be characterized by smaller time-specific residuals around their expected trajectory (i.e., less time-specific state-like fluctuations).

A Construct Validation Perspective

Although person-centered analyses can be used in both a confirmatory (i.e., anchored in specific hypotheses, as in the present study) or exploratory manner, they remain methodologically exploratory in nature (requiring the comparison of alternative solutions including differing numbers of profiles) (Morin et al., 2018). This exploratory nature makes it particularly important to document the construct validity of extracted GMA profiles by verifying their associations with theoretically relevant predictors and outcomes (Meyer & Morin, 2016; Morin et al., 2018). This verification makes it possible to document the construct validity of these profiles, and thus to ensure that they do not simply reflect a methodological abstraction emerging as a result of random sampling variations.

In GMA, two distinct layers of predictive relations can be investigated. On the one hand, time-invariant predictions can be tested whereby the initial levels of the predictors are used to predict the trait component of the AOC trajectories (i.e., principals' likelihood of membership into the various profiles, as well as the initial levels and rate of change of their individual AOC trajectories). In contrast, time-varying predictions can also be tested whereby the role of time-specific levels on each of the predictors can be used to predict time-structured fluctuations in principals' levels of AOC at each specific time point. In simpler terms, whereas the first component (time-invariant) represents the effects of the predictors on the trajectories themselves, the latter component (time-varying) seeks to explain why individuals deviate from their trajectory at any given point in time (i.e., the predictors are used to predict the time-specific residuals, which reflect state-like deviations from participant's trajectories). These distinctions are important, as they make it possible to differentiate predictors likely to have a lasting effect on principals AOC trajectories (i.e., time-invariant) relative to those that are only likely to be useful as a short-term fix to temporarily improve AOC levels (i.e., time-

varying). Although associations involving outcomes are tested in a slightly different manner in GMA, they also differentiate associations between the profiles and the outcomes that are stable over time, versus those that fluctuate as a function of the shape of principals' AOC trajectories.

Need Satisfaction as Drivers of AOC Trajectories

OIT/SDT (Deci & Ryan, 2000; Ryan & Deci, 2017) posits that the process of internalization whereby an activity (such as the occupation) becomes integrated into one's professional entity (such as through the emergence of AOC; e.g., Gagné & Howard, 2016; Meyer et al., 2004) will be substantially driven by the extent to which the occupational environment is able to satisfy employees' basic psychological needs. According to OIT/SDT (Ryan & Deci, 2017), these basic psychological needs entail relatedness (e.g., positive relationships with colleagues), competence (e.g., feeling confident about one's ability to perform their work), and autonomy (e.g., feeling of having control over one's work). From this perspective, we consider the role played by three work-related characteristics likely to be closely connected to participants' needs for relatedness (i.e., the quality of their relationships with the school personnel), competence (i.e., their managerial self-efficacy), and autonomy (i.e., their sense of professional autonomy) as possible predictors of AOC profiles and trajectories.

Autonomy

As a work condition, OIT/SDT defines autonomy as the extent to which employees experience of sense of being in control and have the ability to make their own decisions (Deci et al., 2017; Gagné & Deci, 2005). Autonomy might be even more important for managers, such as school principals, who have to lead their organization, mainly on their own, while having to navigate the constraints inherent in governmental policies and school board decisions. Relatively old meta-analytic evidence supports the presence of a positive association between employees' levels of autonomy and AOC (Lee et al., 2000), although this result is limited to cross-sectional studies. More recent studies have also demonstrated that fostering autonomy supportive work conditions may help to foster career commitment (Littman-Ovadia et al., 2013; Mabekoje et al., 2017), organizational commitment among various types of employees (Galletta et al., 2011; Holliman et al., 2021; Labrague et al., 2018; Sisodia & Das 2013, Van den Broeck et al., 2010) including school principals (Chang et al., 2015), and occupational commitment (Giffords, 2009; Satoh et al., 2017). Unfortunately, these results also remain cross-sectional. Nevertheless, from the perspective of OIT/SDT, these associations should be maintained longitudinally so that principals' sense of

professional autonomy should help promote higher AOC trajectories (i.e., trait-like levels), whereas time-specific increases in their levels of autonomy should lead to time-specific increases in AOC levels (i.e., state-like fluctuations).

Hypothesis 3. (a) Higher initial levels of professional autonomy will predict membership into the *High* profile relative to all other profiles, and into the *Slowly Increasing* profiles relative to the *Low* and *Slowly Decreasing* profiles. (b) Higher initial levels of professional autonomy will predict higher initial levels (i.e., intercept factor) and higher increases over time in AOC levels (i.e., slope factor) in all profiles. (c) Higher time-specific levels of school principals' professional autonomy will predict state-like increases in AOC levels relative to their estimated trajectories (i.e., trait-like fluctuations).

Interpersonal Relationships with the Personnel

The ability to share positive social relationships at work has long been acknowledged as a core driver of relatedness satisfaction (Deci et al., 2017; Gagné & Deci, 2005; Ryan & Deci, 2017). Although research regarding the links between the quality of social relationships and AOC are still lacking, research has generally supported the role of this factor in the prediction of higher levels of affective commitment to the organization (Epitropaki, & Martin, 2005; Greguras & Diefendorff, 2009; Van den Broeck et al., 2010). Of direct relevance to our study, Houle et al. (2020) demonstrated positive association between the quality of school principals' relationships with other school managers and their likelihood of membership in more desirable occupational commitment profiles. This observation led them to suggest that future research should devote more attention to other types of social relationships, such as those shared between school principals and their personnel. This study thus expands upon Houle et al.'s (2020) results to consider the role played by the quality of social relationships shared between school principals and their personnel. Like for autonomy, OIT/SDT lead us to expect that:

Hypothesis 4. (a) More positive initial relationships with the school personnel will predict membership into the *High* profile relative to all other profiles, and into the *Slowly Increasing* profile relative to the *Low* and *Slowly Decreasing* profiles. (b) More positive initial relationships with the school personnel will predict higher initial levels and higher increases over time in AOC levels in all profiles. (c) Higher time-specific levels of school principals' quality of relationships with the school personnel will predict state-like increases in AOC levels relative to their estimated trajectories (i.e., trait-like fluctuations).

Managerial Self-Efficacy

Self-efficacy refers to individual's self-perceptions of their own ability to successfully complete specific tasks or to adequately play specific roles (Bandura, 2007), and is an important indicator of the extent to which one's need for competence is fulfilled in that context (Ryan & Deci, 2017). For school principals, managerial self-efficacy directly refers to their self-perceived ability to successfully apply their competencies to manage their schools by adequately performing their administrative duties, providing instructional leadership to the personnel, and managing external relationships (e.g., Federici & Skaalvick, 2011; Fernet, 2011; Smith & Guarino, 2006; Tschannen-Moran, & Gareis, 2009). Meta-analytic evidence supports the presence of positive associations between self-efficacy and AOC among teachers (Chestnut & Burley, 2015), as well as between self-efficacy and affective commitment to the organization among members of other professional groups (Meyer et al., 2002; Rigotti et al., 2008). Houle et al. (2020) also highlighted the importance for future research to account for the impact of more proximal, or personal, indicators of need satisfaction, such as managerial self-efficacy, as possible drivers of commitment among school principals. We pursue this recommendation by testing the following hypothesis, aligned with OIT/SDT:

> *Hypothesis 5.* (a) Higher initial levels of managerial self-efficacy will predict membership into the *High* profile relative to all other profiles, and into the *Slowly Increasing* profile relative to the *Low* and *Slowly Decreasing* profiles. (b) Higher initial levels of managerial self-efficacy will predict higher initial levels and higher increases over time in AOC levels in all profiles. (c) Higher time-specific levels of school principals' managerial self-efficacy will predict state-like increases in AOC levels relative to their estimated trajectories (i.e., trait-like fluctuations).

AOC Trajectories: Implications for Burnout, Job Satisfaction, and Turnover Intentions

At the core of OIT/SDT (Ryan & Deci, 2017) is the proposition that individuals who achieve a greater level of internalization of their occupational role into their professional identity (as expressed by higher levels of AOC; e.g., Gagné & Howard, 2016; Meyer et al., 2004) should experience higher levels of psychological health and well-being, an idea also consistent with commitment theory (e.g., Meyer & Maltin, 2010). Supporting this proposition, research has demonstrated that higher levels of AOC tended to be associated with higher levels of psychological well-being at work, as operationalized by a variety of indicators, including higher levels of job satisfaction and lower levels of burnout or turnover intentions (Cooper & Viswesvaran, 2005; Lee et al., 2000; Meyer & Maltin, 2010). These outcomes thus seem to be natural candidates to verify the theoretical conformity and construct validity of the

AOC trajectory profiles, which are hypothesized to represent differing degrees of internalization of the school principal occupation into one's professional identity.

Burnout

Burnout is a multidimensional syndrome whose core components encompass feelings of emotional exhaustion and cynicism (or depersonalization), and that is assumed to emerge as a result of prolonged exposure to work-related strain (Demerouti & Bakker, 2008; Maslach et al., 2001; Schaufeli, 2021). Burnout is typically conceptualized as a negative component of psychological well-being at work, indicating that employees suffering from burnout no longer have the capacity, or the desire, to invest efforts in their work (Bakker & de Vries, 2021). Burnout is theoretically assumed to develop in sequence, following a prolonged state of stress that has the effect of depleting employees' emotional resources (Leiter & Maslach, 2004; Maslach et al., 2001). A state of emotional exhaustion is assumed to occur first, followed by a sense of cynicism (i.e., interpersonal detachment from one's work) which is assumed to emerge as a way to protect oneself from job demands seen as increasingly unrealistic (Leiter & Maslach, 2004; Maslach et al., 2001). As a result of these manifestations, employees' progressively come to feel unable to adequately complete their work-related activities, leading to a widespread array of negative consequences (Byrne, 1993; Leiter & Maslach, 2004; Maslach et al., 2001). Importantly, although early conceptualizations of burnout suggested that it might also be relevant to consider employees' reduced sense of professional efficacy as a third core components of burnout (Maslach et al., 2001), more recent evidence has rather demonstrated that this component was conceptually and empirically distinct from burnout (Nadon et al., 2022; Sandrin et al., 2022; Schaufeli & Taris, 2005). As a result, and to minimize possible overlap with our measure of managerial self-efficacy, we do not consider this third component in the present study.

In the current study, failure to develop and maintain satisfactorily high AOC levels (i.e., reflecting a low level of internalization) is hypothesized to stem from the inability of this occupation to satisfy school principals' basic needs over a prolonged period of time, and is thus likely to lead to persistent levels of emotional exhaustion and cynicism. Although relatively rare, research has supported the presence of negative cross-sectional associations between AOC and burnout components among various types of employees (e.g., Cohen, 1998; Lee et al., 2000; Miller et al., 1990; Yeh et al., 2007), and demonstrated that profiles of teachers experiencing high levels of AOC tended to present lower levels of burnout (Morin et al., 2015; Meyer et al., 2019). However, and contrary to their expectations, Sawhney et al. (2020) also found that higher levels of AOC tended to be associated with higher levels of

burnout among nurses exposed to a higher number of stressful work-related events. According to the authors, employees highly invested in their occupation may thus be more vulnerable to burnout following the accumulation of stressful work-related events, perhaps because these stressors interfere with the ability to fully engage in their occupation. However, Sawhney et al. (2020) still reported that burnout levels remained the highest among nurses characterized by low levels of AOC. In the present study, we expand on these previous studies by adopting a longitudinal perspective. In accordance with OIT/SDT, we thus hypothesize that:

Hypothesis 6: Time-specific measures of emotional exhaustion and cynicism will be lower in profiles characterized by higher AOC at the matching time point, and higher in profiles characterized by lower AOC at the matching time point.

Job Satisfaction

As another component of employees' emotional well-being at work (Diener, 2000; Ryan & Deci, 2001), job satisfaction is typically defined as a desirable emotional state emerging from the positive appraisal of one's work reality (e.g., Locke, 1976). In the current study, school principals who manage to develop and maintain high levels of AOC, reflecting a higher level of internalization of their occupation into their professional identity, can be expected to find more enjoyment in their occupation, and thus higher levels of job satisfaction. Extensive research evidence supports the presence of positive associations between AOC and job satisfaction (Cooper & Viswesvaran, 2005; Lee et al., 2000), and emerging research also indicates that profiles of teachers (Meyer et al., 2019) and school principals (Houle et al., 2020) displaying higher AOC tend to show higher levels of job satisfaction. Building on these considerations, we thus hypothesize that:

Hypothesis 7: Time-specific measures of job satisfaction will be higher in profiles characterized by higher AOC at the matching time point, and lower in profiles characterized by lower AOC at the matching time point.

Turnover Intentions

Employees' intentions to leave their occupation has long been considered to be the key focal outcome of AOC (Lee et al., 2002; Meyer & Herscovitch, 2001). Indeed, the construct of commitment was initially proposed to explain retention (e.g., Meyer & Allen, 1991; Meyer et al., 1993). From the perspective of OIT/SDT, higher levels of internalization of an occupation into one's professional identity should also lead to substantial decrease in one's desire or intentions to leave this occupation (e.g., Gagné & Howard, 2016). Ample research evidence supports the existence of negative associations between AOC and turnover intentions (Cooper & Viswesvaran, 2005; Lee et al., 2000). Likewise, person-centered

research also supports the idea that profiles of employees (Morin et al., 2011a), teachers (Morin et al., 2015; Meyer et al., 2019), and school principals (Houle et al., 2020) characterized by higher levels of AOC tend to report lower turnover intentions. Building on these considerations, we thus hypothesize that:

> *Hypothesis 8:* Time-specific measures of turnover intentions will be lower in profiles characterized by higher AOC at the matching time point, and higher in profiles characterized by lower AOC at the matching time point.

The Present Study

From a conceptualization of AOC as a core motivational driver reflecting the extent to which an occupation has become internalized into one's professional identity, we rely on OIT/SDT to investigate school principals' AOC trajectories. We first seek to identify which quantitatively and qualitatively distinct profiles will best characterize school principals' trait-like AOC trajectories. Second, we investigate whether these trait-like trajectories possess self-equilibrium properties aligned with their representation as a core component of one's professional identity or as purely motivational phenomenon. Third, given their natural link with the satisfaction of the basic psychological needs for autonomy, relatedness and competence, we investigate the role played by principals' sense of professional autonomy, relationships with the school personnel, and managerial self-efficacy in the prediction of their AOC trajectories at the trait and state level. Finally, we document the role of these AOC trajectories in relation to principals' levels of job satisfaction, turnover intentions, and burnout.

<div align="center">

Method

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Sample and Procedures

An invitation letter was sent to all members of the Quebec Federation of School Principals ($N = 2400$). This letter presented the goals of the research and included a link to the online survey. A total of 441 school principals (18.38%) completed the first wave of data collection in June 2008. A first follow up invitation was sent to all members of the list in October 2008 (Wave 2), leading to a response rate of 415 at Wave 2 (17.29%). Finally, every school principal who participated at Wave 1 and/or 2 was sent to additional follow up invitations in June 2009 (Wave 3) and June 2010 (Wave 4). These follow up questionnaires were completed by 364 school principals at Wave 3, and 262 Wave 4. In total, 661 school principals ($M_{age} = 44.94$; $SD_{age} = 7.19$), including 42% males and 58% females, participated in at least one wave of data collection. On average, participants had 6.19 years of tenure (6 months to 38 years; SD = 4.90) in this function, were principals in schools including 69.67

employees (SD = 47.17) and rated the SES of their schools (on a 1 to 3 scale) 1.72 (SD = .70). In terms of education, 0.6% reported having obtained an undergraduate university degree, 25.6% a diploma higher than an undergraduate degree, 46% a master's degree, and 27.8% a doctorate degree.

Measures

All questionnaires were administered in French.

AOC

AOC was assessed using the relevant subscale from Meyer et al.'s (1993) questionnaire adapted and validated in French by Stinglhamber et al. (2002). This scale included six items (α_{t1} = .830; α_{t2} = .821; α_{t3} = .835; α_{t4} = .840; e.g., *I am proud to be in this occupation*), rated on a 5-point scale (1 = Completely Disagree to 5 = Completely Agree).

Autonomy

Participants' sense of professional autonomy was measured using a 5-item scale (α_{t1} = .793; α_{t2} = .738; α_{t3} = .772; α_{t4} = .780; e.g., *I have control over how I do my work*) derived from two separate measures. The first two items originate from the French version (Brisson et al., 1998) of the Job Content Questionnaire (JCQ; Karasek, 1985) assessing decisional latitude. The last three items originate from the job control subscale of the Areas of Worklife Survey (Leiter & Maslach, 2000). The factor validity and scale score reliability internal consistency of the French version of this subscale have been previously established (Fernet et al., 2012, 2014, 2016). All items were rated on a 5-point scale (1 = Completely Disagree to 5 = Completely Agree).

Quality of Interpersonal Relationships with Personnel

To assess the perceived quality of participants' interpersonal relationships with the school personnel, we relied on a 5-item subscale (α_{t1} = .948; α_{t2} = .953; α_{t3} = .964; α_{t4} = .966; e.g., *Presently, in my relationships with other personnel, I feel appreciated*) initially developed in French by Richer and Vallerand (1998). These items were rated on a 5-point rating scale (0 = Not at All to 4 = Extremely).

Managerial Self-Efficacy

Managerial self-efficacy was assessed with a 12-item scale (α_{t1} = .835; α_{t2} = .818; α_{t3} = .851; α_{t4} = .819; e.g., *I believe I can ensure that staff achieve their work objectives*) developed specifically in French for school principals (Trépanier et al., 2012). These items were answered on a 5-point scale (1 = Completely Disagree to 5 = Completely Agree).

Burnout

Burnout was measured using two subscales from the Maslach Burnout Inventory (MBI-GS;

Maslach et al., 1996; French by Bocéréan et al., 2019): (a) Emotional exhaustion (five items; α_{t1} = .894; α_{t2} = .919; α_{t3} = .920; α_{t4} = .919; e.g., *working all day is really a strain for me*); (b) cynicism (five items; α_{t1} = .714; α_{t2} = .806; α_{t3} = .787; α_{t4} = .797; e.g., *I have become more cynical about whether my work contributes anything*). All items were rated on a 7-point scale (0 = Never to 6 = Every Day).

Job Satisfaction

Participants' job satisfaction was measured using a questionnaire originally developed in French by Blais et al. (1989) to assess life satisfaction. As commonly done in previous studies (e.g., Houlfort et al. 2015), the referent for this scale was changed from "life" to "job". All five items from this measure (α_{t1} = .842; α_{t2} = .830; α_{t3} = .848; α_{t4} = .864; e.g., *I am satisfied with my job*) were rated on a 7-point scale (1 = Completely Disagree to 7 = Completely Agree).

Turnover Intentions

Intentions to leave the occupation was assessed with three items developed by O'Driscoll and Beehr's (1994; French by Fernet et al., 2015) asking whether participants thought about: (i) leaving their occupation, (ii) looking for a new occupation within the next 12 months, and (iii) looking for a new occupation within the next 3 years. An additional item was added to account for the Quebec socio-economic context at the time of data collection (i.e., *If the economic context was favorable, I would actively seek a new occupation*). All four items (α_{t1} = .889; α_{t2} = .904; α_{t3} = .903; α_{t4} = .899) were rated on a 7-point scale (1 = Completely Disagree to 7 = Completely Agree).

Analyses

Model Estimation and Missing Data

All analyses were conducted using *Mplus* 8.2 Muthén & Muthén, 2018) robust maximum likelihood robust (MLR) estimator, and full information maximum likelihood (FIML) procedures to handle missing data. FIML relies on the assumption that missing data is missing at random (MAR) and can be conditioned on all variables included in the analytical model, including the variables themselves measured at different time points in longitudinal models such as those used in this study, making FIML robust to attrition processes related any of the variables included in the model (Enders, 2010, Graham, 2009). Research has demonstrated that FIML and multiple imputation have a similar accuracy, but that FIML should be favoured (for its computational simplicity) when large amounts of missing data (e.g., over 50%) are present (Enders, 2010; Graham, 2009). FIML made it possible to rely on the full sample of participants who completed at least one time point. These 661 participants

provided a total of 1482 time-specific ratings (M=2.24 per participant), with 100 (15.13%) participants responding to all four time waves, 176 (26.63%) responding to 3 time waves, 169 (25.57%) responding to 2 time waves points, and 216 (32.68%) responding to a single time wave.

Preliminary Analyses

Factor scores from preliminary measurement models reported in Appendix A were used as profile indicators, predictors, and outcomes. To ensure that the measures were comparable over time, these factor scores were saved from invariant longitudinal models (Millsap, 2011) in standardized units with $M = 0$ and $SD = 1$. Although factor scores are not as robust to measurement errors as latent variables, they afford a partial control for unreliability and preserve the measurement structure (e.g., invariance) better than scale scores (Morin et al., 2016a; Morin et al., 2016b). Due to the complexity of the current longitudinal analyses, separate models were estimated for AOC, for each of the predictors (autonomy, quality of interpersonal relationships with the personnel, and self-efficacy), for burnout (emotional exhaustion and cynicism) and for job satisfaction and turnover intentions. Statistical fit indices for these models are reported in Table S1 of Appendix A, parameter estimates in Tables S2-S3 of Appendix A, variable correlations and reliability information in Table S4, and model fit information for additional tests of discriminant validity in Table S5 of Appendix A.

Growth Mixture Analyses (GMA).

GMA are a person-centered extension of latent curve models (Bollen & Curran, 2006) seeking to identify subpopulations characterized by distinct longitudinal trajectories on a set of repeated measures (i.e., AOC in this study). GMA summarize a series of repeated measures by the estimation of random intercepts and slope factors reflecting, respectively, the initial level of the trajectories (the loadings of the time-specific measures on this factor are all fixed to 1), and the rate of change over time. To account for the possible non-linearity of these trajectories while allowing for the estimation of distinct functional shapes in each profile, we relied on a latent basis parameterization (Morin & Litalien, 2019; Ram & Grimm, 2009). Just like polynomial parameterizations (i.e., linear, quadratic), a latent basis parametrization assumes that time intervals are the same for all participants (which is the case for the present study). However, whereas polynomial parameterizations rely on time codes placed on the slope factor to reflect the passage of time, the latent basis parameterization only relies on two time codes that are independent from the true length of the time intervals. A time code of 0 is used at Time 1 to locate the position of the intercept, and a time code of 1 is used at the last

time point to indicate that the slope factor reflects the total amount of change occurring within each profile over the course of the study (2 years). The remaining loadings are freely estimated and allowed to differ across profiles, so that their value reflects the proportion of the total change occurring between each adjacent time points, making it possible to estimate non-linear trajectories differing in shape across profiles (Morin & Litalien, 2019).

Statistical recommendations are that all GMA parameters (i.e., intercept mean and variance, slope mean and variance, intercept and slope covariance, time-specific residuals) should, ideally, be freely estimated in all profiles (Diallo et al., 2017; Morin et al., 2011c). However, this is not always possible (e.g., non-converging or improper solutions), especially with sample sizes lower than 1000 (Diallo et al., 2017). When this happens, as in the present study, equality constraints should be progressively implemented across profiles on distinct subsets of model parameters to achieve a more parsimonious solution (Diallo et al., 2017; Morin & Litalien, 2019). We thus relied on the Mplus default parameterization, setting the latent variance-covariance matrix to be equal across profiles, but allowed the time-specific residuals to be freely estimated across time and profiles.

GMA including 1 to 8 profiles were estimated, using 10000 random sets of start values, 500 iterations, and 1000 final stage optimizations (Hipp & Bauer, 2006). To determine the optimal number of profiles, we considered their theoretical adequacy, meaningfulness, and the following statistical indicators (Marsh et al., 2009; Muthén, 2003): (i) the Akaïke Information Criterion (AIC), (ii) the Consistent AIC (CAIC), (iii) the Bayesian Information Criterion (BIC), (iv) the sample-size Adjusted BIC (ABIC), (v) the adjusted Lo, Mendel and Rubin's (2001) Likelihood Ratio Test (aLMR), and (iv) the Bootstrap Likelihood Ratio Test (BLRT). Lower values for the AIC, CAIC, BIC, and ABIC value suggest a better-fitting solution. A statistically significant aLMR and BLRT supports a *k*-profile solution relative to a *k-1*-profile solution. Finally, the entropy provides a summary of classification accuracy (ranging from 0 to 1) for the assignment of cases to their respective profiles. The Mplus syntax used to estimate the final latent basis GMA, as well as subsequent models incorporating predictors and outcomes, are reported at the end of Appendix A.

Predictors and Outcomes of Profile Membership

Predictors were integrated to the final model following a sequential strategy proposed by Diallo et al. (2017). First, we tested whether demographic controls (age, tenure, sex, highest educational degree, school's socio-economic status, and number of school personnel) were relevant to include as time-invariant predictors (TIP). We first specified a null effects model in which the effect of these controls on the likelihood of membership into the various profiles,

as well as on the growth (intercept and slope) factors were constrained to be 0. Second, the demographics were allowed to predict profile membership. Third, the demographics were allowed to freely predict the intercept factor. Fourth, the demographics were allowed to predict both growth factors (intercept and slope). Finally, the last two models were re-estimated allowing for these effects to vary across profiles.

This sequence was then repeated for the Wave 1 predictors (autonomy, quality of interpersonal relationships with the personnel, and managerial self-efficacy), specified as TIP. Using the most optimal model from this sequence, we then added the remaining time-specific predictors (Waves 2 to 4) to estimate their role as time-varying predictors (TVP). We first estimated a null effects model in which all relations between the TVP and within-profile time-specific AOC levels were constrained to be 0. Second, the effects of the TVP on the repeated AOC measures were constrained to equality across time and profiles. Third, the effects of the TVP were allowed to vary across profiles but not across time points. Fourth, the effects of the TVP were allowed to vary across time points but not across profiles. Finally, the effects of the TVP were allowed to vary across time points and profiles. We compared the fit of these alternative models using the aforementioned information criteria (AIC, CAIC, BIC, ABIC) to select the optimal solution (Diallo et al., 2017; Morin et al., 2016b).

Finally, for the outcomes, we used a model-based weighted ANOVA approach (Bakk & Vermunt, 2016; Bolck et al., 2004) implemented via the Auxiliary (BCH) function (Asparouhov & Muthén, 2015) to compare the time-specific outcome levels observed across each of the profiles. More specifically, at each time point, mean differences in outcome levels were contrasted across the profiles to determine whether, on average, individuals assigned to different AOC profiles also differed in a statistically significant manner on the time-specific outcome measures.

Results

The results from the alternative GMA solutions are reported in the top of Table 1. Although the aLMR nor the BLRT failed to converge on a solution, all four information criteria (AIC, CAIC, BIC, ABIC) reached their lowest value for the 5-profile solution. Inspecting this solution and the adjacent 4- and 6- profile solutions supported the value of adding a fifth profile (corresponding to Profile 4 in Figure 1), whereas the addition of a sixth profile resulted in the estimation of an empty profile. The five-profile solution was thus

retained and is graphically illustrated in Figure 1[1]. The estimates from this solution are reported in Table 2. Classification accuracy is reported in Table 3 and is quite high, ranging from .712 to .956, matching the high entropy value associated with this solution (.745).

The first profile characterized 18.5% of the sample displaying *High* levels of AOC at the beginning of the study (.418 *SD*) showing slight, but negligible (+.124 *SD*) increases over the course of the study. Profile 2 characterized 27.8% of the sample displaying *Moderately High* levels of AOC at the beginning of the study (.293 *SD*) showing a slight, but again negligible (-.061 *SD*) decreasing tendency over the course of the study. Profile 3 characterized 13.6% of the sample displaying close to average levels of AOC at the beginning of the study (i.e., the intercept of .165 did not differ from the sample mean of 0 in a statistically significant manner) showing a *Slowly Increasing* tendency over the course of the study (+.344 *SD*). Looking at the freely estimated loadings (i.e., time codes) reported in Table 2 for Time 2 and Time 3 in this profile, we can tell that 32.1% of the total increase observed in this profile occurred by Time 2, and 95.6% of that total increased occurred by Time 3 (midway through the study). Another way of viewing this result is to multiply these freely estimated loadings by the mean of the slope factor, which reflect the total amount of change observed in this profile over time. In this profile, the total amount of change occurring between Time 1 and Time 4 is of +.344 SD units; 32.1% of that total change (i.e., +.110 *SD* unit) has occurred by Time 2, and 95.6% (i.e., + .329 *SD*) has occurred by Time 3. These values can be added to the mean of the intercept factor (.165 at Time 1) to indicate the average AOC value observed in this profile at each time point: .165 at Time 1, .275 at Time 2, .494 at Time 3, and .509 (100% of the change) at Time 4. This profile thus seems to reflect a trajectory that switches from roughly average levels of AOC at the start of the study to a level comparable to that of the *High* profile 12 months into the study. Profile 4 characterized 27.7% of the sample displaying close to average levels of AOC at the beginning of the study but presenting a *Slowly Decreasing* trajectory over the course of the study (-.220 *SD*), with 34.8% of the total decrease occurring by Time 2, and 105.9% by time 3. This means that only a negligible amount of change (corresponding a small decrease of 5.9% took place between Time 3 and Time 4). This profile thus presents a switching tendency that is diametrically opposite to that observed in the *Slowly Increasing* profile, although the levels of AOC observed in this profile at the end of study remain close to the average and quite distinct from those observed in the upcoming *Very Low* profile. The last

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[1] The profile indicators (the repeated AOC measures) are factor scores estimated in standardized units (*M*= 0, *SD* = 1) saved from a longitudinally invariant measurement model, meaning that these scores can be interpreted in SD units as deviations around the sample mean.

profile characterized 12.4% of the sample displaying *Very Low* levels of AOC at the start of the study (-1.286 *SD*) which remained stable over time on the average (the slope factor mean was non-statistically significant). These profiles are aligned with, and thus support, Hypothesis 1, while highlighting the need to differentiate between *High* and *Moderately High* AOC trajectories.

Finally, examination of the time-specific residuals (the state component) showed that trajectories characterized by higher levels of AOC (i.e., *High* and *Moderately High* profiles) tended to fluctuate less over time (i.e., associated with smaller time-specific residuals, respectively $M_{SD(\varepsilon yi)}$ = .096 and .059), whereas trajectories characterized by lower levels of AOC (i.e., *Low* profile) tend to fluctuate more over time ($M_{SD(\varepsilon yi)}$ = .472). In addition, the *Slowly Increasing* profile displayed decreasing time-specific residuals as AOC levels increased over time ($M_{SD(\varepsilon yi)}$ =.277 at Waves 1 and 2 and .217 at Waves 3 and 4), while the *Slowly Decreasing* profile presented the opposite tendency ($M_{SD(\varepsilon yi)}$ =.183 at Waves 1 and 2 and .246 at Waves 3 and 4). These results support Hypothesis 2.

Predictors of AOC Trajectories

Results from the alternative predictive models are reported in the middle and bottom sections of Table 1. Regarding the demographic controls, the null effects model resulted in the lowest value on all information criteria (AIC, CAIC, BIC, and ABIC), thus supporting the superiority of this model. An examination of the parameter estimates associated with the alternative solutions was also consistent with this conclusion. These results are consistent with a lack of effects of the demographic variables.

The results of the models including the TIP (Time 1 predictors) are consistent with an effect on the likelihood of profile membership and on within-profile variations in the value of the intercept and slope factor that was identical across profiles, as this solution resulted in the lowest value on all four information criteria (AIC, CAIC, BIC, and ABIC). TVP were thus added to this solution. These subsequent analyses were consistent with the presence of time-varying effects of the TVP on time-specific levels of AOC that were equivalent across profiles and time points, as this model resulted in the lowest values on the CAIC and BIC. An examination of the parameters estimates from the alternative models also supported this conclusion. The results from this model are reported in Table 4.

Partially supporting Hypothesis 3a, school principals who reported greater levels of autonomy were more likely to belong to the *High* (1), *Moderately High* (2), *Slowly Increasing* (3), and *Slowly Decreasing* (4) profiles relative to the *Very Low* profile (5). Failing to support Hypothesis 3b, autonomy did not predict within-profile variations in the intercepts and slopes

of the trajectories. Supporting Hypothesis 3c, higher time-specific levels of autonomy were associated with time-specific increases in school principals AOC levels relative to their estimated trajectory. These results suggest that autonomy may be relevant to help school principals stay away from *Very Low* AOC trajectories, and that fluctuations in autonomy may also help to temporarily increase AOC levels.

The quality of principals' interpersonal relationships with the personnel was not associated with their likelihood of profile membership, thus failing to support Hypothesis 4a. Partially supporting Hypothesis 4b, the quality of these relationships was associated with higher initial levels of AOC (i.e., a positive association with the intercept), but with a reduction over time in these levels (i.e., a negative association with the slope). These associations were more pronounced in relation to the intercept factor than in relation to the slope factor, suggesting that school principals reporting more positive relationships remained likely to experience higher levels of AOC over time compared to those reporting poorer relationships. Failing to support Hypothesis 4c, time-specific levels of relationship were not associated with state-like deviations from principals' AOC trajectories.

Higher levels of managerial self-efficacy were associated with a higher likelihood of membership in the *High* profile (1) and *Moderately High* profile (2) relative to the *Slowly Decreasing* (4) profile, thus partially supporting Hypothesis 5a. Partially supporting Hypothesis 5b, higher levels of managerial self-efficacy were associated with higher initial levels of AOC, but with a decrease over time in the within-profiles levels of AOC (i.e., a negative association with the slope factor). Similar to the results obtained for interpersonal relationships, the initial boost in AOC levels associated with higher managerial self-efficacy remained greater than the subsequent decrease in AOC levels associated with these higher levels. However, in this case, higher time-specific levels of managerial self-efficacy were also associated with state-like increases in principals' estimated AOC trajectory, thus supporting Hypothesis 5c.

Outcomes of AOC Trajectories

The results of the outcome comparisons are reported in Table 5, and graphically illustrated in Figures 2 to 5. These results demonstrate that the statistically significant differences observed between profiles vary across time points for some outcomes but are stable for others.

Beginning with burnout, emotional exhaustion presented stable and identical associations with profile membership. Thus, across all time waves, emotional exhaustion was highest in the *Very Low* profile (5), followed by the *Slowly Decreasing* profile (4), and lowest in the

High (1), *Moderately High* (2), and *Slowly Increasing* (3) profiles which did not differ from one another. In contrast, associations between profile membership and cynicism differed over time. At Wave 1, cynicism was highest in the *Very Low* profile (5), followed by the *Slowly Decreasing* profile (4), and lowest in the *High* (1), *Moderately High* (2), and *Slowly Increasing* (3) profiles, matching the results obtained for emotional exhaustion. Although the pattern of results remained similar at Waves 2 to 4, the levels of cynicism observed in the *Moderately High* (2) profile became higher than those observed in the *High* (1) profile starting in Wave 2, as well as those observed in the *Slowly Increasing* (3) profile at Wave 4. These results generally support Hypothesis 6.

For job satisfaction, Figure 2 displays results that match the shape of the AOC trajectories, supporting Hypothesis 7. At Waves 1 and 2, job satisfaction was highest in the *High* (1), *Moderately High* (2), and *Slowly Increasing* (3) profiles, which did not differ from one another, followed by the *Slowly Decreasing* (4) profile (which did not differ from the *Slowly Increasing* one at Time 1), and then by the *Very Low* profile (5). At Waves 3 and 4, the pattern of results remains similar, except that job satisfaction was now higher in the *High* (1) profile than in the *Moderately High* (2) profile, a tendency that was maintained at Wave 4. At Wave 4, job satisfaction levels observed in the *Slowly Increasing* (3) profiles also became higher than those observed in the *Moderately High* (2) profile.

At Waves 1 and 2, turnover intentions were highest in the *Very Low* profile (5), followed equally by the *Slowly Decreasing* (4), *Slowly Increasing* (3), and *Moderately High* (2) profiles, and then by the *High* (1) profile (which did not differ from the *Slowly Increasing* one). By Wave 3, turnover intentions had become higher in the *Moderately High* (2) profile than in the *Slowly Increasing* (3) profile, but equivalent in the *High* (1) and *Moderately High* (2) profiles. Finally, at Wave 4, turnover intentions were still highest in the *Very Low* profile (5), followed equally by the *Moderately High* (2) and *Slowly Decreasing* (4) profile, and lowest in the *High* (1) and *Slowly Increasing* (3) profiles, which did not differ from one another. These changes mainly reflect the decrease in turnover intentions between Waves 2 and 3 in the *Slowly Increasing* (3) profile. These results support Hypothesis 8.

Discussion

As an affective bond describing the relationship between employees and their occupation (Klein et al., 2012; Meyer & Herscovitch, 2001), we positioned AOC as a core indicator of the extent to which the occupation has become internalized within employees' professional identity (Gagné, & Howard, 2016; Meyer et al., 2004, 2006, 2008). Reflecting this internalization process, this dynamic bond is expected to evolve as a function of employees'

adaptation to the changing nature of their occupational role and personal goals throughout the course of their career (Baltes et al., 2014; Spurk et al., 2019). From this perspective, it is not surprising to note that AOC has repeatedly been shown to positively contribute to shape work-related attitudes, values and behaviors (Cooper-Hakim & Viswesvaran, 2005; Spurk et al., 2019; Wang et al., 2019), and to nurture psychological well-being at work (Houle et al., 2020; Meyer & Maltin, 2010). Yet, despite this generally recognized dynamic nature, longitudinal investigations seeking to understand the evolution of this construct, and inter-individual differences in the shape of this evolution, remain a rare exception.

To address this gap, this study sought to document how AOC evolves over time among well-established public school principals, a socially valued occupation typically characterized by a long occupational tenure. In doing so, we considered the shape of this evolution, the distinct subpopulations (or profiles) of school principals characterized by qualitatively distinct AOC trajectories, and whether these distinctive profiles also differed in their propensity to display more or less pronounced time-specific fluctuations in AOC levels. To better grasp the work-related drivers of these AOC trajectories, we then considered the role played by three work characteristics closely related to principals' need for autonomy, relatedness, and competence, proposed by OIT/SDT to be core drivers of the process of internalization expected to characterize AOC. Finally, we sought to document the implications of these profiles by investigating how they related to principals' levels of burnout, job satisfaction, and turnover intentions. Beyond the generic implication of our results for our understanding of AOC in general, we also highlight their relevance to the recruitment and training of public school principals, as well as to the optimization of their work conditions to help foster more desirable AOC trajectories.

Affective Occupational Commitment Trajectories

Supporting Hypothesis 1 and providing further evidence suggesting the need to account for inter-individual heterogeneity when considering AOC trajectories (Salzmann et al., 2018), we identified five profiles of school principals following qualitatively distinct AOC trajectories. Specifically, 58.7% of our sample corresponded to one of three profiles characterized by slowly evolving, or relatively stable, trajectories characterized by persistently *High* (Profile 1), *Moderately High* (Profile 2), or *Very Low* (Profile 5) levels of AOC. Based on OIT/SDT, the *High* and *Moderately High* profiles (forming 46.3% of our sample) are thought to reflect a process of complete (integration), or at least advanced (identification), internalization of the occupational role into participants' professional identity in a way that has achieved some degree of persistence over time. More precisely, these

profiles suggest a strong sense of occupational identity that is resilient to most internal or external changes unfolding in the life of these principals. In contrast, the *Very Low* profile (12.4% of our sample), rather seems to describe a more controlled form of regulation whereby the occupational role is rather seen as having little value or personal meaningfulness for the principals, and thus unlikely to become an internalized part of their identity. The remaining 41.3% of our sample were rather characterized by a process of internalization that was still evolving, either *Slowly Increasing* (Profile 3) or *Slowly Decreasing* (Profile 4). These principals thus seemed to be experiencing a change in the internalization of their occupational role into their professional identity, possibly as a result of a change in the characteristics of their work, of an evolution in their values or aspirations, or of a combination of both. For some of them, these changes seem to favor a better internalization (i.e., *Slowly Increasing* AOC levels that became more stable over time), whereas for others the occupational role became increasingly discrepant with their own goals, values, and aspirations (i.e., *Slowly Decreasing* AOC levels that became less stable over time).

These results thus provide preliminary evidence of continuity and change in the AOC trajectories observed among a sample of well-established employees, thus supporting the representation of AOC as a dynamic long-term bond between employees and their occupational roles (Spurk et al., 2019). However, in this regard, it is important to acknowledge that we monitor only a short period of time within school principal's lengthy career trajectories. Replication over longer periods of time covering important career milestones (e.g., onboarding, promotions) will thus be needed to increase our understanding of AOC from a true lifespan perspective. Moreover, although we provide theoretical explanations for the psychological mechanisms underpinning the stability and malleability of AOC trajectories, our results do not clearly allow us to support these propositions, at least beyond the role of the need-nurturing work characteristics to which we will come back later. Thus, future research will be needed to further the understanding of these mechanisms.

Interestingly, the two-year time frame considered in this study made it possible observe that the changes occurring in the *Slowly Increasing* and *Slowly Decreasing* profiles remain modest, thus supporting our assertion that changes in AOC occurs progressively among established employees (Houle et al., 2020; Salzmann et al., 2018; Spurk et al., 2019). However, our results also suggest that this change requires an initial period (6 months) of assessment of one's changing situation, before being expressed more drastically over the next six months and stabilizing thereafter. This observation supports the idea that important changes in AOC levels can occur within a period of six months (Solinger et al., 2013), while

telling us that changes do not occur out of the blue but are preceded by a six-month period of precontemplation in which smaller changes can already be observed. From an intervention perspective, this result suggests that the careful monitoring of AOC trajectories can be used to identify initial decreases in AOC levels, making it possible to intervene before the crystallization of this decrease into a less desirable trajectory.

A Self-Equilibrium Perspective on AOC Trajectories

Supporting Hypothesis 2, our results provided evidence that self-equilibrium processes (e.g., Morin et al., 2013, 2017) were at play in principals' AOC trajectories. Thus, profiles characterized by higher AOC were also characterized by less fluctuations in AOC levels, suggesting a more consistently internalized sense of professional identity that is resilient to internal or external changes. This interpretation is aligned with the theoretical recognition of AOC as a dynamic, career-long bond that, when internalized (Meyer et al., 2004), becomes engrained within one's occupational identity (Spurk et al., 2019). In contrast, when internalization is weaker, and thus when principals' engagement in their occupation tends to be less driven by a sense of emotional connection, AOC should naturally be more permeable to the influence of time-specific fluctuations in their personal or professional context (Morin et al., 2-013, 2017; Ryan & Deci, 2017). In plain language, these results indicate that lower levels of AOC seem to be more contingent on internal or external circumstances relative to higher levels of AOC, showcasing the indissociable nature of AOC levels and rates of fluctuations. This link appears particularly strong, as evidenced by the fact that profiles characterized by *Slowly Increasing* or *Slowly Decreasing* AOC trajectories were also characterized by increasingly or decreasingly stable AOC levels. From a practical perspective, these results suggest that interventions seeking to increase or support AOC would also need to account for the degree of contingency, or reactivity, of AOC trajectories. This implies that punctual interventions designed to boost commitment are unlikely to be efficient in the long run unless they are designed to generate a long-term fit between principals and their occupation that will facilitate more integrated forms of internalization and to nurture the psychological skills necessary to maintain a sense of balance in relation to one's identity.

From a theoretical perspective, it is interesting to note that the self-equilibrium hypothesis has not always been supported. Indeed, tentative evidence suggests that self-equilibrium processes might be reversed when work motivation is considered, suggesting that more extreme levels of motivation (high or low) tend to fluctuate more widely over time than average levels (Gillet et al., 2018). When we consider the various constructs for which the self-equilibrium hypothesis has been previously supported (e.g., Authors, under review;

Morin et al., 2013, 2017; Mund & Neyer, 2016) or not (Gillet et al., 2018), these results suggest that AOC might be better conceptualized as a self-defining construct with motivational implications rather than as a purely motivational construct. Of course, this tentative interpretation awaits replication of the present results, and further investigations of the self-equilibrium hypothesis involving a greater variety of motivational and identity-related constructs.

Need-Supportive Conditions and AOC Trajectories

From the perspective of OIT/SDT, the conceptualization of AOC as an affective bond (Meyer & Herscovitch, 2001) reflecting employees' adaptation to their work context (Baltes et al., 2014; Spurk et al., 2019) through a process of internalization (Meyer et al., 2004, 2006, 2008) suggests that AOC should be impacted by the extent to which their basic needs for autonomy, relatedness and competence are supported in their occupational life (Deci & Ryan, 1985; Ryan & Deci, 2017). To verify this proposition, we considered the role played by school principals' perceptions of professional autonomy (indicative of work conditions supportive of the need for autonomy), quality of relationships with the school personnel (indicative of work conditions supportive of the need for relatedness), and managerial self-efficacy (indicative that the need for competence has been met) as predictors of AOC profiles and trajectories. Considering the trait and state components of GMA, we hypothesized that principals reporting higher levels of satisfaction of these three needs would be more likely to report more desirable AOC profiles, higher initial levels of AOC and increasing AOC trajectories, as well as to undergo short-term increases in AOC as a result of increases in their levels of need satisfaction.

Partially supporting Hypothesis 3a, principals reporting a greater sense of professional autonomy were less likely to correspond to the *Very Low* AOC profile. However, and failing to support Hypothesis 3b, their levels of professional autonomy did not predict increases in AOC levels over time. Finally, and supporting Hypothesis 3c, principals reporting higher time-specific levels of professional autonomy were also more likely to report short term boosts in their levels of AOC. These results suggest that professional autonomy might act as a safeguard against the emergence of a *Very Low* longitudinal AOC profile among school principals, while short term fluctuations in their levels of professional autonomy might also be more directly linked to the time-specific experiences of AOC. Despite these benefits, however, professional autonomy does not appear to play a role in the differentiation of profiles characterized by moderate to high levels of AOC, nor to directly shape the evolution of AOC trajectories. From the perspective of OIT/SDT (e.g., Ryan & Deci, 2017), these

results suggest that the satisfaction of the need for autonomy may help protect school principals from engaging their occupational role AOC in a purely controlled fashion, but without being sufficient to support a complete process of internalization of this role in their professional identity.

Partially supporting Hypothesis 4b, principals' reporting more positive interpersonal relationships with the personnel were more likely to display higher initial levels of AOC, although this effect partially faded over time. In revealing that principals exposed to more positive relationships tended to display higher levels of AOC, this result supports the idea that they might be particularly sensitive to the quality of their work relationships (Houle et al., 2020; Trépanier et al., 2012). The observation that these higher initial levels tended to fade over time also suggests that benefits stemming only from the need for relatedness might be hard to maintain over time when they have not been fully integrated into a strong sense of professional identity (Fernet et al., 2012). This negative association can also indicate that principals who were initially negatively impacted by their exposure to poorer relationships seemed to experience a slight increase over time in their levels of AOC. This converse perspective suggests that these principals may come to downwardly adjust their relational expectations, which may help them to partly offset the initial negative impact of their poor relationships with the school personnel. Indeed, individuals are continuously creating and adjusting their expectations about their work life (e.g., Boswell et al., 2005; Solinger et al., 2013), such as the extent to which various needs can realistically be met at work. Such expectations, when proven wrong, lead to subsequent adaptation processes via which new expectations come to be slowly formed and tested against their ever-evolving work reality. This interpretation, aligned with the idea that interpersonal relationships slowly shape AOC trajectories via a progressive adjustment of one's expectations, is consistent with the observation that interpersonal relationships did not predict membership into profiles characterized by distinct AOC trajectories (thus failing to support Hypothesis 4a). It is also consistent with the additional observation that time-specific fluctuations in interpersonal relationships levels did not result in short-term fluctuations in AOC levels (thus failing to support Hypothesis 4c).

Partially supporting Hypothesis 5a, school principals reporting higher levels of managerial self-efficacy were more likely to belong to the most desirable *High* and *Moderately High* profiles relative to the *Slowly Decreasing* one. Furthermore, principals presenting higher levels of managerial self-efficacy also tended to display higher initial levels of AOC, although these benefits also seemed to partially fade over time, thus only providing

partial support to Hypothesis 5b. This last result suggests that principals seeing themselves as highly effective from the start may come to feel less positively challenged by their occupation as time goes on, leading to slight decreases in their AOC levels. However, and supporting Hypothesis 5c, time-specific increases in managerial self-efficacy were also found to be positively associated with time-specific increases in AOC levels, suggesting that continuous efforts to maintain managerial self-efficacy over time may help to circumvent this fading away of the initial benefits of managerial self-efficacy. As school principals are continuously dealing with a range of novel situations, their sense of competence is likely to be regularly tested, leading to an ongoing adaptation of their managerial self-efficacy. Some may overestimate their managerial self-efficacy and be humbled by situations revealing gaps in their competencies, whereas others may unexpectedly find themselves able to solve novel issues in a way that exceeded their expectations.

When we consider these results together, they seem to be consistent with OIT/SDT assumption that satisfaction of all three needs is required for internalization to occur (Ryan & Deci, 2017). More precisely, these results highlight the complementary role of all three needs in a way that seems to be highly relevant for intervention. Thus, from a practical perspective, interventions focused on cultivating autonomy-supportive work conditions might be particularly relevant to help school principals stay away from the most undesirable profile (*Low*), whereas those targeting managerial self-efficacy might support the emergence of more desirable profiles (*High* and *Moderately High*) relative to profiles characterized be *Slowly Decreasing* AOC trajectories. In a complementary manner, efforts to foster a work environment allowing for the development of positive relationships with the school personnel, as well as efforts to nurture managerial self-efficacy, may be particularly relevant to nurture higher trait-like levels of AOC across all profiles. Finally, interventions seeking to achieve short term boosts in AOC levels, such as in professional development training programs or workshops, would benefit from a focus on professional autonomy and managerial self-efficacy, which can even help to offset further decreases in AOC levels occurring because of principals' habituation to their occupation over time. Thus, interventions targeting all three needs appear necessary to maximize the likelihood of experiencing the most desirable AOC profiles, characterized by higher initial levels, less pronounced decreases over time, and to achieve short terms boost over time designed to help offset habituation. In addition, our results also clearly point toward managerial self-efficacy as a possibly potent lever of intervention to nurture AOC among school principals. These results are aligned with the self-equilibrium hypothesis (e.g., Morin et al., 2013, 2017) and OIT/SDT (Ryan & Deci, 2000,

2017) in suggesting that the most potent drivers of the ability to develop and maintain a strong core sense of professional identity (as reflected in AOC) are those reflecting an internalization of the benefits afforded by need nurturing conditions, such as managerial self-efficacy.

Outcomes Implications of AOC Trajectories

From the perspective of OIT/SDT (Ryan & Deci, 2017) and commitment theory (Meyer & Maltin, 2010), higher levels of internalization, as reflected in higher levels of AOC, should be closely related to higher levels of psychological health and well-being (e.g., Meyer & Maltin, 2010). Indeed, our results revealed that principals' time-specific levels of emotional exhaustion and cynicism inversely matched profile-specific levels of AOC observed at the same time point. However, the lowest levels of emotional exhaustion were found to be equivalent among members of the three profiles characterized by the highest AOC levels (*High*, *Moderately High*, and *Slowly Increasing*), suggesting that once AOC levels are high enough to limit the risk of burnout, their benefits reach a plateau. Likewise, although associations between levels of AOC and cynicism fluctuated slightly over time, the overall pattern of association remained the same as for emotional exhaustion, with one exception. Indeed, over the course of the study, levels of cynicism came to be slightly higher among school principals corresponding to the *Moderately High* profile relative to those corresponding to the *High* (by Time 2) and *Slowly Increasing* (by Time 4) profiles, suggesting that the aforementioned plateauing may not generalize to cynicism. As cynicism refers to a state of interpersonal detachment from work (Leiter & Maslach, 2004; Maslach et al., 2001), it is likely to be experienced through a stronger symbiosis with AOC, and thus more attuned to changes occurring at higher AOC levels. Overall, these results thus support the previous observation that membership into a profile characterized by high or increasing levels of AOC seem to be accompanied by a lower risk of burnout (e.g., Morin et al., 2015; Meyer et al., 2019). However, as noted by Houle et al. (2020), so long as commitment remains driven by an emotional attachment (AOC), its benefits will not necessarily be proportional, as illustrated by the plateauing effect identified here.

Supporting Hypotheses 7 and 8, our results also revealed that profile-specific levels of AOC observed at each time point corresponded to principals' levels job satisfaction observed at the same time point, and inversely corresponded to their turnover intentions at the same time point. These benefits were not accompanied by any plateauing effect. However, observing that the *Moderately High* and *Slowly Decreasing* profiles displayed similar turnover intentions was more intriguing, suggesting that the *Moderately High* profile may not be entirely desirable. This effect, however, could be related to the fact that the overall within-

profile AOC trajectories identified in both of these profiles was characterized by slight (*Moderately High*) to more pronounced (*Slowly Decreasing*) decreasing trajectories. Indeed, individuals who experience a steady decline in their AOC levels are likely to have a more negative outlook on their occupational future, and thus to consider alternative career paths. The present study suggests that this seems to be the case irrespective of how high these decreasing levels are to begin with. Thus, although there is ample variable- (Cooper & Viswesvaran, 2005; Lee et al., 2000) and person- (Houle et al., 2020; Meyer et al., 2019; Morin et al., 2015; Morin et al., 2011a) centered evidence indicating negative associations between AOC and turnover intentions, this study is the first to demonstrate a more complex reality in which turnover intentions may be better accounted for by considering both the level of AOC, but also the shape of AOC trajectories. In contrast, job satisfaction levels seemed to be maintained over time irrespective of this slight decrease in AOC levels, and do not seem to plateau when AOC gets higher, thus highlighting unconditional benefits of AOC in terms of job satisfaction (e.g., Houle et al., 2020; Meyer & Maltin, 2010).

When considered together, these results shed some valuable insights for the development of interventions seeking to improve AOC and psychological functioning over time. First, due to the plateauing effect characterizing the benefits of AOC in relation to burnout, interventions seeking to prevent burnout could possibly benefit from efforts to improve AOC up to the level beyond which its benefits stop rather than trying to go all the way. In this regard, our previous results suggest that nurturing professional autonomy might help principals to stay away from the least desirable AOC profiles, in turn reducing their risk of experiencing burnout. Second, special care may be taken to target employees' experiencing decreasing AOC trajectories to limit the risk of losing these employees to another occupation (i.e., turnover intentions). Finally, although it may not be necessary to invest extra efforts to nurture very high levels of AOC when the focus is placed on burnout prevention, it remains important to note that any effort to increase AOC should lead to matching benefits in terms of job satisfaction. Overall, our results thus support the notion that monitoring AOC levels at any given time point is not enough to adequately capture the dynamic interplay between AOC and psychological well-being as it evolves over time, thus reinforcing the need for more intensive longitudinal studies.

Limitations and Suggestions for Future Research

Despite its strengths, this study has limitations. First, we relied on self-report measures, which are known to be vulnerable to various forms of self-report biases. It would be important for future studies to consider more objective measures, such as actual turnover data, and

multiple sources of information when evaluating the quality of school principals' work context (e.g., personnel reports or observational ratings of the quality of interpersonal relationships). Second, this study is the first to rely on person-centered analyses of AOC trajectories. As such, the generalizability of our results remains tentative pending replication. Person-centered evidence is built from an accumulation of studies allowing for the identification of profiles emerging systematically, of profiles emerging in some situations or in some occupational groups, and of profiles that only seem to reflect random sampling variations (e.g., Meyer & Morin, 2016; Morin & Litalien, 2019). In this regard, it would be important for future studies to expand upon our results by considering other types of managers, more diversified samples of public and private employees, as well as a distinct or more comprehensive set of predictors (e.g., personality, work conditions, person-organization value fit) and outcomes (e.g., performance, work-life balance).

Third, this study focused on AOC, thus ignoring the other commitment mindsets (e.g., normative and continuance: Houle et al., 2020) or targets (e.g., organization, supervisor, workgroup, customers or students: Morin et al., 2011a; Perreira et al., 2018). For instance, the equivalent levels of turnover intentions observed in *Moderately High* and *Slowly Decreasing* profiles might have resulted from other mindsets, which might have helped to reduce turnover intentions in the latter profile (high levels), or to increase these intentions in the former (low levels) (Houle et al., 2020). Additional studies will be required to verify this claim, as well as to enrich our understanding of longitudinal profiles of commitment defined while encompassing multiple targets and/or mindsets.

Fourth, although our two-year time interval is a strength (i.e., allowing us to detect changes in AOC trajectories), especially when considering the scarcity of longitudinal studies focused on AOC among any type of employees, it is also a limitation when it comes to our ability to draw inferences from a lifespan, or career-long perspective. Irrespective of the time interval selected for any specific study, results are always conditioned by that time interval (Cole & Maxwell, 2000). As such, the only way to obtain a complete picture of AOC trajectories is to rely on a diversity of studies relying on different time frames, on more or less established employees, and even on employees undergoing specific life changing transitions (i.e., promotion, change in occupation, etc.). Moreover, obtaining a complete picture of AOC from a lifespan perspective will require monitoring individuals over longer time intervals, covering major career milestones. As occupational commitment is thought to evolve fairly slowly for school principals (Houle et al., 2020), it made sense to focus on a two-year time interval in the current study in attempts to capture a glimpse of their lifespan trajectories. Yet,

this may not be the case when investigating other targets of commitment that theoretically fluctuate more quickly (e.g., colleagues or supervisors) or when investigating less established employees. Moreover, even with a similar timeline, the generalizability of our findings may also be limited to populations with similar occupational characteristics (i.e., top manager, lengthy tenure, restricted occupational mobility, public system), thus reinforcing the need for replication among more diverse samples.

