DISSERTATION

WHAT MOTIVATES HEALTHCARE WORKERS? USING LATENT PROFILE ANALYSIS TO UNDERSTAND HEALTHCARE WORKERS' MOTIVES AND THEIR RELATIONSHIPS WITH WORK OUTCOMES

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ABSTRACT

WHAT MOTIVATES HEALTHCARE WORKERS? USING LATENT PROFILE ANALYSIS TO UNDERSTAND HEALTHCARE WORKERS' MOTIVES AND THEIR RELATIONSHIPS WITH WORK OUTCOMES

Healthcare workers (HCWs) are an integral part of the U.S. healthcare system. Despite their importance, healthcare organizations often struggle to attract, retain, and manage these workers due to various challenges inherent in this type of work. Human resource management interventions that target HCWs' motivation have been proposed as a means to help address these issues. However, HCW motivation is complex and multifaceted and prior work has not thoroughly accounted for how multiple motives influence HCWs' work. The current research seeks to understand how various HCW motives identified in the literature relate to each other and to important work outcomes. Specifically, I used latent profile analysis to identify distinct HCW motive profiles, evaluated the degree to which each profile was characterized by extrinsic or intrinsic motivation or amotivation, and then examined whether these profiles were differentially related to client-related burnout, work-related burnout, turnover, job satisfaction, meaning in life, and job performance. My results revealed three latent profiles: an incentive-driven profile, an altruism-driven profile, and a broadly-driven profile. The incentive-driven profile displayed low intrinsic motivation and was associated with the worst outcomes. The altruism-driven profile displayed moderate intrinsic motivation and was associated with better outcomes than the incentive-driven profile but worse outcomes than the broadly-driven profile. The broadly-driven profile displayed high intrinsic motivation and was associated with the best outcomes. All profiles

displayed high extrinsic motivation and low amotivation. This study's results demonstrated that HCWs who reported multiple motives for engaging in their work fared better than those who reported only one or two motives, and that a higher degree of internalization (i.e., intrinsic motivation) was associated with better outcomes. This study also found, counterintuitively, that being driven solely by altruistic motives was detrimental to HCWs. Implications for research and practice as well as future direction are discussed.

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DEDICATION

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

Overview

Healthcare workers (HCWs) provide a vital service to society. Despite their importance, there are widespread challenges to attracting and retaining them due to hardships inherent in their work. Researchers and policy makers have increasingly recognized the importance of human resource management interventions in the healthcare sector and have noted the potential of motivation for improving worker and patient outcomes (Dieleman, Gerretsen, & van der Wilt, 2009; Gambino, 2010; Moller, Jager, Williams, & Kao, 2019; Phipps-Taylor & Shortell, 2016; Stevens, Moriarty, Manthorpe, Hussein, Sharpe, Orme … Crisp, 2012). However, the literature on HCW motivation has largely focused simply on identifying factors that motivate workers (i.e., motives), and little work has examined the complex relationships between distinct motives or between motives and performance outcomes. HCWs often report that they find multiple aspects of their job motivating as well as demotivating (Ahlstedt, Lindvall, Holmström, & Athlin, 2019; Greenspan, McMahon, Chebet, Mpunga, Urassa, & Winch, 2013; Lambrou, Kontodimopoulos, & Niakas, 2010; Manongi, Marchant, & Bybjerg, 2006; Phipps-Taylor & Shortell, 2016; Stevens et al., 2012), so it is important to examine motives in conjunction with each other to fully understand their impact on performance. This study will address the lack of attention to this issue by studying HCW motivation from a more integrated perspective, identifying profiles of motives and examining how these profiles relate to important work-related outcomes. The findings will further our understanding of motivation among HCWs in the post-pandemic environment and will provide practical recommendations for HCW programs seeking to improve worker performance.

Healthcare Workers

HCWs play a critical role in the U.S. healthcare system by providing services such as medical treatment, long-term care, and health education and outreach to patients and communities. HCWs are a broad group of workers employed across a wide variety of occupations. The U.S. Health Workforce Chartbook (National Center for Health Workforce Analysis, 2013) examined the characteristics of health sector jobs using data from 15 million individuals collected between 2001 and 2015. It organized HCWs into 34 distinct occupations, ranging from dentists, to pharmacists, to emergency medical technicians, to social workers. It found that registered nurses made up the largest group of health sector jobs, followed by nursing, psychiatric, and health home aids, then personal care aids, physicians, and finally licensed practical and licensed vocational nurses. Although the roles and responsibilities for different HCW occupations vary widely, they all generally involve providing individualized care to patients, advising patients on maintaining their health or managing conditions, and helping patients navigate the healthcare system (see National Center for O*NET Development, 2016a – 2016e for sample occupational tasks).

In particular, the work done by patient-facing HCWs involves additional complexity. Although some people who work in the healthcare industry have non-patient facing jobs (e.g., pathologists, healthcare administrative workers, certain pharmacists and radiologists), those who work with patients routinely interact directly with patients and their families. This makes the nature of the work fundamentally different as it requires additional interpersonal skills, such as empathy (Mercer & Reynolds, 2002), sensitivity to patient needs (Clark, 2003), communication and collaboration (Davenport, Henderson, Mosca, Khuri, & Mentzer Jr., 2007), and confidence (Owens & Keller, 2018). Interpersonal interaction also introduces unique job demands. Although many patient-facing HCWs view "emotional engagement" such as showing concern and empathy as important to providing care, they also recognize that emotional detachment is necessary to cope

with emotionally draining situations (Mann, 2004). The incongruence between HCWs' true feelings and the feelings they display constitutes emotional labor, which can have negative consequences for their wellbeing (Grandey & Gabriel, 2015). These demands create a complex set of circumstances unique to patient-facing HCWs that they must navigate to perform their jobs, and highlight the need for research that focuses on their specific needs and circumstances.

Employment in the healthcare sector has dropped substantially in recent years but is projected to be one of the fastest growing job sectors through the next decade (Dubina, Morisi, Rieley, & Wagoner, 2019; Sommers & Franklin, 2012). This growth spans different roles, such as nurses (U.S. Department of Health and Human Services, 2018), community healthcare workers (U.S. Department of Health and Human Services, 2019), and social workers (U.S. Department of Health and Human Services, 2019) among many others. This increased need has been driven by several factors and underscores the important role HCWs play in society. First, there is a high prevalence of chronic diseases, such as diabetes and cardiovascular disease, among Americans that require professional care (Martinez & Knickman, 2010). In fact, diabetes and obesity rates have steadily increased between 1988 and 2016 (Centers for Disease Control, 2018) and chronic conditions such as cardiovascular disease, cancer, and diabetes are among the leading causes of death for Americans (Heron, 2019). The prevalence of these conditions is due, in part, to systemic issues in the U.S. healthcare system. Although healthcare spending in the U.S. is among the highest in the world, its healthcare system ranks last among similar industrialized countries in several areas, including population health, access to care, efficiency of care, and equity (Commonwealth Fund, 2014). This dismal status has been attributed to a lack of attention to preventative care, inadequate insurance coverage, administrative inefficiency, and a fragmented healthcare system.

Second, there is a large population of older adults that requires specialized care. In 2016,

the 65 and older age group comprised 15.24% of the population and is projected to reach 20.60% by 2030 and 22.03% by 2050 (U.S. Census Bureau, 2017). Aging is a well-established risk factor for chronic disease (Christensen, Doblhammer, Rau, & Vaupel, 2010; Fontana, Kennedy, & Longo, 2014) and many older adults suffer from diseases such as cancer, dementia, obesity, diabetes, heart disease, and arthritis (Collins, Davis, Schoen, Doty, & Kriss, 2006; Federal Interagency Forum on Aging-Related Statistics, 2012). As the number of older adults continues to increase, the prevalence of such chronic diseases is expected to increase substantially (American Hospital Association, 2007; World Health Organization, 2016). Comorbidity of chronic disease is also increasingly prevalent among older adults in the U.S., indicating that many will suffer from multiple chronic diseases at once (Centers for Disease Control, 2020; Hung, Ross, Boockvar, & Siu, 2011). Although physical activity is an important preventative factor against chronic disease, people become less active as they get older (Watson, Carlson, Gunn, Galuska, O'Connor, Greenlund, & Fulton, 2016) and the risk of death or serious harm from injuries such as falls has been on the rise among those 65 and older (Burns & Kakara, 2018). These trends underscore the complex healthcare needs of older adults and show that HCWs are needed to provide care for increasingly complex health conditions.

Third, the COVID-19 pandemic had a major impact on the healthcare workforce. HCWs, deemed essential workers at the start of the pandemic, experienced a sharp increase in turnover over a short span of time (Telesford, Wager, Hughes-Cromwick, Amin, & Cox, 2023). Approximately 1.5 million HCWs lost their jobs as clinics temporarily closed and elective surgeries were postponed to minimize exposure to the virus (Fraher, Pittman, Frogner, Spetz, Moore, Beck … Buerhaus, 2020; Turner, Rhyan, Hughes-Cromwick, & Miller, 2020). Although many of these HCWs returned to work later that year, employment in the healthcare sector was

still lower than pre-pandemic levels (Altarum, 2020; Buerhaus, Staiger, Auerbach, Yates, & Donelan, 2022). HCWs left their jobs due to various factors. The threat of contagion or death and increased workload led to higher burnout, emotional exhaustion, and lower psychological well-being (Frogner & Dills, 2022; Poon, Lin, Griffiths, Yong, Seah, & Liaw, 2022; Tabur, Elkefi, Emhan, Mengenci, Bez, & Asan, 2022). Such emotional distress is typically more severe when facing disasters or life-threatening events, such as the pandemic (Leon, 2004). Additionally, frontline HCWs are the primary points of contact between the healthcare system and the general public. This responsibility increased pressure and workload as the public looked to HCWs for how to respond (Tabur, Elkefi, Emhan, Mengenci, Bez, & Asan, 2022), and in some cases even led to harassment from members of the public with irrational beliefs about the pandemic (Bahcchi, 2020). The highest rates of turnover were seen among female HCWs with young children (Frogner & Dills, 2022) and HCWs belonging to underrepresented racial and ethnic groups (Frogner & Dills, 2022; Poon et al., 2022), which poses additional challenges for providing care to at-risk groups. Together, all of these factors highlight the urgent need to hire and retain HCWs to ensure the U.S. healthcare system can continue to provide essential medical services.

Challenges Faced by Healthcare Workers

Although HCWs perform a critical service to society, they often face a myriad of challenges in their line of work that contribute to the difficulty of recruiting and retaining them. Some of these challenges stem from the work roles and responsibilities themselves. Certain workplaces, like hospitals and clinics, can be fast paced and subject HCWs to high volumes of work, multiple urgent demands, and frequent interruptions (Gazelle, Liebschutz, & Riess, 2014; Triolo, 1989a). Role ambiguity, a lack of clarity around job expectations (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964), is an issue for HCWs who serve as a primary point of contact for

patients and thus must fulfill a variety of roles, such as social workers (Kadushin & Kulys, 1995; Um & Harrison, 1998) and community health workers (Witmer, Seifer, Finocchio, Leslie, & O'Neil, 1995; WestRasmus, Pineda-Reyes, Tamez, & Westfall, 2012). Exacerbating these issues is the fact that patient-based work is inherently challenging (Cournoyer, 1988; Pines & Kafry, 1978; Söderfeldt, Söderfeldt, & Warg, 1995) and that training programs, such as those for physicians, often emphasize perfectionism and denial of personal vulnerability (Miller & McGowen, 2000; Spickard Jr., Gabbe, & Christensen, 2002; Wallace, Lemaire, & Ghali, 2009).

The work environment can also pose additional challenges. Working with sick patients in medical settings exposes healthcare workers to infectious diseases, biological hazards, and carcinogens (Panlilio, Orelien, Srivastava, Jagger, Cohn, Cardo … EPINet Data Sharing Network, 2004; Triolo, 1989b). Patients who are disabled or infirmed may need to be lifted to be moved, which increases the likelihood of back injuries (Gershon, Stone, Zeltser, Faucett, MacDavitt, & Chou, 2007; Triolo, 1989a). HCWs of all types are exposed to violence and threats (Magnavita, 2014; NIOSH, 1996; Warren, 2011), especially those connected with psychiatric or emergency services and first aid (Magnavita & Heponiemi, 2012) and who serve vulnerable patients or communities (Beaver, 1999; Greenspan et al., 2013; Lechuga, Garcia, Owczarzak, Barker, & Benson, 2016; Newhill, 1995; Schultz, 1987). HCWs may be required to work a range of shifts including nights, weekends, and holidays. Schedules for shift workers can also rotate and be unpredictable, which can lead to inconsistent sleep schedules (Berger & Hobbs, 2006; Caruso, 2014; Kuhn, 2001; Triolo, 1989a) that increase the risk for sleep disturbances, accidents and injuries, social isolation, and negative physiological effects (Berger & Hobbs, 2006).

Lack of support from the organization is another common challenge. HCWs may come into conflict with administration over issues such as management style, priorities, policies and

procedures, and organizational culture (McLean & Andrew, 1999; Suchman, 2001; Triolo, 1989a). Certain HCWs, such as social workers and community health workers, report that their organizations do not understand or value their skills or view their work as less legitimate compared to other HCWs (Goodwin & Tobler, 2008; Institute of Medicine, 2003; Kadushin & Kulys, 1995; Lechuga et al., 2016; Reid, Johnson, Morant, Kuipers, Szmukler, Thornicroft … Prosser, 1999; Witmer et al., 1995). These negative attitudes can lead to insufficient funding and resources (Goodwin & Tobler, 2008; Institute of Medicine, 2003; Kadushin & Kulys, 1995; Witmer et al., 1995).

Challenges can also arise due to the work conflicting with individuals' needs. Many HCWs report feeling a lack of control or autonomy at work (Dillon, 1990; Gazelle, Liebschutz, & Riess, 2014; Triolo, 1989a), often having final decisions about their work environment or responsibilities dictated by administrators or others in the healthcare system (Borland, 1981; Kadushin & Kulys, 1995; Spickard Jr., Gabbe, & Christensen, 2002). Emotional labor and compassion fatigue are also commonly reported as many HCWs must manage emotionally taxing situations, such as dealing with death, traumatized persons, and grieving family members (Cocker & Joss, 2016; Figley, 2013; Graham & Shier, 2014; Triolo, 1989a). Healthcare work can also come into conflict with HCW's personal and family life (Greenspan et al., 2013; Lechuga et al., 2016; Myers, 2013; Triolo, 1989a; Wu, Rusyidi, Claiborne, & McCarthy, 2013), especially among female HCWs who are more likely to manage domestic responsibilities and serve as the primary caregivers for children, parents, and spouses (Gautam, 2001; Killien, 2004). Clearly, high job demands are inherent in healthcare work, and thus strategies to mitigate their impact on workers are necessary to address some of the systemic healthcare issues facing the U.S.

Consequences of High Job Demands

Higher Burnout

These job demands can result in a variety of negative consequences for workers. For example, the high stress HCWs are subjected to can lead to burnout. Burnout refers to the physical and emotional exhaustion that results from long-term involvement in emotionally demanding work (Pines & Aronson, 1988; Schaufeli & Greenglass, 2001; Shirom, 1989), especially that which involves interpersonal interaction (Maslach, Schaufeli, & Leiter, 2001). Burned-out workers are more likely to engage in job withdrawal behaviors (e.g., turnover, absenteeism), and are less productive, less satisfied with their jobs, and less committed to their organizations (Maslach et al., 2001). Further, burnout may be "contagious" in the workplace as those experiencing burnout may disrupt others' work and engage in more conflict (Maslach et al., 2001). It can also spillover into workers' home lives (Burke & Greenglass, 2001).

Meta-analytic research has found that high job demands can lead to burnout. In particular, high workloads, role ambiguity, role conflict, role stress, stressful work events, and work pressure have been identified as antecedents (Alarcon, 2011; Lee & Ashforth, 1996). It is a major issue for HCW jobs that involve emotionally demanding patient-client interactions, such as nurses (Janssen, de Jonge, & Bakker, 1999; Potter, Deshields, Divanbeigi, Berger, Cipriano, Norris, & Olsen, 2010), volunteers in healthcare settings (Akintola, Hlengwa, & Dageid, 2013; Bakker, van der Zee, Lewig, & Dollard, 2006; Moreno- Jiménez & Villodres, 2010), and social workers (Lloyd, King, & Chenoweth, 2002). In the healthcare industry, burnout has been associated with high job demands, increased work pressure, lack of role clarity, lack of opportunities for promotion, low supervisor support, pay issues, and role conflict (Janssen et al., 1999; Martin & Schinke, 1998; Melchior, Bours, Schmitz, & Wittich, 1997; Schaefer & Moos, 1993; Um & Harrison, 1998).

