

**Strengths-Based Nursing and Healthcare Leadership: An Approach to Minimize the Rate
of Burnout in Healthcare**

Meghan Mastroberardino

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By: Meghan Mastroberardino

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complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the final examining committee:

_____ Chair
Dr. Adriane MacDonald

_____ Examiner
Dr. Tracy Hecht

_____ Examiner
Dr. Alexandra Panaccio

_____ Thesis Supervisor
Dr. Kathleen Boies

_____ Thesis Co-Supervisor
Dr. Julie Fr chet

Approved by

Dr. Linda Dyer, Chair of Department of Management and Graduate Program Director

Dr. Anne-Marie Croteau, Dean of Faculty

Abstract

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Meghan Mastroberardino

Healthcare workers, especially nurses, are susceptible to burnout at more prevalent rates than the rest of the population. We argue that one way to mitigate rates of burnout in healthcare is by putting a spotlight on the Strengths-Based Nursing and Healthcare Leadership (SBNH-L) approach. Literature on SBNH-L is in its infancy, and no literature to date has looked at this leadership approach in relation to burnout. This study aimed to understand how SBNH-L can foster a culture of inclusion in nursing (and healthcare) and how this can be reflected in the rates of burnout among nurses and other healthcare employees. We surveyed 357 healthcare workers in Canada (144 of whom were nurses) using the AskingCanadians online data collection service. The participants were asked to complete the SBNH-L questionnaire in relation to their manager, a perceived inclusion questionnaire and a self-rated burnout questionnaire. To analyze the data, we conducted a mediation analysis using the PROCESS macro on SPSS. The results showed that inclusion partially mediated the relationship between SBNH-L and emotional exhaustion in the full healthcare sample. These results contribute to findings on the newly developed leadership approach of SBNH-L. They also extend into the clinical world to provide insight into inclusion as a mechanism to mitigate burnout rates.

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Dedication

In loving memory of my beautiful mother, Connie Contino. Thank you for showing me how to be strong and resilient and for teaching me to persevere no matter what. You have inspired me to live life to the fullest, to work hard at everything I do, and never give up despite tough times. Mom, every page is written in honour of you. Thank you for carrying me through the hardships. This thesis embodies a labour of love, heartache, and healing.

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Introduction

When a kettle filled with water boils continuously, it will eventually run dry. The same is known about people—if one continues to experience increased pressure and role demands (i.e., heat) but their motivation runs dry (i.e., water), then the individual's energy sources will deplete and, like the kettle, will eventually burn; this phenomenon is known as burnout (Maslach et al., 2001; Maslach & Jackson, 1981).

In the healthcare field, a common and highly preoccupying result of burnout is a decrease in the quality of care or service given to patients by the employees (Klein et al., 2010; Maslach & Jackson, 1981; Shanafelt et al., 2002). Burnout is also seen as contagious within a team (Maslach et al., 2001; Meredith et al., 2020); consequently, it must be addressed to stop the spread. We must understand possible antecedents and mitigating factors of burnout, especially in the field of healthcare, as these employees show more prevalent rates of burnout when compared to the general population (Dyrbye et al., 2014). One important factor to consider when thinking about burnout is the work environment (Aronsson et al., 2017).

All healthcare professionals should be working in a healthy work environment. We are basing our understanding of a healthy work environment on Pearson and colleagues' (2007) definition:

The promotion of physical and mental health as evidenced by observable positive health and well-being, job and role satisfaction, desirable recruitment and retention rates, low absenteeism, illness and injury rates, low turnover, low involuntary overtime rates, [and] positive inter-staff relationships... (p. 280).

One way to foster a healthy work environment is by emphasizing the importance of feelings of inclusion. It can allow nurses and healthcare workers to feel recognized, an important standard

for creating and maintaining a healthy work environment (Woolforde, 2019). Leaders' behaviours can go a long way in promoting inclusion in the work unit and research tells us that managers have an important role in mitigating their employees' burnout risk (e.g., Lambert et al., 2012).

Strengths-Based Nursing and Healthcare Leadership (SBNH-L) is a promising avenue to promote inclusion in healthcare. Since SBNH-L is an approach that fosters empowerment and mitigates stress (Gottlieb et al., 2021), it is hypothesized to be one solution to decrease rates of burnout amongst nurses and other healthcare workers. Thus, this thesis aims to discern how SBNH-L can foster a culture of acceptance and inclusion and how this can be reflected in the rates of burnout among healthcare employees, including nurses. We are looking at these two groups (all healthcare workers and only nurses) because although SBNH-L originates from the nursing discipline (i.e., strengths-based nursing, SBN)—a discipline that has been strained for far too long (Gottlieb et al., 2021)—SBNH-L is a leadership approach that can be applied to the broader realm of healthcare (Gottlieb et al., 2012). This study zooms in on how SBNH-L can contribute to creating an inclusive work environment where nurses and other healthcare workers feel supported. In turn, we hypothesize that SBNH-L reduces the risk of burnout.

Although we argue that SBNH-L contributes to an environment that fosters inclusion, no literature to date has quantifiably demonstrated this. Thus, this thesis will be one of the first of its kind to quantitatively measure the use of SBNH-L from the healthcare employee's standpoint. More specifically, this study will test whether SBNH-L influences rates of burnout and whether perceived inclusion mediates this relationship. The hope is that SBNH-L fosters an environment that encourages inclusion and support and will lead to fewer healthcare employees going into burnout.

Literature Review

Equity—Diversity—Inclusion

In North America, among many other areas in the world, individuals from minority groups continue to experience inequalities in their work environments, especially in healthcare. For instance, there is a very pronounced gender pay gap. More specifically, among healthcare professionals, women are paid less than men in the same position, earning on average 73% of a man's salary in the same position (Csanady, 2016). This gap is apparent even if women and men are equivalent in their level of education (American College of Healthcare Executives, 2006 as cited in Hoss et al., 2011). Not only do women face inequalities in their wages (e.g., Desai et al., 2016), but they also face more significant obstacles climbing the “corporate ladder” because of pre-existing biases (Agogino, 2007). These obstacles often stem from stereotypes about their personalities, such as having more communal traits (e.g., nurturing) rather than agentic ones (e.g., independent; Heilman, 2001).

In a study by Peterson and colleagues (2004), the authors found that minority members in faculty positions in medical schools around the USA reported experiencing discrimination and lower career satisfaction. Furthermore, an article published by CBC News documented that 88% of black nurses reported experiencing forms of racism. Not only are they discriminated against, but even within the nursing field, they report not having any black mentors to look up to in higher nursing positions (Nassar, 2022). Healthcare employees from minority groups also face concrete barriers, where many experience institutional inequality (Amis et al., 2020; Shell et al., 2022), which may add to their susceptibility to burnout (e.g., Inandi, 2009; Pedersen & Minnotte, 2017). These added obstacles allow us to get a deeper understanding of why minority groups face burnout at higher rates (Khan et al., 2021) and how these injustices are often fueled by a

leadership that does not place value on fairness and inclusion (e.g., Woodcock & Woolfson, 2019). It is important to consider inclusion when thinking about reducing inequalities.

When we think of an organization, whether a healthcare institution or otherwise, we can understand that equity, diversity, and inclusion are powerful attributes of a healthy environment. Together, they represent the desire to treat every member who makes up the team with respect, dignity, empowerment, and fairness (Lorbiecki & Jack, 2000). It is important to understand each term of EDI, especially when conceptualizing these concepts within the healthcare organizational structure.

Firstly, equity can be defined as “the removal of systemic barriers and biases enabling all individuals to have equal opportunity” (Government of Canada, 2021). Secondly, diversity is the “differences in race, colour, place of origin, religion, immigrant and newcomer status, ethnic origin, ability, sex, sexual orientation, gender identity, gender expression and age” (Government of Canada, 2021). When management programs were elicited to promote diversity, positive work outcomes such as job satisfaction and commitment were the result (Mor Barak et al., 2016). Lastly, inclusion can be described as the “degree to which an employee perceives that he or she is an esteemed member of the workgroup through experiencing treatment that satisfies his or her needs for belongingness and uniqueness” (Shore et al., 2011, p. 1265). Although all three components of EDI promote an environment for success, this thesis will focus on the component of inclusion.

Inclusion is a crucial facet on which to focus when thinking about SBNH-L and burnout. Indeed, although an organization can be putting in efforts to diversify their teams and promote equity among individuals from minority backgrounds, it does not necessarily signify that those in the group genuinely feel like they belong and are supported by their team members. Employees’

perceptions of acceptance and recognition in the workplace are referred to as perceived inclusion, and this feeling of inclusion reflects the employees' satisfaction within the organization (Mor Barak & Cherin, 1998). Notably, when employees feel isolated and unsupported, rates of burnout increase (Eliacin et al., 2018). Thus, we know that one antecedent to burnout is feelings of low support in the workplace (Bhutani et al., 2012). Furthermore, an inclusive environment can allow intrinsic motivation to flourish (Bidee et al., 2017) and intrinsic motivation acts as a protective factor against job burnout (Norton, 2018). Consequently, if we can address and promote inclusion, perhaps we can diminish burnout rates.

Therefore, inclusion is a valuable component of a successful healthcare workplace and should be integrated into every healthcare team. Moreover, we know that employees from minority backgrounds tend to see themselves as outsiders in their workgroups because they have been marginalized in society (Cho & Mor Barak, 2008). This only emphasizes the need for leaders to break down these ingrained and erroneous beliefs that their employees may have because we know that perceived inclusion in a workgroup is important for the success of a group overall. It has been linked to organization-based self-esteem (Cottrill et al., 2014), self-rated organizational citizenship behaviour (Cottrill et al., 2014), and role-based performance (Chen & Tang, 2018), to name a few. Therefore, we believe one possible solution to increase perceived inclusion is to adopt a leadership style that encourages and actively promotes inclusion.

There are multiple ways in which inclusion can be promoted and instilled through leadership. The Theory of Generative Interactions (Bernstein et al., 2020) is one theory developed to improve inclusion by promoting a more inclusive culture and encouraging new pathways for research and managerial approaches centred on inclusion. Bernstein and colleagues (2020) argued that this theory is one way to establish equity, diversity, and inclusion (EDI) and

emphasize the need for more than just representative diversity to stimulate inclusion in an organization.

The authors explain that three elements must be synthesized to best utilize diverse groups: “[1] bringing diverse members into frequent, repeated interaction, [2] equal status among work group members, and [3] collaborative interaction” (p. 400). Furthermore, to get the most beneficial interactions, there are three more elements that the authors explain must also be taken into consideration: “[1] adaptive contact, [2] interaction frequency, and [3] interaction quality” (p. 401). The authors argue that continuous interactions will eventually lead to a reduction in biases and prejudice towards diverse members of a group. This is generated by the participation of different members of a team and improving the equity amongst the team members. This theory postulates that more than one factor results in a beneficial inclusive organization.

A few more examples of factors that promote EDI have been the use of intentional workplace hiring (Estime et al., 2021), improving cultural competence (Saha et al., 1999), and the implementation of codes of conduct (Peel & Lorello, 2021). One way to implement this theory and these factors into a workgroup is through effective leadership. A successful leader must integrate the components of the Theory of Generative Interactions into their leadership approach to mobilize their teams and encourage an environment for growth. This thesis will contribute to previous findings, which demonstrate that leadership is a significant antecedent to an environment that promotes EDI (Peus et al., 2012; Spence Laschinger et al., 2008). Taking it one step further, we argue that SBNH-L may be a leadership approach that is best placed to promote inclusion (and thus reduce burnout) in the healthcare sector.

Leadership

Leadership influences how change happens and how power, and the actions that go along with it, are disseminated to others. Leadership can be defined as:

(a) An influencing process—and its resultant outcomes—that occurs between a leader and followers and (b) how this influencing process is explained by the leader’s dispositional characteristics and behaviors, follower perceptions and attributions of the leader, and the context in which the influencing process occurs. (Day & Antonakis, 2012, p. 5)

On a macro scale, leaders shape the next generation; on a micro scale, they directly impact how their followers feel and perform (e.g., de Jong & Den Hartog, 2007). Cummings and colleagues (2018) conducted a large-scale literature review looking at leadership styles and outcomes in nursing. The authors conveyed that leadership style can significantly affect employees’ well-being. For instance, the authors reported that transformational leadership reduced emotional exhaustion and job stress (see Ebrahimzade et al., 2015 for more on this). Inversely to this, dissonant leadership, defined as a “lack of harmony and being emotionally ‘out of touch’ with employees which undermines the emotional foundations that support and promote staff success” (Goleman et al., 2002, as cited in Cummings et al., 2005, p. 3), was associated with an increase in employees’ emotional exhaustion. Thus, how a leader enforces change is related to critical follower outcomes.

Strengths-Based Nursing and Healthcare Leadership

SBNH-L, pioneered by Laurie N. Gottlieb, is a leadership style that stems from the Strengths-Based Nursing (SBN) approach. It is anchored in the nursing practice and shares some elements of transformational leadership and authentic leadership (Gottlieb et al., 2021).

