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Covariates of turnover intentions of teleworking call center agents in Québec during the COVID-19 pandemic

By

Pham Phuong Mai Do

Département de psychologie, Faculté des arts et des sciences

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Abstract

Teleworkers from multiple call centers in Québec provided questionnaire data about their various job demands (measured by organizational stressors, mental load, and emotional load), job resources (measured by independence in the work, participation, and relationship with supervisors) as well as for outcome measures of job satisfaction, organizational commitment, and turnover intentions. Hypotheses structured by the JD-R model were tested using correlational methods. As predicted, job resources were significantly related to both job satisfaction and organizational commitment perceived by the sample. Job demands predicted job satisfaction, but they did not relate to organizational commitment. The theoretical and practical implications of these results were discussed.

Keywords: teleworkers, call centers, turnover intentions, job satisfaction, organizational commitment

Résumé

Les télétravailleurs de plusieurs centres d'appels au Québec ont fourni des données des questionnaires sur leurs diverses demandes au travail (mesurées par les facteurs de stress organisationnels, la charge mentale et la charge émotionnelle), les ressources au travail (mesurées par l'indépendance au travail, la participation et les relations avec les superviseurs) ainsi que pour les mesures des résultats de la satisfaction au travail, de l'engagement organisationnel et de l'intention de quitter. Les hypothèses structurées par le modèle *Job Demands-Resources* ont été testées à l'aide de méthodes corrélationnelles. Comme prévu, les ressources au travail étaient liées de façon significative à la fois à la satisfaction au travail et à l'engagement organisationnel perçu par l'échantillon. Les demandes au travail prédisaient la satisfaction au travail, mais elles n'étaient pas liées à l'engagement organisationnel. Les implications théoriques et pratiques de ces résultats ont été discutées.

Mots-clés: télétravailleurs, centres d'appels, intention de quitter, satisfaction au travail, engagement organisationnel

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Introduction

In 1965, when the Birmingham Press and Mail installed the GEC PABX 4 ACD, a telephone exchange or switching system that allows rows of agents handling incoming and outgoing calls, call centers began to flourish, primarily to receive orders, confirm reservations, and support sales. Eventually, large companies started to integrate in-house call centers, hoping to offer their customers higher-quality services and boost their revenues. With the rapid development of technology, call centers in the 21st century have become the indispensable components of various industries where immediate customer service and high call volumes are expected, operating nation-wide and serving the international population at every second. Estimates indicated that in 2005, there were over 13,000 call centers in Canada, employing more than half a million of Canadian employees (Holman et al., 2007). As a prominent example of the Information Technology Enabled Services industry, call centers provide services to both local and overseas customers though telephone calls by using advanced computer-assisted telephone interviewing software to retrieve and record information (Vine, 2017). Due to fast-paced configurations of customer-employee interactions and distinct attributes of work processes and employment conditions, business and industry groups in both Canada and India such as the Contact Center Canada and the National Association for Services and Software Companies have considered call centers a unique industry worthy of independent lobbying, research, and different platforms for professionals to share recommended practices (Stevens, 2014).

Several decades have passed since the first call centers were built yet call centers can never seem to escape from their negative reputation of low pay, monotonous work, high demands, low control, limited social support and few opportunities for work participation and learning (Anderrson & Jansson, 2006; Houlihan, 2000). These characteristics potentially

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reinforce employees' traditional plan of making their call center jobs transitory until availability of better career prospects. Due to frequent complaints and verbal harassments from customers, employees' regular suppression of their own feelings coupled with the constant effort of being professional at work are found to have a negative impact on job satisfaction, which eventually leads to turnover intentions (Zito et al, 2018). Low quality jobs consisting of low job discretion and high monitoring are also associated with higher turnover rate (Holman et al., 2007).

The COVID-19 pandemic has disrupted normal operations of businesses across the world and forced many organizations to transfer most of their staff into teleworkers. The Gartner (2020) survey of 229 HR leaders on April 2 reported that nearly 50% of organizations were having more than 81% of their employees working remotely during the pandemic, and that many workers were planning to work from home more often in the future. Research indicates that employees felt their job performance was positively affected by teleworking (Major et al., 2008), and that employers believed it increased organizational productivity (Martinez-Sanchez et al., 2007). Compared to their in-office coworkers, teleworkers were happier in their jobs and more dedicated to their employers (Coombes, 2007). Despite indisputable benefits of work autonomy and scheduling flexibility from teleworking, some scholars suggest that professional isolation, state of mind or belief that occurs when one is out of touch with others in the workplace (Diekema, 1992), may leave teleworkers feeling out of the loop in-office interactions (Baruch & Nicholson, 1997; Vega & Brennan, 2000). When employees spend more time teleworking, professional isolation might strengthen its negative impact on their job performance (Golden et al., 2008). Due to the lack of social barometers, teleworkers have difficulties determining how they should behave or react to work events (Mann et al., 2000; Vega, 2003). Consequently, professionally isolated teleworkers become less confident in their abilities and knowledge, which

can put them at a distinct disadvantage in performing their jobs (Golden et al., 2008). With a reduced sense of belonging and increased frustration from extended period of professional isolation (Lewandowski, 2003), teleworkers feel less attachment and commitment to their organization (Bandura, 1977; Duffy et al., 2002), creating a major obstacle to teleworking's continued application (Cascio, 2000; Venkatesh & Speier, 2000).

In the Canadian Contact Centre Industry report conducted in 406 call centers from a broad array of industries in all ten provinces, the average quit rate annually is 14.3% and the average costs of recruiting, screening, selecting, and training a typical call center employee are $3,456 CAD (van Jaarsveld et al., 2007). In 2008, the National Association of Call Centers in the United States estimated that the cost of replacing a contact center worker was $5,566 USD (Contact Centre Canada, 2009). It is estimated that replacing one call-center-employee equals to 16% of the gross annual earnings of another call center employee; and it can take almost five months for new call center workers in Canada to be proficient at their jobs (Holman et al., 2007). Therefore, it is important to identify the factors that lead to negative outcomes such as absenteeism, psychological strain, and employee turnover in the call center industry in order that appropriate measures could be adjusted by management (Siong et al., 2006).

Problem statement

Call center work has been described an advanced form of Taylorism, a theory of management developed in the late 19th century focusing on increases of efficiency, labor productivity and mass production growth, which can be achieved through the application of production line, formal operating procedures, allocated time, division of labor and mechanization (Knights & McCabe, 1998; Peaucelle, 2000). Call center operators are required to engage in routine, scripted interactions that are continuously distributed to them by the automatic dialer

under the pressure of maintaining a friendly manner; therefore, they are given limited possibilities to cope with stressors (Holman, 2003; Zapf et al., 2003). Working conditions in call centers resemble those of Taylorian workshops, where employees frequently experience work overload (Peaucelle, 2000). Call centers also create an environment of high psychological stress, which can lead to health impairment and low motivation for employees (Rohrmann et al., 2010). In a study conducted on 375 call center employees from eight call centers in Germany, low complexity, low resources, and a relatively high level of emotional dissonance are found to be prevailing problems of working in call centers (Zapf et al., 2003). Health problems and motivational factors are common antecedents of turnover intentions among call center agents (Bakker, Demerouti, & Schaufeli, 2003). If lost productivity is considered, replacing one worker equals between three and four months of a typical worker's pay, and when labor costs represent 70% of total costs in call centers, the cost-focused strategy endorsed by most call centers makes costs derived from turnover particularly high (Holman et al., 2007).

During the 2008 recession, work-life balance became one of the most frequently cited benefits of teleworking since teleworkers had more opportunities to enjoy life and pursue career goals at their own pace with less conflict between their personal life and work, thanks to the time and money saved by not having to travel to work (Raiborn & Butler, 2009). Despite that teleworking enhances job performance and reduces turnover intentions among teleworkers (Bailey & Kurland, 2002; Igbaria & Guimaraes, 1999; Staples et al., 1999), professional isolated teleworkers may experience less fulfillment in their basic human need to belong (Baumeister & Leary, 1995), more alienation from their colleagues and disloyalty to the organization (Ashforth & Humphrey,1995; Mann et al., 2000), greater disinterest or even rejection from coworkers (Golden, 2006, 2007; Leary et al., 1998), resulting in an urge to leave the organization (Golden

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et al., 2008). By hindering their "ability to establish or maintain positive interpersonal relationships, work-related success, or favorable reputation within one's place of work" (Hitlan et al., 2006), professional isolated teleworkers become less confident in initiating interactive discussions due to fear of being criticized or exposed (Golden et al., 2008). Consequently, they tend to take frequent corrective actions due to deficient decision-making procedures; and therefore, experience increased anxiety (Baumeister & Tice, 1990), loneliness (Jones, 1990), diminished psychological and physical health (DeWall & Baumeister, 2006; Schneider et al., 2000).

Purpose of the study

This study aims to examine how the different facets of working from home as a remote call center agent during the COVID-19 pandemic can correlate with turnover intentions. The unique work experiences at a call center have prompted the researcher to choose this type of work environment as the context of this study. Given the risks and uncertainties of the outbreak, the return to normal business operations prior to the pandemic remains unforeseeable. The more extensively professionally isolated teleworkers are absent from the workplace, the more they are vulnerable to the harmful effects of professional isolation (Caldwell, 1997). Prolonged periods of professional isolation may negatively impact job performance (Golden et al., 2008), increase job burnout and dissatisfaction (Baumeister & Leary, 1995), and accelerate turnover intentions (Arches, 1991). The 1Q20 Gartner Survey (2020) of more than 5,000 employees revealed that among employees who worked remotely, there were 13% less of them exhibiting a high intent to stay with their current employer.