Higher Turnover

The stressful nature of healthcare work can lead to higher turnover. Turnover refers to workers leaving an organization who need to be replaced. This is financially costly for organizations. When employees leave, there are costs associated with their separation from the organization (e.g., exit interviews, paperwork), recruiting and attracting new candidates, putting candidates through selection systems, hiring and training, and the loss of productivity throughout this process (e.g., loss of experienced workers, learning curve for new workers, supervisor/peer disruption; Hinkin & Tracey, 2000). These costs are even greater for healthcare programs because the loss of experienced workers also means the loss of established connections with patients and communities that are vital to driving healthcare outcomes (Bhattacharyya, Winch, LeBan, & Tien, 2001).

A meta-analysis by Griffeth, Hom, and Gaertner (2000) found that job satisfaction, job stress, leadership, and promotion opportunities were among important predictors of turnover. Similar findings have been established across various healthcare occupations, where turnover has been associated with dissatisfaction with aspects of the job, exposure to violence, job stress, lack of career advancement opportunities, lack of performance feedback, negative attitudes from peers, poor leadership, poor work-life balance, role ambiguity, and shiftwork (Beaver, 1999; Benson & Ducanis, 1995; Brichacek, 1988; Gray-Toft & Anderson, 1981; Hall & Wakeman, 1999; Hall, Wakeman, & Levy, 1992; Hayes, O'Brien-Pallas, Duffield, Shamian, Buchan, Hughes, … Stone, 2006; Lloyd et al., 2002; O'Brien-Pallas, Murphy, Shamian, Li, & Hayes, 2010; Rabin & Zelner, 1992; Rosse & Miller, 1984; Seibold, Rossi, Berteotti, Soprych, & McQuillan, 1987; Shields & Ward, 2001). Among certain HCW roles, such as community health workers and emergency medical technicians, inadequate pay and benefits are also drivers of turnover (Blau & Chapman, 2016; Chevalier, Lapo, O'Brien, & Wierzba, 1993; Ofosu-Amaah, 1983).

Lower Job Satisfaction

High job demands can also decrease job satisfaction among HCWs. Job satisfaction is a positive or negative response to one's job situation comprised of both cognitive and affective components (Judge, Hulin, & Dalal, 2012). It can represent a response to the job as a whole or distinct responses to specific aspects of the job, such as pay, procedures, promotions, rules, supervisors, and the work itself (Smucker & Kent, 2004). Job satisfaction has been conceptualized hierarchically with facet-specific satisfactions underlying overall job satisfaction; however, overall job satisfaction is more than just a sum of its parts (Scarpello & Campbell, 1983) and is more informative when general attitudinal and behavioral outcomes of are interest. Job satisfaction has been associated with many important organizational outcomes, such as attendance, emotional exhaustion, job performance (including counterproductive work behaviors and organizational citizenship behaviors), psychological well-being, and turnover decisions (Hom, 2001; Hulin & Judge, 2003; Roznowski, Miller, & Rosse, 1992; Scott & Taylor, 1985).

A variety of factors have been linked to job satisfaction among HCWs. Challenging working conditions, difficult relationships with patients, coworkers, and managers, high workloads, job stress, lack of autonomy, lack of self-growth, lack of training and career opportunities, low job security, low salaries, and poor leadership have all been associated with lower overall satisfaction among nurses (Blegen, 1993; Gray-Toft & Anderson, 1981; Lu, Barriball, Zhang, & While, 2012; Rowe, de Savigny, Lanata, & Victora, 2005; Zangaro & Soeken, 2007). Exposure to violence, lack of social support, role ambiguity, and work stress have been associated with lower satisfaction among social workers (Balloch et al., 1998; Beaver, 1999; McLean & Andrew, 1999; Sutherland & Cooper, 1990; Um & Harrison, 1998). Given that many of these demands are common in the healthcare industry, low job satisfaction is very likely a

concern for HCWs of all types.

Lower Job Performance

High job demands can have a detrimental effect on HCWs' job performance. Job performance is a multidimensional construct consisting of task performance (the effectiveness with which workers perform their required job duties) and contextual performance (extra-role activities that contribute to the social context of the workplace; Borman & Motowidlo, 1993). Although contextual performance is not formally part of one's job requirements, it does contribute to overall performance (Motowidlo & Van Scotter, 1994). For HCWs, poor job performance is a serious issue as it can ultimately result in worse health outcomes for patients, including death. Research has found that inadequate staffing, lack of adequate job resources and facilities, lack of performance evaluation and feedback, lack of supervisor support, poor leadership and supervision, low pay, organizational climate, safety concerns, and time pressure are all associated with lower task performance among HCWs (Chen, Evans, Anand, Boufford, Brown, Chowdury, … Wibulpolprasert, 2004; Crowe, Fernandez, Pepe, Cash, Rivard, Wronski, … Ferketich, 2019; Gershon et al., 2007; Rowe et al., 2005). As discussed above, burnout and job dissatisfaction can also lower overall performance, and turnover is a counterproductive workplace behavior in and of itself, and thus is considered a form of negative performance.

Work Motivation among Healthcare Workers

Recognizing the potential that work motivation holds for improving outcomes for HCWs and patients, researchers and practitioners have made calls to leverage motivation interventions as a means to address the demands HCWs face (Chen et al., 2004; Dieleman et al., 2009; Fernandes, Santinha, & Forte, 2022; Gambino, 2010; Moller et al., 2019; Rowe et al., 2005). Work motivation is defined as "a set of energetic forces, originating from within and outside the individual, that

drive work-related behavior and determine its direction, duration, and intensity" (Pinder, 1998). Motivation is important in the work context because it drives performance through attention, effort, persistence, and strategy utilization (Mitchell & Daniels, 2003). This motivation-performance relationship has been established in the health sector as well (Chen et al., 2004; Franco et al., 2002; Martinez & Martineau, 1998), where low motivation can manifest itself as a lack of patient courtesy, tardiness, absenteeism, turnover, and poor process quality (Chiu, Chien, Lin, & Hsiao, 2004; Gilson, Alilio, & Heggenhougen, 1994; Mutizwa-Mangiza, 1998; Van Lerberghe, Conceicao, Van Damme, & Ferrinho, 2002). Understanding HCWs' motivation is critical for developing interventions to manage it, which can reduce costs associated with poor performance and turnover for HCW organizations.

Many studies on HCW motivation have focused on identifying specific aspects of the work that HCWs find motivating (e.g., Dickin, Dollahite, & Habicht, 2011; Dieleman, Viet Cuong, Vu Anh, & Martineau, 2003; Filho, de Souza, Elias, & Viana, 2016; Lambrou et al., 2010; Lechuga et al., 2016; Phipps-Taylor & Shortell, 2016; Stevens et al., 2012). This notion of what are sometimes referred to as "motives" has historically been associated with need-based theories of motivation (e.g., Emmons & McAdams, 1991; McClelland, 1985), but in this context it has generally been used to refer to aspects of the job that underlie workers' motivation (or lack thereof). The literature on HCW motivation has generally focused on identifying motives that lend themselves to practical intervention. Although most studies on this topic have not approached it through the lens of motivation theory, several studies have utilized various theories to frame their results. One such theory is self-determination theory (Ryan & Deci, 2000), of which a simplified framework has often been used to organize motives (Bhattacharyya et al., 2001; Dickin et al., 2011; Dieleman et al., 2003; Greenspan et al., 2013; Filho et al., 2016). Self-determination theory

distinguishes extrinsic motivation, where behavior is driven by the desire to attain an outcome such as pay, from intrinsic motivation, where behavior is driven by the inherent satisfaction of it. This dichotomous extrinsic/intrinsic categorization offers a convenient means for classifying HCWs' motives based on their drives. Many studies on HCW motives have been conducted over the past several decades, examining workers in different roles and from different parts of the world. Despite the variety in study contexts and respondents, findings have been remarkably consistent. Table 1 presents a summary of HCW motives identified in the literature, organized by extrinsic/intrinsic drive.

The term "motive" is rarely defined in the HCW motivation literature, though Ramirez-Valles (2001) described motives as socially constructed guides for action, rooted in personal experiences and social norms, that provide meaning for the actions they beget. Much of this literature frames motives as aspects of the job that workers view positively (motivators) or negatively (deterrents) from which their motivation arises, consistent with Ramirez-Valles' notion that they guide behavior. This suggests that motives are distinct from motivation but nevertheless comprise a fundamental aspect of it. Whereas motivation can be thought of as the overarching drive or desire to act in a certain way to achieve specific goals or outcomes, a motive is a specific desired state or outcome that arouses and directs motivation. For example, an HCW may feel energized to work hard to care for patients in their role due to motivation, and their motivation may arise from a motive for a desire to help others.

This conceptualization of motives overlaps with what Schaufeli and Bakker (2004) referred to as "job resources," which are aspects of the job that reduce job demands, are functional in achieving work goals, and stimulate personal growth and development. In fact, according to the job demands-resources model (Bakker & Demerouti, 2007), resources can spur both intrinsic and

extrinsic motivation, especially when workers face high job demands (Bakker, 2011). Further, some job characteristics that are regarded as archetypal job resources in the occupational health literature, such as autonomy, learning opportunities, and peer support, are also regarded as motives in the HCW literature (Bhattacharyya et al., 2001; Dickin et al., 2011; Greenspan et al., 2013; Sonnentag, 2015). Despite these similarities, job resources are distinct from motives in that resources are aspects of the job that facilitate work behaviors, whereas motives are aspects of the job that drive work behaviors, even when these aspects are not currently available to workers. To illustrate this, consider the role of learning opportunities as both a resource and a motive. Learning opportunities can function as a resource because workers gain skills that facilitate their completion of job tasks. However, workers can still value learning opportunities and find them motivating, even if their job does not currently offer them. In the context of healthcare work, motives can explain why a person decides to become an HCW and why they persist in this role despite the high demands they face.

Issues in the Healthcare Worker Motivation Literature

Lack of Attention to Motivation Theory

As previously discussed, there has been relatively little consideration of theory in the HCW motivation literature, with some studies even invoking theories that have limited empirical support, such as Herzberg's (1968) motivation-hygiene model (e.g., Dieleman et al., 2003; Mathauer & Imhoff, 2006). These issues may be due, in part, to the complex and somewhat convoluted nature of work motivation theory as many theories have been put forth, each emphasizing distinct psychological processes. For example, self-determination theory (Ryan & Deci, 2000) aligns the motives that underlie motivation on a continuum of self-determination or internalization. Social cognitive theory (Bandura, 1977) highlights the role of self-efficacy in work motivation. Goal-

setting theory (Locke & Latham, 2002) focuses on how goal difficulty and specificity affect motivation. Job characteristics theory (Hackman & Oldham, 1976) is concerned with how aspects of the job influence workers' motivation. Following decades of research, these theories have all received varying degrees of empirical support *and* criticism and no single theory has emerged as dominant (Locke & Latham, 2004). Instead, researchers have started proposing integrated models of work motivation that combine valid aspects of many extant theories (e.g., Locke & Latham, 2004; Wright, 2001).

Such integrated theories have not yet been widely accepted (in their review, Latham and Pinder [2005] concluded that goal setting, social cognitive, and organizational justice theories have dominated the motivation literature). However, these integrated theories provide valuable insights into how different motivational processes may be linked to each other. In Locke and Latham's (2004) model, motives (referred to as "incentives") affect what goals workers choose to strive for as well as their level of self-efficacy for achieving these goals. In Wright's (2001) model, motives underlie workers' choice in employment sector, their job satisfaction, and their overall motivation. In both, motives are presented as an early step in the overarching motivation process that helps to signal which aspects of the job workers care about. However, there is little clarity regarding how motives directly influence work outcomes, and non-integrated models (e.g., Hackman & Oldham, 1976; Ryan & Deci, 2000) generally do not specify how workers' preference for motives influences these outcomes. Despite the healthcare literature's emphasis on identifying motives, research has not yet established a clear relationship between motives and work outcomes. Understanding how motives are related to outcomes, if at all, is an important first step for advancing theory on HCW motivation.

Social identity theory (Tajfel & Turner, 1979) offers one explanation for how motives may

influence work outcomes. Social identity theory posits that an important part of individual identity is derived from the groups one belongs to and that people strive to maintain positive self-identities. Because organizations and work groups are salient social groups that influence workers' sense of identity (Ashforth & Mael, 1989; Hogg & Terry, 2000), the nature of the work can affect how positively or negatively workers evaluate themselves. In the context of social identity theory, motives may signal which aspects of the job workers believe enhance their self-identities, and thus workers may experience more positive work outcomes when aspects of the job are congruent with their motives, and more negative outcomes when they are not. Another explanation is provided by conservation of resources theory (Hobfoll, 1989), which proposes that workers seek to acquire and maintain resources, and that the loss of or threat of loss of resources causes stress. According to conservation of resources theory, resources can be objects (e.g., supplies, tools), personal characteristics (e.g., self-esteem), conditions (e.g., financial security, higher social status), and energies (e.g., money, knowledge). In this context, motives may indicate which resources workers particularly value and the loss of these valued resources may result in greater stress.

Researchers have used both social identity theory and conservation of resources theory, in tandem, to explain how the characteristics of jobs influence work outcomes. For example, prior research has found that people who engage in "dirty work," work widely considered disgusting or degrading, are more likely to turnover, experience higher levels of strain, and report lower job satisfaction (Baran, Rogelberg, Lopina, Allen, Spitzmüller, & Bergman, 2012; Lopina, Rogelberg, & Howell, 2012). In these studies, the authors argued that these outcomes were a result of the stigmatized nature of the work being incompatible with workers' positive self-identity (consistent with social identity theory), as well as the increased strain resulting from the threat this stigma posed to workers' self-esteem (consistent with conservation of resources theory). Certain HCW

roles, such as community health workers, emergency medical services, and nursing home care workers, are both valued for providing critical care services and undervalued as low skill and low wage work, even dirty work by some (Duffy, 2022; Gould, Sawo, & Banerjee, 2021; Kinder, 2020). Consequently, these jobs may bolster self-esteem and positive self-identity due to their prosocial nature but may also undermine them due to the lack of financial security and low social status associated with these jobs. In contrast, HCW roles like physicians and surgeons offer much better financial security and are held in higher regard by society, but also tend to foster environments that emphasize competitiveness, perfectionism, and workaholism (Miller & McGowen, 2000; Thomas & Bigatti, 2020). Setbacks or failures at work may therefore have a much more detrimental impact on self-esteem and identity. These aspects of healthcare work can impact HCW motivation in different ways, and framing motives in the context of social identity theory and conservation of resources theory may help understand why people engage in this type of work.

Lack of Attention to the Influence of Multiple Motives

The wide range of motives reported by HCWs illustrates the complex and multifaceted nature of what drives them. Identifying workers' motives is an important step for managing their motivation; however, there are issues in this body of literature that limit the utility of its findings. One major limitation is that research in this area has not fully explored how multiple motives work together to influence motivation. As discussed above, motives are the desired states or outcomes that spur motivation. Generally, an individual has multiple motives influencing their decision to act at any given time, and this also applies to the work context. A large body of research on volunteer motivation has found that people engage in volunteering activities for multiple reasons (Morrow-Howell & Mui, 1989; Okun, 1994; Van Til, 1988). As evidenced by the long list of

identified motives, this multiplicity certainly exists among HCWs as well. For example, HCWs report that personal reward-based (e.g., pay) and service-based (e.g., helping others) motives are both important to them. Intrinsic motives, such as a desire to help others, are presumed to be more important for healthcare workers than extrinsic rewards, such as financial incentives (Speedling, 1990). However, despite many HCWs reporting that they value the altruistic nature of their work (Greenspan et al., 2013; Phipps-Taylor, & Shortell, 2016; Stevens et al., 2011; Toode, Routasalo, & Suominen, 2011), compensation also often emerges as an important motive (Alfaro-Trujillo et al., 2012; Blau & Chapman, 2016; Perreira, Innis, & Berta, 2016). During the pandemic, HCWs may have been driven by the desire to help for the sake of public good but had to weigh this against concerns for their own health and that of their families (Imai, Fukushima, Miyakoshi, & Matsuishi, 2023; Malesza, 2021; Poon et al., 2022). While HCWs can be driven by several motives, they may differ in terms of the relative importance that they place on each, and thus may differ in how they respond to job demands that affect different aspects of their job. For example, an HCW that is primarily motivated by recognition may be more likely to burnout or turnover if they do not feel valued by their community or by other healthcare workers. In contrast, an HCW primarily motived by their desire to help others may be less likely to burnout or turnover because helping others is a fundamental aspect of their work. Approaches that further our understanding of how these motives are weighed by individual workers are necessary to effectively manage their motivation.