However, it is based on the values of SBN and, thus, is an entirely different approach to (or philosophy of) leadership. More specifically, SBNH-L is described as: “a unique, value-driven, embodied approach that guides leaders and managers to create equitable and safe workplace cultures and environments that honour, develop, mobilize, and capitalize on the strengths of individuals and their team” (p. 173). It is founded on four key elements: person-centered, empowerment, relationship-focused, and innate capacities/healing mechanisms.

The authors express eight fundamental values that underlie and operationalize SBNH-L: Systems-thinking, uniqueness, health and healing, multiple perspectives/creating meaning, self-determination, goodness-of-fit, learning/timing/readiness, and collaborative partnership (Gottlieb et al., 2021). The SBNH-L scale was derived by operationalizing how these eight core values may be expressed by a leader’s behaviour as these eight values are interconnected, “represent[ing] the unit of the leaders' concern” (Gottlieb et al., 2021) and guide leaders’ behaviours. The values embody an approach that shifts the mindsight of the leader from a deficit model to one that encapsulates the whole person and their strengths (Gottlieb et al., 2021). For this reason, the values are thought to be one dimension of behaviour (and analyzed as such)—focusing on reinforcing the strengths of each member and behaving in a way that fosters an environment where members feel like they can demonstrate their strengths.

SBNH-L is an approach proposed as one way to change how care is delivered to patients by applying principles of SBN to the leadership behaviours of the nurse/healthcare manager. SBNH-L encourages reciprocated respect between managers and employees and amongst employees. SBNH-Leaders work with their teams’ strengths and build on what works effectively within the group. It fosters a healthy work environment and contributes to a culture that is

psychologically empowering by emphasizing the autonomy of one's work (Gottlieb et al., 2021). These concepts can be associated with the Self-Determination Theory (Deci & Ryan, 1985).

The Self-Determination Theory (SDT) explains some motivational factors behind one's behaviour and offers support to the SBNH-L approach. The SDT posits that humans strive for (and are motivated by) a need for autonomy, relatedness, and competence—factors that encompass the values of SBNH-L. Gagné (2003) described this phenomenon as intrinsic motivation often stemming from:

Do[ing] an activity simply for the enjoyment they derive from it, when they can freely choose to pursue the activity (autonomy), when they master the activity (competence), and when they feel connected and supported by important people, such as a manager, a parent, a teacher, or teammates (relatedness). (p. 202)

This suggests that when leaders demonstrate support for their followers' needs for autonomy, competence, and relatedness, followers exhibit more intrinsic motivation. This ties back to perceived inclusion—when people feel included in a team, this satisfies their need for relatedness (Deci & Ryan, 2000). Together, we can understand how SBNH-L can promote inclusion, which may lead to the fostering of autonomous motivation.

In a study by Bidee and colleagues (2017), the researchers were interested in seeing how perceived inclusion and motivation were related. They asked volunteers to complete a daily diary and used path-analysis to measure the hypothesized relationships. The researchers concluded that the more the volunteers perceived themselves to be included, the more motivated they were in their tasks because they felt more autonomous, competent, and relatable. This study allows us to understand how SDT and perceived inclusion are essential factors in generating greater autonomous motivation, which is a significant protective barrier to burnout (ten Brummelhuis et

al., 2011). Thus, if healthcare and nurse leaders use the SBNH-L approach when managing their team(s), this can foster an environment that promotes autonomous motivation in caring for each patient. Thus, SBNH-L is argued to make a positive contribution to the workforce by promoting autonomy, relatedness, and competence and, hence, a healthy work environment.

Why SBNH-L over Other Leadership Paradigms?

As previously stated, SBNH-L was founded on the principles of SBN. Some of its features share similar characteristics to other well-known leadership frameworks, such as transformational leadership, authentic leadership, servant leadership, value-based leadership, and leader-member exchange theory (LMX). However, we argue that SBNH-L covers a leadership approach that is not well captured, in its entirety, by any one of these constructs (either in isolation or together). Although a demonstration of the predictive power of SBNH-L over other related leadership approaches is beyond the scope of this thesis, we briefly review below the main differentiating factors between SBNH-L and each leadership construct.

Transformational leadership can be understood as a charisma-based relational leadership style, whereby the leader emphasizes the importance of the relationship with their followers and focuses on encouraging and motivating their employees (Burke & Collins, 2001). They rely on four interrelated behaviours (inspirational motivation, idealized influence, intellectual stimulation, and individualized consideration) to encourage followers to perform beyond expectations (Bass, 1985). This can be so powerful that the leader can change the culture of the organization by influencing the followers to believe in a new vision. As it is a charisma-based approach, there is a tendency for the transformational leadership literature to consider the leader as an all-powerful individual. Philosophically, this is far removed from the values of SBNH-L, which taps into the collective strengths and resources to create movement towards a common

goal. In addition, the four behaviours through which transformational leadership is expressed are captured within SBNH-L but form only a subset of what SBNH-L is. For example, SBNH-Leaders intentionally act in ways that promote health and healing through promoting healthy habits amongst the team, attending to the physical and psychological environment for the team, and so on. This component is not found in transformational leadership.

Along similar lines, authentic leadership is based on legitimacy and ethical foundations and is linked to empowerment in healthcare (Nelson et al., 2014). Leaders who utilize this approach demonstrate inherent beliefs and values (Gardner et al., 2011). Here, the leader is considered authentic when they act according to their values, though the operationalization of authentic leadership is more complex (and composed of multiple subdimensions). In SBNH-L, acting authentically is but one dimension of a leader. In addition to holding themselves to high ethical standards, which is characteristic of authentic leadership, SBNH-Leaders will also be attuned to elements outside themselves that impact the team, such as organizational barriers, team readiness and collaborative relationships within the workplace. Moreover, SBNH-Leaders focus on fostering an environment that capitalizes on their team's strengths as their primary purpose. On the other hand, authentic leaders foster an environment that aligns with being true to oneself (e.g., Sparrowe, 2005).

In line with the authentic leadership theory is the value-based leadership approach. Value-based leadership is “an action-based leadership style that takes into account dynamic and changing values and identities” (Busch & Wennes, 2012, p. 205). Within this approach, leaders' actions are solely focused on acting on the organization's values (Busch & Wennes, 2012). Again, although acting according to one's values can certainly be captured within SBNH-L, it

does not sufficiently capture all of SBNH-L, which taps into a broader realm of motivation for actions such as creativity, systems-thinking, timing, and so on.

Comparable to these other leadership approaches is servant leadership, where “the Servant-Leader is servant first. It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead” (Greenleaf, 1977, p. 7). Servant leadership is very closely aligned with the previously mentioned leadership frameworks. However, what distinguishes servant leaders from the rest is the focus on “humility, authenticity, and interpersonal acceptance” (van Dierendonck, 2011, p. 1235). Servant leaders emphasize serving for the greater good and encapsulate the belief that the leader abides by a ‘higher power’ (Sendjaya et al., 2008). Servant leaders have much in common with SBNH-Leaders, whereby both leaders help their followers flourish. However, instead of serving their organization and their followers, SBNH-Leaders are part of their team and mobilize their strengths.

Finally, the LMX theory is based on “the dyadic relationship quality between leaders and members as key to understanding leader effects on members” (Erdogan & Bauer, 2013, p. 1). The most prominent concept of this theory is that the leader has a different relationship with each follower based on the followers’ “differing levels of competence, motivation, and willingness to spend effort toward their work as well as toward their building a relationship” (Erdogan & Bauer, 2013, p. 1). In terms of SBNH-L, there is no doubt that they will form unique relationships with each of their team members, but this is not the essence of SBNH-L. The essence of SBNH-L is creating the conditions that allow teams to function at their optimal potential through enabling possibilities.

By looking at these theories independently, we can see many commonalities between each of them and SBNH-L. However, no individual theory encapsulates all the values that

encompass and promote SBNH-L, nor do they address the importance of a theory capturing all three concepts of autonomy, empowerment, and agency, consequently lacking essential features of this approach grounded in healthcare (Cicolini et al., 2014; Feldman et al., 2017; Finn, 2001).

Autonomy, specifically in the healthcare domain, means the freedom to act in a manner that reflects what you believe to be in the best interest of the patient (Gottlieb et al., 2021; Kramer et al., 2006). Empowerment is about having intrinsic motivation and feeling like your work has meaning (Spreitzer, 2008), and finally, agency is having the power to control your path and your growth (Bjerede, 2017). Ultimately, the value of “health and healing” is unique to SBNH-L and reflects that this leadership approach emerged from the nursing (healthcare) field. Therefore, despite these well-researched and beneficial styles of leadership and the links made with SBNH-L, Gottlieb and colleagues (2021) theoretically propose SBNH-L as a new leadership framework “grounded in the real world of nursing practice” (p. 173) and defend that it takes into account agency, autonomy, and empowerment. Hence, it “goes beyond other leadership styles to offer practical guidance to nurse leaders to help staff reach their full potential” (p. 179). Accordingly, we argue that SBNH-L creates a workplace environment that capitalizes on each team member’s strengths and fosters an environment of inclusion through its focus on empowerment and autonomy.

In sum, SBNH-L is a unique leadership approach, and the autonomy and respect it fosters can create an environment that encourages EDI to flourish. When healthcare leaders model SBNH-L, they are partnering with nurses and healthcare employees and demonstrating respect, trust, empathy, compassion, and kindness (Gottlieb et al., 2012; Gottlieb, 2013, 2013; Gottlieb & Gottlieb, 2017), which is then transmitted from the staff to their patients.

SBNH-L encompasses EDI and recognizes and celebrates strengths. The act of performing SBNH-L reflects accepting uniqueness, embracing diversity, and ensuring that every patient is experiencing equity in their care. This can also be mirrored in the workgroup, where all members of the team embrace a culture of inclusion and fairness. Emphasizing inclusion in the way in which leaders display SBNH-L can cascade down to the way the employees work and how they care for patients. Instead of focusing on differences (in line with weaknesses and deficits), the focus should be on what each person can bring to the organization.

Therefore, the more the culture of the work environment—fostered by the leaders—allows for nurses and other healthcare workers to display strengths-based care, the more inclusive their approach to care will be. For this reason, operationalizing and quantifying SBNH-L can be a step in the right direction for the future of healthcare workers because insufficient support from administrators, poor communication with employees, and little autonomy may predispose nurses and other healthcare workers to burnout and negatively impair the quality of care they provide to patients (Poghosyan et al., 2013; Williams et al., 2007).

Burnout

Burnout is often seen in occupations centred around helping others (Maslach et al., 2001), so it is important to understand the impact that burnout can have on healthcare workers. Maslach and colleagues (2001) define burnout as “a prolonged response to chronic emotional and interpersonal stressors on the job” (p. 397). There are three dimensions to burnout: exhaustion, depersonalization and cynicism, and professional inefficacy (Maslach et al., 2001; Maslach & Jackson, 1984).

Maslach and colleagues (2001) explain that exhaustion is the feeling of being overworked with all energy resources being completely depleted. The researchers define cynicism as “a

negative, callous, or excessively detached response to various aspects of the job” (p. 399), and finally, they describe professional inefficacy as feeling inadequate and inept. The combination of these three dimensions creates an employee performing sub-optimally and feeling rundown. When employees are overworked and their job demands continue to rise, it often results in burnout (Campbell & Gavett, 2021) and, in turn, job performance and health have been seen to decline (Butler et al., 2017; Zhang et al., 2018). This is especially worrisome in the healthcare field as it has been seen that burnout among healthcare professionals harms patients—it has been linked to poor quality of treatment and medical errors, putting the safety of patients in jeopardy (Klein et al., 2010; Maslach & Jackson, 1981; Shanafelt et al., 2002). As previously mentioned, while burnout directly affects healthcare employees and their patients, it can also spread amongst team members and may cause a vicious cycle within work teams (Maslach et al., 2001; Meredith et al., 2020). This is one of many reasons why it is vital to address burnout through leadership.

To date, considerable research has been published on leadership and burnout. In a study conducted by Zopiatis and Constanti (2010), the researchers found that there was a significant decrease in rates of emotional exhaustion and depersonalization when leaders used the transformational leadership style. In contrast, when they used a laissez-faire leadership approach, there was a significant negative relationship with these dimensions (note that the referent in this study was the self as the leader). This was also seen when looking more closely at healthcare professionals in nursing and mental health: when transformational leadership was used, it acted as a protective barrier to depersonalization (Kanste et al., 2007). As mentioned, SBNH-L shares some of its core properties with transformational leadership. However, transformational leadership was not founded in the healthcare profession. Thus, we believe that because SBNH-L

is grounded in the nursing discipline, it acts as a more powerful protective barrier to burnout in healthcare since it captures the profession's values.

In a systematic review by Shoman and colleagues (2021), the authors looked at research on burnout and compiled findings on predictors of burnout found between 1993 and 2018. They discovered that situational work-related factors, individual factors, work-life balance, and perceived consequences are the leading predictors of burnout. More precisely, the authors listed job demands, decision latitude, job resources, interpersonal relationships, communication, and leadership as the predominant predictors of exhaustion leading to burnout. Notable, the authors explained that although there was a body of research on leadership as a possible predictor of burnout, no study to date has found a significant relationship. Nonetheless, we cannot disregard the relationship between leaders and other significant predictors of burnout (e.g., job demands and work-life balance) as leaders foster an environment for these issues to thrive or collapse. For this reason, this thesis provides a different angle on leadership and its possible influence on burnout through the mechanism of inclusion.