Conclusion

The importance of AOC as a core component of one's professional identity and as a positive binding force tying employees to their occupation has long been recognized in organizational research (Lee et al., 2000; Meyer et al., 1993). However, it is only more recently that AOC has also been positioned as a dynamic construct reflecting employees ongoing process of adaptation to their professional career (Spurk et al., 2019; Sullivan & Baruch, 2009) via a process of internalization of their occupational role into their professional identity (e.g., Gagné, & Howard, 2016). This study sought to better document this emerging representation of AOC via the theoretical lens of OIT/SDT (e.g., Ryan & Deci, 217). Supporting this dynamic, longitudinal perspective, we found that AOC trajectories matched five distinct profiles, two of which were characterized by changing AOC levels over time. These profiles also seemed characterized by self-equilibration processes (i.e., more desirable levels tended to be more stable, reflecting a stronger process of internalization) identified in research on human identity (e.g., Morin et al., 2013, 2017), suggesting that AOC might be more self-defining and represent an integrated form of internalization of occupational values with long-term benefits for psychological health. In this regard, and matching OIT/SDT, these profiles differed in relation to job satisfaction, burnout, and turnover intentions in a way that generally matched the levels of AOC observed in the profiles. However, the benefits of AOC seemed to plateau in relation to emotional exhaustion, while decreasing trajectories seemed to be a main driver of turnover intentions.

From a practical perspective, our results indicated that managerial self-efficacy might represent a core driver of more desirable AOC trajectories, while job autonomy might serve to provide both a long-term protective mechanism against the adoption of a *Very Low* AOC trajectory and temporary boosts in AOC levels. In contrast, positive relationships with the school personnel seemed to be mainly helpful for nurturing higher initial levels of AOC. However, these initial increases could not be fully sustained over time in the absence of other interventions, thus supporting OIT/SDT assertion of the importance to simultaneously support the three basic psychological needs. These results also highlight highly diverse associations

between work characteristics and AOC levels, thus helping to position AOC at the nexus of employees' adaptation to their occupational career. Understanding the subtle differences between work conditions that help foster temporary versus more permanent changes in AOC would thus greatly benefit organizations and practitioners whose resources are often limited.

Tables & Figures
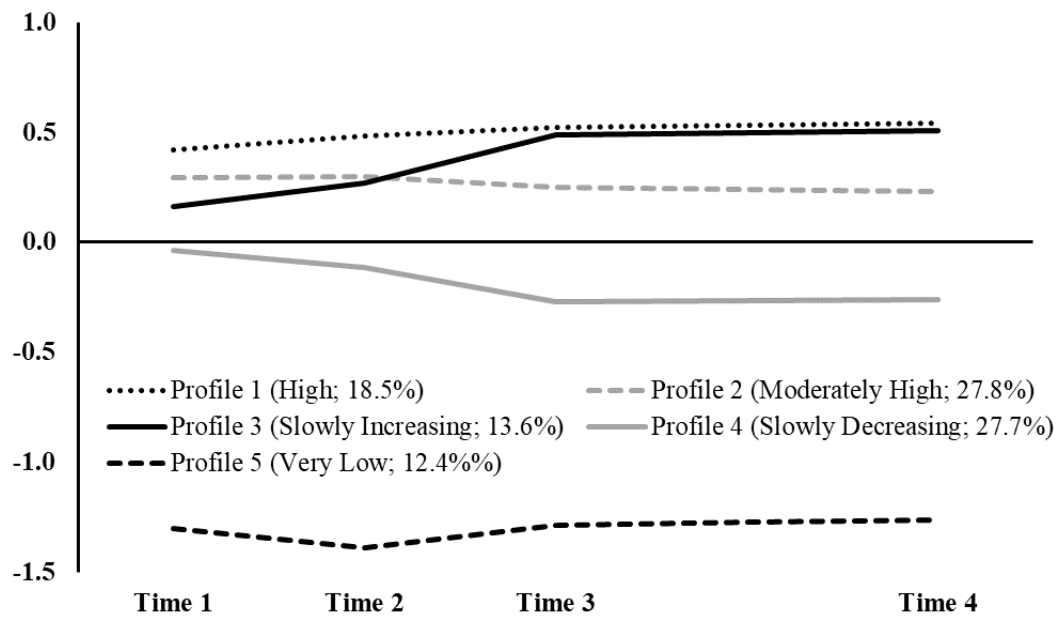
Figure 1. Final 5-Profile Solution for study 1: Affective Commitment to the Occupation Trajectories

Note. Profile indicators are factor scores with mean of 0 and a standard deviation of 1.
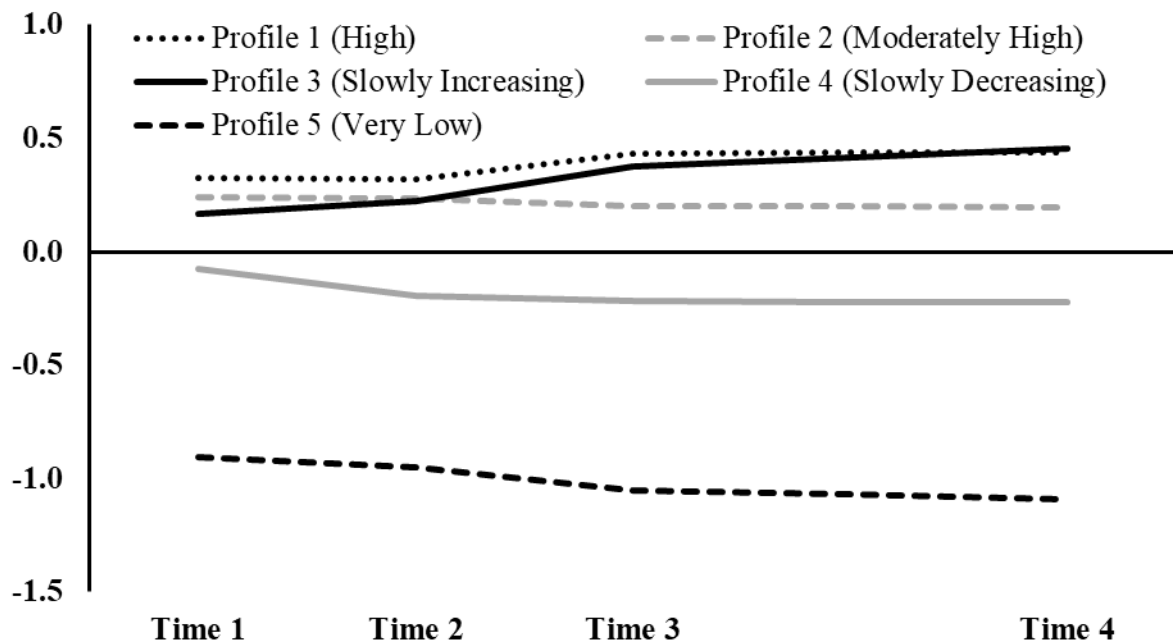
Figure 2. Job Satisfaction Trajectories within the Final 5-Profile Solution.

Note. Outcome indicators are factor scores with mean of 0 and a standard deviation of 1.
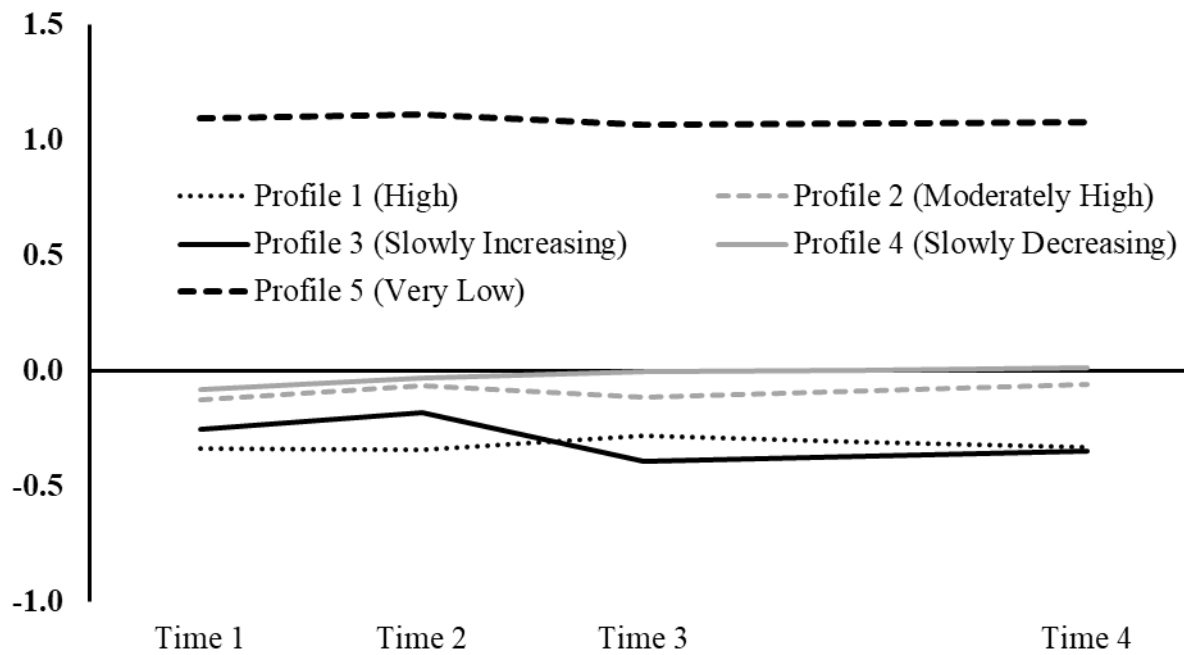
Figure 3. Turnover Intentions Trajectories within the Final 5-Profile Solution.

Note. Outcome indicators are factor scores with mean of 0 and a standard deviation of 1.
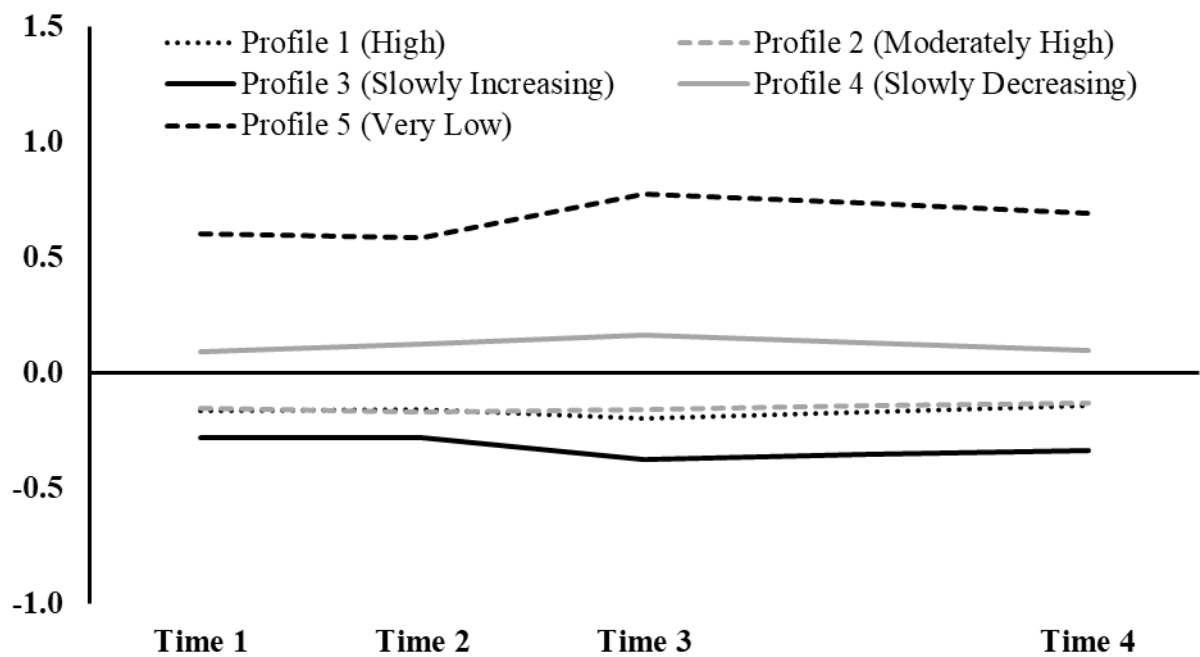
Figure 4. Emotional Exhaustion Trajectories within the Final 5-Profile Solution.

Note. Outcome indicators are factor scores with mean of 0 and a standard deviation of 1.
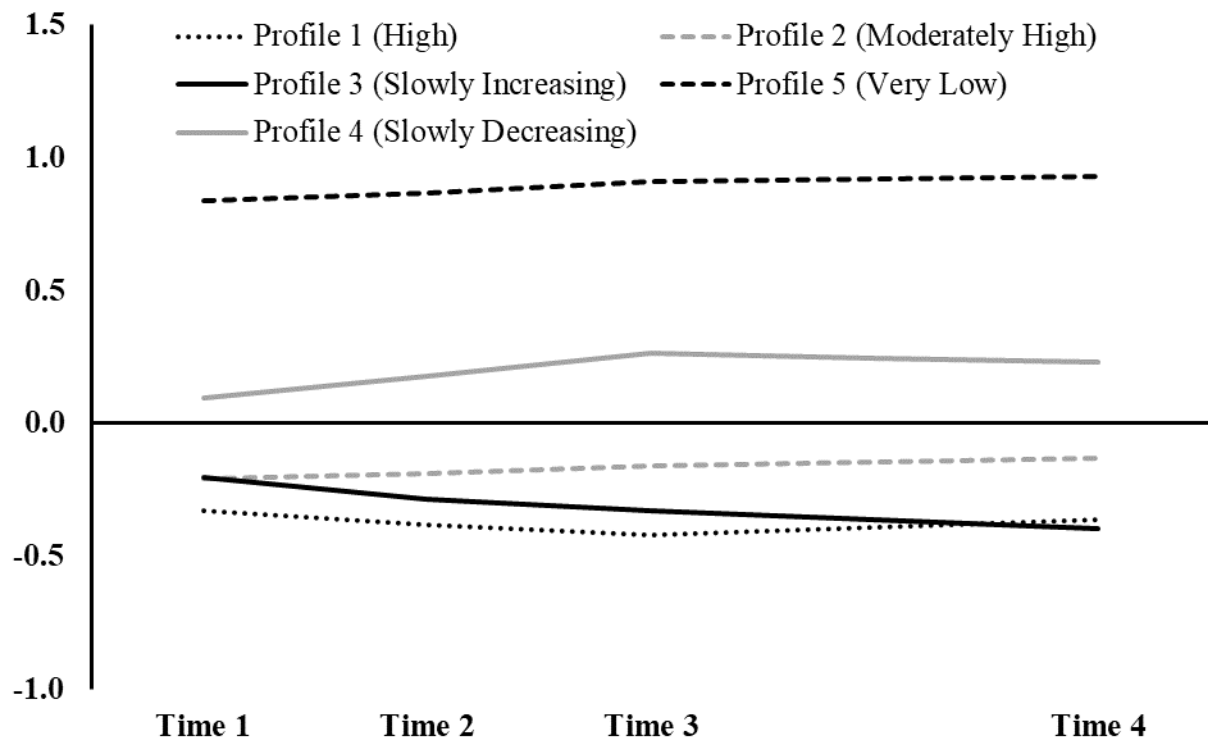
Figure 5. Cynicism Trajectories within the Final 5-Profile Solution.

Note. Outcome indicators are factor scores with mean of 0 and a standard deviation of 1.

Table 1

Results from the Growth Mixture Analyses for Study 1

	LogLikelihood	#*fp*	Scaling	AIC	CAIC	BIC	ABIC	Entropy	aLMR	BLRT
Unconditional Growth Mixture Analyses										
1 Class	-1328.078	11	2.455	2678.157	2738.588	2727.588	2692.662	Na	Na	Na
2 Class	-918.301	20	1.725	1876.601	1986.476	1966.476	1902.976	.759	$\leq .01$	$\leq .01$
3 Class	-787.115	29	1.299	1632.230	1791.549	1762.549	1670.473	.725	$\leq .01$	$\leq .01$
4 Class	-727.470	38	1.532	1530.941	1739.703	1701.703	1581.052	.758	$\geq .05$	$\leq .01$
5 Class	-686.300	47	1.346	1466.599	1724.806	1677.806	1528.579	.745	$\geq .05$	$\leq .01$
6 Class	-701.609	56	1.419	1515.219	1822.869	1766.869	1589.067	.727	$\geq .05$	$\leq .01$
7 Class	-696.351	65	1.070	1522.703	1879.797	1814.797	1608.420	.792	$\geq .05$	$\geq .05$
8 Class	-684.095	74	0.951	1516.191	1922.728	1848.728	1613.776	.818	$\geq .05$	$\leq .01$
Models with Time 1 Demographic Predictors										
Null Effects	-582.952	4	1.000	1173.905	1194.811	1190.811	1178.114	.739	Na	Na
Effects on C	-567.105	28	1.006	1190.211	1336.554	1308.554	1219.679	.751	Na	Na
Effects on C, I (inv.)	-562.959	34	1.006	1193.918	1371.620	1337.620	1229.701	.755	Na	Na
Effects on C, I, S (inv.)	-561.197	40	0.976	1202.394	1411.455	1371.455	1244.491	.756	Na	Na
Effects on C, I (free across profiles)	-552.232	58	1.036	1220.465	1523.604	1465.604	1281.506	.741	Na	Na
Effects on C, I, S (free across profiles)	-534.062	88	1.105	1244.124	1704.059	1616.059	1336.738	.756	Na	Na
Models with Time Invariant Predictors										
Null Effects	-687.202	4	1.000	1382.404	1404.373	1400.373	1387.673	0.744	Na	Na
Effects on C	-647.229	16	1.023	1326.457	1414.333	1398.333	1347.533	0.751	Na	Na
Effects on C, I (inv.)	-644.546	19	1.078	1327.091	1431.444	1412.444	1352.118	0.748	Na	Na
Effects on C, I, S (inv.)	-602.938	22	1.071	1249.875	1370.704	1348.704	1278.854	0.754	Na	Na
Effects on C, I (var.)	-596.119	34	1.129	1260.239	1446.975	1412.975	1305.024	0.753	Na	Na
Effects on C, I , S (var.)	-586.806	46	1.220	1265.612	1518.255	1472.255	1326.203	0.757	Na	Na

Table 1 (Continued)

LogLikelihood	#*fp*	Scaling	AIC	CAIC	BIC	ABIC	Entropy	aLMR	BLRT
Models with Time Varying Predictors									
Null Effects	-602.938	22	1.071	1249.875	1370.704	1348.704	1278.854	0.754	Na	Na
Effects on Time & Profiles (inv.)	-555.226	25	1.284	1160.451	1297.757	1272.757	1193.382	0.754	Na	Na
Effects on Time (inv.) & Profiles (var.)	-533.844	37	1.442	1141.688	1344.901	1307.901	1190.425	0.755	Na	Na
Effects on Time (var.) & Profiles (inv.)	-550.642	34	1.272	1169.283	1356.019	1322.019	1214.068	0.754	Na	Na
Effects on Time & Profiles (var.)	-499.090	82	1.260	1162.18	1612.543	1530.543	1270.191	0.771	Na	Na

Note. N=661; #fp: Number of Free Parameters; Scaling = scaling factor; AIC: Akaïke Information Criteria; CAIC: Constant AIC; BIC: Bayesian Information Criteria; ABIC: Sample-Size adjusted BIC; ICL-BIC: entropy-adjusted BIC; aLMR: Adjusted Lo-Mendell-Rubin likelihood ratio test; BLRT: Parametric Bootstrapped Likelihood Ratio Test. Not applicable; C: Profile membership; I: Intercept factor; S: Slope factor.

Table 2

Parameter Estimates for the Final Unconditional Growth Mixture Solution for Study 1

Parameter	Profile 1 (High) Estimate (*t*)	Profile 2 (Moderately High) Estimate (*t*)	Profile 3 (Slowly Increasing) Estimate (*t*)	Profile 4 (Slowly Decreasing) Estimate (*t*)	Profile 5 (Very Low) Estimate (*t*)
Intercept mean	.418 (5.522)**	.293 (4.366)**	.165 (1.585)	-.031 (-.403)	-1.286 (-5.307)**
Slope mean	.124 (5.224)**	-.061 (-4.788)**	.344 (3.212)**	-.220 (-4.129)**	.048 (1.640)
Intercept variability (SD = $\sqrt{\sigma}$)	.627 (9.390)**	.627 (9.390)**	.627 (9.390)**	.627 (9.390)**	.627 (9.390)**
Slope variability (SD = $\sqrt{\sigma}$)	.122 (4.710)**	.122 (4.710)**	.122 (4.710)**	.122 (4.710)**	.122 (4.710)**
Intercept-slope correlation	-.078 (-7.271)**	-.078 (-7.271)**	-.078 (-7.271)**	-.078 (-7.271)**	-.078 (-7.271)**
Loading Time 1 (λ_{1k})	0 (NA)	0 (NA)	0 (NA)	0 (NA)	0 (NA)
Loading Time 2 (λ_2)	.532 (7.158)**	-.102 (-.901)	.321 (2.204)*	.348 (3.492)**	-1.657 (-4.616)**
Loading Time 3 (λ_{3k})	.854 (5.727)**	.715 (29.693)**	.956 (6.408)**	1.059 (7.296)**	.310 (.557)
Loading Time 4 (λ_{4k})	1 (NA)	1 (NA)	1 (NA)	1 (NA)	1 (NA)
SD(εyi)_T1	.095 (3.618)**	.126 (5.696)**	.270 (1.297)	.179 (2.581)**	.505 (5.309)**
SD(εyi)_T2	.000 (.110)	.045 (1.680)	.283 (3.147)**	.187 (2.781)**	.032 (1146.322)**
SD(εyi)_T3	.148 (2.743)**	.032 (1.632)	.210 (3.069)**	.295 (5.990)**	.643 (4.376)**
SD(εyi)_T4	.141 (4)**	.032 (2.031)*	.224 (3.048)**	.197 (2.088)*	.707 (4.862)**

Note. t = Estimate / standard error of the estimate (t values are computed from the original variance estimate and not from the square root); SD(εyi) = Standard deviation of the time-specific residual; NA = not applicable (i.e., fixed parameter);. The square root of the estimate of variability (trajectory factor, time-specific residual) is presented so that the results can be interpreted in the same unit as the construct used in the model (here, standardized factor score with a mean of 0 and an SD of 1); * p ≤ .05; ** p ≤ .01.

Table 3

Classification Probabilities for the Most Likely Latent Class Membership (Column) by Latent Class (Row) for Study 1.

	High	Moderately High	Slowly Increasing	Slowly Decreasing	Very Low
High	.803	.109	.047	.038	.002
Moderately High	.021	.956	.005	.016	.002
Slowly Increasing	.141	.023	.712	.097	.027
Slowly Decreasing	.049	.036	.036	.841	.037
Very low	.006	.010	.033	.144	.807

Table 4

Results from the Predictive Analyses for Study 1

Predictors	Profile 1 vs. Profile 5		Profile 2 vs. Profile 5		Profile 3 vs. Profile 5		Profile 4 vs. Profile 5	
	Coeff (s.e)	OR	Coeff (s.e)	OR	Coeff (s.e)	OR	Coeff (s.e)	OR
Autonomy	0.506 (.244)*	1.659	0.789 (.271)**	2.201	0.984 (.468)*	2.675	0.589 (.240)*	1.802
Relations with Personnel	0.392 (.262)	1.480	0.245 (.241)	1.278	0.301 (.295)	1.351	0.294 (.242)	1.342
Global Self-Efficacy	0.353 (.362)	1.423	0.189 (.316)	1.208	0.118 (.395)	1.125	-0.377 (.307)	0.686

Predictors	Profile 1 vs. Profile 4		Profile 2 vs. Profile 4		Profile 3 vs. Profile 4	
	Coeff (s.e)	OR	Coeff (s.e)	OR	Coeff (s.e)	OR
Autonomy	-0.083 (0.166)	0.920	0.200 (.170)	1.221	0.395 (.352)	1.484
Relations with Personnel	0.098 (.192)	1.103	-0.048 (.170)	0.953	0.007 (.241)	1.007
Global Self-Efficacy	0.730 (.258)**	2.075	0.566 (.182)**	1.761	0.495 (.265)	1.640

Predictors	Profile 1 vs Profile 3		Profile 2 vs Profile 3		Profile 1 vs. Profile 2	
	Coeff (s.e)	OR	Coeff (s.e)	OR	Coeff (s.e)	OR
Autonomy	-0.478 (.347)	0.620	-0.194 (.314)	0.824	-0.284 (.167)	0.753
Relations with Personnel	0.091 (.256)	1.095	-0.056 (.224)	0.946	0.147 (.193)	1.158
Global Self-Efficacy	0.235 (.317)	1.265	0.072 (.242)	1.075	0.164 (.235)	1.176

Predictors	Intercept Factor		Slope Factor		Within-Profile AOC	
	Coeff (s.e)	β	Coeff (s.e)	β	Coeff (s.e)	β
Autonomy	0.083 (.054)	0.095	-0.017 (.011)	-0.1	0.094 (.021)**	0.103**
Relations with Personnel	0.116 (.038)**	.136**	-0.025 (.009)**	-.149**	0.017 (.015)	0.019
Global Self-Efficacy	0.093 (.049)	0.117	-0.019 (.010)	-0.124	0.031 (.010)**	0.037**

Notes. **: $p < .01$; *: $p < .05$. Coef: Regression coefficient (these are multinomial logistic regression coefficients for the prediction of profile membership, and unstandardized multiple regression coefficients for the prediction of the intercept and slope factors); SE: standard error of the coefficient; OR: Odds ratio; β: standardized multiple regression coefficients. The multinomial logistic regression coefficients and OR reflect the predictor effects on the likelihood of membership in the bottom listed profile relative to the top listed profile; Profile 1: High; Profile 2: Moderately High; Profile 3: Slowly Increasing; Profile 4: Slowly Decreasing; Profile 5: Very low.

Table 5
Time-Varying Associations between Profile Membership and the Outcomes for Study 1

	Profile 1 (High)	Profile 2 (Moderately High)	Profile 3 (Slowly Increasing)	Profile 4 (Slowly Decreasing)	Profile 5 (Very Low)	Summary of significant differences
Job Satisfaction						
Time 1	0.326	0.239	0.163	-0.065	-0.904	1 = 2 = 3 > 5; 1 = 2 > 4 > 5; 3 = 4
Time 2	0.319	0.232	0.220	-0.193	-0.950	1 = 2 = 3 > 4 > 5
Time 3	0.442	0.201	0.363	-0.219	-1.052	1 > 2 > 4 > 5; 2 = 3 > 4 > 5; 1 = 3
Time 4	0.440	0.198	0.453	-0.222	-1.090	1 = 3 > 2 > 5 > 4
Turnover Intentions						
Time 1	-0.337	-0.125	-0.249	-0.082	1.094	5 > 2 = 3 = 4; 5 > 2 = 4 > 1; 1 = 3
Time 2	-0.345	-0.065	-0.172	-0.030	1.113	5 > 2 = 3 = 4; 5 > 2 = 4 > 1; 1 = 3
Time 3	-0.279	-0.114	-0.389	-0.004	1.067	5 > 4 > 1 = 3; 5 > 2 > 3; 1 = 2; 2 = 4
Time 4	-0.335	-0.060	-0.341	0.013	1.075	5 > 2 = 4 > 1 = 3
Emotional Exhaustion						
Time 1	-0.172	-0.150	-0.266	0.090	0.600	5 > 4 > 1 = 2 = 3
Time 2	-0.163	-0.170	-0.268	0.127	0.585	5 > 4 > 1 = 2 = 3
Time 3	-0.199	-0.155	-0.370	0.167	0.778	5 > 4 > 1 = 2 = 3
Time 4	-0.145	-0.131	-0.328	0.097	0.693	5 > 4 > 1 = 2 = 3
Cynicism						
Time 1	-0.334	-0.207	-0.194	0.096	0.838	5 > 4 > 1 = 2 = 3
Time 2	-0.382	-0.188	-0.281	0.178	0.870	5 > 4 > 2 > 1; 5 > 4 > 3; 1 = 3; 2 = 3
Time 3	-0.420	-0.158	-0.322	0.263	0.912	5 > 4 > 2 > 1; 5 > 4 > 3; 1 = 3; 2 = 3
Time 4	-0.364	-0.129	-0.393	0.231	0.929	5 > 4 > 2 > 1 = 3

Note. Outcomes are time-invariant factor scores with a sample mean of 0 and an SD of 1.

Chapter 3

A Longitudinal Person-Centered Investigation of Organizational Commitment Trajectories Among Canadian Military Recruits

Affective commitment is an emotional bond directed at a specific target (Klein et al., 2012; Meyer & Herscovitch, 2001) and evolves over the lifespan (Spurk et al., 2019). Commitment was initially proposed to explain employees' intentions to leave, or remain in, their organization and occupation (Allen & Meyer, 1990a; Meyer et al., 1993; Porter et al., 1974). From this very specific focus, affective commitment to work-related targets, such as the organization and occupation, have since been theorized to be intimately connected to the internalization of the target of commitment into employees' sense of professional identity (Houle et al., 2022, Meyer et al., 2006; Spurk et al., 2019). From this broader perspective, researchers have shown that the nomological network of affective commitment extends well beyond retention to encompass multiple (un)desirable behaviors and outcomes (Meyer & Maltin, 2010; Meyer et al., 2002; Spurk et al., 2019).

Unfortunately, longitudinal investigations depicting how commitment trajectories evolve dynamically over the course of an employee's career, remain scarce (van Rossenberg et al., 2022). Within studies that consider how affective commitment evolves over time, most rely on a variable-centered approach, focusing on average associations among variables assumed to generalize to the whole sample (e.g., Salzmann et al., 2018; Vandenberghe et al., 2011, 2017, 2021). These studies can capture inter- and intra- individual heterogeneity in commitment trajectories (i.e., all employees can change over time and distinct employees can follow trajectories differing in terms of initial level and rate of change). However, this approach still assumes that the mechanisms underpinning individual trajectories generalize to the whole sample. Variable-centered studies thus ignore the possibility that discrete subpopulations (or profiles) of employees may follow differently shaped trajectories resulting from distinct underlying psychosocial mechanisms (e.g., Solinger et al., 2013; Houle et al., 2022).

From a lifespan perspective (Spurk et al., 2019), it is also important to acknowledge that career progression, the evolution of one's work context, and even personal growth, will contribute to shape one's commitment trajectory, which in turn will influence one's work-related behaviors, attitudes, and emotions. In the present study, we seek to understand the longitudinal evolution of affective commitment to the organization from the very beginning of military recruits' entry into the Canadian Armed Forces (CAF; i.e., their organization) as trainees, until nine months following the end of their training. Beyond seeking to understand

the nature of the profiles that will best capture these heterogeneous trajectories (Houle et al., 2022), we also want to understand the role of psychosocial mechanisms central to organizational entry likely to influence the internalization of the organization into newcomers' professional identity (i.e., perceived realism of job previews, socialization, satisfaction with the implications of military life for work-life balance, and identity conflict). Lastly, we want to document associations between these commitment trajectories and the evolution of critical outcomes (i.e., turnover intention, transition intention, job satisfaction, and perceived performance). In doing so, we hope to expand knowledge of how affective commitment becomes internalized, and the benefits of this internalization for important work-related outcomes.

A Comprehensive Perspective on the Evolution of Affective Commitment to the Organization

Growing theoretical and empirical evidence positions affective commitment as an evolving bond between an employee and a specific target of commitment, which also captures the progressive internalization of that target into the employee's sense of professional identity (Houle et al., 20222; Meyer, 2016; Meyer et al., 2006). In accordance with Self-Determination Theory (SDT; Gagné & Howard, 2016; Ryan & Deci, 2017) and commitment theory (Meyer et al., 2004, 2006), the development of a strong affective commitment to a specific target, such as the organization, is indicative of the degree to which employees see that target as allowing them to behave in accordance with their core values, thus facilitating the internalization of that target within their professional identity. This process of internalization should result in an identity and commitment that are more resilient to personal or situational fluctuations that would otherwise influence employees with a weaker sense of professional identity or weaker commitment (Houle et al., 2022). This perspective is anchored in the self-equilibrium hypothesis (Morin et al., 2013, 2017) and SDT (Ryan & Deci, 2017), which propose that a well-internalized sense of identity should be both stronger (i.e., higher or increasing levels) and more resilient, whereas a poorly integrated sense of identity should be both weaker (i.e., lower and/or decreasing levels) and more reactive.

Understanding this resiliency, or self-equilibration, requires the ability to differentiate how commitment trajectories evolve over time (initial levels which can display an increasing or decreasing tendency over time) from time-specific fluctuations around these trajectories. It is this second component that indicates the extent to which these trajectories can be seen as resilient over time. Morin et al. (2013, 2017) previously showed that Growth Mixture

Analyses (GMA; Muthen, 2002) were required to achieve this longitudinal disaggregation of stable and evolving levels of commitment from time-specific fluctuations around these trajectories, as it made it possible to circumvent the assumption of most other longitudinal analyses, by allowing time-specific residuals (i.e., time-specific fluctuations around each individual estimated trajectory) to differ across profiles presenting distinct trajectories[2]. This is the approach taken in this study.

Past research has supported the heterogeneity of both affective commitment trajectories (Salzmann et al., 2018; Solinger et al., 2013; Vandenberghe et al., 2011, 2017, 2021) and fluctuations around these trajectories (Houle et al., 2022). If we focus more specifically on previous person-centered investigations of commitment trajectories, Solinger el al., (2013) found five distinct trajectories of organizational commitment among a sample of organizational newcomers (PhD graduates) over their first six months of tenure. These authors interpreted these trajectories as reflecting distinct socialization scenarios, reflecting exposure to work conditions matching newcomers' expectations in a positive (i.e., *High* trajectory), neutral (i.e., *Moderate* trajectory), or negative (i.e., *Low* trajectory) manner (Solinger et al., 2013). They also identified a profile displaying a trajectory suggesting exposure to work conditions which progressively come to exceed employees' expectations, which they labelled as reflecting a *Learning to Love* scenario (e.g., Dutton et al., 2010). Their last trajectory rather suggested exposure to work conditions that progressively disappoint employees' initially high expectations, which they labelled as reflecting a *Honeymoon Hangover* scenario (e.g., Boswell et al., 2005, 2009). Interestingly, five similar trajectories were also identified by Houle et al. (2022) among established school principals. Moreover, Houle et al. (2022) also found support for the self-equilibrium hypothesis, showing that time-specific fluctuations were far more pronounced in profiles characterized by persistently low or decreasing commitment trajectories. These theoretical and empirical considerations suggest that:

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[2] In GMA, a model-implied trajectory is estimated for every member of the sample. This trajectory is summarized by an intercept (i.e., initial levels) and one of more slopes (i.e., change over time, e.g., capturing increases or decreases from the initial level). However, for any person, repeated measures seldom follow a smooth trajectory (e.g., linear, curvilinear) over time. Indeed, at each time point, individual measures can deviate to a greater or lesser extent from participants' model-implied trajectory. These deviations are captured by the time-specific residuals of the model (for each participant, one residual is estimated at each time point). In GMA, the different profiles define subpopulations of participants following differently shaped trajectories. These profiles can differ from one another in their average initial level (intercept), in their average change over time (slopes), and in the extent to which observed scores deviated from model implied trajectories (time-specific deviations, residuals, or fluctuations). The self-equilibrium hypothesis assumes that time-specific residuals will be lower (i.e., consistent with a higher level of resilience) in profiles displaying higher levels of commitment than in profiles characterized by lower levels of commitment.

Hypothesis 1 (H1). Individual trajectories of affective commitment to the organization will correspond to the following profiles: *High, Moderate, Low, Increasing*, and *Decreasing*.

Hypothesis 2 (H2). Profiles characterized by persistently high or increasing trajectories of affective commitment to the organization will display less pronounced time-specific fluctuations (i.e., residuals) than profiles characterized by persistently low or decreasing trajectories.

Antecedents of Newcomers' Trajectories of Affective Commitment to the Organization

To properly theorize the likely effects of our predictors on organizational commitment trajectories, we draw upon the socialization literature (Feldman 1976; Louis, 1980; Van Maanen & Schein, 1979; Wanous 1992) which highlights the importance of anticipatory socialization (i.e., pre-entry) and early socialization (e.g., first year) on the ongoing adaptation of employees. On the one hand, newcomers need to learn the ropes of their new job and will do so at the pre-entry stage based on their exposure to previews of what their new job is likely to entail, as well as when joining the organization through their exposure to formal and informal socialization experiences. On the other hand, by learning the ropes of a new job, employees may also benefit from their improved understanding of their new role or experience identity conflicts, which can respectively support or hinder the internalization of the organization into their professional identity. From the premise that commitment trajectories are influenced by the alignment between newcomers' expectations and their work reality, we consider how these trajectories will be influenced by (i) their exposure to previews of their new role seen as more or less realistic, (ii) their early socialization experiences, (iii) their perceptions that training had positive implications for work-life balance, and (iv) their experience of identity conflict.

Perceived Realism of Job Previews. We first consider the extent to which recruits felt that they were provided with a realistic preview of what their military training and early career would entail. Previews seen as more realistic have been found to help newcomers adapt more quickly to their work reality, to help build organizational commitment, and to decrease early turnover (Bauer et al., 2007; Wanous, 1992; Wanous et al., 1992). The rationale for this effect is that realistic previews allow employees to decide whether the job is well-suited for them, or at least able to mentally prepare them to face job aspects they will enjoy less. From this perspective, exposure to previews seen as realistic should support the emergence of trajectories characterized by higher and less changing levels of organizational commitment

(*High* and *Moderate*), consistent with the idea that realistic previews help newcomers' better adapt to their new work environment. In contrast, because realizing that a preview was not realistic is likely to be retroactive, exposure to unrealistic previews should favor the emergence of organizational commitment trajectories that change over time after expectations have been challenged by the reality (*Increasing*, *Decreasing*). More precisely, unrealistic previews should lead to *Increasing* trajectories as newcomers discover a job that exceeds their expectations, whereas they should lead to *Decreasing* trajectories when the job fails to meet their expectations.

Moreover, organizational commitment has long been seen as anchored in a psychological contract describing reciprocal obligations between employees and their organization, where breaches of that contract on the part of the organization are expected to negatively impact commitment (Coyle-Shapiro et al., 2019; Rousseau, 1995). In this regard, exposure to initially more realistic previews should pave the way for a clearer psychological contract, leading us to expect that, beyond their association with profile membership, more realistic previews should be associated with higher within-profile levels and more pronounced within-profile increases in commitment, both resulting from a clearer psychological contract. Lastly, previews can be seen as increasingly more realistic over time, thus contributing to consolidate participants' unfolding trajectories, such that increased perceptions of realism should lead to further decreases among employees with *Decreasing* trajectories, and to further increases among those with *Increasing* trajectories. These considerations suggest that:

Hypothesis 3a (H3a). Exposure to previews initially seen as more realistic will be associated with membership into profiles characterized by higher and less changing (*High*, *Moderate*) commitment trajectories, whereas exposure to previews initially seen as less realistic will be associated with membership into profiles characterized by changing (*Decreasing, Increasing*) trajectories.

Hypothesis 3b (H3b). Exposure to previews initially seen as more realistic will be associated with higher within-profile levels of organizational commitment and with within-profile increases in organizational commitment levels across all profiles.

Hypothesis 3c (H3c). Changes over time in the perceived realism of previews will lead to within-profile increases in commitment levels among participants corresponding to an *Increasing* profile, and to within-profile decreases among participants corresponding to a *Decreasing* profile.

Socialization

At the core of the socialization literature lies the idea that job transitions create uncertainty

and anxiety for individuals as they are asked to perform in an unknown context (Van Maanen & Schein, 1979). It is thus in the best interest of new employees and organizations to help newcomers learn the ropes of their new occupation quickly and efficiently via efficient socialization practices to limit these feelings while supporting productivity (e.g., Allen & Meyer, 1990b. Rather than focusing on these practices, we rather focus on socialization defined as the extent to which employees learned how to properly function in their new role (Louis, 1980; Van Maanen & Schein, 1979) as a result of achieving a clear understanding of the requirements of their organization, work group, and job (Bauer et al., 2007; Perrot & Campoy, 2009; Saks et al., 2007). From the perspective of commitment theory (Meyer et al., 2006) and SDT (Ryan & Deci, 2017), a more complete socialization can be expected to facilitate the internalization of a new workplace into newcomers' professional identity, in turn supporting affective commitment. Supporting these assertions, meta-analytic evidence supports the idea that socialization levels are associated with higher levels of organizational commitment (Saks et al., 2007; Bauer et al., 2007). On this basis, we expect that:

> ***Hypothesis 4a (H4a).*** Higher initial levels of socialization will be associated with membership into profiles characterized by *High* or *Increasing* organizational commitment trajectories, whereas lower initial levels will be associated with membership into profiles characterized by *Low* or *Decreasing* organizational commitment trajectories.

> ***Hypothesis 4b (H4b).*** Initial levels of socialization will be associated with higher within-profile levels of organizational commitment and with more pronounced within-profile increases in organizational commitment across all profiles.

> ***Hypothesis 4c (H4c).*** Increases in socialization levels will be associated with within-profile increases in organizational commitment across all profiles.

Satisfaction with the Implications of Military Life for Work-Life Balance

Choosing a military career can come with severe demands on work-life balance (Oskarsson et al., 2021; Pickering, 2017). The unique nature of a Canadian military career, at least a full-time one, is experienced immediately upon organizational entry with an immersive 10-week basic military training course taking place in a single location for most Canadian recruits. This initial displacement from friends and family provides a taste of what life on deployment may feel like in terms of work-life balance (i.e., leaving friends and family for extended periods of time). As a result, it may be hard for recruits who struggle with the implications of their new role on work-life balance to fully internalize their affective bond to the CAF since this organization is likely to require a repeated exposure to similar contexts (i.e., deployments on short notice: Britt & Dawson, 2005; MacDermid & Southwell,

2011). Indeed, research has demonstrated a positive association between work-life balance and organizational commitment (Haar & Brougham, 2022; Pradhan et al., 2016). Moreover, initial effects of being away from one's friends and family can reverberate across time, possibly leading to changes in commitment levels as one lives through the repercussions of having been away from loved ones for extended periods of time. In contrast, the effects of joining the CAF can also be beneficial from the perspective of immediate family members (spousal partner, children), knowing that they will eventually be relocated with them. As part of this relocation, the whole family will then be exposed to these completely new life circumstances, a new form of balance is likely to emerge. These considerations lead us to expect that:

Hypothesis 5a (H5a). Initial satisfaction with the implications of military life for work-life balance will be associated with membership into profiles characterized by *High* or *Increasing* organizational commitment trajectories, whereas initial perceptions that military life is harmful for work-life balance will be associated with membership into profiles characterized by *Low* or *Decreasing* organizational commitment trajectories.

Hypothesis 5b (H5b). Initial satisfaction with the implications of military life for work-life balance will be associated with higher within-profile levels of organizational commitment and with more pronounced within-profile increases in organizational commitment across all profiles.

Hypothesis 5c (H5c). Increases in satisfaction with the implications of military life for work-life balance will be associated with within-profile increases in organizational commitment across all profiles.

Identity Conflict

Military life comes with many constraints that are unique to working within a military organization, including working within an authoritarian hierarchical structure (Hall, 2011), ongoing exposure to violent or stressful circumstances (or rather the expectation that this exposure could become normative in conflict situations; Boermans et al., 2013), unrelenting tempos (Huffman et al., 2005), and a professional identity (e.g., being a soldier) that is not bounded by the temporal limitations of ones' work (Di Leone et al., 2016; Johansen et al., 2013). These facets of military life are likely to interact with recruits' personal values to create an identity conflict when they do not match (e.g., Cacace et al., 2022; Kümmel, 2018; Lancaster & Hart, 2014; Vest, 2013). According to both SDT (Ryan & Deci, 2017) and commitment theory (Meyer et al., 2006), such experiences of identity conflict – as well as increases over time in these experiences – are likely to interfere with the internalization of the

organization as a part of recruits' professional identity, thus interfering with the development of their affective commitment to the organization. These considerations suggest that:

Hypothesis 6a (H6a). Initial experiences of identity conflict will be associated with membership into profiles characterized by *Low* or *Decreasing* organizational commitment trajectories, whereas lower initial levels of identity conflict will be associated with membership into profiles characterized by *High* or *Increasing* organizational commitment trajectories.

Hypothesis 6b (H6b). Initial experiences of identity conflict will be associated with lower within-profile levels of organizational commitment and with more pronounced within-profile decreases in organizational commitment across all profiles.

Hypothesis 6c (H6c). Increases in experiences of identity conflict will be associated with within-profile decreases in organizational commitment across all profiles.

Outcomes of Newcomers' Trajectories of Affective Commitment to the Organization

To capture the implications and relevance of early commitment trajectories for employees' functioning (Meyer & Morin, 2016; Morin et al., 2018), we consider four outcomes theoretically relevant to the development and internalization of affective commitment. These outcomes were also selected for their applied relevance to the unique CAF context: (i) employees' intentions to leave the CAF (turnover intention), (ii) their intentions to transition to another sector within the defence team (transition intention), (iii) their job satisfaction, and (iv) their perceived performance.

Turnover Intention and Transition Intentions

From an applied perspective, our selection of turnover intention and transition intention as outcomes was based on their relevance to Canada's *Directive for CAF Reconstitution*, which states that "*Personnel and staffing issues, combined with a changing demographic and expectations of our existing and potential work force, continue to challenge both the strength and the readiness of the CAF*" (Government of Canada, 2022). This policy seeks to grow the size of the Canadian military force, a feat that is difficult to achieve given recent rises in attrition (Laplante et al., 2016). Theoretical and empirical evidence supports the role of affective commitment as a focal predictor of turnover intention and actual turnover (Meyer & Allen, 1991; Meyer et al., 1993; Forner et al., 2023; Lee et al., 2002), in accordance with the theoretical perspective that internalizing the target of commitment into one's identity should decrease one's intention to leave that target (Gagné & Howard, 2016; Houle et al., 2022). Longitudinal evidence also shows that *Decreasing* commitment trajectories tend to display

higher levels of turnover intention than would be expected based solely on current commitment levels, presumably due to employees' understanding of their downward trajectory (Houle et al., 2022). Alternatively, recruits experiencing *High* or *Increasing* commitment trajectories should display the lowest turnover intention.

Importantly, the CAF is a large organization striving to display an increasing level of flexibility to maximise retention (DND, 2022). For this reason, once employed by the CAF, transitions across components and sectors are not only feasible, but encouraged to increase retention within the CAF, or within the public service of the broader Defense Team (DND, 2022). Transition intentions should thus not be regarded as a negative outcome, at least when compared with turnover intention. On the one hand, recruits with a strong affective commitment to the CAF should be more likely to transition within their organization, rather than to decide leaving it, while those with a weaker affective commitment should report higher levels of turnover intention than transition intention. This means that differences between profiles should be less pronounced for transition intention relative to turnover intention. On the other hand, there might be many reasons, other than affective commitment, for staying in the military. For instance, commitment theory has long highlighted the presence of other types of bonds involving either a normative sense of obligation, or a feeling of being stuck resulting from a lack of alternatives or to avoid losing one's investments (Meyer et al., 1993, 2002). Thus, recruits displaying a *Low* or *Decreasing* level of commitment should also report higher levels of transition intention than their peers with *High* or *Increasing* commitment trajectories, even if these levels are lower than their turnover intention. These considerations suggest that:

> *Hypothesis 7a (H7a).* The highest levels and steepest increases in turnover intention and transition intention will be found in profiles with *Low* or *Decreasing* organizational commitment trajectories.

> *Hypothesis 7b (H7b).* The lowest levels and steepest decreases in turnover and transition intention will be found in profiles with by *High* or *Increasing* organizational commitment trajectories.

> *Hypothesis 8 (H8).* The difference between organizational commitment profiles in terms of turnover intention will be greater than those observed in terms of transition intention.

Job satisfaction

Job satisfaction has long been viewed as a desirable emotional state that is a central component of employees' well-being (Diener, 2000; Ryan & Deci, 2000). There is strong empirical support for a positive association between job satisfaction and organizational

commitment (for a recent meta-analysis, see Xu et al., 2023), making job satisfaction a strong candidate for tests of the construct validity of our profiles. Job satisfaction is thought to emerge from a positive appraisal of one's work life (Locke et al., 1976). Thus, employees who have internalized an affective bond to their organization should be more likely to positively appraise their work life, and thus to experience job satisfaction. Moreover, a cognitive dissonance theorization of the temporal associations between job satisfaction and organizational commitment (Vandenberg & Lance, 1992) suggests that job satisfaction should naturally undergo an adjustment process to remain aligned with organizational commitment levels as a means of reducing cognitive dissonance. In this sense, job satisfaction can act as a barometer to monitor the dynamic evolution of affective commitment over time, suggesting that:

Hypothesis 9a (H9a). The highest levels and steepest increases in job satisfaction will be observed in profiles characterized *High* or *Increasing* organizational commitment trajectories.

Hypothesis 9b (H9b). The lowest levels and steepest decreases in job satisfaction will be observed in profiles characterized by *Low* or *Decreasing* organizational commitment trajectories.

Perceived Performance

Perceived performance was finally considered for applied purposes to demonstrate the benefits of developing affective organizational commitment during training on perceived performance levels at the end of training. Theoretically, the internalization of affective commitment to the organization should be supported by an efficient socialization process allowing employees to learn how to properly function as members of their new organization (Saks et al., 2007; Bauer et al., 2007), suggesting that more committed employees should also perform better. Moreover, and in accordance with SDT (Ryan & Deci, 2017) and commitment theory (Meyer et al., 2004), the internalization of a commitment target to one's professional identity entails that the behaviours performed in service of the target fully align with one's own personal values, which also highlights the role of commitment as a motivational mechanism likely to support performance (for empirical evidence supporting this assertion, see Meyer et al., 1989, 2002). We thus expect that:

Hypothesis 10 (H10). At the end of basic military training, higher levels of perceived performance will be observed in profiles characterized by *High* or *Increasing* levels of commitment.

Method

The data used in this study was collected as part of *Project Horizon: Early Career Longitudinal Retention Study* (Laplante et al., 2016) conducted in the CAF and approved by the Director General Military Personnel Research and Analysis' Social Science Research Review Board. The targeted population for this study were all officer cadets and recruits beginning basic military training at the Canadian Forces Leadership and Recruit School, between September 2014 and June 2017. A total of 4859 participants, nested within 189 basic training *platoons*, completed our measure of commitment at one or more measurement points, remained employed in the CAF for the duration of the study, and consented to the longitudinal linking of their responses for research purposes. These participants form the sample used in this study. More precisely, these participants responded to a questionnaire at the beginning of their basic training (T1; $n = 1439$), at the end of basic training (T2, $n = 4533$), 3 months after basic training (T3, $n = 721$), and 6 months following T3 (T4, $n = 603$). Age at T2 (the time point with the highest completion rate) was distributed as follows: 36.2% <20, 34.6% 21-25, 14.5% 26-30, 4.5% 31-35, 1.9% 36-40, and 1.7% >41 [6.6% did not report their age]. Of participants, 78.4% identified as male, 14.8% as female, and 6.7% did not report their gender. Moreover, 11.3% wore the sea uniform, 54.3% the land uniform, 27.4% the air uniform, and 7.0% did not disclose their uniform. Finally, 23.7% were officer cadets, 69.4% were recruits, and 6.9% did not report their status.

Measures

Affective Organizational Commitment (Profile Indicator)

Affective organizational commitment was measured at all time points with the relevant subscale from Meyer et al.'s (1993). The referent was changed from "my organization" to "the Canadian Armed Forces (CAF)". This scale included six items ($\alpha_{t1} = .771$; $\alpha_{t2} = .826$; $\alpha_{t3} = .854$; $\alpha_{t4} = .877$; e.g., *The CAF already has a great deal of personal meaning for me*), rated on a 6-point scale (1 = Strongly Disagree to 6 = Strongly Agree).

Perceived Realism of Previews (Predictor)

Six items, adapted from LeBlanc et al. (2012), were used at T2, T3, and T4 to assess the extent to which participants felt that the previews of what their current phase of training would entail, received from various sources of information (i.e., brochures, CAF website, videos, recruiters, friends/family who are current or former CAF members, unofficial sources) was realistic ($\alpha_{t2} = .732$; $\alpha_{t3} = .819$; $\alpha_{t4} = .814$; e.g., *Interactions with CAF recruiters*). These items were rated on a 5-point scale (1 = Completely Unrealistic to 5

Completely Realistic).

Socialization (Predictor)

A series of five items were designed to capture the socialization experiences of participants in relation to the organization (CAF), their platoon, and their job. These items, inspired by the Newcomer Socialization Questionnaire (Haueter et al., 2003), were used at T1, T3, and T4 [α_{t1} = .840; α_{t3} = .887; α_{t4} = .863; e.g., *My training thus far has allowed me to understand and become familiar with... | The internal politics within the CAF (e.g., chain of command, who is influential, what needs to be done to advance or maintain good standing)*], and were rated on a 6-point scale (1 = Strongly Disagree to 6 = Strongly Agree).

Satisfaction with the Implications of Military Life for Work-Life Balance (Predictor)

Satisfaction with the implications of military life for work-life balance were assessed at T2, T3, and T4 using three items from the CAF Retention Survey (Eren & Budgell, 2015; α_{t2} = .856; α_{t3} = .898; α_{t4} = .848; e.g., *Effects my [training / career] has on my family*) rated on a 6-point scale (1 = Completely Dissatisfied to 6 = Completely Satisfied).

Identity Conflict (Predictor)

Identity conflict was measured at T2 and T4 using five items developed by Smith et al. (2013) and adapted to the CAF context. These items (α_{t2} = .846; α_{t4} = .871; e.g., *I cannot yet reconcile the fact that I'm a member of the CAF with other important parts of my personality*) were rated on a 6-point scale (1 = Strongly Disagree to 6 = Strongly Agree).

Turnover Intention (Outcome)

Turnover intention was assessed at T2, T3, and T4 using three items (α_{t2} = .803; α_{t3} = .838; α_{t4} = .819) from the CAF Retention Survey (Eren & Budgell, 2015) rated on a 5-point scale (1 = Definitely Not to 5 = Definitely Yes). Respondents indicated whether they intended to leave the CAF when they (i) completed their obligatory service or (ii) completed their terms of service, or whether they (iii) intended to stay in the CAF until retirement (reversed).

Transition Intention (Outcome)

Transition intention was assessed at T2, T3, and T4 with three items (α_{t2} = .608; α_{t3} = .583; α_{t4} = .614) from the CAF Retention Survey (Eren & Budgell, 2015) rated on a 5-point scale (1 = Definitely Not to 5 = Definitely Yes). Respondents indicated whether they intended to stay in the CAF but transfer to (i) the Reserve Force or to (ii) another occupation, or whether they (iii) intended to leave the CAF for a public service job within the Department of National Defence.

Job Satisfaction (Outcome)

Job satisfaction was assessed at T3 and T4 using three items from the job satisfaction subscale of the Michigan Organizational Assessment Questionnaire (Cammann et al., 1979, 1983; $\alpha_{t3} = .858$; $\alpha_{t4} = .863$; e.g., *All in all, I am satisfied with my job*) and rated on a 6-point scale (1 = Strongly Disagree to 6 = Strongly Agree).

Perceived Performance (Outcome)

Participants' perceived performance was assessed at T2 using a questionnaire developed by the CAF to assess how well trainees believed they were performing relative to other members of their platoons in terms of (i) the academic aspects of training, (ii) the physical aspects of training, and (iii) course grades. These items ($\alpha_{t2} = .667$) were rated on a 5-point scale (1 = Well Below Average to 5 = Well Above Average).

Analyses

Model Estimation and Missing Data

Analyses were all conducted using *Mplus* 8.7's (Muthén & Muthén, 2018) maximum likelihood robust (MLR) estimator. Participants' nesting within platoons was controlled in all analyses using Mplus complex survey design functionalities (Asparouhov, 2005). Full information maximum likelihood (FIML) procedures were used to handle missing data, which made it possible to rely on the full sample of participants who completed at least one time point (participants provided a total of 7296 time-specific ratings). FIML relies on the assumption that missing data is missing at random (MAR), which means that it is robust to attrition processes linked to the variables included in the analytical model (including the variables themselves at previous time points), making FIML very robust to longitudinal attrition processes (Enders, 2022; Graham, 2012). In the present study, attrition analyses revealed that the number of missing measurement occasions (0 to 4) was negatively associated with participants' initial levels of commitment ($b = -.031$, $SE = .012$, $\beta = -.037$, $p = .011$) and socialization ($b = -.121$, $SE = .049$, $\beta = -.045$, $p = .013$), and positively related to their age ($b = .078$, $SE = .009$, $\beta = .119$, $p \leq .001$) and initial levels of perceived realism of previews ($b = .203$, $SE = .039$, $\beta = .094$, $p \leq .001$) and perceived performance ($b = .027$, $SE = .010$, $\beta = .036$, $p = .008$). Attrition was also higher among recruits than officer cadets ($b = -.464$, $SE = .023$, $\beta = -.277$, $p \leq .001$), men than women ($b = -.107$, $SE = .028$, $\beta = -.053$, $p \leq .001$), and newcomers who wore the land uniform relative to the sea or air uniform ($b = .118$, $SE = .031$, $\beta = .079$, $p \leq .001$). However, these associations remained small (explaining only 13% of the variance in attrition) and accounted for by FIML (these variables were included in our analyses).