The motivational multiplicity inherent in healthcare work makes HCW motivation especially complex, and this complexity poses a challenge for translating motivation research into practical recommendations. Although a great deal of work has been done to identify specific determinants of HCW motivation, it has largely considered them in isolation and has not accounted for the fact that they are not mutually exclusive. The nature of healthcare work can make multiple

motives salient to workers, and research is needed to better understand the multifaceted nature of HCW motivation. This motivational multiplicity means that attempts to manage HCW performance by addressing one motive may fail if other, equally important, motives are not addressed as well. Further, the wide range of motives identifies in the literature poses a practical challenge as there are too many for healthcare programs or administrators to act on. If the challenges to staffing and retaining HCWs are to be addressed, research on workers' motivation must take on a person-level approach to understand the relative importance of different motives and how these relate to important work-related outcomes.

The Current Study

This study will consider HCW motivation in a way that examines each motive in relation to others. Because an individual may have more than one motive for engaging in healthcare work (e.g., to help patients *and* to receive pay), it is important to understand motivation from a person-centered perspective. In contrast to a variable-centered approach that examines the influence of a set of motives on outcomes of interest (how is satisfaction with pay associated with turnover?), a person-centered approach allows for an examination of how combinations of motives (i.e., motivation profiles) influence outcomes (what motive profiles exist and how is each associated with turnover?). This is an important first step to address the lack of attention to multiple motives in the HCW motivation literature and can help identify which types of HCWs are more likely to be high performers, feel satisfied with their jobs, burn out, and turnover.

Beyond the utility a person-centered approach offers, this type of research also benefits the fields of industrial and organizational psychology and human resource management by shifting the focus of research to the worker. Traditional variable-centered approaches have been criticized for treating people as a set of properties, discarding their individual integrity in favor of defining

them based on their levels of given traits or attributes (Weiss & Rupp, 2011). A consequence of this is that many studies frame their findings in the context of an abstract "average" person that does not actually exist. Studies that link workers possessing mean levels of a trait to outcomes can be helpful for establishing that theoretical relationships between variables exist but may not translate well into practical recommendations. This is because few workers are actually average in terms of such traits and because the mechanisms that guide workers' behavior are far more complex than the set of variables examined in the study. This parallels the "*Homo economicus"* criticism of many economic theories, in which people are assumed to be "rational agents" that seek to optimize their outcomes by utilizing all available information to make decisions (Persky, 1995), despite ample evidence that real people often make irrational decisions (Thaler, 2016). By implementing a person-centered approach, this study can offer actionable findings for practitioners by examining more realistic conceptualizations of workers, which helps address a well-documented gap between researchers and practitioners in industrial and organizational psychology and related fields (Deadrick & Gibson, 2009; Rynes, 2012).

Latent profile analysis (LPA) is one statistical method for conducting person-centered research. LPA identifies latent subtypes (i.e., profiles) in a dataset based on similarity of responses by maximizing within-group homogeneity and between-group heterogeneity (Vermunt & Magidson, 2002). The analysis begins with the assumption that only one latent profile exists, and subsequently estimates two, three, and up to *n* distinct profiles until a model is found that is a statistically good fit to the data. It provides profile-specific means of the observed variables, which allow for the interpretation of each profile. For example, a profile with low means on all motive content areas except career development could be interpreted as a "career-driven profile" and a profile with low means on all except self-esteem and understanding could be interpreted as a

"personal growth-focused profile." As HCWs may differ in terms of how important they regard different motives, LPA can derive profiles that describe different patterns of the relative importance of multiple motives. This makes LPA particularly well suited for examining HCW motivation and understanding how workers' endorsement of multiple motives is related to work outcomes.

Hypotheses and Research Questions

A wide array of motives has been identified in the HCW literature, and as illustrated in Table 1, the content of these motives is quite diverse. Their broad nature suggests that individual workers are unlikely to weigh all motives equally and will therefore vary in terms of what motives they report as valuable to them. Further, motivation research has supported the notion that motivation subtypes exist that are rooted in individuals' preferences for outcomes and environments. Studies on motivation in work and educational contexts propose that there are individual differences in extrinsic and intrinsic motivation orientations that influence attitudes and behaviors (Amabile, Hill, Hennessey, & Tighe, 1994; Harter, 1981; Lepper, Corpus, & Iyengar, 2005) and work on volunteer motivation has identified distinct motivation profiles that predict volunteering frequency utilizing LPA (Geiser, Okun, & Grano, 2014). In light of these findings, it is reasonable to expect that distinct latent motive profiles exist based on HCWs' preferences for motives.

> ***Hypothesis 1:*** *Distinct latent profiles will be identified on the basis of HCWs' preferences for motives.*

Once the latent profiles underlying the data are identified, I will examine the extent to which each profile is characterized primarily by intrinsic, extrinsic, or a combination of motives. As discussed earlier, motives have generally been categorized as either extrinsic or intrinsic in the

HCW literature, but it is not clear whether motivation profiles will align neatly along this dichotomous split. The overjustification effect proposes that extrinsic motivation has a detrimental effect on intrinsic motivation (Deci, 1971; Deci, Koestner, & Ryan, 1999), suggesting that motive profiles consisting of extrinsic motives, such as pay and career enhancement, will not include intrinsic motives, such as community service. However, the overjustification effect itself has been called into question and subsequent research has found the negative influence of extrinsic rewards on intrinsic motivation to be marginal (Akin-Little & Little, 2004; Cameron, Banko, & Pierce, 2001; Cameron & Pierce, 1994). In contrast to the overjustification effect, Amabile (1993) argued that, under certain circumstances, extrinsic motivation can combine synergistically with intrinsic motivation to enhance it. Although few studies have applied LPA to work motivation, Geiser and his colleagues (2014) identified motivation profiles comprised of primarily extrinsic, intrinsic, and mixed motives among student volunteers. Additionally, studies on HCW motives have demonstrated that workers do, in fact, report both extrinsic and intrinsic motives as important (Dickin et al., 2011; Lechuga et al., 2016; Phipps-Taylor & Shortell, 2016). This information supports the existence of mixed-motive profiles, though it does not provide definitive conclusions about what specific preferences for motives will define profiles. Understanding the content of latent motivation profiles is important as it can help explain differential profile-outcome relationships.

Research Question 1: *How will latent profiles differ in terms of the extrinsic and intrinsic motives that characterize them?*

A substantial body of research has examined the relationship between work motivation and various work outcomes, though few studies, if any, have investigated how latent motive profiles are associated with such outcomes. It is not clear what the specific content of HCW motive profiles

will look like, which precludes me from making specific hypotheses about how profiles will be related to work outcomes. In one of the few examples of LPA applied to motivation, volunteer motivation profiles were found to be differentially associated with volunteering frequency based on their extrinsic/intrinsic makeup (Geiser et al., 2014). If HCW motive profiles emerge that differ substantively from one another in terms of their extrinsic/intrinsic nature, it follows that they may be differentially associated with work outcomes.

Research Question 2: *Will distinct latent profiles be differentially associated with work outcomes?*

However, it is reasonable to expect that some profiles may be comprised primarily of either extrinsic or intrinsic motives. Provided such profiles emerge, their relationships with work outcomes can be inferred based on insights from research that has looked at work motivation through the lens of self-determination theory. Extrinsic motivation arises from influences outside of the individual, with the intent of fulfilling instrumental purposes. This externality has been interpreted by researchers to mean that workers do not inherently enjoy their work (Gagné & Deci, 2005; Tremblay, Blanchard, Taylor, Pelletier, & Villeneuve, 2009), which has consequences for workers with extrinsic orientations. Studies have linked extrinsic motivation to emotional exhaustion and physical and mental health problems (Blais, Lachance, Vallerand, Brière, & Riddle, 1993; Houkes, Janssen, de Jonge, & Bakker, 2003), and have found that extrinsic motivation at work is negatively associated with citizenship behaviors and positively associated with workplace deviance (Tremblay et al., 2009). Although these findings are not definitive, they suggest that latent motive profiles may be differentially associated with work outcomes. In line with prior research on the correlates of extrinsic motivation, if the analysis for Research Question 1 reveals latent motive profiles primarily defined by extrinsic motives, I predict that these profiles

will be associated with greater burnout and turnover, and lower performance and job satisfaction.

Hypothesis 2a: *Latent profiles characterized primarily by endorsement of extrinsic motives will be positively associated with burnout.*

Hypothesis 2b: *Latent profiles characterized primarily by endorsement of extrinsic motives will be positively associated with turnover intention.*

Hypothesis 2c: *Latent profiles characterized primarily by endorsement of extrinsic motives will be negatively associated with job performance.*

Hypothesis 2d: *Latent profiles characterized primarily by endorsement of extrinsic motives will be negatively associated with job satisfaction.*

In contrast, intrinsic motivation arises from within the individual, driven by personal meaning or inherent satisfaction. This innate interest means that workers genuinely care about the work they do, which leads to outcomes that are more positive for those with intrinsic orientations. Intrinsic motivation has been associated with increased citizenship behaviors (Gagné & Deci, 2005; Tremblay et al., 2009), improved affect and job satisfaction (Deci, Connell, & Ryan, 1989), and higher organizational commitment (Tremblay et al., 2009). Negative relationships have been observed between intrinsic motivation and workplace deviance (Tremblay et al., 2009), and burnout and turnover intentions (Houkes, Janssen, de Jonge, & Nijhuis, 2001). Consistent with these findings, if the analysis for Research Question 1 reveals latent motive profiles primarily characterized by intrinsic motives, I predict that these profiles will be associated with lower burnout and turnover, and higher performance and job satisfaction.

Hypothesis 3a: *Latent profiles characterized primarily by endorsement of intrinsic motives will be negatively associated with burnout.*

Hypothesis 3b: *Latent profiles characterized primarily by endorsement of intrinsic motives*

will be negatively associated with turnover intention.

Hypothesis 3c: *Latent profiles characterized primarily by endorsement of intrinsic motives will be positively associated with job performance.*

Hypothesis 3d: *Latent profiles characterized primarily by endorsement of intrinsic motives will be positively associated with job satisfaction.*

Healthcare work is inherently prosocial in nature. Healthcare roles largely involve caring for others, helping to alleviate suffering, and supporting patients as they navigate life-threatening conditions. Therefore, it is not surprising that HCWs are generally viewed positively, even nobly, by society (Blau, Sela, & Grinberg, 2023; Cox, 2020). As previously discussed, one's work plays an important role in shaping their self-identity (Ashforth & Mael, 1989; Hogg & Terry, 2000) so engaging in this type of work may spur a meaning-making process that extends beyond work and bestows a sense of meaning in life (Maffoni, Zanatta, Setti, Giorgi, Velutti, & Giardini, 2021). Meaning in life encompasses having a sense of purpose, significance, and coherence for oneself (King, Hicks, Krull, & Del Gaiso, 2006). Throughout the pandemic, the HCW's role on the frontline in combatting the virus may have led to a stronger sense of purpose and significance. Among HCWs, this has been associated with lower psychological distress, burnout, and negative affect and higher positive affect (Barnett, Moore, & Garza, 2018), a positive outlook on life (Tsai, Chen, Yeh, Hu, Tseng, & Chen, 2018), and it may even help buffer against depression (Güngör & Uçman, 2019). When individuals derive meaning or purpose from an activity, such as their role as an HCW, they are more likely to find it inherently satisfying as it aligns with their values or larger life goals. Thus, I predict that profiles primarily characterized by extrinsic motives should be associated with lower meaning in life, and profiles primarily characterized by intrinsic motives should be associated with higher meaning in life.

Hypothesis 4a: *Latent profiles characterized primarily by endorsement of extrinsic motives will be negatively associated with meaning in life.*

Hypothesis 4b: *Latent profiles characterized primarily by endorsement of intrinsic motives will be positively associated with meaning in life.*

CHAPTER 2: METHODS

Participants

To examine motives for working in the healthcare field, I recruited participants from Prolific (*www.prolific.co*). Prolific is an online platform where participants can complete studies posted by researchers for monetary compensation. Such online platforms exploded in popularity over the past two decades among behavioral researchers due to their ease of use, low costs, and ready access to a large pool of participants (Buhrmester, Talaifar, & Gosling, 2018; Palan & Schitter, 2018). Prolific was developed as an alternative to Amazon's Mechanical Turk (MTurk), the first and most widely used such platform, that specifically caters to researchers. Specific differences that make Prolific better suited to research are that participants are completely anonymous to researchers and identified only through unique Prolific ID numbers, repeat participation is disallowed by default, and prescreening criteria exist that can be used to filter participants based on their responses to a mandatory background questionnaire. Prescreen criteria are helpful for getting a sense of how many active participants are on the platform who meet a study's requirements before any data is collected. Recent studies examining the viability of Prolific for research have found its data quality to be higher than that of other commonly used data sources (e.g., MTurk, undergraduate students, Qualtrics panels) and that it offers access to demographically diverse participants with work experience (Douglas, Ewell, & Brauer, 2023; Peer, Rothschild, Gordon, Evernden, & Damer, 2022). In fact, several studies have noted an alarming decline in the quality of data collected from MTurk samples over the past decade (Chmielewski & Kucker, 2020; Peer et al., 2022), underscoring the need for high-quality alternatives such as Prolific.

A total of 373 participants (69.19% female, 28.38% male, 2.42% non-binary) responded to the survey and were retained following data cleaning procedures (described in detail below). Participants' ages ranged from 18 to 69 (M = 34.41, SD = 10.80). 74.03% of the sample self-identified as White or Caucasian (Non-Hispanic), 7.48% as Asian or Pacific Islander, 7.26% as Hispanic or Latino, 6.71% as Black or African-American, 3.74% as Multiracial or Biracial, 0.55% as Native American or Alaskan Native, and 0.22% as Other. The majority of participants had a 4-year degree (42.13%), worked 40-49 hours per week (50.38%), earned $30,000 - $39,999 annually (16.94%), and worked in the Health Care and Social Assistance industry (90.86%). Additionally, 83.11% of participants reported that they spent at least 70% of their time interacting directly with patients/clients. Complete breakdowns for industry, recency of HCW role, percent of time spent interacting with patients, employment type, hours worked per week, income, and education are presented in Table 2. HCWs who reported interacting with patients for 30% or more of their time, working in a HCW role (determined by looking at their self-reported industry and job title), and having held their HCW role within the past three years were invited to participate in this study. Only HCWs who lived in the U.S. and were age 18 or older were allowed to participate.

Procedure

I posted the study on Prolific's website to advertise to potential participants. The study included three surveys: two screening surveys that assessed whether participants were eligible to participate in the main survey, and a main survey that included the study's variables of interest. Participation in the screening surveys was restricted using Prolific's prescreen criteria. The first screening survey was restricted to participants who reported working in the "emergency service," "health care and social assistance," "medical/healthcare," or "veterinary" industries and in a "customer-facing" role. The second screening survey was restricted to participants who reported

past work experience in the "medicine" employment sector and working in a "customer-facing" role. Leveraging two screening surveys allowed me to maximize the number of potential participants for the main survey by including those who recently changed jobs away from healthcare. The screening survey posts on Prolific described the aims of the study, participation requirements, compensation, and expected completion time. Participants were paid $0.14 for completing the advertised 1-minute survey, which came out to $7.04 per hour based on the mean completion time of 1 minute, 19 seconds. Because of the wide variety of job titles applicable to HCWs, the screening surveys provided a definition for this role along with a list of sample job titles (emergency medical service personnel, nursing assistants, therapists, etc.), to help respondents know if they belonged to the target population. The surveys asked participants to report the industry in which they worked their HCW role, how recently they held this role, what percentage of time they spent interacting with patients, and their job title.

The main survey's Prolific posting also described the aims of the study, participation requirements, compensation, and expected completion time. Participants were paid $2.05 for completing the advertised 15-minute survey, which came out to $13.67 per hour based on the mean completion time of 9 minutes. Participation was restricted to only those added to a custom allow list who met the study's inclusion criteria after completing either screening survey. The survey consisted of seven sections that each included one of the study's measures. These sections were randomly presented to avoid ordering effects with the exception of the work- and client-related burnout measures, which were presented one after the other. I presented these together because their conceptual similarity makes it cognitively much easier for participants to recall this information and respond accurately to both sets of items. The final part of the survey presented demographic questions as well as questions from the screening survey to corroborate participants'

HCW status.

Measures

The following sections detail the measures I used to assess the constructs of interest for this study. Each section explains my rationale for using these specific scales, scale internal consistency reliability, number of items, and response scales. Items for all measures are presented in the corresponding sections of the Appendix.

