Working in the “New Normal”: Exploring the Link Between Hybrid Work and Need Fulfillment

Nickolas Kisil

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By: Nickolas Kisil

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Signed by the final examining committee:

_____ Chair

Dr. Linda Dyer

_____ Examiner

Dr. Alex Lefter

_____ Examiner

Dr. Steven Granger

_____ Thesis Supervisor

Dr. Tracy Hecht

Approved by:

_____ Graduate Program Director

Dr. Linda Dyer

_____ Dean

Dr. Anne-Marie Croteau

ABSTRACT

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Nickolas Kisil

This study investigated the mechanisms through which daily work modalities (i.e., work-from-home (WFH) and office-based work) influence daily fulfillment of employees' basic psychological needs. Grounded in Self-Determination Theory (SDT), I hypothesized that daily fulfillment of the needs for autonomy and competence is higher on days when an employee is in the WFH modality than on days when they are in the office modality, and that daily fulfillment of the need for relatedness is higher for days in the office modality than for days in the WFH modality. I further hypothesized that perceived monitoring, perceived locational autonomy, workplace interruptions, and social interactions are mechanisms through which these effects occur. I also proposed that shared modality prevalence (the extent to which colleagues share the same daily work modality) moderates the effects of daily work modality on these mechanisms. A longitudinal daily diary methodology was employed to capture within-person variability and to examine how differences in work modalities affect need satisfaction at the within-individual level. Survey data were collected from 142 participants over five workdays (N = 655 observations). A multilevel modeling approach was used to test hypotheses, accounting for both within-person and between-person variability. In line with my hypotheses, I found that the WFH modality was associated with enhanced fulfillment of the need for autonomy, mediated by reduced perceived monitoring and increased perceived locational autonomy. I also found that the office modality was associated with enhanced fulfillment of the need for relatedness, mediated by positive social interactions. In contrast to my hypotheses, no significant effects of work

modality on fulfillment of the need for competence were found. This research advances the application of SDT to hybrid work environments, contributing to the literature on the impact of daily work modalities on psychological need satisfaction. It also establishes a foundation for future studies to investigate the nuanced effects of hybrid work arrangements on employee motivation. The practical implications of these findings are noteworthy. Organizations can enhance employee motivation by offering flexibility in work location and minimizing surveillance practices, thereby fostering a sense of autonomy. A balanced hybrid work model that combines flexible WFH options with coordinated, mandatory in-office days is recommended. This approach ensures that employees can enjoy the autonomy benefits of working from home while still reaping the social and relational advantages of in-person interactions, thereby optimizing both individual well-being and organizational cohesion.

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INTRODUCTION

Work motivation has been defined as "a set of energetic forces that originate both within as well as beyond an individual's being, to initiate work-related behavior, and to determine its form, direction, intensity, and duration" (Pinder 2014, p. 11). It is essential in establishing how individuals allocate their resources to pursue goals and attain valued outcomes (Warr & Inceoglu, 2012). When individuals are motivated, they engage in proactive and sustained efforts towards their tasks, leading to higher levels of performance (Diefendorff & Chandler, 2011). Motivation drives not only individual performance but has been found to drive team dynamics and collective performance as well, as motivated employees tend to better support their team members (Jungert et al., 2021). Resultingly, work motivation is recognized as a pivotal catalyst in optimizing human capital, as a heightened level of motivation at both individual and team levels contributes to the overall effectiveness of organizations, ultimately leading to competitive advantage and organizational success (Bohórquez et al., 2021; Campbell & Kryscynski, 2012). This study aims to explore how hybrid work arrangements influence the fulfilment of basic psychological needs, thereby affecting work motivation within contemporary organizations.

Among theories of motivation, few have received as much scholarly attention as the empirically derived self-determination theory (SDT, Ryan & Deci, 2000; Van den Broeck et al. 2016). SDT contends that there are three universal basic psychological needs that are fundamental for healthy human development and functioning: the need for autonomy, the need for competence, and the need for relatedness (Ryan & Deci, 2020). The need for autonomy represents the need to self-regulate actions and decisions according to one's own values (Ryan & Deci, 2017; Sheldon et al., 2001). The need for competence refers to the need to feel effective by obtaining desired outcomes and developing mastery (Deci et al., 2001; Ryan & Deci, 2017). The need for relatedness

refers to the need of feeling socially connected to others and feeling a sense of belongingness (Ryan & Deci, 2017; Ryan & Deci, 2020).

In the context of work and organizations, when an individual experiences fulfillment of the three basic psychological needs, studies have shown that this leads to a multitude of benefits critical to organizations and the individuals that work within them, such as increased engagement (e.g., Grouzet et al., 2004; Meyer & Gagné, 2008; Ni et al., 2023), innovation (e.g., Devloo et al., 2015), well-being (e.g., Kanfer et al., 2017; Van den Broeck et al. 2016), performance (e.g., Shuck et al., 2015), and overall job satisfaction (e.g., Huyghebaert-Zouaghi et al., 2020). Despite acknowledging the crucial role of work motivation as a catalyst for individual and organizational success, the ability to develop and maintain a motivated workforce remains a major challenge in contemporary organizations (Kanfer et al., 2008). This challenge has traditionally been associated with the complex nature of work motivation, and it is now being compounded by the rapidly evolving dynamics of the modern workplace, including changes to where people work (Hensher et al., 2022; Smite et al., 2023).

In March 2020, the traditional workplace was turned upside-down due to the COVID-19 pandemic. Seemingly overnight, business shutdowns were mandated across the world and many companies were left with no choice but to implement mandatory work-from-home in a very limited time frame, removing the office as a workplace for many "non-essential" employees (Delfino & Van Der Kolk, 2021; Kniffin et al., 2021). In 2024, now that COVID-19 is no longer classified as a global health emergency and we have begun to emerge from the unprecedented set of circumstances precipitated by this global event, some scholars have argued that the fundamental principles of the workplace have been forever changed (e.g., Hensher et al., 2022; Smite et al., 2023). One such change can be seen in organizational return-to-office strategies in which

organizations have re-opened their doors and are encouraging, or requiring, employees to return to the office. This return, however, is not to the "old normal" in which all employees worked at the office all the time. Rather, the "new normal" to which many employees have returned is one that entails working some days at the office and other days at home, recently popularized under the label of a "hybrid" work arrangement (Appel-Meulenbroek et al., 2022).

Hybrid work arrangements have gained popularity amongst both employees and employers. Recent studies have found that approximately 70% of organizations are currently engaging in some form of hybrid work arrangement, with employees generally working 2-3 days per week at home (Acoba et al., 2022), and that hybrid work is presently the most desired job configuration amongst eligible employees (Adamovic, 2022; Aksoy et al., 2023). These arrangements have critical implications for motivation, as work motivation theorists have emphasized the workplace (e.g., the physical office building) as the epicenter of working conditions that influence individual work motivation (Kanfer et al., 2008). Considering the monumental shift in the workplace due to the implementation of hybrid work arrangements, which see employees regularly transitioning between the office and remote workplaces, it remains unclear how these changes in work location may impact the fulfillment of an individual's basic psychological needs.

In this research, I investigated relations between different work modalities that occur in hybrid work environments and need satisfactions that are foundational to motivation (see Figure 1). Specifically, I adopted the lens of SDT (Deci & Ryan, 1985; Ryan & Deci 2000) to examine how hybrid working arrangements may affect individual need satisfaction at the within-person level. SDT posits that every individual possesses basic psychological needs, and that the fulfillment of those needs varies within each individual and across different contexts (Gerdenitsch,

2017). SDT was chosen because it addresses the interplay between basic psychological needs and external social conditions in influencing motivation (Deci & Ryan, 1985; Ryan & Deci 2000; Van Lange et al., 2011). As such, I investigated the relation between work modality, characterized as either working in the office or working from home, and the fulfillment of each of the basic psychological needs for autonomy, competence, and relatedness, as well as several mechanisms through which work modality may support or hinder need fulfillment.

With regard to autonomy, I investigated the relation between an individual's work modality and the fulfillment of their need for autonomy. Work-from-home, hereafter referred to as WFH, has traditionally been associated with increased autonomy due to fewer temporal and spatial limitations as well as a greater sense of self-regulation over the execution of one's tasks (Gajendran & Harrison, 2007; Gerdenitsch, 2017). However, scholars have also contended that, as the prevalence of WFH increases, organizations may establish more rigid monitoring procedures (e.g., surveillance software) to ensure that employees are continuing to work efficiently, which could, in turn, reduce the employees' sense of control (Sewell & Taskin, 2015; Waizenegger et al., 2020). Resultingly, the extent to which WFH will continue to be the environment that best supports an individual's fulfillment of the need for autonomy warrants further investigation.

With regard to competence, I investigated the relation between an individual's work modality and the fulfillment of their need for competence. WFH has traditionally been associated with increased feelings of competence due to employees escaping the interruptions of the office (e.g., Bailey & Kurland 2002; Gajendran & Harrison, 2007; Golden, 2007). However, scholars have also contended that, as innovations in the information and communication technology sphere have enabled employees to remain connected to the office regardless of spatial location (Charalampous et al., 2019), working-from-home may no longer be the quiet,

uninterrupted workplace that it was in the past. Thus, the extent to which WFH will continue to be the environment that best supports an individual's fulfillment of the need for competence also warrants more study.

With regard to relatedness, I investigated the relation between an individual's work modality and the fulfillment of their need for relatedness. WFH has traditionally been associated with social isolation (e.g., Morganson et al., 2010) due to a lack of interpersonal interactions with colleagues for employees who are not present at the office (Whittle & Mueller, 2009). This is because the office has historically served as a hub for interactions between co-workers where they can satisfy their social needs (Windeler et al., 2017). However, scholars have also contended that, as office attendance is no longer mandatory, offices have become emptier with less frequent interactions (Appel-Meulenbroek, 2022), and they have also noted that technological innovation has led to significant improvements in virtual interactions amongst employees (Gifford, 2022; Leroy et al., 2021). Thus, the extent to which WFH will continue to be the environment that is less supportive of an individual's fulfillment of the need for relatedness also warrants further attention.

Finally, I investigated shared modality prevalence as a potential moderator. As noted above, hybrid work arrangements typically offer employees the flexibility to choose their work modality, whether in the office or WFH. This flexibility has the potential to lead to variability in shared work modality among colleagues on any given day. In other words, on some days, individuals may be working in the same modality as the majority of their coworkers (e.g., I go to the office and the rest of my team is also at the office that day, or I work from home and the majority of my colleagues are also working from home that day; high shared modality prevalence), whereas on other days, individuals may be working in a different modality from the majority of

their colleagues (e.g., I'm working from home today, but all of my colleagues went to the office, or I'm working at the office today, but everyone else stayed at home; low shared modality prevalence).

I propose that this variability in the extent to which individuals work in the same or different work modality from the majority of their colleagues could affect the relations between work modality and need fulfillments. More specifically, being the sole individual engaging in WFH or work in the office, while the rest of the team is in the contrasting work modality, may alter the extent to which work modality affects mechanisms such as interruptions, channels of communication, interactions, and the flow of information. For instance, higher shared modality prevalence may enhance an individual's involvement with colleagues due to the ease of access inherent in working in the same modality, but might additionally increase interruptions due to being more accessible. Conversely, lower shared modality prevalence may lead to feelings of isolation, but might also allow individuals to work with fewer interruptions. Consequently, I contend that this variation in shared modality among co-workers moderates the relations between work modality and interruptions as well as interactions, which, in turn, affect satisfaction of the needs for competence and relatedness.

I utilized a daily diary survey, with individuals surveyed once per day close to the end of their workday, to capture the impact of work modality on basic psychological need satisfaction at a within-person level of analysis. By employing a within-person approach to capture the nuances in employee need satisfaction stemming from hybrid work arrangements, I intended to contribute to the literature on self-determination theory. Currently, there is a gap in the literature regarding the dynamics of need fulfillment in hybrid work environments, particularly in relation to whether the (same) individual is working from home or in the office (Brunelle & Fortin, 2021).

Accordingly, my research makes several key contributions. Firstly, by examining the mechanisms through which hybrid work arrangements influence the fulfillment of basic psychological needs, this study extends the application of SDT to modern and evolving work environments. Secondly, the use of a within-person approach allows for the capture of nuanced variations in need satisfaction on a daily basis, providing a more granular understanding of how contextual factors influence the motivational process at an individual level. Thirdly, I provide managers and organizational decision-makers with evidence-based insights into how to best support their employees' needs, which should help organizations to develop and maintain a motivated workforce in the context of hybrid work. Hopefully, this will help contemporary organizations that are struggling to determine how to structure their hybrid work policies.

THEORETICAL BACKGROUND

Self-Determination Theory

Self-determination theory is a theory of human motivation with a particular interest in how socio-contextual factors either support or hinder human flourishing through the satisfaction of basic psychological needs (Ryan & Deci, 2017). Rather than simply viewing motivation as a unitary phenomenon, self-determination theory explicitly differentiates distinct types of motivation organized along a continuum of self-determination (autonomy-control continuum; Deci et al. 2017; Ryan & Deci, 2000). According to the continuum, amotivation is the least motivated state, in which an individual experiences a complete absence of motivation or intention. The next state is extrinsic motivation, in which individuals are externally driven to obtain rewards or avoid undesirable consequences. Finally, the last state is intrinsic motivation, which represents the greatest state of self-determination, in which individuals are genuinely interested and enjoy activities which they deem internally rewarding (Deci & Ryan, 2008; Ryan & Deci, 2000).

According to Ryan and Deci (2017), where an individual falls along the continuum of self-determination is dependent on the fulfillment of their basic psychological needs. When all three of the basic psychological needs (autonomy, competence, and relatedness) are met, an individual is most likely to experience high levels of intrinsic motivation. Conversely, failure to fulfill basic psychological needs is generally met with an individual having low levels of intrinsic motivation and becoming more reliant on external factors, which generally leads to states of extrinsic motivation or even amotivation.

According to Ryan and Deci (2017), the three basic psychological needs for autonomy, competence, and relatedness are either supported or hindered because of social contexts. Social contexts can include homes, classrooms, workplaces, and any other environments that have the potential to impact motivational regulation because of their characteristics. Resultingly, social contexts can be characterized in terms of the extent to which they are: (1) autonomy supportive, (2) competence supportive, and (3) relatedness supportive. An autonomy supportive environment is one that supports an individual's sense of choice and encourages self-regulation according to an individual's preferences. In the workplace, this could manifest through the provision of greater decision-making authority over how and when work tasks are completed throughout a workday, as opposed to requiring that work tasks be completed according to a strict procedure and in a particular order (Moreau & Mageau, 2012; Rigby & Ryan, 2018; Ryan, & Deci, 2017). A competence supportive environment is one that fosters an individual's sense of efficacy and mastery, typically through the provision of structure. In the workplace, this may entail providing clear expectations and guidance about how to achieve them, as opposed to providing inconsistent standards that can lead to discouragement (Jang et al., 2010; Ryan & Deci, 2017). Finally, a relatedness supportive environment is one that provides an individual with a sense of authentic

interest and caring involvement from others. In the workplace, this can manifest through mechanisms such as active listening and feeling heard, as opposed to being in an impersonal environment where one's attempts at interaction are routinely rejected (Ryan & Deci, 2017; Slemp et al., 2021).

Generally speaking, the importance of social contexts, such as a workplace, in self-determination theory lies in the extent to which those social contexts support or hinder the fulfillment of basic psychological needs (Gerdenitsch, 2017; Kanfer et al., 2017; Ryan & Deci, 2017). Consistent with Gagné et al. (2022), whose review leveraged SDT to explain how hybrid work arrangements are work contexts that impact need satisfaction, I contend that hybrid work arrangements, which see employees transitioning between the office and remote workplaces, constitute social contexts capable of influencing need satisfaction. Furthermore, given that social contexts are dynamic in nature, their resulting impact on the fulfillment of basic psychological needs can fluctuate within persons over time (Ryan & Deci, 2017). According to a recent review by Coxen et al. (2021), the fulfillment of basic psychological needs has been found to demonstrate substantial within-person variation and to be dynamic on a daily basis in a work context. Coxen et al. proposed that measuring need satisfaction on a daily basis and collecting data close to the event, as opposed to collecting data on a weekly basis, may improve validity of findings as it reduces dependence on participant's recall bias and instead utilizes a participant's experienced-self. In alignment with the recommendations of Coxen et al., this study employed daily diary surveys administered at the end of each workday to minimize recall bias and enhance the validity of the findings. This approach was utilized to capture real-time need fulfillment, which prior research has identified as a fundamental driver of motivation, which, in turn, significantly influences performance (Diefendorff & Chandler, 2011).