Preliminary Analyses

To partially control for unreliability (Skrondal & Laake, 2001) and preserve the measurement structure of our constructs (Morin et al., 2016a, 2016b), factor scores were generated from preliminary measurement models and used as profile indicators, predictors, and outcomes in our main analyses (see online supplements for details). To ensure measurement equivalence over time, the factor scores used for the commitment variables were saved from longitudinally invariant models (Millsap, 2011) in standardized units (M = 0; SD = 1). Due to the complexity of the current longitudinal analyses, separate models had to be estimated for the main variable (i.e., commitment), predictors (i.e., perceived realism of previews, socialization, satisfaction with the implications of military life for work-life balance, and identity conflict), and outcomes (i.e., turnover intention, transition intention, job satisfaction and perceived performance). For predictors and outcomes measured at three time points (i.e., perceived realism of previews, socialization, satisfaction with the implications of military life for work-life balance, turnover intention and transition intention) factor scores were saved from a latent curve model estimated at the item level (the indicators are used to estimate time-specific factors, which are themselves used to estimate higher-order intercept and slope factors reflecting participants' initial level and rate of change over time) in natural units of measurement. For predictors and outcomes measured at two time points (i.e., identity conflict and job satisfaction), factor scores were saved from a latent change model, also estimated at the item level (i.e., the indicators are used to estimate time-specific factors which are themselves used to estimate two factors representing initial levels and change over time) in standardized units. Details on these models are reported in the online supplements (model fit in Table S1, parameter estimates of the measurement models in Tables S2-S3, and parameter estimates of the latent curve and latent change models in Tables S4 and S5; correlations in Table S6).

Growth Mixture Analyses (GMA)

GMA are a person-centered extension of latent curve models (Bollen & Curran, 2006) seeking to identify subpopulations, or profiles, of participants following distinct longitudinal trajectories on a set of repeated measures (organizational commitment in this study). More precisely, GMA summarize a series of repeated measures by the estimation of random intercepts and slope factors reflecting, respectively, the initial level of the trajectories (the loadings of the time-specific measures on this factor are all fixed to 1) and change in these trajectories over time. To account for possible non-linearity, we relied on a latent basis parameterization (Morin & Litalien, 2019; Ram & Grimm, 2009), allowing for the estimation of distinct functional shapes in each profile without being bounded by polynomial

specifications (Houle et al., 2022; Morin & Litalien, 2019). We used a time code of 0 to position the intercept (i.e., initial level) at T1 and a time code of 1 at T4 to indicate that the slope factor reflects the total change occurring over the course of the study (1 year). The remaining two time codes are freely estimated and can differ across profiles, thus revealing the proportion of the total change occurring between adjacent time points. This approach makes it possible to estimate non-linear trajectories differing in shape across profiles (Morin & Litalien, 2019).

Statistical recommendations are that all GMA parameters (i.e., intercept mean and variance, slope mean and variance, intercept and slope covariance, time-specific residuals) should ideally be freely estimated across profiles (Diallo et al., 2016; Morin et al., 2011c). However, it is well recognized that this completely free estimation is not always possible (non-convergence, convergence on improper parameter estimates, etc.). When this happens, as was the case in this study, it is usually taken to reflect model overparameterization, suggesting that equality constraints should be progressively implemented across profiles on distinct subsets of model parameters to achieve a more parsimonious solution (Diallo et al., 2016; Morin & Litalien, 2019). We thus relied on the Mplus default parameterization of setting the latent variance-covariance matrix to be equal across profiles. Moreover, we also relied on a parameterization that is typical of multilevel growth modeling (Li & Hser, 2011; Tofighi & Enders, 2007) by setting the time-specific residuals to be homoscedastic (i.e., equal across time, consistent with a model providing a similarly accurate estimation of all time-specific measures; Diallo et al., 2016). However, as this was required for tests of the self-equilibrium hypothesis, we allowed these homoscedastic residuals to differ across profiles.

GMA including 1 to 5 profiles were estimated (solutions failed to converge on proper solutions after five profiles, across all possible parameterizations), using 10000 random sets of start values, 1000 iterations, and 1000 final stage optimizations (Hipp & Bauer, 2006). The optimal number of profiles was determined by considering theoretical adequacy and heuristic meaning of the solutions, in a process where viable solutions were first identified using statistical indicators (Marsh et al., 2009; Muthén, 2003): (i) the Akaïke Information Criterion (AIC), (ii) the Consistent AIC (CAIC), (iii) the Bayesian Information Criterion (BIC), and (iv) the sample-size Adjusted BIC (ABIC)[3]. Lower values on the AIC, CAIC, BIC, and ABIC

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[3] The adjusted Lo, Mendel and Rubin's (2001) Likelihood Ratio Test (aLMR) and the Bootstrap Likelihood Ratio Test (BLRT) are not available when controlling for nesting using complex survey design functions.

value suggest a better-fitting solution. However, it is important to note that statistical simulation studies have not supported the utility of the AIC as an indicator of the optimal number of profiles (e.g., Diallo et al., 2016, 2017). We thus only report this indicator to ensure complete disclosure and will not use it to guide model selection. The entropy was also reported as a descriptive indicator of the classification accuracy (0 to 1) of cases into profiles.

Predictors and Outcomes of Profile Membership

Predictors (intercept and slopes of the predictor trajectories for perceived realism of previews, socialization, satisfaction with the implications of military life for work-life balance, and initial levels and change over time for identity conflict) were integrated into the final model following a sequential strategy initially proposed by Morin et al. (2011c; also see Diallo et al., 2017). However, we first investigated the nature of the associations between participants' demographic characteristics (age was coded 1 to 6 based on the age categories used to describe the sample, sex was coded 0 for men and 1 for women, rank was coded 0 for recruits and 1 for officer cadets, and uniform was dummy coded to reflect land versus others, and sea versus others) and their profiles and within-profiles trajectories. Although this verification only served exploratory and descriptive purposes from a theoretical standpoint, it was critical from a statistical standpoint given the associations found between these characteristics and attrition (i.e., it was necessary to consider the incorporation of these variables to the model to ensure the proper functioning of FIML; Enders, 2022; Graham, 2012). Our results remained unchanged when demographics were included or not into the model, just like the observed associations involving demographic variables remained unchanged when tested with, or without the main predictors.

For the demographics, we first estimated a null model in which the effect of all demographics on the likelihood of profile membership and on the within-profile intercept and slopes of the commitment trajectories were constrained to be 0. Second, demographics were allowed to predict profile membership. Each subsequent steps builds upon the conclusions from the previous step (i.e., adding predictions to those previously retained). Third, demographics were allowed to predict the within-profile intercept of the commitment trajectories. Fourth, demographics were allowed to predict the within-profile slopes of the commitment trajectories. Alternative models were also tested in which the effects of the demographics on the intercepts and slopes of the commitment trajectories were fixed to equality, or allowed to differ, across profiles. Predictors were then added to the optimal solution retained for the demographic variables. Using the intercepts of the predictor trajectories as predictors, we first contrast a sequence of model matching that used for the

demographics. The retained model was then used as the baseline from which two more models were estimated, used to test associations between the slope (or change) of the predictor trajectories and the within-profile slope of the commitment trajectories in a way that was constrained to equivalence, or free to vary, across profiles. In these analyses, it is important to keep in mind that any effect of the predictors on within-profile deviations in the intercepts of the commitment trajectories can be interpreted as an effect of the average level of the commitment trajectories, given that the change captured by the slope factor is always estimated in relation to the intercept (e.g., Bollen & Curran, 2006). In these comparisons, models associated with a lower value on two out of three recommended information criteria (CAIC, BIC, and ABIC; Morin et al., 2016b) are supported by the data.

Outcomes were directly integrated into the final GMA model. Mean-level differences on the outcome levels (i.e., intercept and slope factors for turnover intention and transition intention, initial levels and change for job satisfaction, and T2 perceived performance) were tested in a single step using the multivariate delta method (Raykov & Marcoulides, 2004).

Results

The results from the GMA solutions including different numbers of profiles are reported at the top of Table 1. Although the CAIC, BIC and ABIC reached their lowest value for the 5-profile solution, this solution was improper as it included an empty profile. The fact that the Loglikelihood associated with this model was positive (thus explaining the negative information criteria) is also suggestive of overparameterization. Focusing on the information criteria associated with the solutions including one to four profiles revealed a more typical progressive decline, which plateaued at the three-profile solution (adding a fourth profile led to a negligible increase in information criteria). We thus carefully examined solutions including two to four profiles. Whereas the two-profile solution simply resulted in the estimation of one high and one low profile, the three-profile solution resulted in the addition of a meaningfully large increasing trajectory consistent with our theoretical *Learning to Love* scenario (see Profile 2 in Figure 1). In contrast, adding a fourth profile resulted in the addition of an extreme trajectory matching less than 1% of the sample (roughly 3 participants). For these reasons, the three-profile solution was retained for interpretation. This solution is illustrated in Figure 1, while parameter estimates are reported in Table 2. Classification accuracy is reported in Table 3 and is quite high, ranging from .922 to .942 across profiles, consistent with the high entropy of this solution (.846).

The first profile characterized 39.77% of the sample displaying initially high levels of organizational commitment at the start of the study (.579 *SD*) followed by a steep increase

over the first three months (+.747 *SD*), a small decrease in the next 3 months (-.215 *SD*) that thereafter reached a plateau (approx. 1.00 *SD* above the sample mean from T3 to T4). This profile was labelled *Committed.* The second profile characterized 42.03% of the sample displaying slightly below average levels of organizational commitment at the start of the study (-.257 *SD*) followed by a steep increase in the first three months (+.474 *SD*), a smaller increase in the next three months (+.111 *SD*), and a plateauing at moderately high levels thereafter (approx. 0.35 *SD* above the sample mean from T3 to T4). This second profile was labelled *Learning to Love*. The third profile characterized 18.20% of the sample displaying slightly below average levels of organizational commitment at the start of the study (-.288 *SD*; thus comparable to those observed in Profile 2) followed by a small increase in the first three months (+.144 *SD*), and then by a fairly linear decrease until the end of the study (-.180 *SD* from T2 to T4), ending with slightly lower levels at the end than at the start of the study. This profile was labelled *Failure to Commit*. These results partially support H1.

In this solution, the variance of the intercept factor was statistically significant, indicating within-profile heterogeneity in initial levels of commitment. However, this was not the case for the slope, suggesting that members of each profile all tended to display a similarly shaped trajectory over time. The intercept-slope correlation was also negligible and not statistically significant, indicating that initial commitment levels do not seem related to subsequent trajectories. Finally, and supporting H2, time-specific residuals (i.e., state-like deviations) were substantially higher in the *Failure to Commit* profile (.239 *SD*) than in the *Committed* (.006 *SD*) and *Learning to Love* (.008 *SD*) profiles.

Predictors of Affective Organizational Commitment Trajectories

Model fit results associated with the alternative predictive models are reported in Table 1. For the demographic variables, the CAIC, BIC, and ABIC had a lower value in model D2 (effects on profile membership) than in the null model D1, consistent with the presence of associations with profile membership. However, all further models resulted in an increase in these values, consistent with a lack of associations with within-profile commitment trajectories. Model D2 was thus retained for further analyses. Starting from this model, incorporating associations between the intercepts of the predictor trajectories, the profiles and the within-profile intercepts of the commitment trajectories in a way that differed across profiles all resulted in a decrease in the value of the CAIC, BIC, and ABIC. However, whereas the CAIC further supported a model in which associations between the intercepts of the predictor trajectories and the slopes of the commitment trajectories did not differ across

profiles (P5), the BIC and ABIC both supported a model in which these associations varied across profiles (P6). Examination of the results associated with these models was consistent with the latter model, which was retained for further analyses. From this model (P6), the second set of model comparisons also supported model P6, which resulted in lower values on the CAIC and BIC relative to model P7 and P8, consistent with a lack of association between changes in predictor levels and the within-profile slopes of commitment trajectories. Closer inspection of the model parameters associated with these alternative models was also consistent with the superiority of model P6, which was retained for interpretation. The results from this model are reported in Table 3. As changes in predictor levels shared no association with commitment trajectories, H3c, H4c, H5c, and H7c were not supported by our results, revealing that predictor effects are limited to their initial levels. When considering our results, it is important to keep in mind that all associations can be considered to involve participants' complete commitment trajectories, even those limited to the intercepts of these trajectories, which capture associations with participants' average level of commitment (vs to changes in these levels).

Results related to the demographic characteristics first revealed that officer cadets were more likely than recruits to be members of the *Failure to Commit* profile relative to both other profiles, as well as of the *Learning to Love* profile relative to the *Committed* profile. Women were more likely than men to be members of the *Committed* and *Failure to Commit* profiles than of the *Learning to Love profile*. Older participants were more likely to be members of the *Failure to Commit* profile relative to the other two profiles. Finally, participants wearing the land uniform were more likely than other participants to be members of the *Committed* profile relative to the *Failure to Commit* one.

In relation to our predictors, exposure to previews seen as more realistic shared no association with profile membership but was associated with slightly lower levels of commitment in the *Committed* profile, although this effect remains small, and with higher levels of commitment in the *Failure to Commit* profile, although this benefit seemed to slightly fade away over time (i.e., small negative effect on the slope factor). These results fail to support H3a but partially support H3b.

Participants reporting more positive initial socialization experiences were more likely to correspond to the *Committed* profile than to both other profiles. Positive socialization experiences were also associated with higher levels of commitment in all profiles. Although these benefits seemed to fade away over time in the *Committed* and *Learning to Love* profile (small negative effect on the slope factor), they increased over time in the *Failure to Commit*

profile (small positive effect on the slope factor), thus highlighting additional benefits of socialization when commitment is low. These results support H4a and partially support H4b.

Consistent with H5a, recruits who initially reported being satisfied with the implications of training for their work-life balance were more likely to correspond to the *Committed* profile than to both other profiles. Partially supporting H5b, this satisfaction was also related to higher levels of commitment among employees corresponding to the *Committed* and *Learning to Love* profiles, as well as to increases over time in commitment levels in the *Committed* profile. These results suggest that work-life balance could support, and even nurture, commitment among recruits with high or increasing levels of commitment.

Recruits reporting higher initial levels of identity conflict were less likely to correspond to the *Committed* profile relative to the other two profiles. Greater identity conflict was also associated with lower levels of commitment in all profiles, an effect that was particularly pronounced in the *Failure to Commit* profile, although this negative impact slightly faded over time in this profile (i.e., small positive effect on the slope factor). These results support H6a and H6b.

Outcomes of Organizational Commitment Trajectories

The results of the outcome comparisons are reported in Table 4 and graphically illustrated in Figures 2 to 4. The *Failure to Commit* profile displayed the highest turnover intention and transition intention, followed by the *Learning to Love* profile, and finally by the *Committed* profile. Both intentions seemed to increase over time in all profiles. However, whereas increases in turnover intention were smallest in the *Learning to Love* profile (and did not differ across the *Committed* and *Learning to Love* profiles), increases in transition intention were smallest in the *Failure to Commit* profile and highest in the *Committed* profile, with the *Learning to Love* profile falling in between. These results partially support H7a and H7b. Thus, and consistent with H8, we found that the difference between organizational commitment profiles in terms of turnover intention was greater than that observed for transition intention. For example, turnover intention was on average .831 SD higher in the *Failure to Commit* profile relative to the *Committed* one, while transition intention was only .453 SD higher in the *Failure to Commit* profile relative to the *Committed* profile.

Initial levels of job satisfaction (T3) were highest in the *Committed* profile, followed by the *Learning to Love* profile, and lowest in the *Failure to Commit* profile. The *Learning to Love* and *Failure to Commit* profiles both displayed a small comparable increase in job satisfaction between T3 and T4, whereas job satisfaction remained stable in the *Committed*

profile between T3 and T4. These results partially support H9a and H9b. Finally, T2 levels of perceived performance were higher in the *Committed* and *Failure to Commit* profiles than in the *Learning to Love* one, failing to support H10.

Discussion

Connected to the internalization of various work-related targets to employees' professional identity, commitments are fluid and evolve over the course of one's career (Houle et al., 2022, Meyer et al., 2006; Spurk et al., 2019). This career-wide perspective suggests that the onboarding period of organizational entry is likely to represent a critical milestone in the emergence and consolidation of commitment (Louis, 1980; Solinger et al., 2013; Van Maanen & Schein, 1979). The current study was specifically designed to understand how affective commitment to one's organization first emerges and evolves from the very beginning of military recruits' training until nine months following the end of their training (generally coinciding with the end of the first year of service). First, we sought to assess the extent to which the profiles of commitment trajectories identified in previous studies of new (organizational commitment trajectories among Ph.D. graduates; Solinger et al., 2013) and established (occupational commitment among school principals; Houle et al., 2022) employees would be replicated among a large sample of military recruits. Second, we sought to determine whether these trajectories would follow internalization processes matching the self-equilibrium hypothesis (Morin et al., 2013, 2017), previously found to describe the evolution of occupational commitment (Houle et al., 2022). Third, we sought to document which factors (i.e., perceived realism of previews, socialization, satisfaction with the implications of military life for work-life balance, and identity conflict) would be associated with these early organizational commitment trajectories (i.e., profile membership, intercepts, and slopes). Fourth, we sought to document the implications of these early organizational commitment trajectories in terms of outcomes selected for their dual relevance to the CAF and its members (i.e., turnover intention, transition intention, job satisfaction, and perceived performance).

A Person-Centered Perspective on Early Organizational Commitment Trajectories

Partially supporting H1 and contrasting with previous longitudinal person-centered investigations in which five distinct profiles were identified (i.e., *High*, *Moderate*, *Low*, *Learning to Love*, *Honeymoon Hangover*; Houle et al., 2022; Solinger et al., 2013), only three profiles were identified in the present study (i.e., *Committed, Learning to Love*, and *Failure to Commit*). This difference could reflect the fact that the current study only encompasses

three months of basic training (designed to provide a uniform experience to all trainees) and nine months of subsequent employment, suggesting that these three profiles could represent those that initially emerge during the onboarding phase. It is noteworthy that Solinger et al. (2013) also considered the first six months of employment. However, these authors focused on Ph.D. graduates, who can arguably be considered to have already undergone a substantial amount of occupational socialization as part of their studies (e.g., Houle et al., 2020, 2022), which is typically not the case for most military recruits. Moreover, Solinger et al. (2013) relied on a restricted parameterization of GMA, known to potentially result in the extraction of too many profiles (Morin et al., 2011c). In any case, it is also possible that the current set of profiles could be related to the rather unique nature of military work.

A unique feature of this study was our consideration of the dual training and occupational entry period. It was informative to note that all profiles demonstrated an increase in organizational commitment levels at the end of basic training, although this increase was more pronounced among newcomers with initially high levels of commitment (i.e., the increase was greatest in the *Committed* profile and smallest in the *Failure to Commit* profile). From an applied standpoint, this suggests that the basic training procedures implemented by the CAF seem to successfully set the stage for the development of newcomers' emotional attachment to their organization following the end of this training period. Moreover, although 18.20% of the sample retained a low level of commitment throughout the course of the study suggesting that these benefits may not apply to everyone, 39.77% of the employees displayed a *Committed* profile, and 42.03% displayed a *Learning to Love* profile. In fact, this *Learning to Love* profile was much larger than the similar profile identified among Ph.D. graduates (16.5%; Solinger et al., 2013) or established school principals (13.6%; Houle et al., 2022), which may explain the lower number of profiles identified in the present study via specificities related to the unique context of the CAF. The latter might include the explicit goals of training to instill a sense of duty, loyalty, integrity, and courage (DND, 2009). Conversely, despite also experiencing a small increase in commitment at the end of basic training, the levels of organizational commitment observed in the *Failure to Commit* profile remained problematically low over the course of the study. Interestingly, the size of this profile (18.5%) was similar in other studies (11.5% in Solinger et al., 2013; 12.4% in Houle et al., 2022), suggesting that the prevalence of an apparent person-environment misfit may generalize to different work contexts and career stages.

Also noteworthy was the observation of a flattening in commitment levels after basic training, which was most prominent among the *Committed* profile. In fact, in this profile,

commitment levels seem to suggest a slight level of overenthusiasm at the end of basic training (i.e., *Honeymoon*), followed by a downward correction when their chosen occupational reality fails to fully meet expectations (i.e., *Hangover*). However, although this pattern of evolution does share similarities with the theoretical *Honeymoon/Hangover* socialization scenario (e.g., Boswell et al., 2005, 2009; Solinger et al., 2013), the persistently high levels of commitment observed in this profile are not entirely consistent with this scenario. However, no such flattening was observed in the *Learning to Love* profile, in which commitment kept on increasing for three months after training, before stabilizing.

Interestingly, the bulk of the change observed in the *Committed* and *Learning to Love* profiles, jointly representing more than 80% of the sample, occurred over a six-month period. This finding aligns with previous suggestions that when facing personal or contextual changes likely to impact commitments, it may take approximately six months for one's commitment levels to recrystallize among established employees (Houle et al., 2022). Interestingly, others have also suggested that employees require a period of at least six months to properly learn the ropes of their new role (Ashforth & Saks, 1996), although this should be qualified by a consideration of the complexity of the new role. For instance, Rudman et al. (2014) suggest that nurses may require up to five years to become fully autonomous in their new role. The current study suggests that a time interval of six-month may properly reflect the military reality.

When looking at the *Failure to Commit* profile, we observe a small and consistent downward trajectory post basic training, eventually leading to lower levels of commitment than observed at the start of training, and thus completely offsetting the benefits of the training. Moreover, recruits corresponding to this profile displayed the most pronounced fluctuations around their commitment trajectory. This last observation is theoretically consistent with commitment levels that are highly reactive to personal or social contingencies, perhaps resulting from a weak internalization of the target of commitment to recruits' professional identity (Houle et al., 2022; Morin et al., 2013, 2017; Ryan & Deci, 2017). Conversely, both the *Committed* and *Learning to Love* profiles displayed little state-like variability, meaning members of these profiles were more successful in internalizing the CAF as a part of their professional identity in a way that remains resilient to circumstantial disruptions. These results are consistent with H2 and provide further evidence that self-equilibrium processes (Houle et al., 2022; Morin et al., 2013, 2017) are relevant to commitment trajectories.

Links between Demographic Variables and Early Organizational Commitment Trajectories

For descriptive and statistical purposes, we considered associations between participants' demographic characteristics and their commitment trajectories. However, from an applied standpoint, the results from these analyses can help identify newcomers who present a higher risk of adopting weaker organizational commitment trajectories to support the development of targeted interventions. It is first important to note that officer cadets were systematically more at risk of membership into more problematic profile (i.e., *Failure to Commit* relative to the other two profiles, and *Learning to Love* relative to the *Committed* profile). Likewise, older individuals seem more likely to belong to the *Failure to Commit* profile relative to the other profiles. It would seem important for applied purposes for future research to investigate the mechanisms underpinning this higher level of risk among officer cadets and older individuals. Interestingly, women seemed more likely to experience a commitment trajectory suggestive of a positive (*Committed*) or negative (*Failure to Commit*) match between their expectations and their new work reality relative to a *Learning to Love* scenario. This suggests that stronger onboarding support could be provided to women displaying low initial levels of commitment, as this situation seems unlikely to resolve itself on its own based on current practices. Lastly, recruits wearing a sea or air uniform had greater odds than those wearing a land uniform to display a *Failure to Committed* profile relative to a *Committed* profile. This result highlights the need to consider what aspects of the military training or occupation facilitates the consolidation of a strong commitment during onboarding among the Army, relative to the Navy or Air Force.

Predictors of Early Organizational Commitment Trajectories

Although we found evidence of associations between organizational commitment trajectories (i.e., profile membership, within-profile variations in initial levels, and within-profile variations in changes over time in these levels) and initial predictor levels (T1 or T2, depending on predictors), we found no evidence that changes occurring over time in our predictors were associated with commitment trajectories (thus failing to support H3c, H4c, H5c, and H6c). Moreover, none of these predictors differentially predicted membership into the *Learning to Love* profile versus the *Failure to Commit* profile. The latter is not too surprising, however, as our results revealed that associations were limited to initial levels of the predictors (rather than to change over time in these levels). As such, this lack of differential association may simply reflect the matching initial levels of commitment

observed in these two profiles. Moreover, given the difference observed between these profiles in terms of demographic characteristics and outcomes, this lack of differential associations with the predictors does not call into question the distinctiveness of these two profiles. From an applied perspective, our results primarily highlight the critical importance of exposing recruits to positive basic training experiences to optimize their organizational commitment trajectories, while suggesting that attempts to resolve initial failures are unlikely to be fruitful.

Perceived Realism of Previews

CAF employees often expect and want to spend their entire career within the same organization. A decision to join the military is thus bound to be anchored in at least a minimal anticipatory socialization phase in which prospective newcomers would want to obtain previews of what their work should truly entail. The perceived realism of these previews is hypothesized to help newcomers commit to their organization (Bauer et al., 2007; Wanous, 1992; Wanous et al., 1992). Unfortunately, our results failed to support this claim (as well as H3a), revealing no association between employees' exposure to previews seen as more realistic and their likelihood of profile membership. However, and partially supporting H3b, we found that exposure to previews seen as more realistic was associated with higher levels of commitment among employees corresponding to the *Failure to Commit* profile. Although the perceived realism of these previews was also associated with a slight decrease over time in commitment within the same profile, this decrease was not enough to offset the initial benefits. This result suggests that exposure to previews seen as more realistic may be quite important to employees displaying initially low levels of commitment. Our results also revealed one unexpected association. Indeed, exposure to previews seen as more realistic was associated with slightly lower levels of commitment in the *Committed* profile, suggesting that recognizing the unrealism of these previews may lead to slightly lower levels of commitment among otherwise committed employees. Still, the size of this effect was small and aligns with the socialization literature which indicates that some newcomers are bound to experience surprises (which can be positive and/or negative) when entering a new job (Louis, 1980; Van Maanen & Schein, 1979).

Socialization

Supporting H4a and partially supporting H4b, higher initial levels of socialization into the new role was associated with an increased likelihood of membership to the *Committed* profile relative to both other profiles, as well as with higher initial levels of organizational commitment across all profiles, although these benefits faded slightly over time in the

Committed and *Learning to Love* profiles. Moreover, these initial levels of socialization were also positively associated with increases over time in commitment levels within the *Failure to Commit* profile, suggesting that socialization could be a way to help newcomers displaying initially low levels of organizational commitment grow more committed over time. In line with commitment theory (Meyer et al., 2006) and SDT (Ryan & Deci, 2017), socialization appears to be intricately related to the extent to which employees internalize the target of their commitment to their professional identity thereby facilitating the development of higher commitment levels, even among those who, for other reasons, experience low commitment. This observation is also aligned with the recognition that developing an emotional bond with the organization is dependent on newcomers' ability to become familiar with their job and work conditions as early as possible in their career (e.g., Bauer et al., 2007; Lapointe et al., 2013).

Satisfaction with the Implications of Military Life for Work Life Balance

Supporting H5a, newcomers reporting higher levels of satisfaction with the implications of military life for their work-life balance were more likely to be members of the *Committed* profile relative to the other profiles. Partially supporting H5b, members of the *Committed* and *Learning to Love* profiles were also more likely to display higher levels of organizational commitment when they reported a greater satisfaction with the implications of military life for their work-life balance. These benefits also supported small increases in commitment levels within the *Committed* profile. Thus, some level of satisfaction with the implications of military life for work-life balance seems critical to achieve and maintain higher levels of organizational commitment but does not seem to play a substantive role in differentiating between initially low and increasing (*Learning to Love*) or stable (*Failure to Commit*) profiles. This observation suggests that exposure to an early occupational context that hinders work-life balance will not inhibit the development of a *Learning to Love* trajectory. As a result, our results do suggest that capitalizing on onboarding conditions supportive of work-life balance could help support high and stable commitment trajectories without any accompanying trade-off, making it a potentially highly desirable venue of intervention. Considering the nature of a military career where demands on work-life balance can be severe (Oskarsson et al., 2021; Pickering, 2017), our results suggest that it might be important to incorporate these considerations within early training and socialization practices.

Identity Conflict

Supporting H6a and partially supporting H6b, our results revealed that the experience of an identity conflict was associated with a decreased likelihood of membership into the

Committed profile relative to the other two, as well as with lower initial levels of commitment within all profiles. This last effect was particularly marked in the *Failure to Commit* profile although it also faded away over time. Altogether, these results suggest that identity conflicts may inhibit the development of commitment. This result aligns well with commitment theory (Houle et al., 2022; Meyer et al., 2006) and SDT (Ryan & Deci, 2017) in which the internalization of one's commitment target within one's professional identity cannot take place when an employee feels a conflicting sense of identity with that target (i.e., does not identify with the organization's identity, values, mission).

Outcomes of Early Organizational Commitment Trajectories

Turnover and Transition Intentions

In accordance with H8, the difference between profiles in terms of turnover intention was greater than that observed for transition intention. Moreover, and in accordance with commitment theory (Meyer & Allen, 1991; Meyer et al., 1993) and the assumption that internalization facilitates the maintenance of a course of action of relevance to the target being internalized (Meyer et al., 2006; Houle et al., 2022), the lowest turnover and transition intentions were associated with the *Committed* profile, followed by the *Learning to Love* profile, and highest in the *Failure to Commit* profile. Although these results provide some support to H7a and H7b, we also found that all profiles displayed an increase in turnover and transition intention over time that was inconsistent with these hypotheses. Yet, increases in turnover intention were slightly less pronounced in the *Learning to Love* profile relative to the other profiles, while that of transition intention was steepest in the *Committed* profile, followed by the *Learning to Love* profile, and finally the *Failure to Commit* profile. Although it is somewhat disconcerting to note that, despite the increasing levels of organizational commitment observed in the *Committed* and *Learning to Love* profiles, the intention to leave or transition was also increasing in these profiles, this unexpected result primarily seems to reflect the normative increases in both types of intention observed in the current sample (see Table S4 of the online supplements) which essentially seemed to generalize to all profiles. This normative increase could be related to the specificity of the military career, which entails normative exposure to stressful situations (Boermans et al., 2013), strong demands on work-life balance (Oskarsson et al., 2021; Pickering, 2017), and a hierarchical authoritarian structure (Tziner, 1983). Moreover, it could also come from the impression that more time spent working in a military context reduces alternative career opportunities (Laplante et al., 2016; Tziner, 1983). Despite these minor differences limited to the evolution of these

intentions over time, the benefits of higher levels of organizational commitment remain evident when we consider the aforementioned profile differences in turnover and transition intention. In sum, our results suggest that organizational commitment, at least as it emerges in the first months of employment, is not enough to completely curb the normative increase in turnover and transition intention observed at the early stages of the military career.

Job Satisfaction

Partially supporting H9a and H9b, and in line with recent meta-analytic evidence supporting the benefits of organizational commitment for job satisfaction (Xu et al., 2023), the highest levels of job satisfaction were observed in the *Committed* profile, followed by the *Learning to Love* profile, and were lowest in the *Failure to Commit* profile. However, and contrary to our expectations, longitudinal changes in job satisfaction were not aligned with the evolution of the commitment trajectories. Rather, job satisfaction levels underwent a small, and similar, increase in the *Failure to Commit* and *Learning to Love* profiles, while they remained primarily stable in the *Committed* profile. However, these differences remained negligible (less than .100 SD between the highest and lowest level of change over time), especially when compared with the magnitude of the main effect observed in relation to the level of job satisfaction observed in each profile. Still, it remains surprising to note increasing levels of job satisfaction in the *Failure to Commit* profile. This result could possibly be related to the nature of military life, where recruits may grow fond of their occupation despite a lack of emotional attachment to their organization. This could in fact reflect the size of the organization, which suggest that it could be highly valuable for future military research to consider other targets of commitment referring to more easily identifiable or meaningful units, such as the platoon, uniform (sea, land or air), or occupation. Future research will be needed to assess the validity of this interpretation. In the meantime, the value of organizational commitment itself remains supported by the size of differences in job satisfaction levels observed across profiles.

Perceived Performance

Finally, perceived performance was assessed at T2 for applied purposes as a potential beneficial outcome of organizational commitment. Unexpectedly (i.e., failing to support H10), T2 levels of perceived performance were lowest in the *Learning to Love* profile, and no statistically significant difference was observed between the *Committed* and *Failure to Commit* profiles. It is, however, important to highlight that the size of the differences observed across profiles remained minimal (the profile with the highest and lowest levels of perceived performance only differed by .171 SD), and of limited practical utility. Obviously,

this lack of clear differences could also reflect the fact that performance was self-reported by participants right at the end of the basic training and was specific to basic training rather than to the work context. It thus remains possible that different results would emerge from the investigation of work-related indicators of performance measured over time in a more objective manner. Still, it remains important to keep in mind that perceived performance levels were lowest in the *Learning to Love* profile, suggesting that these employees might benefit from some additional support across the onboarding period.

Strengths, Limitations, and Future Directions

Although our longitudinal person-centered approach is a strength of this study, this approach was not suitable to tests of causal directionality, forcing us to rely on theory to position our covariates as predictors or outcomes. For instance, although we can reasonably position the perceived realism of job previews, socialization, satisfaction with the implications of military life for work-life balance, and identity conflict as antecedents of commitment, and commitment as a driver of turnover and transition intention, job satisfaction, and perceived performance, these theoretical expectations do not preclude the possibility of bidirectional (e.g., low levels of satisfaction may reduce commitment, in turn giving rise to identity conflict) or spurious (e.g., caused by unmeasured variables) associations. This limitation is reinforced by our reliance on self-reported measures, which can suffer from a variety of self-report biases. Moreover, the fact that most of the associations found in this study were limited to the average level, rather than changes over time, on the constructs of interest makes it even harder to reach conclusions about directionality. Moreover, some unexpected results, related to normative increases in intentions to leave or transition, increases in job satisfaction in the *Failure to Commit* profile, and even inconsistent associations involving perceived performance suggests that to fully understand the onboarding commitment trajectories of military recruits, other factors would need to be considered (e.g., the unique hierarchical, authoritarian, and stressful context of military work). It is thus critical for future research to assess the directionality of associations, while considering objective data (e.g., turnover) and informant-reports (e.g., supervisor ratings). It is also important to acknowledge the limitations of our measure of realistic job previews, which only captured participants retrospective assessment of whether the previews to which they were previously exposed were realistic or not once confronted to their work reality. As such, this measure does not provide us with any information regarding the content (i.e., expected nature of the job) and valence (i.e., positive or negative) of these previews, making

it hard to clearly unpack the mechanisms underpinning our results. The retrospective nature of this perceptual measure also adds complexity, making it impossible to clearly unpack the causes of their perceived realism (i.e., memory biases and personal factors unrelated to the nature of the work environment may influence these perceptions).

A second strength of this study comes from our consideration of the evolution of organizational commitment trajectories from the start of basic training until the end of the first year of service, a period seen as critical to the success of onboarding (e.g., Ashforth & Saks, 1996; Solinger et al., 2013). In this regard, it was interesting to note that basic training seemed to have a clear positive influence on CAF newcomers' organizational commitment trajectories, with less change occurring after the end of basic training. Still, this timespan remains limited and provides no information regarding the long-term persistence of the profiles identified in the present study. The fact that other studies, focusing on early career (Solinger et al., 2013) or established (Houle et al., 2022) employees converged on a more extensive set of profiles suggests that it might be worth considering what happens following these first few months. Adopting a lifespan perspective to the study of commitment (Spurk et al., 2019) requires a comprehensive assessment of how commitment evolves throughout the career and, although this study contributes one piece of this puzzle, other pieces are still missing.

Our sole focus on affective organizational commitment, although valuable as an established driver of a variety of relevant individual and organizational outcomes (e.g., Meyer, 2016; Meyer & Maltin, 2010; Meyer et al., 2002; Spurk et al., 2019) remains limited. Indeed, commitment can be directed at a variety of other targets (e.g., occupation, supervisor, team; Meyer & Morin, 2016) and mindsets (i.e., normative or continuance; Meyer et al., 1993) also likely to influence employees' functioning, and potentially to offset the problems that may stem from a low commitment to the organization itself and may be particularly relevant to military life. Future studies should consider whether and how the present conclusions generalize, or not, to these other targets and mindsets. Lastly, as is the case for any person-centered investigation (Meyer & Morin, 2016; Morin et al., 2018), the generalizability of the profiles and their associations with predictors and outcomes are dependent on replication across diverse settings, and over time, although this last limitation does not preclude us from drawing substantive applied knowledge as it pertains to the current sample.

Conclusion

Focusing on a large sample of military recruits and officer cadets followed across their first year of service, we identified three profiles of employees displaying organisational commitment trajectories matching a *Committed*, *Learning to Love*, and *Failure to Commit* scenario. Consistent with one of the goals of the basic training implemented by the CAF, these profiles all displayed an increase in commitment levels over the course of training, and this increase even persisted over time in the *Learning to Love* profile. Moreover, profiles displaying moderate (*Learning to Love*) to high (*Committed*) levels of commitment jointly represented 82% of the total sample, leaving only a small portion of recruits displaying a *Failure to Commit* profile (18%). Whereas this last profile could reflect a misfit in terms of candidate selection by the CAF or occupational selection by the candidate, interventions seeking to support the integration and adaptation of these employees into their workplace, or to assist them in finding alternative employment opportunities within the CAF or the broader DND (occupation transfer) might prove worthwhile. The fact that most recruits end up displaying a *Committed* or *Learning to Love* profile is, in and of itself, very encouraging. It would seem critical, for future research, to test whether and how the present results and conclusions would generalize, or not, to other samples of military or civilian employees.

Our results provided further evidence that affective commitment trajectories seem to follow self-equilibrium processes whereby a strong affective commitment is also more resilient over time (Houle et al., 2022; Morin et al., 2013, 2017). Beyond its theoretical value, this observation also suggests that interventions seeking to nurture commitment should not only focus on building attachment to any specific target, but also to encourage the internalization of this target into employees' professional identity to ensure its persistence. Whereas some predictors were linked to high and stable commitment levels (i.e., satisfaction with the implications of military life for work-life balance), others rather seemed to protect against low commitment (i.e., perceived realism of previews), and a final set had more widespread effects (i.e., socialization and identity conflict). From a military perspective, where retention is critical (Laplante et al., 2016), it might be wise to primarily focus on factors that have more widespread effects or that protect against very low levels of organizational commitment.

Lastly, although it was clear that higher levels of commitment shared associations with more desirable outcomes, commitment seemed unable – on its own – to influence changes in outcome levels over time. Beyond highlighting the importance of nurturing commitment as early as possible, these observations also reinforce the importance of considering which other

elements of the onboarding context can be leveraged to help modify problematic outcome levels. For instance, it is important to keep in mind that, beyond the organization, employees can develop affective commitments to many other work-related targets (including their supervisor, platoons, occupation), all likely to further support their optimal work functioning (e.g., Meyer & Morin, 2016).
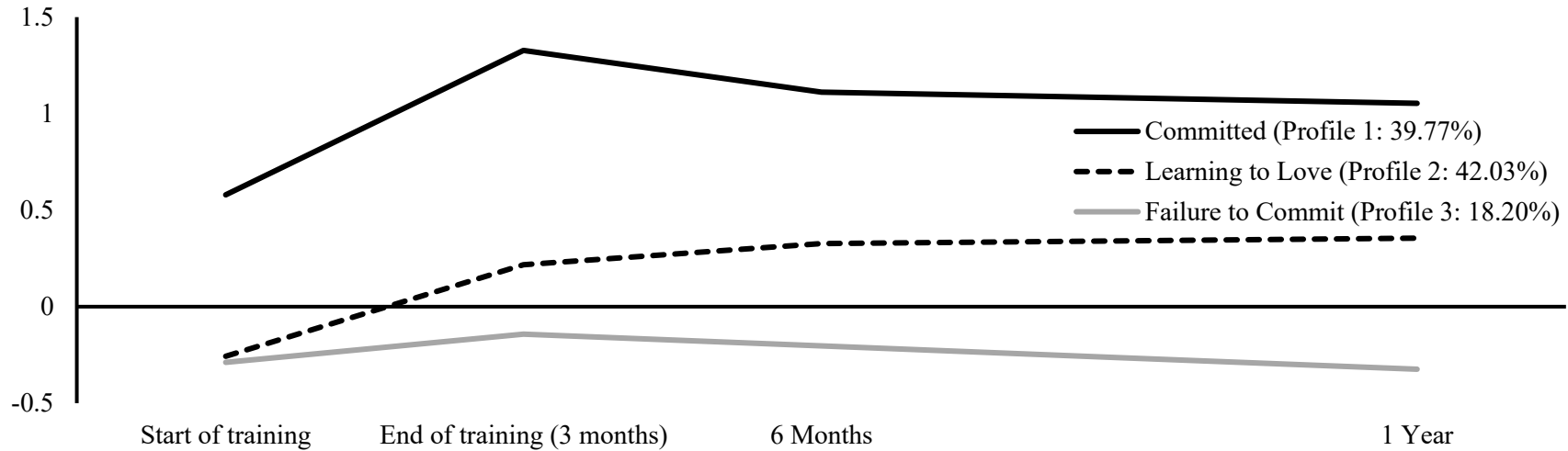
Figure 6. Final 3-Profile Solution for study 2: Affective Organizational Commitment.
Note. Profile indicators are factor scores with a mean of 0 and a standard deviation of 1 at Time 1. At Time 2 to Time 4, factor scores have a mean of .566 and a standard deviation 1.
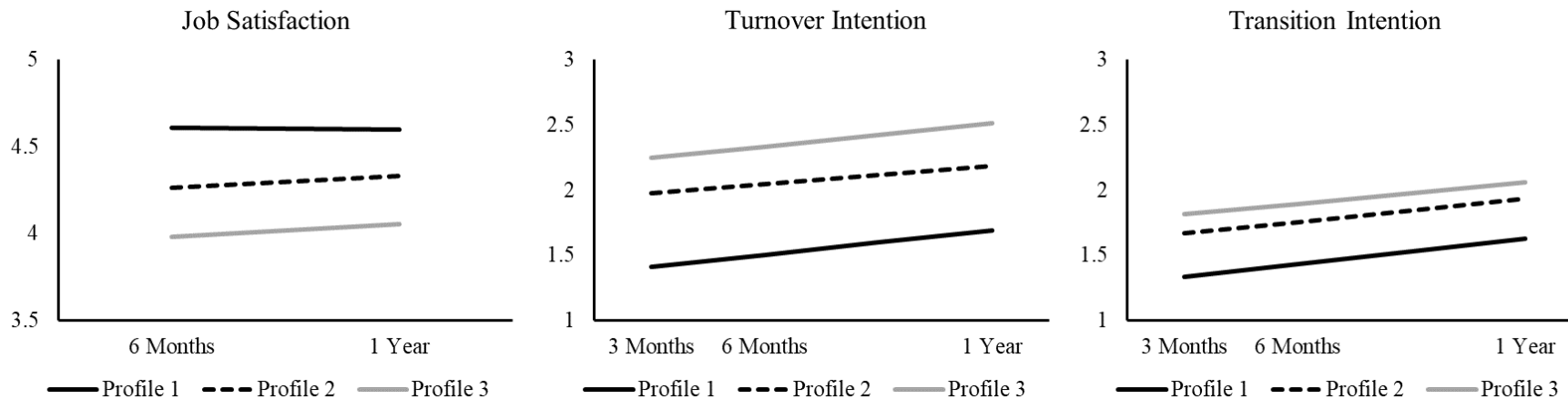
Figure 7. Job Satisfaction, Turnover Intentions, and Transition Intentions within the Final 3-Profile Solution.
Note. Outcome indicators are factor scores with the mean interpreted in the original metric and a standard deviation of 1.

Table 6

Results from the Growth Mixture Analysis for Study 2

	LL	#fp	Scaling	AIC	CAIC	BIC	ABIC	Entropy
Unconditional Model								
1 Profile	-6719.102	8	7.941	13454.204	13514.103	13506.103	13480.681	
2 Profiles	-6587.184	14	4.813	13202.368	13307.191	13293.191	13248.704	1.000
3 Profiles	-1578.886	20	5.605	3197.772	3347.519	3327.519	3263.966	.846
4 Profiles	-1574.042	26	4.534	3200.085	3394.756	3368.756	3286.137	.878
5 Profiles	557.336	32	7.222	-1050.672	-811.077	-843.077	-944.761	.901
Demographics								
D1. Null	-17186.220	30	4.5952	34432.440	34657.060	34627.060	34531.731	.846
D2. C on demographics	-17088.376	40	3.7533	34256.752	34556.246	34516.246	34389.141	.846
D3. C & I (fixed across profiles) on demographics	-17079.572	45	3.4634	34249.143	34586.074	34541.074	34398.080	.846
D4. C & I (free across profiles) on demographics	-17051.402	55	3.1502	34212.804	34624.608	34569.608	34394.838	.847
D5. C & S (fixed across profiles) on demographics	-17081.866	45	3.4530	34253.733	34590.664	34545.664	34402.670	.846
D6. C & S (free across profiles) on demographics	-17076.228	55	3.0133	34262.456	34674.261	34619.261	34444.491	.846
Predictors (From Model D2)								
P1. Null	-14183.964	132	2.7994	28631.929	29620.259	29488.259	29068.810	.846
P2. C on intercepts	-13784.054	140	2.6770	27848.107	28896.337	28756.337	28311.467	.853
P3. C & I (fixed across profiles) on intercepts	-13469.720	144	2.6368	27227.441	28305.620	28161.620	27704.039	.847
P4. C, I (fixed) & S (fixed) on intercepts	-13446.250	148	2.5870	27188.501	28296.629	28148.629	27678.338	.848
P5. C, I (free across profiles) & S (fixed) on intercepts	-13296.665	156	2.5197	26905.330	28073.357	27917.357	27421.644	.850
P6. C, I (free) & S (free) on intercepts	-13259.647	164	2.4350	26847.294	28075.220	27911.220	27390.087	.850
P7. C, I (free) & S (free) on intercepts and S (fixed) on slopes	-13248.934	168	2.4100	26833.868	28091.743	27923.743	27389.899	.850
P8. C, I (free) & S (free) on intercepts and S (free) on slopes	-13224.214	176	2.3563	26800.427	28118.202	27942.202	27382.937	.850

Note. LL: Model loglikelihood; #fp: Number of Free Parameters; Scaling = scaling factor; AIC: Akaïke Information Criteria; CAIC: Constant AIC; BIC: Bayesian Information Criteria; ABIC: Sample-Size adjusted BIC; ICL-BIC: entropy-adjusted BIC; Not applicable; C: Profile membership; I: Intercept factor of the commitment trajectories; S: Slope factor of the commitment trajectories.

Table 7

Parameter Estimates for the Final Unconditional Growth Mixture Solution for Study 2

Parameter	Profile 1 (Committed) Estimate (*t*)	Profile 2 (Learning to Love) Estimate (*t*)	Profile 3 (Failure to Commit) Estimate (*t*)
Intercept mean	.579 (19.658)**	-.257 (-6.742)**	-.288 (-6.697)**
Slope mean	.473 (71.558)**	.612 (86.408)**	-.036 (-7.307)**
Intercept variability (SD = √σ)	.203 (17.670)**	.203 (17.670)**	.203 (17.670)**
Slope variability (SD = √σ)	.008 (1.792)	.008 (1.792)	.008 (1.792)
Intercept-slope correlation	-.016 (-1.846)	-.016 (-1.846)	-.016 (-1.846)
Loading T1	0 (NA)	0 (NA)	0 (NA)
Loading T2	1.580 (46.836)**	.774 (27.111)**	-4.006 (-3.343)**
Loading T3	1.125 (159.156)**	.955 (147.406)**	-2.326 (-2.369)*
Loading T4	1 (NA)	1 (NA)	1 (NA)
SD(εyi)_T1-T4	.006 (11.108)**	.008 (12.019)**	.239 (21.014)**

Note. t = Estimate / standard error of the estimate (t values are computed from the original variance estimate and not from the square root); SD(εyi) = Standard deviation of the time-specific residual; NA = not applicable (i.e., fixed parameter); The square root of the estimate of variability (trajectory factor, time-specific residual) is presented so that the results can be interpreted in the same unit as the construct used in the model (here, standardized factor score with a mean of 0 and an SD of 1); * p ≤ .05; ** p ≤ .01.

Table 8

Classification Probabilities for the Most Likely Latent Class Membership (Row) by Latent Class (Column) for Study 2

	Committed	Learning to Love	Failure to Commit
Committed	.937	.053	.009
Learning to Love	.048	.922	.031
Failure to Commit	.014	.044	.942

Table 9
Results from the Predictive Analyses for Study 2

Predictors	Profile 1 vs Profile 2		Profile 1 vs Profile 3		Profile 2 vs Profile 3	
	Coeff (SE)	OR	Coeff (SE)	OR	Coeff (SE)	OR
Rank (0-recruit *vs* 1-officer cadet)	-.433 (.120)**	.648	-.990 (.159)**	.371	-.557 (.166)**	.573
Sex (0-men *vs* 1-women)	.196 (.093)*	1.217	-.007 (.007)	.993	-.204 (.093)*	.816
Age (coded 1 to 6)	-.067 (.038)	.935	-.226 (.049)**	.798	-.159 (.045)**	.853
Uniform Dummy 1 (1-land *vs* 0-others)	.174 (.122)	1.190	.336 (.151)*	1.399	.162 (.145)	1.176
Uniform Dummy 2 (1-air *vs* 0-others)	-.031 (.129)	.970	-.143 (.163)	.867	-.112 (.138)	.894
Perceived Realism of Previews (FS: M=3.50, SD=.24)	-.015 (.179)	.985	.325 (.237)	1.383	.340 (.230)	1.404
Socialization (FS: M=4.85, SD=.15)	.896 (.224)**	2.449	.722 (.244)**	2.058	-.174 (.236)	.840
Satisfaction with the Implications of Military Life for Work-Life Balance (FS; M=3.93, SD=.41)	.503 (.182)**	1.654	.645 (.196)**	1.906	.142 (.186)	1.152
Identity Conflict (FS: M=0, SD=1)	-.669 (.079)**	.512	-.588 (.085)**	.555	.081 (.065)	1.084

	Profile 1		Profile 2		Profile 3	
	Intercept Coeff (SE)	Slope Coeff (SE)	Intercept Coeff (SE)	Slope Coeff ()	Intercept Coeff (SE)	Slope Coeff (SE)
Perceived Realism of Previews (FS: M=3.50, SD=.24)	-.085 (.038)*	-.014 (.015)	.017 (.056)	-.002 (.016)	.622 (.121)**	-.035 (.015)*
Socialization (FS: M=4.85, SD=.15)	.222 (.057)**	-.051 (.021)*	.224 (.051)**	-.050 (.020)*	.364 (.140)**	.052 (.018)**
Satisfaction with the Implications of Military Life for Work-Life Balance (FS: M=3.93, SD=.41)	.077 (.039)*	.041 (.013)**	.101 (.047)*	.003 (.014)	.035 (.106)	-.023 (.012)
Identity Conflict (FS: M=0, SD=1)	-.053 (.015)**	-.006 (.006)	-.092 (.018)**	.006 (.004)	-.245 (.054)**	.025 (.006)**

Notes. **: $p < .01$; *: $p < .05$. FS: Factor score; Coeff: Regression coefficient (these are multinomial logistic regression coefficients for the prediction of profile membership, and unstandardized multiple regression coefficients for the prediction of the intercept and slope factors); SE: standard error; OR: Odds ratio; The multinomial logistic regression coefficients and OR reflect the predictor effects on the likelihood of membership in the first listed profile relative to the second listed profile; Profile 1: Committed; Profile 2: Learning to Love; Profile 3: Failure to Commit.

Table 10

Results from the Outcomes Comparisons for Study 2

	Committed [95% C.I.]	Learning to Love [95% C.I.]	Failure to Commit [95% C.I.]	Summary of Significant Differences
Turnover Intention: Intercept	1.407 [1.381; 1.432]	1.974 [1.916; 2.031]	2.246 [2.143; 2.349]	3>2>1
Turnover Intention: Slope	.285 [.278; .292]	.214 [.207; .221]	.268 [.235; .300]	1=3>2
Transition Intention: Intercept	1.335 [1.319; 1.351]	1.667 [1.633; 1.700]	1.812 [1.753; 1.870]	3>2>1
Transition Intention: Slope	.294 [.291; .297]	.264 [.260; .269]	.246 [.235; .257]	1>2>3
Job Satisfaction: T3	4.611 [4.590; 4.632]	4.263 [4.223; 4.303]	3.983 [3.888; 4.077]	1>2>3
Job Satisfaction: Change T3-T4	-.010 [-.020; .001]	.066 [.053; .079]	.069 [.013; .125]	2=3>1
Perceived Performance: T2	.079 [.031; .127]	-.092 [-.139; -.046]	.047 [-.043; .137]	1=3>2

Note. Job satisfaction at T3 and the intercept factor for turnover intention and transition intention can be interpreted in the scales' original metric. The change in job satisfaction and the slope for turnover and transition intentions should be interpreted in standard deviation units. Perceived performance is a factor score with a sample mean of 0 and an SD of 1. C.I.: Confidence interval.

Chapter 4

Nurses' Early Career Organizational and Occupational Commitment Trajectories:

A Dual Target Growth Mixture Investigation

Affective commitment entails the development and maintenance of an emotional bond to a specific target (Klein et al., 2012; Meyer & Herscovitch, 2001; Spurk et al., 2019). At work, this emotional bond represents a core component of one's professional identity (Meyer, 2016; Meyer et al., 2006) and a motivational mechanism underlying goal-driven behavior directed at the target of commitment (Meyer, 2016; Meyer et al., 2004). Initially proposed to explain individuals' intentions to stay in their organization or occupation (Meyer et al., 1993) affective commitment to one's organization or occupation has since been found to be associated with a wide range of desirable work-related attitudes and behaviours (Lee et al., 2000; Meyer & Maltin, 2010; Meyer et al., 2002; Spurk et al., 2019). Beyond its positive impact on functioning, affective commitment has also come to be recognized as a key indicator of the degree to which an individual has integrated the target of their commitment to their professional identity (Houle et al., 2022; Meyer et al., 2006; Spurk et al., 2019).

The ability to identify the mechanisms through which commitment becomes internalized in one's professional identity and the implication of this internalization requires a longitudinal perspective and jointly considering multiple targets of commitment (Spurk et al., 2019; Houle et al., 2022). Yet, longitudinal investigations of commitment trajectories remain scarce, leaving room for speculation. The present study contributes to our understanding of how affective commitment to the organization and occupation co-develop during the first five years of the career among a sample of novice nurses followed for two years. To achieve this goal, we rely on a person-centered approach (Meyer & Morin, 2016; Morin et al., 2018) to identify profiles (i.e., sub-populations) of early career nurses following qualitatively and quantitatively distinct trajectories of organizational and occupational commitment. To capture the evolution of commitment since nurses' entry in their occupation, we estimated these trajectories on the basis of nurses' occupational tenure (which ranged from 0 to 3 years at the start of the study) rather than as a function of the specific measurement points taken in this study.

Our focus on commitment to the organization and occupation is predicated on three considerations pertaining to our sample. First, the occupation represents a key target of commitment for highly educated public sector employees, such as nurses, who ideally remain in their occupation most of their careers, sometimes across multiple organizations (Houle et al., 2020, 2022; Spurk et al., 2019). As such, determining how occupational commitment

evolves early in the career may provide actionable knowledge on how to improve work conditions to help nurses internalize and remain in their role. Second, the organization is by far the most studied target of commitment, presumably due to it high desirability from the perspective of the employer (Meyer et al., 2002). Focusing on the organization and occupation thus increases the likelihood that managers will capitalize on our results to improve nurses' occupational and organizational functioning, which should benefit patients' well-being and satisfaction. Third, we are interested in the possible compatibility and/or conflict between early career employees' affective commitment to these two targets (Meyer et al., 2021). Understanding how these commitments align or not among distinct profiles of nurses is likely to help healthcare organizations encourage nurses to remain in their occupation, without having to transfer to another organization.

Our focus on novice nurses provides an opportunity to monitor the evolution of commitment trajectories early in the career to determine which factors, ideally controllable by the organization, are likely to contribute to the development and internalization of a strong affective commitment to both targets. To guide our hypotheses, we rely on Self-Regulation Theory (Carver & Scheier, 1998; Johnson et al., 2013) and Self-Determination Theory (Ryan & Deci, 2017). More precisely, we consider the dynamic role played by socialization experiences (i.e., task, social, organizational; Bauer et al., 2007; Perrot & Campoy, 2009) likely to help nurses achieve a more optimal self-regulation at work and, in turn, develop a stronger bond to their occupation and organization. We also consider psychological need satisfaction (i.e., autonomy, relatedness, competence; Ryan & Deci, 2017) to determine which needs contribute most to the internalization process whereby a target of commitment becomes part of one's professional identity (Houle et al., 2022; Meyer et al., 2006; Spurk et al., 2019).