Burnout

To assess job burnout, I used the work-related and client-related burnout subscales from the Copenhagen Burnout Inventory (CBI; Kristensen, Borritz, Villadsen, & Christensen, 2005). I opted to use this measure instead of the more widely used Maslach Burnout Inventory (Maslach & Jackson, 1981) because of concerns raised about the latter. Kristensen and his colleagues (2005) criticized the Maslach Burnout Inventory for its unclear conceptualization of burnout, specifically how the instrument provides three independent scores for the unitary construct, and how the Maslach Burnout Inventory's definition of burnout frames it as a mixture of an individual state, a coping mechanism, and a work outcome. The CBI's work-related burnout subscale includes seven items ($\alpha = .87$) that assess the degree of physical and psychological fatigue and exhaustion that is perceived by the person as related to their work. The client-related burnout subscale includes six items ($\alpha = .85$) that assess the degree of physical and psychological fatigue and exhaustion that is perceived by the person as related to their work with clients. All items were rated on five-point scales for intensity (1 = a very low degree; 10 = a very high degree). Burnout scale items are presented in Appendix A.

Extrinsic and Intrinsic Work Motivation

To assess extrinsic and intrinsic work motivation, I used the Work Extrinsic and Intrinsic

Motivation Scale (Tremblay et al., 2009). This scale assesses motivation using five dimensions that represent a continuum across extrinsic and intrinsic motivation. From the low end to the high, these dimensions are amotivation (α = .64), external regulation (α = .77), introjected regulation (α = .70), identified regulation (α = .67), integrated regulation (α = .83), and intrinsic motivation (α = .80). Items were rated on a five-point scale (1 = strongly disagree; 5 = strongly agree). Intrinsic and extrinsic work motivation items are presented in Appendix B.

Healthcare Worker Motives

In order to identify latent motive profiles among HCWs, a measure is needed that captures workers' self-reported preferences for motives specific to the healthcare work context. No such measure currently exists, so it was necessary for me to create an entirely new one. I used the motives in Table 1 as a basis for individual items and began by reviewing the appropriateness of each motive's content. Motives with content that would more aptly be considered a job resource (e.g., peer support, inadequate supervision and feedback) or a work outcome (e.g., high job demands, personal & family issues, work interfering with personal life) were excluded from the measure. Motives categorized as deterrents were also excluded because they were simply negatively worded motivators, and thus their content was subsumed by the latter (e.g., "lack of or inadequate pay" reflects the same content as "financial rewards [i.e., pay]"). This resulted in a list of 29 motives used for item generation.

I used a comparable motivation measure, the Volunteer Motivation Inventory (Esmond & Dunlop, 2004), as a foundation for my own measure's items and dimensions. The Volunteer Motivation Inventory assesses the "motivational drives" of volunteers using 44 items across 10 dimensions. As a measure intended to assess the various reasons why people volunteer, it was particularly relevant for this research. I began by mapping each HCW motive onto the Volunteer

Motivation Inventory dimensions to examine how well HCW motives aligned with volunteer motives, and then adapted volunteer motivation items to reflect HCW motive content. When no analogous items existed, I wrote new items. The final HCW motive measure included 29 items across eight groupings. Items were rated on a five-point scale (1 = strongly disagree; 5 = strongly agree). HCW motive items are presented in Appendix C.

The eight groupings that the HCW motive measure borrowed from the Volunteer Motivation Inventory's dimensions included career development, reactivity, reciprocity, recognition, self-esteem, social interaction, understanding, and values. I used definitions originally proposed by Esmond and Dunlop (2004) for each dimension but modified these to better reflect the nature of healthcare work. Career development is the motive to work for the prospect of acquiring skills, experience, and professional connections that will help one obtain better employment later on. Reactivity is the motive to work to help address or heal personal issues one has experienced. Reciprocity is the motive to work to obtain valued rewards or outcomes, such as income or health insurance. Recognition is the motive to work to be recognized and held in high esteem by one's peers. Self-esteem is the motive to work out of a desire to increase one's own feelings of self-worth and self-esteem. Social interaction is the motive to work for the sake of social connection and the enjoyment of interacting with people. Understanding is the motive to work out of a desire to learn more about others and the world. Values is the motive to work due to firmly held personal beliefs regarding the importance of helping others. Although this measure has a very high number of groupings relative to the number of items, it is important to note that these groupings and their definitions are primarily intended to help interpret the latent profiles that emerge. Because this is a person-centered analysis, my focus is on interpreting the content of latent profiles, and not on interpreting the factor structure of this measure or evaluating how individual

groupings relate to outcomes.

Job Performance

To assess job performance, I used the global work performance rating scale from the World Health Organization's Health and Work Performance Questionnaire (Kessler, Barber, Beck, Berglund, Cleary, McKenas, … Wang, 2003). This scale assesses self-reported global job performance using a single item ("How would you rate your overall job performance on the days you worked during the past 4 weeks [28 days]?"), rated on a 10-point scale (1 = worst performance; 5 = top performance). Although it is generally desirable to collect performance data from more objective sources such as supervisor or peer ratings, a self-report measure is a reasonable alternative when organizational data is not available. Because this study recruited participants anonymously from many different organizations and roles, gathering organizational performance records was not feasible.

To improve the reliability of this measure, the Health and Work Performance Questionnaire makes use of decomposition (Means & Loftus, 1991) and internal anchoring (Sudman, Bradburn, & Schwartz, 1996). Respondents may not be able to accurately report their overall job performance due to the complexity of the question, but decomposition can help improve response accuracy by asking respondents to actively retrieve relevant work-related information via component questions. This questionnaire includes seven preliminary questions to spur decomposition, each rated on a five-point scale (1 = none of the time; 5 = all of the time). Respondents may also differ in how they use the rating scale even when scale anchors are provided, for example, average-performing workers may not necessarily use the midpoint of the rating scale to describe their performance. Internal anchoring can help account for this issue. The questionnaire has respondents generate their own internal anchors by asking them to rate the performance for the average worker

in their job ("On a scale from 0 to 10 where 0 is the worst job performance anyone could have at your job and 10 is the performance of a top worker, how would you rate the usual performance of most workers in a job similar to yours?") and for their own usual performance ("Using the same 0-to-10 scale, how would you rate your usual job performance over the past year or two?"). Decomposition items, internal anchor items, and the global job performance assessment item are presented in Appendix D.

Job Satisfaction

To assess job satisfaction, I used a scale adapted from Cammann and colleagues (1979). This scale assesses one's overall satisfaction with his or her job using three items ($\alpha = .88$). Items were rated on a five-point scale (1 = strongly disagree; 5 = strongly agree). Job satisfaction items are presented in Appendix E.

Meaning in Life

To assess meaning in life, I used the short form version of Steger and Samman's (2002) Meaning in Life Questionnaire. This scale assesses search for meaning using three items ($\alpha = .88$). Items were rated on a five-point scale (1 = strongly disagree; 5 = strongly agree). Meaning in life items are presented in Appendix F.

Turnover Intention

Turnover intention is a conscious and deliberate willfulness to leave the organization (Tett & Meyer, 1993). It is the single best predictor of actual turnover (Griffeth et al., 2000), and thus is often used as a proxy when organizational turnover data is not available. It also allows for a reasonable assessment of turnover via self-report. To assess turnover intention, I used a three-item scale ($\alpha = .83$) developed to measure overall turnover propensity (Hellgren, Sjoberg, & Sverke, 1997). This scale's items were taken from other propensity-to-leave scales (Cammann, Fichman,

Jenkins, & Klesh, 1979; Lyons, 1971) and modified to be statements instead of questions. Items were rated on a five-point scale (1 = strongly disagree; 5 = strongly agree). Turnover intention items are presented in Appendix G.

Data Quality

Because I collected data from a single source and respondents completed the survey in an unproctored setting, it was necessary to take steps to ensure quality of the data. To avoid potential ordering effects in the survey, I organized scale items into survey blocks and randomized the order in which they were presented as well as the presentation of items within each block. To avoid any potential stereotype bias, I asked demographic questions at the end of the survey. Additionally, I implemented several procedures to screen for inattentive responding in line with recommendations from Meade and Craig (2012) and Huang, Curran, Keeney, Poposki, and DeShon (2011). I included instructed response items (e.g., "Respond with strongly agree for this item.") randomly throughout the survey, and discarded data from participants who failed too many attention check items. I also examined the response patterns of scales with high internal consistency reliability, as inconsistent responding may signal a lack of attention. Finally, I examined completion time, completion percentage, and variance across all items for each participant. Very fast completion times suggest that a participant did not thoughtfully answer every item, and very low variances can flag instances where respondents repeatedly used the same response option. Currently, there are no widely accepted cutoffs for these screening procedures, and thresholds must be set using one's best judgement, informed by other participants' responses and pilot testing. For this study, I discarded data from participants who failed two or more of four attention check items (ten respondents), completed the survey 1.5 standard deviations below the mean completion time (three minutes and 30 seconds; ten respondents), and completed less than 80% of the survey (seven

respondents). Although I did not have a set cutoff for response invariance or scale reliability, I flagged responses with unusual patterns for further examination and addressed them on a case-by-case basis. A total of 18 respondents were excluded from analyses after implementing these cleaning procedures.

CHAPTER 3: RESULTS

Psychometric Evaluation

Prior to conducting LPA, I assessed the psychometric properties of all variables. This psychometric evaluation helped ensure that scales for each outcome reliably measured their intended constructs. It also helped assess the extent to which profile indicators were correlated or had an underlying latent structure, which would inform whether LPA was the most appropriate statistical approach to examine the data. I evaluated each measure by examining descriptive statistics and scale correlations, as well as by conducting confirmatory factor analyses (CFA) to evaluate the factor structure of the measures. I examined model fit statistics, item factor loadings, and item discrepancies. I determined CFA model fit using chi-square tests (χ^2), the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA), and the standardized root-mean-square residual (SRMR). For chi-square tests, small and non-significant values indicate good model fit, though this statistic is sensitive to sample size and should be interpreted with caution. CFI and TLI values above .95, RMSEA values below .06, and SRMR values below .08 all indicate good fit (Hu & Bentler, 1999). Factor loadings represent the extent to which an item is associated with its underlying factor and loadings of .30 or higher indicate that the item is representative of its factor. Inter-item discrepancies, also referred to as residual correlations, represent the difference between the observed correlation matrix and the predicted correlation matrix. Those with absolute values beyond .10 can be indicative of problems such as redundancy (McDonald, 1999).

Descriptive statistics for all scales are presented in Table 3. Scale correlations are presented in Table 4. I conducted CFAs using the Lavaan package (version 0.6.12; Lavaan Project, 2023) in

R (version 4.2.1; R Core Team, 2015). All CFAs allowed the factors to correlate. I examined outcome scale items separately from HCW motive items because the outcomes scales were created with the intention of assessing latent variables, whereas the HCW motive predictors were not intended to function as latent variables in the structural models. For the outcome analyses, I began by specifying an 11-factor model to account for each scale and dimension in the survey. The 11-factor model's results indicated acceptable model fit (χ^2 = 1443.83, *df* = 685, $p < .001$, CFI = .93, TLI = .92, RMSEA = .05, SRMR = .06). Item factor loadings demonstrated that each item was representative of its underlying dimension (Table 5). Further, all scales and scale dimensions demonstrated acceptable internal consistency reliability (Cronbach's alpha range: .72 - .94; see Table 4 for all scale alphas). Taken together, these results indicated that the intended 11-factor model was an acceptable representation of the data and that I could proceed with further analyses without needing to revise or discard items from outcome scales.

For the HCW motives measure, I conducted CFAs that included only these 29 items, specifying an 8-factor model to account for how motives were conceptually organized. The 8-factor model's results indicated poor model fit (χ^2 = 675.36, *df* = 349, $p < .001$, CFI = .85, TLI = .82, RMSEA = .08, SRMR = .08). A revised model that removed items with the most problematic residual correlations (items 2, 21, 25, and 29) also indicated poor fit (χ^2 = 454.93, *df* = 239, $p <$ .001, CFI = .88, TLI = .85, RMSEA = .07, SRMR = .07). However, this poor model fit may have been due to the proposed 8-factor structure being an inappropriate representation of the data, which is possible given that this measure was not developed with dimensionality in mind. In order to check for alternative models that may better fit the data, I conducted exploratory factor analyses (EFA). I ran EFAs using the Psych package (version 2.2.5; Revelle, 2020) in R (version 4.2.1; R Core Team, 2015). All EFAs were estimated using a principal factor solution to account for non-

normally distributed data in the motive items. I ran a follow-up parallel analysis to confirm the number of identified factors. This approach compares observed eigenvalues extracted from the correlation matrix to those from uncorrelated, randomly generated data and is considered one of the more accurate methods for determining how many factors to retain (Horn, 1965; Zwick & Velicer, 1986). The EFA extracted six eigenvalues greater than one and the parallel analysis indicated that all six were meaningful (eigenvalues: 9.59, 2.66, 1.63, 1.44, 1.27, 1.17). However, the identified factors were not conceptually meaningful, and several high cross-loadings were present. Collectively, these results corroborated that there was no clear underlying latent structure to the HCW motives measure, as was intended. However, the correlation matrix of motives and residual correlations from the CFA both suggested that several predictors were highly correlated, which can be problematic for identifying latent profiles.

Item Parceling

To address the issue of correlated HCW motive items, I reduced the total number of predictors using item parceling. Item parceling is a technique for reducing the number of observed variables by aggregating individual items into smaller subsets, or parcels (Matsunaga, 2008). Parceling can provide psychometric and model-related benefits by improving communality across indicators, increasing the common-to-unique ratio for each indicator, and reducing random error (Little, Cunningham, Shahar, & Widaman, 2002). Structural equation model solutions that utilize parceling provide more stable estimates and fit the data better compared to item-based models (Bandalos, 2002). One notable criticism of parceling is that the same mechanism that maximizes communality across items can obscure the factor structure of multidimensional measures (Bandalos, 2002; Little et al., 2002). However, because this HCW motives measure was not designed to be multidimensional measure of motives and because the factor analyses did not

identify a clear latent structure, this was not a concern for this study.

I parceled items using the correlational algorithm method (Matsunaga, 2008). In this algorithm, bivariate correlations are first calculated for all items. The two items with the highest zero-order correlation are paired to form the first parcel, then the two items with the second highest correlation are paired to form the second parcel, and this process is repeated until each parcel contains two items. Correlations are then calculated once again, this time between the newly created parcels and remaining items, and items are added to the parcels with which they have the highest correlations. This process is repeated until there are no items remaining. As I worked through the parceling process, I was mindful of the conceptual relatedness of items as well as their pattern of relationships with other items. I discarded items that demonstrated high correlations with many other items across content domains, that had high residual correlations in the CFA models, and that did not correlate highly with any other items. I also avoided assigning items to parcels when their content did not align. This produced seven parcels from 19 items (Table 6). These parcels preserved several of the categories from the original measure, including altruism, career development, personal needs, reciprocity, recognition, self-esteem, and social interaction motives. These parcels served as the indicators for the LPA models. Parcel correlations with outcome scales are presented in Table 4.

Latent Profile Analysis

The first goal of this study was to identify distinct profiles of HCW motives. I derived motive profiles using LPA from item parcel scores for HCW motives. I tested models with increasing numbers of profiles in Mplus (version 8; Muthén & Muthén, 2017). Starting with a model that includes all motives on a single profile, I tested subsequent models that added profiles, one at a time, and evaluated their fit until one that demonstrated appropriate fit emerged. Missing

data were handled using maximum likelihood estimation, which is regarded as best practice (Schafer & Graham, 2002). Model fit was assessed using four criteria based on recommendations from Muthén and Muthén (2000) and Nylund, Asparouhov, and Muthén (2007). This includes the Lo-Mendell-Rubin likelihood ratio test of model fit (LMR; Lo, Mendell, & Rubin, 2001), the Bayesian Information Criterion (BIC; Schwarz, 1978), entropy values (Celeux & Soromenho, 1996), and average latent profile probabilities. The LMR compares a model with k classes to a model with k – 1 classes and statistically tests the probability that the data have been generated by the model with k – 1 classes. A significant p-value for the LMR suggests that the k-class model is a better fit to the data than the model with k – 1 classes. The BIC maximizes the likelihood ratio statistic while rewarding parsimony. Lower BIC values indicate better model fit, so the model with the lowest value is generally preferred (Muthén & Muthén, 2000). Entropy values provide a measure of model classification quality. Entropy values range from 0 to 1, with higher values indicating better classification quality (Celeux & Soromenho, 1996), and values above .80 are considered adequate (Jung & Wickrama, 2008). Average latent profile probabilities indicate the most likely latent profile membership by latent profile discrimination. Values close to 1 in the primary diagonal and close to 0 in the off-diagonal represent good fit, and values close to 0.50 indicate that individuals in a particular group would fit equally well in another group. These values provide an index of how likely the individuals within a latent profile belong in that class. Determination of the final model was based on these fit criteria, parsimony, and model interpretability.