Hybrid Work: The evolution of WFH

Inspired by the idea of "moving the work to the workers, instead of moving the workers to work," the concept of telecommuting was first conceptualized as an alternative to physical commuting (Nilles, 1976, p. 87). Telecommuting has since been defined as "an alternative work arrangement in which employees perform tasks elsewhere, that are normally done in a primary or central workplace, for at least some portion of their work schedule, using electronic media to interact with others inside and outside the organization" (Gajendran & Harrison, 2007, p.1525). The terms telecommuting, WFH, telework, and remote work are often used interchangeably (Adamovic, 2022; Athanasiadou & Theriou, 2021). Telecommuting was originally made possible by the increased availability of sophisticated communication and computational technology; it facilitated organizational decentralization and enabled multiple societal benefits, including reduced commute time, reduced pollution, and increased diversity in the labor force (Nilles, 1975).

In the almost half-century since its inception, telecommuting, hereafter referred to as WFH, has continued to be heavily driven by innovations in the information and communication technology (ICT) sphere, which have made working away from a centralized office more feasible than ever before (Gifford, 2022). It is worth noting that WFH falls under the umbrella of flexible work arrangements, which are work practices that allow employees to choose when and where they work, and are often implemented to facilitate employees' work-life balance (Allen et al., 2013). WFH has generated a high degree of scholarly interest in a variety of disciplinary domains including but not limited to economics, family studies, human resources, management, psychology, and most recently the health sciences (see Bailey & Kurland, 2002; Gajendran et al., 2007; Athanasiadou & Theriou, 2021 for reviews). However, prior to the Covid-

19 pandemic, WFH had only accounted for approximately five percent of paid work hours in the United States of America (Barrero et al., 2021).

Halford (2005) was the first to coin the term "hybrid work," which was used to explain the spatial hybridity of employees who combined both homeworking and office working. The concept of hybrid work, however, is not a new phenomenon, despite the term only recently gaining widespread popularity (Appel-Meulenbroek, 2022). In reality, hybrid work is simply a standard WFH arrangement with varying degrees of intensity along the spectrum of low-intensity to high-intensity WFH. The importance of considering WFH intensity is well established in the literature (Urien, 2023). In their review, Gajendran and Harrison (2007) established parameters for WFH intensity under two categories, (1) high-intensity, which was deemed as working remotely 2.5 or more days per week, and (2) low-intensity, which was deemed as working remotely fewer than 2.5 days per week. Furthermore, Gajendran and Harrison emphasized that the outcomes of WFH arrangements, whether high-intensity or low-intensity, vary based on an individual's level of commitment to the work arrangement (Gajendran & Harrison, 2007).

Recent studies have linked WFH intensity to a variety of individual outcomes. For example, Nagata et al. (2021) found that high-intensity WFH led to feelings of increased discretion over work tasks, and Alfanza (2021) found that it contributed to feelings of isolation and reduced interaction quality, which they attributed to a lack of physical presence with co-workers. These findings further underline that one's workplace, the office or working from home, can play an important role in one's work experience. I contend that this can be partially explained from the lens of self-determination theory.

Although prior research has demonstrated the importance of one's workplace in relation to need satisfaction (e.g., Brunelle & Fortin, 2021; Philippe & Vallerand, 2008; Schade et al., 2021),

there is little research exploring within-person variation that occurs when examining a situation in which employees are working at the office a few days per week and from home a few days per week (i.e., have low levels of telework intensity). I contend that further examination into the within-individual experience of working in a hybrid work environment, and the various contextual factors that manifest as a result, can contribute to the establishment of a more comprehensive understanding of hybrid work arrangements and their implications for the fulfillment of basic psychological needs that ultimately impact motivation.

This is important because much past research has been based on the assumption that WFH was occurring as a result of being requested by individual employees (Henke et al. 2016), was a form of entitlement/privilege for select employees (Bloom et al., 2009; Lautsch & Kossek, 2011, Morganson et al., 2010), was mainly reserved for high-skilled professional knowledge workers (Morikawa, 2020; Vilhelmson & Thulin, 2016), and was generally only sought out by individuals with a high need for flexibility (Spreitzer et al. 2017). However, as hybrid work has gained more prominence and become more accessible to a larger number and more types of employees (e.g., Acoba et al., 2022; Adamovic, 2022; Appel-Meulenbroek, 2022; Barrero et al., 2023; Marzban et al., 2021), questions have arisen about whether past findings, which primarily investigated the impact of traditional WFH setups, where employees would generally work remotely without regular physical presence in the office, are generalizable to the current situation of hybrid work (see Kniffin et al., 2021, for a review).

In this research, I compare two work modalities that occur when working in a hybrid arrangement: WFH days and office days. WFH days consist of employees working from a remote location, typically their primary residence. Office days consist of employees being physically present at a centralized office location.

Work Modality and Fulfillment of the Need for Autonomy

In their meta-analysis exploring consequences of WFH on individuals, Gajendran and Harrison (2007) found evidence that WFH was positively related to one's feelings of psychological control and autonomy. According to Gajendran and Harrison (2007), this was likely due to increased feelings of control that individuals have over their work tasks and their overall work environment (e.g., layout, clothing, lighting, music, etc.) while working from home. Gajendran and Harrison (2007) also found that WFH intensity did not moderate the effects of WFH on perceived autonomy, which suggests that increased frequency of WFH does not accentuate the perceived autonomy gained from this work arrangement (Gajendran & Harrison, 2007).

Following Gajendran and Harrison's (2007) review, O'Neill et al. (2009) assessed the fulfillment of the need for autonomy in teleworkers vs non-teleworkers. According to their findings, teleworkers reported experiencing higher job autonomy than non-teleworkers. O'Neill et al. suggested that this greater perception of job autonomy could be attributed to the teleworking environment offering individuals more flexibility over their work schedules, as well as the opportunity to work under less direct supervision than their office-bound colleagues. Similarly, in a study conducted to explore the differing dimensions of job autonomy in the workplace, De Spiegelaere et al. (2016) found evidence of two dimensions of autonomy that could influence an individual's satisfaction of the need for autonomy and that were related to positive individual outcomes: (1) work method autonomy, referring to the amount of freedom an employee has as it relates to how their work is performed, and (2) locational autonomy, referring to the amount of freedom an employee has over where they work. The results of their study indicated that both work method autonomy and locational autonomy are relevant factors in an employee's perception

of overall job autonomy. Similarly, Metselaar & Vermeeren (2023) found a significant positive correlation between working from home and increased feelings of autonomy, which they attributed to greater control over work in the home environment.

The findings of Gajendran and Harrison's (2007) review, as well as these recent studies, are relevant to the context of hybrid work arrangements because they provide evidence that an individual's ability to self-regulate in the workplace has greater importance than an individual's ability to choose their workplace with respect to fulfillment of the need for autonomy. In the context of hybrid work arrangements, this suggests that employees are likely to perceive greater autonomy while working from home than while working in the office as a result of being in an environment where they are under less external pressure to act in a particular way. In opposition to this, several scholars have theorized that WFH may reduce an individual's perception of autonomy due to increasingly prevalent forms of remote electronic surveillance (e.g., Ambrose & Adler, 2000; Sewell & Taskin, 2015).

Considering all this, it seems reasonable to suggest that exploring within-person variation in work modality may shed light on the extent to which WFH is associated with increased fulfillment of the need for autonomy as compared to office days. Biron & Van Veldhoven (2016) conducted such a study, utilizing a daily diary survey for six working days to capture the within-individual differences of working at home and at the office to determine feelings of control and accountability of employees. The results of their study indicated that individuals experienced improved motivational outcomes on days when they worked from home than on days when they worked from the office. Specifically, they found that the increased worktime control afforded by the flexibility of work location led to better focus and less exhaustion, highlighting the positive impact of control over one's work environment on overall work experience.

Overall, these findings, along with SDT, suggest that an individual's daily work modality will have an impact on daily satisfaction of the need for autonomy, and that days on which individuals are in the WFH modality should provide individuals with an enhanced sense of control over their work processes than days on which individuals are in the office modality. Therefore, I hypothesize that:

Hypothesis 1: On days when an employee is in the WFH modality, they will report a greater fulfillment of the need for autonomy than on days when they are in the office modality.

Work Modality and Fulfillment of the Need for Competence

According to Halford's (2005) research on hybrid work arrangements, hybrid employees reclassified their work tasks into two streams: an office stream and a home stream. According to Halford (2005), this was done to take advantage of the undisturbed nature of WFH and to enjoy the collaborative nature of the office. This evidence suggests that employees may adapt their work modality to fit the requirements of their work activities. Similarly, Gerdenitsch (2017) identified in their review that when employees have the flexibility to choose where they work based on what they need to do, they often feel more capable, which can lead to increased fulfillment of the need for competence. To elaborate, Gerdenitsch (2017) suggested that employees who have more control over their physical and digital work environments are likely to work more efficiently and more effectively. A recent study conducted by Brunelle & Fortin (2021) that compared the job satisfaction of office employees and WFH employees through the lens of SDT found that employees in the WFH modality experienced greater satisfaction of their need for competence than office-based workers. Brunelle and Fortin (2021) suggested that some potential contributors to this were the time saved from commuting and fewer disruptions experienced by WFH employees.

Overall, these findings suggest that an individual's daily work modality will have an impact on daily satisfaction of the need for competence, and that days on which individuals are in the WFH modality should provide individuals with an enhanced sense of efficacy than days on which individuals are in the office modality. Therefore, I hypothesize that:

Hypothesis 2: On days when an employee is in the WFH modality, they will report a greater fulfillment of the need for competence than on days when they are in the office modality.

Work Modality and Fulfillment of the Need for Relatedness

According to Gerdenitsch (2017), in the context of work, individuals generally have their need for relatedness satisfied through the social support provided by colleagues and supervisors. Traditionally, individuals who are working from home are away from the central office and thereby away from their colleagues, which historically has been attributed to feelings of social isolation and reduced co-worker relationship quality (see Athanasiadou & Theriou, 2021, for a review). However, the current reality of hybrid work arrangements is that the office is no longer the bustling social hub that it once was, and this raises questions regarding its ability to satisfy an individual's need for relatedness. Recent evidence from Brunelle and Fortin (2021) found that WFH better satisfied the need for relatedness than working in office. This may seem counterintuitive, but Brunelle and Fortin (2021) suggested that WFH employees experienced a higher fulfillment of relatedness needs than their office counterparts due to technology that allowed for quicker and easier communication, as well as organizational practices that allowed WFH employees to interact with colleagues at a frequency and intensity more in line with their own needs. These results were reinforced by a recent review conducted by Gagné et al. (2022), regarding SDT and the future of work. In their review, Gagné et al. (2022) suggested that individuals in hybrid work arrangements may be able to meet their relatedness needs while

working from home if they are provided the opportunity for virtual connection through means such as "virtual coffee breaks." However, Gagné et al. (2022) emphasized that increasingly interacting with virtual systems rather than people may hinder an individual's ability to fulfill their need for relatedness, and that office opportunities still present the best way to develop connections with colleagues.

Overall, these findings, along with SDT, suggest that an individual's daily work modality will have an impact on daily satisfaction of the need for relatedness, and that days on which individuals are in the office modality should provide individuals with more opportunities to connect with their peers than days on which individuals are in the WFH modality. Therefore, I hypothesize that:

Hypothesis 3: On days when an employee is in the office modality, they will report a greater fulfillment of the need for relatedness than on days when they are in the WFH modality.

The Role of Perceived Monitoring

Monitoring, alternatively referred to as surveillance, has been defined as "the technique used by organizations to monitor and supervise employee work; it comprises a number of forms, including close supervision and electronic performance monitoring" (Jensen & Raver, 2012, p. 312). Evidence suggests that surveillance diminishes employees' perceptions of autonomy. For instance, Jensen & Raver (2012) found a significant reduction in perceived autonomy among employees who perceived greater surveillance. This finding was corroborated by Sewell & Taskin (2015), who found that employees under surveillance often felt pressured to demonstrate their presence, which negatively impacted their sense of autonomy. Gerdenitsch (2017) further supported this in their review, finding that employees' perceptions of being monitored hindered the fulfillment of their need for autonomy.

In accordance with Ryan and Deci's (2017) conceptualization of an autonomy-supportive environment, employees who feel pressured to act in a certain way due to being monitored are likely to experience a diminished sense of choice and self-regulation, ultimately hindering the fulfillment of their need for autonomy. Consequently, I contend that higher levels of perceived monitoring will negatively impact employees' fulfillment of their need for autonomy.

Traditionally, WFH arrangements have been associated with reduced perceptions of monitoring and, in turn, increased feelings of autonomy (see Bailey & Kurland, 2002; Gajendran et al., 2007; Athanasiadou & Theriou, 2021 for reviews). However, more recently, Gagné et al. (2022) identified that organizations may be undermining the autonomy benefits that employees gain from WFH by implementing electronic performance monitoring practices, such as through surveillance of computer and phone usage. Contrary to this, Brunelle & Fortin (2021) found that employees engaging in WFH still experienced greater satisfaction of their need for autonomy, and provided evidence that this was due to working away from immediate managerial supervision. The comparatively smaller impact of electronic monitoring on autonomy, relative to the impact of direct supervision, may be partially explained by Vitak and Zimmer (2023). They found that employees generally accepted work-related electronic monitoring as long as it pertained to their work and was perceived as non-invasive, though perceptions of what constituted acceptable and non-invasive electronic monitoring were highly contextual and varied significantly across individuals. Perhaps direct supervision of onsite work is perceived as more invasive and thus as a higher level of monitoring, and therefore has a bigger detrimental impact on perceived autonomy.

Taken together, the relation between work modality and autonomy may be nuanced, but I contend that employees will still perceive greater monitoring while in the office modality as

compared to in the WFH modality. This is due to being in close proximity to their supervisors and colleagues, thus being under more direct supervision. Therefore, I propose the following hypothesis:

Hypothesis 4: There is an indirect effect of work modality on fulfillment of the need for autonomy through perceived monitoring, such that on days when an employee is in the WFH modality they will experience lesser perceived monitoring than on days when they are in the office modality and, in turn, will experience higher satisfaction of the need for autonomy on those days.

The Role of Perceived Locational Autonomy

Locational autonomy is defined as "the discretion of employees on where to perform tasks" (De Spiegelaere et al., 2016, p. 3). In their study, De Spiegelaere et al. (2016) found that locational autonomy significantly contributed to employees' overall perceptions of job autonomy, making it in an important mechanism in understanding an individual's overall sense of autonomy. This is particularly pertinent in the context of hybrid work, where employees work some days at the office and other days at home.

Historically, WFH was reserved for select employees, who often voluntarily requested it, leading to increased autonomy as they chose their preferred location of work (Bloom et al., 2009; Lautsch & Kossek, 2011, Morganson et al., 2010). Gerdenitsch (2017) highlighted that while WFH can enhance an individual's sense of autonomy, this benefit can be mitigated when choices about work location are externally restricted by an individual's colleagues or managers. Kaduk et al. (2019) supported this, finding that voluntary work location scheduling is positively associated with increased feelings of control.

Considering these results, I contend that an employee's perception of their locational autonomy is crucial in explaining the relationship between work modality and fulfillment of the need for autonomy. Employees may encounter situations where they are technically allowed to be in the WFH modality, but they feel pressured to work in the office due to the organizational culture or because there is a meeting they do not want to miss; thus, they go to the office feeling like that location was not their choice. In contrast, for employees who feel less pressure to be in the office modality, on days when they are at home, they are more likely to feel that it was their choice to be there. Consequently, I posit that on days when individuals are in the WFH modality, they will experience a greater sense of perceived locational autonomy, leading to a higher fulfillment of their need for autonomy, than on days when they are in the office modality. Therefore, I propose the following hypothesis:

Hypothesis 5: There is an indirect effect of work modality on fulfillment of the need for autonomy through perceived locational autonomy, such that on days when an employee is in the WFH modality they will experience greater perceived locational autonomy than on days when they are in the office modality and, in turn, will experience higher satisfaction of the need for autonomy on those days.

The Role of Interruptions

Interruptions have been defined as "an unexpected suspension of the behavioral performance of, and/or attentional focus from, an ongoing work task" (Puranik et al., 2020, p.817). In their foundational review, Bailey and Kurland (2002) found that employees may be choosing the WFH modality to avoid the many interruptions of the office. They proposed that it may be easier for one to work competently at home rather than in the office, because of fewer interruptions (Bailey & Kurland, 2002). Similarly, Halford's (2005) research on hybrid work arrangements

found that employees take advantage of the fewer interruptions at home to be more productive. Additionally, several studies have found that WFH enables employees to focus on their work with minimal distractions (see Gajendran & Harrison, 2007 for a review). These studies all provide evidence that employees working at home should experience less interruptions.