Lastly, to determine which profiles, and combinations of profiles across targets, of commitment trajectories are most desirable we consider their dynamic associations with a series of outcomes relevant to employees (i.e., somatization, psychological distress) and organizations (i.e., work satisfaction, quality of care). We thus hope to provide guidance to healthcare organizations seeking to improve nurses' affective organizational and occupational commitment, and in doing so to maximise their contribution to the provision of quality healthcare to their patients.

The Evolution of Affective Commitment to the Occupation and Organization

To understand how affective commitment becomes internalized within one's professional

identity, we rely on the Organismic Integration component of Self-Determination Theory (SDT: Ryan & Deci, 2017). According to SDT, the process of internalization follows a continuum, where behaviors initially driven by external contingencies (e.g., having paycheck, not being fired) progressively come to be driven by internal (i.e., introjected) contingencies (e.g., seeking pride, avoiding guilt), before becoming aligned with one's personal values (i.e., identification), and finally becoming part of one's sense of identity (i.e., integration). As a long-term, continuously evolving, and self-defining emotional bond, affective commitment has been positioned as an indicator that the target of commitment has become internalized within one's sense of professional identity (Gagné & Howard, 2016; Houle et al., 2022; Meyer et al., 2006). With newcomers, the emergence of a strong sense of affective commitment to the occupation and organization also serves as an indicator of how well these newcomers have adapted to their new work life (Bauer et al., 2007; Solinger et al., 2013; Spurk et al., 2019).

Affective commitment is a dynamic construct (Klein et al., 2012, 2022), whose evolution depends on multiple professional (Sullivan & Baruch, 2009) and personal (Spurk et al., 2019) factors that come to influence, and be influenced by, employees' adaptation to their work. Accumulated evidence highlights substantive heterogeneity of affective commitment trajectories across diverse samples and targets of commitment (Houle et al., 2022; Salzmann et al., 2018; Solinger et al., 2013; Vandenberghe et al., 2011, 2017, 2021). Moreover, the evolution of commitment is theoretically assumed to be influenced by one's career stage, as well as by any other periods characterized by substantive changes to one's work conditions (e.g., Spurk et al., 2019). Arguably, the period of entry into a new occupation, when employees' transition from being "learners" to become "performers", is likely to represent a highly tumultuous period in the development of commitment (e.g., Solinger et al., 2013).

In the nursing occupation, affective commitment is likely to be substantially modified upon entry into the profession, when a key referent of commitment changes from an educational to a professional institution. Viewing commitment as a measure of internalization of a target into one's sense of identity implies that enough knowledge has been accumulated about that target to feel that it aligns with one's values (e.g., Houle et al., 2022; Meyer et al., 2006). Thus, initial levels of occupational commitment are likely to be indicative of the extent to which past socialization experiences were positive (e.g., learning and success in school), and anchored in at least some knowledge of their occupation (learned throughout their studies, and including clinical practica and internships), although this prior knowledge may still undergo substantial changes upon entering their first professional nursing position.

In contrast, early career nurses are likely to possess only minimal knowledge of their own specific organization upon entry, and this knowledge is unlikely to be anchored in more than hearsay, brief observations, and assumptions. In fact, research has often found that most pre-entry socialization factors have little effect on post-entry organizational commitment (for a review see: Morrow, 2010), and that those that do have an effect (e.g., career exploration, pre-entry knowledge about a job, career decisiveness) seem more strongly associated to occupational (vs organizational) commitment. We thus expect more within-profile variability (i.e., more within-person fluctuations over time) in organizational, relative to occupational, commitment.

Given that occupational commitment is likely to have undergone a more extensive development during schooling, nurses should display more differentiated initial levels (between-person differences) of affective commitment to the occupation relative to the organization upon entry into the workforce. It is, however, important to acknowledge that affective commitment is just one type of bond underpinning employees' intentions to adopt and maintain a course of action of relevance to a target (Meyer & Herscovitch, 2001; Meyer et al., 1991, 1993). Indeed, both continuance (i.e., the lack of alternatives or anticipated loss of investments when terminating the bond) and normative (i.e., a sense of obligation to maintain the current course of action) commitment could lead nursing students to remain in their occupation despite a lack of affective commitment. In fact, evidence exists documenting the emergence of employee profiles in which employees have very low affective commitment but very high normative and continuance commitment to the organization (e.g., Meyer et al., 2012) and occupation (Houle et al., 2020). Thus, although some nurses may enter their occupation with a very high level of emotional attachment to it (i.e., affective commitment), others may enter it with little emotional attachment but a far stronger sense of continuance or normative commitment reflecting the time and resources invested in their education. This differentiation should not be as evident in terms of commitment to the organization, which remains an unknown entity for most nurses during their early educational years. The organization is thus unlikely to become integrated within their professional identity prior to occupational entry (Houle et al., 2022), leading us to anticipate a higher initial level of between-profile variability for occupational commitment.

Research on employee socialization highlights how pre-entry socialization is likely to differ from actual work experiences and post-entry socialization experiences. Employee socialization is defined as a process through which employees acquire the social knowledge and skills needed to function in a new occupational or organizational role (Van Maanen &

Schein, 1979) and come to internalize their new role within their professional identity (Perrot & Campoy, 2009). Socialization is expected to differ across employees (including nurses: Dinmohammadi et al., 2013) based on the extent to which the new role exceeds, matches, or fails to meet their expectations (Boswell et al., 2005; Solinger et al., 2013), which inextricably is tied to one's pre-entry socialization and expectations (i.e., anticipatory socialization). A review conducted by Morrow (2010) highlights how one of the strongest antecedents of commitment is newcomer socialization, concluding that the development of commitment is shaped by the extent to which newcomers' expectations and desired work experiences are met in early career.

Results reported by Solinger et al. (2013) showcased the emergence of distinct organizational commitment trajectories amongst recent Ph.D. graduates entering the workforce. Despite their limited focus on Ph.D. graduates' commitment to their organization, these different trajectories were strongly connected with their more generic theoretical perspective anchored in an integrative socialization theory (Fiss, 2011; McKinney, 1969; Solinger et al., 2013) developed to increase our knowledge of socialization as a process unfolding over time. Indeed, this is how socialization was initially conceptualized (i.e., as a process; Ashforth et al., 2014; Feldman, 1981; Louis, 1980; Van Maanen & Schein, 1979), and thus seem relevant to consider more broadly in relation to nurses' initial trajectories of occupational and organizational commitment. Supporting this possible generalization, Houle et al. (2022) reported similar occupational trajectories among a sample of more established school principals. First, initially cautious or concerned employees can progressively integrate their new occupation and/or organization to their identities through a smooth process of goal setting and attainment, corresponding to a Learning to Love socialization scenario (Solinger et al., 2013). Second, initially enthusiastic nurses may become increasingly disappointed when continuously failing to achieve their goals or meeting a work reality that do not match their expectations, corresponding to a Honeymoon-Hangover scenario. Importantly, these scenarios are more relevant to the description of the shape of the trajectories rather than of their starting point. For instance, an employee with a moderately high pre-entry commitment levels can still experience a Learning to Love scenario provided fulfilling post-entry experiences, or a Honeymoon-Hangover scenario provided problematic post-entry experiences (e.g., Houle et al., 2022). Interestingly, these trajectories were found to be characterized by far more limited levels of changes among established employees (Houle et al., 2022) than among newcomers (Solinger et al., 2013). Finally, other nurses may experience, from the start, a strong match between their expectations and their new

professional reality, corresponding to High, Moderate, or Low Matching scenarios (resulting in stable high, moderate, or low trajectories; e.g., Houle et al., 2022; Solinger et al., 2013). Such scenarios are hypothesized to emerge from self-regulated processes in which employees set self-defining goals that are consistently (i.e., High), partly (Moderate), or rarely (i.e., Low) attained. We hypothesize that similar processes will generalize to newcomers in general, as socialization theory underscores the heterogeneity of employees' adaptation based on their unique pre-and post-entry experiences (Van Maanen & Schein, 1979).

It is also possible that changes in levels of occupational commitment may not be as pronounced as those observed for organizational commitment levels due to the underlying expectations associated with each commitment target. This notion has been raised in relation to commitment mindsets by Bentein et al. (2005) and seem equally relevant to commitment targets. That is, employees are likely to have different expectations from their organization than from their occupation, with occupational expectations often being satisfied through social exchanges with other commitment targets such as the organization, the patients, or the work team (Houle et al., 2020; Morin et al., 2011a; Perreira et al., 2018). Thus, nurses' adaptation to their occupation will undeniably be influenced by what happens in their organization (i.e., within which their occupational role will unfold), whereas the opposite is less likely as the occupation remains a target of commitment that could in theory be enacted within different organizations. This should lead to more pronounced changes in organizational commitment trajectories than in occupational commitment trajectories among newcomers.

In this sense, adopting a dual growth mixture approach to investigate the heterogeneity of early career nurses' organizational and occupational commitment trajectories should support three major contributions to our understanding of commitment. This approach will allow us to (1) document the extent to which initial levels of organizational and occupational commitment differ upon occupational entry, (2) determine whether different initial levels lead to more or less pronounced changes in organizational or occupational commitment over time, and (3) identify whether organizational or occupational commitment is more malleable over time. Should one target display more pronounced changes, it may indicate that the emotional attachment to that target is more reactive to socio-emotional work-related factors (Bentein et al., 2005). In this sense, this target may be a better avenue for interventions seeking to improve commitment in early career. Conversely, should the trajectories display little growth or decline over time this may indicate that intervention aimed at improving affective commitment may have a greater impact prior to, or immediately upon, occupational entry

(e.g., during school). This is especially true if the commitment target in question is well differentiated at occupational entry. Based on the aforementioned theoretical propositions and empirical evidence (Houle et al., 2022; Solinger et al., 2013) we present the following three hypotheses:

Hypothesis 1 (H1). Individual trajectories of affective commitment to the organization should match one of the following five profiles: *Low*, *Moderate*, *High, Increasing*, and *Decreasing*.[4]

Hypothesis 2 (H2). Individual trajectories of affective commitment to the occupation should match one of the following five profiles: *Low*, *Moderate*, *High, Increasing*, and *Decreasing*.

Hypothesis 3 (H3). Initial levels of organizational commitment will differ more within and less between profiles than occupational commitment levels.

The Co-Evolution of Affective Commitment to the Occupation and Organization

The work life of all employees' entails a system of commitments to a variety of targets (Klein et al., 2022), where commitment to any one target creates a context likely to influence the expression of commitments to other targets (Meyer et al., 2021; Morin et al., 2011a). Despite the recognition of the multidimensional nature of commitment (Perreira et al., 2018), and of the critical role played by the occupation and organization within this commitment system (Klein et al., 2022; Meyer et al., 2002; Spurk et al., 2019), no previous study has yet considered the co-evolution of employees' affective commitment to these two targets. On the one hand, we can theoretically expect convergence in commitment for employees who see both targets as compatible (Meyer et al., 2021), which is consistent with the high correlations generally observed between these two targets (Cooper-Hakim & Viswesvaran, 2005). Indeed, when considering dual commitment profiles (profiles estimated while considering mindsets of organizational and occupational commitment), previous results have revealed that most profiles tend to display matching mindsets across these two targets of commitment (Meyer et al., 2019; Morin, Meyer et al. 2015; Tsoumbris & Xenikou, 2010), a result previously reported by Morin, Morizot et al. (2011) in a study only considering affective commitment to a variety of targets.

Self-Regulation Theory (e.g., Carver & Scheier, 1998; Johnson et al., 2013) suggests that

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[4] We adopt the labels proposed by Houle et al. (2022) rather than those proposed by Solinger et al. (2013) as they better differentiate between initial levels *and* change over time, as well as to simplify comparison across studies (Meyer & Morin, 2016).

the development of a strong affective bond towards any target should be predicated by the extent to which it is responsible for assisting employees attaining self-defining goals. Self-Regulation Theory assumes that employee's behaviors are self-regulated through a feedback process of setting and accomplishing goals while seeking to improve their current state (Carver & Scheier, 1998; Johnson et al., 2012). Goals are hierarchically-organized, with the most important being self-defining (Carver & Scheier, 1998) and taking longer to realize, while lower-level goals represent smaller tasks contributing to the achievement of higher-level goals. Once goals are set, individuals must work to reduce the discrepancy that exists between their desired state (i.e., obtained from achieving the goal) and their current state. In a context where nurses are practicing their occupation within a particular organization, it is likely that both targets (i.e., occupation and organization) could be perceived as contributing, or not, to goal attainment. For instance, some nurses have the goal of developing strong social relationships to satisfy their need for relatedness at work. Once having attained this goal, nurses may feel a commitment to the organization which is providing them with opportunities to fulfill this goal, but also toward the occupation which set the stage for the work-related dynamics underpinning these relationships. More generally, nurses may become attached to an organization allowing them to practice an occupation they enjoy, just like they could become attached to an occupation because of the work environment in which it unfolds. However, we posit that greater change will occur in terms of organizational commitment as most changes in work conditions influencing both targets of commitment levels are likely to unfold as a result of this target (Houle et al., 2020).

Still, commitments may sometimes conflict with one another (Meyer et al., 2021). For instance, one may come to resent an organization seen as interfering with the proper enactment of one's occupational role, just like one may come to see the occupation differently under the lights of a specific workplace. Empirical evidence from past studies investigating commitment to the organization and occupation reveals a greater likelihood that both targets will be experienced in unison, while suggesting that discrepancies may still exist for a subset of employees (Meyer et al., 2019; Morin et al., 2011a, 2015; Tsoumbris & Xenikou, 2010). Interestingly, a recent study suggests that such discrepancies are likely to be far more prevalent among newcomers (Houle et al., 2023).

Moreover, we already proposed that organizational commitment levels are likely to be more variable within-, and less variable across-, profiles than occupational commitment levels, resulting from a more limited prior organizational knowledge and socialization. In this context, it is possible that occupational commitment, anchored in a more extensive pre-entry

socialization, may help pave the way for the development of organizational commitment. Indeed, based on social exchange principles, nurses who have a strong affective bond to their occupation are likely to attribute part of that bond to their organization (Houle et al., 2020), thus facilitating the development of affective organizational commitment for nurses who already have a strong emotional bond with their occupation. Indeed, past research supports the proposition that occupational commitment may predate AOC (Vandenberg & Scalpels, 1994). In line with OIT/SDT (Ryan and Deci, 2017) and commitment theory (Meyer et al., 2006), nurses who have developed a strong affective bond towards a target have come to internalize that target as part of their professional identity (presumably due to the attainment of self-defining goals), resulting in a less reactive commitment (Houle et al., 2022), and vice versa. While occupational commitment may have had time to properly develop during nurses' education, this is unlikely for organizational commitment. Thus, stable occupational commitment levels that emerged prior to entry into the workforce could, over time, generalize to the organization seen as being responsible for one's occupational work conditions. Conversely, average occupational commitment trajectories should not hinder or accentuate the development of organizational commitment as the outlook of working in the profession is not grounded in a general negative or positive affective state that comes to be attributed to the organization. Thus, contrary to past person-centered studies investigating multiple targets of commitment over a single or two time-points, we seek to observe how the level and shape of nurses' occupational commitment trajectories during the first five years of their career come to be associated with lower, higher, increasing, or decreasing levels of organizational commitment, and vice versa, leading us to hypothesize that:

Hypothesis 4 (H4). Most nurses will belong to matching profiles of affective organizational and occupational commitment trajectories (especially for the profiles with the highest and lowest trajectories), while a minority of nurses will belong to profiles characterized by distinct organizational and occupational commitment trajectories.

Internalization and Self-Equilibrium Processes

Considering commitment as an indicator of the extent to which one's occupation and organization have been internalized as a part of one's professional identity, makes it critical to adopt a state-trait perspective. This perspective describes how each commitment evolves over time (trait-like evolution), but also the extent to which this evolution is smooth or characterized by time-specific fluctuations (state-like fluctuations) (Houle et al., 2022). Both components can be captured with growth mixture analyses (GMA) of nurses' profiles of

commitment trajectories (Morin et al., 2013, 2017). Our previous hypotheses all pertain to the trait-like evolution of commitment trajectories and rely on the explicit assumption that a higher commitment entails a greater degree of internalization.

The self-equilibrium hypothesis (Morin et al., 2013, 2017; Mund & Neyer, 2016), was initially developed in close connection with SDT (Ryan & Deci, 2017), to explain how one's sense of identity evolves over time. This hypothesis highlights the importance of a balance with the environment to ensure the ongoing satisfaction of one's basic psychological needs (Houle et al., 2022; Morin et al., 2013, 2017), and is also consistent with Self-Regulation Theory (e.g., Carver & Scheier, 1998), as the consistent attainment of self-defining goals should also lead to more stable trajectories. This equilibrium should result in the emergence of a strong sense of professional identity that remains stable over time. From this perspective, more desirable trait-like trajectories (e.g., higher or increasing levels of commitment) should also fluctuate less over time as a result of time-specific (measured or not) contingencies (i.e., be associated with smaller time-related fluctuations). In contrast, whereas this form of stability would be consistent with the idea that these trajectories reflect a well-internalized sense of professional identity, unstable trajectories should accompany lower levels of commitment and reflect an insufficiently internalized (and thus more reactive) sense of identity.

Houle et al. (2022) supported the self-equilibrium hypothesis among established school principals, consistent with the idea that self-equilibrium processes are a lifelong phenomenon. Thus, their *High* and *Moderately High* trajectories were accompanied by the lowest state-like deviations, while their *Low* trajectories were accompanied by the highest state-like deviations. Moreover, their *Increasing* and *Decreasing* trajectories displayed similar average state-like fluctuations, but these fluctuations decreased over time in the *Increasing* profile and increased over time in the *Decreasing* profile. These results are consistent with the idea that increases in commitment reflect a stronger internalization. We build upon this previous study by considering the emergence of these processes among early career nurses, and extend it to the consideration of organizational commitment, hypothesizing that:

Hypothesis 5 (H5). Profiles with higher trait-like levels of affective commitment to the organization or occupation will be characterized by smaller state-like deviations (i.e., smaller time-specific residuals) around their trait-like trajectory, and vice versa.

Psychological Need Fulfillment and Commitment Trajectories

At the core of SDT (Ryan & Deci, 2000, 2017) and the self-equilibrium hypothesis (Houle

et al., 2022; Morin et al., 2013, 2017) is the assumption that the extent to which employees will be able to internalize an activity (e.g., occupation) or social entity (e.g., organization) to their professional identity depends on the extent to which this activity or entity can satisfy their basic psychological need for autonomy, competence, and relatedness. In line with Self-Regulation Theory (e.g., Carver & Scheier, 1998; Johnson et al., 2012) these three basic needs can be considered as self-defining goals that will contribute to internalization of one's work life. SDT further assumes that satisfying all three needs is necessary to a complete internalization process (Ryan & Deci, 2017). Conversely, sub-optimal internalization is expected to result not only from a lack of satisfaction of these needs, but even more importantly from their frustration (Chen et al., 2015; Trépanier et al., 2016). SDT also emphasizes the role of balance in the fulfillment (a term used to reflect the joint consideration of need satisfaction and frustration; Tóth-Király et al., 2018) of all three needs, highlighting that the imbalanced fulfillment of any specific need will not necessarily yield the same benefits as their joint fulfillment (Sheldon & Niemiec, 2006). As a result, previous SDT research has highlighted the importance of disaggregating global levels of fulfillment across all three needs from the degree to which the fulfillment of any specific need lies in a state of imbalance relative to this global level (Gillet et al., 2019, 2020), which is the approach taken in the present study.

Acknowledging that commitment (e.g., Klein et al., 2012, 2022) and need fulfillment (Hewett et al., 2017; van Hoof & Geurts, 2015) are dynamic constructs likely to exhibit short-term (state-like) fluctuations around more stable longitudinal trajectories (trait-like), makes it important to consider their associations across these two layers of analysis (Hofmans et al., 2021). Considering the trait-like effects of need fulfillment on commitment trajectories (i.e., effects on profile membership and within-profile trajectories) will reveal the more lasting, or longer-term, benefits of need fulfillment. Conversely, considering their short-term (i.e., effects on state-like deviations) effects will indicate whether they can be used to temporarily boost commitment levels in periods of need.

Although they did not specifically consider need fulfillment, Houle et al. (2022) showed that characteristics of the work environment likely to support these needs played a differentiated role in the development and maintenance of occupational commitment trajectories amongst established school principals. The need for autonomy seemed particularly relevant to keep principals away from the least committed profile, whereas the need for competence seemed important to help them stay away from a decreasing trajectory. The need for relatedness was rather related to higher levels of commitment within all profiles,

an effect that faded partly over time. Albeit informative in indirectly supporting the relevance of need fulfillment for occupational commitment, their study failed to directly measure need fulfillment and to properly consider the dual role of global levels of need fulfillment relative to imbalances in the fulfillment of each specific need. We address this limitation, in addition to considering the implications of need fulfillment for the commitment trajectories of a sample of early career nurses for whom commitment is still emerging rather than anchored into a longer professional career. Based on the above considerations, we hypothesize that:

Hypothesis 6 (H6). Higher global levels of need fulfilment will be associated with: (a) membership into profiles characterized by higher, and increasing, levels of affective commitment to the organization and occupation (**H6a**), (b) within-profile trajectories characterized by higher levels of affective commitment to the organization and occupation, and with more pronounced increases in these levels (**H6b**); (c) more positive time-specific (state-like) increases in levels of affective commitment to the organization and occupation (**H6c**).

Hypothesis 7 (H7): The extent to which each specific need is fulfilled beyond global levels of need fulfilment will be associated with differentiated positive effects on: (a) profile membership (**H7a**), within profile trajectories (**H7b**), and time-specific deviations (**H7c**).

Socialization and Commitment Trajectories

A key contribution of this study lies in our consideration of the degree to which commitment first emerges and evolves in the early stages of nurses' careers. The period of entry into a new occupation and organization is critical for employees, who are continuously exposed to novel and unexpected situations that can lead them to feel uncertainty and anxiety in the navigation of their new role (Louis, 1980; Van Maanen & Schein, 1979). Employees must quickly learn to navigate their new role to reduce these feelings and to successfully fulfill their duties in a way that is sustainable and aligned with their core identity. Thus far, research has documented the benefits of learning about the organization (e.g., its values, mission, culture), one's tasks (e.g., responsibilities, specific duties, required communications), and one's social (team) context (i.e., required vs optional relationships with organizational members) on the process via which new employees successfully integrate their new professional role (Bauer et al., 2007; Perrot & Campoy, 2009; Saks et al., 2007).

Each of these three domains of socialization (i.e., organization, tasks, and social relationships) is closely related to the satisfaction of the three psychological needs proposed by SDT to be fundamental for optimal functioning (Ryan & Deci, 2017). Whereas forming

strong social relationships should help fulfill the need for relatedness, understanding one's organization and tasks should help fulfill the need for competence, just like developing a good grasp of the overall work context (i.e., all three domains) should help fulfill the need for autonomy (Fernet et al., 2020). Beyond learning about these domains, this connection with need fulfillment also highlights the importance of monitoring the degree to which each domain comes to be internalized within one's usual functioning (Chao et al., 1994; Perrot & Campoy, 2009). For new employees, the ability to learn and internalize these new components should greatly assist in terms of achieving self-defining goals and thus contribute to the internalization of their occupation and organization within their professional identity, which is the core of affective commitment (Meyer, 2016; Meyer et al., 2006).

Given the natural connection between these domains of socialization and SDT (e.g., Fernet et al., 2020) we adopt a similar operationalization of socialization and need fulfillment. More precisely, we separately consider employees' global levels of socialization across all three domains as a potentially central driver of their affective commitment to the organization and occupation (Ryan & Deci, 2017), from the degree to which their domain-specific socialization lies in a state of imbalance relative to this global level. As a result, each specific socialization domain (just like all specific needs) is likely to share unique associations with newcomers' affective commitment trajectories. Indeed, from a target similarity perspective (Lavelle et al., 2007, 2009; Morin et al., 2011a, 2011b), each socialization domain should share its strongest associations with the commitment target most relevant to that domain. Self-Regulation Theory (e.g., Carver & Scheier, 1998; Johnson et al., 2013) assumes that goal attainment upon occupational entry should be facilitated by the extent to which past socialization experiences have adequately prepared an employee for their current work life. In turn, this should help the employee develop and internalize an affective bond to their organization and occupation (i.e., achieving lower-level goals that contribute to self-defining goals). For these reasons, organization-related socialization should primarily contribute to commitment to the organization, whereas task-related socialization should mainly contribute to commitment to the occupation. In contrast, socialization related to social relationships should contribute to both targets of commitment, as relationships may be seen as a characteristic of the workplace (i.e., organization) and of the work-role (occupation) given the inherent team-structured nature of nursing.

Although the learning component of socialization is likely to play an important role in helping early career nurses acquire information of relevance to the development of their affective organizational and occupational commitment, the development of a strong affective

bond towards their occupation or organization should be more strongly associated with the extent to which they come to internalize what they have learnt within their professional identity (Meyer, 2016; Meyer et al., 2006, 2008). Lastly, and despite the theoretical benefits of learning, it is also possible for learning, but not internalization, to contribute to a reduction in affective commitment when it involves discovering undesirable aspects of the work role (e.g., Solinger et al., 2013). We leave, however, this possibility as an open research question, and for the moment hypothesize that:

Hypothesis 8 (H8). Higher global levels of socialization will be associated with: (a) membership into profiles characterized by higher, and increasing, levels of affective commitment to the organization and occupation (**H8a**), (b) within-profile trajectories characterized by higher levels of affective commitment to the organization and occupation, and with more pronounced increases in these levels (**H8b**); (c) more positive time-specific (state-like) increases in levels of affective commitment to the organization and occupation (**H8c**).

Hypothesis 9 (H9): Levels of learning/internalization specific to the organization will be associated with larger positive effects on profile membership, within-profile trajectories, and state-like deviations for organizational commitment (**H9a**), whereas levels of learning/internalization specific to the tasks will be associated with larger positive effects on profile membership, within-profile trajectories, and state-like deviations for occupational commitment (**H9b**).

Hypothesis 10 (H10): Levels of internalization specific to the tasks, organization, and social relationships will be associated with larger effects on profile membership, within-profile trajectories, and state-like deviations than specific levels of learning.

Critical Outcomes of Commitment Trajectories

In person-centered studies, documenting the association between profiles and a series of work outcomes serves two main goals. First, although they can be used for confirmatory (driven by theory and hypotheses, as in the present study) and exploratory purposes, person-centered methodologies are methodologically exploratory (Morin et al., 2018). As a result, it is always important to document how profiles are associated with various facets (predictors, outcomes, or correlates) of their nomological network to verify their construct validity (Meyer & Morin, 2016; Morin et al., 2018). Second, documenting how the profiles share differential associations with outcomes helps to document their desirability, which can then help prioritize interventions seeking to limit or favor the occurrence of some profiles. We

consider four outcomes likely to share time-structured associations with the commitment trajectories captured by our profiles. We consider two desirable outcomes from the perspective of the employing organization (work satisfaction; quality of care), and two undesirable outcomes from the perspective of the employee (psychological distress; somatization).

From a socialization perspective, all newcomers undergo an anticipatory socialization phase in which they form expectations, attitudes, and perceptions about what their new role should entail once they start their occupation and about what their work-life should be like in their new organization (e.g., Feldman, 1976, 1981; Richards et al., 2014; Riordan et al., 2001). Selecting nursing as an occupation and deciding to apply to work in a specific organization can be assumed to be intimately anchored in these expectations for a substantial number of early career nurses. In addition, SDT (Ryan & Deci, 2000; Ryan & Deci, 2017) and commitment theory (Meyer, 2016; Meyer et al., 2004) both suggest that nurses' early levels of affective commitment should reflect the extent to which their new organization and occupation align with their basic psychological needs and expectations (Houle et al., 2022). In turn, higher early levels of commitment, anchored in this impression of person-environment fit, should lead employees to develop higher levels of work satisfaction, to invest more energy into providing quality care to patients, and to experience higher levels of psychological well-being (i.e., lower psychological distress and somatization; e.g., Meyer, 2016; Meyer & Maltin, 2010; Meyer et al., 2002, Spurk et al., 2019). Conversely, nurses who enter their career with a lack of emotional bond to their organization or occupation should experience more somatization and psychological distress, as well as lower work satisfaction, as they need to navigate a demanding and stressful role with which they do not yet identify, in addition to having a harder time providing efficient care to their patients.

However, socialization is ongoing beyond this initial anticipatory phase and nurses' initial work experiences are likely to change their initial views of their occupation and organization in a way that exceeds, matches, or fails to meet their expectations (Boswell et al., 2005; Solinger et al., 2013). The speed at which this discrepancy can be reduced (or increased) over time is referred to as velocity (Johnson et al.,2013). A stronger velocity tends to be associated with more desirable outcomes, such as job satisfaction and goal commitment (Chang et al., 2010), as it reflects a more efficient progression toward goal achievement. As the development and/or maintenance of a strong organizational and occupational commitment is theorized to occur as a result of achieving self-defining goals (e.g., fulfilment of basic needs), changes in commitment levels over time should be accompanied by similar changes in

employees' well-being and functioning at work. That is, the velocity at which organizational and occupational commitment increase or decrease should be associated with the velocity of change in work satisfaction, quality of care, somatization, and psychological distress. Thus, initial trait-like trajectories that do not change should be associated with more stable outcome levels. Based on the aforementioned theoretical rationales, we hypothesize that:

Hypothesis 11 (H11). Profiles characterized by higher initial levels of affective commitment to the organization or occupation will be accompanied by higher initial levels of work satisfaction and quality of care, and by lower initial levels of psychological distress and somatization.

Hypothesis 12 (H12): Profiles presenting increasing levels of affective commitment to the organization or occupation will be accompanied by steeper increases in levels of work satisfaction and quality of care, and by steeper decreases in levels of psychological distress and somatization relative to profiles with more static trajectories.

Method

Sample and Procedures

Data for the current study was collected among newly registered French-Canadian nurses, working in the public health care sector in the Canadian province of Quebec, across four time points (T1: October 2014; T2: April 2015; T3: October 2015; T4 October 2016), with six months intervals between the first three waves and a year between T3 and T4. A total of 659 nurses with a mean age of 26.8 years ($SD = 6.71$) and 0 to 3 years of tenure in nursing ($M = 1.85$; $SD = .86$) took part in the study. Of them, 265 had 1 year or less experience, and 189 had 1 to 2 years of experience. A total of 647 nurses completed the questionnaires at T1, 428 at T2, 357 at T3, and 295 at T4. Most were women (88%) holding a permanent position (76.40%). Fewer than half of them (43.4%) were working full time, 65% had a college degree, 31.8% a bachelor's degree, and 3.2% had additional training (e.g., Master's). In terms of tenure, 64.68% of nurses had the same organizational and occupational tenure, 16.36% had a shorter organizational tenure and 18.96% had a longer organizational tenure. Potential participants were contacted via a letter sent to their home address explaining the goals of the study and were invited to complete an online questionnaire. In the letter, it was emphasized that responses were confidential and that participation was voluntary. All participants were contacted by email at each time point, while the recruitment was kept open, allowing some new nurses to join the study at later time points. All questionnaires were administered in French at all time points. A data transparency table describing how this data set was used

before is provided in Table 4.

Measures

Occupational and organizational commitment

Organizational and occupational commitment were assessed using the relevant subscales from Meyer et al.'s (1993) questionnaire adapted to French by Stinglhamber et al. (2002). Both occupational commitment (α_{t1} = .868; α_{t2} = .872; α_{t3} = .893; α_{t4} = .872; e.g., *The nursing profession means a lot to me*) and organizational commitment (α_{t1} = .795; α_{t2} = .779; α_{t3} = .807; α_{t4} = .775; e.g., *I am proud to belong to this organization*) included six items rated on a 5-point scale (1 = Completely Disagree to 5 = Completely Agree).

Socialization

Nurses' socialization into various aspects of their role was assessed using Perrot and Campoy (2009) 24-item scale, originally developed in French. This measure encompasses three socialization facets (organization, task, and team) across two dimensions (learning and internalization) resulting in six four-item subscales. Due to the high degree of interrelation between the matching facets of learning and internalization (e.g., task learning and task internalization) and the high interrelation between higher-order factors (organization, task, and team) formed by combining the dimensions (Fernet et al., 2020), we relied on a bifactor representation of this measure (see Appendix C for details). We thus estimated one global socialization factor anchored in the variance shared among all items (α_{t1} = .950; α_{t2} = .951; α_{t3} = .953; α_{t4} = .952) and six specific factors reflecting the variance uniquely shared by items forming each subscale beyond that explained by the global factor: (a) task learning (α_{t1} = .797; α_{t2} = .801; α_{t3} = .810; α_{t4} = .824; e.g., *I know the responsibilities, tasks, and projects that I was hired for*); (b) organization learning (α_{t1} = .886; α_{t2} = .887; α_{t3} = .898; α_{t4} = .894; e.g., *I understand the objectives and goals of my organization*); (c) team learning (α_{t1} = .888; α_{t2} = .904; α_{t3} = .921; α_{t4} = .901; e.g., *I understand how my team contributes to my organization's goals*); (d) task internalization (α_{t1} = .899; α_{t2} = .897; α_{t3} = .919; α_{t4} = .922; e.g., *I fully agree with the work mission*); (e) organization internalization (α_{t1} = .877; α_{t2} = .874; α_{t3} = .869; α_{t4} = .888; e.g., *I have incorporated the values of my organization into my own value system*); (f) team internalization (α_{t1} = .909; α_{t2} = .913; α_{t3} = .924; α_{t4} = .937; e.g., *My team's objectives are also my own objectives*). Items were rated on a 7-point scale ranging from 1 (*completely disagree*) to 7 (*completely agree*).

Need fulfilment at work

Basic psychological need fulfilment at work was assessed using a total of 19 items, 10 of

which were adapted from the Work-related Basic Need Satisfaction scale (Van den Broeck et al., 2010; French version by Gillet et al., 2020) and 9 of which were adapted from the Psychological Need Thwarting Scale (Bartholomew et al., 2011; French version by Gillet et al., 2012). As noted in Appendix C, following recent recommendations regarding the optimal measurement structure of basic psychological need fulfilment (Tóth-Király, 2018, 2019), we relied on a bifactor operationalization of this construct. We thus estimated a global need fulfilment factor reflecting the variance shared among all items (α_{t1} = .888; α_{t2} = .899; α_{t3} = .907; α_{t4} = .905) and three specific factors reflecting the variance uniquely associated with each need beyond this global factor: (a) autonomy fulfilment (α_{t1} = .825; α_{t2} = .840; α_{t3} = .847; α_{t4} = .853; e.g., *I feel like I can be myself at my job*); (b) competence fulfilment (α_{t1} = .794; α_{t2} = .815; α_{t3} = .849; α_{t4} = .820; *I have the feeling that I can even accomplish the most difficult tasks at work*); (c) relatedness fulfilment (α_{t1} = .791; α_{t2} = .793; α_{t3} = .783; α_{t4} = .811; *Some people I work with are close friends of mine*). Items were rated on a 5-point Likert scale ranging from 1 (*totally disagree*) to 5 (*totally agree*).

Work satisfactio.

Work satisfaction was assessed using an adapted version of Diener et al.'s (1985; French version by Bouizegarene et al., 2018) life satisfaction scale in which the referent was changed from "life" to "work" (Houlfort et al., 2015; Huyghebaert et al., 2018). The five items of this measure (α_{t1} = .891; α_{t2} = .872; α_{t3} = .893; α_{t4} = .872; *I am satisfied with my work*) were rated on a 7-point type scale ranging from 1 (*completely disagree*) to 7 (*completely agree*).

Quality of care

Quality of care was assessed using scale initially developed by Aiken et al. (2002; French version by Lavoie-Tremblay et al., 2016). The four items of this measure (α_{t1} = .839; α_{t2} = .783; α_{t3} = .825; α_{t4} = .813; *How to you evaluate the nursing care you provide to your patients*) were rated on a 4-point type scale ranging from 1 (*bad*) to 4 (*excellent*).

Psychological Distress

Psychological distress was assessed using the Kessler et al.' (2002; French version by Arnaud et al., 2010) six-item psychological distress scale. These items (α_{t1} = .861; α_{t2} = .864; α_{t3} = .886; α_{t4} = .884; *In the last month, how often did you feel hopeless*), were rated on a scale ranging from 1 (*never*) to 5 (*very often*).

Somatization

Somatization was assessed using the eight relevant items from the 27-item Physical Symptoms Scale adapted by Knäuper et al.'s (2004; French version by Trépanier et al., 2016) from a measure originally proposed by Bern (1995). Participants were asked to rate the

frequency with which they suffered from eight physical symptoms (e.g., headaches; $\alpha_{t1} =$ .795; $\alpha_{t2} = .798$; $\alpha_{t3} = .817$; $\alpha_{t4} = .807$) on a scale ranging from 1 (*never*) to 7 (*almost always*).

Analyses

Model Estimation and Missing Data

Analyses were realized with Mplus 8.7 (Muthén & Muthén, 2018), the maximum likelihood robust (MLR) estimator, and full information maximum likelihood (FIML) procedures to handle missing data. Statistical research has shown that FIML and multiple imputation have a similar accuracy (Collins et al., 2001; Graham et al., 2007), but that FIML should be favoured (for its computational simplicity) for complex models (Enders, 2010). Indeed, statistical simulation studies conducted by Lee et al. (2019) and Newman (2003) show that 65% and 75% of the data can be salvaged by using state-of-the-art missing data handling techniques such as FIML, without estimation biases. FIML relies on the missing at random (MAR) assumption that missing responses can be conditioned on all variables included in the model, including the same variables measured at different time points in longitudinal models, making it robust to attrition processes related to any of the variables included in the model (Enders, 2010). FIML made it possible to rely on the full sample of participants who completed at least one time point. These 659 participants provided a total of 1727 time-specific ratings (*M*=2.62), with 198 nurses (30.04%) answering all 4 time waves, 166 (25.19%) answering 3 time waves, 141 (21.40%) answering 2 time waves, and 154 (23.37%) answering only 1 time wave. In addition, the specification of the analyses conducted in this study (i.e., estimated based on tenure rather than measurement point) entail a representation of time similar to that used in multilevel growth models (Grimm et al., 2016), which do not assume that everyone will complete all measurement occasions but rather simply use tenure as a predictor of repeated measures. Lastly, attrition analyses were conducted to assess whether Time 1 scores on all variables (including demographics) were related to the number of time points completed. A single effect appeared significant (*p* = .037), showing that participants with higher levels of work satisfaction were slightly more likely to remain longer in the sample than other participants (*b* = .221, SE = .106; *β* = .124).

Preliminary Analyses

Details on the preliminary measurement models used to verify the psychometric properties and invariance over time (Millsap, 2011) of our measures are reported in Appendix C. Factor scores were saved from the most invariant of those models in standardized units (*M* = 0 and *SD* = 1) for the profile indicators (i.e., organizational and occupational commitment) and

predictors (i.e., socialization and basic need fulfilment). For outcomes (i.e., work satisfaction, quality of care, psychological distress, and somatization), factor scores were saved from a latent curve model (time-specific factors were used to estimate a higher-order intercept and slope factor reflecting participants initial levels and rate of changes over time) estimated directly from an item-level measurement model (i.e., where invariant time-specific factors are estimated from the items), also described in Appendix C. Factor scores afford a partial control for unreliability (Skrondal & Laake, 2001) and preserve the measurement structure (e.g., bifactor, invariance, latent curve) better than scale scores (Morin et al., 2016a; Morin et al., 2016b). Correlations among all variables are reported in Table S6, while their means and variances are reported in Table S7 of Appendix C.

Growth Mixture Analyses (GMA)

As a person-centered extension of latent curve models (Bollen & Curran, 2006), GMA identifies subpopulations (i.e., profiles) presenting distinct trajectories on a set of repeated measures (affective commitment to the organization and occupation). Specifically, a series of repeated measures is summarized by a random intercept factor reflecting initial level (the loadings of the time-specific measures on this factor are all fixed to 1) and a random linear slope factor reflecting the rate of change over time (the loadings of the time-specific measures on this factor are coded to reflect the passage of time, as outlined below). To account for possible nonlinearity (Solinger et al., 2013), we included a random quadratic slope factor (squaring the loadings on the linear slope factor) to estimate possible U-shaped or inverted U-shaped trajectories (Grimm et al., 2016; Morin & Litalien, 2019).

Given our objective of studying onboarding trajectories among newly registered nurses as a function of their tenure, rather than as a function of the time of measurement, we estimated these trajectories as a function of nurses' tenure since their registration using procedures outlined by Grimm et al. (2016; also see Morin & Litalien, 2019). Thus, the intercept factor reflected nurses' commitment upon registration (tenure = 0) and the linear and quadratic slope were coded in annual units. Doing so made it possible to estimate trajectories portraying nurses' commitment over their first five years.

Statistical recommendations are that all GMA parameters (i.e., intercept mean and variance, slopes mean and variance, intercept and slopes covariance, time-specific residuals) should ideally be freely estimated in all profiles (Diallo et al., 2017; Morin et al., 2011c). This recommendation comes with the recognition that this is not always possible (e.g., non-converging or improper solutions) (Diallo et al., 2017; Morin & Litalien, 2019). This was the case, suggesting that these more complex models might have been overparameterized and

that simpler models were desirable (e.g., Diallo et al., 2017; Morin & Litalien, 2019). We thus relied on the Mplus default parameterization of setting the growth factors variance-covariance to equality across profiles, while allowing their means to be freely estimated (Diallo et al., 2017; Morin & Litalien, 2019). Due to the estimation of trajectories as a function of tenure (i.e., individually-varying time codes), time-specific residuals (time-specific deviations around one's model implied trajectory) had to be kept equal over time (homoscedastic), but allowed to differ across profiles. This specification is consistent with the multilevel operationalization of growth models (e.g., Li & Hser, 2011; Tofighi & Enders, 2007).

GMA including one to five profiles were estimated separately for organizational and occupational commitment using 10000 random sets of start values, 500 iterations, and 1000 final optimizations (Hipp & Bauer, 2006). Although we initially tried to estimate up to eight profiles for each construct, models including more than five profiles converged on improper solutions including empty profiles, leading to their rejection. To determine the optimal number of profiles, we considered their theoretical adequacy, meaningfulness, and statistical indicators (Marsh et al., 2009; Muthén, 2003): (i) Akaïke Information Criterion (AIC), (ii) Consistent AIC (CAIC), (iii) Bayesian Information Criterion (BIC), and (iv) sample-size Adjusted BIC (ABIC). Lower values for the AIC, CAIC, BIC, and ABIC suggest a better-fitting solution. However, these indicators often provide evidence that is continuously in favor of adding unnecessary profiles due to their sample-size dependency (Marsh et al., 2009), and thus only provide a rough indication of the true number of profiles. Many have thus recommended to graphically report the value of these indicators as a function of the number of profiles (i.e., elbow plot), and to consider the first plateau as a rough indicator of the optimal solution (Morin & Litalien, 2019; Morin et al., 2011c). Although the adjusted Lo, Mendel and Rubin's (2001) Likelihood Ratio Test (aLMR) and the Bootstrap Likelihood Ratio Test (BLRT) are also often reported to guide this decision, these indices are not available when modelling the trajectories as a function of individually-varying time codes (e.g., tenure). Finally, the entropy provides a purely descriptive summary of classification accuracy (ranging from 0 to 1) for the assignment of cases to their respective profiles.

Once the optimal number of profiles was selected for the organizational and occupational commitment, these solutions were combined into a single model via a latent transition analytic (LTA) link function (Collins & Lanza, 2010) allowing for the cross-tabulation of profile membership across the two solutions. To ensure that the nature of the profiles remained unchanged in this combined solution, as well as in analyses of predictors and

outcomes, profiles were defined using the start values corresponding to the final unconditional solutions. Although LTA is most typically used to assess within-person stability in profile membership over time (Houle et al., 2020; Kam et al., 2016), it can also be used to create a link among any forms of person-centered solutions (e.g., Nylund-Gibson et al., 2014). Put differently, this allowed us to determine how many members of each organizational commitment profile belonged to each occupational commitment profile.

Predictors and Outcomes of Profile Membership

Scores obtained on the predictors at the start of the study (T1) were integrated to the final LTA model as time-invariant predictors (TIP) following a sequential strategy proposed by Diallo et al. (2017). Due to the complexity of the models and number of predictors, the effects of need fulfilment and socialization were estimated separately.[5] First, predictors were only allowed to predict profile membership. Second, predictors were also allowed to predict the intercept factor in a way that was invariant across profiles. Third, predictors were also allowed to predict the linear slope factor in a way that was invariant across profiles. Fourth, predictors were also allowed to predict the quadratic slope factor in a way that was invariant across profiles. Finally, starting from the solution retained in steps 1 to 4, predictions involving the growth factor were allowed to vary across profiles.

Starting from the optimal TIP solution, time-specific scores on the predictors at T2 to T4 were added to the model as time-varying predictors (TVP; T1 associations are already captured by TIP associations with the intercept factor). Four models were tested in sequence. First, we estimated a null model in which all relations between the TVP and within-profile time-specific commitment levels were constrained to be 0. Second, the effects of the TVP on the repeated commitment measures were constrained to equality across time and profiles but allowed to vary across constructs (organizational versus occupational commitment). Third, the effects of the TVP were constrained to equality across time, profiles, and constructs. Fourth, the effects of the TVP were allowed to vary across profiles and constructs, but not time points. As the trajectories are estimated as a function of tenure, it was not possible to investigate whether TVP effects differed over time. In these comparisons, a lower value on the AIC, CAIC, BIC, ABIC indicate a better fitting model (Diallo et al., 2017; Morin et al., 2016b).

Lastly, factor scores reflecting the intercepts and slopes of the outcome trajectories were

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[5] We first estimated a similar sequence of models using demographic controls (i.e., sex, age, part-time vs full-time, permanent vs temporary, level of education, and organizational tenure) to check if their inclusion was needed. Results, reported in Table S8 of the online supplements, support the lack of effect of these variables.

contrasted across profiles using a model-based weighted ANOVA approach (Bakk & Vermunt, 2016) implemented via the Auxiliary (DCON) function (Asparouhov & Muthén, 2015). At each time point, mean differences on the intercept and slope factor for each outcome were contrasted across profiles to determine whether, on average, individuals assigned to different profiles differed in terms of work satisfaction, quality of care, psychological distress, and somatization trajectories.

Results

Profiles of Organizational and Occupational Commitment Trajectories

Selecting the Number of Profiles.

The results from the alternative solutions are reported in the top of Table 1. For organizational commitment, the AIC, CAIC, BIC, and ABIC kept on decreasing until the five-profile solution. However, the elbow plot (Figure S1 in Appendix C) suggested a first plateau at four profiles. An examination of solutions ranging from three to five profiles revealed that the four-profile solution reflected trajectories differing in commitment levels, stability, and shape, and resulted in the addition of a meaningful profile (i.e., Profile 3 in Figure 1) relative to the three-profile solution. In contrast, the five-profile solution resulted in the addition of a conceptually similar (i.e., statistically redundant) profile (corresponding to Profile 2 in Figure 1 but with a slightly lower trajectory).

The results were similar for occupational commitment. Indeed, all information criteria kept on decreasing until the five-profile solution, while the elbow plot (Figure S2 in Appendix C) suggested a first plateau at three profiles. Investigating solutions including three to five profiles revealed that adding a fourth profile led to a meaningful addition (corresponding to Profile 3 in Figure 2) and to the estimation of trajectories differing in commitment levels, stability, and shape. In contrast, adding a fifth profile resulted in the addition of a conceptually similar (i.e., statistically redundant) profile (virtually identical to Profile 2 in Figure 2 but with a slightly higher initial level).

The four-profile solution was thus retained for interpretation for both constructs, shared important similarities across constructs (differing mainly in profile size), and are graphically illustrated in Figures 1 (organizational commitment) and 2 (occupational commitment). Parameter estimates are reported in Table S9 and classification probabilities in Table S10 of Appendix C)[6]. Both solutions were associated with a high level of classification accuracy

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[6] The profile indicators (the repeated measures of occupational commitment) are factor scores estimated in standardized units ($M = 0$, $SD = 1$) saved from a longitudinally invariant measurement model.

(organizational commitment: 802 to .887; occupational commitment: .805 to .929) consistent with their high entropy value of .745 (organizational commitment) and .830 (occupational commitment). In all profiles, the intercept and linear slope factor were negatively correlated showing that, within all profiles, higher initial levels of organizational or occupational commitment were accompanied by lower rates of increases or steeper rates of decreases over time. The intercept and linear slope factors were associated with a statistically significant variance, consistent with inter-individual heterogeneity within each of the profiles, although this variability was more pronounced for commitment to the organization than occupation.

Profiles of Organizational Commitment

The first profile displayed moderately high initial levels of organizational commitment, which remained stable over time. To reflect the fact that organizational commitment was the highest in this profile (i.e., these levels differ in a statistically significant manner from those observed in profiles 3 and 4 after six months, and from those observed in profile 2 after 18 months[7]), we refer to this profile as characterized by *High* levels of organizational commitment. Profile 2 displayed initially *Moderately high* levels of organizational commitment showing a slight decreasing tendency over time but remaining above the sample average for the duration of the study. Profile 3 displayed below average initial levels of organizational commitment showing an increasing tendency until 3 to 4 years of employment, before starting to decrease until the end of the study. Indeed, although the mean of the linear and quadratic slopes were not significant in this profile, after 18 months, the levels of organizational commitment observed in this profile were significantly higher than those observed in Profile 4 and comparable to those observed in Profile 2 (*Moderately high*). We thus retained the label *Low and Increasing* to describe this profile. Lastly, Profile 4 displayed initially slightly below average levels of organizational commitment and a steep decreasing trajectory until 3 to 4 years of employment, before starting to slightly increase until the end of the study. We retained the label *Average and Decreasing* to describe this profile. These profiles fully support H1.

Profiles of Occupational Commitment

The first profile displays initially *High* levels of occupational commitment which slightly decreased over time, while they remained higher than in all other profiles for the duration of the study. Profile 2 displayed initially *Average* levels of occupational commitment that

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[7] Conclusions about time-specific differences across profiles came from the examination of the 95% confidence intervals around the estimated trajectories obtained using Mplus' LOOP PLOT function (Morin et al., 2020).

remained stable and significantly higher than those observed in Profiles 3 and 4 over time. Profile 3 displayed initially low levels of occupational commitment and a steep increasing trajectory that plateaued in the last year. Although the levels of occupational commitment observed in this *Low and Increasing* profile did not initially differ from those observed in Profile 4, these levels became significantly higher after two and a half years and remained so until the end of the study. Profile 4 displayed low initial levels of occupational commitment. Although the means of the linear and quadratic slopes were not significant in this profile, after 2.5 years, the levels of occupational commitment observed in this profile became significantly lower than those observed in Profile 3, leading us to label this profile as reflecting a *Low and Decreasing* trajectory. These profiles fully support our H2.

Variability Within and Across Profiles

The parameter estimates associated with these two solutions revealed that initial levels of organizational commitment presented almost twice as much within-profile variability as initial levels of occupational commitment. Perhaps as a result of this greater within-profile variability, however, they displayed less variability across profiles. Thus, inspection of the 95% confidence intervals around the estimated trajectories (LOOP PLOT; Morin et al., 2020) revealed that initial levels of occupational commitment differed significantly across most profiles, with the sole exception of the *Low and Decreasing* and *Low and Increasing* profiles, which only differed after 2.5 years. In contrast, initial levels of organizational commitment only differed significantly between the *Moderately High* and *Low and Increasing* profiles. These results thus support H3.

Size of the Profiles and Latent Transitions

For organizational commitment, nurses were evenly spread across profiles: (a) *High*: 21.56%; (b) *Moderately High*: 30.51%: (c) *Low and Increasing*: 25.41%; (d) *Average and Decreasing*: 22.52%. In contrast, for occupational commitment, the *High* (40.54%) and *Average* (37.30%) profiles were more prevalent than the *Low and Increasing* (8.00%) and *Low and Decreasing* (14.16%) ones.

The cross-tabulation results are graphically illustrated in Figure 3 and reported in Table S11 in Appendix C. These results clearly indicate that nurses can adopt distinct trajectories of organizational and occupational commitment in the early stages of their career. Over 75% of nurses belonging to the *High* occupational commitment profile (1) corresponded to the *High* (1) or *Moderately High* (2) organizational commitment profiles, relative to roughly 22% who corresponded to the *Low and Increasing* (3) or *Average and Decreasing* (4) organizational commitment profiles. Most nurses belonging to the *Average* occupational commitment

profile (2) corresponded either to the *Low and Increasing* (3) or *Average and Decreasing* (4) organizational commitment profiles, which may help explain why this occupational commitment profile showed a decreasing trajectory after a few years of employment. However, 33.7% of them also corresponded to the *High* (1) or *Moderately High* (2) organizational commitment profiles. The smallest occupational commitment profile (i.e., *Low and Increasing*) was dominated (70.9%) by nurses who displayed a *Moderately High* (2) organizational commitment profile (2), followed by those with an *Average and Decreasing* (4) profile (21.6%). Finally, the *Low and Decreasing* (4) occupational commitment profile mainly included (91.5%) nurses corresponding to the *Average and Decreasing* (4: 58.5%) or *Low and Increasing* (3: 33.0%) organizational commitment profiles. Yet, 5.1% of them displayed a *High* (1) organizational commitment profile. These results fully support H4.

Time-Specific Residuals as an Indicator of State-Like Variability

For organizational commitment, the time-specific residuals (the state component) indicated that trajectories characterized by higher levels of commitment (i.e., the *High* and *Moderately High* profiles) fluctuated less over time (i.e., smaller time-specific residuals, respectively $SD_{(\varepsilon yi)}$ = .259 and .114). In contrast, trajectories characterized by lower levels of commitment (i.e., *Low and Increasing* and *Average and Decreasing* profiles) fluctuated more (respectively $SD_{(\varepsilon yi)}$ = .623 and .463). However, within these two pairs of profiles, those characterized by generally increasing trajectories (*High* and *Low and Increasing* profiles) displayed higher levels of instability than those characterized by stable or decreasing trajectories (*Moderately High* and *Average and Decreasing*).

For occupational commitment, trajectories characterized by high (i.e., *High* profile) or increasing (i.e., *Low and Increasing*) levels of commitment fluctuated less (i.e., respectively $SD_{(\varepsilon yi)}$ = .077 and .118), whereas trajectories characterized by *Average* levels of commitment fluctuated more ($SD_{(\varepsilon yi)}$ = .352). However, trajectories characterized by the lowest levels of commitment (i.e., *Low and Decreasing*) fluctuated the most ($SD_{(\varepsilon yi)}$ = .706). Thus, for occupational commitment, increases were associated with less fluctuations, whereas they were associated with more fluctuations for organizational commitment. In contrast, for both constructs, higher levels were associated with lower fluctuations relative to lower levels. These results fully support H5.

Predictors of Commitment Trajectories

Model Comparisons

Results from the predictive models are reported in the middle (need fulfillment) and

bottom (socialization) of Table 1. For need fulfilment, the BIC and ABIC supported the presence of effects of initial levels of need fulfillment (TIP) on profile membership, as well as on the intercept and slope factors in a way that did not differ across profiles (Model N3). Although the AIC also suggested effects on the quadratic slope factor, no such effects were present in the results. Likewise, although the CAIC suggested a model including effects limited to profile membership, the additional effects suggested by the BIC and ABIC both seemed relevant to consider, leading us to retain Model N3. Adding TVP effects of need fulfillment to this model supported the presence of additional effects on time-specific fluctuations in commitment levels that differed across constructs but not across profiles (Model N8, associated with the lowest values on the CAIC, BIC, and ABIC). Although the AIC suggested that some of these effects could differ across constructs, the parameter estimates from these models were consistent with a lack of variability across constructs, leading us to retain Model 8. For socialization, the BIC and ABIC supported the presence of effects of the initial levels of socialization (TIP) limited to profile membership, whereas the AIC and ABIC also suggested the presence of effects on the intercept (both), linear slope (both), quadratic slope (AIC only) that were invariant across profiles. Examination of the results associated with these alternative solutions supported the presence of TIP effects limited to the profiles and not extending to within-profile trajectories, leading us to retain Model S1. Adding TVP effects of socialization to this model supported the presence of additional effects on time-specific fluctuations in commitment levels that differed across construct but not across profiles (Model S8, associated with the lowest values on the CAIC, BIC, and ABIC). Model S8 was thus retained for interpretation. The results from both sets of predictive models are reported in Tables 2 (organizational commitment profiles) and 3 (occupational commitment profiles).

Need Fulfillment

Supporting H6a, participants' initial levels of global and relatedness need fulfillment were associated with a higher likelihood of membership into the *High* relative to the *Low and Increasing* organizational and occupational commitment profiles, although these effects were stronger for occupational commitment. Initial levels of global and relatedness need fulfillment were also associated with a higher likelihood of membership into the *High* relative to the *Low and Decreasing* occupational commitment profile. Initial levels of relatedness need fulfillment were finally associated with an increased likelihood of membership into the *High* relative to the *Average* occupational commitment profile, whereas initial levels of competence fulfillment were associated with a higher likelihood of membership into the *High*

relative to the *Average and Decreasing* organizational commitment profile. Lastly, initial levels of autonomy need fulfillment were associated with a higher likelihood of membership into the *High* relative to the *Average and Decreasing*, as well as into the *Moderately High* relative to *Low and Increasing* organizational commitment profile. Likewise, initial levels of autonomy need fulfillment were also associated with a higher likelihood of membership into the *High* relative to all other occupational commitment profiles. These results fully support H7a.