The second goal of this study was to examine how identified latent profiles are associated with differences in burnout, job performance, job satisfaction, meaning in life, and turnover intention. I used the BCH method (Bakk & Vermunt, 2016) to determine whether profiles differed

with respect to these work-related variables. This method accounts for the probabilistic nature of class membership and allows for global and pairwise comparisons to be made using Wald tests (Clark & Muthén, 2009). Wald tests use chi-squares to compare latent groups with a posterior probability-based multiple imputation strategy (Clark & Muthén, 2009). These tests are conducted simultaneously with LPA and allow consideration of the probabilistic class membership of participants to control error. This approach allowed me to compare expected values of work outcomes between different pairs of profiles to determine if differences exist.

Sample Size and Statistical Power

At present, there are no guidelines for determining the number of participants needed to achieve sufficient statistical power for LPA. However, recent work has used simulation studies to examine the effect of various factors, including sample size, on power to detect the correct number of latent profiles in a dataset. In general, the minimum number of participants required for LPA depends on the distance (degree of separation) between profiles, distance being analogous to measures of effect size in multivariate analyses (Tein, Coxe, & Cham, 2013). It can be difficult to detect the correct number of latent profiles when inter-profile distance is small to medium (Cohen's $d \leq .50$) and better results are achieved when distances are large ($d = .80$) or very large ($d = 1.50$; Tein et al., 2013). If the inter-class distance is not too small, it is possible to achieve reasonable results with within-profile sample sizes of 75 (Lubke & Neal, 2006). If the distance is very large, adequate results can be achieved with as few as 25 participants within profiles (Lubke & Neal, 2006). Further, when the inter-profile distance is large, true profile number and number of indicators are also important considerations alongside sample size: statistical power is higher when the number of true profiles is lower, and when the number of indicators for profiles is higher (Tein et al., 2013). These findings highlight the importance of inter-class distance for conducting

LPA, and identify several factors that must be considered when determining statistical power.

As previously discussed, I expected at least one extrinsic profile and one intrinsic profile to identify, but I did not expect many more based on the conceptual relatedness of motives. As discussed below, the number of true profiles in this study was relatively small, which improves statistical power. Additionally, a small number of true profiles means that there will be more indicators (items) for each profile, which also improves power. The effect of sample size on power is minimal relative to these other factors (Tein et al., 2013) and therefore a sample of at least 300 respondents would be sufficient to accurately identify latent profiles in this study.

Overall LPA Model Fit

I tested 1- through 4-profile models of HCW motives in a stepwise process, and the 3-profile solution demonstrated the best overall model fit (Table 7). Although the 3-profile model did not have the lowest BIC, it did have the highest pattern of average latent class probabilities and the highest entropy (tied with the 2-class model and excluding the 1-class model, which always has an entropy value of 1). Additionally, the LMR tests indicated that the 3-profile model was an improvement over the 2-profile model, but that the 4-profile model was not an improvement over the 3-profile model. The breakdown of membership for each profile was also reasonable, with 5.09% of the sample most likely to belong to profile 1, 49.06% to profile 2, and 45.84% to profile 3. Thus, I retained the 3-profile model to evaluate relationships with work outcomes. These analyses successfully identified distinct profiles based on HCWs' preferences for motives, thereby supporting Hypothesis 1.

Description of Best-Fitting LPA Models

Table 8 presents estimated means for each profile on all the indicators used to derive the latent profiles (see Figure 1 for a graphical representation). Client- and work-related burnout, job

satisfaction, meaning in life, turnover intention, job performance, and the extrinsic and intrinsic work motivation dimensions were treated as auxiliary variables in this analysis and therefore were not included as indicators of the latent profiles. Profile 1 was characterized by high endorsement of only the reciprocity motive and low endorsement of all other motives. This "incentive-driven" profile describes HCWs who are motivated only by the tangible incentives they receive and are otherwise indifferent toward other aspects of their jobs. For this group, healthcare work may be regarded simply as a means to make money or gain access to valued benefits like health insurance. The LPA model estimated that 19 respondents belonged to this profile. Profile 2 was characterized by high endorsement of altruism and self-esteem motives and moderate endorsement of all other motives. This "altruism-driven" profile describes HCWs who are primarily motivated by a desire to help others and make a difference in the world. This group is likely driven by a sense of empathy and social responsibility. The LPA model estimated that 183 respondents belonged to this profile. Profile 3 was characterized by high endorsement of altruism, career development, self-esteem, and social interaction motives, and moderate endorsement of personal needs, reciprocity, and recognition motives. This "broadly-driven" profile describes HCWs who are generally highly motivated albeit mainly by non-incentive motives. This group likely enjoys their work and feels a high level of work engagement. The LPA model estimated that 171 respondents belonged to this profile.

BCH Tests of Equality: Extrinsic and Intrinsic Characterization

I used BCH tests to determine if there were differences in extrinsic and intrinsic work motivation across latent profiles, which helped clarify whether each profile was characterized by extrinsic or intrinsic motives (Figure 2). According to its authors, only the intrinsic motivation dimension of the work extrinsic and intrinsic motivation scale captures purely intrinsic motivation.

The other dimensions (except amotivation) become increasingly externalized (i.e., less intrinsic and more extrinsic) from integrated regulation to external regulation. However, because integrated regulation is the most autonomous form of extrinsic motivation that only occurs when regulations are aligned with one's other values, it is closely aligned with intrinsic motivation (Deci & Ryan, 2000). Thus, I considered integrated regulation as part of intrinsic motivation for the sake of interpretation. In this study, I regarded the intrinsic motivation and integrated regulation dimensions to be components of intrinsic motivation and the identified regulation, introjected regulation, and external regulation dimensions to be components of extrinsic motivation. Amotivation represented a lack of motivation.

Omnibus tests were significant for intrinsic motivation (χ^2 = 166.15, *df* = 2, p < .001, Cramer's V = 3.53), integrated regulation (χ^2 = 230.84, df = 2, p < .001, Cramer's V = 4.16), identified regulation (χ^2 = 113.59, *df* = 2, p < .001, Cramer's V = 2.92), introjected regulation (χ^2 = 122.73, *df* = 2, p < .001, Cramer's V = 3.03), and external regulation (χ^2 = 16.86, *df* = 2, p < .001, Cramer's V = 1.12), but not for amotivation (χ^2 = 5.58, *df* = 2, p < .001, Cramer's V = 0.65). Pairwise comparisons for these outcomes between profiles are presented in Table 9. The incentive-driven profile displayed a high score for external regulation, a moderate score for amotivation, and low scores across the remaining motivation dimensions. This profile reported lower intrinsic motivation, integrated regulation, identified regulation, and introjected regulation as well as higher external regulation than the other profiles. It scored higher in amotivation than the broadly-driven profile but did not differ compared to the altruism-driven profile. Given that this profile was highest on the most externalized component of motivation, I interpreted the incentive-driven profile to be characterized by extrinsic motives to a higher degree than the other profiles.

The altruism-driven profile displayed a high score for external regulation, a low score for

amotivation, and moderate scores across the remaining motivation dimensions. Compared to the incentive-driven profile, this profile reported higher scores for all dimensions except for external regulation, on which it was lower, and amotivation, on which they did not differ. Compared to the broadly-driven profile, this profile reported lower scores for all dimensions except for amotivation, on which they did not differ. The within-profile pattern of results suggests that the altruism-driven profile was characterized by a mixture of motives, though the across-profile results suggest that it is characterized by intrinsic motives to a higher degree than the incentive-driven profile but to a lower degree than the broadly-driven profile.

The broadly-driven profile displayed high scores across all motivation dimensions except amotivation, which was low. This profile reported higher intrinsic motivation, integrated regulation, identified regulation, and introjected regulation than the other profiles. It scored higher on external regulation than the altruism-driven profile but lower than the incentive-driven profile. It also scored lower on amotivation than the incentive-driven profile but did not differ compared to the altruism-driven profile. Similar to the altruism-driven profile, the broadly-driven profile was characterized by a mixture of extrinsic and intrinsic motives. This profile was characterized by intrinsic motives to a higher degree than the other profiles, but also by extrinsic motives to a higher degree than the altruism-driven profile and to a lower degree than the incentive-driven profile. These findings demonstrated that latent profiles did in fact differ in terms of their extrinsic and intrinsic motive composition, addressing Research Question 1.

BCH Tests of Equality: Performance Outcomes

I also used BCH tests to determine if there were differences in client-related burnout, work-related burnout, job satisfaction, meaning in life, turnover intention, and work performance across latent profiles (Figure 3). Omnibus tests were significant for client-related burnout ($\chi^2 = 54.00$, *df*

= 2, p < .001, Cramer's V = 2.01), work-related burnout (χ^2 = 21.72, df = 2, p < .001, Cramer's V = 1.28), job satisfaction (χ^2 = 84.81, *df* = 2, p < .001, Cramer's V = 2.52), meaning in life (χ^2 = 63.23, *df* = 2, p < .001, Cramer's V = 2.18), turnover intention (χ^2 = 42.65, *df* = 2, p < .001, Cramer's V = 1.79), and work performance (χ^2 = 19.15, *df* = 2, p < .001, Cramer's V = 1.20). Pairwise comparisons for these outcomes between profiles are presented in Table 9. The incentive-driven profile displayed higher client-related burnout scores and lower job satisfaction and meaning in life scores than the altruism-driven profile. It also displayed higher client-related burnout and turnover intention scores and lower job satisfaction, meaning in life, and job performance scores than the broadly-driven profile. The altruism-driven profile displayed lower client-related burnout scores and higher job satisfaction and meaning in life scores than the incentive-driven profile. It also displayed higher client-related burnout, work-related burnout, and turnover intention scores and lower job satisfaction, meaning in life, and job performance scores than the broadly-driven profile. The broadly-driven profile displayed lower client-related burnout and turnover intention scores and higher job satisfaction, meaning in life, and job performance scores than the incentive-driven profile. It also displayed lower client-related burnout, work-related burnout, and turnover intention scores and higher job satisfaction, meaning in life, and job performance scores than the altruism-driven profile. These findings demonstrated that motive profiles *were* differentially associated with different work outcomes, addressing Research Question 2.

The incentive-driven profile, which was characterized to a higher degree by extrinsic motives, was associated with worse burnout, turnover intention, job performance, and job satisfaction outcomes, supporting Hypotheses 2a through 2d. This profile was also associated with lower meaning in life, supporting Hypotheses 4a. The altruism- and broadly-driven profiles, which

were characterized to a higher degree by intrinsic motives, were associated with better burnout, turnover intention, job performance, and job satisfaction outcomes. These outcomes were more positive for the broadly-driven profile, which was characterized to a higher degree by *both* extrinsic and intrinsic motives than the altruism-driven profile. Taking into account that outcomes improved correspondingly for profiles that were more intrinsic in nature, these findings are consistent with Hypotheses 3a through 3d. These profiles were also associated with higher meaning in life, consistent with Hypotheses 4b.

CHAPTER 4: DISCUSSION

The aim of this study was to understand how various motives identified as important in the HCW motivation literature were related to key work outcomes. Using LPA to investigate this issue from a person-centered perspective, I predicted that distinct motive profiles could be identified based on HCWs' preferences for motives and that these profiles would be differentially related to work outcomes based on their extrinsic and intrinsic characteristics. These results revealed three motive profiles: an incentive-driven profile, an altruism-driven profile, and a broadly-driven profile. The incentive-driven profile was characterized by high reciprocity, indicating that HCWs in this profile were driven by incentives such as pay and benefits. This profile displayed a high degree of extrinsic motivation and low intrinsic motivation and amotivation. The incentive-driven profile reported worse outcomes for client-related burnout, job satisfaction, and meaning in life than the altruism-driven profile, and worse outcomes for client-related burnout, job satisfaction, meaning in life, turnover intention, and job performance than the broadly-driven profile. The altruism-driven profile was characterized by high altruism and self-esteem, indicating that HCWs in this profile were driven by a desire to help others and make a difference in the world. This profile displayed a moderate degree of extrinsic and intrinsic motivation and low amotivation. The altruism-driven profile reported better outcomes than the incentive-driven profile, but worse outcomes for client-related burnout, work-related burnout, job satisfaction, meaning in life, turnover intention, and job performance than the broadly-driven profile. The broadly-driven profile was characterized by high scores across motives, notably for altruism, career development, self-esteem, and social interaction, indicating that HCWs in this profile were driven for many reasons. This profile displayed a high degree of extrinsic and intrinsic motivation and low amotivation. The

broadly-driven profile reported better outcomes than the other two profiles. These findings demonstrated that motive profiles differentially predicted work outcomes for HCWs and that these differences were attributable, in part, to the extrinsic and intrinsic nature of the motives. A summary of these results and how they align with my stated hypotheses and research questions is presented in Table 10.

The existence of distinct motive profiles among HCWs is consistent with prior research findings that workers differ in terms of their motivation orientation (Amabile et al., 1994; Geiser et al., 2014; Harter, 1981; Lepper et al., 2005). This study's results also align with a recent study by Yordanov and colleagues (2023) that used LPA to examine motivation among physicians. They focused on four motivation indicators: extrinsic motivation (compensation), intrinsic motivation (professional interests), public service motivation (helping society), and user orientation (helping patients). Their analysis identified five latent profiles: a "less about money" profile that was notably low on extrinsic motivation, an "about everything" profile high across all motivation types, an "about helping others" profile high on the prosocial motivation types, an "about the work" profile high on intrinsic motivation, and an "about the money and the patient" profile high on extrinsic motivation and user orientation. The current study's incentive-, altruism-, and broadly-driven profiles parallel the "about the money and the patient," "about helping others," and "about everything" profiles, but diverge from Yordanov and colleagues' findings in that no profiles were identified that were low on compensation (i.e., reciprocity) or high solely on intrinsic motivation. The difference in reciprocity findings may be due to the different populations studied: Yordanov and colleagues' study focused on physicians whereas this study's population included all types of HCWs. Because physicians are generally better compensated than other types of HCWs, they are less likely to be concerned about their pay compared to low-wage HCWs, for whom it is a more

salient concern. The difference in intrinsic motivation findings is likely because this study relied on motives identified in the HCW motivation literature as LPA indicators. Many of the studies that sought to identify motives did so from the perspective of managing HCW performance and therefore tended to skew in favor of being extrinsic rather than being purely intrinsic.

One notable finding of this study was that scores for the reciprocity motive were high across all profiles, including for those that displayed higher intrinsic motivation, and therefore was not a key differentiator in and of itself. Although self-determination theory conceptualizes extrinsic and intrinsic motivation as different ends of a spectrum, more recent work has argued that they are independent and that people can be motivated by both extrinsic and intrinsic factors (Amabile, 1993; Grant, Nurmohamed, Ashford, & Dekas, 2011). Compensation is an integral part of why people work and, accordingly, it has consistently emerged as an important motive in the HCW motivation literature (e.g., Alfaro-Trujillo et al., 2012; Blau & Chapman, 2016; Perreira et al., 2016). It is therefore not surprising that reciprocity scores were high for all profiles. However, there is some debate about how compensation and other extrinsic rewards affect work motivation and, in turn, work outcomes. Some studies have found that, independently, it has a negative impact on work (e.g., Kuvaas, Buch, Weibel, Dysvik, & Nerstad, 2016), while others have found it can have a positive effect (e.g., Dill, Erickson, & Diefendorff, 2016). Some researchers have argued that extrinsic and intrinsic motivation can function synergistically and together enhance overall motivation (Amabile, 1993; Fishback & Woolley, 2022; Grant et al., 2011). This study's findings support this, suggesting that extrinsic and intrinsic motives are complementary rather than opposing. All profiles identified in this study displayed high within-profile reciprocity scores, and the nature of each profile was therefore defined primarily by its degree of intrinsic motivation.

The assertion that intrinsic and extrinsic motivation can co-occur and are not merely

opposite ends of a continuum is supported by more recent structure-based models of intrinsic motivation that diverge from classic content-based models, such as that proposed by Ryan and Deci (2000). According to one such structure-based model, the means-ends fusion model (Fishback & Woolley, 2022; Kruglanski, Fishbach, Woolley, Bélanger, Chernikova, Molinario, & Pierro, 2018), intrinsic motivation arises from the "perceptual fusion" between an activity and its associated goal. As such, the nature or content of the activity and goal is less important than the structural relationship between them (i.e., how closely tied or integrated the activity is with the goal). This model posits that intrinsic motivation is more likely to arise when the activity-goal association is unique, repeatedly paired, closely aligned in terms of similarity, or temporally proximate. The more closely an activity is perceived as being its own end (i.e., intrinsically rewarding) the greater the intrinsic motivation to engage in it. This conceptualization suggests that intrinsicality exists on a continuum from more to less intrinsic, in contrast to content-based models that view it as a pure state. One implication of this is that activities, such as work, can therefore be driven simultaneously by multiple extrinsic and intrinsic factors – people may do their work for money, social connection, or a sense of achievement in addition to enjoying the work itself.