Drawing from a majority of previous findings that apply the Job Demands-Resources model as the framework, this research is grounded in the concepts of job demands (stressors,

mental load and emotional load) and job resources (job autonomy, participation and relationship with supervisors) as potential determinants of job satisfaction and organizational commitment, leading to patterns of turnover intentions (Bakker, Demerouti, & Schaufeli, 2003; Bakker et al., 2010; Carlson et al., 2017; Kraemer & Gouthier, 2014; Lewig & Dollard, 2003; Mathieu et al., 2016; Siong et al., 2006; Zito et. al, 2018). The flexibility of the Job Demands-Resources model allows researchers to consider a wide range of possible working conditions, making it adaptable to different characteristics of many occupations (Zito et. al, 2018). The model assumes that job demands are mainly responsible for health-impairment processes, while job resources are mainly responsible for motivational processes (Bakker & Demerouti, 2007). In addition, the JD-R model proposes that the interaction between job demands and job resources is important for the development of job strain and motivation (Bakker & Demerouti, 2007). More specifically, job resources may buffer the impact of job demands on job strain, including burnout (Bakker & Demerouti, 2007). Therefore, it is possible that several job resources can play the role of buffer for several job demands (Bakker & Demerouti, 2007). Some studies considered job satisfaction as a mediator between job demands, job resources and employees' behaviors, which also goes in line with the JD-R model theoretical framework (Malik et al., 2010; Sila & Gamero, 2014). Other researchers presented that organizational commitment develops through job satisfaction and that organizational commitment mediates the influence of job satisfaction on turnover intentions (Price & Mueller, 1986; Williams & Hazer, 1986).

Different analyses have reported that turnover intention is strongly and directly related to actual turnover (Griffeth et al., 2000; Hom et al., 1984; Mobley, 1977; Steel & Ovalle, 1984; Tet & Meyer, 1993). In fact, many studies on faculty staff concluded that intention to leave is one of the main and immediate precursors of employee turnover (Hassan & Hashim, 2011; Park, 2015;

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Xu, 2008; Zhou & Volkwein, 2004) and actual turnover positively increases with turnover intention (Kaur, Mohindru, & Pankaj, 2013; Staffelbach, 2008). Consequently, employees' eagerness to terminate their employment is generally synonymous with their turnover intention (Jeswani & Dave, 2012). Since voluntary turnover is a frequent concern for organizations, understanding the underlying antecedents of employees' turnover intentions might help organizations reduce the loss of skillful talents and lessen its damaging effects on the morale of the remaining workforce as well as the reputation of the organization (Ngo-Henha, 2017).

In general, the central question to the study is whether the relationships described by the JD-R model, developed with the general work population, hold when tested with teleworking employees. Given this perception, the specific research questions for this study are:

1. Do job resources moderate the relationship between job demands and job satisfaction or organizational commitment?

2. Does organizational commitment predict turnover intentions better than job satisfaction?

3. Does organizational commitment mediate the relationship between job satisfaction and turnover intentions?

Literature review

Teleworking, its benefits and drawbacks.

Teleworking or telecommuting is defined as the ability to work at a distance from a principal business location (Raiborn & Butler, 2009). According to the General Social Survey of 2016 and the Labor Force Survey of April 2020 published by Statistics Canada, in late March 2020, 39.1% of Canadians was teleworking, compared with only about 15% who have done so before the pandemic (Morissette et al., 2021). Most businesses in the information and cultural

industries, management of companies and enterprises, and finance and insurance sectors had over half of their staff working from home (Statistics Canada, 2020). Teleworking enables employees to perform assigned tasks at personal discretion of time, place, and pace of task achievement without direct employer supervision, which consequently enhances job satisfaction derived from the autonomy and flexibility to control work pace and arrange workflow (Raiborn & Butler, 2009). According to the U.S. Census Bureau (2000), the average travel time to work in the United States is 25.5 minutes, with only 4.7% of the workers using public transportation and 12.2% in carpools. Teleworking also helps reduce modern societal and environmental problems such as traffic congestion, pollution, energy depletion, and resource waste (Raiborn & Butler, 2009). A 2007 survey conducted by the Consumer Electronics Association estimated that telecommuting one day per week saved approximately 840 million gallons of gasoline that year (Matlin, 2008) and the reduced carbon dioxide emissions were equivalent to taking two million cars off the road annually (Kolman, 2008). Using data from the 2016 Census of Population of Statistics Canada, Morissette et al. (2021) showed that full telework capacity could decrease roughly 8.6 megatons of carbon dioxide equivalent in annual greenhouse gas emissions, which accounted for 6% of the direct GHG emissions from Canadian households in 2015 and 11% from transportation in the same year. In a summary report of previous studies on energy and GHG emission impact of teleworking, O'Brien & Aliabadi (2020) concluded that teleworking did not have a significant effect on saving household energy, Information and Communications Technology-related energy or GHG emission because energy generated from office equipment was simply replaced by energy from household devices, and Internet use at home or at the office could be both personal and work-related.

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For employers, the most frequently cited benefit of telecommuting is increased productivity while being cost-efficient (Raiborn & Butler, 2009). A company with 14,000 employees would estimate to eliminate approximately $3.5 million in facilities costs if only 5% of its employees were teleworkers (Weil, 2008). Capital One's process of telework implementation quickly cut 20% of the company's real estate costs (Conlin, 2009). During economic recession situations, the teleworking opportunity may be an important factor in attracting and retaining highly potential employees while reducing recruiting and training costs (Raiborn & Butler, 2009). Since teleworking erases some location restrictions, employers have a larger talent pool when recruiting and potentially reduce newly recruits' relocation costs. Talented current employees can also be retained through teleworking even if they must relocate for personal or family reasons. It is noteworthy that employees will be more committed to employers proactively looking for ways to retain those employees and helping them meet their financial obligations than to employers performing massive layoffs without consideration for labor needs in the future (Raiborn & Butler, 2009). During the recession in 2000, Gartner Inc., a leading provider of market research in the information technology industry, warned companies that "more than 90% of knowledge workers who are laid off or choose to leave an enterprise during an economic downturn will be unavailable for rehire in an upturn" ("Gartner: Be Wary of Whom You Lay Off," 2001). This increased loyalty can give companies competitive edges to benefit from any economic rebound (Raiborn & Butler, 2009).

Teleworking seems to be a promising solution for employers to reduce a wide range of costs while retaining their talents. However, isolation, security breach, legal damages, and decrease in work productivity are common drawbacks of teleworking (Raiborn & Butler, 2009). Although teleworking offers a flexible schedule and shortens travel time, teleworkers who are

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frequently being interrupted by family matters may have some difficulties in concentrating and often end up working more hours than their in-office colleagues (Raiborn & Butler, 2009). By not having to travel to the office, teleworkers miss out face-to-face interactions with other coworkers, which can negatively impact teamwork efficiency in jobs that require intense and immediate collaboration (Raiborn & Butler, 2009). Due to the absence of physical visibility, managers cannot directly monitor and evaluate performance of teleworkers, and the lack of socialization and in-person interactions with managers may also cause a teleworker's career development to suffer. Managers also lose some control over data security through teleworking (Raiborn & Butler, 2009). Because of the necessity of communications via external electronic devices and the usage of Internet, teleworkers unintentionally make their organization's information more vulnerable to external attacks compared to in-office workers working with an enclosed intranet. A 2007 survey indicated that 49% of respondents admitted using their own devices to access company networks and electronic files (Hines, 2008). A particular teleworking nightmare for employers is the leak of internal sensitive or proprietary data (Raiborn & Butler, 2009). In February 2008, a laptop containing sensitive medical information on 2,500 patients enrolled in a National Institutes of Health (NIH) study was stolen from the locked trunk of an NIH teleworker's car (Raiborn & Butler, 2009). This type of breach of data security can subsequently create potentials for enormous legal and financial damages. Additionally, determination of which employees are to be laid off is commonly made based on skills, knowledge, and ability, which might deny older workers opportunities if a company decides to adopt teleworking policy (Raiborn & Butler, 2009). In March 2009, statistics from the U.S. Equal Employment Opportunity Commission (EEOC) showed that age-discrimination allegations by employees increased by 28.7%, from 19103 to 24582 between fiscal years of 2007

and 2008 (U.S. EEOC, 2009). It is a common belief that senior employees are less familiar with technological features in the virtual world than their younger colleagues. Considering that two critical factors for productive teleworker performance are technological savvy and little need for face-to-face interaction, companies need to be careful in selecting teleworkers to assure that no discrimination issues can be raised (Bailey & Kurland, 2002; Raiborn & Butler, 2009).

Characteristics of call centers.

In Canada, the United States, and Mexico, the term "telephone call center" is defined by the North American Industry Classification System as an industry comprised of establishments primarily engaged in receiving and making telephone calls for others. These establishments are engaged in activities such as soliciting or providing information; promoting products or services; taking orders; and raising funds for clients (Stevens, 2014). This industry also includes establishments primarily engaged in answering telephone calls and relaying messages to clients; and establishments primarily engaged in providing voice mailbox services (Statistics Canada n.d.). Gans et al. (2003) described the working environment of a large call center as "an endless room with numerous open-space cubicles, in which people with earphones sit in front of computer terminals, providing teleservices to phantom customers." Call centers can be classified into two main many categories: inbound vs. outbound and in-house vs subcontractor. Inbound call centers handle incoming calls that are initiated by outside callers calling into the center, typically provide customer support, help-desk services, reservation and sales support, and order-taking functions. Outbound call centers, traditionally associated with telemarketing and research services, handle calls initiated by employees from within the center (Gans et al., 2003). Outbound call center workers tend to be rewards driven and they might have less control over their interaction with customers due to a focus on selling rather than problem solving (Lewin &

Sager, 2007). In contrast, inbound call center agents have greater control over their customer interactions, and they are less rewards driven given that their primary motivation is to help and solve problems (Lewin & Sager, 2007). Agents employed in unionized centers have the longest average tenure (11.3 years), while agents working in outbound centers are at the other side of the continuum (3.5 years) (van Jaarsveld et al., 2007).