One study that takes a closer look at the mechanisms of how interruptions affect employees was conducted by Fonner & Roloff (2010), who sought to explore why employees engaging in WFH are more satisfied than their office-based colleagues. In the study, Fonner and Roloff (2010) suggested that excessive interruptions could lead employees to feel less competent in their work, which could ultimately result in a decreased sense of psychological control and a reduction in job satisfaction. The results of the study indicated that, overall, employees in the WFH modality experienced less stress from interruptions than their office-based colleagues, which Fonner and Roloff (2010) attributed to a decreased frequency of interruptions experienced while working at home. The findings of this study demonstrated how the increased frequency of interruptions could negatively affect whether individuals feel competent at the workplace. In support of this, Gagné et al. (2022) suggested that interruptions in the form of electronic communication technology could be distracting and prevent employees from completing tasks, ultimately diminishing an individual's fulfillment of the need for competence (Gagné et al., 2022). Overall, these findings suggest that interruptions can indeed impact an individual's fulfillment of their need for competence.

Beyond the frequency of interruptions, Wilkes et al. (2018) suggested that it is also important to consider types of interruptions. They proposed two types of interruptions. First, there are effort-enhancing interruptions, which include intrusions, distractions, and discrepancy detections. Second, there are recovery-enhancing interruptions, which include breaks. On the

effort-enhancing side of interruptions, intrusions represent unforeseen interruptions which impede an employee from their task progression. For example, this can occur in-person when colleagues stop by to chat in an office, or electronically, when colleagues initiate unexpected video calls or send emails. Distractions represent extraneous stimuli that can break an employees' focus. For example, this can occur when employees are exposed to disturbing background noise. Discrepancy detections represent interruptions that occur when employees stop their work because they perceive incongruities between their actions and the expected outcome. For example, this can occur if an employee suddenly realizes they have been referencing outdated figures from older documents to complete their work instead of using the correct updated figures. On the recovery-enhancing side, breaks represent short pauses from completing work tasks which can either be planned or unplanned. For example, this can occur from an employee deciding to leave their immediate workspace to go grab a beverage and make conversation. According to Wilkes et al. (2018), breaks are in their own class because they provide employees with the opportunity to recover. Wilkes et al. (2018) found preliminary support for their workplace interruption measure, and they also found that effort-enhancing interruptions were positively related to negative individual work outcomes (perceived stress, exhaustion, and disengagement), whereas recovery-enhancing interruptions were negatively related to negative individual work outcomes.

Considering these results, and in line with Ryan and Deci's (2017) conceptualization of a competence-supportive environment, I contend that employees who regularly experience effort-enhancing interruptions in the workplace would have their efficiency disrupted, thereby hindering their ability to feel a sense of efficacy and develop a sense of mastery. Conversely, I contend that employees who regularly experience recovery-enhancing interruptions in the workplace would have their efficiency enhanced, thereby supporting their ability to feel a sense of efficacy and

develop a sense of mastery. Furthermore, based on the evidence provided of employees historically working from home to avoid the interruptions of the office (e.g., Gajendran & Harrison, 2007) and findings by Biron & Van Beldhoven (2016) that WFH affords individuals increased work-time control and less exhaustion due to the ability to take breaks when needed, I contend that employees will experience more effort-enhancing interruptions while in the office modality than when working in the WFH modality, and that those in the office modality will be less inclined to engage in recovery-enhancing interruptions than when they are in the WFH modality. Therefore, I propose the following hypotheses:

Hypothesis 6: There is an indirect effect of work modality on fulfillment of the need for competence through effort-enhancing interruptions, such that on days when an employee is in the WFH modality they will experience fewer effort-enhancing interruptions than on days when they are in the office modality and, in turn, will experience higher satisfaction of the need for competence on those days.

Hypothesis 7: There is an indirect effect of work modality on fulfillment of the need for competence through recovery-enhancing interruptions, such that on days when an employee is in the WFH modality they will experience greater recovery-enhancing interruptions than on days when they are in the office modality and, in turn, will experience higher satisfaction of the need for competence on those days.

The Role of Interactions

Social interactions are generally understood as "complex phenomena involving different dimensions of verbal and non-verbal behavior, varying contexts, numbers of participants, and frequently, technological mediation" (De Jaegher et al., 2010, p.442). In their study of social interactions, Ilies & Johnson (2005), developed a measure of social interactions at the workplace

that accounts for both frequency and pleasantness of interactions. They emphasized the need to distinguish between positive social interactions (i.e., interactions that provided personal support, instrumental support, and rewarding companionship) and negative social interactions (i.e., interactions deemed stressful or embarrassing) when considering how social interactions may support the satisfaction of an individual's need for relatedness. Overall, the results of Ilies & Johnson's study found that both positive social interactions and negative social interactions contributed to employees' job satisfaction.

Similarly, Gerdenitsch (2017) identified that social interactions (both synchronous and asynchronous) in the workplace are related to an increased sense of relatedness amongst coworkers. According to Ryan and Deci (2017), interactions represent one of the core mechanisms used by individuals to support the fulfillment of their need for relatedness, and the literature on relatedness is filled with evidence to support this (e.g., Meng et al., 2023; Rietveld et al., 2022; see Gagné et al., 2022, for a review). Additionally, Ryan and Deci (2017) emphasized that what is truly important in supporting the fulfillment of the need for relatedness are social interactions that are not impersonal and transactional in nature, but that truly resonate with an individual (Ryan & Deci, 2017).

In the context of hybrid work arrangements, it seems reasonable to suggest that individuals in the WFH modality could experience a reduction in positive social interactions and an increase in negative social interactions as compared to when working in the office modality. This is because the physical separation from one's coworkers when at home may hinder the natural flow of spontaneous and informal communication, which is important for fulfilling relatedness needs, according to Ryan and Deci (2017). In support of this, Whittle & Mueller (2009) found evidence that face-to-face interactions enhanced relationships and fostered a sense of belongingness among

colleagues. Additionally, in a study examining basic need satisfaction while in the WFH modality, Schade et al. (2021) found that employees who were working from home because of the Covid-19 pandemic perceived significantly lower satisfaction of their need for relatedness, as opposed to when they were working in the office. Schade et al. (2021) suggested that this was the result of positive social interactions, which naturally occurred at the office, not automatically occurring in online teams. Similarly, Delanoeije and Verbruggen (2020) found that employees with hybrid work arrangements experienced greater satisfaction in their personal interactions when working onsite than when working from home. As to how the WFH modality could promote negative social interactions, Windeler et al. (2017) found evidence that digital communication channels such as text or instant messaging presented greater opportunities for miscommunication such as misinterpreting messages or experiencing delays in response time, which could foster frustration among colleagues. Similarly, in their review, Gagné et al. (2022) identified that virtual interactions can be more stressful and effortful than in-person interactions, which can reduce the benefits individual perceive from them. Resultingly, this suggests that individuals working from home will experience fewer positive social interactions and greater negative social interactions. Therefore, I propose the following hypotheses:

Hypothesis 8: There is an indirect effect of work modality on fulfillment of the need for relatedness through positive social interactions, such that on days when an employee is in the WFH modality they will experience fewer positive social interactions than on days when they are in the office modality and, in turn, will experience less satisfaction of the need for relatedness on those days.

Hypothesis 9: There is an indirect effect of work modality on fulfillment of the need for relatedness through negative social interactions, such that on days when an employee is in the

WFH modality they will experience greater negative social interactions than on days when they are in the office modality and, in turn, will experience less satisfaction of the need for relatedness on those days.

The Moderating Role of Shared Modality Prevalence

Golden (2007) conducted one of the first studies to examine the impact that WFH had on those employees who remained at the office. Central to Golden's (2007) study was the construct of teleworker prevalence, which they defined as the proportion of co-workers in one's work unit who teleworked away from the office. Golden (2007) argued that high teleworker prevalence has the potential to lead to perceived feelings of injustice and frustration for office-bound employees. Ultimately, Golden (2007) found that WFH could adversely impact how office employees viewed their co-workers, which gave credence to his initial ideas regarding the importance of teleworker prevalence.

In their more recent review, Gagné et al. (2022) identified that hybrid work arrangements have led to the diminishment of employee physical presence at the office as fewer employees frequent the office on a daily basis. Building on this, I contend that it is valuable to delve into work modality consistency to better understand the impact of current hybrid work arrangements. I propose that "shared modality prevalence," defined as the proportion of co-workers in one's work unit who are operating in the same modality of work as themselves, whether it be in the office or at home (i.e., if one is at home, it is the percentage of other employees working at home, but if one is in office, then it is the percentage of other employees who are also in office), is a boundary condition that affects relations between work modality and other variables.

Work Modality and Effort-Enhancing Interruptions. I propose that shared modality prevalence has the potential to moderate the relation between work modality and effort-enhancing

interruptions. Specifically, higher shared modality prevalence can amplify the differences in effort-enhancing interruptions between being in the WFH modality and being in the office modality. This moderation is predicated on the idea that increased accessibility to one's colleagues influences the frequency of effort-enhancing interruptions. When shared modality prevalence is low, communication can be fragmented and disjointed for both work modalities. For instance, an individual working in the office modality with low shared modality prevalence will have fewer in-person interactions because a significant number of their colleagues will be at home. Similarly, an individual in the WFH modality with low shared modality prevalence may have fewer virtual interactions, because a significant number of their colleagues will be engaging in face-to-face communication since they are all together in office. Consequently, the difference in the frequency of effort-enhancing interruptions between being in the WFH modality and being in the office modality will be dampened when shared modality prevalence is low because neither those who are working at home nor those who are at the office will have high levels of effort-enhancing interruptions.

Conversely, when shared modality prevalence is high, the difference between the WFH and office modalities should be bigger. Communication becomes more consistent and accessible within each modality when shared modality prevalence is high, but the likelihood of effort-enhancing interruptions differs. In the office modality, high shared modality prevalence should facilitate more accessible and unplanned in-person communication, leading to more effort-enhancing interruptions. This is because physical proximity in the office modality provides the greatest accessibility to one's colleagues, and therefore the highest opportunity for effort-enhancing interruptions. In contrast, in the WFH modality, high shared modality prevalence may result in more consistent virtual communication (e.g., Teams, Zoom, etc.), but a lesser increase in effort-enhancing interruptions because virtual communications tend to be less spontaneous. Therefore,

the difference in frequency of effort-enhancing interruptions between being in the WFH modality and being in the office modality should become more pronounced as shared modality prevalence increases. Based on these premises, I propose the following hypothesis:

Hypothesis 10: Shared modality prevalence moderates the relation between work modality and effort-enhancing interruptions, such that the difference between the WFH modality and the office modality becomes larger as shared modality prevalence increases.

Work Modality and Recovery-Enhancing Interruptions. I also propose that shared modality prevalence has the potential to moderate the relation between work modality and recovery-enhancing interruptions. Specifically, higher shared modality prevalence can mitigate the differences in recovery-enhancing interruptions between being in the WFH modality and being in the office modality. This moderation is predicated on the idea that increased access to synchronous breaks with one's colleagues leads to more frequent recovery-enhancing interruptions. Thus, when shared modality prevalence is low, the difference in recovery-enhancing interruptions between the WFH modality and the office modality will be more pronounced. This is due to a lack of consistency in break times and diminished willingness to partake in recovery-enhancing interruptions – for those at the office. For instance, an individual in the office modality with low shared modality prevalence may feel less inclined to take breaks due an absence of social cues from their coworkers and fewer opportunities for casual interactions, leading to an increased likelihood of remaining engaged in work without interruptions. In contrast, an individual in the WFH modality is likely to engage in more frequent recovery-enhancing interruptions due to the increased work-time control that is afforded to them by being in their home environment (Biron & Van Beldhoven, 2016). Consequently, the discrepancy in the frequency of recovery-enhancing interruptions between

being in the WFH modality and being in the office modality will be larger when shared modality prevalence is low.

Conversely, when shared modality prevalence is high, the collective adherence of employees to engage in recovery-enhancing interruptions is more likely to increase due to the opportunity to take synchronous breaks with colleagues. For example, an individual in the office modality with high shared modality prevalence may feel more inclined to adhere to structured breaks due to being able to directly observe when colleagues are taking breaks (e.g., I can see that everyone else is sitting in the cafeteria at noon, therefore I will go there too) as well as increased opportunities for casual interactions (e.g., Jon is grabbing a coffee, let me get one too). In the WFH modality, high shared modality prevalence could also increase the likelihood of synchronized breaks, as individuals may look for digital cues to align their breaks with their colleagues (e.g., I can see that everyone has set their MS Teams status to 'Away' around lunch, therefore I will go away from my computer too). This synchronization could reduce the difference in the frequency of recovery-enhancing interruptions between the WFH and office modalities. Therefore, the difference in the frequency of recovery-enhancing interruptions between being in the WFH modality and being in the office modality becomes less pronounced as shared modality prevalence increases. Based on these premises, I propose the following hypothesis:

Hypothesis 11: Shared modality prevalence moderates the relation between work modality and recovery-enhancing interruptions, such that the difference between the WFH modality and the office modality becomes smaller as shared modality prevalence increases.

Work Modality and Positive Social Interactions. I propose that shared modality prevalence has the potential to moderate the relationship between work modality and positive social interactions. Specifically, shared modality prevalence can amplify the differences in positive

social interactions between the WFH modality and the office modality. This moderation is based on the idea that opportunity for spontaneous and non-transactional interactions with colleagues leads to more positive social interactions. When shared modality prevalence is low, an individual may feel less inclined to engage in spontaneous and non-transactional interactions – whether they are working from home or working in office, thereby hindering the frequency of their positive social interactions. For instance, an individual working in the office modality with low shared modality prevalence may find it challenging to engage in spontaneous interactions given that many of their colleagues are not physically present, making it harder to initiate non-transactional interactions. Similarly, an individual in the WFH modality with low shared modality prevalence may experience fewer occurrences of spontaneous and non-transactional communication due to feeling disconnected from the rest of the group who is all together interacting in person. Consequently, both the individual in WFH modality and the individual in the office modality will have few spontaneous, non-transactional communications, and the difference in the frequency of positive social interactions between the two modalities will be smaller when shared modality prevalence is low.

Conversely, when shared modality prevalence is high, an individual will experience fewer communication barriers and will be able to better gauge whether to initiate colleagues in non-transactional conversations due to the shared experience of working in the same modality. In the office modality, high shared modality prevalence presents the greatest opportunity for spontaneous and non-transactional communication with colleagues, due to physically sharing a workspace, and therefore the greatest opportunity for positive social interactions. In the WFH modality, high shared modality prevalence may lead an individual to feeling less withdrawn from their coworkers due to most colleagues sharing the same mode of communication; however, this would not significantly increase the frequency of positive social interactions as compared to when shared

modality prevalence is low because, as noted earlier, online interactions tend to be less spontaneous. Therefore, the difference in the frequency of positive social interactions between being in the WFH modality and being in the office modality becomes more pronounced as shared modality prevalence increases. Based on this reasoning, I propose the following hypothesis:

Hypothesis 12: Shared modality prevalence moderates the relation between work modality and positive social interactions, such that the difference between the WFH modality and the office modality becomes larger as shared modality prevalence increases.

Work Modality and Negative Social Interactions. I also contend that shared modality prevalence has the potential to moderate the relationship between work modality and negative social interactions. Specifically, higher shared modality prevalence can mitigate the differences in negative social interactions between being in the WFH modality and being in the office modality. This moderation is based on the idea that alignment in communication channels will reduce the frequency of negative social interactions.