Beyond these effects on profile membership, higher initial levels of global need fulfillment were associated with higher initial levels of organizational commitment and with a slight decrease in organizational commitment levels within all organizational commitment profiles, thus partially supporting H6b. Higher initial levels of competence need fulfillment were associated with a slight increase in organizational commitment levels within all organizational commitment profiles, thus partially supporting H7b. Lastly, time-specific levels of global, autonomy, and relatedness need fulfillment were associated with time-specific increases in participants' levels of organizational and occupational commitment (effects stronger for organizational commitment), and time-specific increases in competence need fulfillment were associated with time-specific increases in occupational commitment. Thus, these results fully support H6c and H7c.

Socialization

Higher initial levels of global socialization were associated with a higher likelihood of membership into the *High* relative to all other occupational and organizational commitment profiles in a way that was slightly stronger for occupational commitment. These levels were also associated with a higher likelihood of membership into the *Moderately High* relative to the *Average and Decreasing* organizational commitment profile. These results partially support H8a. However, due to the lack of effects on the within profile trajectories (i.e., the intercept and slope factors), H8b was not supported.

Initial levels of task internalization seemed particularly relevant in relation to occupational commitment, being associated with a higher likelihood of membership into the *High* relative to *Low and Increasing* and *Low and Decreasing* profiles, as well as into the *Average* relative to *Low and Decreasing* profile. Initial levels of team internalization were associated with a higher likelihood of membership into the *Moderately High* and *Low and Increasing* relative to *Average and Decreasing* organizational commitment profiles, whereas higher initial levels of organization internalization were associated with a higher likelihood of membership into the *High* relative to *Average and Decreasing* organizational commitment profile. Initial levels

of team learning were associated with a higher likelihood of membership into the *Average and Decreasing* relative to the *Moderately High* organizational commitment profile. Taken together, these results partially support H9a and fully support H9b. Fully supporting H8c and partially supporting H10, time-specific increases in global socialization levels were also associated with time-specific increases in organizational and occupational commitment (effects stronger for organizational commitment). Similarly, time-specific increases in organization internalization were associated with time-specific increases in organizational commitment, whereas time-specific increases in task learning and internalization were both associated with time-specific increases in occupational commitment.

Outcomes of the Commitment Trajectories

The outcome comparisons are graphically represented in Figures 4 (organizational commitment) and 5 (occupational commitment) and reported in Table S12 in Appendix C.

For both targets, the highest initial levels of work satisfaction and quality of care were found in the *High* profiles, while the lowest levels were found in the *Average and Decreasing* (organizational) or *Low and Decreasing* and *Low and Increasing* (occupational) profiles. Levels of work satisfaction and quality of care fell between these extremes in the moderate profiles (i.e., *Average* occupational commitment and *moderately High* organizational commitment profiles). For work satisfaction, the greatest increases over time occurred equally in the *High* and *Low and Increasing* profiles, followed by the moderate profiles, and then by the *Average*/*Low and Decreasing* profiles, both of which displayed low and stable work satisfaction trajectories. For quality of care, all profiles displayed an increasing trajectory, which was the least pronounced in the *High* profiles, and the lowest in the Average and Decreasing (organizational) and *Low and Increasing/Decreasing* (occupational) profiles.

For both targets, initial levels of psychological distress were equally the highest in the *Low and Increasing* and *Average and Decreasing/Low and Decreasing* profiles, followed by the Moderate profile, and lowest in the *High* profile. All profiles displayed a decrease in psychological distress, with a greater decrease in the *Low and Increasing* profile for both targets, followed by the *Average and Decreasing* profile and then by the *High* profile for organizational commitment. In contrast, for occupational commitment, psychological distress trajectories showed a similar decline in the *Low and Increasing* and *Low and Decreasing* profiles, followed by the *Average* and then by the *High* profiles. For both targets, levels of psychological distress were notably higher in the *Low and Increasing* and *Average/Low and Decreasing* profiles than in the *High* and *Moderately High/Average* profiles.

Finally, somatization trajectories decreased over time for all profiles of organizational and occupational commitment and displayed a distinct pattern of associations with the organizational versus occupational commitment profiles. For organizational commitment, initial levels of somatization were equally the highest in the *Low and Increasing* and *Average and Decreasing* profiles, and the lowest in the *High* and *Moderately High* profiles. Moreover, the largest decrease was observed in the *Low and Increasing* profile (which almost reached the levels observed in the *High* and *Moderately High* profiles by the end of the study), followed equally by the *High* and *Moderately High* profiles, and finally by the *Average and Decreasing* profile. In contrast, for occupational commitment, initial levels of somatization were equally the highest in the *Low and Decreasing* and *Average* profiles, and all profiles displayed a statistically similar decreasing somatization trajectory. Moreover, examination of Figure 5 reveal virtually identical somatization trajectories in the Average and Low and Decreasing profiles, which fell in between those observed in the High profile (lowest) and in the Low and Increasing one (highest). Taken together, these results fully support H11 and partially support H12. A summary of all results as they pertain to our hypotheses is provided in Table 5.

Discussion

Affective commitment refers to the emergence of an emotional bond between an employee and a specific work-related target (Klein et al., 2012), which progressively becomes internalized a part of employees' professional identity (Meyer et al., 2008) and a central driver of their goal-directed behaviors (Meyer et al., 2004). Despite the widespread acknowledgement of the importance of affective commitment for employees and organizations alike (e.g., Meyer, 2016; Meyer et al., 2002; Spurk et al., 2019), there has been surprisingly few longitudinal investigations of how commitment dynamically emerges among new employees (e.g., Solinger et al., 2013), making it impossible to generate clear guidance on how to nurture this important component of their professional identities. Moreover, despite the recognition that employees' commitments to a variety of targets form a complex system within which each commitment creates a context that might influence the expression of other commitments (e.g., Klein et al., 2022; Meyer et al., 2021; Perreira et al., 2018), our knowledge of the joint evolution of multiple commitments remains virtually non-existent. This study sought to address both limitations by considering how trajectories of affective commitment to the organization and occupation co-evolve among a sample of novice nurses during their first five years in the profession. Moreover, to generate guidance on how to help nurture more desirable commitment trajectories among novice nurses, we focused on the

dynamic associations between these trajectories and two sets of predictors already associated with validated types of interventions (e.g., Gagné et al., 2022; Slemp et al., 2021; Wanberg, 2012): (a) their level of basic psychological need fulfillment (e.g., Ryan & Deci, 2017); and (b) their experiences of socialization (e.g., Perrot & Campoy, 2009). Lastly, to achieve a more accurate understanding of the various implications of these trajectories, we considered their dynamic associations with nurses' levels of somatization, psychological distress, work satisfaction, and the quality of care offered to their patients.

Distinct but Similar Profiles of Affective Commitment to the Organization and Occupation

Our results revealed four profiles following qualitatively distinct affective commitment trajectories for both targets, thus supporting H1 and H2 and providing replication evidence to previous studies conducted among more (Houle et al., 2022) or less (Solinger et al., 2013) established employees while focusing on a single target of commitment. Two of those profiles displayed persistently *High* or Moderate (i.e., *Average* or *Moderately High*) levels of affective commitment to the organization or to the occupation, which became progressively more differentiated from the other trajectories over time. Moreover, we observed more within-profile, and less between-profile, variability upon occupational entry for organizational commitment profiles relative to occupational commitment. This result fully supports H3. These results suggest that it might be easier for organizations to influence nurses' organizational (*vs* occupational) commitment levels. Conversely, educational institutions responsible for nurses' training may want to monitor whether and how the development of a commitment to the nursing occupation is unfolding among students, as this initial development is likely to have a long-lasting impact on nurses' ability to adapt to, and willingness to remain in, nursing.

In socialization research (Boswell et al., 2005; Solinger et al., 2013) stable trajectories of commitment are assumed to reflect a *matching* scenario in which employees' expectations are supported by the characteristics of their new role. The proportion of our sample corresponding to a *matching* scenario for organizational commitment (i.e., the *High* and *Moderately High* profiles) is roughly the same (~50%) as that reported by Solinger et al. (2013) in their smaller sample of Ph.D. graduates. Although the proportion of nurses corresponding to a *Matching* scenario was much higher (~78%) for occupational commitment (i.e., the *High* and *Average* profiles), this proportion is similar – albeit slightly higher – to that reported by Houle et al. (2022) among established school principals (~60%). These results

suggest that a majority of newly registered nurses experience a match between their expectations and their new occupational role. Indeed, the proportion of nurses who experience discrepancies between their expectations and the reality of their healthcare organization remain more frequent (~50%) than for the occupation (~22%). Yet, pending replication, this result may be due to the current sample's characteristics (i.e., French-Canadian nurses, pre-pandemic).

It was particularly noteworthy that only *High* or moderate (i.e., *Average* or *Moderately High*) m*atching* scenarios were observed for both targets of commitment, suggesting that changes in commitment levels over nurses' early years in the profession seemed limited to those displaying initially lower expectations, as captured by initially low to moderately low initial levels of organizational and occupational commitment. For those nurses, the new reality of their work role can either act as an agreeable surprise – thus coming to reflect a *learning to love* scenario – or as an eventual source of disappointment (*hangover*) following initially high positive impression (*honeymoon*)– thus coming to reflect a *honeymoon hangover* scenario (Boswell et al., 2005; Solinger et al., 2013). Indeed, the *Low and Increasing* organizational commitment profile displays a *honeymoon hangover* scenario wherein nurses' emotional bond with their organization progressively increases for three and a half years before starting to progressively decrease. Moreover, even if the *honeymoon* component was not directly observed, both the *Low and Decreasing* occupational commitment profile and the *Average and Decreasing* organizational commitment profile showcased a *hangover* component, characterizing nurses who become increasingly emotionally detached from either target. Lastly, the *learning to love* scenario was only present for occupational commitment, corresponding to the *Low and Increasing* profile in which a growth in commitment was observed over time. Moreover, most (i.e., 73%) nurses corresponding to this *learning to love* scenario for occupational commitment (i.e., the *Low and Increasing* profile) belonged to the *High* or *Moderately High* organizational commitment profiles, suggesting that, for very small subset of nurses (i.e., 5.8% of our total sample), organizational commitment may be linked to the positive development of occupational commitment. Similarly, 58.2% of nurses belonging to the *Low and Increasing* organizational commitment profile corresponded to the *High* or *Moderately High* occupational commitment profile, suggesting that a strong occupational commitment may be linked to the positive development of organizational commitment for 14.8% of nurses. These results thus support the idea that fostering a strong commitment to one target may favor the emergence of commitment to the other target, and that this effect, at least for nurses, may be more prevalent

for occupational commitment.

For occupational commitment, the changing profiles (*Low and Increasing*; *Low and Decreasing*) were similar in shape to those identified by Houle et al. (2022), although characterized by slightly lower initial levels and less frequent (~22% for both profiles in this study relative to ~41% in Houle et al., 2022). In contrast, the changing profiles (*Low and Increasing*; *Average and Decreasing*) found in this study for organizational commitment were very close in shape and size (~47% versus ~42%) to those identified by Solinger et al. (2013). Preliminary evidence appears to indicate that organizational commitment may be more malleable than occupational commitment making this target more receptive to contextual changes (e.g., starting a new occupation), and possibly interventions aimed at improving employee commitment. Indeed, it was encouraging to note that the trajectories observed in *Low and Increasing* organizational commitment profile reached a level comparable to those observed in the *Moderately High* organizational commitment profile by the third year of the study. This observation suggests that after an initial period of adaptation, these nurses came to develop a stronger emotional attachment towards their organization and reap benefits in terms of outcomes.

These observations indicate that, despite similarities, commitment trajectories observed among newcomers (e.g., the present study and Solinger et al., 2013) do differ from those observed among more established employees (e.g., Houle et al., 2022), and that changing scenarios may be more prevalent when the organization is the target compared to the occupation. As previously mentioned, the nature of the trajectories observed in this study suggests that nurses' training programs might be preparing them better to face the reality of the occupation as to face that of healthcare organizations, but that post-entry factors are more likely to influence the development of organizational commitment. Based on past research, organizations and HR leaders should demonstrate a clear strategy for the short- and long-term support of employees (e.g., using individual development plans) and attempt to build connections with them (e.g., forming extra-organizational ties) (Morrow, 2010).

Still, person-centered evidence is cumulative, requiring an accumulation of studies to differentiate a core set of universal profiles, a second set of context-specific profiles, and a last set of unique profiles unlikely to generalize (Meyer & Morin, 2016; Solinger et al., 2013). Although our results and current evidence (i.e., Houle et al., 2022; Solinger et al., 2013) supported the construct validity of our profiles, additional research will be essential to better document their relevance and generalizability.

Lastly, when looking at the shape of the trajectories observed for both types of

commitment, a relatively clear inflexion point seems to happen between 3 to 4 years of tenure, after which the observed trajectories seem to become more stable. This result is highly informative for our understanding of nurses' socialization process. Indeed, whereas some have suggested that it might take as little as six months for new employees to become familiar with, and autonomous in, their new work role (e.g., Ashforth & Saks, 1996), others have noted that the socialization period was likely to be much longer (one year: Bauer et al., 2007; five years: Rudman et al., 2014), especially among highly qualified employees such as nurses (Benner et al., 2009; Rudman et al., 2014). Our results suggest that, when nurses are considered, the first three to four years might be the most critical.

Co-Evolving Profiles of Affective Commitment to the Occupation and Organization

Supporting H4, most nurses displayed similar profiles of organizational and occupational commitment, particularly those displaying *High* or *Decreasing* trajectories. Thus, close to 80% of nurses from the *High* occupational commitment profile corresponded to a *High* or *Moderately High* organizational commitment profile, whereas nearly 60% of those from the *Low and Decreasing* occupational commitment profile matched the *Average and Decreasing* organizational commitment profile. These results provide longitudinal evidence of the strong association between organizational and occupational commitment previously identified in cross-sectional studies (e.g., Meyer et al., 2019; Morin et al., 2011a, 2015; Tsoumbris & Xenikou, 2010), while also showing that this association appears stronger at more extreme levels (i.e., *High* or *Low/Average and Decreasing)*. In contrast, only 10% of nurses characterized by an *Average* occupational commitment profile corresponded to the same organizational commitment profile: Most of them rather matched the *Low and Increasing* organizational commitment profile (45%), followed by the *High* (24%), and *Average and Decreasing* (21%) organizational commitment profiles. Likewise, only 5.5% of the nurses presenting a *Low and Increasing* occupational commitment profile displayed a *Low and Increasing* organizational commitment profile: Most of them rather matched the *Moderately High* (71%) organizational commitment profile, followed by the *Average and Decreasing* (21.6%) one.

Beyond showing that it is possible for nurses to adopt distinct trajectories of commitment to their organization and occupation, and also supporting H4, this last set of results suggests that a stronger affective bond to any of those targets could contribute to increase the affective bond to the other and vice versa (i.e., a weaker bond to one target can reduce the bond to the other). Although our results do not allow us to identify the mechanisms involved in the

process via which commitment increase, or decrease, in similarity across targets, they suggest that both are important and likely to influence one another, perhaps through self-regulation or internalization processes (Fernet et al. 2017). In combination with SDT (Ryan & Deci, 2017) and commitment theory (Meyer et al., 2004), our results thus support the idea that fostering any of those two commitments is likely to create a process that favors the development and internalization of both targets into nurses' professional identities, whereas failing to do so is likely to impede the development and consolidation of both types of bonds.

Self-Equilibrium Processes Underpinning Affective Commitment Trajectories

Supporting H5 and the self-equilibrium hypothesis (Morin et al., 2013, 2017), profiles characterized by higher trajectories of affective commitment also tended to display a lower level of state-like fluctuations over time. These results are thus consistent with those reported by Houle et al. (2022) in relation to the occupational commitment trajectories observed among a sample of established school principals, thus demonstrating the generalizability of the self-equilibrium hypothesis to early career nurses' commitment to their occupation and organization. Initially proposed to explain how different components of one's identity become progressively internalized into a stable sense of self, the self-equilibrium hypothesis is thus explicitly designed to describe the evolution of one's sense of identity (e.g., Houle et al., 2022; Morin et al., 2013, 2017). Our results support the idea that affective commitment reflects the dynamic internalization of various work-related targets into one's sense of professional identity (Meyer et al., 2024, 2006; Spurk et al., 2019) and that stronger levels of internalization also appear more resilient (or less reactive) to internal or external contingencies. When this internalization is weaker, one's sense of professional identity becomes more permeable to the influence of these contingencies (Morin et al., 2013, 2017; Ryan & Deci, 2017).

However, our results also reveal some intricacies that partially challenge, or at least complement, the self-equilibrium hypothesis (Morin et al., 2013, 2017). Although the smallest state-like fluctuations were found in the *High* and *Moderately High* organizational commitment profiles, these fluctuations were slightly larger in the *High* profile relative to the *Moderately High* one. However, these differences remain minor relative to those observed between the *High* or *Moderately High* profiles relative to both other profiles and could possibly reflect the slightly larger slope found in the *High* profile. The slightly higher level of trait-like evolution observed in this profile seem to be accompanied by slightly larger trait-like fluctuations, reflecting a progressive consolidation of this *High* trajectory at early career

stages. Consistent with this interpretation, state-like fluctuations were also more pronounced in the *Low and Increasing* organizational commitment profile relative to the *Average and Decreasing* profile. In contrast, for occupational commitment, these fluctuations were lower in the *Low and Increasing* profile relative to the *Average* one, suggesting that the presence of a trait-like increasing trend in occupational commitment might help to generate state-like stability. Taken together, these unexpected results suggest that increasing trajectories of organizational commitment require a continuous process of adjustment whereby early career nurses come to progressively discover, and learn to enjoy, their new organization. In contrast, early career nurses are already well-informed, because of their training, about the specificities of their new occupational role. Increasing trajectories of occupational commitment may thus occur when nurses realize that their occupation provides a better match to their expectations than they initially thought, a realization that can come without the need for further exploration or adjustments given their prior knowledge.

From a practical perspective, our results highlight that interventions seeking to increase commitment among early career nurses should jointly consider their initial and evolving levels of commitment, but also the reactivity of their commitment to internal and external contingencies. Our results suggest that employees' commitment profiles are jointly defined by these three components (initial levels, trait-like evolution, and time-specific fluctuations), while highlighting that lower commitment trajectories seem to be far more unstable at the state-level. This instability is suggestive of a higher level of reactivity to external or internal contingencies, which is likely to entail a higher level of responsivity to interventions seeking to increase affective commitment among newcomers. However, for these changes to become incorporated into nurses' ongoing commitment trajectories (rather than solely resulting in temporary boosts), these interventions will need to have long lasting effects or be maintained over time. Moreover, in line with the self-equilibrium hypothesis (Morin et al., 2013, 2017, Houle et al., 2022) and current knowledge based on recognized antecedents of commitment (e.g., Morrow, 2010), interventions seeking to increase commitment also seem more likely to succeed if they seek to nurture an in-depth internalization of the commitment targets within nurses' sense of professional identity. Our next set of results provide more specific guidance as to how to best influence profile membership early in the career *versus* how to best influence nurses' unfolding commitment trajectories *versus* how to generate short-term boosts in commitment levels.

Basic Psychological Need Fulfillment and Commitment Trajectories

SDT (Ryan & Deci, 2017) assumes that employee's internalization of their work role to their sense of identity (e.g., affective commitment to the organization and occupation) are closely related to the extent to which their basic psychological needs for relatedness, competence, and autonomy are fulfilled at work. Supporting this theoretical expectation and our hypotheses, our results revealed that the joint (i.e., global) fulfillment of all three needs was associated with higher and more stable commitment trajectories (partially supporting H6a). These global levels of need fulfillment were also associated with higher levels of organizational commitment across all profiles (partially supporting H6b), as well as with time-specific increases in organizational and occupational commitment (supporting H6c). These associations were stronger and more widespread for organizational commitment relative to occupational commitment, possibly because it is within the confines of their organization that nurses experience a global sense of need fulfillment, whereas their occupation is slightly more abstract. Although we unexpectedly found that global levels of need fulfillment predicted a slight decrease over time in organizational commitment, this effect is consistent with the negative intercept-slope correlation present in all profiles and suggests that higher initial levels leave less room for growth. These results support the idea that balanced need fulfillment is a key driver of internalization (Ryan & Deci, 2017; Sheldon & Niemec, 2006), at least for affective commitment.

Similar associations were found when we considered each specific need (supporting H7a and H7c, and partially supporting H7b). However, the benefits of the needs for autonomy and relatedness were more pronounced and widespread for occupational commitment than organizational commitment, whereas the opposite was true for the need for competence. These results are thus consistent with the idea that each need plays a unique role beyond their joint effect (Gillet et al., 2019, 2020). The need for competence seemed to play a key role in relation to organizational commitment, suggesting that nurses may attribute the fulfillment of this need primarily to their organization as the place where they express and nurture their skills. In contrast, it is to their occupation that they mainly seem to attribute the fulfillment of their needs for relatedness and autonomy. This suggests that it is to their occupation that nurses may come to attribute their most important social interactions at work (with coworkers and patients), and that their feelings of autonomy at work are seen as primarily regulated by the rules and principles that guide the practice of nursing rather than by any specific organizational benchmark.

Our results support the idea that efforts to nurture affective commitment among early

career nurses could benefit from need supportive interventions. A wide variety of organizational interventions, anchored in SDT, have been proposed, and validated, to support employees' needs and internalization (for comprehensive lists, see Gagné et al., 2021; Slemp et al., 2021). For example, autonomy supportive training seems to positively influence internalization (Williams et al., 2016), while leadership training focusing on initiative taking and positive informational feedback has positive effects on managers' autonomy supportive tendencies and employees' work climate perceptions (Deci et al., 1989). The success of these interventions may depend on whether employees feel that the support will persist in the future (Morrow, 2010) making it important to establish and monitor short- and long-term effects of trainings and interventions. Whereas SDT research has heavily focused on managers' autonomy supportive behaviors, recent studies invite us to consider the contribution of other key agents in the nursing work environment such as the immediate supervisor and coworkers (e.g., Fernet et al., 2021). Intervention research would do well in examining the distinct, but potentially complementary, role of a fuller spectrum of key socializing agents in the pre- and post-entry periods, including mentors, preceptors, clinical supervisors, and patients (Hopeck, 2023).

Socialization Experiences and Commitment Trajectories

New employees need to progressively learn and internalize the basics of their new work role, work group, and organizations via positive socialization experiences (e.g., Louis, 1980; Van Maanen & Schein, 1979). Without a clear understanding of the functioning of their new work environment, it would be rather unrealistic to expect them to develop a strong emotional attachment to any facet of their work role (e.g., Bauer et al., 2007; Chao et al., 1994; Perrot & Campoy, 2009; Saks et al., 2007). In this regard, our study is the first to demonstrate that the global quality of nurses' socialization experiences was associated with their likelihood of membership into the profiles characterized by the highest levels of affective commitment to the organization and occupation (partially supporting H8a), although these effects were stronger for occupational commitment. Moreover, positive socialization experiences were also associated with an increased likelihood of membership into the *Moderately High* organizational commitment profile, thus highlighting their relevance for both forms of commitment. Although these global levels of socialization had no further impact on within-profile trajectories (failing to support H8b), they were associated with the greatest time-specific increases in organizational and occupational commitment (supporting H8c). Moreover, and supporting the target similarity perspective (Lavelle et al., 2007, 2009;

Morin et al., 2011a, 2011b) specific levels of task internalization were associated with the *High* and *Average* occupational commitment profiles and with time-specific increases in occupational commitment (supporting H9b and partially supporting H10), while organizational internalization was associated with the *High* organizational commitment profile and time-specific increases in organizational commitment (partially supporting H9a and H10).

These results thus support the idea that globally adequate socialization experiences, as well as adequate target-specific levels of internalization, are likely to encourage the emergence of more desirable profiles and to help generate short term boosts in commitment levels. Moreover, based on the size of the residuals across profiles, our results suggest that short-term boosts in commitment levels as a result of time-specific increases in socialization should have a greater effect on employees with low commitment trajectories (i.e., state-like deviations are larger in these profiles). Thus, although the beneficial short-term impact of socialization (as well as need fulfilment) are equivalent in terms of their state-level effect, state-like deviations are more pronounced in profiles with lower commitment trajectories leading to a larger influence potential.

Although we had no hypotheses specific to team socialization, we found that team internalization was also associated with membership to the *Moderately High* and *Low and Increasing* organizational commitment profile relative to the *Average and Decreasing* profile. These results indicate the benefits of internalizing the team values and objectives as our own in relation to the adoption of higher or increasing trajectories of organizational commitment. These associations are consistent with the idea that one's workgroup is nested within one's organization so that positive experiences with the former are likely to benefit the latter (e.g., Meyer et al., 2021). Interestingly, team learning also increased the odds of membership to the *Average and Decreasing* organizational commitment profile relative to the *Moderately High* profile hinting that some nurses may understand their team objectives without internalizing them as their own. Thus, team learning disconnected from the internalization of this learning seems to be associated with undesirable effects in terms of organizational commitment.

From a practical perspective, our results support the value of positive socialization experiences going beyond simply learning a new role, but also involving the internalization of this new role. Our results suggest that interventions seeking to improve affective commitment may benefit from ensuring that organizations implement need-supportive interventions (Huyghebaert-Zouaghi et al., 2023; Morrow, 2010), thereby increasing the subjective value of maintaining a strong bond with the target of commitment (Rousseau,

1998). Our results also suggest that organizations may want to invest in monitoring the team dynamics to which early career nurses are exposed, and possibly to move them out of problematic teams to help them internalize proper work dynamics, as well as stronger levels of affective commitment, which will then become less sensitive to undesirable contingencies. Interestingly, a wide range of interventions likely to support the proper internalization of a new work role have been previously proposed and validated (Wanberg, 2012).

Outcomes of Organizational and Occupational Commitment Trajectories

Commitment theory (Meyer, 2016; Meyer & Maltin, 2010; Spurk et al., 2019) and SDT (Ryan & Deci, 2017) both highlight that the internalization of a strong affective bond with one's occupation or organization should be associated with a more positive level of functioning in and out of work. Our results generally supported these expectations (supporting H11) in showing that profiles characterized by higher and/or increasing levels of affective commitment to the organization and occupation generally experienced more positive functioning, as operationalized by work satisfaction and quality of care offered to patients, as well as lower levels of somatization and psychological distress. Importantly, the alignment of our results with theory provides additional support for the construct validity of the profiles. However, beyond these generic observations, they also revealed specificities that may be noteworthy if similar longitudinal processes could be replicated in future studies.

Thus, nurses' levels of quality of care and work satisfaction were the highest in the profiles characterized by *High* levels of organizational and occupational commitment, the lowest in the *Decreasing* profiles, and fell in between these two extremes in the moderate profiles. However, whereas these two outcomes had an average and comparable level in the *Moderately High* and *Low and Increasing* organizational commitment profiles, they had a low and comparable level in the *Low and Increasing* and *Low and Decreasing* occupational commitment profiles. These differences can probably be explained by the nature of the profiles identified for both targets of commitment, as the *Low and Increasing* organizational commitment profile displayed levels of commitment which increased up to the levels observed in the *Moderate* profile by the third year of tenure, whereas the two profiles characterized by *Low* levels of occupational commitment remained distinct from the *Moderate* profile throughout the course of the study. Moreover, and partially supporting H12, the two organizational commitment profiles displaying an increasing trajectory (i.e., *High* and *Low and Increasing*) were also characterized by the greatest increase in work satisfaction over time, thus supporting past results in terms of velocity of change being associated with

job satisfaction (Chang et al., 2010). Interestingly, similar yet opposite results were observed in relation to psychological distress, which was highest in the *Low and Increasing* (organization and occupation), *Average and Decreasing* (organization) and *Low and Decreasing* profiles (occupation), highest in the *High* profiles (organization and occupation), and in between these two extremes in the *Moderately High* organizational and *Average* occupational profiles. Moreover, the *Low and Increasing* organizational profile also displayed the greatest reduction of psychological distress over time. These results thus provide further evidence for the benefits of improving organizational and occupational commitment over time in terms of their effect on work satisfaction, psychological distress, and quality of care.

Somewhat unexpectedly, the association between the profiles and somatization were mainly limited to organizational commitment, whereby both the *Average and Decreasing* and *Low and Increasing* organizational commitment profiles displayed higher levels of somatization than the *Moderately High* profile. The *Low and Increasing* organizational commitment profile also displayed higher levels of somatization compared to the *High* profile, while also presenting the sharpest decrease in somatization over time. Interestingly, the *Average and Decreasing* profile displayed the lowest decrease in somatization levels over time. This suggests that somatization is particularly likely for nurses whose values do not align with those of their organization, and that progressively increasing their commitment to the organization is likely to help offset this detrimental effect.

Strengths, Limitations, and Future Directions

A strength of this current study lies in the estimation of trajectories based on the nurse's tenure, which allowed us to capture the evolution of their commitment over the first five years of their career. However, this modelling decision also forces the time-specific residuals to be estimated as equal over time, thus making it impossible to completely test the self-equilibration hypothesis, which also suggests that the size of these residuals should increase or decreases when commitment trajectories respectively decrease or increase (e.g., Houle et al., 2022). Future studies, focusing on employees with similar levels of tenure upon entry into the study, will be necessary to document this possibility. A second strength comes from our comprehensive operationalization or need fulfillment and socialization experiences, as well as our partitioning of these constructs into their global and specific components (Morin et al., 2016a). Despite this strength, many other facets of employees' work life (e.g., leadership, climate, socialization practices) or personality (e.g., self-esteem contingency, neuroticism)

are also likely to influence emerging commitment trajectories and the stability of those trajectories over time. To obtain a complete picture of how commitment first emerges and evolves in the early stages of the career, a more comprehensive set of predictors will need to be considered.

Moreover, although our longitudinal person-centered analytic framework arguably represents another strength of the present study, this analytic design was not suitable to assess the directionality of the associations, which had to be defined based on theoretical *a priori*. For instance, although we can reasonably position socialization experiences as an antecedent of commitment, and commitment as an antecedent of psychological distress, it is also likely that employees experiencing higher levels of psychological distress may not be able to benefit from equally adequate socialization experiences, just like a lack of commitment might also interfere with socialization. This limitation is further reinforced by our sole reliance on self-reported measures, which can suffer from a variety of self-report biases. Clearly, future research will need to consider the directionality of these associations in a more comprehensive manner, while incorporating objective (e.g., actual turnover) and subjective (e.g., team-ratings) data. In addition, our ability to consider the evolution of commitment trajectories over the first five years of the career in a sample of French-Canadian nurses is another important strength of this study. However, this strength also comes with an important caveat in terms of generalizability. Indeed, commitment is a fluid dynamic construct that evolves over the course of employees' career (Houle et al., 2022; Spurk et al., 2019) suggesting that additional studies will be needed to assess how these trajectories keep on evolving as employees get settled into their career, change occupations or organizations, get promoted, and get ready for retirement. For applied purposes researchers ought to focus on periods of high malleability when devising interventions, as these periods are already prone to changes in commitment which may facilitate its development.

Furthermore, as in any longitudinal study, attrition limits generalizability. For instance, it is possible that some of the participants lost through attrition might also have been those initially less committed to their occupation and organization. This could have contributed to the higher prevalence of the profiles displaying higher levels of commitment. Our attrition analyses do not support this interpretation but suggest that a lack of work satisfaction might have played a similar role. In any case, pending replication, it remains unknown whether and how the present results will generalize to other occupations, countries, and cultures, as well as to the full diversity of early career nurses.

Two limitations pertaining to organizational tenure are worth mentioning. First, we did not

monitor organizational transitions, meaning that some nurses may have experienced a change in their organizational referent over time. It is, however, important to note that the prototypical nature of GMM indirectly accounts for these changes by allowing each participant to have a higher, or lower, probability of membership into all of the profiles. Thus, participants likely to have experienced a change will simply end up displaying lower probabilities of profile membership than those with a clearly dominant profile. Second, the lack of organizational identifiers did not allow us to extend our analyses to a multi-level framework accounting for nesting of respondents within organizations.

Lastly, as we relied on a tenure-based modeling approach we were not able to evaluate whether state-like deviations in commitment levels resulted in similar state-like deviations in outcome levels. Future studies should do well to investigate this as the usefulness of interventions designed to temporarily increase commitment levels will depend on whether these improvements benefit other individual (e.g., job satisfaction) and organizational (e.g., turnover intentions) level outcomes.

Conclusion

The importance of retaining public sector employees fulfilling critical societal roles, such as nurses, has led researchers to argue that more research needs to be conducted to better understand the mechanisms through which these workers develop, integrate, and come to internalize their affective bond to multiple work-related targets (Houle et al., 2020, 2022). In the present study, our results supported the idea that affective commitment represents a dynamic bond playing an important role in the ongoing process of adaptation of early career nurses to their career (Spurk et al., 2019; Sullivan & Baruch, 2009). Moreover, we found that the process underpinning the emergence of their commitments to their organization and occupation shared far more similarities than differences, and that both entailed self-equilibration processes whereby a strong affective commitment is also one that shows resilience over time (Houle et al., 2022; Morin et al., 2013, 2017). We found support for the idea that affective commitment entails the internalization of one's organization and occupation to ones' sense of professional identity, a process that is likely to benefit from exposure to work environments likely to fulfill early career nurses' basic psychological needs and to nurture positive socialization experiences. Perhaps more importantly, we also found tentative evidence that internalizing one's commitment to a single target (e.g., the occupation) seemed to facilitate the internalization of one's commitment to another target (e.g., the organization). Finally, we also highlighted the importance of considering

commitment trajectories among early career nurses, by demonstrating the various impacts of these trajectories on their levels of psychological functioning, work satisfaction, and even on the quality of care offered to their patients. We hope that these results will help generate additional research on the dynamic interrelations among commitment trajectories over the course of the career of many different types of employees and motivate the implementation of intervention procedures to help facilitate the onboarding trajectories of nurses, as well many other public sector employees.

Tables & Figures
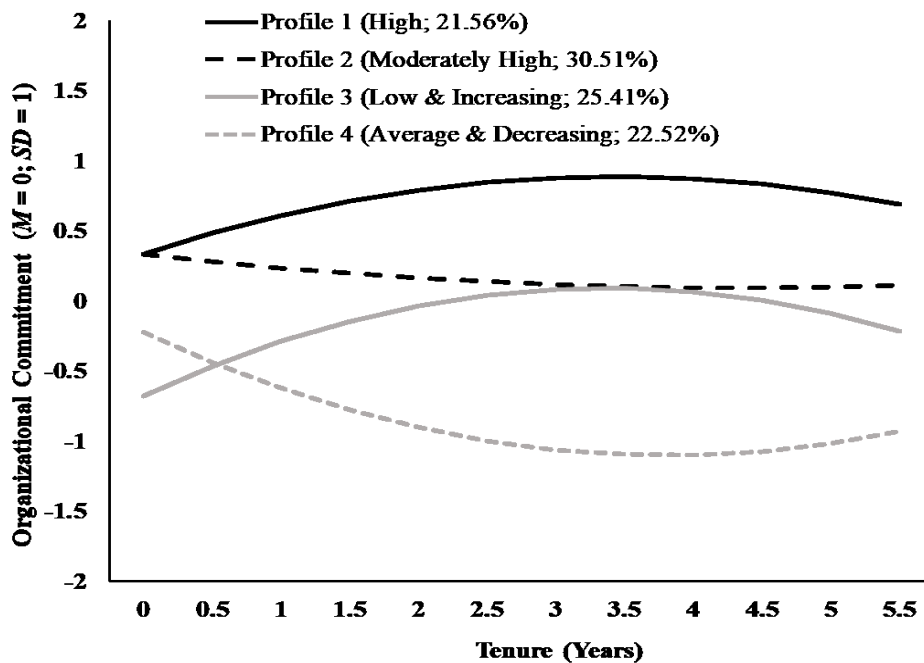
Figure 8. Final 4-Profile Solution for Study 3: Trajectories of Affective Commitment to the Organization
Note. Profile indicators are factor scores with mean of 0 and a standard deviation of 1.
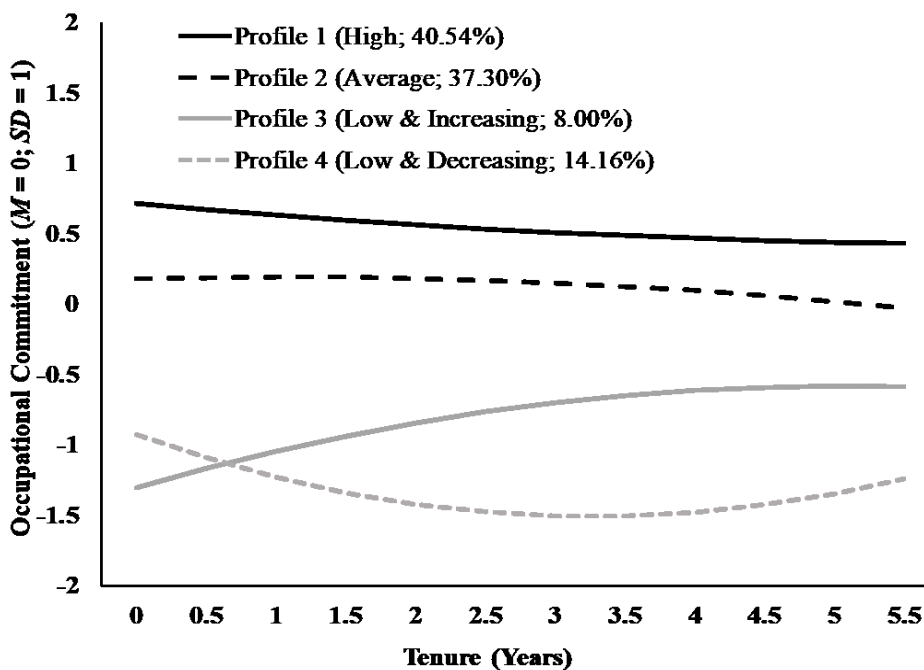
Figure 9. Final 4-Profile Solution for Study 3: Trajectories of Affective Commitment to the Occupation
Note. Profile indicators are factor scores with mean of 0 and a standard deviation of 1.
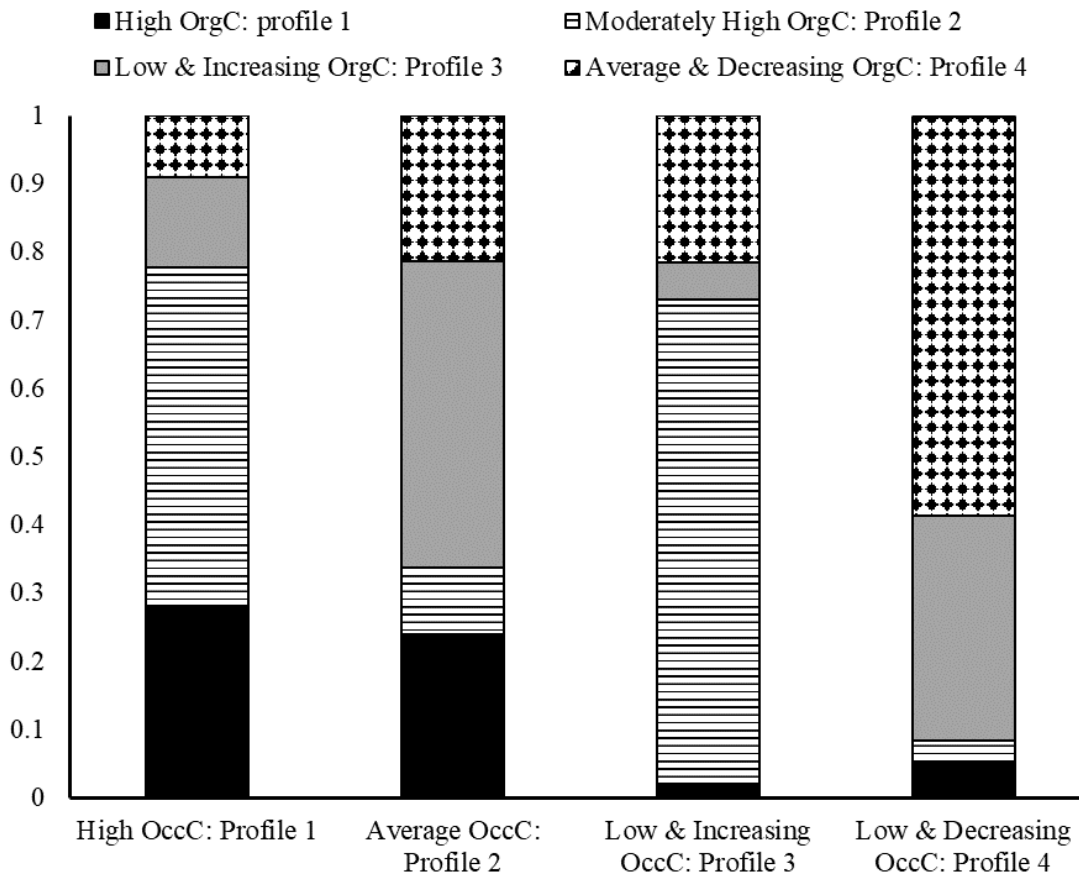
Figure 10

Cross-Classification Probabilities of Profile Membership across Targets

Note. The Y-axis reflects proportions summing up to 100%.
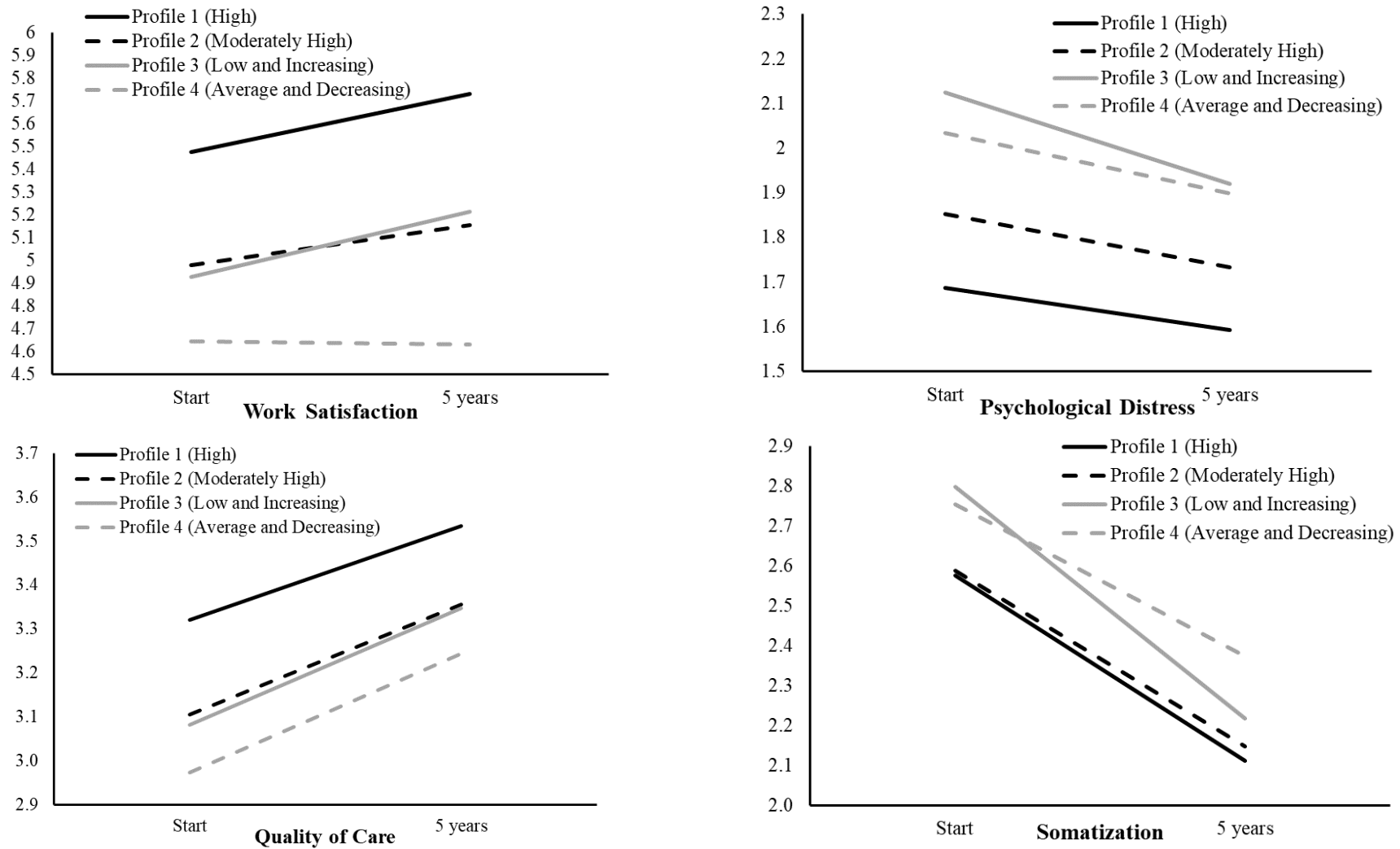
Figure 11. *Outcome Trajectories Within the Final Four-Profile Solution for Organizational Commitment*
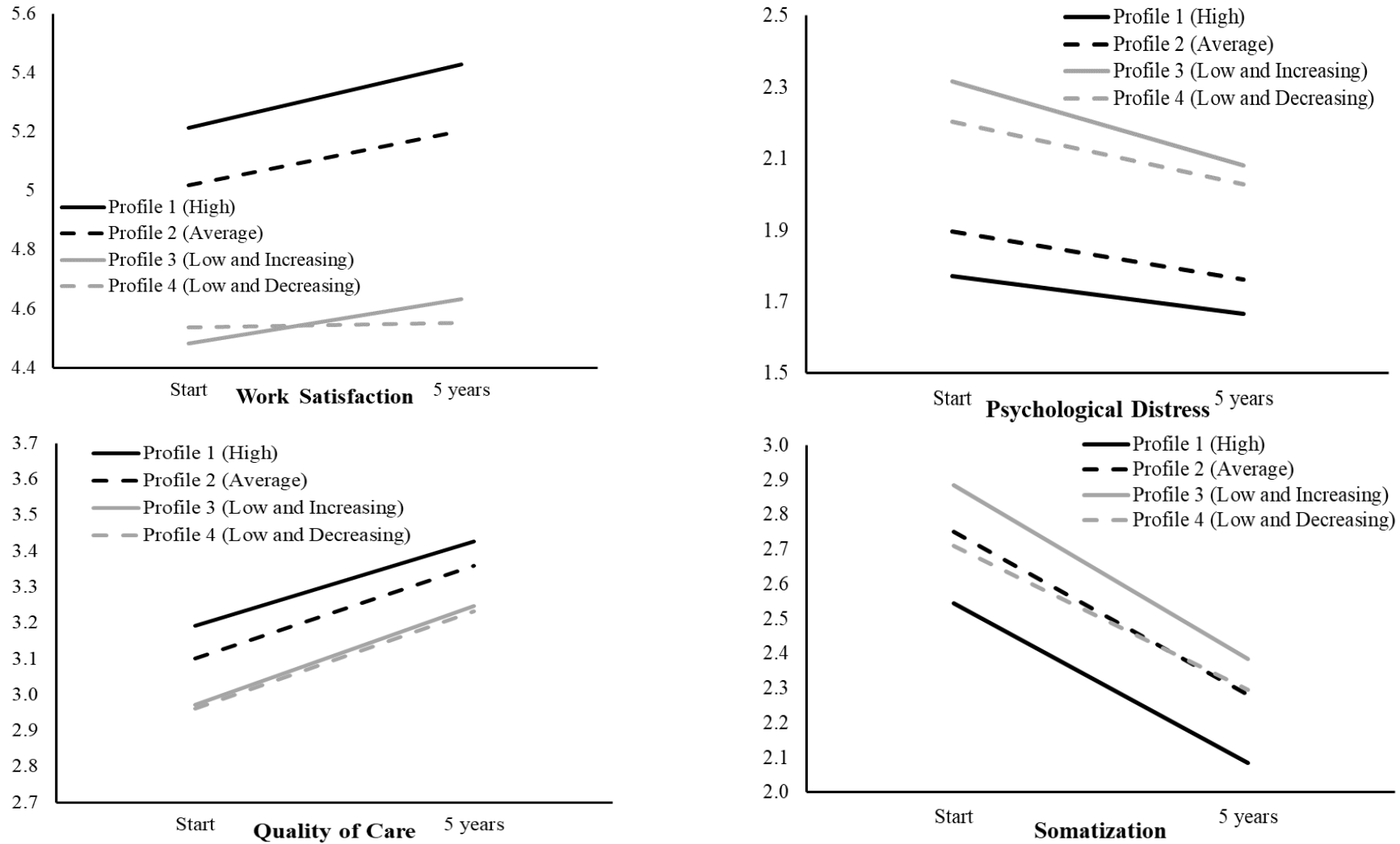
Figure 12. *Outcome Trajectories Within the Final Four-Profile Solution for Occupational Commitment*

Table 11

Results from the Growth Mixture Analyses for Study 3

Model	LL	#fp	Scaling	AIC	CAIC	BIC	ABIC	Entropy
			Organizational Commitment Profiles					
1 Profile	-2282.810	10	1.474	4585.621	4640.406	4630.406	4598.656	
2 Profiles	-1982.794	15	1.426	3995.588	4077.765	4062.765	4015.141	.686
3 Profiles	-1925.591	20	1.638	3891.181	4000.751	3980.751	3917.252	.743
4 Profiles	-1871.849	25	1.714	3793.698	3930.661	3905.661	3826.286	.715
5 Profiles	-1841.737	30	1.524	3743.474	3907.829	3877.829	3782.579	.697
			Occupational Commitment Profiles					
1 Profile	-1904.300	10	2.515	3828.601	3883.508	3873.508	3841.758	
2 Profiles	-1282.593	15	1.575	2595.186	2677.547	2662.547	2614.921	.826
3 Profiles	-1149.156	20	1.458	2338.311	2448.126	2428.126	2364.625	.786
4 Profiles	-1113.288	25	1.363	2276.577	2413.845	2388.845	2309.469	.830
5 Profiles	-1033.436	30	.052	2126.873	2291.594	2261.594	2166.344	.823
			Need Satisfaction and Frustration (Time Invariant Predictors)					
N1. C	-2747.493	48	1.006	5590.985	5851.921	5803.921	5651.528	.809
N2. C, I (inv.)	-2726.663	56	1.027	5565.326	5869.750	5813.750	5635.958	.808
N3. C, I, S (inv.)	-2690.540	64	1.049	5509.081	5856.994	5792.994	5589.804	.807
N4. C, I, S, Q (inv.)	-2679.929	72	1.099	5503.858	5895.261	5823.261	5594.671	.806
N5. N4 + C, I (var.), S (inv.)	-2675.804	88	1.077	5527.609	6005.990	5917.990	5638.603	.816
N6. N4 + C, I, S (var.)	-2656.506	112	1.112	5537.012	6145.861	6033.861	5678.277	.819
			Need Satisfaction and Frustration (Time Varying Predictors)					
N7. Baseline: M3	-2690.540	64	1.049	5509.081	5856.994	5792.994	5589.804	.807
N8. Prof. (inv.) & Const. (var.)	-2554.829	72	1.247	5253.659	5645.062	5573.062	5344.472	.805
N9. Prof. (inv.) & Const. (inv.)	-2587.404	68	1.170	5310.808	5680.467	5612.467	5396.576	.808
N10. Prof. (var.) & Const. (var.)	-2524.021	96	1.392	5240.042	5761.912	5665.912	5361.126	.807

Table 1 (Continued)

Results from the Growth Mixture Analyses

	LL	#fp	Scaling	AIC	CAIC	BIC	ABIC	
Socialization (Time Invariant Predictors)								
S1. C	-2715.844	66	1.013	5563.688	5924.557	5858.557	5649.010	.816
S2. C, I (inv.)	-2690.509	80	1.053	5541.019	5978.435	5898.435	5644.438	.811
S3. C, I, S (inv.)	-2656.250	94	1.035	5500.500	6014.463	5920.463	5622.018	.810
S4. C, I, S, Q (inv.)	-2640.009	108	1.025	5496.019	6086.530	5978.530	5635.635	.806
S5. S4 + C, I (var.) S (inv.)	-2622.254	136	1.167	5516.507	6260.114	6124.114	5692.321	.813
S6. S4 + C, I, S (var.)	-2587.178	178	1.066	5530.356	6503.606	6325.606	5760.464	.825
Socialization (Time Varying Predictors)								
S7. Baseline: S1	-2715.844	66	1.013	5563.688	5924.557	5858.557	5649.010	.816
S8. Prof. (inv.) & Const. (var.)	-2512.447	80	1.259	5184.893	5622.309	5542.309	5288.313	.802
S9. Prof. (inv.) & Const. (inv.)	-2587.333	73	1.145	5320.666	5719.808	5646.808	5415.036	.801
S10. Prof. (var.) & Const. (var.)	-2445.710	122	1.363	5135.420	5802.479	5680.479	5293.135	.809

Note. LL: Loglikelihood*; #fp:* Number of Free Parameters; Scaling = scaling factor; AIC: Akaïke Information Criteria; CAIC: Constant AIC; BIC: Bayesian Information Criteria; ABIC: Sample-Size adjusted BIC; C: Profile membership; I: Intercept factor; S: Slope factor.

Table 12

Results from the Predictive Analyses for Study 3: Organizational Commitment

Predictors	Profile 1 vs Profile 2		Profile 1 vs Profile 3		Profile 1 vs Profile 4		Profile 2 vs Profile 3	
	Coeff (SE)	OR	Coeff (SE)	OR	Coeff (SE)	OR	Coeff (SE)	OR
Global NSF	.258 (.201)	1.294	.448 (.193)*	1.565	.401 (.234)	1.494	.143 (.159)	1.154
Autonomy	.083 (.171)	1.087	.141 (.195)	1.151	.571 (.276)*	1.771	.488 (.218)*	1.629
Competence	.336 (.181)	1.399	.233 (.199)	1.262	.553 (.224)*	1.739	.217 (.172)	1.242
Relatedness	.280 (.160)	1.323	.360 (.179)*	1.433	.201 (.202)	1.223	-.078 (.174)	.925
Global Socialization	.366 (.166)*	1.442	.511 (.165)**	1.667	.845 (.201)**	2.327	.145 (.140)	1.157
Task L.	.063 (.218)	1.065	.052 (.249)	1.053	-.159 (.233)	.853	-.011 (.165)	.989
Organization L.	-.002 (.000)	.998	.006 (.000)	1.006	.019 (.204)	1.019	.008 (.000)	1.008
Team L.	.218 (.191)	1.244	.253 (.230)	1.287	-.213 (.224)	.808	.034 (.163)	1.035
Task I.	.143 (.154)	1.154	.078 (.174)	1.081	.059 (.178)	1.061	-.065 (.149)	.937
Organization I.	.064 (.172)	1.066	.127 (.183)	1.135	.388 (.198)*	1.475	.063 (.142)	1.065
Team I.	-.227 (.230)	.797	-.225 (.187)	.799	.336 (.230)	1.400	.002 (.000)	1.002

Predictors	Profile 2 vs Profile 4		Profile 3 vs Profile 4		Intercept Factor	Slope Factor	Within Profile
	Coeff (SE)	OR	Coeff (SE)	OR	Coeff (s.e)	Coeff (s.e)	Coeff (s.e)
Global NSF	.190 (.146)	.827	-.047 (.197)	.954	.149 (.065)*	-.028 (.010)**	.218 (.050)**
Autonomy	.058 (.167)	.943	.430 (.259)	1.537	.058 (.061)	-.006 (.010)	.083 (.039)*
Competence	-.103 (.157)	1.109	.320 (.209)	1.377	-.097 (.055)	.017 (.008)*	-.024 (.027)
Relatedness	.080 (.145)	.923	-.158 (.216)	.854	.039 (.066)	-.003 (.010)	.151 (.036)**
Global Socialization	.479 (.184)**	1.614	.333 (.198)	1.396	Na	Na	.303 (.026)**
Task L.	-.222 (.181)	.801	-.211 (.229)	.810	Na	Na	.045 (.026)
Organization L.	.021 (.205)	1.021	.013 (.199)	1.013	Na	Na	.029 (.020)
Team L.	-.431 (.216)*	.650	-.466 (.244)	.628	Na	Na	.002 (.025)
Task I.	-.084 (.171)	.919	-.019 (.178)	.981	Na	Na	.023 (.023)
Organization I.	.324 (.170)	1.383	.261 (.196)	1.299	Na	Na	.070 (.023)**
Team I.	.563 (.232)*	1.756	.561 (.230)*	1.753	Na	Na	.034 (.024)

Notes. **: *p* < .01; *: *p* < .05. Coef: Regression coefficient; SE: standard error; OR: Odds ratio; The multinomial logistic regression coefficients and OR reflect the predictor effects on the likelihood of membership in the bottom listed profile relative to the top listed profile; I. = Internalization; L. = Learning; Profile 1: High; Profile 2: Moderately High; Profile 3: Low and Increasing; Profile 4: Average and Decreasing.