The rise of outsourced Canadian call centers for American businesses. Canada's position as a popular outsourced destination for U.S. firms was identified by the New York Times in the 1990s, when the country's cultural similarity to the United States made it a top destination for high-value, sophisticated customer service work (Austen, 2004). According to Datamonitor, because of Canada's low dollar exchange rate in 2006, the cost of a Canadian call center agent was approximately 85% of their U.S. counterpart and thanks to policies of cutting corporate taxes at the federal and provincial levels throughout the 1990s, Canada was at least comparable to the U.S. in terms of business and personal tax rates in 2006 (Stevens, 2014). With a universal public health care system, Canadian call centers are even less burdened with expensive health benefit packages in terms of attracting talented employees. A study conducted by Canadian Customer Contact Center Industry in 2002 showed that metropolitan areas such as Montreal, Toronto, and Vancouver offered vast multicultural and multilingual talent to both foreign and domestic companies seeking to establish call center operations, drawing from as many as seventy languages (Stevens, 2014). Canada's political, economic, and social factors such as its multilingual capabilities, a highly skilled and proficient workforce, a historically low exchange rate with American currency, and an advanced telecommunications network were all stimuli that facilitated the rise of call centers as a chief export-based industry (Stevens, 2014). This solidified Canada's position in the global call center marketplace.

Key features of call centers in Canada. According to Statistics Canada, there were 938 call centers across Canada in 2020 in which 74% of them were micro and small establishments. Québec had the second-highest number of establishments after Ontario with a total of 130 call centers (Canada Industrial Relations Board, 2021). Approximately 77% of Canadian call centers are inbound and 40% of these handle customer service activities (van Jaarsveld et al., 2007). In a study conducted across Canada, Carroll & Wagar (2007) found that Atlantic Canada had the lowest percentage of Canadian ownership at 60% and a high percentage of U.S. multinational ownership at 35%. Canada's entire information and communication technology sub-sector, which includes manufacturing, software services, and wholesaling, generated $155 billion in revenues in 2011 and employed some 521,000 workers in 33,000 companies (Industry Canada, 2013). Alternative employment figures show that in the broader category of business support services, which telephone call centers are a part of the number of jobs grew from 20,000 to 112,000 between 1987 and 2004, an increase of 447% (Akyeampong 2005).

Demographics of Canadian call center agents. Call center employees in small communities of Atlantic Canada are predominantly less than 25 years old female without post-secondary qualifications (Contact Center Canada, 2009). Call center agents with an average tenure of 5.67 years typically earned $31,201 CAD in 2006; however, it is worth mentioning that pay levels significantly varied by industry segments, organizational characteristics, and geographical location (van Jaarsveld et al., 2007). Agents in Western Canada have longer average tenure (6.79 years) when compared with their counterparts in Central (5.14 years) and Eastern Canada (4.32 years), presumably due to the higher percentage of unionized centers in the Western region (van Jaarsveld et al., 2007). In Eastern Canada, facilities witnessed some of the highest turnover rates and are home to the highest proportion of outsourced centers. In fact, a call

center in Montague, a small town located on Prince Edward Island, Canada, closed in 2016 because they could not maintain an adequate number of staff members (CBC News, 2016), despite the province experiencing an unemployment rate of 10.6% that is the second highest in Canada (Statistics Canada, 2018). This example suggests that even amidst an employment market dominated by minimum wage, part-time job prospects, there was still labor force resistance to jobs that had been perceived to be especially demanding and stigmatized (Stevens, 2014).

Call center and turnover intentions. Turnover rates for call centers are reported to be above average in comparison with equivalent office-type working environments (Holdsworth & Cartwright, 2003). Batt et al. (2009) investigated call centers in 16 different countries and observed an average yearly voluntary turnover rate of 11.72%. Stressful work experience was one of the most cited causes of high absenteeism and turnover intentions at call centers, creating a crucial problem for organizations using call centers to manage clients' services (Holman, 2002; Zapf et al., 2003; Tuten & Neidermeyer, 2004, Flint et al., 2013; Ro & Lee, 2017). Low job discretion and high monitoring were also shown to increase employees' stress, which is subsequently associated with higher turnover rate. (Holman et al., 2007). From the global report conducted in 2007 across 2,500 call centers, Holman et al. discovered a pattern among call centers over 17 countries: compared to in-house call centers, subcontractors typically offer lower discretion and lower quality jobs, have higher levels of performance monitoring, pay lower wages, and are less likely to be covered by union contracts. In a qualitative content analysis of 503 anonymous online reviews of 52 Canadian call centers posted on RateMyEmployer.ca, Johnston et al. (2019) found that disciplinary actions against insubordinate employees, unachievable sales quotas, a controlling environment, unfair compensation, and a lack of rapport

with supervisors were associated with high turnover rates in call centers. Nearly half of the reviewers described how the social structure of the call center was designed to swiftly identify, neutralize and in some extreme cases, intimidate or even remove unruly staff to control the message and image of the company (Johnston et al., 2019). Reviews associated with unrealistic standards and managerial oppression implied that high turnover rates in call centers could be explained by the fact that workers must meet impossibly high productivity expectations from the onset of their employment (Johnston et al., 2019). Instead of embracing corporate culture, call center employees turned their frustrations and contempt into critiques of the belief systems woven into the day-to-day operations and functions of call centers, where success is determined by the employee's capacity to achieve high volumes of sales and conformity to the social cues and norms that are constructed as fundamental to making money (Johnston et al., 2019). While most call centers engaging in sales work measure their employee's success in relation to other workers by creating pressure to be the top salesperson, some other companies sought to disguise competition by obligating their staff to see one another as family. In such an environment, team-oriented conditioning turned out to be coercive and controlling (Fleming & Sturdy, 2011; Kinnie et al., 2000), docility was rarely achieved through cooperation, but rather through intensive monitoring, rule enforcement, shaming and surveillance measures (Johnston et al., 2019). Many reviewers expressed frustration that the required skills to succeed were unachievable in such short time periods, and that they were not compensated with the pay normally associated with skilled work (Lloyd & Payne, 2009). Some supervisors assisted entry-level call center workers in resisting and defying the rules that they were paid to enforce (Johnston et al., 2019). Unfortunately, the presence of camaraderie between the supervisors and entry-level staff (Mulholland, 2004; D'Cruz & Noronha, 2008) was not as frequently cited as a sense of

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comradeship with other workers. Indeed, low-level managers are often positioned in an intermediate state, neither benefiting from the bonds developed between lower status workers, nor garnering the benefits or wage improvements associated with executive positions (Johnston et al., 2019). Managers are also a repository for worker complaints, while also being held responsible for the perceived inadequacies or failures of frontline staff by company superiors (Johnston et al., 2019).

Turnover, its antecedents, and related problems.

The term employee turnover refers to the situation where an employee ceases to be a member of an organization (Ngo-Henha, 2017). The first empirical study on labor turnover dates to 1925 (Hom et al., 2017). According to Ellett et al. (2007), employee turnover can be classified into three different categories, namely unavoidable turnover, desirable turnover, and undesirable turnover. Unavoidable turnover may occur due to retirement, sickness, or family matters. Desirable turnover applies to incompetent employees, as opposed to undesirable turnover which occurs when talented, skilled, and competent employees leave the organisation against the will of their employers (Shim, 2010). Turnover can also be categorized as voluntary or involuntary (Ngo-Henha, 2017). According to Mathis & Jackson (2004), involuntary turnover is an "instance of discharge that reflects an employer's decision to terminate the employment relationship". In contrast, voluntary turnover is an employee's decision to leave the organisation at her or his own will (Noe et al, 2006). High rates of voluntary turnover are often found to be harmful to business performance (Glebbeek & Bax, 2004). The unmeasured costs of voluntary turnover exist not only in recruitment, selection, temporary staffing, training, but also in losses of customer service continuity, talents, and valuable experience (Holtom et al., 2008). Therefore, the factors related

to turnover need to be understood so that business practices can be adapted to minimize its harmful effects (Flint et al., 2013).

Common determinants of turnover. Carley (1992) asserts that the decision to quit a job is not usually taken lightly, but it is the result of a thorough and elaborate process. People usually decide to quit their jobs after assessing their situation, weighing different options, looking for opportunities and reflecting upon their feelings (Ngo-Henha, 2017). Employees decide to willingly leave an organisation for countless reasons, including poor compensation, job stress, poor performance appraisal, lack of job satisfaction, lack of career advancement opportunities, lack of organisational commitment, lack of autonomy and unfair labor practices (Lee & Mowday, 1987). March & Simon (1958) claimed that employees initiated the process of terminating their employment only when they desired to do so and when they thought that their move would be easy. Despite an immense amount of research on actual turnover, it is still a challenge for organisations to determine its valid causes (Ngo-Henha, 2017). Since data on employees who quit voluntarily is typically difficult to collect, researchers often focus on the most direct determinant of turnover, intent to stay, which has been demonstrated to exert a strong negative influence on actual turnover (Bluedorn, 1982; Iverson, 1992; Price, 1997). Early literature considered behavioral intentions as strong predictors of actual behavior (Fishbein, 1967; Fishbein & Ajzen, 1975). Zimmerman & Darnold (2009) in a meta-analysis of the relationship between job performance and turnover intentions showed a significant standardized pathway of 0.43 between intentions to quit and voluntary turnover. Hence, studying turnover intentions is predominantly believed to yield more accurate results to understand the actual causes of turnover (Kaur & Mohindru, 2013; Mobley, 1982; Johnsrud & Rosser, 2002; Perryer et al., 2010; Rizwan et al., 2013; Park, 2015). In a comprehensive meta-analysis, job satisfaction,

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organizational commitment, job search, comparison of alternatives, withdrawal cognitions, and quitting intentions were shown to be among the best predictors of turnover (Griffeth et al., 2000). Affective commitment demonstrated substantial correlations with intentions to leave and even actual turnover (Mathieu & Zajac, 1990; Meyer et al., 2002). Lee et al. (2000) in their meta-analytic review confirmed that occupational commitment was negatively correlated with organizational turnover, suggesting that occupation-related attitudes were potentially important to understanding the organizational turnover process. Studies have been reasonably consistent in showing a correlation between job satisfaction and turnover (Crampton & Wagner, 1994; Hulin et al., 1985). (Bakker, Demerouti & Schaufeli, 2003). The availability of resources can also enhance the employees' identification and involvement in the organization that is negatively related to turnover intentions (Bakker, Demerouti & Schaufeli, 2003). In a study of American child life specialists, Munn et al. (1996) found lack of supervisor support was the best predictor of job dissatisfaction and intention to leave a job. Hatton and Emerson (1998) found that actual staff turnover was predicted in part by low levels of support from superiors. In addition, Udechukwu & Mujtaba (2007) suggests that the concept of voluntary turnover should be elucidated as a blend of social, economic, and psychological processes. This implies that, to understand one's intention to leave the job, the underlying social, economic, and psychological factors should also be taken into consideration (Ngo-Henha, 2017).