Looking more closely at the nursing burnout literature, Dall'Ora and colleagues (2020) conducted a review on nurses and predictors of burnout. In sum, they found that workload, staff levels, and job control were factors predicting burnout. Again, this paints a clear picture that leadership may have an indirect (but essential) effect on burnout, as it plays a role in the abovementioned factors. Furthermore, the authors elucidated that the relationship between coworkers and leadership may be an important factor in burnout—introducing the idea that inclusion may play a key role in the relationship between leadership and burnout.

We have demonstrated that leadership may be an important component of a workplace that encourages EDI and fosters inclusion and that a culture that supports inclusion may reduce

the rates of burnout seen in the healthcare profession. If a leader supports their employees, the employees will feel that the organization supports them since leaders represent their organization (Dirks & Ferrin, 2002). This illustrates how vital a leader's role is in an organization.

Although ample research has been conducted on burnout, a gap in the literature remains regarding how the SBNH-L approach and burnout may be related. It is important to fill this gap as research on SBNH-L is still in its infancy, and literature on the possible link between this framework of SBNH-L and burnout is sparse. Equally important is understanding the mechanisms through which leadership (SBNH-L) may influence rates of burnout among healthcare workers, and here we explore perceived inclusion as a likely mediating factor.

This thesis aims to study the relationship between SBNH-L—a relatively new approach to leadership—and burnout, while considering perceived inclusion as an explanatory mechanism of this relationship. We posit that there will be a negative relationship between SBNH-L and burnout, and that perceived inclusion will act as a mediator in this relationship. We will look at SBNH-L as the independent variable, perceived inclusion as the mediating variable, and burnout as the outcome variable (refer to Figure 1 for a diagram of the hypothesized relationships among the variables).

Hypothesis 1: In all healthcare workers (including nurses), SBNH-L will be negatively related to burnout.

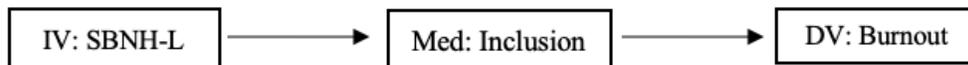
Hypothesis 2: In all healthcare workers (including nurses), SBNH-L and perceived inclusion will be positively associated.

Hypothesis 3: In all healthcare workers (including nurses), perceived inclusion and burnout will be negatively associated.

Hypothesis 4: Inclusion will act as a mediator in the relationship between SBNH-L and burnout.

We expect to find mirroring results when looking at nurses and all healthcare workers because although SBNH-L stems from research in the nursing field, we believe it is a leadership approach that can meet the demands of the broader realm of healthcare. Thus, we reason that the more healthcare workers and nurses feel that their leaders use SBNH-L, the more they will feel included within their team, and because of this, employees may feel less strain of burnout.

Figure 1.
Diagram of variables of interest



Method

Participants

We used a purposive sampling strategy with healthcare workers recruited through the AskingCanadians panel services. Eligibility criteria included: [1] having worked in a healthcare organization for the past six months or more, [2] being currently employed in a healthcare organization in Canada, and [3] not presently employed in a managerial position.

Initially, 1086 participants took part in some portion of the survey. However, to ensure that the data collected were of good quality, we conducted systematic data cleaning and data from 729 participants were not included in the analyses based on the following reasons: Did not provide consent to move forward with the survey (26), provided consent but did not complete screening questions (9), did not meet pre-defined eligibility criteria (253), did not complete all scales in the survey (406), completed the survey in less than 1/3 of the median time at soft launch (5.12 minutes/307 seconds) (4), or demonstrated patterned answer choices (31). The decision to

exclude 406 participants who did not complete the study was based on ethical standards. Since we only paid participants who completed the study, it would not be ethical to use the data for those we did not compensate (i.e., those who did not complete the entire study). These criteria for data inclusion allowed us to control low-quality data (Meade & Craig, 2012) and abide by ethical standards.

Our final sample consisted of 357 healthcare workers (265 women, 89 men, three undisclosed) and of these, 144 were nurses (112 women, 31 men, one undisclosed). Refer to Table 1 for more details on the demographic breakdown of the sample.

Measures

Demographics. Demographic variables included sex, age, and professional discipline, to name a few. These demographic variables were used as covariates (see Analyses for more details).

SBNH-L scale. This 24-item scale was developed by Fréchette and colleagues (2021) and is founded on eight core leadership values drawn from the SBNH-L philosophy, as defined by Gottlieb et al., 2021: Systems-thinking, Uniqueness, Health and Healing, Multiple Perspectives and Creating Meaning, Self-Determination and Self-Awareness, Goodness-of-fit, Timing-Readiness-Learning, and Collaborative Partnerships. This study has adapted the original scale, whereby instead of the self-rated scale measuring the manager's evaluation of their use of the SBNH-L approach using "I" as the referent, the scale in this study used "my manager" from the viewpoint of the employee. An example of an item on the scale is: "To inform team actions, my manager encourages the use of varied forms of knowledge." Responses were provided on a 7-point frequency scale from one to seven, where one represented "Never" and seven represented "Always" (this scale is not provided in the appendix as it is copyrighted). The scale is unidimensional, with a Cronbach's alpha of .99.

Table 1.
Descriptive statistics of the study population.

	Full healthcare sample (N = 357)		Nurses only sample (n = 144)		Healthcare sample not including nurses (n = 213)	
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%
Gender						
Female	265	74.2	112	77.8	153	71.8
Male	89	24.9	31	21.5	58	27.2
Undisclosed	3	0.8	1	0.7	2	0.9
Ethnicity						
Aboriginal	7	2.0	5	3.5	2	0.9
White	277	77.6	118	81.9	159	74.6
South Asian	16	4.5	5	3.5	11	5.2
Chinese	26	7.3	6	4.2	20	9.4
Black	9	2.5	5	3.5	4	1.9
Filipino	12	3.4	5	3.5	7	3.3
Latin American	3	0.8	1	0.7	2	0.9
Arab	3	0.8	1	0.7	2	0.9
Southeast Asian	7	2.0	4	2.8	3	1.4
West Asian	1	0.3	0	0	1	0.5
Korean	0	0.0	0	0	0	0
Japanese	2	0.6	0	0	2	0.9
Other	6	1.7	2	1.4	4	1.9
Discipline						
Nursing	144	40.3	144	100	–	–
Medicine	15	4.2	–	–	15	7.0
Physiotherapy	19	5.3	–	–	19	8.9
Occupational Therapy	38	10.6	–	–	38	17.8
Pharmacy	11	3.1	–	–	11	5.3
Nutrition & Dietetics	7	2.0	–	–	7	3.3
Clinical Psychology	4	1.1	–	–	4	1.9
Human Resources	9	2.5	–	–	9	4.2
Finance	2	0.6	–	–	2	0.9
Marketing	2	0.6	–	–	2	0.9
Information Technology	1	0.3	–	–	1	0.5
Other	105	29.4	–	–	105	49.3
Education						
Post-Doctorate	6	1.7	1	0.7	5	2.3
Doctorate	17	4.8	1	0.7	16	7.5
Masters	47	13.2	18	12.5	29	13.6
Bachelors	143	40.1	70	48.6	73	34.3
College/Cegep	116	32.5	49	34.0	67	31.5
Highschool	21	5.9	4	2.8	17	8.0
Other	5	1.4	1	0.7	4	4.9
Primary healthcare setting						
General hospital (acute care)	156	43.7	67	46.5	89	41.8

	Full healthcare sample (N = 357)		Nurses only sample (n = 144)		Healthcare sample not including nurses (n = 213)	
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%
Specialized hospital	36	10.1	13	9.0	23	10.8
Community hospital	1	0.3	0	0	1	0.5
Primary health-care centre (e.g., CLSC)	40	11.2	11	7.6	29	13.6
Long-term care facility	42	11.8	25	17.4	17	8.0
Home healthcare organization	25	7.0	16	11.1	9	4.2
Blood banks	3	0.8	1	0.7	2	0.9
Orthopedic & other rehabilitation centers	2	0.6	0	0	2	0.9
Pharmaceutical	6	1.7	0	0	6	2.8
Telehealth	3	0.8	3	2.1	0	0
Not-for-profit organization	8	2.2	1	0.7	7	3.3
Other	35	9.8	7	4.9	28	13.1
Nature of healthcare setting						
Public	240	67.2	102	70.8	138	64.8
Private	80	22.4	24	16.7	56	26.3
Public/Private partnership	34	9.5	16	11.1	18	8.5
Primary patient clientele						
Oncology	30	8.4	27	18.8	3	1.4
Critical care	15	4.2	11	7.6	4	1.9
Medicine	31	8.7	9	6.3	22	10.3
Cardiology	5	1.4	1	0.7	4	1.9
Surgery	14	3.9	6	4.2	8	3.8
Gynecology & Obstetric	7	2.0	4	2.8	3	1.4
Pediatrics	16	4.5	5	3.5	11	5.2
Trauma	7	2.0	2	1.4	5	2.3
Rehabilitation	12	3.4	0	0	12	5.6
Geriatrics	36	10.1	24	16.7	12	5.6
Mental health/Psychiatry	25	7.0	12	8.3	13	6.1
Neurological	2	0.6	1	0.7	1	0.5
Various populations	93	26.1	23	16.0	70	32.9
Not applicable	20	5.6	5	3.5	15	7.0
Other	43	12.0	13	9.0	30	14.1

Inclusion scale. The following scale that participants were asked to complete was the Perceived Inclusion scale by Chung and colleagues (2020). This 10-item questionnaire measured workgroup inclusion, focusing on belongingness and uniqueness and used a 5-point Likert scale with one representing “strongly disagree” to five representing “strongly agree.” For example, one statement on the scale was: “While at work, I am comfortable expressing opinions that diverge from my group” (refer to Appendix A for the detailed scale). The Cronbach’s alpha was .93.

Maslach Burnout Inventory (MBI). The third scale that participants were asked to complete for this study is the MBI (Leiter & Schaufeli, 1996). This 17-item questionnaire measures burnout rates using a 7-point Likert scale, with zero representing “Never” and six representing “Every day.” More specifically, it looks at job-related feelings and asks participants to rate the frequency of these feelings (this scale is not provided in the appendix as it is copyrighted). One statement on this questionnaire is, “I doubt the significance of my work.” The Cronbach’s alpha was .84. As the scale is composed of three subscales (emotional exhaustion, cynicism, and professional efficacy), we analyzed the data by looking at each subscale individually to get a more detailed picture of the findings.

Procedure

We used the AskingCanadians panel services to recruit healthcare employees to participate in our study. As the initial step in recruitment, AskingCanadians sent an initial email to inform healthcare employees in their pool about the survey. If individuals who had received this email were interested in participating, they clicked the link to proceed to the next step, directing them to the consent form mandated by Concordia University. If they agreed to participate in the study, they provided their consent by clicking “Next” to begin the survey. AskingCanadians assigned a code to every participant who took part in the study as soon

as they completed the online consent form. This allowed their data to remain anonymous but ensured they provided their consent as the code was associated with their initial consent form.

The average time it took to complete this study was roughly 27 minutes.

In addition to the consent form and demographic questionnaire, the participants were also asked to complete the SBNH-L, inclusion, and burnout questionnaires. Since this thesis is part of a much larger, parallel study that aims for further psychometric testing of the SBNH-L scale, the participants were asked to complete other scales along with these. Note, however, that the results from the additional questionnaires were not analyzed within the scope of this thesis. At the end of the survey, we included a gratitude question (e.g., “Lastly, can you please identify one element that you enjoy about your job”) to lift their moods. We also included resources for mental health services should they need them following the potentially sensitive nature of the questions that were part of specific instruments, such as burnout. This study received approval from Concordia University’s Human Research Ethics Committee (see Appendix B for ethics certificate).

Once their responses were submitted, a code was generated. As stated, this code was only linked to their consent form to keep their responses anonymous. This means that once the data were collected from AskingCanadians, the responses were no longer tied to any individuals/names but solely to their anonymous coded numbers. AskingCanadians compensated the participants with loyalty points to the participants’ chosen loyalty program (e.g., Hudson’s Bay Rewards, Aeroplan, etc.). The compensation was determined by AskingCanadians services and was dependent on the length of time it took the participants to finish the survey. The participants were compensated even if they did not complete the survey in its entirety. However,

if they completed the entire survey, they were paid the maximum compensation. The number of points awarded in every survey is exclusive to AskingCanadians.

Analyses

This study aimed to investigate the relationship between SBNH-L, perceived inclusion, and burnout. As mentioned in the Participants section, before conducting statistical analyses, participants' data were assessed to ensure they met all pre-determined eligibility criteria and contributed sufficient data, as it was important for us to include only those who completed all the scales to meet ethical requirements.