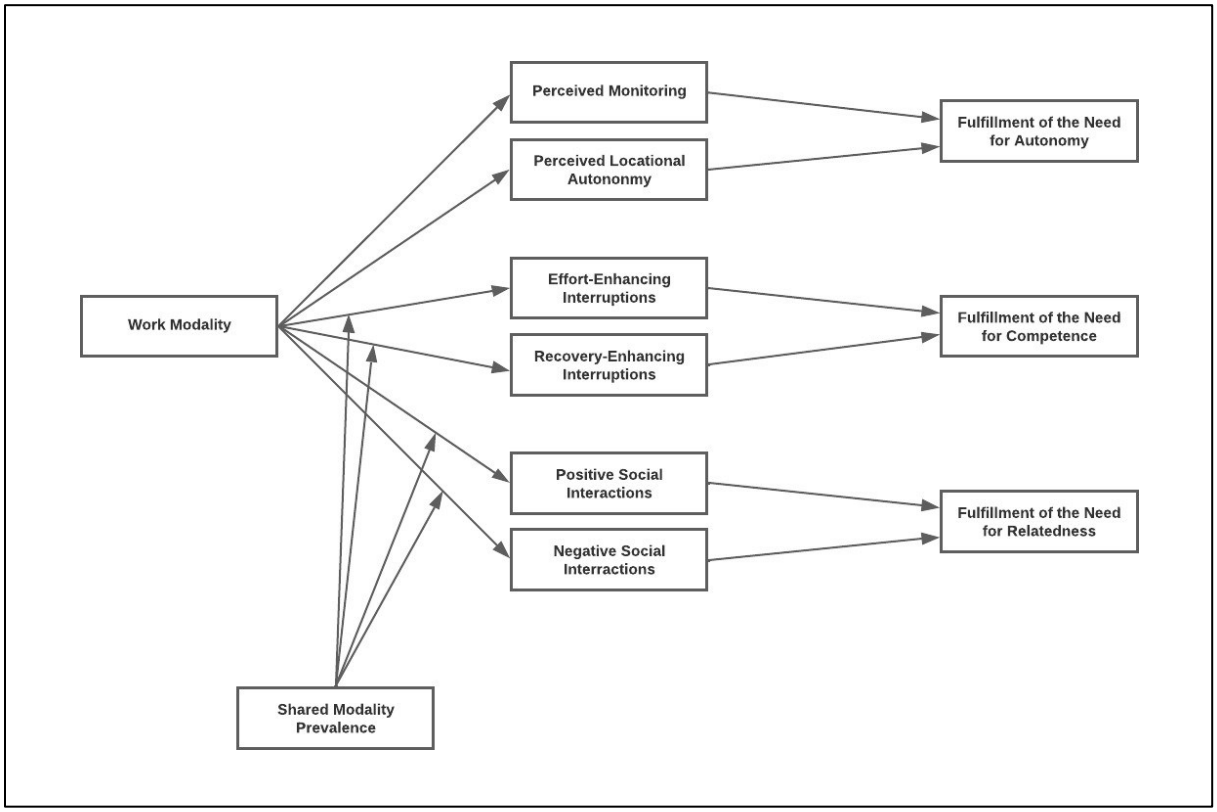
When shared modality prevalence is low, individuals are less likely to be aligned in their communication channels. For instance, an individual in the WFH modality with low shared modality prevalence may experience inconsistent communication and misunderstandings due to the majority of their colleagues being in the office modality, where face-to-face interactions are prioritized. This misalignment can potentially lead to messages being left unread or miscommunicated, as online communication is not prioritized when other team members are gathered together in the office. In contrast, for an individual in the office modality with low shared modality prevalence, communication is still prone to miscommunication, although the impact may be less severe as they can still engage in some face-to-face interactions. However, this can still lead to negative social interactions due to the mixed communication channels (online and in-

person), which complicate the overall interaction process. Consequently, the discrepancy in the frequency of negative social interactions between the WFH modality and the office modality becomes more pronounced as shared modality prevalence decreases.

Conversely, when shared modality prevalence is high, individuals are more likely to be aligned in their communication channels. For instance, an individual in the WFH modality with high shared modality prevalence is less likely to experience negative social interactions due to inconsistent communication and misunderstandings, as the rest of their team is also online and prioritizing online communication. Similarly, an individual in the office modality with high shared modality prevalence is more likely to engage effectively and clearly with colleagues through face-to-face interactions, thereby reducing the likelihood of misunderstandings. Therefore, the difference in negative social interactions becomes less pronounced as shared modality prevalence increases. Based on these premises, I propose the following hypothesis:

Hypothesis 13: Shared modality prevalence moderates the relation between work modality and negative social interactions, such that the difference between the WFH modality and the office modality becomes smaller as shared modality prevalence increases.

Figure 1: A Model of Hybrid Work Arrangements and Basic Psychological Need Satisfaction



METHOD

Recruitment and Procedure

The sample was recruited from two sources. One source was the Montreal office of a multinational company in the electronics industry. The other source was an online panel service.

The multinational company was chosen as the first source because it mandated a hybrid working arrangement in which employees were: (a) required to come to the office on one mandatory day (all employees were required to come to the office on Wednesdays), (b) required to come to the office on one optional day of their choosing, and (c) were eligible to work the remaining three workdays remotely. Recruiting from this organization ensured that participants' work schedules included both the office modality and the WFH modality, consistent with the focus on within-person effects of hybrid work arrangements. All individuals who worked at the Montreal office were eligible to participate.

Participants were recruited through the assistance of a Senior Director at the aforementioned multinational organization. The recruitment message was sent by the researcher to the Senior Director, who then forwarded the email to all eligible members of the organization. The forwarded recruitment message described the study, explaining that it was being conducted by researchers at Concordia University, and included a direct link to the study website. Individuals could choose to continue to the study website or not. On the study website, participants had the option to read a detailed description of the study procedures and its broad goals, followed by the choice to participate or not based on their interest in the study and the conditions provided. All individuals in the sample provided their active consent by checking an option that said they had consented.

By having the organization forward the recruitment message to participants, the researcher

did not have to request that the organization provide any information about the participants without their consent. Furthermore, it was clearly established in the recruitment message that participation in the study was confidential, and that no information would be communicated to the organization about who had chosen to participate, or what data any individual had provided. This reassured participants about the confidentiality of the study. The email also established that the study was voluntary and that there were no consequences for choosing not to participate. Therefore, individuals should not have felt any limits to the voluntary nature of their participation.

Each employee received a link to the study's landing page on Thursday, November 30, 2023, and had until midnight on Wednesday, December 6, 2023, to register. Interested participants clicked the link, reviewed the detailed study information, and provided consent. Upon registration, participants completed an electronic form with contact information for survey notifications, and were notified of the study timeline. The introductory survey was available from Thursday, December 7, 2023, until midnight on Sunday, December 10, 2023, followed by the daily surveys from Monday, December 11, 2023, to Friday, December 15, 2023. Potential participants were told from the onset that there was no incentive for participating in the study and that the study was not intended to benefit them personally.

In the introductory survey, participants were asked to respond to several questions that created a unique identifier code that they would use for the remainder of the study. The unique identifier code allowed us to connect data provided in multiple surveys by the same individual without compromising their anonymity, because there was no connection between the survey responses and the participants' contact information, or any other personal identifiers. This allowed us to maintain separation between participants' identities and their data across all surveys. The introductory survey also included questions about demographics and some stable work variables

(e.g., WFH preferences). Those individuals who voluntarily provided their contact information were re-contacted daily starting the following Monday for one work week (i.e., 5 days). Participants were sent a notification via email and/or text at 3:30 p.m. EST each day with a link to the daily survey. They were then asked to complete the survey within 2 hours of reception (i.e., by 5:30 p.m. EST), but the survey remained open until 11:59 p.m. EST.

The introductory survey and the daily surveys each took about 5 minutes to complete. Participants had the choice each day to complete the daily survey or not. All daily surveys, with the exception of the first, were identical and began by asking participants to enter their unique identifier code. Following this, the daily surveys gathered self-reported data on participant's work modality, daily interruptions experienced, perceived monitoring, shared modality prevalence, social interactions experienced, and basic psychological need satisfaction. Measures for the aforementioned variables were drawn from published research, with some being slightly adapted to the context of hybrid work arrangements as described below.

Prolific was chosen as the online panel for the second recruitment source because they have a large pool of individuals who have indicated in pre-screening that they work in a hybrid manner. Participants (N = 200) who were eligible to participate, meaning that their profile information adhered to the study's screening criteria (employed, at least 18 years old, and engaged in some form of hybrid work), were able to see our study in their study feed. More specifically, when browsing their "Studies" feed, participants saw the study titled "The Experience of Hybrid Work Arrangements," and were provided information about the length of the study, compensation per hour, a brief description of the study, and the number of spaces that remained available. The brief study description provided some key study details (e.g., that each survey took 5 minutes and that the study involved 6 surveys), and after reviewing this information, interested panelists could

voluntarily reserve their place in the study. Participants were informed that the study was longitudinal, meaning that it would involve participation at multiple time points over a one-week time period. After consenting to participate, panelists completed a 5-minute introductory survey, and were invited to complete daily surveys for the following work week, for a total of 5 daily surveys that asked about their daily work experience.

The initial recruitment period began on Thursday, January 11, 2024, with the posting of the introductory survey that was made available until midnight on Sunday, January 14, 2024. Following the completion of the introductory survey, participants were contacted for the daily surveys, which began on Monday, January 15, 2024, and ran until Friday, January 19, 2024. Each daily survey was made accessible to participants via the "Studies" feed of their Prolific dashboard starting at 3:30 p.m. (GMT) each weekday, with a reminder message sent at 8:00 p.m. (GMT). Participants had until 11:59 p.m. (GMT) each day to complete the survey. Participants had the choice each day to complete the survey or not.

To link participants' surveys together, they had to consent to their 'ProlificID' (i.e., the unique ID associated with each user account) being recorded in the introductory survey, which enabled subsequent contact for the daily surveys. Resultingly, the introductory survey for the Prolific participants was modified to not require the creation of a unique identifier code, as the ProlificIDs were used to identify participants. The introductory survey for the Prolific participant pool was also modified to include a more comprehensive set of demographic questions (e.g., participant location, organization size, industry, etc.). This adjustment was necessary in order to account for the greater heterogeneity in the Prolific sample as compared to the organization sample. The content and structure of the subsequent daily surveys remained consistent and unchanged across both samples.

Sample

Multinational Organization Sample. Recruitment emails were sent to 110 eligible employees who worked some form of hybrid work arrangement. The result of the initial recruitment email was the participation of 12 employees in the introductory survey (for a response rate of 10.9%). Of those who signed up, 5 respondents provided enough data to be included in the study analyses (criteria of acceptance described below). Ultimately, the responses from the multinational organization were merged with the responses from the online panel service.

Online Panel Service. The initial posting of the "Hybrid Work Arrangements – Introductory Survey" was made live on Prolific on Thursday January 11, 2024, which informed participants of the upcoming longitudinal study that would run from Monday January 15, 2024, to Friday January 19, 2024. The introductory survey reached the maximum number of participants allowable within the funding constraints, resulting in a total enrollment of 200 participants. Of those who signed up, 137 respondents provided enough data to be included in the analyses (per the criteria of acceptance below).

Criteria of Acceptance. For a respondent's participation to be deemed of sufficient quality to be included in the analyses, the data were filtered on several grounds. First, survey quality was assessed on a survey-by-survey basis, where participants needed to complete a minimum of three out of the five daily surveys, working in each modality (WFH and working-from-office) at least one time. Second, each daily survey included two attention check questions (e.g.*., This is an attention check. Attention check questions allow us to make sure that everyone is reading each question carefully. To confirm that you are paying attention, please select "6 - Agree" as your answer and do not select any other options)* where submissions were discarded if

participants failed both attention check questions in a given survey. Third, each daily survey was reviewed for "speeding", defined as having a completion time that was less than one third of the median completion time. Finally, individuals who were outliers in more than 60% of the surveys they completed were excluded. Given the multivariate nature of the data being analyzed, Mahalanobis' distance was used to detect multivariate outliers, considering that this is a widely accepted means of multivariate outlier detection (Finch 2012). Overall, 70 participants were filtered out using the criteria of acceptance, generally because they did not complete enough daily surveys or had no variability in work modality (63 of 200 from the panel service and 7 of 12 from the multinational organization). For a complete breakdown of the number of participants excluded from the study analyses for various reasons, see Appendix B.

Merged Dataset. Upon merging the two samples, the dataset comprised 142 participants who each completed an average of 4.61 daily surveys, for a total of 655 observations. More specifically, 8 participants completed the survey for 3 days, 39 participants completed the survey for 4 days, and 95 participants completed the survey for all 5 days. Of the 142 respondents, 51.4% identified as male, 47.9% identified as female, and .7% identified as non-binary. The most common age of the sample was between 35-39 (19%), and the sample came predominantly from the UK (96.5% - the Prolific sample), with the remainder coming from Canada (3.5% - the company sample). The majority of participants were employed full-time (89.4%), with the rest being employed part-time (10.6%). Most participants worked at large organizations (48.6%, defined as 1000+ employees) followed by medium organizations (31.7%, defined as 101-1000 employees). It is worth noting that the respondents from the company sample, despite being part of a multinational firm, were categorized under 'medium organization' due to the size of the office within Canada. Additionally, the average organizational tenure of respondents was 9.14

years (*SD* = 8.25), and the average time spent commuting per day was 1 hour and 2 minutes (*SD* = 56.4 minutes). For a complete breakdown of sample demographics, please refer to Appendix C.

Measures

To assess the internal consistency of the measures, Cronbach alphas were computed daily and then averaged over the 5 daily surveys (see Table 1). Most measures were slightly modified to make the items more relevant to the context of daily data collection in the workplace. Some examples of this include adding the pre-amble of "today," replacing "people" with "coworkers", and adding the context of "work" to items. For a complete list of the measures and their respective items, please refer to Appendix A.

Furthermore, the scales were shortened to 3 items per measure to maintain balance among the different variables being tested and to minimize participant burden of having daily surveys that were too long or too repetitive. Items were selected based on their factor loadings in the original studies from which they were derived.

Work Modality. Work modality was measured each day with a single item that asked the participant the following question: "*Please select the situation that most accurately reflects your work location for today.*" The response "I did not work today" was coded 0, the response "Today I worked in the office" was coded 1, and the response "Today I worked from home" was coded 2. When processing the data, responses for "I did not work today" were eventually removed, leading to the response "Today I worked in the office" being re-coded as 0, and the response "Today I worked-from-home" being re-coded as 1.

Shared modality Prevalence. The measure of shared modality prevalence was modified from Golden's (2007) *Teleworker Prevalence* measure. Golden (2007) measured teleworker

prevalence with 1 item asking respondents to indicate the proportion of co-workers in their work unit who teleworked away from the office. Whereas Golden defined *teleworker prevalence* as the proportion of co-workers in one's work unit who teleworked away from the office, *shared modality prevalence* was defined as the proportion of co-workers in the participant's work unit who operated in the same modality of work as the participant on that day, whether it be in the office or WFH. Resultingly, shared modality prevalence was a 1-item measure that asked participants the following question: *"You indicated that you worked [answer to work modality question] today. What percentage of your co-workers do you estimate were also [answer to work modality question] today?*" Participants responded using a sliding scale of percentages ranging from 0% to 100%.

Perceived Monitoring. Perceived monitoring was measured using 3 items from the 5- item *Surveillance and Enforcement Scale* (Jensen & Raver, 2012). A sample item is: "*Today, my supervisor closely monitored me while I was trying to do my work*." Responses to the items were made using a 7-point response scale ranging from 1 = Strongly Disagree, to 7 = Strongly Agree.

Perceived Locational Autonomy. Perceived Locational Autonomy was measured using 3 items from the 7-item *Perceived Location Autonomy Scale* (Spivack & Milosevic, 2018). A sample item is: "*Today, it was basically my own responsibility to find or create an environment that allows me to get my work done*." Responses to the items were made using a 7-point response scale ranging from 1 = Strongly Disagree, to 7 = Strongly Agree.

Workplace interruptions. Effort-enhancing interruptions and recovery-enhancing interruptions were measured using 6 items from the 12-item *Workplace Interruption Measure* (Wilkes, Barber, & Rogers, 2017). The original scale is composed of 3 items for each interruption type (intrusions, distractions, discrepancy detections, and breaks), resulting in 9 items for effort-

enhancing interruptions and 3 items for recovery-enhancing interruptions. The measure was modified by combining 1 item from each of the 3 effort-enhancing interruption types, and keeping the 3 items for recovery-enhancing interruptions. A sample item for effort-enhancing interruptions is: *"Today, there were distracting noises in my work area when I was completing my work."* A sample item for recovery-enhancing interruptions is: "*Today, I took a break from tasks when I needed one*." Participants were instructed to report the exact number of occurrences for each interruption type (effort-enhancing and recovery-enhancing), with response options ranging from "0 = Never", to "5 = More than four times (please specify)," where participants were instructed to type in the exact number of occurrences if it exceeded four interruptions. In that case, the exact number was used to calculate the scale score.

Negative Social Interactions. Negative social interactions were measured using 3 items from the 7-item *Workplace Incivility Scale* (Cortina et al., 2001). A sample item is: "*Today, my work was put down or was subject to condescension by coworkers*." Participants were instructed to report the exact number of occurrences, with response options ranging from "0 = Never", to "5 = More than four times (please specify)," where participants were instructed to type in the exact number of occurrences if it exceeded four interruptions. In that case, the exact number was used to calculate the scale score.