The Job Demands-Resources model.

Since Demerouti et al. (2001) created the Job Demands-Resources (JD-R), it has gained high popularity and recognition among researchers. The JD-R model is acknowledged as one of the leading job stress models, along with Karasek's (1979) Job Demands Control (JD-C) model and Siegrist's (1996) Effort Reward Imbalance (ERI) model (Schaufeli & Taris, 2014). All these

three models hypothesizes that employee health and well-being result from a balance between positive (resources) and negative (demands) job characteristics. The most common conceptual criticism is that the JD-C model is too simplistic and fails to capture the complexity of work environments (Bakker et al., 2010). Some studies believed that job control was not the only resource available for coping with job demands and social support from colleagues or superiors could also play an important role (De Lange et al., 2003; Johnson & Hall, 1988; Van der Doef & Maes, 1999). Other studies included physical and emotional demands in the JD-C model in addition to workload (De Croon et al, 2002; Van Vegchel et al., 2002). This failure of the JD-C model to capture the complexity of work environments has inspired the development of the JD-R model (Bakker & Demerouti, 2007; Demerouti et al., 2001). The JD-R model distinguishes itself on the assumption that employees 'motivation, strain and job performance can be influenced by a variety of job demands and job resources (Schaufeli & Taris, 2014). Thus, the scope of the JD-R model is much broader than that of other models because it potentially includes all possible job demands and job resources. Thanks to its flexibility, researchers can adapt and create their own JD-R model suitable for any work settings (Schaufeli & Taris, 2014). As the ERI and JD-C models relate specifically defined sets of concepts to each other, the JD-R model offers an exploratory method of finding different job aspects that can affect employees' opinions about their work (Schaufeli & Taris, 2014). This implies that even if two studies show no overlap in terms of the study concepts, they could still be based on and test the same assumptions of the JD-R model. The heuristic use of the JD-R model in combination with its vast liberty appeals to researchers, just as its flexibility is attractive to practitioners (Schaufeli & Taris, 2014).

The JD-R model assumes that every occupation has facets that can be divided into two categories: job demands and job resources (Bakker & Demerouti, 2017). Job demands refer to

"those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs" (Bakker, Demerouti & Schaufeli, 2003, p. 395). High work pressure, unfavorable physical environment, and emotionally demanding interactions with clients are examples of job demands. In contrast, job resources refer to "those physical, psychological, social, or organizational aspects of the job that are either/or functional in achieving work goals, reduce job demands and the associated physiological and psychological costs, stimulate personal growth, learning, and development" (Bakker, Demerouti & Schaufeli, 2003, p. 395). Job resources can be found at the organizational level (pay, career opportunities, job security), the interpersonal level (supervisor, co-worker support, team climate), the work organization level (role clarity, participation in decision making), and at the task level of the task (skill variety, task identity, task significance, autonomy, performance feedback). The JD-R model comprises dual processes (Bakker, Demerouti & Schaufeli, 2003). While chronic job demands might lead to emotional strain and energy depletion, job resources have motivational potential and lead to high work engagement, low cynicism, and excellent performance. Job resources may buffer the impact of job demands on job strain (Bakker, Demerouti & Schaufeli, 2003; Bakker & Demerouti, 2007). A high-quality relationship with supervisors and colleagues would likely to help reduce job strain and stimulate organizational commitment (Bakker, Demerouti & Schaufeli, 2003). On the contrary, when employees experience high strain and low motivation, managers would notice signs of job withdrawal and eventually turnover. The JD-R model has been used by many studies with common variables such as emotional exhaustion, emotional dissonance, and job satisfaction to explain or predict turnover intentions in call centers (Kraemer & Gouthier, 2014, Lewig &

Dollard, 2003, Molino et al., 2016, Zito et. al, 2018). Most job satisfaction models mainly

concentrate on negative factors that can influence turnover intentions, while the JD-R model

examines the interaction between both sides of the job and allows a thorough assessment on

different facets that can potentially relate to the final outcomes.

Figure 1. Job Demands-Resources model (Bakker & Demerouti, 2017, p. 275)
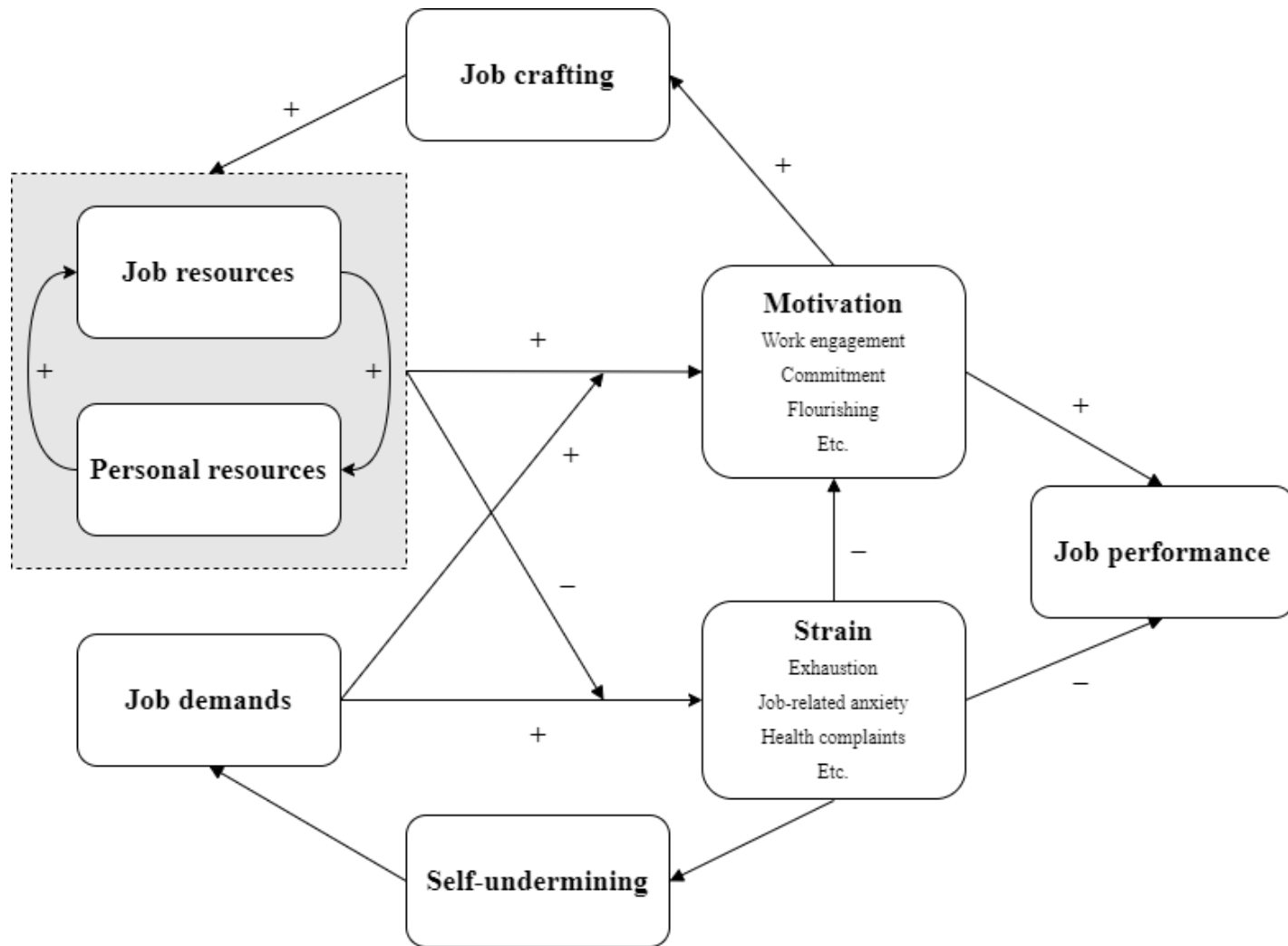
From this conceptual theoretical background, these hypotheses were tested:

Hypothesis 1. Job demands (measured by organizational stressors, mental load, and

emotional load) has a negative relationship with job satisfaction.

Hypothesis 2. Job resources (measured by independence in the work, participation, and relationship with supervisors) have a positive relationship with job satisfaction.

Hypothesis 3. Job demands have a negative relationship with organizational commitment.

Hypothesis 4. Job resources have a positive relationship with organizational commitment.

Hypothesis 5. The relationship between job demands and job satisfaction is moderated by job resources.

Hypothesis 6. The relationship between job demands and organizational commitment is moderated by job resources.

Organizational commitment.