We first tested the structure of the SBNH-L scale as this is a fairly new scale, and it is the first time it has been used to measure SBNH-L with the employee as the referent. To do this, we conducted a principal component analysis on the larger general healthcare employee sample. This was done on the full sample only to ensure an adequate ratio of participant to item.

To test our *a-priori* hypotheses (that there will be a negative relationship between SBNH-L and burnout and that perceived inclusion will act as the mediator in this relationship), we conducted mediation analyses using the PROCESS macro on SPSS to statistically measure the hypothesized relationships between SBNH-L, inclusion, and burnout in both the nursing sample and the larger complete healthcare worker sample. We looked at each burnout subscale separately to see their individual relationship to SBNH-L and inclusion.

The SBNH-L scale was conceived as applicable to the broader healthcare context. It is a leadership approach that values respect and collaboration. Although it stems from the relationship between nurse and patient, we believe it also reflects the relationship between any member of an interdisciplinary team who cares for patients. For this reason, we are looking at the full sample of healthcare workers (including nurses) but believe it is still important to look at the

nurses as a subsample since SBNH-L stemmed from the nursing field. We present analyses for the nurse-only sample ($n = 144$) and the entire healthcare worker sample ($N = 357$), which also includes the nurse subsample.

Using the PROCESS macro on SPSS, we entered SBNH-L as the predictor variable, perceived inclusion as the mediator, and burnout (separately: emotional exhaustion, cynicism, and professional efficacy) as the outcome variables. We set the model to “4,” the bootstrap samples to 5000, and the confidence intervals to 95. We also used ethnicity as a control variable.

Results

Testing the Structure of the SBNH-L Scale

Since this was the first time the SBNH-L scale was used with employees evaluating their manager, we wanted to verify the distribution of the responses on each item of the scale. To do so, we computed skewness and kurtosis (refer to Table 2 for more details). To see which items were skewed, we divided the skewness score by its standard error, and if the result fell outside ± 3.29 (± 3 SD), we deemed the item skewed. Items 2 and 25 fell outside of this range and thus were considered skewed and careful consideration was taken to see if they should continue to be included in the computation of the SBNH-L scale score. All analyses on the structure of the SBNH-L scale were done with the entire healthcare sample to preserve adequate power and a good ratio of participant to item.

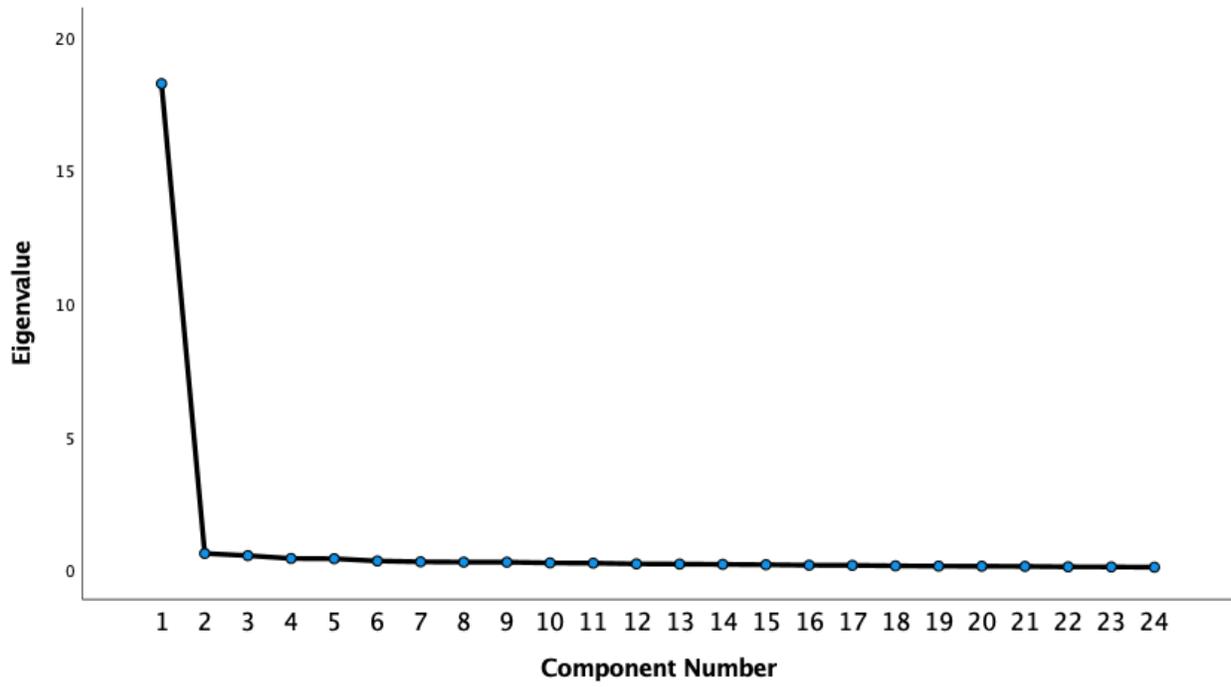
In the original study by Fréchette and colleagues (2021), the researchers concluded that although the SBNH-L items were generated based on eight values, the items on the scale are best represented by one factor. With this information, we decided to conduct a principal components analysis (PCA-Original). The eigenvalue rule (>1) and scree plot confirmed one-factor loading (refer to Figure 2). Since there were no differences in results, we included items 2 and 25 in the SBNH-L scale score computation.

Table 2.
Skewness and Kurtosis test for SBNH-L items

	<i>N</i>	<i>M</i>	<i>SD</i>	Skewness		Kurtosis	
				Statistic	<i>SE</i>	Statistic	<i>SE</i>
SBNHL1	357	3.96	1.62	-0.31	0.13	-0.77	0.26
SBNHL2	357	4.76	1.43	-0.52	0.13	0.07	0.26
SBNHL3	357	4.36	1.52	-0.41	0.13	-0.32	0.26
SBNHL4	356	4.29	1.61	-0.30	0.13	-0.68	0.26
SBNHL5	355	4.41	1.58	-0.42	0.13	-0.44	0.26
SBNHL6	356	4.44	1.56	-0.50	0.13	-0.31	0.26
SBNHL7	356	4.28	1.62	-0.38	0.13	-0.60	0.26
SBNHL8	357	4.18	1.54	-0.24	0.13	-0.61	0.26
SBNHL9	357	4.20	1.68	-0.36	0.13	-0.69	0.26
SBNHL10	356	4.23	1.65	-0.34	0.13	-0.55	0.26
SBNHL11	355	4.26	1.69	-0.32	0.13	-0.71	0.26
SBNHL12	357	4.22	1.74	-0.26	0.13	-0.79	0.26
SBNHL13	354	4.08	1.70	-0.28	0.13	-0.86	0.26
SBNHL14	354	4.04	1.70	-0.28	0.13	-0.76	0.26
SBNHL15	357	4.11	1.65	-0.37	0.13	-0.67	0.26
SBNHL16	–	–	–	–	–	–	–
SBNHL17	355	4.06	1.53	-0.31	0.13	-0.40	0.26
SBNHL18	357	4.13	1.654	-0.32	0.13	-0.70	0.26
SBNHL19	357	4.22	1.794	-0.30	0.13	-3.90	3.26
SBNHL20	356	4.21	1.705	-0.35	0.13	-0.80	0.26
SBNHL21	355	4.08	1.696	-0.32	0.13	-0.89	0.26
SBNHL22	355	4.18	1.641	-0.32	0.13	-0.66	0.26
SBNHL23	357	4.17	1.625	-0.30	0.13	-0.62	0.26
SBNHL24	357	4.19	1.636	-0.37	0.13	-0.70	0.26
SBNHL25	356	4.52	1.638	-0.63	0.13	-0.27	0.26

Note. Item 16 was omitted from analysis as it was used as a directed item

Figure 2.
Scree Plot of Principal Components Analysis (Original)



We then ran a second principal component analysis (PCA-Modified) using the same criteria, except we omitted items 2 and 25 from the scale. As Table 3 demonstrates, there were no differences between the items' factor loadings whether items 2 and 25 were kept or removed (refer to Figure 3 for the scree plot). Since there were no differences in results, we included items 2 and 25 in the SBNH-L scale score computation.

Relationships Between Variables

We were interested in studying the relationships between SBNH-L, inclusion, and burnout in a sample of healthcare workers and a sub-sample of nurses. Table 4 (nurse-only sample) and Table 5 (entire healthcare workers sample) present means, standard deviations, and correlations among the study variables. In particular, the variables of interest were: SBNH-L, inclusion, burnout, age, team/unit size, and years of experience.

We first analyzed the correlations between the main variables of our hypotheses (SBNH-L, inclusion, and burnout subscales) in the nurse subsample (Table 4). We found that SBNH-L and emotional exhaustion had a significant negative correlation ($r = -0.18, p < .05$), SBNH-L and cynicism were negatively but not significantly related ($r = -.13, p > .05$), and SBNH-L and professional efficacy were positively but not significantly related ($r = .12, p > .05$). Furthermore, SBNH-L and inclusion had a significant positive relationship ($r = 0.51, p < .001$) and inclusion was only significantly related to the burnout subscales of cynicism ($r = -0.24, p < .001$) and professional efficacy ($r = -0.24, p < .001$). This suggests that the greater a nurse rated their manager's ability to demonstrate SBNH-L, the more included the nurse felt, and the less burnout (cynicism and professional efficacy) they experienced.

Figure 3.
Scree Plot of Principal Components Analysis (Modified)

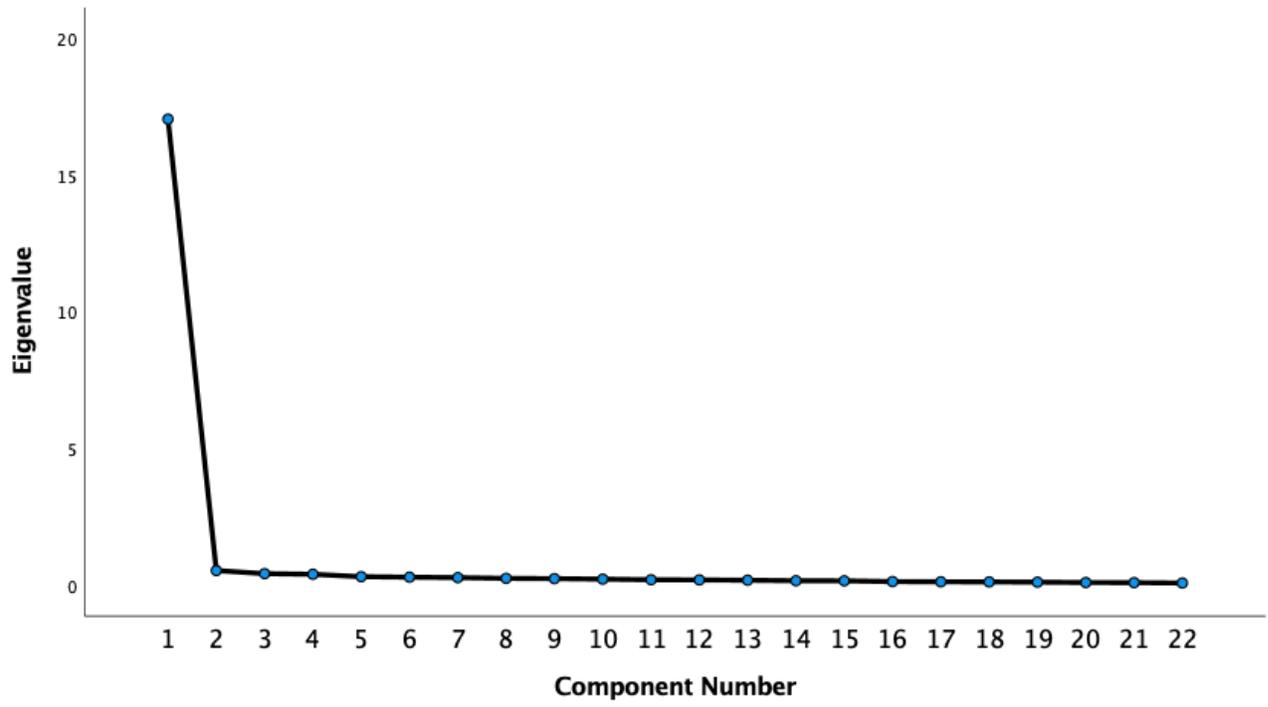


Table 3.