Positive Social Interactions. Positive social interactions were measured using 3 items from the *Social Interactions Scale* (Ilies & Johnson, 2005). A sample item is: "*Today, my coworkers made me feel better about a work decision that I had made*." Participants were instructed to report the exact number of occurrences, with response options ranging from "0 = Never", to "5 = More than four times (please specify)," where participants were instructed to type in the exact number of occurrences if it exceeded four interruptions. In that case, the exact number was used to calculate the scale score.

Psychological Need Satisfaction. Fulfillment of the need for autonomy, fulfillment of the need for competence, and fulfillment of the need for relatedness were measured with the 9-item *Psychological Need Satisfaction Measure* (Sheldon, Kasser, Elliot, & Kim, 2001). A sample item for autonomy is: "*Today, I felt free to do things my own way with respect to my work."* A sample item for competence is: "*Today, I felt that I was successfully completing difficult tasks and projects at work."* A sample item for relatedness is: "*Today, I felt a sense of connectedness with co-workers who care for me, and for whom I care*." Responses to the items were made using a 7-point response scale ranging from 1 = Strongly Disagree, to 7 = Strongly Agree.

RESULTS

Analytic Strategy

Prior to hypothesis testing, the first step was to assess the internal consistency of the measures using Cronbach's alpha. As summarized in Table 1, seven out of the nine measures used in the study showed high internal consistency (i.e., perceived locational autonomy, perceived monitoring, recovery-enhancing interruptions, negative social interactions, fulfillment of the need for autonomy, fulfillment of the need for competence, and fulfillment of the need for relatedness), but two measures did not. Specifically, the measures for effort-enhancing interruptions and positive social interactions had low internal consistency.

The low internal consistency for effort-enhancing interruptions (α = .39) and positive social interactions (α = .44) can likely be attributed to the item selection process from the original multidimensional measures. For effort-enhancing interruptions, I selected and combined one item from each of the three interruption types (i.e., intrusions, distractions, discrepancy detections) from the *Workplace Interruption Measure* (Wilkes, Barber, & Rogers, 2018), reducing the original 9 items and 3 dimensions to 3 items and one dimension. Similarly, the *Social Interactions Scale* (Ilies & Johnson, 2005) was adapted by selecting and combining one item from each category of "personal support," "instrumental support," and "rewarding companionship," rather than using the full set of items and looking at each dimension separately.

Despite this approach potentially compromising the internal consistency of both measures, they were retained in the study analyses for two key reasons. First, their theoretical relevance to the study's hypotheses related to fulfillment of the needs for competence and relatedness warranted their inclusion. Second, although the items may not have demonstrated

high internal consistency, I believe they still effectively capture the dynamics of interruptions and positive social interactions, respectively.

The second step prior to hypothesis testing involved partitioning the variance in the data by estimating intercept-only multilevel models using Mplus to ensure that individuals experienced significant daily variation in the key variables. The partitioning of variance in the key variables, summarized in Table 2, revealed substantial variability both within and between individuals. For instance, need for autonomy showed a statistically significant within-individual variance estimate (e^2 = .41, p <.001), accounting for 33.57% of the total variance. Similar patterns of significant daily fluctuations were observed for all other variables in the study (e.g., recovery-enhancing interruptions, positive social interactions, satisfaction of the need for relatedness, etc.), with each variable demonstrating a statistically significant within-individual variance estimate (see Table 2). These results confirmed that the study variables varied significantly within individuals from one day to another, suggesting that individuals experienced substantial variability across work modalities.

The third and final step prior to hypothesis testing was computing descriptive statistics and bivariate correlations, which are summarized in Table 1. Table 1 presents both the within-person correlations, calculated based on repeated measures for the several workdays, as well as the between-person correlations, calculated by averaging over workdays for each individual.

To test the hypotheses, a multilevel modeling approach was employed using Mplus (Version 8.8; Muthén & Muthén, 2017). This approach ensured that the effects were tested separately at the within-person and between-person levels. The analyses involved estimating multilevel models with random intercepts and random slopes, centering all independent variables at individuals' means. This centering was used to eliminate

between-person variance in the estimation of the within-person effects, thereby providing accurate estimates of within-individual relations. Multilevel modeling was necessary due to the nested structure of the data, which consisted of multiple daily observations nested within individuals. Additionally, when testing hypotheses that involved indirect effects, the Monte Carlo method for assessing multilevel mediation was used as described by Preacher and Selig (2010). This approach was used to estimate the 95% confidence intervals in 1-1-1 multilevel models. Finally, moderation hypotheses were tested using a within-subject regression approach. This involved specifying interaction terms and examining their significance within the multilevel regression models.

Descriptive Statistics

Table 1 provides a detailed overview of the within-person and between-person correlations for the study variables. Several notable relations shed light on the dynamics of work modality and the fulfillment of basic psychological needs. First, on average, participant work modality was 0.54 (*SD* = 0.50), indicating that participants worked from home, on average, two to three days out of the 5-day long study period.

At the within-person level, work modality was positively correlated with the need for autonomy ($r = .08$, $p = .03$) and perceived locational autonomy ($r = .64$, $p < .001$), and negatively correlated with perceived monitoring ($r = -.14$, $p < .001$). This suggests that on days when a participant worked from home, they experienced an enhanced fulfillment of their need for autonomy, perceived greater autonomy in their choice of work location, and felt less monitored than on days when they worked in the office.

Work modality was also positively correlated with recovery-enhancing interruptions ($r = .25$, $p < .001$) and negatively correlated with effort-enhancing interruptions ($r = -.34$, $p < .001$).

This suggests that on days when a participant worked from home, they were more likely to take breaks that facilitated recovery and less likely to encounter effort enhancing interruptions (i.e., distractions, intrusions, discrepancy detections), as compared to days when they worked in the office.

Not surprisingly, perceived monitoring was negatively correlated with recovery-enhancing interruptions (r = -.16, p < .001), indicating that a participant was less likely to take breaks the more they perceived that they were being monitored. Additionally, fulfillment of the need for competence was negatively correlated with negative social interactions (r = -.21, p < .001) and positively correlated with positive social interactions (r = .13, p < .001), indicating a relation between social dynamics and fulfillment of an individual's sense of competence.

At the between-individual level, work modality was only significantly related to fulfillment of the need for competence (r = -.10, p = .02), highlighting that, overall, individuals who worked from home more frequently felt less competent than those who worked in the office.

Hypothesis Tests

For a summary of the complete results for the effects of work modality on basic psychological need satisfaction, please refer to Table 3.

Hypothesis 1: Work Modality and Autonomy. Hypothesis 1 stated that on days when an employee is in the WFH modality, they will report a greater fulfillment of their need for autonomy than on days when they are in the office modality. As shown in Table 4, the within-individual effect of working from home on autonomy was positive and statistically significant (b = .21, SE = .07, p = .003). This means that on days when an individual worked from home, they reported significantly higher satisfaction of the need for autonomy than on days when they

worked in the office. Thus, Hypothesis 1 was supported. Additionally, there was significant variance in the slopes (b = .28, SE = .10, p = .01), indicating that the strength of the relation between work modality and fulfillment of the need for autonomy varied significantly across individuals.

Hypothesis 2: Work Modality and Competence. Hypothesis 2 stated that on days when an employee is in the WFH modality, they will report a greater fulfillment of their need for competence than on days when they are in the office modality. As shown in Table 4, the within-individual effect of working from home on competence was non-significant (b = -.11, SE = .07, p = .12). Thus, Hypothesis 2 was not supported. Additionally, there was no significant variance in the slopes (b = .18, SE = .11, p = .08), indicating that the strength of the relation between work modality and fulfillment of the need for competence did not vary across individuals.

Hypothesis 3: Work Modality and Relatedness. Hypothesis 3 stated that on days when an employee is in the office modality, they will report a greater fulfillment of their need for relatedness than on days when they are in the WFH modality. As shown in Table 4, the within-individual effect of working from home on relatedness was negative and significant (b = -1.14, SE = .12, $p < .001$). This means that on days when an individual worked from home, they reported significantly lower satisfaction of the need for relatedness than on days when they worked in the office. Thus, Hypothesis 3 was supported. Additionally, there was significant variance in the slopes (b = 1.10, SE = .25, $p < .001$), indicating that the strength of the relation between work modality and fulfillment of the need for relatedness varied significantly across individuals.

Hypothesis 4: Indirect Effect of Work Modality on Autonomy via Perceived Monitoring. Hypothesis 4 stated that there would be an indirect effect of work modality on

fulfillment of the need for autonomy through perceived monitoring, such that on days when an employee is in the WFH modality, they will experience lesser perceived monitoring than on days when they are in the office modality and, in turn, will experience more satisfaction of the need for autonomy on those days.

As shown in Table 5, the within-individual effect of working from home on perceived monitoring was negative and significant (b = -.48, SE = .08, p < .001), and the within-individual effect of perceived monitoring on fulfillment of the need for autonomy was also negative and significant (b = -.11, SE = .05, p = .01). The indirect effect of working from home on fulfillment of the need for autonomy through perceived monitoring was positive and significant (*estimate* = .07, *95% CI [.01, .14]*). Thus, Hypothesis 4 was supported. Of note, the remaining direct effect of working from home on fulfillment of the need for autonomy was non-significant (b = .14, SE = .08, p = .08). It is also noteworthy that there was significant variance in the effect of work modality on perceived monitoring (b = .51, SE = .18, p = .004), indicating that the strength of the relation between work modality and perceived monitoring varied significantly across individuals.

Hypothesis 5: Indirect Effect of Work Modality on Autonomy via Perceived Locational Autonomy. Hypothesis 5 stated that there would be an indirect effect of work modality on fulfillment of the need for autonomy through perceived locational autonomy, such that on days when an employee is in the WFH modality, they will experience greater perceived locational autonomy than on days when they are in the office modality and, in turn, will experience more satisfaction of the need for autonomy on those days.

As shown in Table 6, the within-individual effect of working from home on perceived locational autonomy was positive and significant (b = 2.37, SE = .13, p < .001), and the within-

individual effect of perceived locational autonomy on fulfillment of the need for autonomy was also positive and significant (b = .11, SE = .05, p = .01). The indirect effect of working from home on fulfillment of the need for autonomy through perceived locational autonomy was positive and significant (*estimate* = .30, *95% CI [.06, .56]*). Thus, Hypothesis 5 was supported. Of note, the remaining direct effect of working from home on fulfillment of the need for autonomy was non-significant (b = -.10, SE = .14, p = .50). It is also noteworthy that there was significant variance in the effect of work modality on perceived locational autonomy (b = 2.02, SE = .24, p < .001), indicating that the strength of the relation between work modality and perceived locational autonomy varied significantly across individuals.

Hypothesis 6. Indirect Effect of Work Modality on Competence via Effort-Enhancing Interruptions. Hypothesis 6 stated that there would be an indirect effect of work modality on fulfillment of the need for competence through effort-enhancing interruptions, such that on days when an employee is in the WFH modality, they will experience fewer effort-enhancing interruptions than on days when they are in the office modality and, in turn, will experience higher satisfaction of the need for competence on those days.

As shown in Table 7, the within-individual effect of working from home on effort-enhancing interruptions was negative and significant (b = -.63, SE = .08, p < .001), but the within-individual effect of effort-enhancing interruptions on fulfillment of the need for competence was non-significant (b = .07, SE = .08, p = .39). The indirect effect of working from home on fulfillment of the need for competence through effort-enhancing interruptions was non-significant (*estimate* = .02, *95% CI [-.12, .16]*). Thus, Hypothesis 6 was not supported. Of note, the remaining direct effect of working from home on fulfillment of the need for competence was also non-significant (b = -.13, SE = .10, p = .19). It is also noteworthy that there was significant

variance in the effect of work modality on effort-enhancing interruptions (b = .62, SE = .12, p < .001), indicating that the strength of the relation between work modality and effort-enhancing interruptions varied significantly across individuals.

Hypothesis 7. Indirect Effect of Work Modality on Competence via Recovery-Enhancing Interruptions. Hypothesis 7 stated that there would be an indirect effect of work modality on fulfillment of the need for competence through recovery-enhancing interruptions, such that on days when an employee is in the WFH modality, they will experience greater recovery-enhancing interruptions than on days when they are in the office modality and, in turn, will experience higher satisfaction of the need for competence on those days.

As shown in Table 8, the within-individual effect of working from home on recovery-enhancing interruptions was positive and significant (b = .56, SE = .09, p < .001), but the within-individual effect of recovery-enhancing interruptions on fulfillment of the need for competence was non-significant (b = -.02, SE = .06, p = .77). The indirect effect of working from home on fulfillment of the need for competence through recovery-enhancing interruptions was non-significant (*estimate* = -.03, *95% CI [-.11, .06]*). Thus, Hypothesis 7 was not supported. Of note, the remaining direct effect of working from home on fulfillment of the need for competence was also non-significant (b = -.09, SE = .07, p = .25). It is noteworthy that there was significant variance in the effect of work modality on recovery enhancing interruptions (b = .69, SE = .16, p < .001), indicating that the strength of the relation between work modality and recovery-enhancing interruptions varied significantly across individuals.

Hypothesis 8. Indirect Effect of Work Modality on Relatedness via Positive Social Interactions. Hypothesis 8 stated that there would be an indirect effect of work modality on fulfillment of the need for relatedness through positive social interactions, such that on days

when an employee is in the WFH modality, they will experience fewer positive social interactions than on days when they are in the office modality and, in turn, will experience less satisfaction of the need for relatedness on those days.

As shown in Table 9, the within-individual effect of working from home on positive social interactions was negative and significant (b = -.85, SE = .08, p < .001), and the within-individual effect of positive social interactions on fulfillment of the need for relatedness was also positive and significant (b = .42, SE = .09, p < .001). The indirect effect of working from home on fulfillment of the need for relatedness through positive social interactions was negative and significant (*estimate* = -.20, *95% CI [-.37, -.03]*). Thus, Hypothesis 8 was supported. Of note, the remaining direct effect of working from home on fulfillment of the need for relatedness was negative and significant (b = -.95, SE = .13, p < .001). It is noteworthy that there was significant variance in the effect of work modality on positive social interactions (b = .58, SE = .23, p = .01), indicating that the strength of the relation between work modality and positive social interactions varied across individuals.

Hypothesis 9. Indirect Effect of Work Modality on Relatedness via Negative Social Interactions. Hypothesis 9 stated that there would be an indirect effect of work modality on fulfillment of the need for relatedness through negative social interactions, such that on days when an employee is in the WFH modality, they will experience greater negative social interactions than on days when they are in the office modality and, in turn, will experience less satisfaction of the need for relatedness on those days.

As shown in Table 10, the within-individual effect of working from home on negative social interactions was non-significant (b = -.05, SE = .03, p = .07), and the within-individual effect of negative social interactions on fulfillment of the need for relatedness was also non-

significant (b = -.09, SE = .20, p = .67). The estimated indirect effect of working from home on fulfillment of the need for relatedness through negative social interactions was non-significant (*estimate* = -.03, *95% CI [-.08, .02]*). Thus, Hypothesis 9 was not supported. Of note, the remaining direct effect of working from home on fulfillment of the need for relatedness was negative and significant (b = -1.11, SE = .11, p < .001). It is also noteworthy that the variance in the effect of work modality on negative social interactions was non-significant (b = .04, SE = .03, p = .21), indicating that the strength of the relation between work modality and negative social interactions did not vary significantly across individuals.

Hypothesis 10: Shared Modality Prevalence as a Moderator of the Relation between Work Modality and Effort-Enhancing Interruptions. Hypothesis 10 stated that shared modality prevalence moderates the relation between work modality and effort-enhancing interruptions, such that the difference between the WFH modality and the office modality becomes larger as shared modality prevalence increases. As shown in Table 11, the within-individual effect of the interaction between working from home and shared modality prevalence on effort enhancing interruptions was non-significant (b = -.05, SE = .09, p = .09). Thus, Hypothesis 10 was not supported.

Hypothesis 11: Shared Modality Prevalence as a Moderator of the Relation between Work Modality and Recovery-Enhancing Interruptions. Hypothesis 11 stated that shared modality prevalence moderates the relation between work modality and recovery-enhancing interruptions, such that the difference between the WFH modality and the office modality becomes smaller as shared modality prevalence increases. As shown in Table 12, the within-individual effect of the interaction between working from home and shared modality prevalence on recovery enhancing interruptions was non-significant (b = -.003, SE = .04, p = .94). Thus,

Hypothesis 11 was not supported.