Organizational commitment is the degree to which an employee feels loyalty to a particular organization. (Mueller, Wallace, & Price, 1992; Price, 1997). Allen & Meyer (1990) defined organizational commitment as "an affective or emotional attachment to the organization such that the strongly committed individual identifies with, is involved in, and enjoys membership in, the organization" (p. 2). By integrating various conceptualizations from previous findings, they presented a model of organizational commitment with three components: affective ("employees' emotional attachment to, identification with, and involvement in, the organization"), continuance ("commitment based on the costs that employees associate with leaving the organization"), and normative ("employees' feelings of obligation to remain with the organization") (Allen & Meyer, 1990, p. 1). A strong affective attachment to the organization develops when employees' experiences within the organization meet their expectations and satisfy their basic needs (Meyer et al., 1993). Continuance commitment presumably grows when employees recognize possible losses of accumulated investments and limited availability of comparable alternatives if they were to leave the organization (Becker, 1960; Meyer et al., 1993).

Finally, normative commitment evolves as the result of socialization experiences emphasizing the appropriateness of remaining loyal to the employer (Wiener, 1982) or through the receipt of benefits such as tuition payments or skills training that create within employees a sense of obligation to reciprocate (Scholl, 1981). Meyer et al. (1993) believed that a better understanding of an employee's relationship with an organization would be achieved when all three forms of commitment are considered together. Many studies have identified organizational commitment as a predictor of turnover intentions (Hackett et al., 2001; Bentein et al., 2005; Wagner, 2007). De Ruyter et al. (2001) also found evidence for a negative relationship between commitment and turnover intentions in their call center study. A one-year follow-up study applying the JD-R model among Australian university staff showed that job resources had a negative relationship with psychological strain and a positive relationship with organizational commitment but failed to confirm the effect of job demands on strain (Boyd et al., 2011). Prior research utilizing structural equation modeling has found that affective organizational commitment mediated the relationship between job satisfaction and intent to leave (Netemeyer et al., 1995; Schaubroeck et al., 1989; Wunder et al., 1982). Lack of complexity and low utilisation of qualifications and skills are related to low levels of affective commitment, while experienced monotony, low variety and low levels of complexity predict employees' intentions to quit (Grebner et al., 2003).

Previous findings have mainly categorized the relationships between organizational commitment, job satisfaction and turnover process into three mediation models. In the satisfaction-to-commitment mediation model, Steers et al. (1974) claimed that commitment took longer to develop from job satisfaction, mediated the effects of satisfaction on withdrawal variables, and was more stable than satisfaction. The model suggested that job satisfaction had only an indirect influence on the intention to quit and encouraged study of mechanisms through

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which satisfied workers become committed to their organizations (Marsh & Manari,1977; Mowday et al., 1982; Price & Mueller, 1986; Williams & Hazer, 1986). In contrast, the commitment-to-satisfaction mediation model suggested that commitment to the company produced a positive attitude toward the job, possibly through a rationalization process (Bem, 1967; Salancik & Pfeffer, 1978), and decisions of leaving or staying were based on feelings towards the job. That commitment to the company may develop prior to entry (O'Reilly & Caldwell, 1981; Schein, 1968) or at least may be evident at early stages of employment (Porter et al., 1976; Bateman & Strasser, 1984). The model also promoted the view that changes in commitment can be expected to have only indirect effects on turnover (Bateman & Strasser, 1984; Dossett & Suszko, 1989). Finally, the independent effect model suggested that job satisfaction and organizational commitment were related but distinct constructs (Dougherty et al., 1985). It implied no causality between the two attitudes but does not rule out the possibility of reciprocal influences, and both contributed uniquely to the turnover process (Farkas & Tetrick, 1989; Tett & Meyer, 1993).

Job satisfaction.

Job satisfaction was defined by Locke (1976) as a pleasant or positive emotional state resulting from a person's assessment of their work or work experiences. Job satisfaction is also how people feel about their jobs and different aspects of their jobs (Spector, 1997). Jyoti & Sharma (2015) defined job satisfaction as the affective orientation of individuals towards work roles that they are currently occupying. It refers to the extent that the job fulfils one's dominant needs and values (Jyoti & Sharma, 2015). Prior research on call centers demonstrates that low job discretion and high-performance monitoring is associated with higher levels of anxiety, depression, emotional exhaustion, and lower levels of job satisfaction (Holman et al., 2007).

Igbaria & Greenhaus (1992) reported that among management information systems personnel, the most immediate determinants of turnover intentions were lack of job satisfaction and lack of organizational commitment. Job satisfaction has a direct and negative impact on intent to leave (Tate et al., 1997; Igbaria & Guimaraes, 1993; Netemeyer et al., 1995). Using structural equation modeling, Williams & Hazer (1986) showed that job satisfaction was antecedent to organizational commitment, while Schaubroeck et al. (1989) determined that job satisfaction had a significant and negative effect on an employee's intent to leave among both civilian federal government manufacturing and university maintenance workers. Griffeth et al. (2000) concluded that organizational commitment predicted turnover better than job satisfaction. Abusive supervision was found to be related to lower levels of job satisfaction, normative and affective commitment and increased psychological distress (Tepper, 2000). Mathieu et al., (2016) proved that person-oriented leadership behavior affects turnover intentions through job satisfaction and organizational commitment more than task-oriented leadership behavior; and that only organizational commitment had a direct effect in explaining turnover intention. Applying the JD-R model in their study, Lewig & Dollard (2003) concluded that increasing job autonomy, social support and rewards can boost job satisfaction among South Australian call center workers. From their study involving 318 call center agents in Italy, Zito et. al (2018) pointed out the importance of making resources available and offering specific training programs to make employees and supervisors aware about the consequences of emotional dissonance, to foster job satisfaction and reduce turnover intentions.

To determine the mediation models of organizational commitment, job satisfaction and turnover intentions, these hypotheses were tested:

Hypothesis 7. Organizational commitment predicted turnover intentions better than job satisfaction.

Hypothesis 8. The relationship between job satisfaction and turnover intentions is mediated by organizational commitment.

Organizational stressors.

A job stressor is a condition or event at work that requires an adaptive response by a person, such as being yelled at or having to complete a difficult assignment by a deadline (Spector, 1997). Job stressors and lack of job satisfaction were among the factors contributing to employees' quitting intentions (Moore, 2001). Wunder et al. (1982) found that stressors had a direct, negative effect on job satisfaction among managers in a large international manufacturer, which led to a reduced commitment to the organization and to intention to quit and actual quitting behaviors. However, several other studies did not find direct effect of stressors on intention to quit, but rather indirect effects through the experience of job stress, social support, job satisfaction and lack of commitment to the organization (Armstrong-Stassen et al., 1994; Igbaria & Greenhaus, 1992; Koeske & Koeske, 1993; Tinker & Moore, 2001). Role ambiguity, role conflict, work-overload, and work–family conflict were the four stressors measured in this study. Role ambiguity is the degree of certainty the employee has about what his or her functions and responsibilities are (Spector, 1997). Role conflict exists when people experience incompatible demands about their functions and responsibilities (Spector, 1997). Both role ambiguity and role conflict have been shown to correlate with job satisfaction. In their meta-analysis, Jackson & Schuler (1985) found mean correlations with global job satisfaction of $-.30$ and $-.31$ for role ambiguity and role conflict, respectively; and that these two variables tend to moderately correlate with job commitment. Research has found stressors such as work-overload

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and work-life balance to influence staff turnover in the aged care sector (Karantza et al., 2012; Fitzgerald, 2007). Work overload has also been consistently and strongly associated with intention to quit (Brannon et al., 2007; Tuckett et al., 2009). Work-family conflict exists when demands of the family and demands of the job interfere with one another (Spector, 1997). Work-family conflict has been found to correlate significantly with job satisfaction. Employees who experience high levels of conflict tend to report low levels of job satisfaction (Bedeian et al., 1988; Holahan & Gilbert, 1979; Lewis & Cooper, 1987; Rice et al., 1992). Thomas & Ganster's study in 1995 on the impact of organizational policies and supervisor behavior on employee's work-family conflict and job satisfaction provides evidence that organizational policies such as childcare and flexible work schedules can reduce work-family conflict and enhance job satisfaction. Decreasing workplace stressors and workplace stress are thought to be key variables in increasing job satisfaction and decreasing intent to quit and actual turnover rates (Gleason-Wynn & Mindel, 1999).

Emotional load.

Call center employees frequently suffer emotional abuse from unsatisfied customers (Jeong et al. 2015). Most customer-service-related jobs require employees to suppress their reactions and feelings to maintain a professional image, even when faced with hostility and verbal harassment. Such situation is known as "emotional labor", which is common among call center employees (Hochschild, 1983). In addition, an important component of emotional labor is emotional dissonance, which is the difference between emotions that are felt and emotions that are displayed (Lewig & Dollard, 2003). The typical outcome of emotional dissonance is emotional exhaustion, mental stress, job burnout, and high staff turnover, all of which have negative effects on the performance of emotional labor (Dormann & Kaiser, 2002; Johnson et al.,

2005; Morris & Feldman, 1996; Wharton, 1999). Emotional dissonance also reveals a negative relationship with job satisfaction and a positive relationship with turnover intentions (Zito et. al, 2018).

Mental load.

Mental workload represents the cognitive job demands that primarily impinge on the brain processes involved in information processing (Chrisopoulos, Dollard, Winefield, & Dormann, 2010; van den Tooren & de Jonge, 2010). A call center employee might experience cognitive overload when processing a high amount of or highly complex information. Cognitive overload can also occur when an individual's attention is split, distracted or directed toward non-relevant factors or events. Once cognitive processes are overloaded, additional information may be filtered or discarded, potentially negatively affecting emotional labor performance (Barthelus, 2015). In a 2008 study conducted by Nagesh and Murthy on how the complexity of workflow technology can cause emotional stress on customer service representatives and the consequences of emotional stress on performance, processing high volumes of calls reveals to contribute to work-related stress, along with constant verbal communication causing an increase in respiratory problems, long work hours coupled with mandatory overtime, pressure to meet performance targets, loss of identity, handling challenging customers, routinized and standardized work. Customer service representatives who experience ongoing and protracted periods of high stress are more likely to perform poorly, leading to low productivity, errors, and the need to repeat work, all of which will directly or indirectly affect the organization's bottom line (Nagesh & Murthy, 2008).