Results of the exploratory factor analysis of the SBNH-L scale

Items	Component Matrix		Communalities	
	PCA-Original	PCA-Modified	PCA-Original	PCA-Modified
1. SBNHL1	.83	.83	.69	.70
2. SBNHL2	.76	–	.57	–
3. SBNHL3	.81	.81	.66	.65
4. SBNHL4	.87	.88	.76	.76
5. SBNHL5	.88	.88	.77	.77
6. SBNHL6	.85	.85	.72	.73
7. SBNHL7	.89	.90	.80	.80
8. SBNHL8	.86	.88	.77	.77
9. SBNHL9	.88	.88	.77	.77
10. SBNHL10	.91	.92	.84	.84
11. SBNHL11	.90	.90	.81	.81
12. SBNHL12	.87	.87	.76	.76
13. SBNHL13	.88	.88	.78	.78
14. SBNHL14	.90	.90	.81	.81
15. SBNHL15	.89	.89	.79	.79
17. SBNHL17	.88	.89	.78	.79
18. SBNHL18	.89	.89	.79	.79
19. SBNHL19	.90	.90	.81	.81
20. SBNHL20	.88	.89	.78	.78
21. SBNHL21	.91	.92	.84	.84
22. SBNHL22	.87	.87	.76	.76
23. SBNHL23	.87	.86	.75	.75
24. SBNHL24	.89	.88	.79	.78
25. SBNHL25	.83	–	.69	–

Note. EFA-Original includes all item of the scale, EFA-Modified omits items 2 and 25.

^a*N* = 354-357.

Table 4.
Pearson's correlation matrix for nurse sample

	<i>n</i>	<i>Mean</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Team/unit size	143	109.50	443.71	1									
2. PMS	143	1.86	0.47	.12	1								
3. SBNH-L	144	4.39	1.33	.07	-.11	1							
4. Inclusion	144	5.35	1.04	-.00	-.27***	.51**	1						
5. Burnout: Emotional Exhaustion	144	3.71	1.69	.04	-.04	-.18*	.07	1					
6. Burnout: Cynicism	144	3.17	1.78	.06	.02	-.13	-.24**	.77**	1				
7. Burnout: Professional efficacy	140	1.00	0.65	.02	.05	.12	-.24**	.05	.35**	1			
8. Sex	143	1.22	0.41	.13	-.002	.06	.01	.10	.12	.12	1		
9. Experience (years)	144	11.06	9.75	.03	-.06	-.17*	.15	-.02	-.08	-.32**	.07	1	
10. Ethnicity	138	0.19	0.39	-.07	-.53**	-.15	-.21*	-.21*	-.12	-.10	.07	-.18*	1

^aPMS refers to Perceived Minority Status; it is binary, where No is coded as 0 and Yes is coded as 1. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership. ^cSex is binary, where Female is coded as 1 and Male is coded as 2. ^dEthnicity is binary, where White is coded as 0 and Non-White is coded as 1. ^eIt is possible that some may have reported their entire organisation's staff or entire organisation nursing staff vs. unit for Team unit/size

**Correlation is significant at the 0.05 level (2-tailed).

***Correlation is significant at the 0.01 level (2-tailed).

In the full healthcare sample (Table 5), found that SBNH-L and emotional exhaustion burnout had a significant negative correlation ($r = -0.21, p < .001$), SBNH-L and cynicism were negatively and significantly associated ($r = -.18, p < .001$), and SBNH-L and professional efficacy were negatively but not significantly related ($r = -.05, p > .05$).

Furthermore, SBNH-L and inclusion had a significant positive relationship ($r = 0.53, p < .001$) and inclusion was negatively and significantly related to all three subscales of burnout (emotional exhaustion: $r = -0.23, p < .001$, cynicism: $r = -0.34, p < .001$, and professional efficacy: $r = -0.25, p < .001$). This suggests that the greater a nurse rated their manager's ability to demonstrate SBNH-L, the more included the nurse felt, and the less overall burnout they experienced. Overall, the pattern of relationships was very similar between the two samples. Interestingly, in both samples, SBNH-L and years of experience were significantly and negatively associated (nurses-only subsample: $r = -.17, p = .05$), healthcare sample: $r = -.18, p < .001$). This conveys that the greater amount of experience the nurse and healthcare worker had, the less they perceived their manager(s) to display SBNH-L.

At a glance, we can see that the demographic breakdown of each sample seems relatively similar between nurses and other healthcare workers (refer to Figures 4–7 for more details). However, these groups are compared more closely in *posthoc* analyses (see below: *Posthoc* Analyses).

Test of Hypotheses

We conducted a mediation analysis (IV: SBNH-L, Med: Perceived inclusion, DV: Burnout (emotional exhaustion, cynicism, professional efficacy)) on the nurse sample and on the overall healthcare workers sample to test our hypotheses.

Table 5.

Pearson's correlation matrix for full healthcare sample

	<i>N</i>	<i>Mean</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Team/unit size	353	72.58	306.03	1									
2. PMS	351	1.69	0.46	-.05	1								
3. SBNH-L	353	4.24	1.43	.03	-.11*	1							
4. Inclusion	353	5.24	1.08	-.03	-.10	.53**	1						
5. Burnout: Emotional Exhaustion	353	3.54	1.70	.05	-.01	-.21**	-.23**	1					
6. Burnout: Cynicism	353	3.07	1.73	.06	-.01	-.18**	-.34**	.72**	1				
7. Burnout: Professional Efficacy	349	1.04	0.75	.06	.05	-.05	-.25**	.13*	.26**	1			
8. Sex	350	1.25	0.43	.08	.06	.13*	.10	.004	1	.08	1		
9. Experience (years)	351	11.09	9.68	.02	.12*	-.18**	.10	-.21	-.02	.17**	-.02	1	
10. Ethnicity	343	1.23	0.42	-.09	.54**	-.05	-.08	-.16**	-.14**	.01	-.03	-.21**	1

^aPMS refers to Perceived Minority Status; it is binary, where No is coded as 0 and Yes is coded as 1. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership. ^cSex is binary, where Female is coded as 1 and Male is coded as 2. ^dEthnicity is binary, where White is coded as 0 and Non-White is coded as 1. ^eIt is possible that some may have reported their entire organisation's staff or entire organisation nursing staff vs. unit for Team unit/size

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Figure 4.

Bar graph depicting the healthcare participants' age, clustered by sex

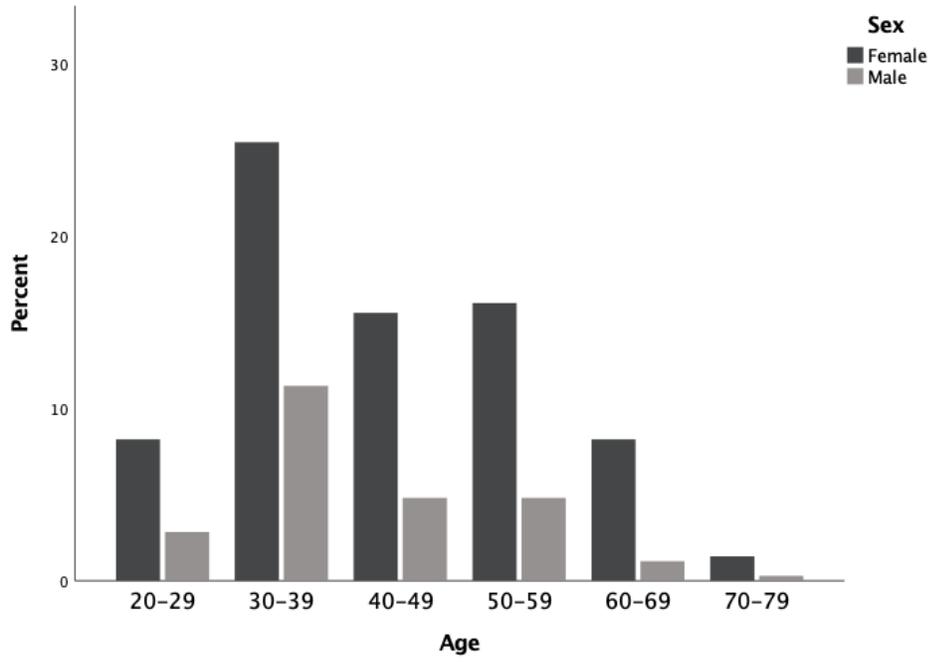


Figure 5.
Bar graph depicting breakdown of primary clientele, clustered by discipline

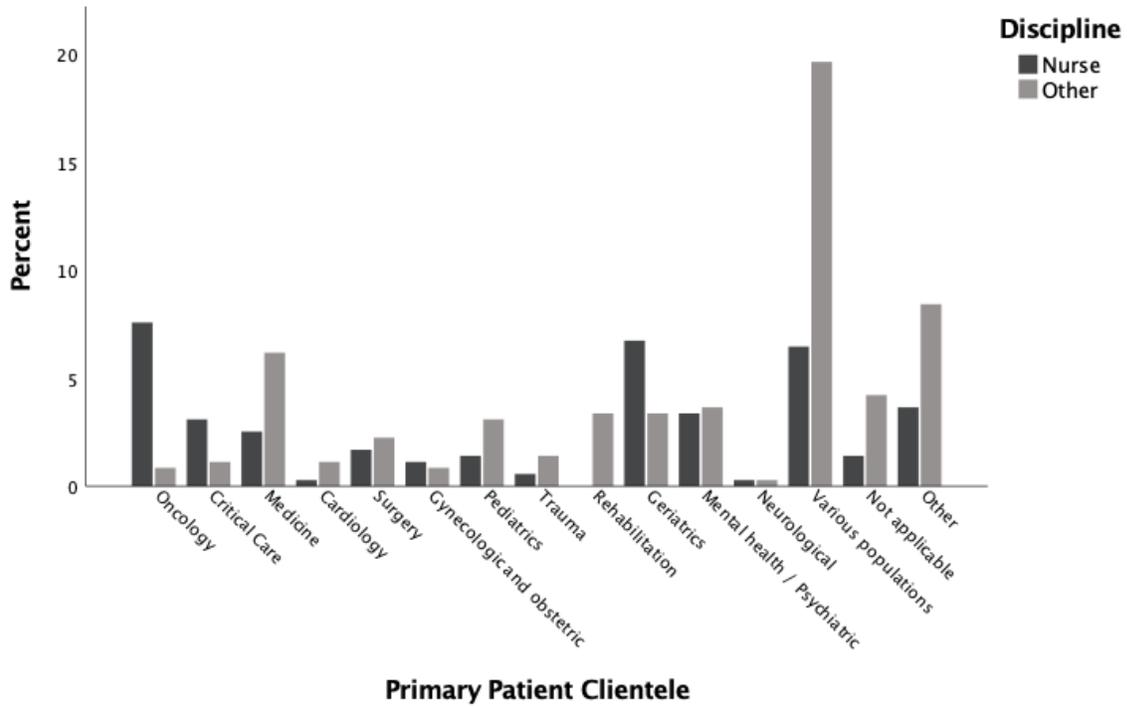


Figure 6.
Bar graph of breakdown of healthcare settings where participants work in, clustered by discipline

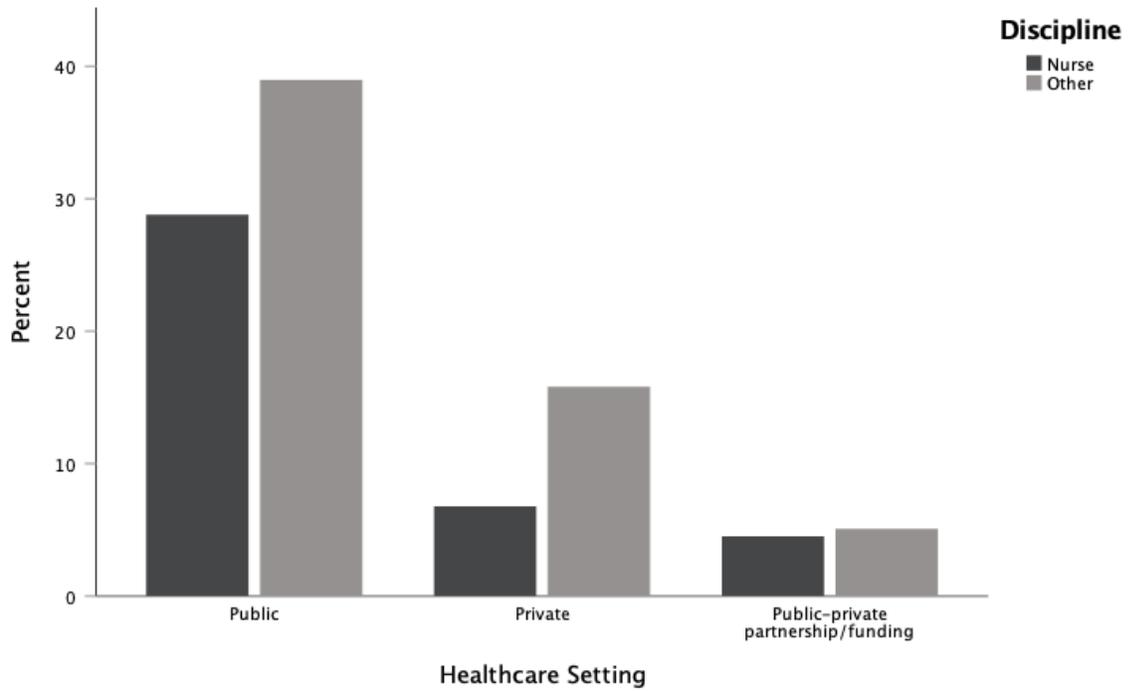
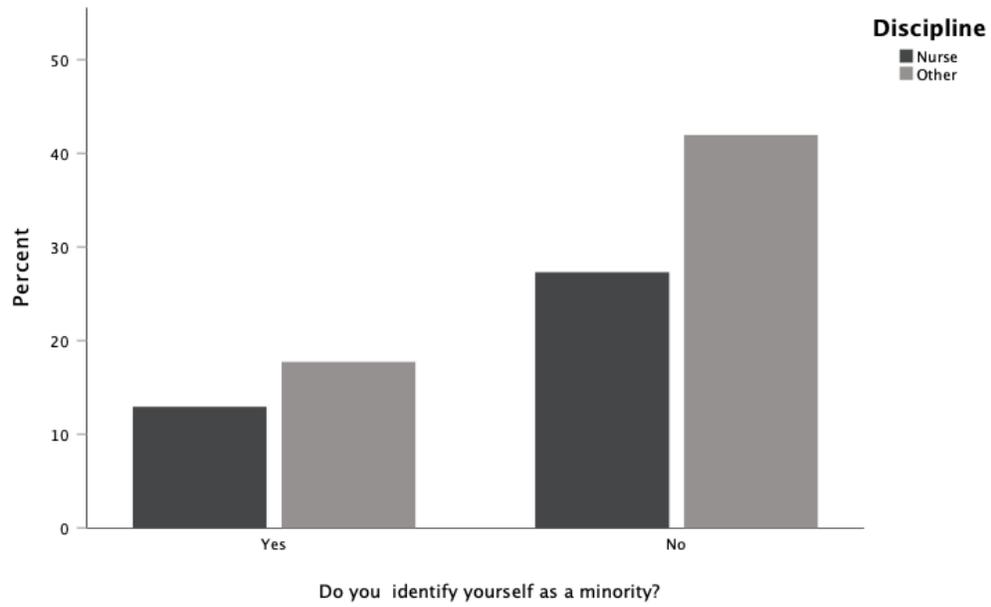


Figure 7.