Table 13

Results from the Predictive Analyses for Study 3: Occupational Commitment

Predictors	Profile 1 vs Profile 2		Profile 1 vs Profile 3		Profile 1 vs Profile 4		Profile 2 vs Profile 3	
	Coeff (SE)	OR	Coeff (SE)	OR	Coeff (SE)	OR	Coeff (SE)	OR
Global NSF	.230 (.165)	1.259	.710 (.267)**	2.034	.548 (.194)**	1.730	.480 (.320)	1.616
Autonomy	.615 (.186)**	1.850	.858 (.278)**	2.358	.733 (.240)**	2.081	.243 (.301)	1.275
Competence	.317 (.167)	1.373	.222 (.260)	1.249	.239 (.215)	1.270	-.095 (.242)	.910
Relatedness	.321 (.141)*	1.379	.775 (.332)*	2.171	.662 (.233)**	1.939	.455 (.320)	1.576
Global Socialization	.631 (.157)**	1.879	1.067 (.267)**	2.907	.921 (.209)**	2.513	.436 (.289)	1.547
Task L.	.132 (.181)	1.141	.522 (.277)	1.686	.409 (.221)	1.506	.390 (.282)	1.477
Organization L.	-.263 (.155)	.769	-.256 (.243)	.774	-.257 (.201)	.773	.007 (.000)	1.007
Team L.	-.169 (.163)	.845	-.299 (.290)	.741	.163 (.227)	1.178	-.131 (.271)	.877
Task I.	.100 (.166)	1.105	.556 (.247)*	1.743	.842 (.222)**	2.320	.456 (.253)	1.577
Organization I.	-.154 (.155)	.857	-.174 (.223)	.840	-.311 (.207)	.732	-.020 (.241)	.980
Team I.	-.089 (.166)	.915	.270 (.283)	1.310	-.262 (.194)	.769	.359 (.282)	1.432

Predictors	Profile 2 vs Profile 4		Profile 3 vs Profile 4		Intercept Factor	Slope Factor	Within Profile
	Coeff (SE)	OR	Coeff (SE)	OR	Coeff (s.e)	Coeff (s.e)	Coeff (s.e)
Global NSF	.318 (.173)	1.374	-.162 (.300)	.851	.057 (.047)	-.002 (.007)	.078 (.020)**
Autonomy	.118 (.198)	1.125	-.125 (.306)	.882	-.011 (.036)	.005 (.005)	.044 (.010)**
Competence	-.079 (.167)	.924	.016 (.236)	1.016	.016 (.045)	.008 (.006)	.043 (.015)**
Relatedness	.341 (.201)	1.406	-.114 (.292)	.892	.021 (.048)	.007 (.006)	.054 (.014)**
Global Socialization	.291 (.177)	1.337	-.146 (.320)	.864	Na	Na	.099 (.016)**
Task L.	.278 (.196)	1.320	-.113 (.299)	.893	Na	Na	.031 (.012)*
Organization L.	.005 (.000)	1.005	-.001 (.000)	.999	Na	Na	-.016 (.012)
Team L.	.332 (.205)	1.394	.463 (.337)	1.589	Na	Na	.003 (.009)
Task I.	.742 (.181)**	2.099	.286 (.297)	1.331	Na	Na	.027 (.010)**
Organization I.	-.158 (.183)	.854	-.138 (.269)	.872	Na	Na	.009 (.017)
Team I.	-.173 (.169)	.841	-.532 (.286)	.587	Na	Na	.002 (.013)

Notes. **: $p < .01$; *: $p < .05$. Coef: Regression coefficient; SE: standard error; OR: Odds ratio; The multinomial logistic regression coefficients and OR reflect the predictor effects on the likelihood of membership in the bottom listed profile relative to the top listed profile; I. = Internalization; L. = Learning; Profile 1: High; Profile 2: Average; Profile 3: Low and Increasing; Profile 4: Low and Decreasing.

Data Transparency

The dataset used in this study was initially collected as part of a study specifically focused on motivation and was utilized in three previous publications. Study 1 is a cross-sectional variable-centered study looking at the role of motivation as a mediator of the associations between need satisfaction and psychological functioning. Study 2 is a person-centered study focusing on the stability on multidimensional motivational profiles across two time points. Study 3 is a person-centered study focusing on longitudinal trajectories of a global indicator of motivation using all four time points. In contrast, the current study focused on trajectories of affective organisational and occupational commitment across all time points but, rather than estimating these trajectories as a function of the time of measurement (thus essentially ignoring the effects of tenure), we estimated them as a function of nurses' tenure, which allowed us to directly represent their onboarding (at career start) trajectories. We also note that, although some variables are used in more than one study, very often the way these variables are operationalized differ from one study to the other.

Table 14

	Study 1	Study 2	Study 3	This Study
Global Motivation				
Time 1	Mediator	Main variable	Main variable	
Time 2			Main variable	
Time 3			Main variable	
Time 4		Main variable	Main variable	
Specific motives				
Time 1	Mediator	Main variable		
Time 2				
Time 3				
Time 4		Main variable		
Need Satisfaction				[satisfaction and frustration]
Time 1	Main variable			Predictor
Time 2				Predictor
Time 3				Predictor
Time 4				Predictor
Need Frustration				[satisfaction and frustration]
Time 1				Predictor
Time 2				Predictor
Time 3				Predictor
Time 4				Predictor
Socialization			[3 global dimensions]	[more complete: 7 components]
Time 1			Predictor	Predictor

	Study 1	Study 2	Study 3	This Study
Time 2			Predictor	Predictor
Time 3			Predictor	Predictor
Time 4			Predictor	Predictor
Emotional Exhaustion				
Time 1	Outcome	Outcome		
Time 2				
Time 3				
Time 4		Outcome		
Work Satisfaction				
Time 1	Outcome			Outcome
Time 2				Outcome
Time 3				Outcome
Time 4				Outcome
Turnover intentions				
Time 1	Outcome	Outcome	Outcome	
Time 2			Outcome	
Time 3			Outcome	
Time 4		Outcome	Outcome	
Job Demands				
Time 1		Predictor		
Time 2				
Time 3				
Time 4		Predictor		
Job Resources				
Time 1		Predictor		
Time 2				
Time 3				
Time 4		Predictor		
In role performance				
Time 1		Outcome		
Time 2				
Time 3				
Time 4		Outcome		
Transform. Leader.				
Time 1			Predictor	
Time 2			Predictor	
Time 3			Predictor	
Time 4			Predictor	
Abusive Leadership				
Time 1			Predictor	
Time 2			Predictor	
Time 3			Predictor	
Time 4			Predictor	
Affective commit. (org.)				
Time 1			Outcome	Main variable
Time 2			Outcome	Main variable
Time 3			Outcome	Main variable

	Study 1	Study 2	Study 3	This Study
Time 4			Outcome	Main variable
Continuance commit. (org)				
Time 1			Outcome	
Time 2			Outcome	
Time 3			Outcome	
Time 4			Outcome	
Affective commit. (occ.)				
Time 1			Outcome	Main variable
Time 2			Outcome	Main variable
Time 3			Outcome	Main variable
Time 4			Outcome	Main variable
Continuance commit. (occ)				
Time 1			Outcome	
Time 2			Outcome	
Time 3			Outcome	
Time 4			Outcome	
Somatization				
Time 1				Outcome
Time 2				Outcome
Time 3				Outcome
Time 4				Outcome
Psychological distress				
Time 1				Outcome
Time 2				Outcome
Time 3				Outcome
Time 4				Outcome
Quality of Care				
Time 1				Outcome
Time 2				Outcome
Time 3				Outcome
Time 4				Outcome
Tenure			Control (not retained in model)	Main trajectory indicator

Table 15.

Summary of Hypotheses and Results for Study 3

Hypotheses	Results	Support
Hypotheses about the shape of trait-like commitment trajectories		
H1 Individual trajectories of affective commitment to the organization should match one of the following five profiles: *Low*, *Moderate*, *High, Increasing,* and *Decreasing*.	Four organizational commitment profiles followed *High*, *Moderately High*, *Low and Increasing*, and *Average and Decreasing* trajectories.	Full support
H2 Individual trajectories of affective commitment to the occupation should match one of the following five profiles: *Low*, *Moderate*, *High, Increasing,* and *Decreasing.*	Four occupational commitment profiles followed *High*, *Average*, *Low and Increasing*, and *Low and Decreasing* trajectories.	Full support
H3 Organizational commitment levels will differ more within and less across profiles than occupational commitment levels.	Initial levels of organizational commitment presented almost twice as much within-profile variability as initial levels of occupational commitment. As expected, they also displayed less variability across profiles.	Full support
H4 Most nurses will belong to matching profiles of organizational and occupational commitment trajectories (especially for the profiles with the highest and lowest trajectories), while a minority of nurses will belong to profiles characterized by distinct organizational and occupational commitment trajectories.	Trait-like organizational and occupational commitment levels evolved in a similar manner for most nurses. This was especially true for those with low or high levels of commitment, while average levels of commitment to one target were less frequently linked to matching levels on the other target.	Full support
Hypothesis pertaining to state-like deviations from trait-like trajectories of commitment		
H5 Profiles with higher trait-like levels of affective commitment to the organization or occupation will be characterized by smaller state-like deviations (i.e., smaller time-specific residuals) around their trait-like trajectory, and vice versa	Profiles with by higher trait-like levels were accompanied by smaller state-like deviations. Increases in occupational commitment were more stable than increases in organizational commitment.	Full support
Predictors effects on trait-like commitment trajectories		
H6a Higher global levels of need fulfilment will be associated with membership into profiles characterized by higher, and increasing, levels of affective	Global need fulfilment increased membership into the *High* profile relative to the *Low and Increasing*	Partial support

Hypotheses	Results	Support
commitment to the organization and occupation	organizational and occupational commitment profiles, and to the *Low and Decreasing* occupational commitment profile. Effects were stronger for the occupation than the organization.	
H6b Higher global levels of need fulfilment will be associated with within-profile trajectories characterized by higher levels of affective commitment to the organization and occupation, and with more pronounced increases in these levels	Global need fulfillment was associated with higher initial levels of organizational commitment and with a slight decrease over time in these levels. No within-profile associations found for occupational commitment.	Partial support
H7a The extent to which each specific need is fulfilled beyond global levels of need fulfilment will be associated with differentiated positive effects on profile membership	Autonomy and relatedness increased membership into the *High* occupational commitment profile relative to all others. Autonomy and competence increased membership into the *High* organizational commitment profile relative to the *Average and Decreasing* profile. Autonomy increased membership into the *Moderately High* versus the *Low and Increasing* organizational commitment profile. Relatedness increased membership into the *High* organizational commitment profile relative to the *Low and Increasing* one.	Full support
H7b The extent to which each specific need is fulfilled beyond employee's global levels of need fulfilment will be associated with differentiated positive effects on within-profile trajectories.	Competence was associated with a slight increase in organizational commitment.	Partial support
H8a Higher global levels of socialization will be associated with membership into profiles characterized by higher, and increasing, levels of affective commitment to the organization and occupation.	Global socialization increased membership into the *High* relative to all other occupational and organizational commitment profiles (stronger for occupational commitment). These levels increased membership into the *Moderately High* relative to the *Average and Decreasing* organizational commitment profile.	Partial support
H8b Higher global levels of socialization will be associated with within-profile	No within-profile effect of global socialization was	No

Hypotheses	Results	Support
trajectories characterized by higher levels of affective commitment to the organization and occupation, and with more pronounced increases in these levels.	found.	support
H9a Levels of learning/internalization specific to the organization will be associated with larger positive effects on profile membership and within-profile trajectories for organizational commitment.	Organizational internalization increased membership to the *High* organizational commitment profile relative to the *Average and Decreasing* profile but had no effect on occupational commitment profiles and on within-profile trajectories. Organizational leaning had no effect.	Partial support
H9b Levels of learning/internalization specific to the tasks will be associated with larger positive effects on profile membership and within-profile trajectories for occupational commitment	Task internalization increased membership into the *High* relative to *Low and Increasing* and *Low and Decreasing* occupational commitment profiles, as well as into the *Moderate* relative to *Low and Decreasing* occupational profiles. Task internalization had no effect in relation to organizational commitment profiles and trajectories. Task learning had no effect.	Full support
H10 Levels of internalization specific to the tasks, organization, and social relationships will be associated with larger effects on profile membership and within-profile trajectories.	Beyond effects reported for H8a, H8b, team learning decreased membership in the *High* organizational profile relative to the *Moderately High* profile, whereas team internalization had the opposite effect. Team internalization increased membership into the *High* organizational profile relative to the *Low and Increasing* profile. In total, there were 6 effects of internalization on profiles, 1 (unexpected) effect of learning on profiles, and no within-profile effect of learning or internalization.	Partial support
Predictors effects on state-like deviations from trait-like trajectories		
H6c Higher global levels of need fulfilment will be associated with more positive time-specific (state-like) increases in levels of affective commitment to the organization and occupation	Global need fulfillment was related to time-specific increases in organizational and occupational commitment (stronger for organizational	Full support

Hypotheses	Results	Support
	commitment).	
H7c The extent to which each specific need is fulfilled beyond global levels of need fulfilment (i.e., imbalance) will be associated with differentiated positive effects on time-specific deviations	Autonomy and relatedness were related to time-specific increases in organizational and occupational commitment (stronger for organizational commitment). Competence was related to time-specific increases in occupational commitment.	Full support
H8c Higher global levels of socialization will be associated more positive time-specific (state-like) increases in levels of affective commitment to the organization and occupation	Global socialization was related to time-specific increases in organizational and occupational commitment (stronger for organizational commitment).	Full support
H9a Levels of learning/internalization specific to the organization will be associated with larger positive effects on state-like deviations for organizational commitment	Organization internalization was related to time-specific increases in organizational commitment. Organization learning had no effect.	Partial support
H9b Levels of learning/internalization specific to the tasks will be associated with larger positive effects on state-like deviations for occupational commitment	Task learning and internalization were related to time-specific increases in occupational commitment.	Full support
H10 Levels of internalization specific to the tasks, organization, and social relationships will be associated with larger effects on state-like deviations relative to specific levels of learning.	No effect beyond those reported for H8a and H8b. In total, there were two effects of internalization for one effect of learning.	Partial support
Outcomes		
H11 Profiles characterized by higher initial levels of affective commitment to the organization or occupation will be accompanied by higher initial levels of work satisfaction and quality of care, and by lower initial levels of psychological distress and somatization.	The highest work satisfaction and quality of care and the lowest somatization and psychological distress were observed in the *High* organizational and occupational commitment profiles. The lowest levels were observed in the *Low and Decreasing* occupational profile and the *Average and Decreasing* organizational profile.	Full Support
H12 Profiles presenting increasing levels of affective commitment to the organization or occupation will be accompanied by steeper increases in levels of work satisfaction and quality of care, and by steeper decreases in levels of psychological distress and somatization relative to profiles with more static trajectories.	The greatest increase in work satisfaction was in *High* and *Low and Increasing* profiles followed by the *Moderately High* profile. All profiles displayed a decrease in psychological distress (most pronounced in the *Low and Increasing* profiles).	Partial support

Hypotheses	Results	Support
	The largest decrease in somatization was in the *Low and Increasing* organizational profile, followed by the *High* and *Moderately High* profiles. Somatization decreased at the same rate for all occupational profiles. All profiles displayed increasing trajectory of quality of care (smallest increase in the *High* profiles).	

Chapter 5

General Discussion

As a dynamic construct (Spurk et al., 2019) emerging in connection with the progressive internalization of a work-related target to one's sense of professional identity (Gagné & Howard, 2016; Meyer et al., 2006), affective commitment represents an important driver and indicator of the extent to which employees have successfully adapted to their work-life (Solinger et al., 2013) and are motivationally driven to engage in goal-directed behaviours benefiting both the target of their commitment (Meyer, 2016; Meyer et al., 2004) and themselves (Meyer & Maltin, 2010). The overarching goal of this dissertation was to document the evolution (i.e., growth and stability) of organizational and/or occupational affective commitment amongst employees working in socially vital occupations in the Canadian public sector (i.e., school principals, military recruits, nurses), and to identify factors contributing to the emergence of the most desirable commitment trajectories. A series of three longitudinal person-centered studies were conducted to identify the profiles that best summarized the shape of the organizational or occupational commitment trajectories observed in our samples, and the associations between these trajectories and a variety of antecedents and outcomes of theoretical and applied relevance for employee and organizational/social functioning. In doing so, we sought to provide targeted recommendations to help improve employee commitment within the Canadian public sector, as a means of increasing well-being and retention and of promoting a the sustainable delivery of optimized service to the Canadian population. We begin by detailing the shape and stability of the commitment trajectories identified in each study included in this dissertation, followed by a discussion of their drivers and outcomes. We then acknowledge the limitations of these studies and present recommendations for future research and practice, before concluding.

Profiles of Affective Commitment Trajectories

In line past empirical results and theoretical expectations pertaining to the process through which employees are socialized (e.g., Feldman, 1981; Solinger et al., 2013; Van Maanen & Schein), we found that our samples were best characterized by 3 to 5 profiles of employees following distinct commitment trajectories, and that most of these profiles generalized across samples. Thus, in all samples, we found evidence for the presence of *Matching* scenarios, first described by Solinger et al. (2013), displaying persistently *High* or *Low* levels of commitment over time. In studies 1 and 3, we also identified moderate to moderately high and stable commitment trajectories, suggesting that *Matching* scenarios fall unto a continuum, ranging from persistently low levels of commitment to persistently high

levels of commitment. Moreover, we also identified profiles matching the theoretical *Learning to Love* (i.e., increasing) scenario in all studies, and a *Honeymoon Hangover* (i.e., decreasing) scenario in studies 1 and 3 (Solinger et al., 2013).

More precisely, across all studies and for both targets in study 3, we identified a profile presenting a consistently *High* commitment trajectory. However, we also found some small variations related to the shape of this trajectory across studies. More precisely, occupational and organizational commitment levels increased in the *High* profile for school principals and military newcomers over the course of the study. In contrast, among nurses, this *High* profile displayed an increase in organizational commitment during the first three and a half years of employment, before declining thereafter, whereas the same profile was characterized by a small but steady decline in occupational commitment levels in the same sample. Similarly, in studies 1 and 3, we also identified profiles corresponding to an average *Matching* scenario (Solinger at al., 2013): a *Moderately High* profile (i.e., for school principals and nurses' organizational commitment) and an *Average* profile (i.e., for nurses' occupational commitment). Interestingly, in the nursing sample this average occupational commitment profile began a downward trajectory after 3 years. From a macro-social standpoint, these results suggest that nurses might be exposed to occupational and organizational work conditions (e.g., Aiken et al., 2013; Pisanti et al., 2011; Tóth-Király et al., In Press) that make it difficult for highly or moderately committed newcomers to maintain or further grow their commitment in early career. Alternatively, it is also possible that the longer time span considered in this study (the first 5 years of the career, relative to 12 to 24 months in studies 1 and 2) could also explain why we were able to identify slightly distinct trajectories in this sample. Replication efforts focused on considering how commitment evolves over longer periods of time within distinct occupations will be required to disentangle these interpretations. Pending replication, further inquiries into specific facets of the nursing work context likely to explain this effect will be needed to guide intervention seeking to maintain nurses' commitment to their organization and occupation.

Second, we found similar *Increasing* profiles across all studies and commitment targets. Specifically, these profiles displayed a commitment characterized by initially low levels of commitment that increased over time to slightly above (i.e., for military newcomers), slightly below (for nurses' occupational commitment), or roughly equivalent to (for nurses' organizational commitment) the sample average. In both samples of newcomers (nurses and military) these *Increasing* profiles seem to match a *Learning to Love* socialization scenario (Solinger et al., 2013) in which employees' initial expectations are fairly poor but come to be

continuously exceeded after organizational (i.e., study 2) or occupational (i.e., study 3) entry. It was thus interesting to identify a similar profile among our sample of established school principals, as this suggested that it remains possible to "learn to love" an occupation with which we have been disappointed in the past. Importantly, among both samples of newcomers, these *Increasing* trajectories became increasingly stable over time, consistent with the idea that they do reflect a progressive process of internalization of a target of commitment into their sense of professional identity (e.g., Meyer et al., 2006).

Third, we identified a profile characterized by consistently *Low* levels of organizational and occupational commitment in studies 1 and 2 respectively. Interestingly, the *Low* profile displayed the most consistent trajectory among established school principals, highlighting that continuing membership in an occupation with which one has no emotional attachment will make it difficult for any situational or dispositional changes to affect one's commitment trajectory. Among nurses, we rather identified an *Average and Decreasing* organizational commitment profile (in which commitment levels took eighteen months to reach the lowest levels observed in the sample) and a *Low and Decreasing* occupational commitment profile. The difference in the initial levels of commitment observed in these profiles in Study 3 may reflect the fact that occupational socialization has started well before entry into the workforce (when attending nursing school), whereas organizational socialization can only start when entering a specific workplace. In other words, whereas nurses may start their occupation with an already established low trajectory, a similarly low organizational commitment trajectory rather emerges more slowly over time as nurses become more familiar with their workplace.

Importantly, for both occupational and organizational commitment, these *Decreasing* profiles displayed an initial level of commitment similar to that observed in the aforementioned *Increasing* (i.e., *Learning to Love*) profiles. For both targets of commitment, these initially similar profiles (organization: *Low and Increasing* and *Average and Decreasing*; occupation (*Low and Increasing* and *Low and Decreasing*) became progressively more differentiated over time. This result in highly interesting, as it suggests that it is should possible, through early intervention, to help offset initially low to levels of commitment among nurses. Thus, in accordance with the socialization literature (Louis, 1980; Van Maanen & Schein, 1979), our results suggest that role transitions (e.g., organizational and/or occupational entry) provide a critical period of employee adaptation in which organizations have a window of opportunity to either facilitate or hinder the development of affective commitment.

Fourth, we found evidence for profiles corresponding to a *Honeymoon Hangover* scenario (Solinger at al., 2013) in the form of a *Slowly Decreasing* occupational commitment profile (i.e., study 1) and of *Average and Decreasing* organizational commitment profile (i.e., study 3). In both samples, the initial starting point for these profiles displaying the steepest decreases in commitment levels were observed amongst employees with initially average levels of commitment, possibly indicating that employees exhibiting such levels need to be closely monitored to prevent a decreasing trajectory. Moreover, and in accordance with the socialization literature which expects newcomers to experience more uncertainty and changes as they learn the ropes of their new role (Van Maanen & Schein, 1979; Louis, 1980), more change was observed in the *Average and Decreasing* profile among nurses, as opposed to the *Slowly Decreasing* profile among established school principals.

More generally, our results are indeed consistent with the idea that newcomers (i.e., studies 2 and 3) should experience more pronounced changes in their commitment levels over time relative to more established employees (study 1). Indeed, even with newcomers, changes in commitment levels were also greatest near organizational and occupational entry than later in the follow up period. In line with SDT (Ryan &Deci, 2017) and commitment theory (Meyer et al., 2004), the process of internalization takes time and requires a thorough understanding of one's work conditions. Established employees are already knowledgeable about their work environment, and need only adapt to changing work conditions. Based on study 1, this process appears to take six months to a year (i.e., *Slowly Increasing* and *Slowly Decreasing* profiles). In contrast, newcomers need to learn the ropes of all components of their work, explaining why changes may keep on unfolding for longer periods of time in these samples. In fact, our results also suggest that this initial period of adaptation requires less time for military newcomers (roughly six months based on our results), while nurses seem to require as much as three to four years to reach stable commitment trajectories. These differences may reflect the complexity of nurses' versus military recruits' occupational role (e.g., qualifications, length of training, etc.). Thus, the complex nature of the nursing profession and lengthy specialized training (i.e., minimum three years of schooling and multiple internships) has led some to propose that it may take up to five years for nurses to fully adapt to their occupational role (Rudman et al., 2014). Our results are consistent with this proposition. In contrast, becoming a member of the CAF requires little qualifications other than a high school diploma and successfully completing the three-month basic training within which trainees are already considered to be members of the organization. Thus for military newcomers a six month adaptation period appears sufficient to learn about their new

role and organization. If we extrapolate this information to school principals, we can surmise that the initial process of adaptation may take as long as that observed among nurses, whereas ongoing adaptation to changes in work conditions may only require a period of adaptation similar to that observed among newcomers from less complex occupations. Evidently, further replications are needed to clearly assess whether these conclusions will be replicated among distinct occupational groups, and to validate the theoretical mechanisms proposed to be underly stability and changes in commitment trajectories.

Fifth, our reliance on a person-centered approach allowed us to adopt a macro-social perspective and investigate whether certain public sector occupations (e.g., school principals, nurses) or organizations (e.g., the CAF) have a greater proportions of (un)committed employees relative to other occupations. The highest proportion of employees corresponding to a *High* profile was observed for nurses' occupational commitment (40.54%), followed by military newcomers' organizational commitment (39.77%), then by school principals' occupational commitment (32.1%; combining the *Slowly Increasing and High* profiles), and finally by nurses' organizational commitment (21.56%). These results first suggest that fewer nurses manage to fully internalize their organization, relative to their occupation, within their professional identity. Moreover, the *Low* profile with the highest membership rate was also found for nurses' organizational commitment (22.52%) while the lowest rate is observed for school principals (12.4%). These results indicate that it may be particularly worthwhile for healthcare organizations to devise interventions designed to nurture and support nurses' commitment to their organization. Paired with our results (study 3) indicating that higher levels of commitment to one target appear to help facilitate the development of commitment to another target, improving organizational commitment may also help improve nurses' occupational commitment.

Finally, in accordance with SDT (Ryan and Deci, 2017) and showcasing the relevance of the self-equilibrium hypothesis to our understanding of the evolution of affective commitment (Morin et al., 2013; 2017), members of the *High* profiles consistently displayed more resilient commitment trajectories (i.e., characterized by lower time-specific fluctuations). This observation is also consistent with the theoretical connection between affective commitment to a specific target, and the internalization of this target to employees' professional identity (Meyer et al., 2004, 2006; Spurk et al., 2019). Interestingly, our results also reveal some intricacies among nurses that help complement the original self-equilibrium hypothesis. Indeed, among nurses, the *Average* occupational commitment profile displayed more time-specific fluctuations than the *Low and Increasing* profile, whereas the opposite

was found for organizational commitment. Self-equilibration processes can be expected to unfold over time following a series of continuous adjustments in which employees discover various aspects of their organization and/or occupation, leading them to progressively internalize these targets to their professional identity. For nurses, our results thus suggest that an increasing occupational commitment trajectory does not require as much adjustments, presumably as it builds upon their prior extensive period of occupational socialization as nursing students.

Predicting the Longitudinal Evolution of Commitment

To better capture social and psychological factors likely contributing to the short- and long-term development of affective occupational and/or organizational commitment, we considered predictors related to employees' socialization (Bauer et al., 2007; Perrot & Campoy, 2009; Saks et al., 2007) and basic need fulfilment (Deci & Ryan, 1985; Ryan & Deci, 2017).

Socialization Experiences

In line with the socialization literature (Bauer et al., 2007; Perrot & Campoy, 2009; Saks et al., 2007), we found widespread positive effects of employee socialization on the evolution of the commitment trajectories in studies 2 and 3. Importantly, the results obtained in study 3 also highlight the need for a balanced learning and internalization of various facets of one's work (i.e., global socialization) to facilitate the development of strong affective commitments to the organization and occupation. Also in study 3, our results supported the target-similarity perspective (Lavelle et al., 2007, 2009; Morin et al., 2011a, 2011b) in showing that socialization experiences (e.g., task learning) of greater relevance to a specific commitment target (e.g., occupation) shared stronger associations with that target relative to the other target (e.g., organization). In study 2 we observed that specific types of anticipatory socialization experiences (i.e., exposure to job previews perceived as more or less realistic) can also help protect employees against the experience of levels of commitment, whereas specific types of early socialization experiences (i.e., a lack of identity conflict and satisfaction with the implications of military life for work-life balance) may support the development of persistently high commitment. Taken together, our results thus support the idea that newcomers will benefit from learning and internalizing various aspects of their work in a balanced manner. Importantly, and in accordance with the target similarity perspective (Lavelle et al., 2007, 2009), our results also show that to nurture commitment to a specific target, it is important to dedicate socialization efforts to that specific target (e.g., task internalization will promote occupational commitment).

Fulfilment of Basic Psychological Needs

Affective commitment is a dynamic mindset (Spurk et al., 2019) that is intimately related to the internalization of the target of that commitment to one's professional identity (Gagné & Howard, 2016; Meyer et al., 2004, 2006). The fulfilments of basic psychological needs is thought to facilitate this process of internalization while also supporting optimal work functioning (Ryan & Deci, 2017), including the development of stronger affective commitments to multiple targets (Holliman et al., 2021; Lee et al., 2000; Meyer et al., 2004; Numminen et al., 2015; Van den Broeck et al., 2010). Our results from studies 1 and 3 provide extensive longitudinal evidence in support of these propositions, while highlighting some interesting differences across samples.

First, the results from studies 1 and 3 both showcased the importance of the need for autonomy as a key driver of more desirable occupational commitment trajectories. Among school principals, the satisfaction of the need for autonomy appeared as a protective mechanism against the adoption of a *Very Low* commitment trajectory. For nurses, the fulfilment of the need for autonomy was systematically associated with a higher likelihood of membership in the *High* profile. The benefits of this need were also observed in relation to nurses' organizational commitment trajectories, although these benefits were not as pronounced as for occupational commitment, hinting that autonomy may be more intricately tied to nurses' occupational, as opposed to organizational, role. Moreover, short-term benefits of time-specific increases in the fulfillment of the need for autonomy were also observed in all profiles, across both studies. Thus, in accordance with past empirical evidence (Galletta et al., 2011; Holliman et al., 2021) and theoretical expectations (Gagné & Howard, 2016; Meyer et al., 2004) we position autonomy as a key driver of affective commitment among specialized public sector employees (i.e., nurses and school principals) across different stages of their career.

Second, the results from studies 1 and 3 also highlighted the importance of the need for relatedness on commitment trajectories, although these benefits seem to differ across samples. For school principals, positive social relationships with the school personnel were associated with higher commitment trajectories within all profiles, although this effect faded slightly over time. For nurses, the fulfilment of the need for relatedness appeared to facilitate the development of a *High* occupational commitment trajectory, and to a lesser extent of a *High* organizational commitment trajectory. For nurses, time-specific increases in relatedness fulfilment also yielded short-term benefits on organizational and occupational commitment levels. Thus, this dissertation adds to past empirical evidence (Epitropaki, & Martin, 2005;

Greguras & Diefendorff, 2009; Houle et al., 2020; Van den Broeck et al., 2010) by demonstrating the long-term and short-term benefits of positive social relationships on occupational and organizational commitment trajectories.

Third, the results from studies 1 and 3 also highlighted the importance of the need for competence (operationalized indirectly a managerial self-efficacy in Study 1), which seemed to protect school principals the adoption of a decreasing occupational commitment trajectory, and to support increasing organizational commitment trajectories among nurses. Interestingly, the fulfillment of the need for competence came out as the sole predictor having a prominent effect on changes over time in commitment trajectories, highlighting its role as a potential lever for increasing commitment over time. Moreover, time-specific increases in the fulfillment of this this need were also associated with short-term benefits effects for occupational commitment levels among nurses and school principals. This dissertation thus adds to past empirical evidence highlighting the benefits of competence satisfaction (e.g., Meyer et al., 2002; Numminen et al., 2015; Rigotti et al., 2008) in relation to commitment trajectories.

Lastly, we also considered the balance between the satisfaction and frustration of all three needs (i.e., global need fulfilment) in study 3. Our results provide additional evidence (e.g., Sheldon & Niemiec, 2006; Tóth-Király et al., 2018) that achieving a balanced level of need fulfilment (across all three needs) is likely to yield additional benefits over and above the specific level of fulfilment of each need. Indeed, our results indicate that organizations should support the implementation of work conditions that facilitate the fulfilment of all three needs in a balanced manner, while being aware that additional benefits may also come from focusing more energy on one specific need over the others another (e.g., competence to improve trajectories vs autonomy for more widespread benefits) when resources are limited.

On the Desirability of Distinct Commitment Trajectories

In accordance with commitment theory (Meyer et al., 1993, 2004, 2006; Spurk et al., 219) and supporting the construct validity of our profiles (Meyer & Morin, 2016; Morin et al., 2018), our results showed that higher and increasing commitment trajectories were associated with diverse individual and organizational benefits.

Satisfaction

Although the results from all three studies revealed that profiles displaying higher levels of commitment tended to be systematically associated with higher levels of work/job satisfaction, the dynamic associations between changes occurring over time in these two constructs were not so consistent. For school principals, we found that changes in

commitment levels tended to be accompanied by matching changes in job satisfaction levels. However, in studies 2 and 3, these associations were less consistent. More precisely, nurses belonging to a decreasing organizational or occupational commitment profile displayed stable levels of work satisfaction over the course of the study. However, and in support of past results documenting the velocity of change over time (Chang et al., 2010), the steepest increase in work satisfaction was observed in the *High* and *Low and Increasing* organizational commitment profiles for nurses, both of which displayed the steepest increase in commitment levels. In contrast, military newcomers belonging to the *Failure to Commit* profile displayed increasing levels of job satisfaction while those belonging to the *High* profile did not. Taken together, our results indicate that levels of organizational and occupational commitment tend to be generally aligned with job/work satisfaction levels, but that changes in commitment levels are not systematically accompanied by matching changes in work/job satisfaction. Moreover, the latter associations seem to vary across occupational groups, and to remain fairly minimal. These results thus primarily highlight the need to foster strong commitment trajectories early on in employees' careers to maximize and/or stabilize their levels of job/work satisfaction.

Intention to Leave

Similar associations between commitment profiles and turnover intentions were observed among school principals and military newcomers. Indeed, and matching theoretical expectations (Meyer et al., 1993, 2004) and past empirical results (e.g., Houle et al., 2020; Lee et al., 2000; Meyer et al., 1993) our results supported the presence of negative associations between affective occupational and organizational commitment and turnover intention, as well as with transition intention among military newcomers. However, we found that turnover and transition intentions increased over time across all profiles among military newcomers, thus highlighting the role of factors other than commitment, or possibly the role of other targets (e.g., supervisor, workgroup) and mindsets (e.g., normative, continuance) of commitment, in the prediction of turnover and transition intentions. Conversely, for school principals we found that changes in commitment helped to account for the higher-than-expected levels of turnover intention observed in the *Moderately High* profile, which aligns with theoretical expectations (Chang et al., 2010; Meyer et al., 1993). Moreover, in study 2, our results also underscored the benefits of organizational commitment in supporting employees to prioritize a transition within the same organization as opposed to leaving it, thus providing additional evidence that increasing commitment levels of military newcomers may help increase organizational retention (Forner et al., 2023; Meyer & Allen, 1991; Meyer et al.,

1993).

Well-Being & Performance

In studies 1 and 3, our results supported the benefits of higher levels of commitment as a possible driver of well-being, demonstrating similar associations between school principals' occupational commitment trajectories and their levels of burnout levels, and nurses occupational and organizational commitment trajectories and their levels of somatization and psychological distress. In addition, although a decrease in psychological distress and somatization levels was observed across all profiles, this decrease was more pronounced for nurses corresponding to the increasing organizational and occupational commitment profiles. For school principals, the *Slowly Increasing* and *Slowly Decreasing* profiles also displayed increasing and decreasing levels of cynicism, respectively, while changes in occupational commitment levels were not accompanied by matching changes in their levels of emotional exhaustion. Together, these results provide additional evidence for the benefits of fostering strong commitment trajectories to help support employee well-being.

In relation to performance, our results showed that nurses displaying a profile characterized by higher levels of organizational and occupational commitment tended to report offering a better quality of care to their patients. However, changes in commitment levels were not associated with matching changes in quality of care, highlighting the need to develop organizational and occupational commitment as early as possible to maximize quality of care. Moreover, no differences in self-reported levels of performance during training were observed across military newcomer profiles. These inconsistent results are, however, consistent with existing evidence, which has thus far yielded conflicting results on these associations (e.g., Becker et al., 1996; Meyer et al., 2016). As others before us (Becker et al., 1996), we propose that special attention needs to be given to the target of commitment in relation to the nature of the performance indicator being evaluated (e.g., commitment to the workgroup may be a more potent driver of teamwork performance, commitment to the patients may drive quality of care more than other targets of commitment, and commitment to the instructor may play a stronger role in driving training performance). It may thus be worthwhile for future research to jointly consider employees' trajectories of commitment to multiple targets when seeking to capture associations between commitment and performance (Houle et al., In Press; Meyer et al., 2021).

Strengths, Limitations, and Future Directions

Through this dissertation, we sought to provide actionable knowledge on how to facilitate the development of strong and resilient organizational and occupational commitment

trajectories among socially critical public sector employees at distinct stages in their careers. Despite this strength, it remains that the adoption of a lifespan perspective (Spurk et al., 2019) entails the need to monitor commitment at various stages throughout employees' careers, including periods of job transitions, promotions, and pre-retirement, that were not considered in the current set of studies. It would thus be important for future work to expand upon the current results to monitor the evolution of commitment across the entire career, while also considering whether and how our results would generalize to diversified samples of public and private sector employees. Perhaps more importantly, future research should also expand upon our results by considering a greater variety of timeframes. For instance, when considering time-specific fluctuations in commitment levels, it would be useful to document (i) how long do these temporary increases in commitment levels truly last, (ii) whether they are associated with short-term improvements on a variety of outcomes, and if so (iii) determine how long these benefits last.

Second, for all three studies we relied solely on self-report measures susceptible to various biases (e.g., social desirability, memory, self-consistency, etc.). Future studies will thus need to assess whether and how our conclusion generalize to objective (e.g., turnover, medical leave, performance) and informant-reported (e.g., colleagues' reports of social interactions, supervisors' reports of performance) measures. Moreover, we considered antecedents of commitment trajectories that, although anchored in theory and actionable from an applied standpoint, are limited in scope. More diverse antecedents need to be considered to further our understanding of commitment's evolution for employees from diverse backgrounds, cultures, occupations, and career stage. Similarly, in the current dissertation, we focused on employees' perception of their work life (e.g., socialization; need fulfilment) without also considering the influence of more objective characteristics of their work context, and while also ignoring possible drivers of commitment located at the interface of their work and personal lives (e.g., too much personal life demands may interfere with work functioning). Importantly, as most employees are nested within teams (or platoons in the military), departments, and organizations, multi-level investigations of the macro-social dynamics (e.g., culture, climate; Bowen & Ostroff, 2004) underpinning employees' commitment and adaptation are needed to properly capture the whole range of factors likely to influence commitment.

Third, although our longitudinal person-centered analyses arguably represent another strength of this dissertation, these analyses are not suited to suitable to tests of causal directionality, which had to be inferred based on theory. For instance, although we can

theoretically position socialization as a predictor of commitment, and commitment as predictor of satisfaction it is also likely that more satisfied employees be more likely to experience high levels of commitment, and even be more likely to benefit from their socialization experiences. Likewise, a low level of commitment could limit the benefits of socialization. Clearly, future research will need to consider the directionality of these associations in a more comprehensive manner.

Fourth, affective commitment is only one type of bond underpinning employees' intentions to adopt and maintain a course of action of relevance to a target (Meyer & Herscovitch, 2001; Meyer et al., 1991, 1993). Both normative (i.e., a sense of obligation to maintain the current course of action) and continuance (i.e., the lack of alternatives or anticipated loss of investments when terminating the bond) commitment are also likely to contribute to limit turnover intention and to support work functioning in a way that completements affective commitment. Likewise, commitment can be related to a lot of targets, related to employees' work (e.g., supervisor, team, customers) and personal (e.g., family, leisure) lives (Meyer & Morin, 2016; Perreira et al., 2018). These alternative bonds are also likely to complement, and perhaps even modify, the impact of organisational and occupational commitments. Future research should thus incorporate a more direct focus on the complementarity of these alternative mindsets and targets of commitment.

Practical Implications

The current dissertation was designed to improve our understanding of how to facilitate the development and maintenance of established and early career public service employees' affective commitment to their organization and occupation. From an applied perspective the malleability of commitment trajectories observed across all three studies provides evidence that commitment keeps on evolving over time over the course of employees' career, although change seems to be more frequent and pronounced in the early years of the career. This malleability supports the relevance of targeting commitment through interventions seeking to maximise the sense of connection of employees with their occupations and workplaces, as well as their level of personal and professional functioning. Further support for this claim is provided across all studies in which we observed that affective commitment's evolution was consistently associated with more positive outcomes of relevance to employee and organizational functioning. Moreover, the resilience (i.e., lower levels of time-specific fluctuations) of trajectories characterized by higher levels of commitment suggests that lower commitment levels should be more reactive to external and internal contingencies. This reactivity goes both ways. Indeed, it does suggest that exposure to

a problematic work context is likely to interfere with commitment. However, it also suggests that interventions specifically targeted at uncommitted employees are likely to help generate increases in commitment levels among those employees. From a applied perspective, this means that interventions aimed at improving employee commitment are likely to be maximally beneficial for employees who need it most.

Beyond these generic conclusions, our results also highlight, as others have done before us (Sheldon & Niemiec, 2006; Tóth-Király et al., 2018), that interventions seeking to help achieve a balanced level of fulfilment of employees' basic psychological needs are likely to be particularly beneficial at nurturing, supporting, and consolidating their affective commitment at all stages of their career. Likewise, our results also highlight the likely benefits of supporting employees' socialization experiences early in the career to help support the initial emergence of strong and resilient commitment trajectories. Indeed, our results clearly highlight the benefits a balanced socialization experience as a way to facilitate the emergence of moderate to high commitment trajectories. Interestingly, these two likely levers of intervention as not independent from one another. Indeed, theoretically speaking, learning how to perform one's task and subsequently internalizing the relevant behaviors should greatly facilitate the fulfilment of one's need for competence. Likewise, learning how to form healthy social relationships that are necessary to fulfill one's work role is bound to contribute to the fulfilment of one's need for relatedness at work. Lastly, learning all three socialization domains should facilitate a greater understanding of one's work context and required work behaviours, thus facilitating the fulfillment of the need for autonomy. In sum, a balanced socialization process should help employees' fulfill their basic psychological needs at work, and this to better internalize various aspects of their work lives to their professional identity (Perrot & Campoy, 2009), leading to higher and more stable organizational and occupational commitment trajectories. Luckily, validated interventions targeting socialization and basic need fulfilment already exists to guide practitioners (Gagné et al., 2022; Slemp et al., 2021; Wanberg, 2012).

Beyond these two types of generic intervention strategies, organizations may want to target some more specific factors for further enhance affective commitment, such as trying to support work-life balance, ensure that realistic job previews are provided to recruits, and trying to limit the experience of identity conflicts resulting from perceived person-environment misfit among new employees. Likewise, directly targeting the fulfillment of a single basic psychological need may also help achieve some specific benefits. Indeed, our results suggest that fulfilling the need for competence can facilitate a more positive

organizational commitment trajectory for early career nurses, and protect employees against a negative change in occupational commitment among more established employees (i.e., school principals in this dissertation). Moreover, fostering employees' need for competence is likely to facilitate the internalization of task-relevant behaviours. Based on our results, higher task internalization will increase the likelihood that early career nurses will adopt a stronger and more resilient occupational commitment trajectory. Thus, ensuring that employees are proficient in their work role thus appears to be a viable method to improve both organizational and occupational commitment over time.

Next, we found that fulfilling the need for relatedness, just like maximizing socialization efforts specifically focused at improving team functioning, both had positive and long-lasting effects on the development of stronger and more resilient organizational and occupational commitment trajectories. Indeed, similar evidence is accumulating that, for school principals, there are benefits to fostering healthy distal (i.e., relationships with other school principals; Houle et al., 2020) and proximal (relationships with personnel; Study 1) social interactions at work. For nurses, fulfilment of the basic need for relatedness was also found to primarily associated with better organizational commitment trajectories, while higher team internalization was primarily associated with better occupational commitment trajectories. These results are informative as they imply that nurses will attribute their ability to fulfill their need for relatedness to their organizational context, but will attribute the mechanisms involved in the internalization of their team's values, attitudes and behaviours to occupational characteristics underpinning these social relationships. For applied purposes, our results highlight the need to foster work conditions that are conducive to nurses' ability to develop healthy and functional relationships as part of their work role, as to increase their affective commitment.

Our results also highlighted widespread positive effects of fulfilling employees' basic need for autonomy among school principals and nurses. For nurses, autonomy seemed particularly important to foster stronger and more resilient commitment trajectories, while for school principals it primarily served to protect against the adoption of a low and unstable commitment trajectory. Paired with the short-term benefits of autonomy on organizational and occupational commitment levels, our results thus suggest increasing autonomy among specialized public service employees stands to have some of the most widespread beneficial effects on commitment levels over time.

Conclusion

Although the current dissertation provides an abundance of insights on the evolution

of employees' organizational and occupational commitment, it is clear the research remains in its infancy stage when it comes to understanding the complexity of the dynamic associations between commitment and its diverse antecedents and outcomes. Still, our results support past theoretical propositions detailing the emergence of distinct commitment trajectories (Solinger et al., 2013), thus providing a much-needed replication of these socialization scenarios, among larger and more diversified sample studied over distinct time periods. Moreover, albeit indirectly, this dissertation provides evidence that affective commitments share intimate associations with employees' sense of professional identity (Meyer et al., 2004, 2006; Ryan & Deci, 2017), and unfold over time based on similar longitudinal processes whereby stronger commitments also tend to be more resilient over time (Morin et al., 2013, 2017). It would be critical for future research to test these assumptions more extensively, while incorporating direct measures of identity and resilience. From an applied perspective, we finally provide recommendations about social and psychological factors, for which interventions already exist (i.e., socialization and need fulfilment; Gagné et al., 2022; Slemp et al., 2021; Wanberg, 2012), most likely to have short- and long-term benefits for commitment trajectories among Canadian public sector employees working in socially vital occupations and organizations. We hope the current research may spur further investigations into the longitudinal dynamics of affective commitment to keep on improving our understanding of optimal work conditions that benefit employees and organizations alike.

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Appendix A

Supplements for

Longitudinal Trajectories of Affective Commitment to the Occupation Among School Principals: A Person-Centered Perspective

Preliminary Measurement Models

To ascertain the psychometric properties of all measures, as well as their longitudinal invariance (i.e., the equivalence of their psychometric properties over time), preliminary measurement models were estimated using *Mplus* 8.2 (Muthén & Muthén, 2018). These models were estimated using the maximum likelihood robust estimator (MLR) and full information maximum likelihood (FIML) procedures to handle missing data. Due to the complexity of the current longitudinal analyses, separate longitudinal measurement models were estimated for affective commitment to the occupation, for each of the predictors (autonomy, quality of interpersonal relationships with personnel, and managerial self-efficacy), for burnout (emotional exhaustion, cynicism, and professional efficacy), and for turnover intentions and job satisfaction. In models, *a priori* correlated uniquenesses were added between matching indicators over time to avoid inflated stability estimates (e.g., Marsh, 2007).

Participants' ratings of affective occupational commitment were represented via a single confirmatory factor analytic (CFA) factor (AC) at each time point, resulting in a four-factor longitudinal CFA model (one factor per time point). An *a priori* orthogonal method factor was included to this model to account for the methodological artifact created by the negative wording of the three items from the AC subscale (e.g., Zhang et al., 2016), reversed coded prior to analyses.

Participants' ratings on the predictors were first represented via the estimation of 3 separate longitudinal CFA models (one per predictor). Two of the predictors were estimated as independent factors using CFA (i.e., autonomy, quality of interpersonal relationships with personnel), while the third predictor was estimated using a bifactor representation (Morin et al., 2016) including one global factor (global managerial self-efficacy) and three orthogonal specific factors (administrative management self-efficacy, personnel management self-efficacy and external relations management self-efficacy). This approach is aligned with recent results supporting the superiority of a bifactor representation of multidimensional self-efficacy measures across domains (Cornick, 2015; Török et al., 2017). Despite our main interest in considering global levels of managerial self-efficacy (rather than specific levels of self-efficacy in different managerial tasks), the reliance on a bifactor operationalisation of this

construct made it possible to control for subscale specificity in the estimation of the global factor (Morin et al., 2016, 2020).

Participants' ratings on the outcomes were estimated via two separate models, one encompassing the three dimensions of burnout (burnout: emotional exhaustion, burnout: professional efficacy, burnout: cynicism) and one encompassing job satisfaction and turnover intentions. All of these constructs were represented using a single CFA factor per time point.

Across constructs, longitudinal CFA models were used to assess the measurement invariance of the latent factors across time points (Millsap, 2011). These tests were conducted in the following sequence: (i) configural invariance (same model, with no additional constraint), (ii) weak invariance (same factor loadings), (iii) strong invariance (same factor loadings and items intercepts), (iv) strict invariance (same factor loadings, items intercepts, and items uniquenesses), (v) invariance of the latent variances and covariances, and (vi) latent mean invariance.

The discriminant validity of the constructs was investigated by contrasting a global model including all factors at Time 1 and contrasting it with alternative models in which constructs correlated with one another above .5 were combined into a single factor in a pairwise manner: (i) cynicism and affective commitment; (ii) job satisfaction and affective commitment; (iii) turnover intentions and affective commitment; (iv) global self-efficacy and interpersonal relationships with personnel; (v) job satisfaction and emotional exhaustion; (vi) job satisfaction and cynicism; (vii) turnover intentions and cynicism; (viii) emotional exhaustion and cynicism; and (iv) turnover intentions and job satisfaction. This sequence was repeated at Time 2 and 3.

Various statistical indices are reported, including the chi-square test of exact fit (χ^2), the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA) and its confidence intervals (Hu & Bentler, 1999; Marsh et al., 2005). Given the well-documented sample size dependency and oversensitivity to minor misspecifications of the χ^2, we relied on the sample-size independent goodness-of-fit indices (CFI, TLI, RMSEA) to assess model fit using common interpretation guidelines (Hu & Bentler, 1999; Marsh et al., 2005). More precisely, CFI and TLI values greater than .90 and .95 and RMSEA values smaller than .08 and .06 respectively support adequate and excellent model fit. To establish measurement invariance, common interpretation guidelines (Chen, 2007; Cheung & Rensvold, 2002) suggest that the invariance hypothesis can be considered to be supported when a model does not result in a CFI or TLI decrease greater than .01, or in a RMSEA increase than .015 when compared to the previous model.

Goodness-of-fit results for all preliminary measurement models are reported in Table S1. These results confirm the full longitudinal invariance of all constructs. All seven configural models fit the data well (CFI and TLI >.900, RMSEA < .06), and none of the subsequent models resulted in a decrease in model fit exceeding the recommended guidelines (ΔCFI $\leq$ .010; ΔTLI $\leq$ .010; ΔRMSEA $\leq$ .015). On this basis, the model of latent mean invariance was retained for each construct, and factor scores were saved from these models to use as profile indicators, predictors, and outcomes. Retaining factors from a model of latent means invariance has the advantage of resulting in factor scores which can be interpreted as a function of a mean of 0 and a SD of 1, allowing for an interpretation of scores as deviations from the sample mean in standardized units (Meyer & Morin, 2016). For the commitment measure, the support for latent mean invariance simply indicates that, across the whole sample, average levels of affective commitment to the occupation do not change over time, which is consistent with the fact that most participants were already established in their occupation.

The final parameter estimates obtained from these models of latent mean invariance are reported in Tables S2 and S3, and correlations for all variables included in the present study are reported in Table S4, alongside composite reliability coefficients (ω: McDonald, 1970). Overall, all factors were correctly defined as shown by acceptable factor loadings ($M_{|\lambda|}$ = .723) and strong composite reliability coefficients (Morin et al., 2020): (a) affective commitment ($M_{|\lambda|}$ = .652; ω = .841); (b) global managerial self-efficacy ($M_{|\lambda|}$ = .527; ω = .859); (c) autonomy ($M_{|\lambda|}$ = .641; ω = .782); (d) interpersonal relationships with personnel ($M_{|\lambda|}$ = .848; ω = .959); (e) emotional exhaustion ($M_{|\lambda|}$ = .827; ω = .916); (f) professional efficacy ($M_{|\lambda|}$ = .726; ω = .871); (g) cynicism ($M_{|\lambda|}$ = .649; ω = .790); (h) job satisfaction ($M_{|\lambda|}$ = .736; ω = .856); (i) turnover intentions ($M_{|\lambda|}$ = .836; ω = .903). Analyses of discriminant validity are reported in Table S5 and support the discriminant validity of all factors, as evidenced by the substantial drop in model fit for all alternative models, across all time points.

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Table S1
Goodness-of-Fit Information for the Measurement Models for Study 1

Model	df	χ^2	CFI	TLI	RMSEA	90% CI	$\Delta\chi^2$ (df)
Affective Commitment							
Configural	180	248.894*	.978	.966	.024	.016; .031	
Weak	201	267.311*	.979	.971	.022	.014; 029	19.878 (21)
Strong	213	279.328*	.979	.972	.022	.014; .028	11.309 (12)
Strict	231	281.688*	.984	.981	.018	.009; .025	12.422 (18)
Latent variance	237	292.679*	.982	.979	.019	.010; .026	10.394 (6)
Latent means	243	298.301*	.982	.980	.019	.010; .025	4.120 (6)
Managerial Self-Efficacy (global, administrative, personnel, external relations)							
Configural	864	1151.395*	.961	.948	.021	.018;.025	
Weak	924	1199.926*	.962	.954	.020	.017;.024	55.161 (60)
Strong	948	1249.135*	.959	.951	.021	.018;.024	3987.391 (24)**
Strict	984	1249.164*	.963	.956	.019	.016;.023	24.786 (36)
Latent variance	996	1334.421*	.954	.947	.022	.019;.025	115.456 (12)**
Latent means	1008	1353.311*	.953	.947	.022	.019;.025	18.979 (12)
Autonomy							
Configural	134	214.439*	.963	.948	.030	.022;.037	
Weak	146	232.682*	.960	.948	.029	.022;.036	18.333 (12)
Strong	158	249.855*	.958	.949	.029	.022;.036	16.800 (12)
Strict	173	267.258*	.957	.953	.028	.021;.035	18.372 (15)
Latent variance	176	275.325*	.955	.951	.029	.022;.035	7.883 (3)*
Latent means	179	282.317*	.953	.950	.029	.022;.035	7.590 (3)
Interpersonal relationships							
Configural	534	1493.481*	.911	.895	.051	.048;.055	
Weak	558	1515.681*	.911	.900	.050	.047;.053	23.563 (24)
Strong	582	1555.177*	.910	.902	.050	.047;.053	32.261 (24)
Strict	609	1585.191*	.909	.906	.049	.046;.052	43.409 (27)*
Latent variance	612	1598.181*	.909	.906	.049	.046;.052	13.121 (3)**
Latent means	615	1602.352*	.908	.906	.049	.046;.052	2.785 (3)
Burnout (emotional exhaustion & cynicism)							
Configural	652	1136.794*	.941	.930	.033	.030;.037	
Weak	676	1159.772*	.941	.932	.033	.030;.036	24.942 (24)
Strong	700	1191.197*	.941	.934	.032	.030;.036	31.217 (24)
Strict	730	1189.497*	.944	.941	.031	.028;.034	24.099 (30)
Latent variance	739	1201.776*	.944	.941	.031	.027;.034	12.600 (9)
Latent means	745	1208.775*	.944	.941	.031	.027;.034	6.732 (6)
Job Satisfaction and Turnover Intentions							
Configural	512	891.790*	.945	.933	.033	.030;.037	
Weak	533	917.376*	.945	.935	.033	.029;.037	27.512 (21)
Strong	554	943.104*	.944	.936	.033	.029;.036	23.266 (21)
Strict	581	954.597*	.946	.942	.031	.028;.035	29.124 (27)
Latent variance	590	969.776*	.945	.942	.031	.028;.035	15.173 (9)
Latent means	596	980.532*	.945	.942	.031	.028;.035	11.013 (6)

Note. * p < .01; df: degrees of freedom; χ^2 = chi-square; CFI: comparative fit index; TLI: Tucker-Lewis index; RMSEA: root mean square approximation; C.I.: 90% confidence intervals for the RMSEA, $\Delta\chi^2$: Chi-square difference test.

Table S2

Longitudinally Invariant Standardized Parameter Estimates for the Occupational Commitment, Global Managerial Self-Efficacy, Autonomy, and Interpersonal Relationships with Personnel Measurement Models for Study 1

	Affective Commitment		Global Self Efficacy		Autonomy		Interpersonal Relationships	
	λ	δ	λ	δ	λ	δ	λ	δ
Item 1	.602	.468	.603	.322	.484	.766	.785	.383
Item 2	.524	.531	.549	.575	.781	.391	.855	.270
Item 3	.685	.531	.671	.501	.678	.540	.862	.257
Item 4	.762	.419	.700	.498	.488	.762	.879	.227
Item 5	.505	.623	.571	.552	.772	.404	.850	.277
Item 6	.831	.310	.547	.569			.846	.285
Item 7			.445	.743			.820	.327
Item 8			.545	.608			.889	.210
Item 9			.533	.629			.849	.280
Item 10			.387	.764				
Item 11			.410	.337				
Item 12			.359	.475				

Note. λ: factor loading; δ: item uniqueness; All coefficients are statistically significant ($p \leq .01$).