Relationship with supervisors.

In an investigation conducted on 173 Australian retail salespeople, Firth et al. (2004) discovered that emotional support from supervisors and self-esteem mediated the impact of stressors on stress reactions, job satisfaction, organizational commitment, and turnover intentions. Behavior by supervisors that supports employees with family responsibilities was also found to have positive effects (Thomas & Ganster, 1995). Call centers have started to adopt mentoring culture in which supervisors must have five attributes of a leader as a role model, coach, motivator, communicator, and problem solver (Jyoti & Sharma, 2015). A study by Rad & Yarmohammadian (2006) has established that there was a significant correlation between leadership style and employees' job satisfaction. Bono et al. (2007) reported that employees who work with supervisors having high transformational leadership experienced more positive emotions throughout the workday and were less likely to experience decreased job satisfaction, than were those with supervisors having low transformational leadership. Some call centers implement problem-solving group approach which provides opportunities for employees to meet with supervisors on a regular basis; those meetings can be the source of learning, problem solving, and performance improvement (Holman et al., 2007).

Independence in the work.

Independence in the work refers to the freedom individuals have in carrying out their work, including freedom regarding scheduling work, decision making, and work methods (Bakker et al., 2010; Boyd et al., 2011). It is a common belief that call center jobs provide relatively few opportunities for employees to exercise their independent judgment. In fact, over 55% of the jobs in Canada and the UK offer few opportunities for employees to make their own decisions at work (Holman et al., 2007). Call center jobs tend to show low job control, low

complexity, and variety, which have been associated with poor outcomes in terms of employee well-being and turnover (Kahn & Byosiere, 1992; Sonnentag & Frese, 2003). According to the demands–control model (Karasek, 1979), job stress is particularly caused by the combination of high job demands (work overload and time pressure) and low job control. Job control was positively related to job satisfaction and affective commitment and negatively associated with irritated reactions, psychosomatic complaints, resigned attitude towards the job, and intention to quit (Grebner, et al., 2003).

Participation.

Participation refers to the employees' capacity to influence and participate in decisions on important matters (Bakker et al., 2010; Bakker, Demerouti, de Boer et al., 2003). In a study of absenteeism among nutrition company employees, Bakker, Demerouti, de Boer et al. (2003) found that job control and participation in decision-making were unique predictors of commitment, and indirectly of absence frequency. Employees who can draw upon job resources such as job control and participation in decision-making might be more motivated to do their job, feel stronger commitment to their organization, and less likely to call sick than their counterparts (Bakker, Demerouti, de Boer et al., 2003). Participation in decision making, along with other job resources, predicted task enjoyment and organizational commitment particularly under conditions of high workload and emotional demands (Bakker et al., 2010).

Methodology

Sample

Participants of this study were call center agents, telephone interviewers, and customer services representatives whose primary job activities include making outbound calls, gathering data via the use of computer-assisted telephone interviewing system, answering inbound calls,

and responding to customer inquiries. Teleworking agents were also included in this study due to similarity of their work compared to in-office agents. Since data collection occurred during the COVID-19 pandemic, most participants in this study were working from home.

Research sites

Four organizations have granted permission to conduct research. A major part of their operations includes market research or customer service call centers from which inbound and outbound phone calls on a computer-assisted telephone interviewing system are made.

Measures

Participants completed an online questionnaire in English or French, designed in the studies of Firth et al. (2004), Lequeurre et al. (2013), Allen & Meyer (1996), Weiss et al. (1967) van Veldhoven et al. (2015), Roussel, P. (1996), Belghiti-Mahut, S., & Briole, A. (2004) which covered demographic characteristics, Organizational stressors, Mental load, Emotional load, Relationship with superiors, Independence in the work, Participation, Job satisfaction, Organizational commitment and Turnover intentions. Demographic data were be collected on gender, age, level of education, professional status, tenure, and the number of hours worked per week. Except for Organizational stressors and Turnover intentions, all the other subscales were translated and validated in French by previous studies.

Organizational stressors. Organizational stressors were measured using scales adapted from Tate et al. (1997) in their tri nation study of retail salesmen. This subscale was translated into French and checked for accuracy using back-translation procedure as recommended by Brislin (1970). A bilingual contributor was asked to translate the subscale from English into French, which were subsequently back translated into English by another bilingual contributor. Minor differences that emerged during this process were resolved between the author and other

contributors. Three items measured each of the following stressors: role ambiguity (e.g., my job responsibilities are not clear to me), role conflict (e.g., to satisfy some people at my job, I have to upset others), work-overload (e.g., it seems to me that I have more work at my job than I can handle) and work–family conflict (e.g., my work makes me too tired to enjoy family life). Role ambiguity was reverse scored so that high scores would indicate high levels of role ambiguity. Items was answered on a five-point Likert scale, from strongly agree to strongly disagree. The items for Organizational stressors of this study had a Cronbach's alpha coefficient of 0.72, indicating acceptable reliability (George & Mallery, 2019).

Mental load was measured by the Questionnaire on the experience and evaluation of work (van Veldhoven et al., 1997) and Questionnaire sur les Ressources et Contraintes Professionnelles (Lequeurre et al., 2013). The original subscale consisted of seven items (e.g., "Do you have to give continuous attention to your work?"). The French validation study conducted by Lequeurre et al. (2013) examined item-total correlations for each subscale to select the four items that were the most highly correlated with the average of the others. The items for Mental load of this study had a Cronbach's alpha coefficient of 0.84, indicating good reliability (George & Mallery, 2019).

Emotional load was measured by the Questionnaire on the experience and evaluation of work (van Veldhoven et al., 1997) and Questionnaire sur les Ressources et Contraintes Professionnelles (Lequeurre et al., 2013). It consists of 4 items (e.g., "Does your work put you in emotionally upsetting situations?"). The items for Emotional load of this study had a Cronbach's alpha coefficient of 0.72, indicating acceptable reliability (George & Mallery, 2019).

Independence in the work was measured by the Questionnaire on the experience and evaluation of work (van Veldhoven et al., 1997) and Questionnaire sur les Ressources et

Contraintes Professionnelles (Lequeurre et al., 2013). It consists of 4 items (e.g., "Do you have an influence on the pace of work?"). The items for Independence in the work of this study scale had a Cronbach's alpha coefficient of 0.81, indicating good reliability (George and Mallery, 2019).

Participation was measured by the Questionnaire on the experience and evaluation of work (van Veldhoven et al., 1997) and Questionnaire sur les Ressources et Contraintes Professionnelles (Lequeurre et al., 2013). It consists of 4 items (e.g., "Can you participate in decisions affecting issues related to your work?"). The items for Participation of this study had a Cronbach's alpha coefficient of 0.93, indicating excellent reliability (George & Mallery, 2019).

Relationship with superiors was measured by the Questionnaire on the experience and evaluation of work (van Veldhoven et al., 1997) and Questionnaire sur les Ressources et Contraintes Professionnelles (Lequeurre et al., 2013). It consists of 4 items (e.g., "Do you get on well with your superior?"). The items for Relationship with superiors of this study had a Cronbach's alpha coefficient of 0.91, indicating excellent reliability (George & Mallery, 2019).

Organizational commitment was measured by Allen and Meyer's organizational commitment questionnaire (1990), which consists of 18 items on a 5-point response scale from strongly disagree to strongly agree. Affective commitment expresses the emotional attachment of the employees. Normative commitment does not correspond to any individually felt attachment of the organization members, but rather reflects their moral or ethical obligation towards the organization (Meyer et al., 2002, 2013). Continuance commitment results from the motivation to avoid impending costs that would be linked to a possible change of employer (Allen & Meyer, 1990; Meyer et al., 2002, 2013). The French version of this scale was translated and validated by

Belghiti-Mahut S., & Briole A. (2004). The items for Organizational commitment of this study

had a Cronbach's alpha coefficient of 0.83, indicating good reliability (George & Mallery, 2019).

Job satisfaction was measured by the short form of the Minnesota Satisfaction

Questionnaire, which consists of 20 items from the long-form MSQ that best represent each of

the 20 scales, such as authority, compensation, coworkers, responsibility, security, working

conditions (Weiss et al., 1967). The French version of this scale was translated and validated by

Roussel (1994). The items for Job Satisfaction of this study had a Cronbach's alpha coefficient of

0.93, indicating excellent reliability (George & Mallery, 2019).

Turnover intentions were measured by two questions adapted from Hom et al. (1984)'s

turnover constructs that reflect how participants feel about their leaving their jobs. This subscale

was translated into French and checked for accuracy using back-translation procedure as

recommended by Brislin (1970). The answers were rated on a five-point scale (i.e., How often do

you think about leaving the job?). The items for Turnover Intentions of this study had a

Cronbach's alpha coefficient of 0.62, indicating questionable reliability (George & Mallery,

2019).