Bar graph of percentage of participants who identify as a minority or not, clustered by discipline



We conducted the mediation analysis for both samples again, this time including a covariate that we believed could have influenced the outcome variable, ethnicity. Following the PROCESS analysis above, we were interested in seeing if any demographic variables had confounding roles in the mediating effect. We believe this variable should be accounted for in our mediation analyses because it represents potential grounds upon which someone may identify as a minority, and perceiving oneself as a minority may influence feelings of inclusion.

Note that to include ethnicity as a covariate, we first analyzed the frequency with which each ethnicity was reported (refer back to Table 2 for the breakdown). Since there was a substantial portion (77.6%) who identified as White and a small number of participants who identified with an ethnicity outside of White, we decided to collapse the results to create a binary variable of ethnicity that encompassed those who identified as White (the largest subsample) and those who identified as any other ethnicity. The participants who selected multiple ethnicities outside of White were combined into the Non-White sample, and those who identified as White and another ethnicity were excluded from this analysis of mediation ($n = 10$). We excluded these 10 participants because we wanted to distinguish more strictly between both groups.

Hypothesis 1. We found partial support for our first hypothesis that in all healthcare workers (including nurses), SBNH-L will be negatively related to burnout. Firstly, we analyzed the data for all three dependent variables separately (emotional exhaustion, cynicism, and professional efficacy) in the nurse-only subsample. We found that there was a significant total effect of SBNH-L on emotional exhaustion ($B = -0.22$, $LLCI = -0.43$, $ULCI = -.02$), a non-significant total effect of SBNH-L on cynicism ($B = -0.17$, $LLCI = -0.39$, $ULCI = 0.05$), and a non-significant total effect of SBNH-L on professional efficacy ($B = -.06$, $LLCI = -0.02$, $ULCI =$

0.14). Refer to Tables 6-8 for the detailed results on the three burnout subscales within the nurse sample.

In the full healthcare sample, we discovered that there was a significant total effect of SBNH-L on emotional exhaustion ($B = -0.25$, $LLCI = -0.37$, $ULCI = -0.13$) and on cynicism ($B = -0.22$, $LLCI = -.34$, $ULCI = -.09$), but not on professional efficacy ($B = 0.02$, $LLCI = -0.03$, $ULCI = 0.08$). Refer to Tables 9–11 for the detailed results on the three subscales of burnout within the full healthcare sample. These results suggest that SBNH-L may act as a predictor of two subscales of burnout (emotional exhaustion and cynicism), possibly playing a role in decreasing emotional exhaustion and decreasing cynicism to overall combat burnout rates. However, these findings were only found in the larger healthcare sample and not in the subsample of nurses, where only emotional exhaustion was found to have a significant total effect.

Hypothesis 2. We found full support for our second hypothesis (that in all healthcare workers and nurses, SBNH-L would be positively associated with inclusion). This was found in the nurse-only sample ($B = 0.51$, $SE = 0.06$, $t = 7.04$, $LLCI = 0.29$, $ULCI = 0.51$) and in the full healthcare sample ($B = 0.53$, $SE = 0.03$, $t = 11.62$, $LLCI = 0.33$, $ULCI = 0.47$), suggesting that the more a leader displays SBNH-L, the more included the team members will feel (refer to Table 6 and Table 9 for more details).

Hypothesis 3. For our third hypothesis (that in both samples, inclusion would be positively related to burnout), we found partial support in the nurse-only sample and full support in our full healthcare sample on all three subscales of burnout.

Table 6.

Mediation model in nurse sample using PROCESS Macro model 4 with Emotional Exhaustion as the outcome

Antecedents	Inclusion						Emotional Exhaustion					
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²
						.26***						.04***
Constant	3.60***	0.26	13.98	3.09	4.12		5.19***	0.74	6.99	3.72	6.65	
SBNH-L	0.51***	0.06	7.04	0.29	0.51		-0.13	0.12	-1.39	-0.41	0.07	
Inclusion	–	–	–	–	–		-0.08	0.16	-0.87	-0.45	0.17	

Results of direct, indirect, and total theory effects

Predictor	Effect	LLCI	ULCI
Direct effects			
SBNH-L on Emotional Exhaustion	-0.17	-0.41	0.07
Indirect effects			
SBNH-L on Emotional Exhaustion via Inclusion	-0.05	-0.19	0.06
Total effects			
SBNH-L on Emotional Exhaustion	-0.22**	-0.43	-0.02

Note. Nurses. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval.

^a*n* = 144. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

****p* < 0.001. ***p* < 0.05.

Table 7.

Mediation model in nurse sample using PROCESS Macro model 4 with Cynicism as the outcome

Antecedents	Inclusion						Cynicism						
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	
						.26***						.06**	
Constant	3.60***	0.26	13.98	3.09	4.12		5.41***	0.77	7.02	3.89	6.93		
SBNH-L	0.51***	0.06	7.04	0.29	0.51		-0.002	0.13	-0.02	-0.25	0.25		
Inclusion	–	–	–	–	–		-0.24**	0.16	-2.57	-0.74	-0.10		
<i>Results of direct, indirect, and total theory effects</i>													
Predictor							Effect			LLCI		ULCI	
Direct effects													
	SBNH-L on Cynicism							-0.002			-0.25		0.25
Indirect effects													
	SBNH-L on Cynicism via Inclusion							-0.17**			-0.35		-0.03
Total effects													
	SBNH-L on Cynicism							-0.17			-0.39		0.05

Note. Nurses. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval.

^a*n* = 144. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

****p* < 0.001. ***p* < 0.05.

Table 8.

Mediation model in nurse sample using PROCESS Macro model 4 with Professional efficacy as the outcome

Antecedents	Inclusion					Professional Efficacy						
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	
											.26***	.14***
Constant	3.60***	0.26	13.98	3.09	4.12	1.64***	0.27	6.06	1.11	2.18		
SBNH-L	0.51***	0.06	7.04	0.29	0.51	0.33***	0.05	3.58	0.07	0.25		
Inclusion	–	–	–	–	–	–0.41***	0.06	–4.40	–0.36	–0.14		
<i>Results of direct, indirect, and total theory effects</i>												
Predictor						Effect			LLCI		ULCI	
Direct effects												
	SBNH-L on Professional Efficacy					0.16**			0.07		0.25	
Indirect effects												
	SBNH-L on Professional Efficacy via Inclusion					–0.10**			–0.17		–0.05	
Total effects												
	SBNH-L on Professional Efficacy					–0.06			–0.02		0.14	

Note. *n* =140 Nurses. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval.

^aSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

****p* < 0.001. ***p* < 0.05.

Table 9.

Mediation model in healthcare worker sample using PROCESS Macro model 4 with Emotional Exhaustion as the outcome

Antecedents	Inclusion						Emotional Exhaustion						
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	
						.28***						.06***	
Constant	3.55***	0.15	23.10	3.24	3.85		5.48***	0.43	12.63	4.63	6.34		
SBNH-L	.53***	0.03	11.62	0.33	0.47		-0.12**	0.07	-2.02	-0.29	-0.004		
Inclusion	–	–	–	–	–		-0.16**	0.09	-2.68	-0.44	-0.07		
<i>Results of direct, indirect, and total theory effects</i>													
Predictor							Effect			LLCI		ULCI	
Direct effects													
	SBNH-L on Emotional Exhaustion							-0.15**		-0.29		-0.004	
Indirect effects													
	SBNH-L on Emotional Exhaustion via Inclusion							-0.10**		-0.18		-0.03	
Total effects													
	SBNH-L on Emotional Exhaustion							-0.25**		-0.37		-0.13	

Note. All healthcare workers. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval.

^a*N* = 357. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

****p* < 0.001. ***p* < 0.05.

Table 10.

Mediation model in healthcare worker sample using PROCESS Macro model 4 with Cynicism as the outcome

Antecedents	Inclusion						Cynicism						
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	
						.28***						.11***	
Constant	3.55***	0.15	23.10	3.24	3.85		5.87***	0.43	13.68	5.02	6.71		
SBNH-L	.53***	0.03	11.62	0.33	0.47		-0.01	0.07	-0.11	-0.15	0.13		
Inclusion	–	–	–	–	–		-0.33***	0.09	-5.64	-0.71	-0.34		
<i>Results of direct, indirect, and total theory effects</i>													
Predictor							Effect			LLCI		ULCI	
Direct effects													
	SBNH-L on Cynicism							-0.01		-0.15		0.13	
Indirect effects													
	SBNH-L on Cynicism via Inclusion							-0.21**		-0.31		-0.13	
Total effects													
	SBNH-L on Cynicism							-0.22**		-0.34		-0.09	

Note. All healthcare workers. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval.

^a*N* = 357. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

****p* < 0.001. ***p* < 0.05.

Table 11.

Mediation model in healthcare worker sample using PROCESS Macro model 4 with Professional efficacy as the outcome

Antecedents	Inclusion						Professional Efficacy						
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	
						.28***						.10***	
Constant	3.55***	0.15	23.10	3.24	3.85		1.84***	0.19	9.86	1.47	2.21		
SBNH-L	.53***	0.03	11.62	0.33	0.47		0.24***	0.03	4.05	0.07	0.19		
Inclusion	–	–	–	–	–		–0.37***	0.04	–6.25	–0.34	–0.18		
<i>Results of direct, indirect, and total theory effects</i>													
Predictor							Effect			LLCI		ULCI	
Direct effects													
	SBNH-L on Professional Efficacy							0.13**		0.07		0.19	
Indirect effects													
	SBNH-L on Professional Efficacy via Inclusion							–0.10**		–0.15		–0.07	
Total effects													
	SBNH-L on Professional Efficacy							0.02		–0.03		0.08	

Note. *N* = 353 All healthcare workers. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval.

^a*N* = 353. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

****p* < 0.001. ***p* < 0.05.

For the nurse-only sample, we found support for this hypothesis for the subscales of cynicism ($B = -0.24$, $SE = 0.16$, $t = -2.57$, $LLCI = -0.74$, $ULCI = 0.10$; refer to Table 7) and professional efficacy ($B = -0.41$, $SE = 0.06$, $t = -4.40$, $LLCI = -0.36$, $ULCI = 0.14$; refer to Table 8), but not emotional exhaustion ($B = -0.08$, $SE = 0.16$, $t = -0.87$, $LLCI = -0.45$, $ULCI = 0.17$; refer to Table 6).

In the full healthcare sample, support was found for all three subscales: emotional exhaustion ($B = -0.16$, $SE = 0.09$, $t = -2.68$, $LLCI = -0.44$, $ULCI = -0.07$; refer to Table 9), cynicism ($B = -0.33$, $SE = 0.09$, $t = -5.64$, $LLCI = -0.71$, $ULCI = -0.34$, refer to Table 10), and professional efficacy ($B = -0.37$, $SE = 0.04$, $t = -6.25$, $LLCI = -0.34$, $ULCI = -0.18$; refer to Table 11). These results suggest that, overall, inclusion and burnout are highly related.