The incentive-driven profile displayed the highest extrinsic motivation and lowest intrinsic motivation and also reported the most negative work outcomes. Characterized primarily by the reciprocity motive, this profile was especially high in external regulation and much lower in the other more internalized forms of extrinsic motivation, suggesting that HCWs belonging to this profile did not enjoy their work (lower internalization) and did it solely as a means to earn income (higher externalization). This finding is consistent with self-determination theory's assertion that extrinsic rewards and incentives can have a negative impact on work performance (Gange & Deci, 2005). It also aligns with prior research that found intrinsic motivation is associated with better

work outcomes than extrinsic motivation (Dill et al., 2016; Kuvaas et al., 2016). In the absence of intrinsic motives, extrinsic motives may not be enough on their own to buffer against negative work outcomes. England and colleagues (2012) argued "…there is little about the actual doing of care work that is in itself inherently interesting or pleasurable, independent of the prosocial aspects of the work such as helping others." If true, this presents an issue for healthcare work because a need will always exist for HCWs to routinely perform less desirable caring tasks such as bathing and cleaning patients from which it may be difficult to derive intrinsic motivation. However, this study found that motive profiles displayed consistently high extrinsic motivation but varied mainly in their degree of intrinsic motivation, and that the incentive-driven profile contained the smallest number of HCWs. These results suggest that the majority of HCWs do derive some degree of intrinsic motivation from their work and may ascribe intrinsic motives to even undesirable tasks.

The altruism-driven profile displayed moderate extrinsic and intrinsic motivation. It was higher in intrinsic motivation and reported better work outcomes than the incentive-driven profile but was lower in intrinsic motivation and reported worse work outcomes than the broadly-driven profile. The motives that characterized this profile – altruism and self-esteem – are rooted in prosocial motivation, which is a form of motivation spurred by a desire to benefit others (Grant, 2008). It is often presumed that prosocial motivation is an essential part of healthcare work due to its caring nature, and this is often emphasized in recruitment and training for these jobs. However, prior research has found that prosocial motivation can be detrimental for HCWs (Caldas, Ostermeier, & Cooper, 2020; Dill et al., 2016). One possible explanation for this is that highly prosocial HCWs may become overly vested in their work and find it too emotionally taxing. Alternatively, it may be that HCWs in demanding or lower status roles may lean more strongly into its prosocial nature as an ego-protective means to foster a positive self-identity, as posited by

social identity theory. These results highlight that, contrary to popular belief, prosocial motives alone are counterproductive for HCWs.

The broadly-driven profile displayed high extrinsic and intrinsic motivation and reported better work outcomes than the other profiles. This profile was notable for being characterized by multiple motives that spanned extrinsic and intrinsic motivation dimensions, suggesting that both forms of motivation synergize to improve work outcomes. Research on extrinsic and intrinsic motivation has proposed several mechanisms for how they interact to affect work outcomes, and two are particularly relevant for HCWs. First, extrinsic factors are more likely to undermine intrinsic motivation when they impose constraints on one's work and second, a major determinant of work performance is how the type of motivation matches the stage or type of work being done (Amabile, 1993; Fishback & Woolley, 2022). Although healthcare work environments impose many strict regulations and safety protocols, HCWs with multiple motives may simply view them as part of working in this field and not as a tradeoff attributable to extrinsic motives such as reciprocity and career development. Without an undermining impact, multiple extrinsic and intrinsic motives are therefore able to improve work outcomes in various ways. Having multiple motives can result in better alignment between one's values and their tasks or roles, which may be especially important given the fast-paced and multifaceted nature of healthcare work. Multiple motives may also impart a more profound and varied sense of engagement with the work and may serve to preserve overall motivation if the source of any single motive wanes. Because motives reflect aspects of the work that workers find important, having multiple motives may also represent a healthy individual state whereby HCWs can balance helping others, their careers, and their own well-being.

Study Contributions

This study makes several important contributions to the literature on HCW motivation. This study empirically established a relationship between HCW motives and work outcomes. While intuitive, defining motives and examining their relationship with outcomes has generally not been a focus in the HCW literature. A great deal of research on HCW motivation has focused on identifying motives for why people engage in this type of work in order to leverage them to manage workers' performance, and this has resulted in a rich list of motives. However, there has been a disconnect between the practice-oriented literature's focus on identifying and applying motives and the theory-oriented literature's focus on explaining the mechanisms that underlie motivation in that a link between identified motives and performance is often presumed without being tested. By reviewing the literature for such motives and examining their relationship with key performance metrics, this study established that such motives are important for understanding HCW outcomes. Also, to my knowledge, this is the first study to apply LPA to examine HCW motives and work outcomes. This helps the HCW literature by increasing our understanding of motivation from a person-centered perspective, which clarifies how multiple motives influence HCWs. Motives do not influence worker motivation in isolation and, with so many different motives identified, it is critical to understand how workers value motives in relation to other motives and how these preferences drive work outcomes.

Theoretical Implications

By examining work motives through a person-centered lens, this study provides some valuable insights for motivation theory. By identifying profiles comprised of both extrinsic and intrinsic motives, this study supports the notion that extrinsic and intrinsic motivation *can* work together to enhance work outcomes. This diverges from need-based motivation theories (e.g., Maslow, 1943; Herzberg, 1966) in that extrinsic motivation need not be achieved before intrinsic

motivation can arise. This also diverges from self-determination theory's original assertions that viewed extrinsic and intrinsic motivation as opposite ends of a broader motivation spectrum. Rather, as discussed above, extrinsic and intrinsic motivation are independent forces that can undermine or enhance each other (Amabile, 1993; Fishback & Woolley, 2022). The motive profiles identified in this study revealed that extrinsic motives such as reciprocity are universally important for HCWs alongside varying degrees of intrinsic motives, which highlights that they are not antagonistic, can be complementary, and that even the highly externalized incentives need not undermine intrinsic motives.

This study's findings also demonstrated that prosocial motivation can be detrimental to HCW performance. Recent work has found that prosocial motivation can bolster intrinsic motivation, resulting in higher persistence and performance (Grant, 2008). This study also found that prosocial motivation led to lower persistence and performance when intrinsic motivation was low. This echoes work on nurses that found that prosocial motivation, on its own, was associated with worse performance outcomes than extrinsic or intrinsic motivation (Dill et al., 2016). Grant (2008) attributed the negative effect of prosocial motivation to intrinsic motivation: high intrinsic motivation signals that workers enjoy doing their jobs, which results in a higher degree of internalization of prosocial motivation, and ultimately a greater desire to help others. Conversely, low intrinsic motivation signals that workers do not enjoy doing their jobs, resulting in externalized prosocial motivation, and workers putting pressure on themselves to help others as part of their jobs. Specific to the healthcare context, Dill and her colleagues (2016) argued that this negative effect was due to nurses high in prosocial motivation identifying too closely with the job and not being able to distance themselves from the stress inherent in this work. Compassion fatigue and emotional labor are well-established issues among HCWs (Cocker & Joss, 2016; Mann, 2004).

The COVID-19 pandemic dramatically increased the volume of work and intensity of demands on HCWs for a prolonged period of time, including much higher than normal patient mortality. HCWs driven primarily by prosocial motives may have seen their enjoyment of the work wane due to these circumstances and also may have emotionally internalized patient deaths more than others, feeling powerless to help and not being able to emotionally detach enough. These results demonstrated that motivation can have similar consequences in that HCWs who are driven by more prosocial motives are more likely to struggle.

Practical Implications

The results of this study offer meaningful insights for healthcare organizations. Specifically, these results revealed three latent profiles demonstrating that there were HCWs driven by different sets of motives. This is important for healthcare managers and administrators to take note of, as attempting to manage HCWs by addressing one or two motives alone will not have a meaningful impact on their motivation or performance. As discussed above, the means-ends fusion model posits that intrinsic motivation results from the relationship between an activity and its end goal. According to this model, the antecedents of intrinsic motivation are the unique association between the activity and goal, repeated pairing of the activity and goal, the fit or relatedness between the activity and goal, and the proximity (i.e., immediateness) of the activity and the goal. This offers insight into how HCWs' intrinsic motivation can be managed across different motive profiles. Because HCWs in the incentive-driven profile place a high value on the pay and benefits they get from their work, interventions that focus on incentives may be particularly effective. These HCWs may benefit from having small, immediate incentives tied to patient care that align closely with healthcare values, such as tokens redeemable for rewards or instant recognition for good patient care. Performance management and training systems can also

be designed to emphasize the link between patient care and incentives, increasing the relatedness of patient care and incentives. However, these findings suggest that the number of HCWs who are only driven by money and benefits is small and therefore healthcare managers and administrators must ensure that interventions focused on improving motivation also address other motives. HCWs in the altruism-driven profile place a strong emphasis on helping others, and thus the emotional joy of successful patient outcomes is particularly rewarding for them. Allowing HCWs choice in their daily tasks or specialization, wherever possible, can increase intrinsic motivation by allowing them to engage in the unique caring activities they strongly associate with helping patients. Further, mindfulness interventions that highlight the positive impact of this work on patients or publicizing patient success stories may strengthen the perceived relationship between healthcare tasks and altruistic outcomes. Because the broadly-driven profile is multifaceted, motivation interventions targeting these HCWs can do so via multiple avenues. Many of the same approaches useful for the other profiles would also apply here. Offering additional benefits, such as financial rewards, recognition, or career development opportunities may also be fruitful. If possible, allowing for task variety or rotation of responsibilities as well as choice as to which work to perform in can allow HCWs to engage in whichever activities they may find energizing at that time.

Broader strategies may also be successful regardless of motive profile. Reciprocity emerged as an important motive in all profiles, which emphasizes its importance for all types of HCWs as well as the need for healthcare organizations to ensure equitable pay as much as possible. The motives included in this study signal, in essence, characteristics that make up a positive workplace and that are consistent with good management practices across organizational contexts. Healthcare organizations should therefore focus on addressing motivation by focusing on fostering

a positive work environment. They may consider implementing robust employee listening strategies that establish various feedback mechanisms so they can understand what HCWs in their organizations value and identify opportunities for how to address them. Organizations should also focus on fostering a positive culture by seeking opportunities to align organizational goals and values with motives that their employees care about. The COVID-19 pandemic resulted in many HCWs leaving the workforce and an ensuing rush to hire more. Many recruitment efforts emphasized the caring and altruistic nature of the job. While important, the finding that it can be detrimental to HCWs means that organizations should be careful to not overemphasize these aspects of the job and include other motives in their recruitment strategies as well.

Importantly, the motives included in this study are also relevant for jobs outside of healthcare. All jobs offer financial incentives (e.g., pay, benefits) to their employees and provide at least some non-financial benefits (e.g., social interaction, skill development, recognition). It is therefore reasonable to expect that in other industries some workers are motivated primarily by pay and benefits (incentive-driven profile) and others by a variety of job-specific motives (broadly-driven profile). For workers in such profiles, similar strategies for managing performance via intrinsic motivation can also be valuable. Similar to healthcare work, a variety of other jobs are also strongly associated with altruism and helping others, such as teaching (Serow, 1993), volunteering (Burns, Reid, Toncar, Fawcett, & Anderson, 2006), and civil service (Brewer, 2003). This emphasis on altruism suggests that some workers in these roles may also be primarily motivated by prosocial motives (altruism-driven profile), and this may be maladaptive in these contexts as well. Organizations in these industries must therefore be cautious about overstating the value of this motive in their hiring and training.

Limitations

This study offers valuable insight into HCW motives, but like all studies, is not without limitations. First, this study relied on self-reported measures of work performance, which is susceptible to self-report bias. Although steps were taken to ensure reliability of responses and self-report measures are an accepted means of gathering data on work attitudes and behaviors, workers' self-perceptions may not fully align with their objective performance. Ideally, performance data would be collected from a healthcare organization where multiple performance measures, including objective measures (e.g., tardiness, safety policy violations) and ratings by others (e.g., supervisor evaluations), can be used. Second, study employed a cross-sectional design, which inherently limits its capacity to make causal inferences. As such, I could not conclusively determine whether endorsement of motive profiles led to better or worse work outcomes or if challenging working conditions lead to lower motivation – does being driven mainly by incentives make workers more likely to burnout or does becoming burned out cause workers to feel "checked out" and only continue to work for because they need the income? Other research designs that can better probe the directionality of these relationships should be employed in the future. Lastly, this study relied on motives that were identified by prior research as indicators for the LPA models. This was done intentionally to evaluate their viability, given their emphasis in the literature. However, as one might expect, many of these motives were conceptually related and displayed high correlations. Although LPA's assumption of local independence of indicators is important, small to moderate violations are often tolerated due to practical considerations. In practice, it is rare to find a set of indicators that are completely orthogonal. The motives utilized for this LPA were not created with the intention of evaluating latent variables and were therefore not treated as such, but multicollinearity among these items still needed to be addressed. Although the item parceling approach I used was appropriate in this context, future work should more deliberately

consider which motives to include as indicators based on how they may affect structure equation models.

Future Directions

This study serves as an important initial step in understanding how multiple motives affect work outcomes among HCWs. Although these findings align with those from other recent studies on HCW motivation, future research should nevertheless strive to replicate these results in different contexts. Beyond replication, future studies should also aim to examine motive profiles across different HCW roles. Healthcare work encompasses a vast array of different roles, such as physicians, nurses, emergency medical services personnel, nursing home workers, among many others. Although there are many commonalities among these roles, there are also important differences in their work and social expectations, training, and work environments that may be tied to differences in motives. Understanding similarities and differences in motive profiles can help provide a more nuanced understanding of motivation for specific roles.

Future research should also examine the degree to which HCWs feel the motives that drive them are fulfilled by their work. This study focused on motives that HCWs endorsed as reasons for why they do their jobs, which is important because it signaled what aspects of the job they valued. However, some HCW jobs may not provide opportunities for certain motives to be fulfilled, for example, they may offer no prospect for career advancement or time pressure may keep workers from meaningfully interacting with patients or peers. This raises several important questions about motives: would endorsing multiple motives still be associated with better work outcomes if one's job offers no opportunities to fulfill them? Would a lack of opportunities to address motives negatively impact their endorsement or one's overall motivation, or would other motives that can be fulfilled compensate for this? Does congruence between motives and

opportunities to address them enhance their effect on work outcomes? Such questions were beyond the scope of this study and should be undertaken by future work.

Another avenue for future research is understanding the origin of motives. This study found that having multiple motives for working was associated with better outcomes, and that specific motives were associated with worse outcomes. My discussion of leveraging motives to manage HCWs focused on strategies for how to fulfill motives, but it is also important to understand workers who would not belong to the broadly-driven profile. One possible approach would be to encourage workers to find value in more motives and to internalize them more, but this would only work if it is possible for workers motives to change at all. Future work should examine whether motives are malleable and, if so, what factors influence them. Employee training and socialization, organizational culture, and individual factors such as personal experiences, family expectations, and social norms may all play a role and future work should aim to better understand these.

TABLE 1

Table 1

Review of HCW motives identified in the literature.

Literature Classification	Motive	Reference
Extrinsic Motivators	access to medical resources & services	Greenspan et al. (2013)
	activity, something to occupy time	Greenspan et al. (2013); Ramirez-Valles (2001)
	aids that foster sense of belonging (e.g., badges, shirts)	Bhattacharyya et al. (2001)
	belief in personal impact, achievement, sense of utility	Dickin et al. (2011); Lambrou et al. (2010); Phipss-Taylor & Shortell (2016)
	career opportunities	Bhattacharyya et al. (2001); Ramirez-Valles (2001); Stevens et al. (2011)
	community recognition & respect	Bhattacharyya et al. (2001); Perreira et al. (2016)
	desire to improve conditions for ingroup (e.g., women, immigrants)	Ramirez-Valles (2001)
	desire to improve personal & family health	Dickin et al. (2011); Greenspan et al. (2013)
	family support	Dickin et al. (2011)
	financial rewards (i.e., pay)	Bhattacharyya et al. (2001); Greenspan et al. (2013); Lambrou et al. (2010); Lechuga et al. (2016); Perreira et al. (2016); Phipss-Taylor & Shortell (2016); Stevens et al. (2011)
	increased social contact	Jenner (1982); Lambrou et al. (2010); Ramirez-Valles (2001);
	job flexibility, autonomy	Dickin et al. (2011); Lambrou et al. (2010); Perreira et al. (2016); Stevens et al. (2011)

Table 1 (continued)

Review of HCW motives identified in the literature.