Hypothesis 12: Shared Modality Prevalence as a Moderator of the Relation between Work Modality and Positive Social Interactions. Hypothesis 12 stated that shared modality prevalence moderates the relation between work modality and positive social interactions, such that the difference between the WFH modality and the office modality becomes larger as shared modality prevalence increases. As shown in Table 13, the within-individual effect of the interaction between working from home and shared modality prevalence on positive social interactions was non-significant (b = .007, SE = .03, p = .77). Thus, Hypothesis 12 was not supported.

Hypothesis 13: Shared Modality Prevalence as a Moderator of the Relation between Work Modality and Negative Social Interactions. Hypothesis 13 stated that shared modality prevalence moderates the relation between work modality and negative social interactions, such that the difference between the WFH modality and the office modality becomes larger as shared modality prevalence increases. As shown in Table 14, the within-individual effect of the interaction between work modality and shared modality prevalence on negative social interactions was non-significant (b = .01, SE = .028, p = .75). Thus, Hypothesis 13 was not supported.

Table 1. Descriptive Statistics, Cronbach's Alphas, and Bivariate Correlations.

	Mean	***SD***	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1. Work Modality	0.54	0.50	-	.22**	.06	.27**	.06	-.16**	.00	-.11**	.00	-.10*	-.04
2. Shared Modality Prevalence	6.08	2.74	.05	-	.05	-.19**	.08*	.11**	-.02	.19**	-.07	.12**	.15**
3. Perceived Monitoring	2.02	1.36	-.14**	-.03	**.92**	-.37**	-.15**	.21**	.32**	.08*	-.34**	-.11**	-.10*
4. Perceived Locational Autonomy	5.09	1.77	.64**	.10**	-.36**	**.87**	.16**	-.28**	-.24**	-.08*	.49**	.12**	.13**
5. Recovery-Enhancing Interruptions	1.80	1.05	.25**	-.03	-.16**	.28**	**.86**	.00	.06	.21**	.02	-.11**	-.11**
6. Effort-Enhancing Interruptions	0.83	0.91	-.34**	-.02	.23**	-.38**	-.10**	**.39**	.40**	.27**	-.30**	-.10*	-.13**
7. Negative Social Interactions	0.11	0.35	-.05	-.04	.26**	-.19**	-.05	.25**	**.73**	.17**	-.32**	-.28**	-.21**
8. Positive Social Interactions	1.12	0.91	-.42**	-.12**	.11**	-.32**	-.00	.30**	.08*	**.44**	.07	.06	.39**
9. Need for Autonomy	5.26	1.13	.08*	.10**	-.30**	.34**	.07	-.23**	-.28**	.03	**.81**	.53**	.46**
10. Need for Competence	5.36	1.04	-.07	.03	-.08*	.03	-.09*	-.03	-.21**	.13**	.47**	**.78**	.42**
11. Need for Relatedness	4.75	1.47	-.34**	-.17**	.00	-.22**	-.14**	.06	-.11**	.46**	.29**	.36**	**.93**

Notes: Number of observations = 655; number of participants = 142. Correlations at the within individual level are shown below the diagonal. Correlations at the between individual level are shown above the diagonal. Cronbach's alphas are shown on the diagonal in bold. **$p < 0.05$ (2-tailed). ***$p <$ 0.01 (2-tailed). Work modality is coded as 0 for in-office days, and 1 for WFH days. Shared modality is scaled by a factor of 10, therefore reported valued should be interpreted as factored percentages (e.g., 6.08 = 60.8%).

Table 2. Partitioning of Variance.

	Within Individual		**Between Individual**		**Percentage of Within-Individual**
	Estimate	***SE***	***Estimate***	***SE***	
Perceived Monitoring	.58**	.09	1.10**	.23	33.90%
Perceived Locational	.64**	.08	.78**	.12	44.97%
Recovery-Enhancing	.50**	.05	.43**	.07	54.16%
Effort-Enhancing	.33**	.05	.28**	.04	54.41%
Negative Social Interactions	.07**	.02	.05	.03	59.02%
Positive Social Interactions	.33**	.04	.25**	.05	56.30%
Need for Autonomy	.41**	.05	.81**	.14	33.57%
Need for Competence	.55**	.06	.49**	.09	52.73%
Need for Relatedness	.75**	.09	.87**	.14	46.02%

Notes: Number of observations = 655; number of participants = 142. **$p <$ 0.01 (2-tailed).

Table 3. Summary Table of Results.

	Hypothesis	Relation
Direct Effects	1. Work Modality and Fulfillment of the Need for Autonomy	Positive
	2. Work Modality and Fulfillment of the Need for Competence	Non-significant
	3. Work Modality and Fulfillment of the Need for Relatedness	Negative
Indirect Effects	4. Work Modality → Perceived Monitoring → Fulfillment of the Need for Autonomy	Negative
	5. Work Modality → Perceived Locational Autonomy → Fulfillment of the Need for Autonomy	Positive
	6. Work Modality → Effort-Enhancing Interruptions → Fulfillment of the Need for Competence	Non-significant
	7. Work Modality → Recovery-Enhancing Interruptions → Fulfillment of the Need for Competence	Non-significant
	8. Work Modality → Positive Social Interactions → Fulfillment of the Need for Relatedness	Negative
	9. Work Modality → Negative Social Interactions → Fulfillment of the Need for Relatedness	Non-significant
Moderation Effects	10. Work Modality x Shared Modality Prevalence → Effort-Enhancing Interruptions	Non-significant
	11. Work Modality x Shared Modality Prevalence → Recovery-Enhancing Interruptions	Non-significant
	12. Work Modality x Shared Modality Prevalence → Positive Social Interactions	Non-significant
	13. Work Modality x Shared Modality Prevalence → Negative Social Interactions	Non-significant

Notes: Number of observations = 655; number of participants = 142.

Table 4. Multilevel Regression Analysis of Work Modality on Need Fulfillment.

	Need for Autonomy		**Need for Competence**		**Need for Relatedness**	
Within-Individual Level:	*Estimate*	SE	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	.21**	.07	-.11	.07	-1.14**	.12
Between-Person Level:						
Work Modality	-.001	.42	-.39	.36	-.35	.45

Note. Number of observations = 655; number of participants = 142. **$p < 0.01$ (2-tailed).

Table 5. Within-Individual Path-Analytic Regression Results for Indirect Effects of Work Modality on the Fulfillment of the Need for Autonomy through Perceived Monitoring.

Within-Individual Level:

Work Modality	**Perceived Monitoring**		**Need for Autonomy**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	-.48**	.08	.14	.08
Perceived Monitoring			-.11*	.05

Indirect Effect	*Estimate*	*LLCI*	*ULCI*
Work Modality -> Need for Autonomy (via Perceived Monitoring)	.07	.01	.14

Between-Person Level:

Work Modality	**Perceived Monitoring**		**Need for Autonomy**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	.40	.50	.16	.39
Perceived Monitoring			-.33**	.09

Note. Number of observations = 655; number of participants = 142. *LLCI* = lower level of the 95% confidence interval; *ULCI* = upper level of the 95% confidence interval. *$p < 0.05$ (2-tailed). **$p < 0.01$ (2-tailed).

Table 6. Within-Individual Path-Analytic Regression Results for Indirect Effects of Work Modality on the Fulfillment of the Need for Autonomy through Perceived Locational Autonomy.

Within-Individual Level:

Work Modality	**Perceived Locational Autonomy**		**Need for Autonomy**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	2.37**	.13	-.10	.14
Perceived Locational Autonomy			.11*	.05
Indirect Effect	*Estimate*		*LLCI*	*ULCI*
Work Modality -> Need for Autonomy (via Perceived Monitoring)	.30		.06	.56

Between-Person Level:

Work Modality	**Perceived Locational Autonomy**		**Need for Autonomy**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	1.48**	.44	-.85*	.35
Perceived Locational Autonomy			-.56**	.10

Note. Number of observations = 655; number of participants = 142. *LLCI* = lower level of the 95% confidence interval; *ULCI* = upper level of the 95% confidence interval. *$p < 0.05$ (2-tailed). **$p < 0.01$ (2-tailed).

Table 7. Within-Individual Path-Analytic Regression Results for Indirect Effects of Work Modality on the Fulfillment of the Need for Competence through Effort-Enhancing Interruptions.

Within-Individual Level:

Work Modality	**Effort Enhancing Interruptions**		**Need for Competence**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	-.63**	.08	-.13	.10
Effort Enhancing Interruptions			.07	.08
Indirect Effect	*Estimate*		*LLCI*	*ULCI*
Work Modality -> Need for Competence (via Effort Enhancing Interruptions)	.02		-.12	.16

Between-Person Level:

Work Modality	**Effort Enhancing Interruptions**		**Need for Competence**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	-.53*	.25	-.55	.36
Effort Enhancing Interruptions			-.25*	.12

Note. Number of observations = 655; number of participants = 142. *LLCI* = lower level of the 95% confidence interval; *ULCI* = upper level of the 95% confidence interval. *$p < 0.05$ (2-tailed). **$p < 0.01$ (2-tailed).

Table 8. Within-Individual Path-Analytic Regression Results for Indirect Effects of Work Modality on the Fulfillment of the Need for Competence through Recovery-Enhancing Interruptions.

Within-Individual Level:

Work Modality	**Recovery Enhancing Interruptions**		**Need for Competence**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	.56**	.09	-.09	.08
Recovery Enhancing Interruptions			-.02	.06
Indirect Effect	*Estimate*		*LLCI*	*ULCI*
Work Modality -> Need for Competence (via Recovery Enhancing Interruptions)	-.03		-.11	.06

Between-Person Level:

Work Modality	**Recovery Enhancing Interruptions**		**Need for Competence**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	.27	.32	-.36	.37
Recovery Enhancing Interruptions			-.09	.09

Note. Number of observations = 655; number of participants = 142. *LLCI* = lower level of the 95% confidence interval; *ULCI* = upper level of the 95% confidence interval. **$p < 0.01$ (2-tailed).

Table 9. Within-Individual Path-Analytic Regression Results for Indirect Effects of Work Modality on the Fulfillment of the Need for Relatedness through Positive Social Interactions.

Within-Individual Level:

Work Modality	**Positive Social Interactions**		**Need for Relatedness**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	-.85**	.08	-.95**	.13
Positive Social Interactions			.42**	.09
Indirect Effect	*Estimate*		*LLCI*	*ULCI*
Work Modality -> Need for Relatedness (Via Positive Social Interactions)	-.20		-.37	-.03

Between-Person Level:

Work Modality	**Positive Social Interactions**		**Need for Relatedness**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	-.37	.28	-.09	.42
Positive Social Interactions			.66**	.18

Note. Number of observations = 655; number of participants = 142. *LLCI* = lower level of the 95% confidence interval; *ULCI* = upper level of the 95% confidence interval. **$p < 0.01$ (2-tailed).

Table 10. Within-Individual Path-Analytic Regression Results for Indirect Effects of Work Modality on the Fulfillment of the Need for Relatedness through Negative Social Interactions.

Within-Individual Level:

Work Modality	**Negative Social Interactions**		**Need for Relatedness**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	-.05	.03	-1.11**	.11
Negative Social Interactions			-.09	.20
Indirect Effect	*Estimate*		*LLCI*	*ULCI*
Work Modality -> Need for Relatedness (via Negative Social Interactions)	-.03		-.08	.02

Between-Person Level:

Work Modality	**Negative Social Interactions**		**Need for Relatedness**	
Main Effects	*Estimate*	*SE*	*Estimate*	*SE*
Work Modality	-.02	.08	-.38	.44
Negative Social Interactions			-.98**	.34

Note. Number of observations = 655; number of participants = 142. *LLCI* = lower level of the 95% confidence interval; *ULCI* = upper level of the 95% confidence interval. **$p < 0.01$ (2-tailed).

Table 11. Within-Individual Path-Analytic Regression Results for the Moderation Effect of Shared Modality Prevalence between Work Modality and Effort Enhancing Interruptions.

Within-Individual Level:

Work Modality	**Effort Enhancing Interruptions**	
Main Effects	*Estimate*	*SE*
Work Modality	-.32	.20
Shared Modality Prevalence	.04	.03
Work Modality X Shared Modality	-.05	.09

Between-Person Level:

Work Modality	**Effort Enhancing Interruptions**	
Main Effects	*Estimate*	*SE*
Work Modality	-.39	.45
Shared Modality Prevalence	.07	.04
Work Modality X Shared Modality	-.03	.06

Note. Number of observations = 655; number of participants = 142.

Table 12. Within-Individual Path-Analytic Regression Results for the Moderation Effect of Shared Modality Prevalence between Work Modality and Recovery Enhancing Interruptions.

Within-Individual Level:

Work Modality	**Recovery Enhancing Interruptions**	
Main Effects	*Estimate*	*SE*
Work Modality	.57**	.22
Shared Modality Prevalence	-.03	.03
Work Modality X Shared Modality	-.003	.04

Between-Person Level:

Work Modality	**Recovery Enhancing Interruptions**	
Main Effects	*Estimate*	*SE*
Work Modality	.09	.56
Shared Modality Prevalence	.02	.06
Work Modality X Shared Modality	.02	.07

Note. Number of observations = 655; number of participants = 142. **$p < 0.01$ (2-tailed).

Table 13. Within-Individual Path-Analytic Regression Results for the Moderation Effect of Shared Modality Prevalence between Work Modality and Positive Social Interactions.

Within-Individual Level:

Work Modality	**Positive Social Interactions**	
Main Effects	*Estimate*	*SE*
Work Modality	-.87**	.16
Shared Modality Prevalence	-.01	.03
Work Modality X Shared Modality	.007	.03

Between-Person Level:

Work Modality	**Positive Social Interactions**	
Main Effects	*Estimate*	*SE*
Work Modality	-.71	.44
Shared Modality Prevalence	.05	.04
Work Modality X Shared Modality	.02	.05

Note. Number of observations = 655; number of participants = 142. **$p < 0.01$ (2-tailed).

Table 14. Within-Individual Path-Analytic Regression Results for the Moderation Effect of Shared Modality Prevalence between Work Modality and Negative Social Interactions.

Within-Individual Level:

Work Modality	**Negative Social Interactions**	
Main Effects	*Estimate*	*SE*
Work Modality	-.10	.51
Shared Modality Prevalence	-.001	.02
Work Modality X Shared Modality	.01	.03

Between-Person Level:

Work Modality	**Negative Social Interactions**	
Main Effects	*Estimate*	*SE*
Work Modality	.13	.24
Shared Modality Prevalence	.004	.02
Work Modality X Shared Modality	-.02	.03

Note. Number of observations = 655; number of participants = 142.

DISCUSSION

The purpose of this study was to investigate the relations between hybrid work arrangements and satisfaction of the three basic psychological needs of autonomy, competence, and relatedness, utilizing a within-person approach. Drawing upon self-determination theory as the theoretical framework, this research aimed to explore how an individual's variation in work modality (WFH vs. working at the office) influences the fulfillment of these three needs. Additionally, the study sought to examine the mediating roles of perceived monitoring, perceived locational autonomy, workplace interruptions (effort-enhancing and recovery-enhancing), and social interactions (positive and negative), as well as the moderating role of shared modality prevalence. A daily diary survey was used to gather data from employees engaged in hybrid work arrangements.

Overall, I found evidence for the differential impact of work modality on the satisfaction of basic psychological needs within individuals. Specifically, on days when individuals worked in the WFH modality, they experienced higher fulfillment of their need for autonomy, mediated by reduced perceived monitoring and increased perceived locational autonomy. Conversely, on days when individuals worked in the office modality, they experienced greater fulfillment of their need for relatedness, mediated by more frequent positive social interactions. Work modality was not related to fulfillment of the need for competence. These findings provide nuanced insights into the dynamic nature of need satisfaction in contemporary work environments. In the following sections, I discuss the key results and their alignment with the proposed hypotheses, the broader theoretical and practical implications of this study, and finally the limitations of the study and directions for future research.

Work Modality and Fulfillment of Basic Psychological Needs

The initial set of hypotheses (Hypotheses 1-3) examined the direct effects of work modality on basic psychological need fulfillment. Hypothesis 1 predicted that individuals would report greater fulfillment of their need for autonomy on days when they were in the WFH modality than on days when they were in the office modality. Consistent with Hypothesis 1, I found that individuals reported higher fulfillment of their need for autonomy when in the WFH modality than when in the office modality. This is consistent with SDT, which holds that autonomy stems from the ability to self-regulate actions and decisions (Ryan & Deci, 2017), and is in line with prior studies (e.g., Gajendran & Harrison 2007; Gerdenitsch 2017). Intuitively, it is not surprising that being in one's home environment, free from immediate oversight, allows for more self-regulation.