Table S3

Longitudinally Invariant Standardized Parameter Estimates for the Emotional Exhaustion, Professional Efficacy, Cynicism, Job Satisfaction, and Turnover Intentions Measurement Models for Study 1

	Emotional Exhaustion		Cynicism		Job Satisfaction		Turnover Intentions	
	λ	δ	λ	δ	λ	δ	λ	δ
Item 1	.804	.354	.833	.306	.715	.489	.806	.351
Item 2	.821	.326	.741	.451	.686	.529	.804	.353
Item 3	.861	.259	.448	.800	.781	.390	.888	.211
Item 4	.800	.360	.532	.717	.800	.360	.845	.286
Item 5	.851	.276	.678	.540	.696	.516		

Note. λ: factor loading; δ: item uniqueness; All coefficients are statistically significant ($p \leq .01$).

Table S4
Reliability and Correlations for the Variables used in Study 1

	α	ω	1	2	3	4	5	6	7	8	9	10	11	12	13
1. AC_1 (fs)	0.83	0.841													
2. SE_1 (fs)	0.835	0.859	.327**												
3. AUT_1 (fs)	0.793	0.782	.369**	.335**											
4. IRP_1 (fs)	0.948	0.959	.317**	.501**	.234**										
5. EE_1 (fs)	0.894	0.916	-.447**	-.323**	-.368**	-.351**									
6. CY_1 (fs)	0.714	0.788	-.602**	-.312**	-.357**	-.342**	.737**								
7. SAT_1 (fs)	0.842	0.856	.678**	.398**	.498**	.396**	-.568**	-.597**							
8. TI_1 (fs)	0.889	0.903	-.586**	-.191**	-.274**	-.233**	.392**	.533**	-.581**						
9. AC_2 (fs)	0.821	0.841	.947**	.335**	.356**	.313**	-.448**	-.593**	.649**	-.589**					
10. SE_2 (fs)	0.818	0.859	.311**	.870**	.312**	.464**	-.318**	-.321**	.410**	-.216**	.337**				
11. AUT_2 (fs)	0.738	0.782	.392**	.308**	.824**	.261**	-.368**	-.381**	.472**	-.303**	.412**	.351**			
12. IRP_2 (fs)	0.953	0.959	.306**	.431**	.211**	.821**	-.326**	-.330**	.344**	-.260**	.333**	.463**	.300**		
13. EE_2 (fs)	0.919	0.916	-.393**	-.277**	-.302**	-.323**	.851**	.591**	-.489**	.358**	-.435**	-.281**	-.367**	-.346**	
14. CY_2 (fs)	0.806	0.788	-.556**	-.285**	-.321**	-.347**	.658**	.834**	-.532**	.520**	-.605**	-.293**	-.423**	-.395**	.749**
15. SAT_2 (fs)	0.83	0.856	.649**	.389**	.455**	.402**	-.536**	-.570**	.886**	-.590**	.682**	.434**	.526**	.414**	-.553**
16. TI_2 (fs)	0.904	0.903	-.535**	-.152**	-.251**	-.227**	.356**	.508**	-.537**	.896**	-.564**	-.169**	-.305**	-.252**	.378**
17. AC_3 (fs)	0.835	0.841	.870**	.321**	.335**	.324**	-.420**	-.569**	.612**	-.555**	.903**	.338**	.379**	.341**	-.416**
18. SE_3 (fs)	0.851	0.859	.353**	.742**	.324**	.487**	-.336**	-.341**	.436**	-.228**	.365**	.826**	.371**	.484**	-.318**
19. AUT_3 (fs)	0.772	0.782	.383**	.274**	.759**	.242**	-.361**	-.383**	.469**	-.310**	.399**	.312**	.854**	.266**	-.339**
20. IRP_3 (fs)	0.964	0.959	.306**	.397**	.224**	.782**	-.298**	-.326**	.344**	-.232**	.313**	.444**	.291**	.833**	-.307**
21. EE_3 (fs)	0.92	0.916	-.454**	-.268**	-.323**	-.324**	.842**	.649**	-.537**	.412**	-.491**	-.286**	-.373**	-.348**	.907**
22. CY_3 (fs)	0.787	0.788	-.559**	-.283**	-.312**	-.318**	.627**	.830**	-.541**	.499**	-.589**	-.313**	-.380**	-.347**	.613**
23. SAT_3 (fs)	0.848	0.856	.623**	.337**	.406**	.380**	-.493**	-.557**	.845**	-.604**	.645**	.387**	.458**	.393**	-.498**
24. TI_3 (fs)	0.903	0.903	-.521**	-.167**	-.236**	-.232**	.348**	.486**	-.487**	.882**	-.548**	-.207**	-.296**	-.269**	.382**
25. AC_4 (fs)	0.84	0.841	.849**	.352**	.333**	.316**	-.421**	-.547**	.610**	-.561**	.905**	.356**	.386**	.336**	-.396**
26. SE_4 (fs)	0.819	0.859	.357**	.850**	.322**	.505**	-.309**	-.322**	.389**	-.234**	.370**	.821**	.326**	.484**	-.266**
27. AUT_4 (fs)	0.78	0.782	.362**	.273**	.766**	.229**	-.329**	-.349**	.456**	-.282**	.390**	.315**	.866**	.266**	-.309**
28. IRP_4 (fs)	0.966	0.959	.236**	.349**	.194**	.644**	-.247**	-.259**	.292**	-.207**	.265**	.395**	.265**	.648**	-.252**
29. EE_4 (fs)	0.919	0.916	-.408**	-.281**	-.325**	-.299**	.878**	.627**	-.517**	.379**	-.432**	-.288**	-.352**	-.311**	.876**
30. CY_4 (fs)	0.797	0.788	-.538**	-.308**	-.334**	-.310**	.664**	.812**	-.532**	.507**	-.571**	-.307**	-.397**	-.336**	.620**
31. SAT_4 (fs)	0.864	0.856	.636**	.389**	.428**	.383**	-.513**	-.550**	.850**	-.617**	.661**	.427**	.484**	.388**	-.488**
32. TI_4 (fs)	0.899	0.903	-.479**	-.153**	-.215**	-.202**	.322**	.450**	-.444**	.889**	-.515**	-.176**	-.279**	-.243**	.327**

Note: * $p < .05$; ** $p < .01$; fs = time invariant factor scores (with a mean of 0 and a SD of 1); time 1 = _1; time 2 = _2; time 3 = _3; time 4 = _4. α: alpha coefficient of scale score reliability; ω: omega coefficient of model-based composite reliability (identical across time waves due to the complete invariance of the measurement models); AC: affective commitment; SE: global managerial efficacy; AUT: decisional autonomy; IRP: interpersonal relationships with personnel; EE: emotional exhaustion; CY: Cynicism; SAT: job satisfaction; TI: turnover intentions;

Table S4 (Continued 1)

	α	ω	14	15	16	17	18	19	20	21	22	23	24	25	26
15. SAT_2 (fs)	0.83	0.856	-.616**												
16. TI_2 (fs)	0.904	0.903	.569**	-.607**											
17. AC_3 (fs)	0.835	0.841	-.569**	.633**	-.521**										
18. SE_3 (fs)	0.851	0.859	-.322**	.456**	-.199**	.424**									
19. AUT_3 (fs)	0.772	0.782	-.392**	.501**	-.316**	.414**	.382**								
20. IRP_3 (fs)	0.964	0.959	-.357**	.392**	-.231**	.353**	.536**	.291**							
21. EE_3 (fs)	0.92	0.916	.751**	-.579**	.413**	-.503**	-.361**	-.393**	-.348**						
22. CY_3 (fs)	0.787	0.788	.838**	-.588**	.500**	-.635**	-.398**	-.426**	-.384**	.773**					
23. SAT_3 (fs)	0.848	0.856	-.571**	.877**	-.618**	.673**	.475**	.509**	.415**	-.563**	-.627**				
24. TI_3 (fs)	0.903	0.903	.536**	-.568**	.855**	-.558**	-.263**	-.314**	-.277**	.448**	.542**	-.619**			
25. AC_4 (fs)	0.84	0.841	-.544**	.646**	-.520**	.915**	.401**	.397**	.323**	-.464**	-.593**	.650**	-.535**		
26. SE_4 (fs)	0.819	0.859	-.296**	.407**	-.187**	.396**	.819**	.311**	.481**	-.295**	-.334**	.385**	-.222**	.416**	
27. AUT_4 (fs)	0.78	0.782	-.362**	.497**	-.268**	.386**	.349**	.830**	.260**	-.343**	-.377**	.462**	-.268**	.407**	.315**
28. IRP_4 (fs)	0.966	0.959	-.292**	.348**	-.210**	.282**	.428**	.246**	.735**	-.259**	-.294**	.366**	-.201**	.306**	.454**
29. EE_4 (fs)	0.919	0.916	.624**	-.535**	.350**	-.444**	-.334**	-.356**	-.288**	.890**	.648**	-.512**	.372**	-.448**	-.298**
30. CY_4 (fs)	0.797	0.788	.804**	-.588**	.494**	-.601**	-.358**	-.407**	-.325**	.691**	.875**	-.588**	.506**	-.634**	-.355**
31. SAT_4 (fs)	0.864	0.856	-.543**	.895**	-.561**	.668**	.472**	.497**	.377**	-.549**	-.591**	.897**	-.553**	.711**	.448**
32. TI_4 (fs)	0.899	0.903	.479**	-.519**	.891**	-.520**	-.225**	-.297**	-.230**	.383**	.478**	-.574**	.866**	-.552**	-.222**

Note: * $p < .05$; ** $p < .01$; fs = time invariant factor scores (with a mean of 0 and a SD of 1); time 1 = _1; time 2 = _2; time 3 = _3; time 4 = _4. α: alpha coefficient of scale score reliability; ω: omega coefficient of model-based composite reliability (identical across time waves due to the complete invariance of the measurement models); AC: affective commitment; SE: global managerial efficacy; AUT: decisional autonomy; IRP: interpersonal relationships with personnel; EE: emotional exhaustion; CY: Cynicism; SAT: job satisfaction; TI: turnover intentions;

Table S4 (Continued 2)

	α	ω	27	28	29	30	31
28. IRP_4 (fs)	0.966	0.959	.277**				
29. EE_4 (fs)	0.919	0.916	-.349**	-.274**			
30. CY_4 (fs)	0.797	0.788	-.409**	-.326**	.747**		
31. SAT_4 (fs)	0.864	0.856	.509**	.411**	-.560**	-.642**	
32. TI_4 (fs)	0.899	0.903	-.267**	-.236**	.374**	.526**	-.597**

Note: * p < .05; ** p < .01; fs = time invariant factor scores (with a mean of 0 and a SD of 1); time 1 = _1; time 2 = _2; time 3 = _3; time 4 = _4. α: alpha coefficient of scale score reliability; ω: omega coefficient of model-based composite reliability (identical across time waves due to the complete invariance of the measurement models); AC: affective commitment; SE: global managerial efficacy; AUT: decisional autonomy; IRP: interpersonal relationships with personnel; EE: emotional exhaustion; CY: Cynicism; SAT: job satisfaction; TI: turnover intentions.

Table S5

Goodness-of-Fit Information for the Sensitivity Analyses for Study 1

Model	df	χ^2	CFI	TLI	RMSEA	RMSEA 90% CI
Time 1						
Everything	1150	1996.933*	.919	.911	.038	.035;.040
1. Everything (CY + AC)	1161	2147.604*	.906	.897	.040	.038;.043
2. Everything (SAT + AC)	1161	2161.201*	.905	.896	.041	.038;.043
3. Everything (TI + AC)	1161	2336.336*	.888	.877	.044	.042;.047
4. Everything (SE + IRP)	1161	2191.627*	.902	.892	.041	.039;.044
5. Everything (SAT + EE)	1161	2515.971*	.871	.858	.047	.045;.050
6. Everything (SAT + CY)	1161	2184.371*	.903	.893	.041	.039;.044
7. Everything (TI + CY)	1161	2298.380*	.892	.881	.043	.041;.046
8. Everything (EE + CY)	1161	2227.799*	.899	.889	.042	.039;.045
9. Everything (TI + SAT)	1161	2593.835*	.864	.850	.049	.046;.051
Time 2						
Everything	1150	2188.095*	.903	.892	.044	.042;.047
1. Everything (CY + AC)	1161	2442.243*	.880	.868	.049	.046;.052
2. Everything (SAT + AC)	1161	2320.030*	.892	.881	.047	.044;.049
3. Everything (TI + AC)	1161	2531.366*	.872	.859	.051	.048;.053
4. Everything (SE + IRP)	1161	2371.475*	.887	.876	.048	.045;.050
5. Everything (SAT + EE)	1161	2704.816*	.856	.841	.054	.051;.057
6. Everything (SAT + CY)	1161	2471.417*	.877	.865	.050	.047;.052
7. Everything (TI + CY)	1161	2530.572*	.872	.859	.051	.048;.053
8. Everything (EE + CY)	1161	2582.963*	.867	.854	.052	.049;.054
9. Everything (TI + SAT)	1161	2708.362*	.855	.841	.054	.051;.057
Time 3						
Everything	1150	2164.481*	.905	.894	.046	.043;.049
1. Everything (CY + AC)	1161	2360.269*	.887	.876	.050	.047;.053
2. Everything (SAT + AC)	1161	2347.053*	.889	.878	.050	.047;.053
3. Everything (TI + AC)	1161	2561.050*	.869	.856	.054	.051;.057
4. Everything (SE + IRP)	1161	2316.671*	.892	.881	.049	.046;.052
5. Everything (SAT + EE)	1161	2713.462*	.854	.840	.057	.054;.060
6. Everything (SAT + CY)	1161	2387.049*	.885	.874	.050	.048;.053
7. Everything (TI + CY)	1161	2702.534*	.855	.841	.057	.054;.059
8. Everything (EE + CY)	1161	2418.885*	.882	.870	.051	.048;.054
9. Everything (TI + SAT)	1161	2689.955*	.857	.842	.056	.054;.059
Time 4						
Everything	1150	1721.431*	.925	.916	.041	.037;.045
1. Everything (CY + AC)	1161	1843.540*	.910	.901	.045	.041;.049
2. Everything (SAT + AC)	1161	1857.324*	.908	.899	.045	.041;.049
3. Everything (TI + AC)	1161	2042.717*	.884	.872	.051	.047;.054
4. Everything (SE + IRP)	1161	1895.565*	.903	.894	.046	.043;.050
5. Everything (SAT + EE)	1161	2249.141*	.856	.842	.056	.053;.060
6. Everything (SAT + CY)	1161	1884.574*	.905	.895	.046	.042;.050
7. Everything (TI + CY)	1161	1998.248*	.890	.879	.050	.046;.053
8. Everything (EE + CY)	1161	2010.434*	.888	.877	.050	.046;.054
9. Everything (TI + SAT)	1161	2122.006*	.873	.861	.053	.049;.057

Note. * $p < .01$; df: degrees of freedom; χ^2 = chi-square; CFI: comparative fit index; TLI: Tucker-Lewis index; RMSEA: root mean square approximation; C.I.: 90% confidence intervals for the RMSEA, $\Delta\chi^2$: Chi-square difference test. AC: affective commitment; SE: global managerial efficacy; IRP: interpersonal relationships with personnel; EE: emotional exhaustion; CY: Cynicism; SAT: job satisfaction; TI: turnover intentions.

Mplus Syntax for the Five Profile Latent Basis GMA

DATA: FILE = AC Factor.dat;
VARIABLE: NAMES ARE
AC1_1 AC2_1 AC3_1 AC4_1 AC5_1 AC6_1
AC1_2 AC2_2 AC3_2 AC4_2 AC5_2 AC6_2
AC1_3 AC2_3 AC3_3 AC4_3 AC5_3 AC6_3
AC1_4 AC2_4 AC3_4 AC4_4 AC5_4 AC6_4
AC_1 AC_1_SE MFN_1 MFN_1_SE AC_2 AC_2_SE MFN_2
MFN_2_SE AC_3 AC_3_SE MFN_3 MFN_3_SE AC_4
AC_4_SE MFN_4 MFN_4_SE ID;
MISSING = *;
IDVAR = ID;
USEV = AC_1 AC_2 AC_3 AC_4;
CLASSES = c(5);
ANALYSIS:
TYPE = MIXTURE;
ESTIMATOR = MLR;
Process = 4;
Starts = 10000 500;
STITERATIONS = 1000;
MODEL:
%OVERALL%
I S | AC_1@0 AC_2* AC_3* AC_4@1; *! Latent Basis Specification*
I S ; [I S]; I WITH S ; AC_1 AC_2 AC_3 AC_4;
%c#1%
I S | AC_1@0 AC_2* AC_3* AC_4@1; *! The shape of the trajectories varies across profiles*
[I S]; *! The means of the intercept and slopes (but not their variance-covariance) vary across profiles*
AC_1 AC_2 AC_3 AC_4; *! Time-specific residuals vary over time and across profiles.*
%c#2%
I S | AC_1@0 AC_2* AC_3* AC_4@1;
[I S]; AC_1 AC_2 AC_3 AC_4;
%c#3%
I S | AC_1@0 AC_2* AC_3* AC_4@1;
[I S]; AC_1 AC_2 AC_3 AC_4;
%c#4%
I S | AC_1@0 AC_2* AC_3* AC_4@1;
[I S]; AC_1 AC_2 AC_3 AC_4;
%c#5%
I S | AC_1@0 AC_2* AC_3* AC_4@1;
[I S]; AC_1 AC_2 AC_3 AC_4;
OUTPUT:
STDYX SAMPSTAT CINTERVAL RESIDUAL svalues TECH1 TECH7 TECH11
TECH14;

Mplus Syntax for Models Including Time-Invariant Predictors (TIP)

These models are specified using the parameters from the final unconditional five profile latent basis solution, used as fixed (@) starts values to ensure replication (i.e., the nature of the profiles should remain unchanged following the inclusion of predictors or outcomes; Diallo et al., 2017; Morin & Litalien, 2019). Only sections reflecting a change from previous inputs are included.

Model 1: Null Effects Model

```
USEV = AC_1 AC_2 AC_3 AC_4 Aut_1 Pri_1 Rec_1 Se_1;
![...]
Starts = 0; ! To ensure replication
MODEL:
%OVERALL%
 i s | ac_1@0 ac_2* ac_3* ac_4@1;
C on Aut_1@0 Pri_1@0 Se_1@0; ! Null effects model
I on Aut_1@0 Pri_1@0 Se_1@0; ! Null effects model
S on Aut_1@0 Pri_1@0 Se_1@0; ! Null effects model
%C#1%
s BY ac_2@0.53173; s BY ac_3@0.85445; s WITH i@-0.07813;
[ ac_1@0 ]; [ ac_2@0 ]; [ ac_3@0 ]; [ ac_4@0 ];
[ i@0.41760 ]; [ s@0.12526 ];
ac_1@0.00904; ac_2@0.00023; ac_3@0.02173; ac_4@0.01990;
i@0.39340; s@0.01508;
%C#2%
s BY ac_2@-0.10152; s BY ac_3@0.71539; s WITH i@-0.07813;
[ ac_1@0 ]; [ ac_2@0 ]; [ ac_3@0 ]; [ ac_4@0 ];
[ i@0.29284 ]; [ s@-0.06137 ];
ac_1@0.01554; ac_2@0.00187; ac_3@0.00096; ac_4@0.00077;
i@0.39340; s@0.01508;
%C#3%
s BY ac_2@0.32098; s BY ac_3@0.95606; s WITH i@-0.07813;
[ ac_1@0 ]; [ ac_2@0 ]; [ ac_3@0 ]; [ ac_4@0 ];
[ i@0.16507 ]; [ s@0.34400 ]; ac_1@0.07284;
ac_2@0.07959; ac_3@0.04373; ac_4@0.04997;
i@0.39340; s@0.01508;
%C#4%
s BY ac_2@-1.65699; s BY ac_3@0.31015; s WITH i@-0.07813;
[ ac_1@0 ]; [ ac_2@0 ]; [ ac_3@0 ]; [ ac_4@0 ];
[ i@-1.28620 ]; [ s@0.04797 ];
ac_1@0.25471; ac_2@0.00110; ac_3@0.41262; ac_4@0.50029;
i@0.39340; s@0.01508;
%C#5%
s BY ac_2@0.34769; s BY ac_3@1.05920; s WITH i@-0.07813;
[ ac_1@0 ]; [ ac_2@0 ]; [ ac_3@0 ]; [ ac_4@0 ];
[ i@-0.03140 ]; [ s@-0.21966 ];
ac_1@0.03247; ac_2@0.03507; ac_3@0.08706; ac_4@0.03889;
i@0.39340; s@0.01508;
```

Model 2: Effects on Class Membership:

MODEL:
%OVERALL%
i s | ac_1@0 ac_2* ac_3* ac_4@1;
C on Aut_1 Pri_1 Rec_1 Se_1; *! Free estimation of the effects on class membership*
I on Aut_1@0 Pri_1@0 Rec_1@0 Se_1@0;
S on Aut_1@0 Pri_1@0 Rec_1@0 Se_1@0;

Model 3: Effects on Class Membership and Intercept Factor Invariant across Profiles

USEV =
Aut_1 Pri_1 Rec_1 Se_1;
MODEL:
%OVERALL%
i s | ac_1@0 ac_2* ac_3* ac_4@1;
C on Aut_1 Pri_1 Rec_1 Se_1; *! Free estimation of the effects on class membership*
I on Aut_1 Pri_1 Rec_1 Se_1; *! Free estimation of the effects on the intercept factor*
S on Aut_1@0 Pri_1@0 Rec_1@0 Se_1@0;

Model 4: Effects on Class Membership, Intercept and Slope Factor Invariant across Profiles

MODEL:
%OVERALL%
i s | ac_1@0 ac_2* ac_3* ac_4@1;
C on Aut_1 Pri_1 Rec_1 Se_1; *! Free estimation of the effects on class membership*
I on Aut_1 Pri_1 Rec_1 Se_1; *! Free estimation of the effects on the intercept factor*
S on Aut_1 Pri_1 Rec_1 Se_1; *! Free estimation of the effects on the slope factor*

Model 5: Effects on Class Membership and Intercept Factor Free across Profiles

MODEL:
%OVERALL%
i s | ac_1@0 ac_2* ac_3* ac_4@1;
C on Aut_1 Pri_1 Rec_1 Se_1; *! Free estimation of the effects on class membership*
I on Aut_1 Pri_1 Rec_1 Se_1; *! Free estimation of the effects on the intercept factor*
S on Aut_1@0 Pri_1@0 Rec_1@0 Se_1@0;
%C#1%
I on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the intercept factor across profiles*
%C#2%
I on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the intercept factor across profiles*
%C#3%
I on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the intercept factor across profiles*
%C#4%
I on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the intercept factor across profiles*
%C#5%
I on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the intercept factor across profiles*

Model 6: Effects on Class Membership, Intercept Factor and Slope Factor Free across Profiles

MODEL:
%OVERALL%
i s | ac_1@0 ac_2* ac_3* ac_4@1;
C on Aut_1 Pri_1 Rec_1 Se_1; *! Free estimation of the effects on class membership*
I on Aut_1 Pri_1 Rec_1 Se_1; *! Free estimation of the effects on the intercept factor*
S on Aut_1 Pri_1 Rec_1 Se_1; *! Free estimation of the effects on the slope factor*
%C#1%
I on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the intercept factor across profiles*
S on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the slope factor across profiles*
%C#2%
I on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the intercept factor across profiles*
S on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the slope factor across profiles*
%C#3%
I on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the intercept factor across profiles*
S on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the slope factor across profiles*
%C#4%
I on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the intercept factor across profiles*
S on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the slope factor across profiles*
%C#5%
I on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the intercept factor across profiles*
S on Aut_1 Pri_1 Se_1; *! Free estimation of the effects on the slope factor across profiles*

Mplus Syntax for Models Including Time-Varying Predictors (TVP)

These models are built from the model retained from the previous analyses (i.e., TIP Model 4):

Model: 1 Null Effects

```
USEV = AC_1 AC_2 AC_3 AC_4 Aut_1 Pri_1 Rec_1 Se_1
Aut_2 Pri_2 Se_2 Aut_3 Pri_3 Se_3 Aut_4 Pri_4 Se_4;
MODEL:
%OVERALL%
i s | ac_1@0 ac_2* ac_3* ac_4@1;
C on Aut_1 Pri_1 Se_1;
I on Aut_1 Pri_1 Se_1;
S on Aut_1 Pri_1 Se_1;
AC_1 on Aut_1@0 Pri_1@0 Se_1@0; ! Null effects model
AC_2 on Aut_2@0 Pri_2@0 Se_2@0; ! Null effects model
AC_3 on Aut_3@0 Pri_3@0 Se_3@0; ! Null effects model
AC_4 on Aut_4@0 Pri_4@0 Se_4@0; ! Null effects model
```

Model 2: Effects Invariant across Time and Profiles

```
MODEL:
%OVERALL%
i s | ac_1@0 ac_2* ac_3* ac_4@1;
C on Aut_1 Pri_1 Se_1;
I on Aut_1 Pri_1 Se_1;
S on Aut_1 Pri_1 Se_1;
AC_1 on Aut_1 Pri_1 Se_1 (r1-r3); ! Effects equal across time and profiles
AC_2 on Aut_2 Pri_2 Se_2 (r1-r3); ! Effects equal across time and profiles
AC_3 on Aut_3 Pri_3 Se_3 (r1-r3); ! Effects equal across time and profiles
AC_4 on Aut_4 Pri_4 Se_4 (r1-r3); ! Effects equal across time and profiles
```

Model 3. Effects Invariant across Time and Free across Profiles

```
MODEL:
%OVERALL%
i s | ac_1@0 ac_2* ac_3* ac_4@1;
C on Aut_1 Pri_1 Se_1;
I on Aut_1 Pri_1 Se_1;
S on Aut_1 Pri_1 Se_1;
AC_1 on Aut_1 Pri_1 Se_1;
AC_2 on Aut_2 Pri_2 Se_2;
AC_3 on Aut_3 Pri_3 Se_3;
AC_4 on Aut_4 Pri_4 Se_4;
%C#1%
AC_1 on Aut_1 Pri_1 Se_1 (r1-r3); ! Effects invariant across time within each profile
AC_2 on Aut_2 Pri_2 Se_2 (r1-r3);
AC_3 on Aut_3 Pri_3 Se_3 (r1-r3);
AC_4 on Aut_4 Pri_4 Se_4 (r1-r3);
%C#2%
AC_1 on Aut_1 Pri_1 Se_1 (rr1-rr3); ! Effects free to vary across profiles
AC_2 on Aut_2 Pri_2 Se_2 (rr1-rr3);
AC_3 on Aut_3 Pri_3 Se_3 (rr1-rr3);
AC_4 on Aut_4 Pri_4 Se_4 (rr1-rr3);
%C#3%
AC_1 on Aut_1 Pri_1 Se_1 (rrr1-rrr3);
AC_2 on Aut_2 Pri_2 Se_2 (rrr1-rrr3);
AC_3 on Aut_3 Pri_3 Se_3 (rrr1-rrr3);
AC_4 on Aut_4 Pri_4 Se_4 (rrr1-rrr3);
%C#4%
AC_1 on Aut_1 Pri_1 Se_1 (rrrr1-rrrr3);
AC_2 on Aut_2 Pri_2 Se_2 (rrrr1-rrrr3);
AC_3 on Aut_3 Pri_3 Se_3 (rrrr1-rrrr3);
AC_4 on Aut_4 Pri_4 Se_4 (rrrr1-rrrr3);
%C#5%
AC_1 on Aut_1 Pri_1 Se_1 (rrrrr1-rrrrr3);
AC_2 on Aut_2 Pri_2 Se_2 (rrrrr1-rrrrr3);
AC_3 on Aut_3 Pri_3 Se_3 (rrrrr1-rrrrr3);
AC_4 on Aut_4 Pri_4 Se_4 (rrrrr1-rrrrr3);
```

Model 4. Effects Free across Time and Invariant across Profiles

```
MODEL:
%OVERALL%
i s | ac_1@0 ac_2* ac_3* ac_4@1;
C on Aut_1 Pri_1 Se_1;
I on Aut_1 Pri_1 Se_1;
S on Aut_1 Pri_1 Se_1;
AC_1 on Aut_1 Pri_1 Se_1; ! Effects free to vary across time (but not profiles)
AC_2 on Aut_2 Pri_2 Se_2;
AC_3 on Aut_3 Pri_3 Se_3;
AC_4 on Aut_4 Pri_4 Se_4;
```

Model 5. Effects Free Across Time and Profiles

```
MODEL:
%OVERALL%
i s | ac_1@0 ac_2* ac_3* ac_4@1;
C on Aut_1 Pri_1 Se_1;
I on Aut_1 Pri_1 Se_1;
S on Aut_1 Pri_1 Se_1;
AC_1 on Aut_1 Pri_1 Se_1;
AC_2 on Aut_2 Pri_2 Se_2;
AC_3 on Aut_3 Pri_3 Se_3;
AC_4 on Aut_4 Pri_4 Se_4;
%C#1%
AC_1 on Aut_1 Pri_1 Se_1; ! Effects free to vary across time and profiles)
AC_2 on Aut_2 Pri_2 Se_2;
AC_3 on Aut_3 Pri_3 Se_3;
AC_4 on Aut_4 Pri_4 Se_4;
%C#2%
AC_1 on Aut_1 Pri_1 Se_1;
AC_2 on Aut_2 Pri_2 Se_2;
AC_3 on Aut_3 Pri_3 Se_3;
AC_4 on Aut_4 Pri_4 Se_4;
%C#3%
AC_1 on Aut_1 Pri_1 Se_1;
AC_2 on Aut_2 Pri_2 Se_2;
AC_3 on Aut_3 Pri_3 Se_3;
AC_4 on Aut_4 Pri_4 Se_4;
%C#4%
AC_1 on Aut_1 Pri_1 Se_1;
AC_2 on Aut_2 Pri_2 Se_2;
AC_3 on Aut_3 Pri_3 Se_3;
AC_4 on Aut_4 Pri_4 Se_4;
%C#5%
AC_1 on Aut_1 Pri_1 Se_1;
AC_2 on Aut_2 Pri_2 Se_2;
AC_3 on Aut_3 Pri_3 Se_3;
AC_4 on Aut_4 Pri_4 Se_4;
```

Mplus Syntax for Models Including Outcomes

Outcomes are integrated to the final unconditional model using the auxiliary option

```
Variable:
AUXILIARY =
Sat_1 (BCH) Idq_1 (BCH) Ee_1 (BCH) Cy_1(BCH)
Sat_2 (BCH) Idq_2 (BCH) Ee_2 (BCH) Cy_2(BCH)
Sat_3 (BCH) Idq_3 (BCH) Ee_3 (BCH) Cy_3(BCH)
Sat_4 (BCH) Idq_4 (BCH) Ee_4 (BCH) Cy_4(BCH);
```

Readers interested in learning more about the estimation of growth mixture analyses including covariates (predictors and outcomes) should consult:

Morin, A.J.S., & Litalien, D. (2019). Mixture modelling for lifespan developmental research. In *Oxford Research Encyclopedia of Psychology*. Oxford University Press. doi: 10.1093/acrefore/9780190236557.013.364

Morin, A.J.S., McLarnon, M.J.W., & Litalien, D. (2020). Mixture modeling for organizational behavior research. In Y. Griep, & S.D. Hansen (Eds.), *Handbook on the Temporal Dynamics of Organizational Behavio*r (pp. 351-379). Edward Elgar.

Wickrama, K.S., Lee, T.K., O'Neal, C.W., & Lorenz, F.O. (2016). Higher-order growth curves and mixture modeling with Mplus: A practical guide. Routledge.

These resources incorporate extensive set of annotated input files (as part of the main text, or of their online supplements).

Appendix B

Supplemental Material for:

A Longitudinal Person-Centered Investigation of Organizational Commitment

Trajectories Among Canadian Military Recruits

Preliminary Measurement Models

Analyses

Preliminary measurement models were estimated in *Mplus* 8.7 (Muthén & Muthén, 2018) to verify the psychometric properties and longitudinal invariance of all measures. All preliminary measurement models were estimated using the maximum likelihood robust estimator (MLR) in conjunction with full information maximum likelihood (FIML) procedures to handle missing data. To control for participants' nesting within work units, we relied on Mplus complex survey design functionalities for all analyses (Asparouhov, 2005). Due to the complexity of the current longitudinal analyses, separate models had to be estimated for the main variable (i.e., commitment), predictors (i.e., perceived realism of previews, socialization, satisfaction with the implications of military life for work-life balance, and identity conflict), and outcomes (i.e., turnover intention, transition intention, job satisfaction and perceived performance). For all models, *a priori* correlated uniquenesses were included among matching indicators of the constructs used over time to avoid inflated stability estimates (Marsh, 2007).

Participants' ratings of affective organizational commitment were represented via a one-factor confirmatory factor analytic (CFA) model at each time point, resulting in a four-factor longitudinal CFA model. To account for the methodological artifact created by the negative wording of three of the items, *a priori* correlated uniquenesses were included to this model (e.g., Zhang et al., 2016).

Participants' ratings on all predictors were represented via a CFA incorporating one factor for perceived realism of previews at T2, T3, and T4 (three factors in total), one factor for socialization at T1, T3, and T4 (three factors in total), one factor for the satisfaction with the implications of military life for work-life balance at T2, T3, and T4 (three factors in total), and one factor for identity conflict at T2 and T4 (two factors in total). This resulted in an eleven-factor CFA. Once the measurement invariance of these constructs was ascertained, the most invariant model was converted to a linear latent curve model (Bollen & Curan, 2006) for predictors measured at three time points (i.e., perceived realism of previews, socialization, and satisfaction with the implications of military life for work-life balance), and to a latent change model (Tóth-Király et al., 2021) for identity conflict, which was only measured at two

time points. For the latent curve models, the scale of the time-specific factors was set using the referent indicator approach to freely estimated the means and variances of the intercept and slope factors in the original metric of the scale. For the latent change model, the scale was set using the standardized factor approach to interpret the change occurring over time in standardized unit (i.e., with a sample mean of 0 at the first measurement occasion).

Participants' ratings on all outcomes were represented via a CFA incorporating one factor for turnover intention at T2, T3, and T4 (three factors in total), one factor for transition intention at T2, T3, and T4 (three factors in total), one factor for job satisfaction at T3 and T4 (two factors in total), and one factor for perceived performance at T2. This resulted in a nine-factor CFA. Once the measurement invariance of these constructs was ascertained, the most invariant model was converted to a linear latent curve model (Bollen & Curan, 2006) for outcomes measured at three time points (i.e., turnover intention and transition intention), and to a latent change model (Tóth-Király et al., 2021) for job satisfaction. These models were estimated following the same procedures used with the predictors.

Longitudinal tests of invariance were conducted for all measurement models (Millsap, 2011). These tests were conducted in the following sequence: (i) configural invariance (same model, with no additional constraint), (ii) weak invariance (same factor loadings), (iii) strong invariance (same factor loadings and items intercepts), (iv) strict invariance (same factor loadings, items intercepts, and items uniquenesses), (v) invariance of the latent variances and covariances, and (vi) latent mean invariance. Tests of invariance of the a priori correlated uniquenesses included in the commitment model to account for the negative wording of three items were also included between steps iv and v.

Given the well-documented sample size dependency and oversensitivity to minor misspecifications of the chi-square test of exact fit (χ^2), we relied on the sample-size independent goodness-of-fit indices to assess model fit (Hu & Bentler, 1999; Marsh et al., 2005): Values greater than .90 and .95 on the comparative fit index (CFI) and the Tucker-Lewis index (TLI), as well as values smaller than .08 and .06 on the root mean square error of approximation (RMSEA) respectively support adequate and excellent model fit. For tests of measurement invariance, common guidelines (Chen, 2007; Cheung & Rensvold, 2002) suggest that the invariance hypothesis can be considered to be supported when a model does not result in a CFI or TLI decrease greater than .01, or in a RMSEA increase than .015, relative to the previous model.

Results: Measurement Models

Goodness-of-fit results for all preliminary measurement models are reported in Table

S1. These results support the partial invariance of participants ratings of commitment over time. More precisely, the fit of the configural model was excellent, and did not reduce in a way that exceeded the interpretation guidelines when weak invariance was imposed. However, the next three models (strong, strict, and correlated uniquenesses) were associated with a reduction in fit exceeding these guidelines (ΔCFI > .01; ΔTLI > .01). A detailed examination of the modification indices associated with the failed model and of the parameter estimates associated with the last supported models suggested that this lack of invariance was limited to a reduced subset of parameters, allowing us to estimate solution of partial strong, partial strict, and partial correlated uniquenesses invariance that were supported by the data. More precisely, equality constraints had to be relaxed on the intercepts of items 1 (slightly higher at T1 than at the other time points), 2 (slightly lower at T1 than at the other time points) and 5 (slightly lower at T1 than at the other time points) at T1. Equality constraints also had to be relaxed on the T1 uniquenesses of two of these items (2 and 5), which were slightly higher at T1 (suggesting a slightly lower level of reliability at the intake of training). Lastly, the correlation between the uniquenesses of items 3 and 4 was also freed at T1, as it was slightly smaller than at the other time points. From that model of partial correlated uniquenesses invariance, the longitudinal invariance of the factor variance was supported over time, but not that of the latent means. A model of partial latent mean invariance in which the latent mean of organizational commitment was freed at T1 (.566 standardized units smaller than at the other time-points) was finally supported by the data. This last result indicates that directly upon entering the training, commitment to the organization is lower, but normatively increases rapidly within the three months of this initial training. Factor scores were saved from this model of partial latent mean invariance. These scores can be interpreted as a function of a mean of 0 and a SD of 1 at time 1, and a mean of .566 and SD of 1 at time 2, 3, and 4, allowing for an interpretation of scores as deviations from the initial sample mean in standardized units (Meyer & Morin, 2016). Parameter estimates, composite reliability coefficients (ω: McDonald, 1970), and alpha coefficient of scale score reliability are reported in Table S2, and support the adequacy of this solution ($M_{|\lambda|t1}$ = .602; ω_{t1} = .775; α_{t1} = .771; $M_{|\lambda|t2\text{-}t4}$ = .634; $\omega_{t2\text{-}t4}$ = .803; $\alpha_{t2\text{-}t4}$ = .826).

For the predictors, our results (see middle section of Table S1) supported the configural and weak invariance of the model, but not its strong and strict invariance. Models of partial strong and strict invariances were, however, supported by the data. In these models, equality constraints were removed from the intercept of the third socialization item intercept at T1 (slightly smaller than at the other time points) and of the fifth identity conflict item at

T2 (slightly higher than at T4). The uniqueness of the last identity conflict item was also relaxed over time (it was slightly lower at T2 than at T4). From this model of partial strict invariance, the invariance of the latent variances and covariances was also supported, but not that of the latent means. A model of partial latent mean invariance in which the latent mean of socialization was freed at T1 (.567 standardized units higher than at the other time-points) was finally supported by the data (suggesting socialization efforts more pronounced earlier in the training). Parameter estimates from the last model of latent mean invariance are reported in Table S2. These results support the adequacy of this solution: (a) perceived realism of previews ($M_{|\lambda|}$ = .593; ω = .780; α = .748); (b) socialization ($M_{|\lambda|}$ = .730; ω = .852; α = .840); (c) satisfaction with the implications of military life for work-life balance ($M_{|\lambda|}$ = .825; ω = .866; α = .856); (d) identity conflict ($M_{|\lambda|t2}$ = .736; ω_{t2} = .856; α_{t2} = .846; $M_{|\lambda|t4}$ = .697; ω_{t4} = .828; α_{t4} = .871).

For the outcomes, the results (see bottom section of Table S1) supported the complete invariance of the model. Parameters estimates from the last model of latent mean invariance are reported in Table S3 and support the adequacy of this model: (a) turnover intention ($M_{|\lambda|}$ = .796; ω = .845; α = .817); (b) transition intention ($M_{|\lambda|}$ = .603; ω = .638; α = .608); (c) job satisfaction ($M_{|\lambda|}$ = .819; ω = .860; α = .858); (d) perceived performance ($M_{|\lambda|}$ = .694; ω = .759; α = .667).

Results: Latent Curve and Latent Change Models

For the predictors and outcomes measured at three time points (i.e., perceived realism of previews, socialization, satisfaction with the implications of military life for work-life balance, turnover intention, and transition intention), the model of (partial)strict invariance was used to generate the latent curve models from which the factor scores were extracted to be able to account for the longitudinal evolution of these variables. For the predictor and outcome measured at two time points (i.e., identity conflict and job satisfaction) the latent change model was specified from the model of latent mean invariance, resulting in an initial sample average of 0 and a change factor that can be interpreted in standardized units. A single model incorporating all predictors was estimated and a single model incorporating all outcomes was estimated. Both models resulted in an adequate level of fit to the data (see models 7 in Table S1) and factor scores (i.e., intercept and slope factors from latent curve models, initial level and change in standardized units for the latent change models, and perceived performance at time 2) were saved from these models and used as predictors and outcomes in the main analyses.

Parameter estimates from the latent curve results are reported in Table S4, while those

from the latent change models are reported in Table S5. These results indicate that, on average, socialization experiences, perceptions of exposure to realistic previews, and satisfaction with the implications of military life for work-life balance all seem to decrease over the first year spent training and working for the Canadian Armed Forces. Moreover, turnover intention, transition intention, and identity conflict seemed to increase from T2 (i.e., end of basic training) to T4 (i.e., 9 months after the end of basic training). The intercept and slope factor variances were statistically significant for all latent curve models, indicating heterogeneity of both initial levels and change over time in socialization, perceived realism of previews, benefits of training on work-life balance, identity conflict, turnover intention, and transition intention. For job satisfaction, the variance but not the mean of the change factor was statistically significant, indicating that job satisfaction did not change at the sample level but does change at the individual level. Lastly, a statistically significant negative correlation between initial levels and change was observed for identity conflict, job satisfaction, and to a lesser extent socialization, indicating that higher initial levels on these constructs are accompanied by, on average, a lower increase or steeper decrease over time (i.e., depending on whether the slope is positive or negative to begin with). All correlations between factors used in the main analyses are reported in Table S6.

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Table S6

Goodness-of-Fit Information for the Measurement Models for Study 2

Model	df	χ^2	CFI	TLI	RMSEA	RMSEA 90% CI	$\Delta\chi^2$ (df)
Affective Commitment to the Organization							
1. Configural Invariance	198	498.191*	.978	.970	.018	.016;.020	NA
2. Weak Invariance	213	627.081*	.970	.961	.020	.018;.022	124.385 (15)*
3. Strong Invariance	228	1495.676*	.909	.890	.034	.032;.035	985.691 (15)*
3a. Partial Strong Invariance	225	725.077*	.964	.956	.021	.020;.023	108.346 (12)*
4. Strict Invariance	243	1097.241*	.939	.930	.027	.025;.029	284.330 (18)*
4a. Partial Strict Invariance	241	837.624*	.957	.951	.023	.021;.024	92.832 (16)*
5. CU Invariance	250	1007.910*	.946	.940	.025	.023;.027	97.366 (9)*
5a. Partial CU Invariance	249	870.633*	.955	.950	.023	.021;.024	30.179 (8)*
6. Latent Variance Invariance	252	914.659*	.952	.948	.023	.022;.025	39.477 (3)*
7. Latent Mean Invariance	255	1206.844*	.932	.926	.028	.026;.029	228.982 (3)*
7a. Partial Latent Mean Invariance	254	1015.748*	.945	.941	.025	.023;.026	93.200 (2)*
Predictors							
1. Configural Invariance	1172	3339.747*	.941	.934	.018	.018;.019	NA
2. Weak Invariance	1198	3435.901*	.939	.933	.018	.018;.019	93.578 (26)*
3. Strong Invariance	1224	4027.462*	.924	.918	.020	.020;.021	569.584 (26)*
3a. Partial Strong Invariance	1222	3713.090*	.933	.927	.019	.018;.020	266.841 (24)*
4. Strict Invariance	1255	4207.363*	.920	.916	.021	.020;.021	318.227 (33)*
4a. Partial Strict Invariance	1254	4028.832*	.925	.921	.020	.019;.021	215.809 (32)*
5. Latent Variance/Covariance Invariance	1267	4239.073*	.919	.916	.021	.020;.021	178.880 (13)*
6. Latent Mean Invariance	1274	4718.103*	.907	.903	.022	.021;.023	409.913 (7)*
6a. Partial Latent Mean Invariance	1273	4448.916*	.914	.910	.021	.021;.022	190.695 (6)*
7. LCuM & LChM	1278	4090.506*	.924	.921	.020	.019;.021	NA
Outcomes							
1. Configural Invariance	267	496.068*	.985	.981	.013	.011;.015	NA
2. Weak Invariance	277	504.313*	.985	.981	.013	.011;.015	8.907 (10)
3. Strong Invariance	287	556.462*	.983	.979	.014	.012;.016	52.138 (10)*
4. Strict Invariance	302	617.464*	.980	.976	.015	.013;.016	44.633 (15)*
5. Latent Variance/Covariance Invariance	311	669.349*	.977	.974	.015	.014;.017	49.639 (9)*
6. Latent Mean Invariance	316	803.045*	.969	.965	.018	.016;.019	142.527 (5)*
7. LCuM & LChM	351	700.199*	.975	.972	.016	.014;.017	NA

Note. * $p < .01$; CU: Correlated uniquenesses; df: degrees of freedom; χ^2 = chi-square; CFI: comparative fit index; TLI: Tucker-Lewis index; RMSEA: root mean square approximation; C.I.: 90% confidence intervals for the RMSEA, $\Delta\chi^2$: Chi-square difference test. LCuM = Latent curve model; LChM= Latent change model.

Table S7
Longitudinally Invariant Standardized Parameter Estimates for the Organizational Commitment and Predictors Measurement Models in Study 2

	Organizational Commitment				Preview Realism		Socialization		SIM-WLB		Identity Conflict			
	Time 1		Time 2-4		Time invariant		Time invariant		Time invariant		Time 2		Time 4	
	λ	δ	λ	δ	λ	δ	λ	δ	λ	δ	λ	δ	λ	δ
Item 1	.684	.532	.684	.532	.861	.259	.614	.622	.794	.369	.611	.627	.611	.627
Item 2	.512	.738	.634	.598	.861	.259	.781	.390	.908	.176	.743	.448	.743	.448
Item 3	-.502	.748	-.502	.748	.725	.474	.796	.367	.772	.405	.798	.363	.798	.363
Item 4	-.658	.567	-.658	.567	.354	.875	.692	.521			.768	.411	.768	.411
Item 5	.695	.517	.767	.412	.492	.758	.767	.412			.759	.424	.566	.680
Item 6	-.559	.688	-.559	.688	.262	.931								
M|λ|	.602		.634		.593		.730		.825		.736		.697	
ω	.775		.803		.780		.852		.866		.856		.828	
α	.771		.826		.748		.840		.856		.846		.871	

Note. λ: factor loading; δ: item uniqueness; All coefficients are statistically significant (p ≤ .01). M\|λ\|: Average factor loading; ω: McDonald (1970) composite reliability coefficient; α: alpha coefficient of scale score reliability; SIM-WLB: Satisfaction with the implications of military life for work-life balance.

Table S8
Longitudinally Invariant Standardized Parameter Estimates for the Outcomes Measurement Model for Study 2

	Turnover Intention (T2-T4)		Transition Intention (T2-T4)		Job Satisfaction (T3-T4)		Perceived Performance (T2)	
	λ	δ	λ	δ	λ	δ	λ	δ
Item 1	.886	.215	.663	.561	.876	.233	.695	.516
Item 2	.893	.203	.420	.823	-.775	.399	.398	.841
Item 3	-.608	.630	.727	.472	.805	.351	.990	.019
M|λ|	.796		.603		.819		.694	
ω	.845		.638		.860		.759	
α	.817		.608		.858		.667	

Note. λ: factor loading; δ: item uniqueness; All coefficients are statistically significant (p ≤ .01). M\|λ\|: Average factor loading; ω: McDonald (1970) composite reliability coefficient; α: alpha coefficient of scale score reliability; T2: Time 2; T3: Time 3; T4: Time 4.

Table S9

Parameter Estimates for the Final Latent Curve Models for Study 2

Parameter	Preview Realism Estimate (*t*)	Socialization Estimate (*t*)	SIM-WLB Estimate (*t*)	Turnover Intention Estimate (*t*)	Transition Intention Estimate (*t*)
Intercept mean	3.501 (192.546)**	4.851 (289.637)**	3.930 (161.510)**	1.789 (86.988)**	1.556 (89.647)**
Slope mean	-.513 (-8.373)**	-.432 (-10.954)**	-.489 (-6.583)**	.254 (6.927)**	.274 (9.216)**
Intercept variability (SD = √σ)	.235 (6.821)**	.147 (5.200)**	.407 (5.528)**	.507 (13.579)**	.216 (7.995)**
Slope variability (SD = √σ)	.624 (3.367)**	.209 (3.121)**	1.121 (3.571)**	.443 (3.129)**	.010 (N/A)**
Intercept-slope correlation	.012 (.230)	-.064 (-1.956)*	-.093 (-.987)	-.057 (-1.130)	.016 (.568)
SD(εyi)_T2	.234 (6.827)**	.111 (3.977)**	.513 (7.245)**	.168 (4.607)**	.122 (4.891)**
SD(εyi)_T3	.269 (7.059)**	.288 (6.924)**	.812 (12.299)**	.178 (6.805)**	.134 (6.757)**
SD(εyi)_T4	.144 (1.120)	.164 (3.517)**	.119 (.502)	.074 (.699)	.160 (4.427)**

Note. * p ≤ .05; ** p ≤ .01; t = Estimate / standard error of the estimate (t values are computed from the original variance estimate and not from the square root); SD(εyi) = Standard deviation of the time-specific residual; The square root of the estimate of variability (trajectory factor, time-specific residual) is presented so that the results can be interpreted in the same unit as the construct used in the model (factor scores estimated in natural units); SIM-WLB: Satisfaction with the implications of military life for work-life balance.

Table S10

Parameter Estimates for the Final Latent Change Models for Study 2

Parameter	Identity Conflict Estimate (*t*)	Job Satisfaction Estimate (*t*)
Mean Change (SD units)	.289 (3.664)**	.035 (.625)
Change variability (SD = √σ)	1.620 (6.537)**	1.218 (7.336)**
Initial levels - change correlation	-.578 (-7.640)**	-.678 (-5.945)**

Note. * p ≤ .05; ** p ≤ .01, t = Estimate / standard error of the estimate (t values are computed from the original variance estimate and not from the square root); The square root of the estimate of variability (trajectory factor, time-specific residual) is presented so that the results can be interpreted in the same unit as the construct used in the model (factor scores estimated in standardized units).

Table S11

Reliability and Correlations for Study 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. AC-t1																		
2. AC-t2	.931**																	
3. AC-t3	.928**	.941**																
4. AC-t4	.917**	.918**	.950**															
5. IDC-t2	-.427**	-.470**	-.438**	-.431**														
6. CHIDC	.230**	.272**	.225**	.199**	-.730**													
7. ISOC	.386**	.374**	.382**	.376**	-.402**	.088**												
8. SSOC	-.062**	-.048**	-0.026	-0.026	.152**	-.426**	-.367**											
9. IPRV	.359**	.372**	.371**	.363**	-.419**	.033*	.650**	.314**										
10. SPRV	-.227**	-.261**	-.209**	-.193**	.662**	-.816**	-.227**	.614**	-.007									
11. IWLB	.442**	.473**	.463**	.447**	-.714**	.419**	.626**	.070**	.720**	-.411**								
12. SWLB	-.229**	-.261**	-.203**	-.182**	.648**	-.853**	-.236**	.585**	-.103**	.885**	-.320**							
13. PF-t2	.049**	.067**	.050**	.037*	-.112**	.078**	.043**	0.006	.054**	-.061**	.099**	-.067**						
14. JS-t3	.418**	.423**	.497**	.470**	-.285**	.090*	.255**	.095**	.269**	-.054**	.343**	-0.027	-.069**					
15. CHJS	-.054**	-.066**	-.089**	0.004	.059**	-.087**	-.055**	.049**	-.055**	.108**	-.083**	.107**	0.025	-.478**				
16. I-TI	-.536**	-.558**	-.557**	-.539**	.372**	-.219**	-.254**	.030*	-.249**	.216**	-.361**	.199**	-.032*	-.673**	.149**			
17. S-TI	.058**	.100**	-0.008	-.080**	-.088**	.190**	0.019	-.153**	0.000	-.211**	.041**	-.249**	.285**	-.204**	-.135**	-.201**		
18. I-TR	-.483**	-.505**	-.506**	-.487**	.367**	-.218**	-.242**	.032*	-.238**	.220**	-.353**	.200**	-.079**	-.660**	.231**	.936**	-.213**	
19. S-TR	.277**	.280**	.272**	.260**	-.111**	.083**	.082**	-.051**	.069**	-.099**	.099**	-.096**	-.193**	.171**	.031*	-.495**	.032*	-.180**

Note: * p < .05; ** p < .01; t1 = time 1; t2 = time 2; t3 = time 3; t4 = time 4; AC: affective organizational commitment; IDC: identity conflict; CHIDC: change in identity conflict; ISOC: socialization factor intercept; SSOC: socialization factor slope; IPRV: realistic preview intercept; SPRV: realistic preview slope; IWLB: satisfaction with the implications of military life for work-life balance intercept; SWLB: satisfaction with the implications of military life for work-life balance slope; PF: perceived performance; JS: job satisfaction; CHJS: change in job satisfaction; I-TI: turnover intentions intercept; S-TI: turnover intentions slope; I-TR: transition intentions intercept; S-TR: transition intentions slope.

Appendix C

Supplements for

Nurses' Early Career Organizational and Occupational Commitment Trajectories: A Dual Target Growth Mixture Investigation

Preliminary Measurement Models

Preliminary measurement models were estimated using the Mplus 8.7 (Muthén & Muthén, 2021) statistical package to ascertain the psychometric properties and longitudinal measurement invariance (i.e., equivalence) of all measures. These models were estimated using the maximum likelihood robust estimator (MLR) and full information maximum likelihood (FIML) procedures to handle missing data. Due to the complexity of the current longitudinal analyses, separate longitudinal measurement models were estimated for (i) affective commitment to the organization and occupation; (ii) basic need fulfilment; (iii) Socialization; (iv) work satisfaction; (v) quality of care; (vi) psychological distress; (vii) somatization. In all measurement models, *a priori* correlated uniquenesses were included between matching indicators across time points to avoid converging on inflated stability estimates (e.g., Marsh, 2007).

Participants' ratings of affective organizational commitment and affective occupational commitment were represented via two confirmatory factor analytic (CFA) factors at each separate time point, resulting in an eight-factor longitudinal CFA model (i.e., one factor for organizational commitment and one factor for occupational commitment at each of four time points). An *a priori* orthogonal method factor was included to this model to account for the methodological artifact created by the negative wording of three items from both subscales (e.g., Zhang et al., 2016).

Participants' ratings of basic need fulfilment and socialization were both represented via the estimation of separate longitudinal bifactor exploratory structural equation models (B-ESEM; Morin et al., 2016). These models were estimated using a confirmatory bifactor orthogonal rotation procedure (target rotation), allowing us to rely on an *a priori* specification of the main indicators of each factor, while also allowing for the free estimation of cross-loadings, which were targeted to be as close to 0 (Morin et al., 2020). For need fulfilment, the superiority of a B-ESEM representation of need satisfaction (e.g., Garn et al., 2019; Gillet et al., 2020) and need fulfilment more generally (i.e. need satisfaction and frustration; Tóth-Király et al., 2018a, 2018b) is well documented. Following previous recommendations (Tóth-Király et al., 2018, 2019), need fulfillment ratings were represented, at each of four time points, by one global factor (global need fulfilment) defined by all items, and three orthogonal

specific factors (autonomy fulfilment, competence fulfilment, relatedness fulfilment, reflecting the variance shared among the items forming these subscales beyond that explained by the global factor). For socialization, the high correlations previously reported by Fernet et al. (2020) between the three global dimensions assessed in this measure (task, organizational, and team socialization) suggested the presence of a global socialization construct. Given the generally acknowledged superiority of bifactor models relative to higher-order models (which rely on a strict proportionality constraint and create a redundancy when first and second order factors scores are jointly used in analyses, Gignac, 2016; Morin et al., 2016), socialization ratings were also modeled using a B-ESEM representation. More precisely, at each time point, we estimated one global factor (global socialization) defined by all items, and six orthogonal specific factors (task learning, team learning, organization learning, task internalization, team internalization, organization internalization reflecting the variance shared among the items forming these subscales beyond that explained by the global factor). This model also incorporated 3 pairs of *a priori* correlated uniquenesses between items presenting parallel wording (e.g., Marsh et al., 2010, 2013).

Participants' ratings on the outcomes were estimated via four separate longitudinal CFA models (work satisfaction, quality of care, psychological distress, somatization). Once the measurement invariance of these solutions was ascertained (up to strict invariance following the sequence detailed above) these four CFA models were converted to latent curve models (Bollen & Curan, 2006), specified as fully latent from the model of strict invariance, to estimate the longitudinal trajectories of the outcomes defined as a function of tenure (Grimm et al., 2016). For these models, we contrasted models involving linear and quadratic trajectories.