Table 1. Summary of Number of Items, Cronbach's alpha, Sources and Rating Scales of Measures

Measures	Number of Items	α	English	French	Rating Scale
Organizational stressors	12	0.72	Tate et al. (1997)	Translated using Brislin (1970)'s method	5-point response scale ranging from Strongly disagree = 1 to Strongly agree = 5
Mental load	4	0.84			5-point response scale ranging from Never = 1 to Always = 5
Emotional load	4	0.72			
Independence in the work	4	0.81	QEEW (van Veldhoven et al., 1997)	QRCP (Lequeurre et al., 2013)	
Participation	4	0.93			
Relationship with superiors	4	0.91			
Organizational commitment	18	0.83	Allen and Meyer's OCQ (1990)	Belghiti-Mahut S., & Briole A. (2004)	5-point response scale ranging from Strongly disagree = 1 to Strongly agree = 5
Job Satisfaction	20	0.93	Short form of MSQ (Weiss et al., 1967)	Roussel (1994)	5-point response scale ranging from Not Satisfied = 1 to Extremely Satisfied = 5
Turnover Intentions	2	0.62	Adapted from Hom et al. (1984)'s turnover constructs	Translated using Brislin (1970)'s method	5-point response scale specific to each statement

Procedure

First and foremost, permission to conduct this study were requested from presidents, CEOs, directors of operations, or managers responsible for executive and operational decisions in the call center. Once the permission to conduct this study was obtained, the links to complete anonymous English and French questionnaires were sent to call centers' directors so that the questionnaires could be distributed to employees. Employees' responses were stored and protected with a password on SurveyMonkey's platform. To answer the questions, employees only needed to give their consent without having to give their names.

Data analysis

  Data was downloaded from Survey Monkey and imported to Intellectus Statistics and SPSS for analysis. Intellectus Statistics is an academic statistics software that interprets the statistical results and generates tables and figures that correspond to the quantitative results in English narrative. Except for mediation analysis, the results from a comparison study of Intellectus Statistics and SPSS suggested that accuracy scores, time on task, and perceived usefulness for the two software were not significantly different (Chen et al., 2018). Incomplete responses were excluded from the data. Several items in some measures were reverse scored so that all variables were consistent. Cronbach's α was calculated to assess the internal consistency of the measures. The Cronbach's alpha coefficient was evaluated using the guidelines suggested by George & Mallery (2019) where > .9 is excellent, > .8 is good, > .7 is acceptable, > .6 is questionable, > .5 is poor, and ≤ .5 is unacceptable. Demographic information on age, gender, education, tenure, numbers of working hours per week were calculated to provide a description of the sample. From Hypothesis 1 to Hypothesis 4, Pearson's correlation coefficients were calculated to determine correlations among variables. Simple linear regression analyses were used in Hypothesis 5, 6, 7. An interaction model and partial F-test were added to Hypothesis 5 to determine moderation. PROCESS macro (Hayes, 2018) was used to determine mediation in Hypothesis 8. All hypotheses were tested at a minimum of the 0.05 level of significance.

Results

Demographic Characteristics of Sample

Participants were from Montréal and Saguenay. According to estimations of participating call center's directors, roughly 120 employees would be qualified respondents. A total of 78 respondents, in which 63 of them were from Montréal and 15 of them were from Saguenay, participated. Of those, 58, or 74.36% of those who started the survey, completed it. Incomplete responses were excluded from the data. Based on 58 completed responses, a typical call center employee is female (n = 37, 64%), aging from 25 to 34 years old (n = 16, 28%), having obtained a post-secondary certificate, diploma, or degree below bachelor's degree (n = 23, 40%), working full-time (n = 30, 52%) for more than 5 years (n = 29, 50%). Frequencies and percentages are presented in Table 2.

Table 2. Frequency Table for Gender, Age, Highest completed education, Employment status, Tenure and Numbers of working hours per week

Variables	*n*	*%*
Gender		
Female	37	63.79
Male	21	36.21
Age		
18-24 years old	5	8.62
25-34 years old	16	27.59
35-44 years old	11	18.97
45-54 years old	3	5.17
55-64 years old	15	25.86
65 years or older	8	13.79
Highest completed education		
No diploma	1	1.72
High school diploma	11	18.97
Post-secondary certificate, diploma, or degree below bachelor's degree	23	39.66
Bachelor's degree	17	29.31
University degree above bachelor's degree	6	10.34
Employment status		
Part-time	28	48.28
Full-time	30	51.72
Tenure		
Less than 6 months	1	1.72
6 to 12 months	2	3.45
1 to 3 years	17	29.31
3 to 5 years	9	15.52
5 years and over	29	50.00
Numbers of working hours per week		
30 to 40 hours	30	51.72
20 to 30 hours	9	15.52
9 to 20 hours	19	32.76

Research question 1

The first research question observed the relationships between Job demands, Job resources, Job satisfaction and Organizational commitment. As suggested by Bakker &

Demerouti (2007), the first research question further examined the moderating effect of Job resources in the relationship between Job demands and Job satisfaction, or Organizational commitment.

A correlation matrix was created to portray the summary statistics of all variables and the relationships between Organizational stressors, Mental load, Emotional load, Independence in the work, Participation, Relationship with superiors, Organizational commitment, Job Satisfaction, and Turnover Intentions. Cohen's standard was used to evaluate the strength of the relationships, where coefficients between .10 and .29 represent a small effect size, coefficients between .30 and .49 represent a moderate effect size, and coefficients above .50 indicate a large effect size (Cohen, 1988). Descriptive statistics, intercorrelations and Cronbach's alpha coefficients of each variable are displayed in Table 3.

Hypothesis 1. Job demands (measured by Organizational stressors, mental load, and emotional load) has a negative relationship with Job satisfaction.

A significant negative correlation was observed between Job demands and Job satisfaction ($r_p = -0.26$, $p = .048$). The correlation coefficient between Job demands and Job satisfaction was -0.26, indicating a small effect size. Hypothesis 1 was supported.

Hypothesis 2. Job resources (measured by independence in the work, participation, and relationship with supervisors) have a positive relationship with Job satisfaction.

A significant positive correlation was observed between Job resources and Job satisfaction ($r_p = 0.75$, $p < .001$). The correlation coefficient between Job resources and Job satisfaction was 0.75, indicating a large effect size. Hypothesis 2 was supported.

Hypothesis 3. Job demands have a negative relationship with Organizational commitment.

A Pearson correlation analysis did not confirm a significant relationship between job demands and organizational commitment ($r_p = 0.06$, $p = .679$). Hypothesis 3 was not supported.

Hypothesis 4. Job resources have a positive relationship with Organizational commitment.

A significant positive correlation was observed between Job Resources and Organizational commitment ($r_p = 0.55$, $p < .001$). The correlation coefficient between Job Resources and Organizational commitment was 0.55, indicating a large effect size. Hypothesis 4 was supported.

Table 3. Means, standard deviations, internal consistencies (Cronbach's alphas on the diagonal), and correlations among Organizational stressors, Mental load, Emotional load, Independence in the work, Participation, Relationship with superiors, Organizational commitment, Job Satisfaction, and Turnover Intentions.

	Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1.	Organizational stressors	2.52	0.60	0.72										
2.	Mental load	4.34	0.60	0.12	0.84									
3.	Emotional load	3.04	0.78	0.43***	0.09	0.72								
4.	Job demands	3.30	0.46	0.73***	0.54***	0.79***	-							
5.	Independence in the work	2.11	0.96	-0.09	0.08	0.11	0.06	0.81						
6.	Participation	1.91	0.91	-0.04	0.11	0.19	0.14	0.61***	0.93					
7.	Relationship with superiors	4.07	0.98	-0.46***	0.21	-0.24	-0.24	0.44***	0.36**	0.91				
8.	Job resources	2.70	0.76	-0.25	0.17	0.02	-0.02	0.85***	0.81***	0.76***	-			
9.	Organizational commitment	3.04	0.66	-0.20	0.31*	0.01	0.06	0.28*	0.49***	0.57***	0.55***	0.83		
10.	Job Satisfaction	3.40	0.78	-0.52***	0.16	-0.19	-0.26*	0.52***	0.49***	0.79***	0.75***	0.64***	0.93	
11.	Turnover Intentions	2.54	1.06	0.56***	0.04	0.39**	0.48***	0.06	0.15	-0.31*	-0.05	-0.28*	-0.45***	0.62

Note. *p < .05; **p < .01; ***p < .001.

Hypothesis 5. The relationship between Job demands and Job satisfaction is moderated by Job resources.

For moderation to be supported, two conditions must be met (Netemeyer et al., 2001). First, the causal predictor variable, Job demands, must significantly predict Job satisfaction in the simple effects model. Secondly, the interaction model must explain significantly more variance of Job satisfaction than the non-interaction model. If either of these conditions fail, moderation is not supported. These regressions will be examined based on an alpha of 0.05. Job demands significantly predicted Job satisfaction (B = -0.44, $t(56)$ = -2.02, p = .048). Therefore, the first condition was met, and the second condition was checked. A partial F-test was conducted to determine if the interaction model explained more variance in Job satisfaction than the non-interaction model. The partial F-test, $F(1,54)$ = 1.19, p = .279, indicated that the interaction model did not explain significantly more variance than the non-interaction model based on an alpha of 0.05. Therefore, the second condition was not met. Hypothesis 5 was not supported. The results of the simple, non-interaction, and interaction models are presented in Table 4. Table 5 presents a comparison of the non-interaction and interaction models.

Table 4. Moderation Analysis Table with Job resources moderating the relationship between Job demands and Job satisfaction.

Predictor	B	SE	β	t	p
Step 1: Simple Effects Model					
(Intercept)	4.86	0.73		6.67	< .001
Job demands	-0.44	0.22	-0.26	-2.02	.048
Step 2: Non-Interaction Model					
(Intercept)	2.73	0.52		5.21	< .001
Job demands	-0.42	0.14	-0.25	-2.98	.004
Job resources	0.76	0.08	0.75	9.02	< .001
Step 3: Interaction Model					
(Intercept)	3.40	0.06		53.27	< .001
Job demands	-0.44	0.14	-0.26	-3.12	.003
Job resources	0.71	0.09	0.70	7.51	< .001
Job demands:Job resources	0.15	0.13	0.10	1.09	.279

Table 5. Linear Model Comparison Table between the Non-Interaction and Interaction Model.