Interestingly, I found no significant between-person effect, meaning that fulfilment of the need for autonomy did not differ between individuals who worked more days per week in the WFH modality versus those who worked more days per week in the office modality. This contrasts with some earlier findings (e.g., Brunelle & Fortin, 2021). One possible explanation for this finding is related to the provision of choice. According to Ryan and Deci (2020), not all choices are associated with increased fulfillment of the need for autonomy, especially choices that are unwanted or have implicit pressures behind them. Consequently, if individuals felt that there was no point being in the office on certain days (because no one else was there, for example), or if they felt compelled to go to the office despite it being technically feasible to work at home (due to organization culture, for example), then the choice of the WFH modality may have been perceived as less meaningful or imposed on them, thereby reducing any increase

in the fulfillment of their need for autonomy from working more days at home.

Hypothesis 2 predicted that individuals would report a greater fulfillment of their need for competence on days when they were in the WFH modality than on days when they were in the office modality. This hypothesis was not supported as the relation between work modality and competence was non-significant. The original reasoning behind this hypothesis was based on how competence is defined in SDT, which emphasizes the need to feel effective by obtaining desired outcomes and developing mastery. Given past findings that the WFH modality reduced distractions and improved productivity (e.g., Bailey & Kurland 2002; Gajendran & Harrison 2007), it seemed likely that work modality would affect fulfillment of the need for competence; however, this was not the case.

The non-significant relation between work modality and fulfillment of the need for competence in my study was not consistent with my reasoning, but is consistent with Schade et al. (2021), who similarly found that individual fulfillment of the need for competence did not fluctuate based on work modality. One possible explanation for this result could be that differences in the physical setup between the WFH and office modalities may be smaller now that many organizations are providing their employees with appropriate equipment for their home offices (Seva et al., 2021), and this could reduce the impact of work modality on satisfaction of the need for competence. Additionally, Ryan & Deci (2020) emphasized that competence thrives in environments that offer challenges, positive feedback, and growth opportunity. Thus, competence may be more influenced by the characteristics of the work that is being performed rather than an individual's physical environment (in this case, work modality).

It is worth noting that the between-individual relation between work modality and fulfillment of the need for competence was complicated. Although the between-person correlation was negative, suggesting that satisfaction of the need for competence was higher for individuals who worked more days per week in the office modality than for individuals who worked more days per week in the WFH modality, the between-person regression coefficient was non-significant, suggesting no difference in satisfaction of the need for competence. Considering that the multilevel regression better isolated the between-person variance, it seems that work modality was not related to fulfillment of the need for competence in this study.

Hypothesis 3 predicted that individuals would report greater fulfillment of the need for relatedness on days when they were in the office modality than on days when they were in the WFH modality. This hypothesis was supported, substantiating the contention that individuals feel more connected and have a greater sense of belongingness when they are physically present with their colleagues. This suggests that the lack of physical proximity to others when working from home can make it challenging to experience social connections, which is consistent with past findings regarding the negative social effects of working from home, such as social isolation and reduced interaction quality (e.g., Alfanza 2021, Morganson et al., 2010). This is also consistent with past research showing that interacting face-to-face provides a level of connection that virtual systems often cannot match (e.g., Ratan & Bailenson, 2022; Shockley et al., 2021).

Intriguingly, I found no significant between-person effect, meaning that fulfilment of the need for relatedness did not differ between individuals who worked more days per week in the WFH modality versus those who worked more days per week in the office modality. One possible explanation for this is that individuals break their work into streams, as suggested by

Halford (2005). Halford (2005) found that hybrid employees often reclassified their work into two streams, an office-stream and a home-stream. According to Halford, this was done to allow individuals to take advantage of the undisturbed nature of WFH for more focused, head-down tasks, while utilizing the collaborative nature of the office for teamwork and social interactions. Consequently, individuals may visit the office specifically with the intention of catching up with their colleagues and to foster a sense of relatedness. It is possible that these social benefits may be effectively achieved by being in the office even only a few days per week, with diminishing returns from being in the office more frequently.

Overall, these first hypotheses highlight the complex nature of hybrid work, and how work modality directly affects the fulfillment of basic psychological needs. Notably, while the WFH modality improves fulfillment of the need for autonomy on a day-to-day basis, individuals who work more days per week in the WFH modality do not experience higher fulfillment of their need for autonomy. In contrast, while the office modality improves fulfillment of the need for relatedness on a day-to-day basis, individuals who work more days per week in the office modality do not experience higher fulfillment of their relatedness needs. These findings underscore the importance of considering both within-person and between-person dynamics when considering the impact of hybrid work on need fulfillment, and suggest that the within-person level is a critical level of analysis. With respect to satisfaction of the need for competence, work modality does not seem to directly affect fulfillment of this need at either the within-person or between-person level. Taken together, these findings reveal a complex interplay between work modality and need satisfaction.

Effects of Perceived Monitoring and Perceived Locational Autonomy

The second set of hypotheses (hypotheses 4-5) examined indirect effects of work modality on fulfillment of the need for autonomy. Hypothesis 4 predicted that there is an indirect effect through perceived monitoring, such that on days when an employee is in the WFH modality, they will experience lesser perceived monitoring than on days when they are in the office modality and, in turn, will experience higher satisfaction of the need for autonomy on those days. Hypothesis 5 predicted that there is an indirect effect through perceived locational autonomy, such that on days when an employee is in the WFH modality, they will experience greater perceived locational autonomy than on days when they are in the office modality and, in turn, will experience higher satisfaction of the need for autonomy on those days.

My findings were consistent with both hypotheses. Individuals in the WFH modality reported less perceived monitoring and greater perceived locational autonomy, both of which enhanced fulfillment of their need for autonomy. This aligns with prior research, such as Jensen & Raver (2012) and Sewell & Taskin (2015), both of which found evidence that increased surveillance diminished perceived autonomy. A potential explanation as to why individuals perceive less monitoring at home than in the office is offered by Metselaar & Vermeeren (2023) and Brunelle & Fortin (2021), who reasoned that the absence of direct supervision may enhance feelings of autonomy for employees. It is interesting that individuals perceive significantly less monitoring while working from home, particularly with the rise of electronic surveillance. Vitak & Zimmer (2023) highlighted the increasingly prevalent use of invasive surveillance technologies by employers to monitor employees who are no longer on-site, including random screenshots, key logging, and monitoring attentiveness during video

calls, all of which have the potential to significantly impact the perception of monitoring while working from home.

The results are also consistent with findings from De Spiegelaere et al. (2016), who found evidence for locational autonomy being a significant factor in perceived job autonomy. Additionally, the results align with Kaduk et al. (2019), who found that locational autonomy is associated with increased feelings of control, and with Gerdenitsch (2017), who found that choice over work location impacts an individual's sense of autonomy. Notably, perceived locational autonomy had a significant between-person effect, indicating that perceived locational autonomy was greater among individuals who worked more days per week in the WFH modality as compared to those who worked more days per week in the office.

Taken together, these findings suggest that on days when individuals are in the WFH modality, they perceive less monitoring and greater control over their work environment, leading to increased fulfillment of their need for autonomy. Overall, this fully aligns with Ryan & Deci's (2017) description of an autonomy supportive environment, in that these variables support an individual's sense of choice and self-regulation, emphasizing both perceived monitoring and perceived locational autonomy as critical mechanisms through which work modality influences fulfillment of the need for autonomy.

Effects of Effort-Enhancing interruptions and Recovery-Enhancing interruptions

The third set of hypotheses (Hypotheses 6-7) examined the indirect effects of work modality on fulfillment of the need for competence. Hypothesis 6 predicted that there is an indirect effect through effort-enhancing interruptions, such that on days when an employee is in the WFH modality, they will experience fewer effort-enhancing interruptions than on days when

they are in the office modality and, in turn, will experience higher satisfaction of the need for competence on those days. Hypothesis 7 predicted that there is an indirect effect through recovery-enhancing interruptions, such that on days when an employee is in the WFH modality, they will experience greater recovery-enhancing interruptions than on days when they are in the office modality and, in turn, will experience higher satisfaction of the need for competence on those days.

My findings did not support either hypothesis, but still provide valuable insights into the relation between work modality and interruptions. Consistent with my reasoning, I found that effort-enhancing interruptions were more frequent, and recovery-enhancing interruptions less frequent, when working in the office as compared to working from home. The former finding aligns with Golden (2007), who suggested that the prevalence of one's coworkers in the office can impact the frequency of disruptions, and is further supported by my finding that shared modality prevalence positively correlates with effort-enhancing interruptions at a between-individual level. The latter finding is consistent with Biron & Van Beldhoven (2016), who found that WFH affords individuals increased work-time control and less exhaustion stemming from the ability to take breaks when needed. This is further supported by the negative correlation between perceived monitoring and recovery-enhancing interruptions, indicating that individuals take fewer breaks when they perceive higher levels of monitoring, which is more common at the office.

The within-individual effects of both effort-enhancing and recovery-enhancing interruptions on fulfillment of the need for competence were non-significant. These findings challenge the traditional assumptions put forth by Bailey & Kurland (2002) and Gajendran &

Harrison (2007), who suggested that escaping office interruptions could be the cause of the increased feelings of competence associated with WFH. One possible explanation for the lack of a relation between effort-enhancing interruptions and competence is related to how the effort-enhancing interruptions measure was formed. In making the measure, I combined three different types of interruptions (i.e., distractions, discrepancy detections, and intrusions), which may have resulted in the effects of different types of interruptions cancelling each other out. It could be, for example, that distractions and intrusions could negatively impact competence by interfering with an individual's work, whereas discrepancy detections could contribute positively to one's sense of mastery by allowing individuals to find and fix errors, thereby enhancing their competence.

Regarding the relation between recovery-enhancing interruptions and fulfillment of the need for competence, past findings have suggested that breaks can indeed facilitate the replenishment of personal resources, promoting effectiveness and task mastery (Trougakos et al., 2014). However, the potential for recovery offered by work breaks is influenced by multiple factors. Fritz et al. (2011) found that employees often do not utilize the most effective strategies for managing breaks at work, with several common techniques such as having a snack, going to the bathroom, and drinking a caffeinated beverage, actually contributing to fatigue. Similarly, Sonnentag et al. (2022) suggested that not all breaks are equally beneficial, and that while breaks may provide short respites from work, this does not equate to effective energy recovery. Therefore, while recovery-enhancing interruptions may provide individuals with short-term relief and relaxation, the variability in the types of breaks in which individuals engage means that not all breaks contribute equally to the enhancement of a sense of efficacy or mastery, and this could explain the lack of a relation between recovery-enhancing breaks and fulfillment of the need for

competence. Overall, these findings suggest that work modality is related to both effort-enhancing interruptions and recovery-enhancing interruptions, but interruptions do not act as mechanisms through which work modality influences fulfillment of the need for competence.

Effects of Positive Social Interactions and Negative Social Interactions

The fourth set of hypotheses (Hypotheses 8-9) examined the indirect effects of work modality on fulfillment of the need for relatedness. Hypothesis 8 predicted that there is an indirect effect through positive social interactions, such that on days when an employee is in the WFH modality, they will experience fewer positive social interactions than on days when they are in the office modality and, in turn, will experience less satisfaction of the need for relatedness on those days. Hypothesis 9 predicted that there is an indirect effect through negative social interactions, such that on days when an employee is in the WFH modality they will experience greater negative social interactions than on days when they are in the office modality and, in turn, will experience less satisfaction of the need for relatedness on those days.

My findings provided support for Hypothesis 8. At the within-individual level, I found a significant positive indirect relation between work modality and satisfaction of the need for relatedness through positive social interactions. This finding is consistent with my reasoning that spontaneous and non-transactional interactions tend to occur more frequently in the office modality, which positively contributes to an individual's sense of belongingness and connection. These positive social interactions that naturally occur in an office setting may not be easily replicated through virtual means, even with the advancement of virtual communication (i.e., Microsoft Teams, Slack). This finding also aligns with Whittle & Mueller (2009), who found that employees working from home lacked interpersonal interactions with colleagues, and with

Gerdenitsch (2017) and Windeler (2017), who suggested that the office acts as an important social hub for beneficial interactions that can enhance one's sense of belongingness. It also aligns with past studies that have highlighted the importance of positive social interactions for satisfying the need for relatedness (e.g., Gagné et al., 2022; Meng et al., 2023; Rietveld et al., 2022). Additionally, I found a significant between-individual relation between work modality and positive social interactions, indicating that individuals who worked more days per week in the office experienced more frequent positive social interactions than those who worked more days per week from home. This finding is consistent with Alfanza (2021), who found that high-intensity WFH contributed to feelings of isolation and reduced interaction quality, due to a lack of physical presence with co-workers.

My findings did not support Hypothesis 9, as there was no significant relation between work modality and negative social interactions. This finding is contrary to the reasoning of Windeler et al. (2017), who suggested that digital communication might lead to increased miscommunication, and Gagné et al. (2022), who suggested that virtual interactions could be stressful. My findings did not provide evidence in line with these claims. The non-significant effect of negative social interactions on fulfillment of the need for relatedness is perplexing, but may be attributed to the measurement approach. In order to capture negative social interactions, I used the *Workplace Incivility Scale* (Cortina et al., 2001), which was initially designed to measure the frequency of disrespectful, rude, or condescending behaviors from supervisors or coworkers over the previous 5 years. According to Cortina et al. (2001), they chose a 5-year period due to the infrequent nature with which incivility takes place in the workplace. Indeed, this infrequency was corroborated by the low frequency of negative

social interactions reported in my data (M = 0.11, SD = .35). Thus, the data for negative social interactions appear to have been highly skewed with little variability, and this could explain the non-significant relation between negative social interactions and satisfaction of the need for relatedness. Perhaps a different measure that better captured some of the more frequent and mundane aspects of negative social interactions would have been more appropriate for daily assessment, potentially yielding the expected relations. Overall, my findings suggest that work modality is related to positive social interactions, which act as a critical mechanism through which work modality influences fulfillment of the need for relatedness.

The Moderating Effect of Shared Modality Prevalence

The fifth set of hypotheses (Hypotheses 10-13) examined whether shared modality prevalence moderates the relations between work modality, on the one hand, and workplace interruptions (effort-enhancing and recovery-enhancing) and social interactions (positive and negative), on the other. These hypotheses were not supported. However, shared modality prevalence was significantly related to perceived locational autonomy, positive social interactions, and fulfillment of the needs for autonomy and relatedness at the within-individual level. At the between-individual level, shared modality prevalence was significantly related to perceived locational autonomy, recovery-enhancing interruptions, effort enhancing interruptions, positive social interactions, and fulfillment of the needs for competence and relatedness. These findings align with the findings of Golden (2007), in that the proportion of one's colleagues operating in the same modality of work as themselves can influence work dynamics. The consistent relations at both within-individual and between-individual levels highlight the potential of shared modality prevalence to impact various dimensions of workplace experience.

Therefore, although shared modality prevalence did not demonstrate a moderating effect as initially hypothesized, it appears to still be an important factor that warrants further investigation.

Directions for Future Research

The findings of this study highlight the complex interplay between hybrid work arrangements and basic psychological need fulfillment, shedding light on several areas that could be explored in future research. First, future research should delve deeper into the surprising lack of significant relations between work modality and fulfillment of the need for competence, as well as between interruptions and fulfillment of the need for competence. More specifically, it may be worthwhile to explore whether different types of interruptions have distinct effects on fulfillment of the need for competence. In my study, the scale used to measure effort-enhancing interruptions was adapted to include intrusions, distractions, and discrepancy detections as a single construct, rather than examining each type of effort-enhancing interruptions separately. Future studies could benefit from separating these categories to see if their effects on competence differ. Similarly, as proposed by Sonnentag et al. (2022), it may be beneficial to classify recovery-enhancing interruptions into productive and unproductive types. Refining these measurement approaches could provide more detailed insights into how different types of interruptions impact fulfillment of the need for competence. Additionally, it may also be valuable to examine other potential mechanisms that could contribute to fulfillment of the need for competence in a hybrid work environment, such as access to professional development opportunities, technological support, and feedback mechanisms. These mechanisms are particularly relevant for employees engaging in WFH, as highlighted in a recent review by Gagné et al. (2022), and align with Ryan & Deci's (2017) description of a competence supportive

environment.