For all measurement models, longitudinal tests of invariance were conducted to assess the measurement invariance of the latent factors across the four time points (Millsap, 2011). These tests were conducted in the following sequence: (i) configural invariance (same model, with no additional constraint), (ii) weak invariance (same factor loadings), (iii) strong invariance (same factor loadings and items intercepts), (iv) strict invariance (same factor loadings, items intercepts, and items uniquenesses), (v) invariance of the latent variances and covariances, and (vi) latent mean invariance.

Given the well-documented sample size dependency and oversensitivity to minor misspecifications of the chi -square test of exact fit (χ^2), we relied on the sample-size independent goodness-of-fit indices to assess model fit (Hu & Bentler, 1999; Marsh et al., 2005): Values greater than .90 and .95 on the comparative fit index (CFI) and the Tucker-

Lewis index (TLI), as well as values smaller than .08 and .06 on the root mean square error of approximation (RMSEA) respectively support adequate and excellent model fit. For tests of measurement invariance, common guidelines (Chen, 2007; Cheung & Rensvold, 2002) suggest that the invariance hypothesis can be considered to be supported when a model does not result in a CFI or TLI decrease greater than .01, or in a RMSEA increase than .015 relative to the previous model. These traditional goodness-of-fit indices were not available, however, for the outcomes latent curve models given the estimation of trajectories defined on the basis of tenure, rather than measurement point. Comparisons of linear and quadratic models thus relies on the same information criteria used in the main manuscript (AIC, CAIC, BIC, and ABIC). We considered lower values on at least two of these criteria sufficient to support the most parsimonious model (linear), but lower values on three of these criteria necessary to support the least parsimonious (quadratic model).

Goodness-of-fit results for all preliminary measurement models are reported in Table S1. These results confirm the full longitudinal invariance of all constructs, as none of the models resulted in a decrease in model fit exceeding the recommended guidelines relative to the previous models. In addition, with two exceptions, all models resulted in an acceptable level of fit to the data. In addition, although the TLI was under .900 for both predictor models for the initial model of configural invariance, the fact that both the CFI and RMSEA were adequate suggested that the lower TLI value may be due to a lack of parsimony in the configural model. Indeed, as soon as constraints were imposed on the factor loadings (i.e., weak invariance) the TLI for these two models increased to an acceptable level of fit, which was maintained in the subsequent models. On this basis, the model of latent mean invariance was retained to save the factor scores for the predictors (basic need fulfilment and socialization) and profile indicators (organizational and occupational commitment). For these constructs, the fact that the model of latent mean invariance was supported simply indicates that average levels observed on these constructs in the current sample did not change over time. Moreover, the reliance on this model to generate the factor scores allowed us to interpret scores on these variables in standardized units ($M = 0$; $SD = 1$; Guay et al., 2021; Meyer & Morin, 2016). For the outcomes, the model of strict invariance was used to generate the latent curve models from which the factor scores were extracted, to be able to account for the possible change in these trajectories over time. These models were estimated while retaining the natural measurement units of the outcomes.

The parameter estimates, composite reliability coefficients (ω: McDonald, 1970), and alpha coefficient of scale score reliability from the final (most invariant) measurement models

estimated for organizational commitment, occupational commitment, and the outcomes are reported in Tables S2, while those for the predictors are reported in Tables S3. Overall, all factors were correctly defined as shown by acceptable factor loadings and strong composite reliability coefficients (Morin et al., 2020): (a) organizational commitment ($M_{|\lambda|}$ = .690; ω = .864); (b) occupational commitment ($M_{|\lambda|}$ = .713; ω = .888); (c) work satisfaction ($M_{|\lambda|}$ = .782; ω = .889); (d) quality of care ($M_{|\lambda|}$ = .730; ω = .821); (e) psychological distress ($M_{|\lambda|}$ = .735; ω = .879); (f) somatization ($M_{|\lambda|}$ = .579; ω = .803); (g) global need fulfilment ($M_{|\lambda|}$ = .511; ω = .915); (h) autonomy fulfilment ($M_{|\lambda|}$ = .452; ω = .719); (i) competence fulfilment ($M_{|\lambda|}$ = .484; ω = .696); (i) relatedness fulfilment ($M_{|\lambda|}$ = .310; ω = .557); (j) global socialization ($M_{|\lambda|}$ = .652; ω = .972); (k) task learning ($M_{|\lambda|}$ = .462; ω = .663); (l) organizational learning ($M_{|\lambda|}$ = .540; ω = .796); (m) team learning ($M_{|\lambda|}$ = .281; ω = .555); (n) task internalization ($M_{|\lambda|}$ = .507; ω = .818); organizational internalization ($M_{|\lambda|}$ = .479; ω = .746); (o) team internalization ($M_{|\lambda|}$ = .528; ω = .836).

Lastly, model fit associated with the alternative latent curve models used to estimate the outcomes trajectories are reported in Table S4. With one exception (i.e., psychological distress), these results supported the linear model, which was associated with lower values than the quadratic model on at least two of the information criteria. Although this was not the case for psychological distress, parameter estimates from this model (as well as from all other quadratic models) were inconsistent with the presence of quadratic trajectories (non-significant means and variances on the quadratic slope factor), leading us to retain the linear models for all outcomes. Parameter estimates from these linear solutions are reported in Table S5. These results reveal, on average, a small increase in quality of care and small decrease in somatization, over the first five years in the nursing occupation. In contrast, work satisfaction and psychological distress remained mostly stable over that same period of time. The factor correlations and scale means and variances for all variables included in the present study are respectively reported in Table S6 and S7.

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Table S12

Goodness-of-Fit Information for the Measurement Models for Study 3

Model	df	χ^2	CFI	TLI	RMSEA	RMSEA 90% CI	$\Delta\chi^2$ (df)
Organizational and Occupational Affective Commitment							
1. Configural	926	1333.242**	.965	.957	.025	.022;.028	
2. Weak	971	1370.134**	.966	.960	.024	.021;.027	44.568 (45)
3. Strong	998	1405.503**	.965	.960	.024	.021;.027	35.162 (27)
4. Strict	1034	1446.811**	.965	.961	.024	.021;.027	46.363 (36)
5. Latent VC	1046	1462.043**	.964	.961	.024	.021;.027	15.428 (12)
6. Latent means	1055	1483.382**	.963	.961	.024	.021;.027	22.019 (9)**
Basic Need Fulfilment							
1. Configural	2379	3805.624**	.905	.886	.031	.029;.033	
2. Weak	2559	3902.735**	.910	.900	.029	.027;.031	135.978 (180)
3. Strong	2604	3960.797**	.909	.901	.029	.027;.031	56.981 (45)
4. Strict	2661	4024.482**	.909	.902	.029	.027;.030	75.389 (57)
5. Latent VC	2691	4037.520**	.910	.905	.028	.027;.030	18.875 (30)
6. Latent means	2703	4072.186**	.908	.903	.028	.027;.030	37.003 (12)**
Socialization							
1. Configural	3522	6125.623**	.918	.893	.034	.032;.035	
2. Weak	3879	6104.923**	.930	.917	.030	.028;.031	283.187 (357)
3. Strong	3930	6172.268**	.929	.918	.030	.028;.031	66.568 (51)
4. Strict	4002	6236.620**	.929	.919	.029	.028;.031	88.803 (72)
4a. Strict Cus	4011	6246.493**	.929	.920	.029	.028;.031	11.075 (9)
5. Latent VC	4095	6316.251**	.930	.922	.029	.028;.030	89.728 (84)
6. Latent means	4116	6376.740**	.928	.921	.029	.028;.031	63.262 (21)**
Work Satisfaction							
1. Configural	134	279.606**	.964	.949	.042	.035;.049	
2. Weak	146	297.848**	.962	.951	.041	.035;.048	18.657 (12)
3. Strong	158	316.499**	.961	.953	.041	.034;.047	18.180 (12)
4. Strict	173	327.090**	.962	.958	.038	.032;.045	15.965 (15)
5. Latent VC	176	328.118**	.962	.959	.038	.031;.044	0.772 (3)
6. Latent means	179	334.009**	.961	.959	.038	.032;.044	5.919 (3)
Quality of Care							
1. Configural	74	158.519**	.960	.935	.043	.034;.053	
2. Weak	83	174.173**	.957	.938	.042	.034;.051	15.660 (9)
3. Strong	92	184.488**	.956	.943	.041	.032;.049	9.014 (9)
4. Strict	104	199.376**	.955	.948	.039	.031;.047	17.176 (12)
5. Latent VC	107	210.287**	.951	.945	.040	.032;.048	13.247 (3)
6. Latent means	110	232.238**	.942	.937	.043	.035;.050	24.844 (3)
Psychological Distress							
1. Configural	210	437.781**	.947	.931	.042	.037;.048	
2. Weak	225	463.590**	.945	.932	.042	.036;.047	26.839 (15)*
3. Strong	240	488.949**	.942	.934	.041	.036;.047	23.888 (15)
4. Strict	258	507.605**	.942	.938	.040	.035;.045	22.910 (18)
5. Latent VC	261	507.313**	.943	.940	.039	.034;.044	2.493 (3)
6. Latent means	264	509.216**	.943	.941	.039	.034;.044	.949 (3)

Table S12 (Continued)

Model	df	χ^2	CFI	TLI	RMSEA	RMSEA 90% CI	$\Delta\chi^2$ (df)
			Somatization				
1. Configural	410	661.222**	.945	.933	.032	.027;.036	
2. Weak	431	680.231**	.945	.937	.031	.026;.035	20.555 (21)
3. Strong	452	715.417**	.942	.936	.031	.027;.035	35.474 (21)*
4. Strict	476	746.249**	.940	.938	.031	.026;.035	30.936 (24)
5. Latent VC	479	746.348**	.941	.939	.030	.026;.034	1.180 (3)
6. Latent means	482	757.647**	.939	.937	.031	.026;.035	11.561 (3)**

Note. * p < .05; ** < .01; df: degrees of freedom; χ^2 = chi-square; CFI: comparative fit index; TLI: Tucker-Lewis index; RMSEA: root mean square approximation; C.I.: 90% confidence intervals for the RMSEA, $\Delta\chi^2$: Chi-square difference test

Table S13
Longitudinally Invariant Standardized Parameter Estimate and Reliability Coefficients for Affective Organizational Commitment, Affective Occupational Commitment, Work Satisfaction, Quality of Care, Psychological Distress, and Somatization Measurement Models for Study 3

	Organizational Commitment		Occupational Commitment		Work Satisfaction		Quality of care		Psychological Distress		Somatization	
	λ	δ	λ	δ	λ	δ	λ	δ	λ	δ	λ	δ
Item 1	.878	.228	-.658	.296	.778	.394	0.679	0.539	0.602	0.638	0.446	0.801
Item 2	-.721	.429	-.648	.344	.672	.548	0.830	0.312	0.834	0.304	0.557	0.69
Item 3	-.620	.573	.847	.282	.858	.263	0.718	0.485	0.564	0.682	0.543	0.705
Item 4	.875	.234	.777	.396	.832	.307	0.693	0.519	0.810	0.343	0.499	0.751
Item 5	.862	.257	-.580	.575	.772	.404			0.840	0.294	0.64	0.59
Item 6	.181	.967	.768	.410					0.758	0.426	0.731	0.465
Item 7											0.628	0.606
Item 8											0.591	0.651
ω	.864		.888		.889		.821		.879		.803	
α t1	.795		.868		.891		.839		.861		.795	
α t2	.779		.872		.882		.783		.864		.798	
α t3	.807		.893		.880		.825		.886		.817	
α t4	.775		.872		.869		.813		.884		.807	

Note. λ: factor loading; δ: item uniqueness; ω: omega coefficient of model-based composite reliability; α: alpha coefficient of scale score reliability; t1: time 1; t2: time 2; t3: time 3; t4: time 4.

Table S14

Longitudinally Invariant Standardized Parameter Estimates and Reliability Coefficients for the Basic Need Fulfilment and Socialization Models for Study 3

	G-fulfilment	S-Autonomy	S-Competence	S-Relatedness		G-Soc.	S-Task (L)	S-Org (L)	S-Team (L)	S-Task (I)	S-Org (I)	S-Team (I)	
	λ	λ	λ	λ	δ	λ	λ	λ	λ	λ	λ	λ	δ
Item 1	**.626**	**.148**	.134	.346	.449	**.565**	**.375**	.046	.099	.184	-.079	-.026	.488
Item 2	**.419**	**.360**	.112	.200	.642	**.565**	**.660**	.049	-.047	.169	-.122	-.001	.197
Item 3	**.474**	**.507**	.122	.103	.492	**.492**	**.547**	.020	-.009	.168	-.155	.036	.405
Item 4	**.223**	**-.510**	-.031	.172	.597	**.485**	**.265**	.060	.015	.155	-.139	-.043	.646
Item 5	**.363**	**-.623**	.016	.203	.300	**.529**	.041	**.691**	-.045	.040	.035	-.055	.411
Item 6	**.251**	**-.563**	.014	.153	.390	**.585**	.034	**.731**	-.006	.007	.050	-.058	.437
Item 7	**.258**	.206	**.484**	.277	.433	**.722**	-.043	**.421**	-.011	-.021	.132	-.154	.183
Item 8	**.680**	.159	**.660**	.327	.304	**.674**	-.004	**.318**	.145	-.039	.092	-.107	.168
Item 9	**.595**	.168	**.650**	.310	.441	**.827**	-.040	.012	**.164**	-.072	.135	.003	.233
Item 10	**.304**	.176	**.618**	.297	.760	**.785**	.005	-.042	**.265**	-.049	-.110	.154	.116
Item 11	**-.543**	.064	**-.369**	.212	.415	**.702**	.018	.045	**.435**	-.058	-.037	.077	.258
Item 12	**-.542**	.056	**-.370**	.241	.276	**.665**	.053	-.056	**.258**	-.003	-.071	.269	.402
Item 13	**-.458**	-.022	**-.240**	.238	.450	**.645**	.180	-.032	.025	**.370**	-.036	.022	.273
Item 14	**-.716**	.024	-.025	**.482**	.302	**.549**	.234	.068	.042	**.439**	.022	.083	.178
Item 15	**-.629**	.054	-.040	**.449**	.406	**.657**	.076	-.004	-.110	**.604**	-.038	.034	.196
Item 16	**-.687**	.003	.064	**.379**	.413	**.669**	.050	.008	-.065	**.613**	-.036	.036	.264
Item 17	**-.660**	.053	.032	**-.209**	.517	**.739**	-.075	.090	-.086	-.052	**.379**	-.113	.264
Item 18	**-.637**	.009	-.003	**-.182**	.562	**.585**	.007	.098	.111	.049	**.667**	.107	.273
Item 19	**-.638**	.104	.029	**-.160**	.556	**.778**	-.065	.054	-.134	-.023	**.401**	-.113	.304
Item 20						**.703**	-.095	-.025	-.088	-.079	**.467**	.007	.408
Item 21						**.744**	-.028	-.134	.008	-.036	-.121	**.491**	.170
Item 22						**.583**	.069	-.060	.141	.076	.140	**.594**	.254
Item 23						**.757**	-.019	-.107	-.005	.001	-.114	**.536**	.116
Item 24						**.640**	-.070	-.074	.019	.024	.019	**.491**	.338

Table S14 (Continued)

	G-fulfilment	S-Autonomy	S-Competence	S-Relatedness	G-Soc.	S-Task (L)	S-Org (L)	S-Team (L)	S-Task (I)	S-Org (I)	S-Team (I)
ω	.915	.719	.696	.557	.972	.663	.796	.555	.818	.746	.836
α t1	.888	.825	.794	.791	.950	.797	.886	.888	.899	.877	.909
α t2	.899	.840	.815	.793	.951	.801	.887	.904	.897	.874	.913
α t3	.907	.847	.849	.783	.953	.810	.898	.921	.919	.869	.924
α t4	.905	.853	.820	.811	.952	.824	.894	.901	.922	.888	.937

Note. λ: factor loading; δ: item uniqueness; G-: global factor; S-: specific factor; (L): learning; (I): internalization. M|λ|: average loading; ω: omega coefficient of model-based composite reliability; α: alpha coefficient of scale score reliability; t1: time 1; t2: time 2; t3: time 3; t4: time 4.

Table S15

Goodness-of-Fit Information for the Latent Curve Models (LCM) Estimated for the Outcomes for Study 3

Model	*LL*	*#fp*	Scaling	AIC	CAIC	BIC	ABIC
			Work Satisfaction				
Linear LCM	10603.915	52	1.3074	21311.831	21592.816	21540.816	21375.730
Quadratic LCM	-10594.570	56	1.2897	21301.140	21603.740	21547.740	21369.954
			Quality of Care				
Linear LCM	-4317.668	43	1.3736	8721.337	8954.186	8911.186	8774.670
Quadratic LCM	-4309.094	47	1.3405	8712.188	8966.698	8919.698	8770.483
			Psychological Distress				
Linear LCM	-10259.196	61	1.5599	20640.393	20970.414	20909.414	20715.753
Quadratic LCM	-10245.097	65	1.5606	20620.193	20971.855	20906.855	20700.494
			Somatization				
Linear LCM	-18585.200	79	1.4935	37328.401	37755.544	37676.544	37425.738
Quadratic LCM	-18579.902	83	1.5047	37325.804	37774.575	37691.575	37428.070

Note. Loglikelihood*;* #fp: Number of Free Parameters; Scaling = scaling factor; AIC: Akaïke Information Criteria; CAIC: Constant AIC; BIC: Bayesian Information Criteria; ABIC: Sample-Size adjusted BIC.

Table S16

Parameter Estimates for the Final Latent Curve Models for the Outcomes for Study 3

Parameter	Work Satisfaction Estimate (*t*)	Quality of Care Estimate (*t*)	Psychological Distress Estimate (*t*)	Somatization Estimate (*t*)
Intercept mean	4.980 (61.678)**	3.107 (74.809)**	1.921 (31.535)**	2.671 (31.253)**
Slope mean	.033 (1.214)	.050 (3.604)**	-.027 (-1.302)	-.092 (-3.437)**
Intercept variability (SD = √σ)	.713 (3.714)**	.237 (3.752)**	.606 (3.818)**	1.049 (4.362)**
Slope variability (SD = √σ)	.026 (.908)	.008 (.971)	.009 (.406)	.033 (.960)
Intercept-slope correlation	-.046 (-.673)	-.024 (-1.195)	-.044 (-.808)	-.073 (-.890)
SD(εyi)_T1	.767 (6.639)**	.370 (6.813)**	.465 (4.393)**	.536 (4.061)**
SD(εyi)_T2	.635 (6.487)**	.286 (4.865)**	.500 (4.616)**	.531 (4.598)**
SD(εyi)_T3	.560 (5.286)**	.342 (6.039)**	.615 (5.062)**	.501 (4.024)**
SD(εyi)_T4	.677 (4.758)**	.383 (4.502)**	.588 (3.422)**	.547 (2.116)*

Note. t = Estimate / standard error of the estimate (t values are computed from the original variance estimate and not from the square root); SD(εyi) = Standard deviation of the time-specific residual; The square root of the estimate of variability (trajectory factor, time-specific residual) is presented so that the results can be interpreted in the same unit as the construct used in the model (here, factor scores are interpreted in natural units); * $p \leq .05$; ** $p \leq .01$.

Table S17
Correlations for the time-invariant factors used in Study 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. OGC_1																								
2. OCC_1	.378**																							
3. GS_1	.525**	.380**																						
4. TKL_1	-.011	.112**	.020																					
5. OGL_1	.030	-.031	.016	.056																				
6. TML_1	-.014	-.071	.061	-.007	-.028																			
7. TKI_1	.052	.286**	.034	.072	.012	-.106**																		
8. OGI_1	.143**	-.028	.038	-.059	-.060	.019	.000																	
9. TMI_1	.097*	.019	.070	-.006	-.098*	.029	-.139**	.001																
10. GNF_1	.426**	.334**	.363**	.139**	.003	.032	.137**	.006	.144**															
11. AF_1	.202**	.206**	.274**	.065	.002	-.119**	.059	-.016	-.075	.062														
12. CF_1	.030	.117**	.203**	.312**	.082*	-.010	.239**	.043	-.083*	.062	.000													
13. RF_1	.179**	.221**	.240**	.120**	-.031	.029	.089*	-.048	.096*	-.007	-.038	.050												
14. OGC_2	.748**	.322**	.431**	.030	-.005	-.013	.046	.153**	.115**	.314**	.194**	.102*	.200**											
15. OCC_2	.374**	.872**	.349**	.130**	-.061	-.037	.242**	-.010	.053	.300**	.201**	.104**	.237**	.406**										
16. GS_2	.409**	.359**	.743**	.117**	-.020	.011	.016	.043	.018	.301**	.279**	.219**	.219**	.535**	.408**									
17. TKL_2	-.012	.087*	.011	.449**	.108**	.098*	.103**	-.113**	-.032	.069	-.005	.182**	.155**	-.030	.094*	.031								
18. OGL_2	.034	-.074	.005	-.025	.488**	.207**	.040	.059	-.037	.022	-.055	.045	-.017	.082*	-.060	.093*	.017							
19. TML_2	-.016	-.067	-.055	.113**	-.099*	.125**	-.009	.114**	.188**	.008	-.037	.054	-.021	.037	-.062	-.003	-.019	-.017						
20. TKI_2	.017	.153**	.056	.055	-.275**	-.017	.533**	.088*	-.042	.065	.057	.156**	.120**	.020	.190**	.045	.092*	-.076	-.085*					
21. OGI_2	.150**	.001	-.053	-.009	.081*	.048	.060	.727**	.200**	.031	-.031	.024	-.062	.205**	.037	-.015	-.070	.043	.028	.022				
22. TMI_2	-.046	.075	-.064	.221**	-.135**	.102**	.137**	.184**	.423**	.088*	-.054	.047	.119**	.006	.090*	.046	-.006	-.102**	.126**	.044	.015			
23. GNF_2	.353**	.328**	.331**	.140**	-.017	-.009	.160**	.031	.084*	.773**	.096*	.074	.169**	.410**	.354**	.371**	.083*	.003	.010	.115**	.015	.150**		
24. AF_2	.076	.126**	.190**	.032	-.067	-.050	.085*	-.012	-.100*	-.016	.597**	.012	.048	.141**	.176**	.260**	.128**	-.048	-.013	.063	-.080*	.016	.085*	
25. CF_2	.023	.096*	.177**	.255**	.018	.049	.157**	.028	-.034	.171**	.053	.644**	.019	.064	.093*	.214**	.283**	.043	-.025	.230**	.009	.014	.098*	.012

Note: * $p < .05$; ** $p < .01$; time 1 = _1; time 2 = _2; time 3 = _3; time 4 = _4; OGC: organizational commitment; OCC: occupational commitment; GS: global socialization; TKL: task learning; OGL: organizational learning; TML: team learning; TKI: task internalization; OGI: organizational internalization; TMI: team internalization; GNF: global need fulfilment; AF: autonomy fulfilment; CF: competence fulfilment; RF: relatedness fulfilment.

Table S6 (Continued 1)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
26. RF_2	.154**	.202**	.209**	.092*	-.014	.018	.031	-.081*	.094*	.002	.029	.132**	.597**	.229**	.247**	.316**	.183**	.043	.105**	.130**	-.100*	.095*	.094*	-.014
27. OGC_3	.704**	.296**	.404**	-.012	.008	-.074	.064	.145**	.125**	.292**	.220**	.059	.140**	.787**	.356**	.431**	-.050	.018	.013	.004	.198**	-.023	.385**	.132**
28. OCC_3	.318**	.819**	.320**	.101*	-.055	-.032	.232**	.015	.035	.266**	.174**	.147**	.213**	.351**	.845**	.376**	.107**	-.062	-.048	.192**	.032	.073	.344**	.136**
29. GS_3	.391**	.323**	.702**	.065	.009	-.175**	.086*	-.014	.015	.271**	.291**	.264**	.202**	.450**	.341**	.767**	.017	-.085*	.041	.064	-.071	-.035	.330**	.204**
30. TKL_3	.036	.122**	.143**	.385**	.011	.139**	.181**	.017	.085*	.177**	-.062	.169**	.141**	.009	.117**	.078**	.570**	.170**	.207**	.140**	-.126**	.010	.124**	.055
31. OGL_3	.081*	-.063	.123**	-.060	.613**	.235**	-.160**	.074	.005	-.008	.055	.074	.002	.092*	-.072	.127**	.007	.637**	-.088*	-.221**	.118**	-.149**	-.023	-.006
32. TML_3	.022	-.043	.153**	.170**	-.123**	.601**	-.216**	.147**	.161**	.061	-.036	.051	.020	.024	-.060	.033	.088*	-.154**	.424**	-.052	.078*	.251**	.037	-.012
33. TKI_3	.065	.266**	.109**	.091*	-.155**	-.052	.314**	.072	-.119**	.098*	.053	.100*	.152**	.021	.268**	.210**	.087*	-.181**	-.258**	.433**	-.026	.006	.115**	.119**
34. OGI_3	.164**	-.007	.049	-.124**	.107**	.119**	.053	.692**	.239**	.016	-.021	-.017	-.076	.239**	.024	.115**	-.149**	.136**	.101*	-.104**	.771**	.041	-.002	-.019
35. TMI_3	-.019	.038	-.119**	.124**	-.058	-.083*	-.017	.195**	.500**	.091*	-.096*	.012	.128**	.033	.106**	.018	.112**	-.007	.059	.214**	.181**	.609**	.132**	-.066
36. GNF_3	.298**	.259**	.259**	.163**	.005	-.033	.155**	.048	.110**	.738**	.096*	.109**	.089*	.310**	.259**	.256**	.094*	.034	-.005	.134**	.066	.119**	.817**	-.046
37. AF_3	.075	.126**	.182**	.027	-.069	-.062	.028	-.011	-.058	-.042	.640**	-.018	.062	.120**	.138**	.178**	.077	-.085*	-.009	.018	-.062	-.009	.080*	.767**
38. CF_3	.081*	.151**	.255**	.235**	.006	.047	.110**	.046	-.007	.325**	.002	.523**	-.009	.088*	.143**	.268**	.259**	.024	.012	.146**	-.023	.034	.232**	.027
39. RF_3	.187**	.239**	.238**	.054	-.045	.001	.067	-.036	.077	.054	.000	-.014	.712**	.249**	.296**	.317**	.148**	-.003	.038	.127**	-.075	.085*	.252**	.077
40. OGC_4	.692**	.316**	.395**	.010	-.022	-.049	.048	.152**	.132**	.253**	.221**	.056	.147**	.789**	.369**	.450**	-.062	-.003	.012	.027	.209**	-.035	.334**	.118**
41. OCC_4	.303**	.831**	.298**	.106**	-.021	-.038	.244**	.004	.032	.245**	.187**	.143**	.195**	.343**	.831**	.358**	.110**	-.049	-.053	.178**	.029	.043	.289**	.146**
42. GS_4	.380**	.269**	.681**	.071	-.037	-.008	-.029	.021	.022	.229**	.287**	.220**	.147**	.457**	.310**	.749**	-.005	.008	-.002	.043	.032	-.169**	.282**	.207**
43. TKL_4	-.031	.063	.008	.369**	-.018	-.247**	.238**	.017	.108**	.070	.020	.198**	.115**	-.049	.038	-.076	.449**	-.074	-.065	.312**	-.098*	.069	.075	.018
44. OGL_4	.058	-.049	.050	-.106**	.537**	.252**	-.057	.008	-.210**	-.039	.016	.076	.012	.062	-.062	.031	.096*	.488**	.051	-.294**	.055	-.154**	-.055	.039
45. TML_4	-.042	-.003	.036	.339**	.018	.435**	-.123**	.023	.045	.057	-.072	.079*	.043	.012	-.011	.101*	.196**	-.146**	.423**	-.218**	-.017	.265**	.054	.017
46. TKI_4	.076	.235**	.127**	.251**	-.047	-.014	.490**	-.089*	-.175**	.140**	.090*	.222**	.206**	.011	.240**	.185**	.290**	-.160**	.054	.405**	-.082*	.283**	.186**	.131**
47. OGI_4	.140**	.048	-.018	.094*	-.023	.073	.157**	.752**	.252**	.074	-.017	.082*	-.005	.245**	.085*	.164**	-.024	.056	.036	.080*	.740**	.228**	.091*	-.017
48. TMI_4	.044	.117**	-.035	.090*	-.065	-.081*	.102**	.218**	.315**	.049	-.010	.044	.094*	.062	.195**	.023	.050	-.112**	.225**	.090*	.173**	.428**	.097*	.017
49. GNF_4	.275**	.233**	.257**	.086*	-.018	-.023	.080*	.060	.108**	.698**	.093*	.033	-.078	.339**	.264**	.270**	.055	.007	-.012	.086*	.099*	.043	.814**	-.044

Note: * $p < .05$; ** $p < .01$; time 1 = _1; time 2 = _2; time 3 = _3; time 4 = _4; OGC: organizational commitment; OCC: occupational commitment; GS: global socialization; TKL: task learning; OGL: organizational learning; TML: team learning; TKI: task internalization; OGI: organizational internalization; TMI: team internalization; GNF: global need fulfilment; AF: autonomy fulfilment; CF: competence fulfilment; RF: relatedness fulfilment.; Raw scores correlations (which were not analyzed in this study) can be obtained upon request from the authors.

Table S6 (Continued 2)

	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
26. RF_2	0.073																							
27. OGC_3	0.047	.136**																						
28. OCC_3	.158**	.223**	.393**																					
29. GS_3	.224**	.284**	.504**	.378**																				
30. TKL_3	.252**	.126**	-0.007	.155**	0.046																			
31. OGL_3	0.065	0.047	0.057	-0.043	.082*	-0.024																		
32. TML_3	0.065	0.016	-0.043	-0.054	-0.036	.114**	0.060																	
33. TKI_3	.152**	.130**	-0.024	.264**	.086*	.096*	-.106**	-.101*																
34. OGI_3	-0.038	-.090*	.261**	0.009	0.046	-0.058	.148**	0.062	-0.028															
35. TMI_3	0.041	.182**	0.014	.093*	-0.020	-0.007	-.100*	0.057	0.062	-0.009														
36. GNF_3	.300**	-0.033	.407**	.310**	.303**	.146**	-0.020	0.007	0.033	0.022	.150**													
37. AF_3	-0.029	-0.014	.183**	.159**	.230**	0.012	-0.035	0.016	0.053	0.000	-.086*	0.063												
38. CF_3	.699**	.165**	0.030	.188**	.290**	.351**	0.056	.095*	.218**	-0.038	0.019	.206**	0.001											
39. RF_3	-0.055	.774**	.244**	.301**	.327**	.166**	0.000	-0.027	.145**	-0.065	.185**	.098*	0.047	0.049										
40. OGC_4	0.034	.146**	.880**	.380**	.472**	-0.017	0.029	-0.019	-0.004	.267**	-0.034	.312**	.138**	0.018	.208**									
41. OCC_4	.119**	.219**	.332**	.897**	.333**	.162**	-0.047	-0.075	.252**	0.020	0.071	.255**	.134**	.148**	.274**	.388**								
42. GS_4	.200**	.215**	.465**	.342**	.808**	0.054	.088*	-0.048	-0.015	0.066	-.197**	.264**	.197**	.233**	.236**	.526**	.340**							
43. TKL_4	.272**	.094*	-0.019	0.076	.143**	.465**	-0.066	-.115**	.175**	-.087*	.138**	.159**	-0.013	.270**	.114**	-0.015	.089*	0.023						
44. OGL_4	0.007	.080*	.083*	-0.026	.099*	.108**	.660**	-0.004	-.112**	.116**	-.208**	-0.046	0.030	0.047	0.028	0.020	-0.018	0.018	-0.063					
45. TML_4	0.073	0.033	-0.038	0.007	0.010	.325**	-.082*	.759**	-0.033	0.058	0.003	0.026	0.000	.155**	0.038	0.017	0.013	0.004	0.044	0.032				
46. TKI_4	.201**	.189**	0.024	.253**	.222**	.085*	-.276**	-.092*	.393**	-.232**	.151**	.153**	.093*	.177**	.183**	0.002	.194**	0.076	.165**	-.094*	0.008			
47. OGI_4	0.075	-0.021	.230**	.082*	0.055	-0.004	0.049	0.055	.123**	.801**	.237**	.091*	-0.018	0.058	-0.002	.246**	.089*	0.060	-0.010	-0.004	0.008	-.090*		
48. TMI_4	-0.039	.178**	.110**	.198**	.139**	0.055	-0.056	-0.003	.171**	.142**	.529**	.118**	0.040	0.025	.193**	.078*	.177**	0.019	0.047	-0.052	0.040	.135**	0.077	
49. GNF_4	.159**	-.085*	.375**	.278**	.290**	.088*	0.001	-0.018	0.055	0.067	0.065	.800**	0.001	.249**	0.037	.360**	.245**	.307**	.116**	-0.020	0.007	.083*	.090*	.122**

Note: * p < .05; ** p < .01; time 1 = _1; time 2 = _2; time 3 = _3; time 4 = _4; OGC: organizational commitment; OCC: occupational commitment; GS: global socialization; TKL: task learning; OGL: organizational learning; TML: team learning; TKI: task internalization; OGI: organizational internalization; TMI: team internalization; GNF: global need fulfilment; AF: autonomy fulfilment; CF: competence fulfilment; RF: relatedness fulfilment.

Table S6 (continued 3)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
50. AF_4	0.074	.171**	.134**	0.019	0.042	-.135**	.094*	-0.015	-.090*	-.115**	.658**	0.035	-0.051	.104**	.179**	.187**	0.036	-0.042	-0.035	0.074	-0.007	-0.045	0.028	.655**
51. CF_4	0.010	0.047	.135**	.286**	0.025	0.006	.160**	0.039	-0.072	.094*	-0.014	.747**	-0.037	0.056	0.050	.161**	.275**	0.042	0.043	.191**	-0.012	0.023	0.069	0.064
52. RF_4	.181**	.204**	.211**	0.067	-0.066	0.029	0.016	-0.076	0.062	-0.025	0.038	-.108**	.724**	.221**	.250**	.253**	.094*	-0.041	0.038	.119**	-0.070	0.043	.192**	0.039
53. ISA	.472**	.411**	.467**	0.070	-0.020	0.002	.196**	0.008	0.056	.403**	.255**	.207**	.233**	.553**	.468**	.522**	.098*	-0.019	0.027	.175**	0.032	0.011	.516**	.232**
54. SSA	.173**	.207**	.139**	0.028	-.090*	-0.055	0.079	0.079	0.039	.093*	.146**	0.058	0.024	.200**	.264**	.202**	0.008	-.083*	0.025	0.052	0.062	0.047	.212**	.118**
55. IPD	-.285**	-.247**	-.255**	-.121**	0.011	0.022	-.176**	-0.058	-0.065	-.574**	-.082*	-.203**	-0.017	-.283**	-.262**	-.232**	-.090*	-0.028	-0.004	-.119**	-0.067	-0.039	-.609**	-0.024
56. SPD	.293**	.221**	.252**	.104*	0.001	-0.017	.177**	0.049	0.062	.540**	0.069	.181**	0.029	.255**	.220**	.218**	0.079	0.041	0.009	.080*	0.047	0.067	.504**	0.041
57. IQC	.302**	.250**	.369**	0.045	-0.030	-0.027	.117**	0.043	-0.002	.289**	.238**	.184**	.105**	.328**	.252**	.441**	0.009	-.089*	0.036	.108**	0.021	0.057	.344**	.201**
58. SQC	-.172**	-.172**	-.212**	-0.059	-.097*	-0.001	-0.067	-0.006	-0.007	-.202**	-.131**	-.095*	-0.060	-.165**	-.145**	-.234**	0.007	0.036	-0.024	-0.015	-0.043	-0.076	-.206**	-.135**
59. ISO	-.145**	-0.076	-.126**	-0.061	-0.031	0.011	-.112**	-.090*	0.003	-.364**	-0.037	-.137**	0.035	-.152**	-.084*	-.145**	-.084*	-0.052	-0.063	-0.059	-.080*	0.008	-.391**	0.000
60. SSO	.084*	0.027	.113**	0.027	-0.001	-0.033	0.025	0.005	-0.001	0.030	0.023	.109**	0.053	0.004	0.012	.115**	0.019	-0.015	0.037	-0.077	-0.029	0.054	-0.079	-0.009

Note: * $p < .05$; ** $p < .01$; time 4 = _4. AF: autonomy fulfilment; CF: competence fulfilment; RF: relatedness fulfilment; ISA: work satisfaction intercept factor; SSA: work satisfaction slope factor; IPD: psychological distress intercept factor; SPD: psychological distress slope factor; IQC: quality of care intercept factor; SQC: quality of care slope factor; ISO: somatization intercept factor; SSO: somatization slope factor.

Table S6 (continued 4)

	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
50. AF_4	-.083*	-0.02	.141**	.154**	.214**	-0.05	0.04	-.129**	0.07	-0.01	-.097*	0.00	.587**	-.095*	-0.04	.165**	.178**	.257**	0.00	0.03	-.100*	.145**	-0.02	0.04
51. CF_4	.780**	.128**	0.05	.128**	.224**	.261**	0.05	0.07	.115**	-0.06	0.03	.241**	0.00	.680**	-.102*	0.02	.099*	.212**	.345**	0.06	.117**	.200**	0.03	0.04
52. RF_4	-.095*	.681**	.215**	.243**	.240**	0.06	-0.02	0.02	.101*	-.087*	.091*	.090*	.084*	-.138**	.754**	.253**	.230**	.254**	.105**	-0.01	0.06	.169**	-0.08	.132**
53. ISAT	.196**	.252**	.558**	.440**	.512**	.110**	0.00	0.02	.116**	0.05	0.02	.437**	.212**	.234**	.290**	.533**	.414**	.492**	0.04	-0.02	0.03	.224**	.093*	0.07
54. SSAT	0.07	0.00	.334**	.297**	.294**	0.01	-0.06	-0.08	0.05	0.07	-0.02	.229**	.176**	.093*	0.06	.394**	.293**	.326**	0.04	-0.08	-0.02	.158**	.089*	.140**
55. IPD	-.219**	0.04	-.276**	-.281**	-.256**	-.152**	0.01	-0.02	-.102*	-0.04	-0.03	-.603**	-0.03	-.286**	-0.02	-.241**	-.247**	-.239**	-.163**	0.02	-0.02	-.144**	-.092*	-0.02
56. SPD	.151**	-0.03	.215**	.199**	.202**	.149**	0.00	0.02	0.07	0.03	0.04	.474**	0.00	.218**	0.00	.177**	.174**	.185**	.131**	0.01	0.02	.122**	0.08	0.01
57. IQOC	.192**	.163**	.344**	.242**	.419**	0.01	-0.02	0.05	.126**	.084*	-0.03	.303**	.174**	.178**	.172**	.352**	.234**	.371**	0.00	-0.02	0.07	.196**	.093*	0.05
58. SQOC	-.139**	-.117**	-.182**	-.129**	-.164**	0.05	-0.04	-.102*	-.099*	-.084*	-0.02	-.178**	-0.06	-0.05	-0.07	-.158**	-.112**	-.091*	0.07	-0.03	-.094*	-.125**	-0.06	-0.01
59. ISOMA	-.123**	0.08	-.164**	-.084*	-.140**	-0.07	-0.02	-0.03	-0.07	-0.08	-0.01	-.392**	0.01	-.166**	0.05	-.109**	-0.07	-.109**	-0.04	-0.02	-0.01	-.095*	-.131**	0.02
60. SSOMA	-0.02	.087*	-0.04	-0.06	.094*	0.00	0.00	0.00	0.03	-0.01	0.05	-.117**	-0.07	0.03	0.02	-0.06	-0.05	0.05	-0.05	0.02	0.02	0.06	0.02	0.03

Note: * p < .05; ** p < .01; time 4 = _4. AF: autonomy fulfilment; CF: competence fulfilment; RF: relatedness fulfilment; ISAT: work satisfaction intercept factor; SSAT: work satisfaction slope factor; IPD: psychological distress intercept factor; SPD: psychological distress slope factor; IQOC: quality of care intercept factor; SQOC: quality of care slope factor; ISOMA: somatization intercept factor; SSOMA: somatization slope factor.

Tables S6 (continued 5)

	49	50	51	52	53	54	55	56	57	58	59
50. AS_4	0.02										
51. CS_4	.082*	0.013									
52. RS_4	0.01	-0.019	-0.070								
53. ISAT	.404**	.219**	.178**	.250**							
54. SSAT	.329**	.284**	0.077	.094*	.330**						
55. IPD	-.575**	-0.033	-.240**	0.023	-.461**	-.207**					
56. SPD	.401**	0.010	.179**	-0.044	.405**	0.005	-.894**				
57. IQOC	.278**	.178**	.166**	.145**	.491**	.251**	-.238**	.222**			
58. SQOC	-.114**	-0.033	-.092*	-.091*	-.251**	0.046	.140**	-.173**	-.605**		
59. ISOMA	-.366**	-0.048	-.134**	.102*	-.296**	-.159**	.578**	-.501**	-.158**	.115**	
60. SSOMA	-.216**	-0.024	0.024	-0.006	-0.007	-.221**	0.062	.158**	-0.023	-0.072	-0.032

Note: * $p < .05$; ** $p < .01$; time 4 = _4. AF: autonomy fulfilment; CF: competence fulfilment; RF: relatedness fulfilment; ISAT: work satisfaction intercept factor; SSAT: work satisfaction slope factor; IPD: psychological distress intercept factor; SPD: psychological distress slope factor; IQOC: quality of care intercept factor; SQOC: quality of care slope factor; ISOMA: somatization intercept factor; SSOMA: somatization slope factor.

Table S18
Scale Means and Variances for Study 3

	Mean	Var.		Mean	Var.		Mean	Var.
Occupational Commitment_T1	4.356	0.521	Org. Internalization_T4	4.644	1.882	Competence_T3	4.068	0.437
Occupational Commitment_T2	4.353	0.474	Team Learning_T1	5.401	1.155	Competence_T4	4.102	0.409
Occupational Commitment_T3	4.299	0.595	Team Learning_T2	5.399	1.111	Global Need Fulfilment_T1	3.870	0.341
Occupational Commitment_T4	4.260	0.612	Team Learning_T3	5.559	1.071	Global Need Fulfilment_T2	3.961	0.360
Org. Commitment_T1	3.629	0.679	Team Learning_T4	5.570	1.203	Global Need Fulfilment_T3	3.955	0.376
Org.Commitment_T2	3.686	0.627	Team Internalization_T1	5.310	1.363	Global Need Fulfilment_T4	3.997	0.378
Org. Commitment_T3	3.572	0.739	Team Internalization_T2	5.281	1.312	Quality of Care_T1	3.230	0.267
Org.Commitment_T4	3.616	0.675	Team Internalization_T3	5.359	1.501	Quality of Care_T2	3.281	0.211
Task Learning_T1	6.014	0.539	Team Internalization_T4	5.478	1.505	Quality of Care_T3	3.351	0.242
Task Learning_T2	6.028	0.567	Global Socialization_T1	5.336	0.721	Quality of Care_T4	3.304	0.277
Task Learning_T3	6.080	0.536	Global Socialization_T2	5.340	0.729	Psychological Distress_T1	1.969	0.602
Task Learning_T4	6.088	0.676	Global Socialization_T3	5.390	0.747	Psychological Distress_T2	1.918	0.569
Task Internalization_T1	5.671	0.818	Global Socialization_T4	5.399	0.794	Psychological Distress_T3	1.916	0.665
Task Internalization_T2	5.699	0.790	Relatedness_T1	4.124	0.495	Psychological Distress_T4	1.921	0.659
Task Internalization_T3	5.728	0.781	Relatedness_T2	4.183	0.489	Somatization_T1	2.600	0.823
Task Internalization_T4	5.745	0.866	Relatedness_T3	4.188	0.500	Somatization_T2	2.595	0.809
Org. Learning_T1	5.030	1.333	Relatedness_T4	4.218	0.531	Somatization_T3	2.437	0.891
Org. Learning_T2	5.060	1.414	Autonomy_T1	3.528	0.645	Somatization_T4	2.477	0.888
Org. Learning_T3	5.045	1.532	Autonomy_T2	3.645	0.687	Work Satisfaction_T1	4.313	1.422
Org. Learning_T4	4.998	1.436	Autonomy_T3	3.572	0.679	Work Satisfaction_T2	4.467	1.424
Org. Internalization_T1	4.708	1.677	Autonomy_T4	3.629	0.697	Work Satisfaction_T3	4.453	1.367
Org. Internalization_T2	4.652	1.581	Competence_T1	3.935	0.410	Work Satisfaction_T4	4.421	1.505
Org. Internalization_T3	4.689	1.718	Competence_T2	4.033	0.400			

Note: _T1-_T4: time 1 to time 4; Var: variance; Org.: Organizational; It is important to keep in mind that our main analyses relied on factor scores (M = 0 and SD = 1), so that these descriptives statistics are only provided to highlight the type of responses provided by the participants

Table S19

Test of Demographic Controls for Study 3 (Sex, Age, Part-Time vs Full-Time, Permanent vs Temporary, Education, and Organizational Tenure)

Model	*LL*	*#fp*	Scaling	AIC	CAIC	BIC	ABIC	Entropy
1. Null	-2796.069	24	1.004	5640.138	5771.363	5747.363	5671.164	.800
2. Effects on C	-2775.908	60	1.008	5671.815	5999.877	5939.877	5749.380	.805
3. Effects on C, I	-2766.728	72	1.112	5677.455	6071.130	5999.130	5770.533	.807
4. Effects on C, I, S	-2759.285	84	1.062	5686.570	6145.857	6061.857	5795.161	.809
5. Effects on C, I, S, Q	-2748.817	96	1.124	5689.634	6214.533	6118.533	5813.738	.810
6. Model 4 + C, I (var.), S				No Convergence				
7. Model 4 + C, I, S (var.)	-2703.563	156	1.1307	5719.126	6572.087	6416.087	5920.794	.810

Note. LL: Loglikelihood*; #*fp: Number of Free Parameters; Scaling = scaling factor; AIC: Akaïke Information Criteria; CAIC: Constant AIC; BIC: Bayesian Information Criteria; ABIC: Sample-Size adjusted BIC; C: Profile membership; I: Intercept factor; S: Slope factor; Q: Quadratic factor.
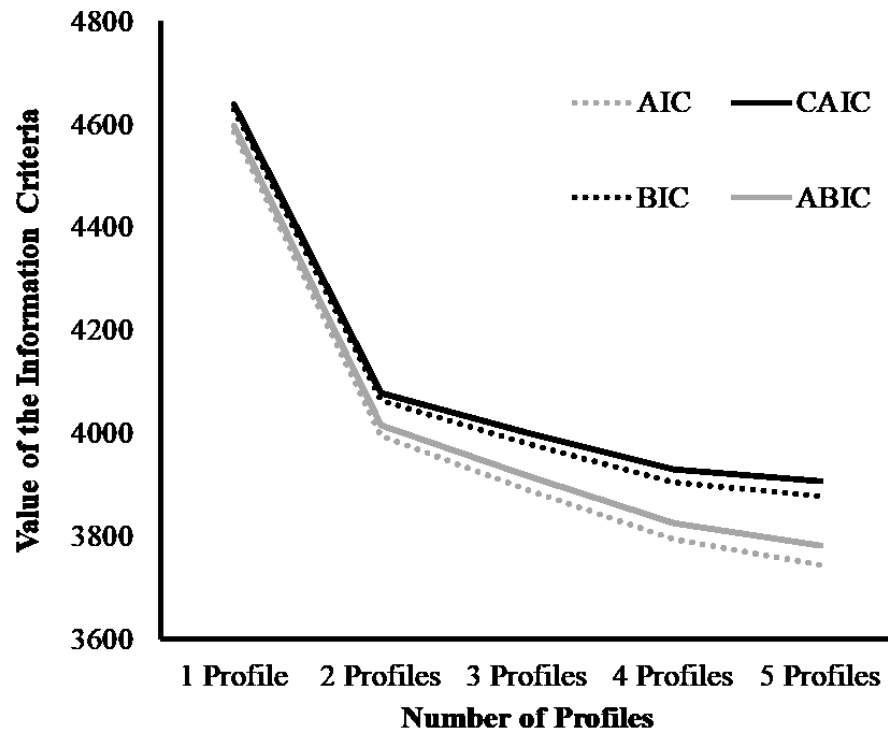
Figure S1. Elbow Plot for the Organizational Commitment Growth Mixture Analyses for Study 3
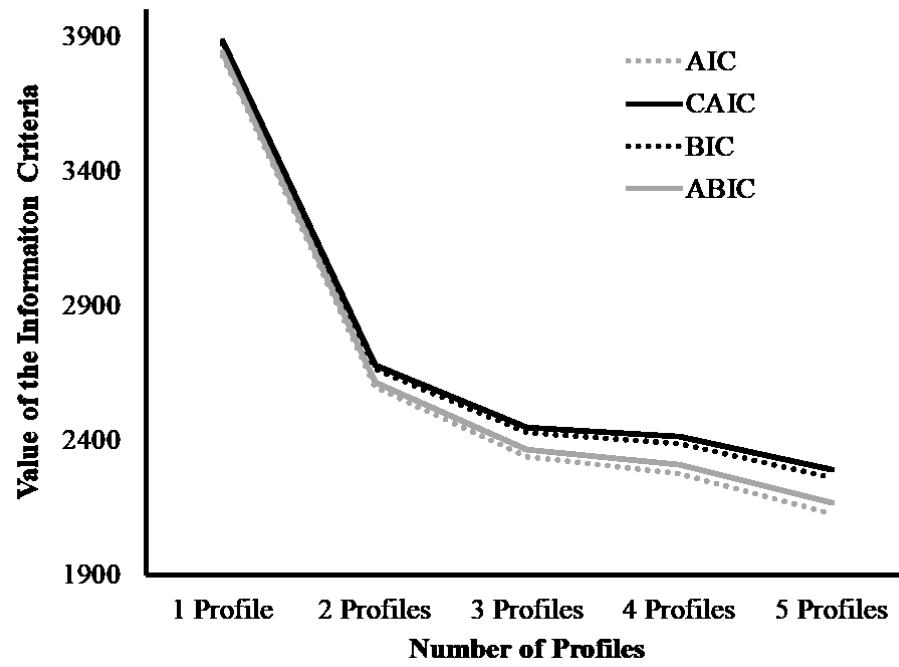
Figure S2. Elbow Plot for the Occupational Commitment Growth Mixture Analyses for Study 3

Table S20
Parameter Estimates for the Final Unconditional Growth Mixture Solutions for Study 3

Parameter	P1 (High) Estimate (*t*)	P2 (Moderately High) Estimate (*t*)	P3 (Low and Increasing) Estimate (*t*)	P4 (Average and Decreasing) Estimate (*t*)
Organizational Commitment				
Intercept mean	.334 (1.093)	.332 (2.801)**	-.678 (-2.211)*	-.221 (-.707)
Slope mean	.323 (1.678)	-.108 (-2.922)**	.457 (1.156)	-.462 (-3.308)**
Quadratic mean	-.047(-1.938)	.012 (2.718)**	-.068 (-1.611)	.061 (3.239)**
Intercept variability (SD = √σ)	.981 (6.763)**	.981 (6.763)**	.981 (6.763)**	.981 (6.763)**
Slope variability (SD = √σ)	.279 (2.719)**	.279 (2.719)**	.279 (2.719)**	.279 (2.719)**
Quadratic variability (SD = √σ)	.032(1.104)	.032 (1.104)	.032 (1.104)	.032 (1.104)
Intercept-slope correlation	-.266 (-5.746)**	-.266 (-5.746)**	-.266 (-5.746)**	-.266 (-5.746)**
Intercept-quadratic correlation	.027 (3.932)**	.027 (3.932)**	.027 (3.932)**	.027 (3.932)**
Slope-quadratic correlation	-.008 (-1.698)	-.008 (-1.698)	-.008 (-1.698)	-.008 (-1.698)
SD(εyi)_T1-T4	.259 (4.123)**	.114 (2.550)*	.623 (3.366)	.463 (2.581)**
Parameter	P1 (High) Estimate (*t*)	P2 (Average) Estimate (*t*)	P3 (Low and Increasing) Estimate (*t*)	P4 (Low and Decreasing) Estimate (*t*)
Occupational Commitment				
Intercept mean	. 718 (10.697)**	.179 (1.789)	-1.303 (-5.139)**	-.930 (-2.660)**
Slope mean	-.091 (-4.071)**	.025 (.380)	.286 (5.555)**	-.354 (-1.722)
Quadratic mean	.007 (1.912)	-.011 (-1.072)	-.028 (-4.313)**	.054 (1.764)
Intercept variability (SD = √σ)	.519 (3.444)**	.519 (3.444)**	.519 (3.444)**	.519 (3.444)**
Slope variability (SD = √σ)	.141 (2.123)*	.141 (2.123)*	.141 (2.123)*	.141 (2.123)*
Quadratic variability (SD = √σ)	.000 (1.716)	.000 (1.716)	.000 (1.716)	.000 (1.716)
Intercept-slope correlation	-.044 (-2.126)*	-.044 (-2.126)*	-.044 (-2.126)*	-.044 (-2.126)*
Intercept-quadratic correlation	.005 (1.830)	.005 (1.830)	.005 (1.830)	.005 (1.830)
Slope-quadratic correlation	-.003 (-1.930)	-.003 (-1.930)	-.003 (-1.930)	-.003 (-1.930)
SD(εyi)_T1-T4	.077 (4.123)**	.352 (2.550)*	.118 (3.366)	.706 (6.324)**

Note. * p ≤ .05; ** p ≤ .01; t = Estimate / standard error of the estimate (t values are computed from the original variance estimate and not from the square root); SD(εyi) = Standard deviation of the time-specific residual; The square root of the estimate of variability (trajectory factor, time-specific residual) is presented so that the results can be interpreted in the same unit as the construct used in the model (standardized factor score with M = 0 and SD = 1); P1: Profile 1; P2: Profile 2; P3: Profile 3; P4: Profile 4.

Table S21

Classification Probabilities: Most Likely Latent Class Membership (Column) by Latent Class (Row) for the Final Unconditional Growth Mixture Solutions for Study 3

Profile	High	Moderately High	Low and Increasing	Average and Decreasing
Organizational Commitment				
High	.832	.050	.115	.003
Moderately High	.053	.887	.033	.026
Low and Increasing	.074	.015	.802	.109
Average and Decreasing	.001	.020	.155	.825
Profile	High	Average	Low and Increasing	Low & Decreasing
Occupational Commitment				
High	.917	.068	.015	.000
Average	.028	.929	.012	.031
Low and Increasing	.072	.094	.805	.029
Low and Decreasing	.000	.067	.016	.918

Table S22

Transitions Probabilities from the Latent Transition Analysis across Organizational and Occupational Commitment Profiles for Study 3

Profile	Profile 1: High OrgC	Profile 2: Moderately High OrgC	Profile 3: Low and Increasing OrgC	Profile 4: Average and Decreasing OrgC
Profile 1: High OccC	.281	.496	.132	.091
Profile 2: Average OccC	.240	.097	.450	.213
Profile 3: Low and Increasing OccC	.021	.709	.055	.216
Profile 4: Low and Decreasing OccC	.051	.033	.330	.585

Note. OccC = Occupational Commitment; OrgC = Organizational Commitment.

Table S23

Associations between Profile Membership and the Outcome Trajectories for Study 3

Outcome		Profile 1 (High)	Profile 2 (Moderately High)	Profile 3 (Low and Increasing)	Profile 4 (Average and Decreasing)	Summary
			Organizational Commitment			
Work Satisfaction	Intercept	5.478	4.982	4.929	4.646	1>2=3>4
	Slope	.051	.035	.057	-.003	1=3>2>4
Quality of care	Intercept	3.320	3.105	3.082	2.973	1>2=3>4
	Slope	.043	.050	.053	.054	2=3=4>1
Psychological Distress	Intercept	1.687	1.853	2.125	2.033	3=4>2>1
	Slope	-.019	-.024	-.041	-.027	3>4>1; 3>2=4; 1=2
Somatization	Intercept	2.576	2.587	2.798	2.754	3=4>2; 3>1=2; 1=4
	Slope	-.093	-.088	-.116	-.076	3>1=2>4;

Outcome		Profile 1 (High)	Profile 2 (Average)	Profile 3 (Low and Increasing)	Profile 4 (Low and Decreasing)	Summary
			Occupational Commitment			
Work Satisfaction	Intercept	5.212	5.018	4.482	4.537	1>2>3=4
	Slope	.043	.037	.030	.003	1=2=3>4
Quality of care	Intercept	3.192	3.100	2.972	2.962	1>2>3=4
	Slope	.047	.052	.055	.054	2=3=4>1
Psychological Distress	Intercept	1.772	1.896	2.317	2.204	3=4>2>1
	Slope	-.021	-.027	-.047	-.035	3=4>2>1
Somatization	Intercept	2.545	2.751	2.884	2.711	2=3>1; 2=3=4; 1=4
	Slope	-.092	-.094	-.100	-.083	1=2=3=4