Literature Classification	Motive	Reference
Extrinsic Motivators	job skills & work experience	Bhattacharyya et al. (2001); Greenspan et al. (2013)
	means of coping with personal troubles	Ramirez-Valles (2001)
	non-financial material rewards	Bhattacharyya et al. (2001); Greenspan et al. (2013)
	peer support	Bhattacharyya et al. (2001); Lambrou et al. (2010)
	positive social/work relationships	Dickin et al. (2011); Jenner (1982); Lambrou et al. (2010); Perreira et al. (2016); Phipss-Taylor & Shortell (2016); Ramirez-Valles (2001); Stevens et al. (2011)
	professional associations & contacts	Bhattacharyya et al. (2001)
	satisfaction from helping, improved self-esteem	Dickin et al. (2011); Ramirez-Valles (2001)
	sense of accomplishment	Bhattacharyya et al. (2001); Jenner (1982)
	supervisor/program recognition & respect	Dickin et al. (2011); Greenspan et al. (2013); Lambrou et al. (2010); Perreira et al. (2016)
Extrinsic Deterrents	high job demands, role overload, role ambiguity	Bhattacharyya et al. (2001); Lechuga et al. (2016)
	inadequate selection system	Bhattacharyya et al. (2001)
	inadequate supervision and feedback	Bhattacharyya et al. (2001)
	inadequate training system, poor preparation for job	Bhattacharyya et al. (2001); Lechuga et al. (2016)
	lack of integration or respect in healthcare system	Bhattacharyya et al. (2001); Dickin et al. (2011)
	lack of or inadequate pay	Bhattacharyya et al. (2001); Blau & Chapman (2016); Dickin et al. (2011); Greenspan et al. (2013); Lechuga et al. (2016)
	negative relationships with peers	Blau & Chapman (2016); Perreira et al. (2016)
	personal & family issues, work interfering with personal life	Lechuga et al. (2016)

Table 1 (continued)

Review of HCW motives identified in the literature.

Literature Classification	Motive	Reference
Intrinsic Motivators	altruism, moral calling, values	Greenspan et al. (2013); Lambrou et al. (2010); Lechuga et al. (2016); Perreira et al. (2016); Ramirez-Valles (2001); Stevens et al. (2011)
	community service, desire to help community	Greenspan et al. (2013); Jenner (1982); Ramirez-Valles (2001)
	concern, desire to help those in need	Ramirez-Valles (2001); Phipss-Taylor & Shortell (2016); Stevens et al. (2011)
	desire to educate people	Dickin et al. (2011)
	opportunity for learning about health	Ramirez-Valles (2001); Perreira et al. (2016)
	personal growth & development	Bhattacharyya et al. (2001); Jenner (1982); Ramirez-Valles (2001)
	understanding others	Ramirez-Valles (2001)

TABLE 2

Table 2

Participant demographics.

Industry	Percent	Recency of HCW Role	Percent	Percent of Time Interacting with Patients	Percent
Accommodation and Food Services	0.77%	Currently working in this job	82.06%	0-9%	0.00%
Agriculture, Forestry, Fishing & Hunting	0.55%	Less than 1 year	5.61%	10-19%	0.22%
Arts, Entertainment and Recreation	0.55%	Between 1 and 2 years	7.48%	20-29%	0.22%
Construction	0.22%	Between 2 and 3 years	4.84%	30-39%	1.65%
Educational Services	2.64%			40-49%	2.09%
Finance and Insurance	0.55%			50-59%	5.61%
Health Care and Social Assistance	90.86%			60-69%	6.93%
Manufacturing	0.55%			70-79%	14.52%
Other Services	0.77%			80-89%	24.42%
Professional, Scientific and Technical Services	1.65%			90-100%	44.22%
Retail Trade	0.77%				

Note: Only industries with at least one response are presented. Percent of time interacting with patients was assessed with an open-response question and grouped into bins for reporting.

Table 2 (continued)

Participant demographics.

Employment Type	Percent	Hours Worked Per Week	Percent	Income	Percent	Education	Percent
Employed full-time	83.16%	Less than 10 hours	1.10%	Less than $10,000	4.84%	Less than high school	0.00%
Employed part-time	14.74%	10-19 hours	2.42%	$10,000 - $19,999	5.61%	High school graduate	6.71%
Student	1.65%	20-29 hours	10.23%	$20,000 - $29,999	9.35%	Some college	15.29%
Volunteer	0.55%	30-39 hours	27.61%	$30,000 - $39,999	16.94%	2-year degree	10.23%
		40-49 hours	50.38%	$40,000 - $49,999	15.51%	4-year degree	42.13%
		50-59 hours	5.06%	$50,000 - $59,999	10.67%	Professional degree	21.45%
		60 hours or more	3.19%	$60,000 - $69,999	9.35%	Doctorate	4.29%
				$70,000 - $79,999	6.38%		
				$80,000 - $89,999	5.39%		
				$90,000 - $99,999	4.07%		
				$100,000 - $149,999	8.58%		
				More than $150,000	3.19%		

Table 3

Scale & parcel descriptive statistics.

Scale/Parcel	*M*	*SD*
Client-Related Burnout	2.84	1.05
Work-Related Burnout	3.04	0.98
Job Satisfaction	3.78	1.06
Meaning in Life	3.35	1.15
Turnover Intention	2.79	1.26
Job Performance	7.70	1.41
WEIM Intrinsic Motivation	3.41	1.04
WEIM Integrated Regulation	3.31	1.07
WEIM Identified Regulation	3.21	1.02
WEIM Introjected Regulation	2.96	1.01
WEIM External Regulation	3.74	0.93
WEIM Amotivation	2.12	1.00
Altruism	4.26	0.79
Career Development	3.44	1.00
Reactivity	3.06	1.05
Reciprocity	3.49	1.02
Recognition	2.93	1.15
Self Esteem	4.04	0.87
Social Interaction	3.39	1.01

Note: N = 373. WEIM = work extrinsic & intrinsic motivation.

TABLE 4

Table 4

Scale & parcel correlation matrix.

Scale/Parcel	1	2	3	4	5	6	7	8	9	10	11
1. Client-Related Burnout	*0.92*										
2. Work-Related Burnout	0.68	*0.91*									
3. Job Satisfaction	-0.59	-0.65	*0.89*								
4. Meaning in Life	-0.42	-0.38	0.54	*0.94*							
5. Turnover Intention	0.45	0.51	-0.66	-0.39	*0.82*						
6. WEIM Intrinsic Motivation	-0.39	-0.26	0.47	0.40	-0.30	*0.86*					
7. WEIM Integrated Regulation	-0.31	-0.24	0.50	0.50	-0.48	0.66	*0.85*				
8. WEIM Identified Regulation	-0.21	-0.18	0.36	0.30	-0.28	0.51	0.60	*0.75*			
9. WEIM Introjected Regulation	-0.13	-0.05	0.25	0.27	-0.23	0.60	0.59	0.63	*0.73*		
10. WEIM External Regulation	0.14	0.06	0.01	-0.03	-0.03	0.00	0.11	0.34	0.17	*0.79*	
11. WEIM Amotivation	0.49	0.59	-0.51	-0.28	0.38	-0.19	-0.13	-0.01	0.07	0.13	*0.72*
12. Altruism	-0.35	-0.13	0.38	0.38	-0.26	0.52	0.46	0.25	0.29	-0.18	-0.22
13. Career Development	-0.19	-0.11	0.23	0.16	-0.07	0.38	0.26	0.49	0.42	0.07	-0.05
14. Reactivity	-0.21	-0.09	0.30	0.20	-0.25	0.42	0.41	0.34	0.38	0.00	-0.04
15. Reciprocity	-0.04	-0.15	0.13	0.02	-0.17	-0.05	-0.03	0.13	0.03	0.52	0.00
16. Recognition	-0.19	-0.19	0.27	0.24	-0.21	0.34	0.38	0.54	0.50	0.18	-0.01
17. Self-Esteem	-0.43	-0.29	0.55	0.48	-0.44	0.64	0.60	0.43	0.41	-0.02	-0.26
18. Social Interaction	-0.38	-0.33	0.47	0.37	-0.28	0.48	0.42	0.38	0.40	0.02	-0.17

Note: N = 373. Cronbach's alpha for each scale is presented along the diagonal. Inter-item correlations are presented in place of alpha values for reactivity, reciprocity, and recognition parcels because they were comprised of only two items. WEIM = work extrinsic & intrinsic motivation.

Table 4 (continued)

Scale and parcel correlation matrix.

Scale	12	13	14	15	16	17	18
12. Altruism	*0.82*						
13. Career Development	0.23	*0.77*					
14. Reactivity	0.41	0.43	*0.41*				
15. Reciprocity	-0.14	0.12	0.10	*0.28*			
16. Recognition	0.22	0.52	0.38	0.18	*0.68*		
17. Self-Esteem	0.66	0.35	0.46	0.02	0.45	*0.84*	
18. Social Interaction	0.48	0.51	0.43	0.14	0.47	0.52	*0.76*

Note: N = 373. Cronbach's alpha for each scale is presented along the diagonal. Inter-item correlations are presented in place of alpha values for reactivity, reciprocity, and recognition parcels because they were comprised of only two items.

TABLE 5

Table 5

Scale factor loadings.

Scale	Item	Factor Loading
Work-Related Burnout	1. Do you feel worn out at the end of the working day?	0.81
	2. Are you exhausted in the morning at the thought of another day at work?	0.83
	3. Do you feel that every working hour is tiring for you?	0.84
	4. Do you have enough energy for family and friends during leisure time? (R)	0.55
	5. Is your work emotionally exhausting?	0.77
	6. Does your work frustrate you?	0.73
	7. Do you feel burnt out because of your work?	0.87
Client-Related Burnout	1. Do you find it hard to work with clients?	0.87
	2. Does it drain your energy to work with clients?	0.83
	3. Do you find it frustrating to work with clients?	0.85
	4. Do you feel that you give more than you get back when you work with clients?	0.64
	5. Are you tired of working with clients?	0.88
	6. Do you sometimes wonder how long you will be able to continue working with clients?	0.82
Job Satisfaction	1. All in all, I am satisfied with my job.	0.91
	2. In general, I don't like my job.	0.85
	3. In general, I like working in my organization.	0.80
Meaning in Life	1. My life has a clear meaning or purpose.	0.92
	2. I have discovered a satisfactory meaning in life.	0.93
	3. I have a clear sense of what gives meaning to my life.	0.91
Turnover Intention	1. I am actively looking for other jobs.	0.76
	2. I feel that I could leave this job.	0.65
	3. If I was completely free to choose I would leave this job.	0.90

Table 5 (continued)

Scale factor loadings.

Scale	Item	Factor Loading
Intrinsic Motivation	1. Because I derive much pleasure from learning new things.	0.80
	2. For the satisfaction I experience from taking on interesting challenges.	0.85
	3. For the satisfaction I experience when I am successful at doing difficult tasks.	0.83
Integrated Regulation	1. Because it has become a fundamental part of who I am.	0.82
	2. Because it is part of the way in which I have chosen to live my life.	0.75
	3. Because this job is a part of my life.	0.84
Identified Regulation	1. Because this is the type of work I chose to do to attain a certain lifestyle.	0.58
	2. Because I chose this type of work to attain my career goals.	0.79
	3. Because it is the type of work I have chosen to attain certain important objectives.	0.76
Introjected Regulation	1. Because I want to succeed at this job, if not I would be very ashamed of myself.	0.69
	2. Because I want to be very good at this work, otherwise I would be very disappointed.	0.84
	3. Because I want to be a "winner" in life.	0.53
External Regulation	1. For the income it provides me.	0.87
	2. Because it allows me to earn money.	0.88
	3. Because this type of work provides me with security.	0.51
Amotivation	1. I ask myself this question, I don't seem to be able to manage the important tasks related to this work.	0.47
	2. I don't know why, we are provided with unrealistic working conditions.	0.75
	3. I don't know, too much is expected of us.	0.82

TABLE 6

Table 6

Final HCW motivation parcels.

Parcel	Item	
Altruism	24.	I believe that helping other people is important.
	26.	I want to help my community.
	27.	I am concerned about people that are in need.
Career Development	1.	It helps me find out about better career opportunities.
	3.	It helps me build my job skills.
	4.	It helps me make important professional connections.
Reactivity	5.	It gives me a chance to ensure people with my background can get access to important services.
	6.	It helps me cope with my own personal struggles and difficult experiences.
Reciprocity	11.	Because of the money it provides.
	12.	Because of the non-monetary benefits it provides (e.g., paid vacation, perks, insurance).
Recognition	13.	It earns me status and recognition among my community or social groups.
	14.	It earns me recognition and respect from my professional peers.
Self-Esteem	15.	It makes me feel like I have an impact on the world.
	16.	It makes me feel good about myself.
	17.	It gives me a sense of accomplishment.
Social Interaction	18.	It gives me a way to meet people.
	19.	It provides me with opportunities to be social.
	20.	I enjoy the positive work relationships it provides.

TABLE 7

Table 7

Fit indices for LPA models.

	1-class	2-class	3-class	4-class
BIC	7289.505	6863.659	6645.301	6588.501
Entropy	-	0.828	0.828	0.799
ALCP	-	.90-.97	.91-.97	.83-.96
LMR	-	0.2765	<.001	0.1267
No. per Profile				
1	373	90	19	18
2		283	183	91
3			171	97
4				167

Note: BIC = Bayesian Information Criterion; ALCP = average latent profile probabilities; LMR = Lo-Mendell-Rubin likelihood ratio test of model fit

TABLE 8

Table 8

Characteristics of final latent profiles on indicators of HCW motivation.

	Profile 1 Incentive-Driven		Profile 2 Altruism-Driven		Profile 3 Broadly-Driven	
Parcel	Mean	SE	Mean	SE	Mean	SE
Altruism	2.17	0.24	4.16	0.07	4.60	0.05
Career Development	2.20	0.28	3.01	0.09	4.03	0.09
Reactivity	1.73	0.19	2.78	0.09	3.80	0.08
Reciprocity	3.81	0.19	3.25	0.09	3.70	0.09
Recognition	1.44	0.21	2.43	0.12	3.63	0.11
Self-Esteem	1.94	0.25	3.78	0.08	4.55	0.06
Social Interaction	1.60	0.16	2.96	0.10	4.04	0.08

TABLE 9

Table 9

Final LPA model pairwise comparisons.

Variable	Incentive-Driven	Altruism-Driven	Broadly-Driven
WEIM Intrinsic Motivation	1.59	3.08	3.96
WEIM Integrated Regulation	1.57	2.94	3.90
WEIM Identified Regulation	1.94	2.81	3.78
WEIM Introjected Regulation	1.68	2.57	3.51
WEIM External Regulation	4.18	3.58	3.86
WEIM Amotivation	2.59	2.18	2.00
Client-Related Burnout	3.98	3.08	2.46
Work-Related Burnout	3.20	3.29	2.76
Job Satisfaction	2.70	3.38	4.32
Meaning in Life	1.93	3.06	3.82
Turnover Intention	3.63	3.16	2.32
Job Performance	6.93	7.41	8.08

Note: WEIM = work extrinsic & intrinsic motivation.

TABLE 10

Table 10

Summary of hypotheses & research questions.

Hypothesis/Research Question	Conclusion	Rationale
H1. Distinct latent profiles will be identified on the basis of HCWs' preferences for motives.	Supported	LPA results identified three distinct profiles
RQ1: How will latent profiles differ in terms of the extrinsic and intrinsic motives that characterize them?	Answered	BCH comparisons revealed differences in intrinsic and extrinsic work motivation dimension mean scores across profiles
RQ2: Will distinct latent profiles be differentially associated with work outcomes?	Answered	BCH comparisons revealed differences in work outcomes across profiles
H2a: Latent profiles characterized primarily by endorsement of extrinsic motives will be positively associated with burnout.	Generally Supported	BCH comparisons revealed that the incentive-driven (most extrinsic) profile was associated with higher burnout and turnover intention mean scores and lower job performance and job satisfaction mean scores.
H2b: Latent profiles characterized primarily by endorsement of extrinsic motives will be positively associated with turnover intention.	Generally Supported	
H2c: Latent profiles characterized primarily by endorsement of extrinsic motives will be negatively associated with job performance.	Generally Supported	
H2d: Latent profiles characterized primarily by endorsement of extrinsic motives will be negatively associated with job satisfaction.	Generally Supported	

Table 10 (continued)

Summary of hypotheses & research questions.