Hypothesis 4. For our final hypothesis (that in both samples, perceived inclusion would act as a significant mediator in the relationship between SBNH-L and burnout), we found partial support for this hypothesis when we analyzed the nurse-only sample and each subscale of burnout separately. We found that inclusion had no mediating effect on SBNH-L and emotional exhaustion ($B = -0.05$, $LLCI = -0.19$, $ULCI = 0.06$; refer to Table 6), a complete mediation effect on SBNH-L and cynicism ($B = -0.17$, $LLCI = -0.35$, $ULCI = 0.03$; refer to Table 7), and only a significant indirect effect (with no total effect) on SBNH-L and professional efficacy ($B = -0.10$, $LLCI = -0.17$, $ULCI = -0.05$; refer to Table 8).

When looking at the full healthcare sample, we discovered that inclusion acted as a mediator in the relationship between SBNH-L and emotional exhaustion ($B = -0.10$, $LLCI = -0.18$, $ULCI = -0.03$; refer to Table 9) and between SBNH-L and cynicism ($B = -0.21$, $LLCI = -0.31$, $ULCI = -0.13$; refer to Table 10). However, inclusion had an indirect effect (but no total

effect) on SBNH-L and professional efficacy ($B = -0.10$, $LLCI = -0.15$, $ULCI = -0.07$; refer to Table 11).

When we considered the covariate of ethnicity, we discovered that the mediating effect patterns of inclusion on the relationship between SBNH-L and each subscale of burnout did not vary largely from the original analyses. In the nurse-only sample, we see the same pattern of results even if we control for ethnicity (refer to Tables 12–14 for more details). When ethnicity was used as a covariate in the healthcare sample, inclusion changed from a partial mediator between SBNH-L and cynicism to a complete mediator ($B = -0.21$, $LLCI = -0.31$, $ULCI = -0.13$; Table 16). Refer to Tables 15–17 for more details on the covariate's effect on the three burnout subscales and refer to Table 18 for a high-level overview of the *a-priori* findings.

Posthoc Analyses

As *posthoc* analyses, we were interested in testing the two groups (nurses and other healthcare workers) to see if there were any demographic differences between them. As such, we conducted independent samples t-tests and used discipline (nurse vs. other) as the grouping variable.

We discovered that there were no statistical differences between nurses and other healthcare workers when we looked at the test variables: age ($t(355) = -0.09$, $p > .05$), years of experience ($t(353) = -0.04$, $p > .05$), and number of people in a team/unit ($t(164.19) = 1.61$, $p > .05$; refer to Table 19). We assumed equal variance for age and years of experience, but team size violated the assumption of homogeneity ($F = 5.95$, $p < .05$). Thus, we proceeded with equal variance not assumed.

Table 12.

Mediation model of nurse-only subsample using PROCESS macro model 4 with Emotional Exhaustion as the DV and Ethnicity as the covariate

Antecedents	Inclusion						Emotional Exhaustion						
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	
						.27***						.09**	
Constant	4.14***	0.38	10.96	3.40	4.89		6.89***	0.96	7.19	4.99	8.77		
SBNH-L	0.48***	0.58	6.48	0.26	0.49		-0.14	0.12	-1.43	-0.42	0.07		
Inclusion	–	–	–	–	–		-0.12	0.16	-1.28	-0.52	0.11		
Ethnicity	-0.14	0.20	-1.89	-0.76	0.02		-0.26**	0.37	-3.07	-1.85	-0.40		
<i>Results of direct, indirect, and total theory effects</i>													
Predictor							Effect			LLCI		ULCI	
Direct effects													
	SBNH-L on Emotional Exhaustion							-0.17			-0.42		0.07
Indirect effects													
	SBNH-L on Emotional Exhaustion via Inclusion							-0.08			-0.22		0.43
Total effects													
	SBNH-L on Emotional Exhaustion							-0.25**			-0.46		-0.04

Note. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval.

^a*n* = 138 Nurse. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

****p* < 0.001. ***p* < 0.05.

Table 13.

Mediation model of nurse-only subsample using PROCESS macro model 4 with Cynicism as the DV and covariates included

Antecedents	Inclusion					Cynicism						
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	
						.27***						.08**
Constant	4.14***	0.38	10.96	3.40	4.89		6.58***	1.01	6.52	4.59	8.58	
SBNH-L	0.48***	0.58	6.48	0.26	0.49		-0.02	0.13	-0.17	-0.28	0.23	
Inclusion	–	–	–	–	–		-0.26**	0.17	-2.67	-0.78	0.12	
Ethnicity	-0.14	0.20	-1.89	-0.76	0.02		-0.17**	0.39	-2.03	-1.55	-0.02	
<i>Results of direct, indirect, and total theory effects</i>												
Predictor						Effect			LLCI		ULCI	
Direct effects												
	SBNH-L on Cynicism						-0.02		-0.28		0.23	
Indirect effects												
	SBNH-L on Cynicism via Inclusion						-0.17**		-0.35		-0.03	
Total effects												
	SBNH-L on Cynicism						-0.19		-0.42		0.04	

Note. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval.

^a*n* = 138 Nurses. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

****p* < 0.001. ***p* < 0.05.

Table 14.

Mediation model of nurse-only subsample using PROCESS macro model 4 with Professional efficacy as the DV and covariates included

Antecedents	Inclusion						Professional Efficacy						
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	
						.27***						.15***	
Constant	4.14***	0.38	10.96	3.40	4.89		1.95***	0.35	5.51	1.25	2.65		
SBNH-L	0.48***	0.58	6.48	0.26	0.49		0.32***	0.05	3.44	0.07	0.25		
Inclusion	–	–	–	–	–		–0.41***	0.06	–4.32	–0.37	–0.14		
Ethnicity	–0.14	0.20	–1.89	–0.76	0.02		–0.14	0.14	–1.68	–0.50	0.40		
<i>Results of direct, indirect, and total theory effects</i>													
Predictor							Effect			LLCI		ULCI	
Direct effects													
	SBNH-L on Professional Efficacy							0.16**		0.07		0.25	
Indirect effects													
	SBNH-L on Professional Efficacy via Inclusion							–0.10**		–0.17		–0.05	
Total effects													
	SBNH-L on Professional Efficacy							–0.06		–0.02		0.14	

Note. $n = 134$ Nurses. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval. *** $p < 0.001$.

^a $n = 134$ Nurses. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

*** $p < 0.001$. ** $p < 0.05$.

Table 15.

Mediation model of healthcare worker sample using PROCESS macro model 4 with Emotional Exhaustion as the DV and covariates included

Antecedents	Inclusion						Emotional Exhaustion						
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	
						.27***						.09***	
Constant	3.77***	0.22	17.22	3.34	4.20		6.40***	0.53	12.14	5.37	7.44		
SBNH-L	0.51***	0.04	11.06	0.32	0.46		-0.12	0.07	-1.91	-0.28	0.004		
Inclusion	–	–	–	–	–		-0.17**	0.10	-2.80	-0.45	-0.08		
Ethnicity	-0.05	0.12	-1.10	-0.36	0.10		-0.18***	0.21	-3.47	-1.14	-0.31		
<i>Results of direct, indirect, and total theory effects</i>													
Predictor							Effect			LLCI		ULCI	
Direct effects													
							SBNH-L on Emotional Exhaustion			-0.14		-0.28	0.004
Indirect effects													
							SBNH-L on Emotional Exhaustion via Inclusion			-0.10**		-0.18	-0.03
Total effects													
							SBNH-L on Emotional Exhaustion			-0.24**		-0.36	-0.12

Note. All healthcare workers. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval.

^a*N* = 343. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

****p* < 0.001. ***p* < 0.05.

Table 16.

Mediation model of healthcare worker sample using PROCESS macro model 4 with Cynicism as the DV and covariates included

Antecedents	Inclusion						Cynicism						
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	
						.27***						.13***	
Constant	3.77***	0.22	17.22	3.34	4.20		6.77***	0.52	12.95	5.75	7.80		
SBNH-L	0.51***	0.04	11.06	0.32	0.46		-0.01	0.07	-0.14	-0.15	0.13		
Inclusion	–	–	–	–	–		-0.34***	0.09	-5.70	-0.72	-0.35		
Ethnicity	-0.05	0.12	-1.10	-0.36	0.10		-0.17***	0.21	-3.31	-1.09	-0.28		
<i>Results of direct, indirect, and total theory effects</i>													
Predictor							Effect			LLCI		ULCI	
Direct effects													
	SBNH-L on Cynicism							-0.01			-0.15		0.13
Indirect effects													
	SBNH-L on Cynicism via Inclusion							-0.21**			-0.31		-0.13
Total effects													
	SBNH-L on Cynicism							-0.22**			-0.34		-0.09

Note. All healthcare workers. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval.

^a*N* = 347. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

****p* < 0.001. ***p* < 0.05.

Table 17.

Mediation model of healthcare worker sample using PROCESS macro model 4 with Professional efficacy as the DV and covariates included

Antecedents	Inclusion						Professional Efficacy						
	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	<i>B</i>	SE	<i>t</i>	LLCI	ULCI	<i>R</i> ²	
						.27***						.10***	
Constant	3.77***	0.22	17.22	3.34	4.20		1.85***	0.23	8.08	1.40	2.31		
SBNH-L	0.51***	0.04	11.06	0.32	0.46		0.24***	0.03	4.01	0.06	0.19		
Inclusion	–	–	–	–	–		–0.37***	0.04	–6.13	–0.34	–0.17		
Ethnicity	–0.05	0.12	–1.10	–0.36	0.10		–0.01	0.09	–0.09	–0.19	0.17		
<i>Results of direct, indirect, and total theory effects</i>													
Predictor							Effect			LLCI		ULCI	
Direct effects													
	SBNH-L on Professional Efficacy							0.13**		0.06		0.19	
Indirect effects													
	SBNH-L on Professional Efficacy via Inclusion							–0.10**		–0.14		–0.06	
Total effects													
	SBNH-L on Professional Efficacy							0.27		–0.03		–0.08	

Note. All healthcare workers. LLCI, lower level of the 95% confidence interval; ULCI, upper level of 95% confidence interval.

^a*N* = 343. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership.

****p* < 0.001. ***p* < 0.05.

Table 18.

High-level overview of mediation results for both the nurse-only subsample and full healthcare sample

Nurses		Healthcare Workers	
EE	Only sig. total effect (no direct effect or indirect effect)	EE	Partial Mediation
CY	Only a sig. indirect effect (no total effect or direct effect)	CY	Complete Mediation
PE	Direct effect & indirect effect, but no total effect	PE	Direct effect & indirect effect, but no total effect
<hr/>			
EE + cov	Only sig. total effect (no direct effect or indirect effect)	EE + cov	Complete Mediation
CY + cov	Only a sig. indirect effect (no total effect or direct effect)	CY + cov	Complete Mediation
PE + cov	Direct effect & indirect effect, but no total effect	PE + cov	Direct effect & indirect effect, but no total effect

Table 19.

Independent t-test between nurses' vs. other healthcare workers' demographic variables

Scale	Nurses		Other		<i>df</i>	<i>T</i>	<i>P</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Age (months)	42.84	12.45	42.95	12.16	355	-0.09	.932	12.28
Experience (years)	11.06	9.75	11.10	9.65	353	-0.04	.967	9.69
Number of people in team/unit	109.45	443.71	47.46	149.69	164.19*	1.61	.061	304.94

Note. Nurses ($n = 144$), Other healthcare workers sample ($n = 213$).

^aEffect size is denoted by Cohen's *d*. ^bSBNH-L refers to Strengths-Based Nursing and Healthcare Leadership. ^cTeam size reflects equal variances not assumed. ^dIt is possible that some may have reported their entire organisation's staff or entire organisation nursing staff vs. unit for Team unit/size

We were also interested in seeing if the two groups demonstrated differences in scores for the scales of interest. We found that there were no significant difference in scores between nurses and healthcare workers on any scale: SBNH-L ($t(355) = 1.69, p > .05$), inclusion ($t(355) = 1.63, p > .05$), emotional exhaustion ($t(355) = 1.60, p > .05$), cynicism ($t(355) = 0.93, p > .05$), or professional efficacy ($t(351) = -0.76, p > .05$). Refer to Table 20 for more details.

Discussion

This thesis sought to examine if perceived inclusion served as an explanatory mechanism in the relationship between SBNH-L and burnout among healthcare workers. We surveyed a group of healthcare workers and ran mirroring analyses on a subsample of nurses. At first glance, we can draw three main takeaways from these *a-priori* results: (1) healthcare workers do benefit from SBNH-L as it has been shown to increase inclusion, (2) inclusion is an important explanatory mechanism of the relationship between SBNH-L and burnout (in particular, emotional exhaustion and cynicism), and (3) nurses alone seem to differ when compared to the full sample of healthcare workers (in which nurses are included).

Theoretical Contributions

Since SBNH-L is still in its infancy, this study is one of the first to quantify SBNH-L through the eyes of the employee, and it adds one more piece of the puzzle to factors that may mitigate burnout in healthcare, adding to the literature on this new leadership approach. We believe that these results give insight into the influence that SBNH-L can have on team members' perceived inclusion and rates of burnout, and this will affect how they care for patients.

Table 20.