Second, the lack of a significant between-person relation between work modality and fulfillment of the need for relatedness warrants further exploration. Future research could investigate why the frequency of in-office days does not appear to enhance fulfillment of the need for relatedness, perhaps by examining how employees compartmentalize their social interactions depending on their work modality. Additionally, it would be worthwhile to re-examine negative social interactions, perhaps with a different measure and with a focus on digital communication. The infrequency and associated skewness of negative social interactions in my study may have masked relations that do exist. Given the increased prevalence of digital communication tools, especially in hybrid work settings (e.g., Microsoft Teams, Zoom), it is important to explore how virtual interactions might contribute to or mitigate negative social experiences. Such research could shed light on whether digital miscommunication increases the likelihood of negative social interactions, thereby impacting fulfillment of the need for relatedness.

Third, future research could further explore the relation between work modality and fulfillment of the need for autonomy, particularly focusing on indirect effects through perceived monitoring and locational autonomy. For example, it would be insightful to differentiate between different types of monitoring, such as electronic surveillance versus direct supervision, and explore their distinct impacts on fulfillment of the need for autonomy. Given the complexity of monitoring in remote work settings, future research could also examine how employees' awareness of electronic monitoring intensity affects their perceptions of being monitored. Additionally, exploring how hybrid work configurations impact perceived locational autonomy

could provide a deeper understanding of the relation between work modality and perceived locational autonomy. A particularly interesting avenue might be to examine the effects of the "unspoken pressure" of coming to work in the office. More specifically, even in flexible arrangements where employees are free to choose when to work in the office, contextual pressures such as concerns about perceived commitment, performance, or promotion expectations, might compel employees to be present more often than they would prefer, potentially diminishing their perceived locational autonomy.

Fourth, the role of shared modality prevalence in hybrid work arrangements warrants further investigation, particularly in how it influences other workplace dynamics. Although my study did not find support for its moderating role, the significant relations observed suggest that shared modality prevalence could influence other variables associated with hybrid work arrangements. Future research could specifically examine how the proportion of colleagues working in the same modality affects perceived locational autonomy, effort-enhancing interruptions, and positive social interactions, all of which indicated a significant between-person relation with shared modality prevalence in my study. Understanding these dynamics could provide valuable insights into optimizing hybrid work environments.

Lastly, future studies could examine organizational hybrid work policies in greater detail. According to Acoba et al. (2022), these policies often vary depending on industry, company size, and job function. Policies may include mandatory office days, where the organization requires employees to be in the office on specific days, and optional office days, where employees choose which days they come in, as long as certain conditions are met (e.g., being in the office two days a week). These different configurations create interesting hybrid work setups that could impact

work modality and fulfillment of basic psychological needs in distinct ways, and therefore warrant future study.

Practical Implications

The findings of this study offer significant practical implications for organizations navigating the complexities of hybrid work arrangements. As more workplaces adopt hybrid work, understanding how work modality affects fulfillment of basic psychological needs is crucial for fostering employee motivation and, subsequently, performance. My research reinforces the fact that WFH can significantly enhance an individual's sense of autonomy, and I found that this occurs in part by reducing the perception of being monitored and increasing the perception of locational autonomy on days when individuals work from home. To leverage this, organizations should offer flexible WFH options for 2-3 days per week, allowing employees to choose their work locations whenever feasible to best suit their needs. My findings have shown that the perception of having chosen one's work location is a key mechanism to fulfillment of the need for autonomy.

At the same time, my study suggests that the office remains a vital hub for positive social interactions and fulfillment of the need for relatedness, such that employees are less likely to satisfy their need for relatedness on days when they are working from home. Therefore, I recommend that organizations implement 1-2 mandatory in-office days per week to ensure regular face-to-face interactions, which strengthen team cohesion and support the need for relatedness. Additionally, the concept of shared modality prevalence has emerged as a potential factor influencing workplace dynamics. High shared modality prevalence is associated with an increase in the frequency of positive social interactions and greater fulfillment of the needs for

autonomy and relatedness. Therefore, organizations should consider coordinating team schedules on mandatory office days, to amplify the benefits of positive social interactions when individuals are in the office.

Organizations may also want to consider minimizing surveillance practices. This is because employees who perceive that they are being monitored experience a decline in fulfillment of their need for autonomy. Past research has also documented that surveillance, especially electronic surveillance, has other negative consequences, including diminished job satisfaction (Siegel et al., 2022), a reduced sense of job control (Ravid et al., 2019), and lower levels of autonomous motivation (Chen et al., 2020). Instead, organizations may be better off leveraging technology such as virtual check-ins, coffee breaks, and networking sessions to help maintain the connections and interactions among team members, particularly those who work remotely regularly.

In summary, several practical implications of these findings are noteworthy. Organizations can enhance employee motivation by offering flexibility in work location and minimizing surveillance practices, thereby fostering a sense of autonomy. A balanced hybrid work model that combines flexible WFH options with coordinated, mandatory in-office days is recommended. This approach ensures that employees can enjoy the autonomy benefits of working from home while still reaping the social and relational advantages of in-person interactions, thereby optimizing both individual well-being and organizational cohesion.

Strengths & Limitations

This study utilized a longitudinal daily-diary methodology to capture within-person variability and provide insights into the day-to-day fluctuations of individual work experiences

across different work modalities. A significant strength of the study lies in its longitudinal design, which unlike cross-sectional approaches, allowed for the examination of changes within individuals over time, offering a more nuanced understanding of how work modality affects fulfillment of basic psychological needs. The use of daily assessments close to the end of the workday each day for 5 consecutive days effectively captured data at the end of the individual's workday, thereby minimizing recall bias and providing a more accurate representation of how the WFH and office modalities influenced fulfillment of the basic psychological needs for autonomy, competence, and relatedness. This approach aligns with Coxen et al.'s (2021) recommendation to use daily assessments close to the actual experience to enhance the validity and reliability of findings in work motivation research. At the same time, the study's reliance on a longitudinal correlational design, while robust for capturing within-person and between-person effects, inherently limits the ability to establish causality, which is a key limitation.

A second limitation of this study pertains to the self-reported nature of the data. Reliance on self-reported data introduces the possibility of common source bias, but in the context of need satisfaction, self-reporting is appropriate since individuals are in the best position to assess their own needs. The measure for shared modality prevalence also relied on subjective self-reported data, but participants may have misestimated the percentage of their colleagues working in the same modality as them, especially in medium to large organizations where accounting for the work modalities of a larger number of colleagues is more challenging. Future studies could address this issue by utilizing more objective measures, such as organizational records, to accurately determine the precise number of individuals working at the office each day.

A third limitation of this study involves some of the adapted measures that were used. For example, the measures for effort-enhancing interruptions and positive social interactions exhibited low internal consistency, which may have been due to how they were re-configured from their original forms. Although theoretical relevance justified their inclusion, the modifications may have compromised the reliability and validity of the measures. Additionally, the measure for negative social interactions may not have been appropriate for daily measurement, as it was originally designed to capture negative social experiences over a much longer time span. Therefore, future research could benefit from using original validated measures, without modifications, or from selecting measures that are better suited to capturing the specific constructs under investigation.

A fourth limitation of this study is that the sample was a convenience sample, with most participants drawn from an online panel service. Although the sample included participants from various industries and job roles, it was not a probability sample, which limits the generalizability of the findings. The inclusion of a small number of participants from a single multinational corporation further highlights the limitations in generalizability, as the sample may not fully capture the diversity of hybrid work experiences across different contexts. Expanding the sample in future research to include a more representative sample of the workforce across different regions and industries would significantly enhance external validity.

Conclusion

This study explored the impact of hybrid work arrangements on fulfillment of the basic psychological needs for autonomy, competence, and relatedness within the framework of SDT. As organizations increasingly adopt hybrid work policies,

understanding these dynamics is crucial for enhancing employee motivation and organizational performance.

My research reinforces the significant role that work modality plays in fulfilling the need for autonomy. Employees reported experiencing less perceived monitoring, greater locational autonomy, and higher fulfillment of the need for autonomy on days when they were in the WFH modality as compared to days when they were in the office modality. This aligns with prior research and conceptualizations of autonomy-supportive environments (De Spiegelaere et al., 2016; Ryan & Deci, 2017). Simultaneously, my findings revealed that the WFH modality is detrimental to fulfillment of the need for relatedness, which is better supported by the office modality. Indeed, my findings indicate that the office continues to play a critical role in fulfilling the need for relatedness, particularly through the mechanism of positive social interactions, which are less prevalent in the WFH modality. These findings re-emphasize the importance of maintaining a balanced approach to hybrid work, where organizations can optimize need fulfillment by strategically integrating both WFH and office days. Specifically, organizations should implement a hybrid work arrangement that allows for both WFH days that support autonomy and coordinated office days that support relatedness. This is especially important given that individuals who worked more days at the office during the study week did not report higher fulfillment of the need for relatedness than individuals who worked fewer days at the office over the same time period.

In conclusion, this thesis underscores the complexity and importance of hybrid work arrangements in shaping employee's experiences and motivation. By examining work modality through the lens of SDT, this research contributes to a deeper understanding

of the factors that drive motivation in contemporary work environments. As organizations navigate the evolving landscape of modern work, the insights of this study hopefully offer guidance for fostering motivation and overall well-being among employees, ultimately contributing to organizational success.

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APPENDICES

Appendix A. Measures

Perceived Monitoring (3-items): Adapted from Jensen & Raver (2012)

Response scale used:

1 = Strongly Disagree

2 = Disagree

3 = Slightly Disagree

4 = Neither Agree nor Disagree

5 = Slightly Agree

6 = Agree

7 = Strongly Agree

Items:

1. *Today, my supervisor closely monitored me while I was trying to do my work.*
2. *Today, I felt like I was constantly being watched to see that I obeyed all rules pertaining to my job.*
3. *Today, I felt like my behaviors were being closely monitored by my organization at all times.*

Perceived Locational Autonomy (3-items): Adapted from Spivack & Milosevic (2018)

Response scale used:

1 = Strongly Disagree

2 = Disagree

3 = Slightly Disagree

4 = Neither Agree nor Disagree

5 = Slightly Agree

6 = Agree

7 = Strongly Agree

Items:

1. *Today, I had the freedom to decide where to complete my work.*
2. *Today, it was basically my own responsibility to find or create an environment that would allow me to get my work done.*
3. *Today, I felt free to work off-site.*

Workplace interruptions (6-items): Adapted from Wilkes, Barber, & Rogers (2017)

Response scale used:

0 = Never

1 = Once

2 = Twice

3 = Three times

4 = Four times

5 = More than four times (please specify)

Effort-Enhancing Interruptions Items:

1. *(Intrusion) Today, I needed to stop what I was doing because a co-worker suddenly gave me a new work-related task.*
2. *(Distraction) Today, there were distracting noises in my work area when I was completing my work.*
3. *(Discrepancy Detection) Today, I found I had made a mistake in my work.*

Recovery-Enhancing Interruptions Items:

4. *Today, when I grew tired on a work task, I took a break.*
5. *Today, I took a break from tasks when I needed one.*
6. *Today, I had breaks from my work that fit with my natural work rhythm.*

Negative Social Interactions (3-items): Adapted from Cortina et al. (2001)

Response scale used:

0 = Never

1 = Once

2 = Twice

3 = Three times

4 = Four times

5 = More than four times (please specify)

Items:

1. *Today, my work was put down or was subject to condescension by coworkers.*
2. *Today, my statements were paid little attention by my coworkers and there was a lack of interest in my opinions at work.*
3. *Today, I was subjected to demeaning or derogatory remarks from my coworkers.*

Positive Social Interactions (3-items): Adapted from Ilies & Johnson (2005)

Response scale used:

0 = Never

1 = Once

2 = Twice

3 = Three times

4 = Four times

5 = More than four times (please specify)

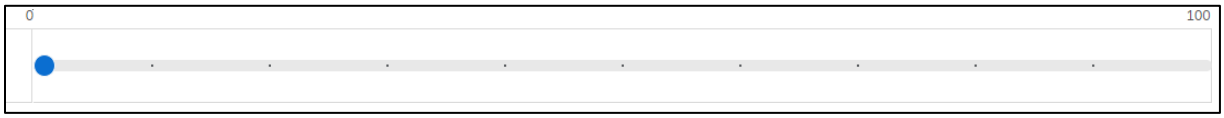
Items:

1. *Today, my coworkers made me feel better about a work decision that I had made.*
2. *Today, my coworkers gave me advice on how to deal with a certain colleague or customer.*
3. *Today, my coworkers engaged me with a friendly discussion.*

Shared Modality Prevalence (1-item): Adapted from Golden (2007)

Response scale used:

Slider ranging from: 0 % - 100 %



Items

1. *You indicated that you worked [answer to work modality question] today. What percentage of your co-workers do you estimate were also [answer to work modality question] today?*

Appendix B. Participant Removal from Data Analysis.

Reason for Removal	# of Participants Removed
Did not complete at least one day in each work modality (WFH & office)	41
Completed less than 3 Daily Surveys	25
Outlier in over 60% of surveys completed	4
Total Participants Removed:	**70**

Appendix C. Merged Dataset – Demographic Information (N = 142)

Demographic Variables	Frequency (N)	Percent (%)	Mean	SD
Age				
18-24	3	2.1		
25-29	17	12.0		
30-34	25	17.6		
35-39	27	19.0		
40-44	23	16.2		
45-49	13	9.2		
50-54	16	11.3		
55-59	5	3.5		
60-64	11	7.7		
70-74	1	0.7		
Gender				
Man	73	51.4		
Woman	68	47.9		
Non-binary	1	.7		
Highest Educational Attainment				
High school diploma, completed secondary education (GCSEs), or equivalent	19	13.4		
Some Cegep, A-levels, or college education	12	8.5		
Cegep certificate, completed A-levels, college diploma, or equivalent	11	7.7		
Some university studies	6	4.2		
Bachelor's degree or university undergraduate degree	70	49.3		
Master's degree or university post-graduate degree	21	14.8		
Doctorate degree or PhD	2	1.4		
Other level of educational attainment (please specify)	1	.7		
Marital Status				
Single, never married	49	34.5		
Married or domestic partnership	84	59.2		
Divorced or separated	9	6.3		
Children				
No	57	40.1		
Yes	84	59.2		

Prefer not to Respond	1	.7		
Number of Children			1.9	.79
0	3	2.1		
1	19	13.4		
2	46	32.4		
3	13	9.2		
More than 3 (Please specify and type your answer using numbers only (e.g., 4))	2	1.4		
Prefer not to respond	1	.7		
Number of Children				
0	3	2.1		
1	19	13.4		
2	46	32.4		
3	13	9.2		
More than 3 (Please specify and type your answer using numbers only (e.g., 4))	2	1.4		
Prefer not to respond	1	.7		
Age of youngest Child				
Not applicable; there are no children in my household	20	14.1		
5 years or younger	29	20.4		
6-12 years	21	14.8		
13-17 years	14	9.9		
Childcare Arrangement				
Childcare is provided at home, and I handle the majority of childcare responsibilities	16	11.3		
Childcare is provided at home, but is generally handled by my spouse/partner or by a non-parent relative (e.g., grand-parent)	19	13.4		
Childcare is provided externally through formal facilities (e.g., daycare, school, etc.)	27	19.0		
Childcare is provided externally through an unpaid care provider (e.g., drop off at grandparents)	3	2.1		
Other (please specify)	13	9.2		
Supervisory Role?				
No	68	47.9		
Yes	74	52.1		
Frequency of WFH prior to Covid-19			.95	1.63

0 days a week	92	64.8		
1 day a week	16	11.3		
2 days a week	13	9.2		
3 days a week	5	3.5		
4 days a week	5	3.5		
5 days a week	9	6.3		
6 days a week	1	.7		
Industry				
Accommodation and food services	2	1.4		
Administrative and support, waste management and remediation services	8	5.6		
Arts, entertainment and recreation	6	4.2		
Construction	5	3.5		
Educational services	15	10.6		
Finance and insurance	15	10.6		
Health care and social assistance	13	9.2		
Information and cultural industries	5	3.5		
Management of companies and enterprises	2	1.4		
Professional, scientific and technical services	11	7.7		
Public administration	15	10.6		
Real estate and rental and leasing	3	2.1		
Retail trade	13	9.2		
Transportation and warehousing	10	7.0		
Utilities	3	2.1		
Wholesale trade	3	2.1		
Other services	13	9.2		
Work Status				
Employed Full-time	127	89.4		
Employed Part-Time	15	10.6		
Organization Size				
Self-employed (1 person)	2	1.4		
Small (2 to 100 people)	26	18.3		
Medium (101 to 1000 people)	45	31.7		
Large (more than 1001 people)	69	48.6		
Organizational Tenure (Years)			9.14	8.25
Commute Time (Hours)			1.04	0.94