Hypothesis/Research Question	Conclusion	Rationale
H3a: Latent profiles characterized primarily by endorsement of intrinsic motives will be negatively associated with burnout.	Generally Supported	
H3b: Latent profiles characterized primarily by endorsement of intrinsic motives will be negatively associated with turnover intention.	Generally Supported	BCH comparisons revealed that profiles higher in intrinsic motivation (broadly-driven > altruism-driven > incentive-driven) were associated with lower burnout and turnover intention mean scores and higher job performance and job satisfaction mean scores.
H3c: Latent profiles characterized primarily by endorsement of intrinsic motives will be positively associated with job performance.	Generally Supported	
H3d: Latent profiles characterized primarily by endorsement of intrinsic motives will be positively associated with job satisfaction.	Generally Supported	
H4a: Latent profiles characterized primarily by endorsement of extrinsic motives will be negatively associated with meaning in life.	Generally Supported	BCH comparisons revealed that the incentive-driven (most extrinsic) profile was associated with lower meaning in life mean scores.
H4b: Latent profiles characterized primarily by endorsement of intrinsic motives will be positively associated with meaning in life.	Generally Supported	BCH comparisons revealed that profiles higher in intrinsic motivation (broadly-driven > altruism-driven > incentive-driven) were associated with higher meaning in life mean scores.

FIGURE 1

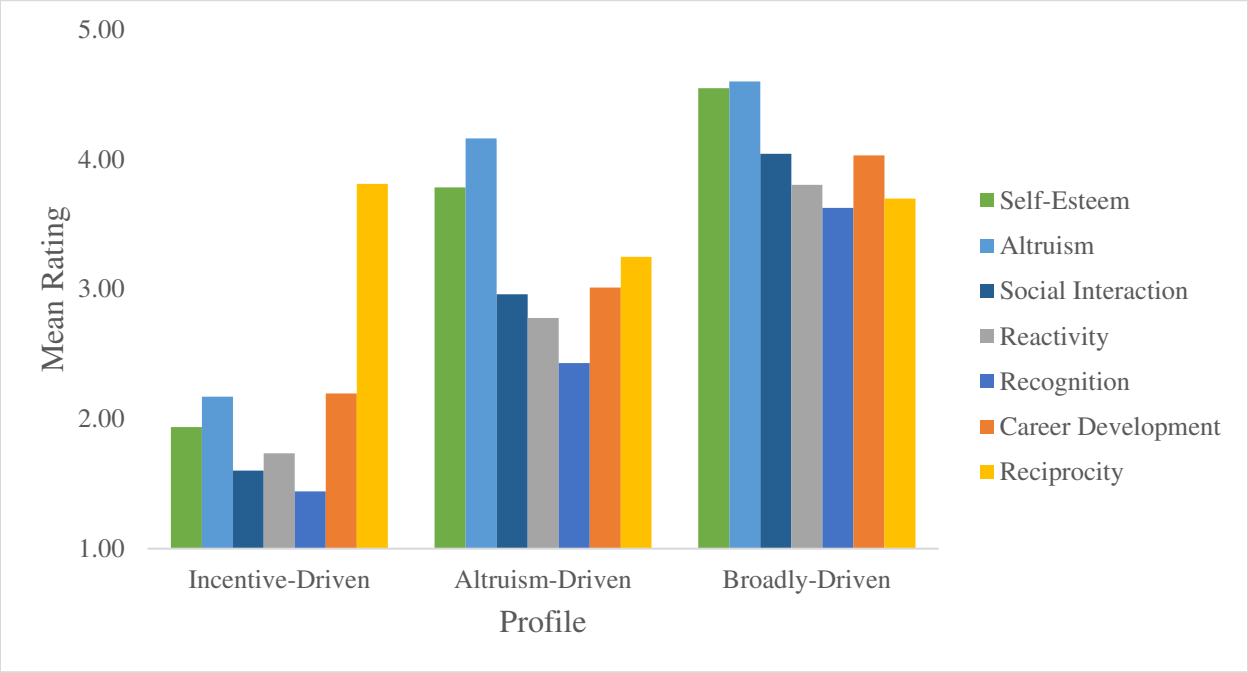

Figure 1. Estimated means for motive indicators across latent profiles. Motive parcels are arranged from most internalized (intrinsic) to least (extrinsic) based on their correlations with work extrinsic and intrinsic motivation dimensions.

FIGURE 2

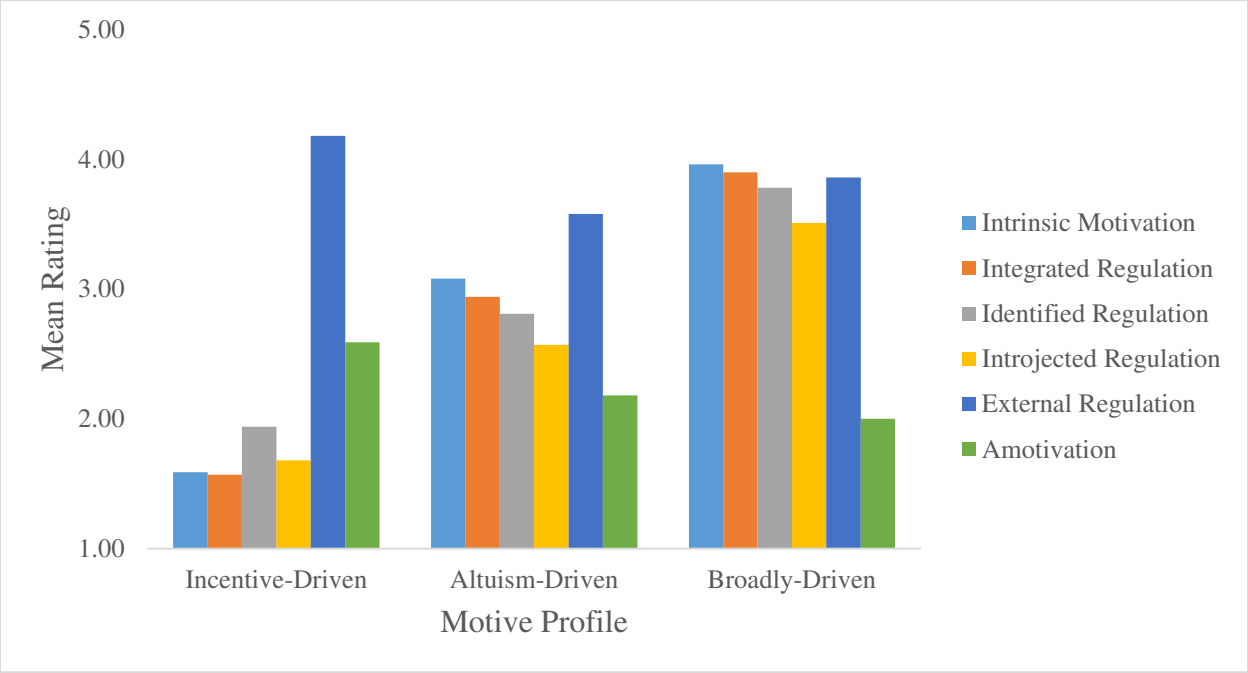

Figure 2. Estimated means for work extrinsic & intrinsic motivation across latent profiles: BCH statements.

FIGURE 3

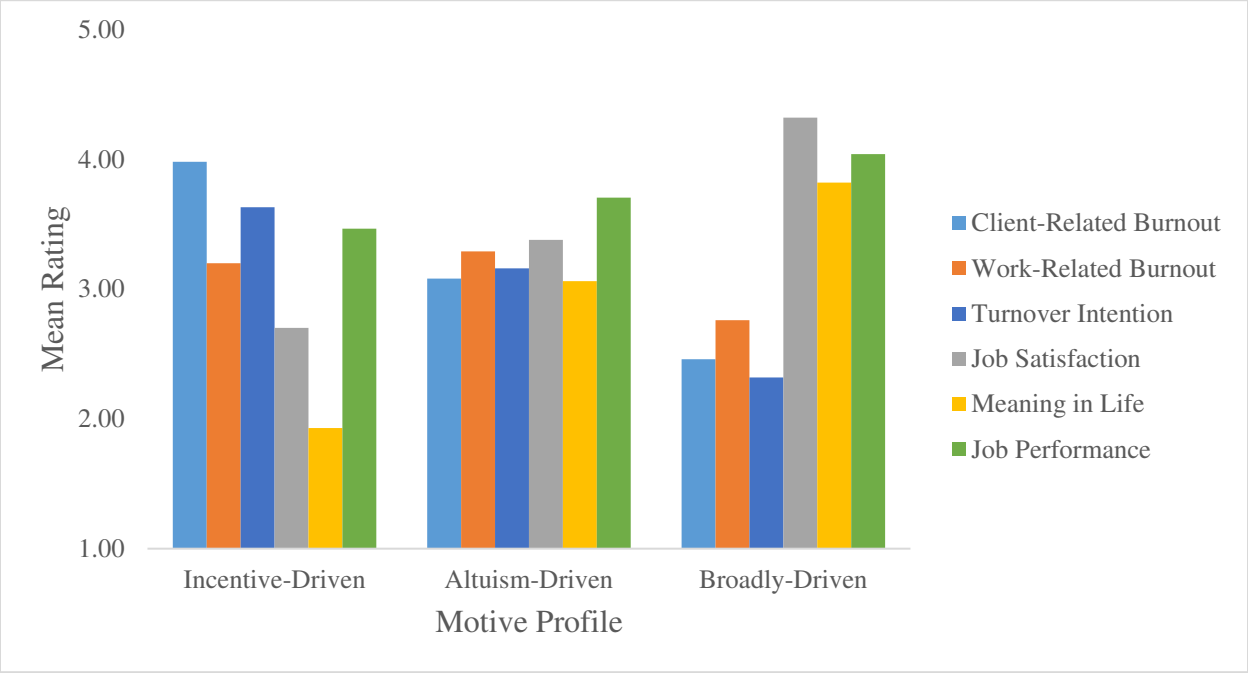

Figure 3. Estimated means for work outcomes across latent profiles: BCH statements.

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Appendix A

Copenhagen Burnout Inventory items.

Subscale	Item
Work-Related Burnout	1. Do you feel worn out at the end of the working day?
	2. Are you exhausted in the morning at the thought of another day at work?
	3. Do you feel that every working hour is tiring for you?
	4. Do you have enough energy for family and friends during leisure time? (R)
	5. Is your work emotionally exhausting?
	6. Does your work frustrate you?
	7. Do you feel burnt out because of your work?
Client-Related Burnout	1. Do you find it hard to work with clients/customers/patients?
	2. Does it drain your energy to work with clients/customers/patients?
	3. Do you find it frustrating to work with clients/customers/patients?
	4. Do you feel that you give more than you get back when you work with clients/customers/patients?
	5. Are you tired of working with clients/customers/patients?
	6. Do you sometimes wonder how long you will be able to continue working with clients/customers/patients?

Note: Work-related subscale Cronbach's alpha = .87. Client-related subscale Cronbach's alpha = .85. Measure originally developed by Kristensen, Borritz, Villadsen, and Christensen (2005).

Appendix B

Work extrinsic and intrinsic motivation items.

Dimension	Item
Intrinsic Motivation	1. Because I derive much pleasure from learning new things.
	2. For the satisfaction I experience from taking on interesting challenges.
	3. For the satisfaction I experience when I am successful at doing difficult tasks.
Integrated Regulation	1. Because it has become a fundamental part of who I am.
	2. Because it is part of the way in which I have chosen to live my life.
	3. Because this job is a part of my life.
Identified Regulation	1. Because this is the type of work I chose to do to attain a certain lifestyle.
	2. Because I chose this type of work to attain my career goals.
	3. Because it is the type of work I have chosen to attain certain important objectives.

Note: Intrinsic motivation dimension Cronbach's alpha = .80. Integrated regulation dimension Cronbach's alpha = .83. Identified regulation dimension Cronbach's alpha = .67. Measure originally developed by Tremblay, Blanchard, Taylor, Pelletier, and Villeneuve (2009).

Appendix B (continued)

Work extrinsic and intrinsic motivation items.

Dimension	Item
Introjected Regulation	1. Because I want to succeed at this job, if not I would be very ashamed of myself. 2. Because I want to be very good at this work, otherwise I would be very disappointed. 3. Because I want to be a "winner" in life.
External Regulation	1. For the income it provides me. 2. Because it allows me to earn money. 3. Because this type of work provides me with security.
Amotivation	1. I ask myself this question, I don't seem to be able to manage the important tasks related to this work. 2. I don't know why, we are provided with unrealistic working conditions. 3. I don't know, too much is expected of us.

Note: Introjected regulation dimension Cronbach's alpha = .70. External regulation dimension Cronbach's alpha = .77. Amotivation dimension Cronbach's alpha = .64. Measure originally developed by Tremblay, Blanchard, Taylor, Pelletier, and Villeneuve (2009).

Appendix C

Initial HCW motivation items.

Dimension	Motive(s)	Item	
Career Development	career opportunities	1.	It helps me find out about better career opportunities.
	job flexibility, autonomy	2.	It gives me flexibility and freedom in how I do my work.
	job skills & work experience	3.	It helps me build my job skills.
	professional associations	4.	It helps me make important professional connections.
Reactivity	desire to improve conditions for ingroup	5.	It gives me a chance to ensure people with my background can get access to important services.
	means of coping with personal troubles	6.	It helps me cope with my own personal struggles and difficult experiences.
	peer support	7.	I want to pay back the help I've received from others.
Reciprocity	access to medical/important resources & services	8.	It gives me access to resources or services that I find important.
	activity, something to occupy time	9.	It keeps me busy.
	desire to improve personal & family health	10.	It helps improve my well-being and/or the well-being of my family.
	financial rewards (i.e. pay)	11.	Because of the money it provides.
	non-financial material rewards	12.	Because of the non-monetary benefits it provides (e.g., paid vacation, perks, insurance).
Recognition	community recognition & respect	13.	It earns me status and recognition among my community or social groups.
	supervisor/program recognition & respect	14.	It earns me recognition and respect from my professionals peers.

Note: Dimensionality based on that of the Volunteer Motivation Inventory (Esmond & Dunlop, 2004). All items were prefaced with the statement "I do this work because…"

Appendix C (continued)

Initial HCW motivation items.

Dimension	Motive(s)	Items
Self-Esteem	belief in personal impact, sense of utility	15. It makes me feel like I have an impact on the world.
	satisfaction from helping, improved self-esteem	16. It makes me feel good about myself.
	sense of accomplishment	17. It gives me a sense of accomplishment.
Social Interact	increased social contact	18. It gives me a way to meet people.
	positive social relationships	19. It provides me with opportunities to be social.
	positive work relationships	20. I enjoy the positive work relationships it provides.
Understanding	opportunity for learning about own health	21. It encourages me to learn about my own health or well-being.
	personal growth & development	22. It helps me grow as a person.
	understanding others	23. It helps me understand other people.
Values	altruism, moral calling, values	24. I believe that helping other people is important.
	desire to help community	25. I want to support the mission of the organization I work for.
	community service, desire to help community	26. I want to help my community.
	concern, desire to help those in need	27. I am concerned about people that are in need.
	concern, desire to help those in need	28. I believe all people should have access to the resources and services I can provide.
	desire to educate people	29. I enjoy teaching people about what I can provide (e.g., outreach, education).

Note: Dimensionality based on that of the Volunteer Motivation Inventory (Esmond & Dunlop, 2004). All items were prefaced with the statement "I do this work because…"

Appendix D

Job performance items.

Item Set	Item
Decomposition Items	1. How often was your performance higher than most workers on your job?
	2. How often was your performance lower than most workers on your job?
	3. How often did you do no work at times when you were supposed to be working?
	4. How often did you find yourself not working as carefully as you should?
	5. How often was the quality of your work lower than it should have been?
	6. How often did you not concentrate enough on your work?
	7. How often did health problems limit the kind or amount of work you could do?
Internal Anchor Items	1. On a scale from 0 to 10 where 0 is the worst job performance anyone could have at your job and 10 is the performance of a top worker, how would you rate the usual performance of most workers in a job similar to yours?
	2. Using the same 0-to-10 scale, how would you rate your usual job performance over the past year or two?
Job Performance Item	1. Using the same 0-to-10 scale, how would you rate your overall job performance on the days you worked during the past 4 weeks (28 days)?

Note: Measure originally developed by Kessler, Barber, Beck, Berglund, Cleary, McKenas, … and Wang (2003).

Appendix E

Job satisfaction items.

Item
1. All in all, I am satisfied with my job.
2. In general, I don’t like my job. (R)
3. In general, I like working in my organization.

Note: Scale Cronbach's alpha = .88. Measure originally developed by Cammann, Fichman, Jenkins, and Klesh (1979).

Appendix F

Meaning in life items.

Item
1. My life has a clear meaning or purpose.
2. I have discovered a satisfactory meaning in life.
3. I have a clear sense of what gives meaning to my life.

Note: Scale Cronbach's alpha = .88. Measure originally developed by Steger and Samman (2021).

Appendix G

Turnover intention items.

Item
1. I am actively looking for other jobs.
2. I feel that I could leave this job.
3. If I was completely free to choose I would leave this job.

Note: Scale Cronbach's alpha = .83. Measure originally developed by Hellgren, Sjoberg, and Sverke (1997).