Independent t-test of scale scores between nurses and other healthcare workers

Scale	<i>df</i>	<i>t</i>	<i>p</i>	<i>d</i>
SBNH-L	355	1.69	.09	1.42
Inclusion	355	1.63	.11	1.08
Emotional Exhaustion	355	1.60	.11	1.70
Cynicism	355	.93	.35	1.73
Professional Efficacy	351	-.76	.45	0.75

Note. Nurses ($n = 144$), Other healthcare workers sample ($n = 213$).

^aEffect size is denoted by Cohen's *d*.

Furthermore, these results contribute to the large-scale review by Cummings and colleagues (2018) and defend that leadership is a significant factor in employees' well-being. In their review, the authors highlight that relational leadership styles show greater success rates among nurses, fostering environments for growth and improved well-being. However, relational leadership styles, such as transformational, were not founded in healthcare and do not capture the full essence of the field. Thus, our study contributes to the nascent literature on SBNH-L and, as such, deserves a place in the leadership literature. We have operationalized the newly developed theory of SBNH-L and have provided evidence on SBNH-L's ability to create healthy work environments in the healthcare field. As stated previously, the abundant amount of literature on leadership highlights the importance of training leaders to shape employees. Nevertheless, no leadership style to date has been grounded in healthcare, a unique labour force, where burnout rates continue to increase and dire change is needed (Dyrbye et al., 2014), attesting to the importance of SBNH-L's development.

The findings from this study provide evidence for Gottlieb's theory which hypothesizes that SBNH-L contributes to creating a healthy work environment. More specifically, these findings suggest that SBNH-L fosters an environment that emphasizes the principle of "goodness-of-fit," whereby healthcare employees work best in environments that utilize their strengths (Gottlieb et al., 2012). This, in turn, fosters inclusion, which we know is a vital component of the EDI matrix and is an important element of a healthy environment (Woolforde, 2019).

Notably, a key factor of inclusion is feeling valued and accepted in a group because of your individual strengths (Shore et al., 2011). Once again, this ties in with SBNH-L, where value is placed on unique strengths (Gottlieb et al., 2012). Therefore, our results align with research

highlighting that leadership plays a vital role in perceived inclusion. Moreover, employees who feel a greater sense of inclusion tend to report having greater self-worth and are more willing to display initiative in their work and help their coworkers (Cottrill et al., 2014).

Furthermore, the relationship between SBNH-L and inclusion supports the previously mentioned Theory of Generative Interactions (Bernstein et al., 2020), where the authors emphasized the importance of collaborative interactions to promote inclusion. More specifically, Bernstein and colleagues (2020) elucidate that there are practices that the organization can use to increase inclusion, some of which include: “shared organizational purpose, [...] equal status and decision making, and collaboration” (p. 403). This links to SBNH-L since one of its core values is collaboration (Gottlieb et al., 2021). These practices elicit more frequent, positive interactions and promote psychological safety, a leading factor in reducing burnout rates (Carmeli et al., 2010; Vévoda et al., 2016). What has also been a focus in the literature are possible mechanisms for burnout, a notable one being leadership (e.g., Zopiatis & Constanti, 2010). This sheds light on the importance of leadership on inclusion and burnout and speaks to SBNH-L being a key mechanism in burnout rate reduction.

When we look back at the interesting findings on the negative relationship between years of experience and SBNH-L, we can make a few interpretations. One explanation is that over time, employees in healthcare may grow more frustrated with their organization and the healthcare system (i.e., long-term effects of tenuous working conditions). Consequently, they may link their manager to the lack of progress and believe their manager exhibits fewer SBNH-L behaviours. Another explanation is that the healthcare workers with more experience are more resistant to burnout than newer healthcare workers (e.g., Torrente et al., 2021). Therefore,

regardless of their manager's leadership style, they can refrain from burnout—perhaps due to other variables outside the scope of the study.

We conducted our primary analyses with the hypothesis that the results of nurses and healthcare workers would mirror each other since SBNH-L is theorized to meet the needs of healthcare in general (Gottlieb et al., 2012). Note, however, that some literature has demonstrated that nurses may be unique in healthcare. More specifically, previous literature reported that nurses were found to suffer from greater levels of stress compared to other healthcare workers (Su et al., 2009), they were more prone to certain diseases and health hazards (Fronteira & Ferrinho, 2011), they experienced more patient aggression (Kowalczyk & Krajewska-Kulak, 2017), and they tended to show significantly greater rates of burnout (Chou et al., 2014). Considering this, it might be one explanation as to why the nurse-only sample had varying results when looking at the burnout subscales and had differing results from the full healthcare sample.

However, another explanation is that the nurse sample was too small to capture the true effect of SBNH-L on burnout, as the sample was half the size of the full healthcare sample. Thus, we are seeing similar patterns between both samples but differing results. Therefore, it could have been lacking power in the nurse sample. Nonetheless, our findings provide evidence that SBNH-L can act as a protective barrier to burnout for healthcare workers by fostering an environment of inclusion.

This study offers a richer understanding of a leadership philosophy that is founded in nursing but can extend to the greater healthcare field. We have demonstrated that SBNH-L is one factor that may contribute to decreasing rates of burnout among healthcare employees. Through uncovering a mechanism by which leadership can affect burnout rates, it will encourage

healthcare managers to adopt the SBNH-L approach to foster an environment of inclusion by utilizing all members' strengths. In turn, we hope that the widespread adoption of this leadership approach in healthcare, a trend that seems to be accelerating of late, will reduce burnout rates, as shown through this study. The aim is to foster an environment where employees are happy and satisfied so they can perform their best and provide the greatest quality of care to patients.

Strengths, Limitations and Future Research

This study contributes to our understanding of how perceived inclusion can play an important role in the relationship between SBNH-L and burnout in healthcare. It brings to light innovative and current concepts in healthcare and ties in the importance of EDI in team settings. Additionally, it is the first study in the SBNH-L literature to investigate the employee's perspective and provides insight into the broader realm of healthcare (i.e., disciplines outside but in line with nursing).

Nevertheless, several limitations need to be acknowledged. First, our sample size was composed of only Canadian healthcare workers. This does not allow us to measure if there is a difference between healthcare systems in Canada and the USA that can be a potential moderator. Nevertheless, although differences in burnout across nations have been shown (Woo et al., 2020), differences within North America are few and far between (Maslach et al., 2001). Thus, we should not expect large-scale differences between both nations, regardless of Canada being based on a prominent structure of public healthcare and the USA being based on a prominent private sector. However, in response to this concern, we compared these opposite healthcare settings within Canada (public versus private health settings) as a parallel reflection of the two countries. We found no significant differences between both healthcare settings in our sample¹.

¹ SBNHL: $F(10.69, 714, 26) = 2.63, p = 0.07$
Inclusion: $F(2, 351) = 1.66, p = .19$

This suggests that our findings may extend to the USA, potentially echoing Maslach and colleagues' (2001) findings. Nonetheless, future studies should look more deeply at this and conduct a comprehensive comparison between nations.

Secondly, our sample was not large enough to capture enough variability in participants' ethnicities. To account for this, we collapsed the ethnicity data into two categories to analyze the data as a binary variable. This meant that we were not able to get a deeper understanding of each ethnicity and how each one may play an independent role in perceived inclusion. Nevertheless, by collapsing the data into two groups based on what was the majority/minority ethnicity in our study, we discovered that ethnicity was a significant negative covariate in both samples. This tells us that ethnicity influenced burnout. More specifically, those who identified as an ethnicity outside of White tended to report greater rates of burnout. Thus, future studies should look deeper into these interesting findings and attempt to break down the variance explained by ethnicity.

Furthermore, the data were collected in a cross-sectional fashion, which does not allow us to draw any causal conclusions. Along the same lines, the data were collected at a single time point, from a single source, making the conclusions susceptible to common method variance. This means that using a mediation analysis at only one time point may not be representative and generalizable to other time points and may allow us to 'discover' spurious relationships that would otherwise not exist if the analyses were conducted over multiple time points. Future studies can attempt to replicate the current study but include multiple time points to control this bias and draw causal conclusions.

Burnout: $F(0.943, 431.98) = 0.38, p = .68$

Finally (and relatedly), we did not collect the data in intact teams (i.e., all members of a unit rating their leader). This limits what we know about the leader and their effect on units. However, these aspects allowed us to capture rich data in a shorter period and propose introductory findings to a newly developed leadership approach with no published quantitative studies to date.

An encouraging future pathway is to approach SBNH-L and inclusion through the self-determination theory (Deci & Ryan, 2000) lens. As stated previously, the SDT encompasses autonomy, relatedness, and competence as three key factors contributing to well-being (Deci & Ryan, 2000). Similarly, one of SBNH-L's core values is self-determination (Gottlieb et al., 2021), supporting the important link between these two theories. It would be interesting to dig deeper into this tie to measure if the three concepts of SDT mediate the link between SBNH-L and burnout. Moreover, we have provided evidence of SBNH-L's ability to increase inclusion among employees through a top-down level of analysis. However, the angle of the bottom-up approach of analysis has not yet been studied, and understanding of how employees' evaluations of self-perceived autonomy, relatedness, and competence may play a role in their ratings of intrinsic motivation and, in turn, can impact their acceptance of SBNH-L. Thus, future studies should break down the nuances of SDT and SBNH-L and how they may connect with intrinsic motivation (Bidee et al., 2017).

Practical Contributions

From a practical standpoint, these findings mean that fostering SBNH-L in healthcare settings through training, mentorship, and reflective leadership practice, is an effective way to create more inclusive workplaces and reduce burnout. This is particularly important as we know that we cannot spare any more absent healthcare workers in a time of great populational demand

for healthcare. Expanding on this, before the Covid-19 pandemic, burnout rates among healthcare workers ranged from 20–30% and by 2021, burnout rates among healthcare workers had exceeded 60% (Maunder et al., 2021). This only exemplifies the importance of addressing this phenomenon by using leadership to mitigate burnout.

While burnout is a psychological phenomenon, its effects reach far beyond the afflicted individual. For one, burnout has been shown to cause a great financial burden. According to Han and colleagues (2019), it is estimated that physician burnout alone costs the medical system in the US about \$4.6 billion a year. In a review by Ellison (2019), the author contributes to Han and colleagues' (2019) findings, stating that the cost of healthcare increases as a result of burnout, and more than that, “an un-well and unhappy workforce may result in high turnover and replacement, low-quality care, a high risk for medical errors and malpractice claims, and suboptimal patient outcomes” (p. 807). In a report by Maunder and colleagues (2021), the authors summarized previous literature on burnout and reiterated that burnout results in numerous adverse outcomes outside of financial burden. Looking at the afflicted individual, we understand that burnout often leads to important issues such as depression, substance abuse, and poor health. When we look at the results of burnout in the organization, the authors explain that high absenteeism and turnover rates become significant. Lastly, the authors clarify that burnout negatively affects the patient, whereby the patient reports lower satisfaction and lower quality of care from the healthcare worker experiencing burnout. Thus, to combat these significant negative consequences of burnout, we need to address leadership by adopting the newly theorized SBNH-L approach. Practically, this can be implemented in clinical settings through leadership training, reflective practice groups, and mentorship.

Conclusion

The Covid-19 pandemic has caused an enormous strain on the healthcare field. Now more than ever, we need to act and do everything in our power to mitigate burnout rates among healthcare professionals. This study captured the importance of the SBNH-L approach on employees as it was shown to increase inclusion and, in turn, reduce burnout rates.

We know that burnout is a prominent phenomenon that needs to be addressed as it negatively impacts healthcare workers every day. Further studying and understanding the SBNH-L approach can potentially affect the way managers in the healthcare field lead. Since leaders shape the future, we believe that this new leadership construct, grounded in the healthcare field, can and should be implemented in the broader realm of healthcare to reduce the rates of burnout. It is essential for leaders to be aware of the impact they have on their employees and recognize that they have the potential to create harmony within their team and promote well-being. We have explored one vital piece of the puzzle on burnout, which can potentially increase the quality of care that patients receive.

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Appendix A: Inclusion Scale

1. I am treated as a valued member of my work group
2. I belong in my work group
3. I am connected to my work group
4. I believe that my work group is where I am meant to be
5. I feel that people really care about me in my work group
6. I can bring aspects of myself to this work group that others in the group don't have in common with me
7. People in my work group listen to me even when my views are dissimilar
8. While at work, I am comfortable expressing opinions that diverge from my group
9. I can share a perspective on work issues that is different from my group members
10. When my groups' perspective becomes too narrow, I am able to bring up a new point of view

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Appendix B: Ethics Certificate



CERTIFICATION OF ETHICAL ACCEPTABILITY FOR RESEARCH INVOLVING HUMAN SUBJECTS

Name of Applicant: Dr. Kathleen Boies
Department: John Molson School of Business\Management
Agency: N/A

Title of Project: Leadership Scale Development

Certification Number: 30014017

Valid From: February 07, 2022 To: February 06, 2023

The members of the University Human Research Ethics Committee have examined the application for a grant to support the above-named project, and consider the experimental procedures, as outlined by the applicant, to be acceptable on ethical grounds for research involving human subjects.

A handwritten signature in black ink that reads "Richard DeMont".

Dr. Richard DeMont, Chair, University Human Research Ethics Committee