Model	R^2	F	df	p
Non-Interaction	0.62			
Interaction	0.63	1.19	1	.279

Hypothesis 6. The relationship between Job demands and Organizational commitment is moderated by Job resources.

Job demands did not significantly predict Organizational commitment, $B = 0.08$, $t(56) = 0.42$, $p = .679$. Since Job demands was not a significant predictor in the simple effects model based on an alpha of 0.05, the first condition was not met. Therefore, hypothesis 6 was not supported. The results of the simple effects models are presented in Table 6.

Table 6. The simple effects models with Job Demands predicting Organizational commitment.

Predictor	B	SE	β	t	p
Simple Effects Model					
(Intercept)	2.78	0.64		4.37	< .001
Job demands	0.08	0.19	0.06	0.42	.679

Research question 2

Based the massive volume of existing literature regarding the most studied predictors Turnover intentions, the second research question determined if Organizational commitment was the stronger predictor of Turnover intentions than Job satisfaction.

Hypothesis 7. Organizational commitment predicted Turnover intentions better than Job satisfaction.

The first linear regression analysis was conducted to assess whether Organizational commitment significantly predicted Turnover intentions. The results of the linear regression model were significant, $F(1,56) = 4.81$, $p = .032$, $R^2 = 0.08$, indicating that approximately 8% of the variance in Turnover intentions is explainable by Organizational commitment. Organizational commitment significantly predicted Turnover intentions, $B = -0.45$, $t(56) = -2.19$, $p = .032$. This indicates that on average, a one-unit increase of Organizational commitment will decrease the value of Turnover intentions by 0.45 units.

The second linear regression analysis was conducted to assess whether Job satisfaction significantly predicted Turnover intentions. The results of the linear regression model were significant, $F(1,56) = 14.25$, $p < .001$, $R^2 = 0.20$, indicating that approximately 20% of the variance in Turnover intentions is explainable by Job satisfaction. Job satisfaction significantly predicted Turnover intentions, $B = -0.61$, $t(56) = -3.77$, $p < .001$. This indicates that on average, a one-unit increase of Job satisfaction will decrease the value of Turnover intentions by 0.61 units.

Since Job satisfaction predicted Turnover intentions better than Organizational commitment,

hypothesis 7 was not supported. Table 7 summarizes the results of the two regression models.

Table 7. Results for Linear Regression with Organizational commitment predicting Turnover intentions and Job satisfaction predicting Turnover intentions.

Variable	B	SE	95% CI	β	t	p
(Intercept)	3.92	0.64	[2.63, 5.21]	0.00	6.11	< .001
Organizational commitment	-0.45	0.21	[-0.87, -0.04]	-0.28	-2.19	.032
(Intercept)	4.62	0.57	[3.49, 5.76]	0.00	8.18	< .001
Job satisfaction	-0.61	0.16	[-0.94, -0.29]	-0.45	-3.77	< .001

Research question 3

Based on the three mediation models regarding the relationships among Organizational

commitment, Job satisfaction and Turnover intentions, the third research question investigated

the mediating effect of Organizational commitment in the relationship between Job satisfaction

and Turnover intentions.

Hypothesis 8. The relationship between Job satisfaction and Turnover intentions is

mediated by Organizational commitment.

Preacher and Hayes (2004) non-parametric bootstrap method was conducted to assess if

Organizational commitment mediated the relationship between Job satisfaction and Turnover

intentions. The PROCESS macro of this method provides point estimates and confidence

intervals by which the strength of the indirect effect can be assessed. If zero does not fall

between the resulting confidence intervals, there is a significant mediation effect. The regression

of Organizational commitment on Job Satisfaction was significant, $F(1, 56) = 38.73, p < .001$.

The results showed that Job Satisfaction was a significant predictor of Organizational

commitment, B = 0.54, t(56) = 6.22, p < .001. The direct effect from Job Satisfaction to

Turnover Intentions is negative and significant ($B = -0.62, SE = 0.21, p = 0.005$), indicating that

employees experiencing high Job Satisfaction are less likely to express Turnover Intentions than those experiencing lower on the measure. The direct effect of Organizational Commitment on Turnover Intentions is positive and insignificant ($B = 0.02$, $SE = 0.25$, $p = 0.94$), indicating employees are not likely to express Turnover Intentions based on their Organizational Commitment. A 95% bias-corrected confidence interval based on 5000 bootstrap samples indicated that the indirect effect (0.01) includes zero (-0.26 to 0.27). Therefore, mediation is not supported. The results of the mediation are presented in Table 8. Table 9 presents the results of the bootstrap method. The raw output from the PROCESS procedure in SPSS Statistics 26 is included in the Appendix C.

Table 8. Mediation Results for Turnover Intentions predicting Job Satisfaction mediated by Organizational Commitment

Dependent	Independent	*B*	*SE*	*t*	*p*
Regression 1:					
Organizational commitment	Job Satisfaction	0.54	0.09	6.22	< .001
Regression 2:					
Turnover Intentions	Job Satisfaction	-0.62	0.21	-2.92	.005
	Organizational commitment	0.02	0.25	0.07	.944

Table 9. Results for Bootstrapping the indirect effect of Job Satisfaction on Turnover Intentions.

Variable	B_0	*SE*	95% CI
Job Satisfaction	0.01	0.14	[-0.26, 0.27]

Discussion

Summary of findings

This study aimed to investigate the role of job demands commonly found in call centers, such as organizational stressors, mental load, and emotional load, and the role of job resources crucial for the perception of job satisfaction, organizational commitment, and turnover intentions, such as independence in the work, participation, and relationship with supervisors at different call centers in Québec. According to the JD-R model, in fact, the current study considered both the presence of job demands and of job resources and their importance on employee well-being (Bakker, Demerouti, & Schaufeli, 2003; Bakker & Demerouti, 2007). Job demands had a significant negative relationship with job satisfaction. Among different job demands, organizational stressors had the highest negative correlation with job satisfaction ($r_p =$ -0.52, $p < .001$). In the 2006 study conducted across 11 Australian call centers, Ming Benjamin Siong et al. found that stressors were not directly predictive of turnover intentions among call center representatives, but rather indirectly related to turnover intentions via supervisor support, job satisfaction, and job commitment for a total effect of 0.48. Job resources had a significant positive relationship with job satisfaction. Among different job resources, relationship with supervisors has the highest positive correlation with job satisfaction ($r_p = 0.79$, $p < .001$). In the 2018 study involved 318 call center agents of an Italian Telecommunication Company, Zito et al. found that job autonomy and supervisors support were positively related to job satisfaction, confirming their role as antecedents of job satisfaction and other well-being indicators. Job resources also had a significant positive relationship with organizational commitment, corresponding to the findings of a one-year follow-up study applying the JD-R model among Australian university staff (Boyd et al., 2011). In the 2010 test of the interaction hypothesis of the JD-R model, Bakker et al. predicted that job resources (skill utilization, learning

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opportunities, autonomy, colleague support, leader support, performance feedback, participation in decision making, and career opportunities) would be positively related to task enjoyment and organizational commitment particularly under conditions of high job demands (workload and emotional demands). Call centre employees who could draw upon job resources such as social support from colleagues and performance feedback felt more dedicated to their work and more committed to their organization, and, consequently, were less inclined to leave the organization (Bakker, Demerouti, & Schaufeli, 2003). Job resources did not buffer the relationship between job demands and job satisfaction nor organizational commitment, conflicting with one of the main features of the JD-R model (Bakker, Demerouti & Schaufeli, 2003; Bakker & Demerouti, 2007). Job demands significantly predicted job satisfaction but did not predict organizational commitment. Organizational commitment significantly predicted turnover intentions, corresponding to the findings of De Ruyter et al., 2001; Hackett et al., 2001; Bentein et al., 2005; and Wagner, 2007. Organizational commitment, however, did not mediate the relationship between job satisfaction turnover intentions, suggesting that these two constructs might independently contribute to the turnover process (Farkas & Tetrick, 1989; Tett & Meyer, 1993). Job satisfaction significantly predicted turnover intentions, corresponding to findings of Tate et al., 1997; Igbaria & Guimaraes, 1993; Netemeyer et al., 1995; and Schaubroeck et al., 1989. In this specific study, job satisfaction was found to be a stronger predictor of turnover intentions than organizational commitment, conflicting with the findings of Griffeth et al. (2000). Das et al. (2013) suggested that job satisfaction could measure how people experienced the quality of their work life, leading them to making the staying or leaving decisions.

Limitations

Canadian call center industry has been the target of numerous market reports and studies (Akyeampong, 2005; van Jaarsveld et al., 2007; Contact Centre Canada, 2009; Flint et al., 2013), yet very little information about specific labor characteristics of the call center industry in Québec was available. A SEM model was originally planned during the data analysis procedure to determine if the aggregation of the three Job demands and three Job resources measures adequately described the data. The small sample size of this study was insufficient to conduct factor analysis; therefore, the SEM model was included in Appendix D as an exploratory causal model of turnover intention amongst call center employees. This study failed to consider other physical and organizational ergonomics that could be both job demands and resources contributing to turnover intentions. The generalization of this study was a limiting factor because the research sample was drawn from four call centers in only two major Québec cities. The methodology of this study was created in mid-2019, while data collection started in June 2020, months after Canada issued social distancing measures due to the global pandemic. Hence, the research design failed to include variables that may reflect changes on employees' attitudes towards their jobs and provide more insight about their coping mechanisms. In the study on the impact of the recent economic crisis of 2009 in Greece on employee work-related attitudes via changes in regulatory focus, based on a large and heterogeneous sample collected during the crisis and five years earlier before the crisis, Markovits et al. (2014) found that participants during the crisis were lower in extrinsic job satisfaction, affective organizational commitment and were also lower in normative commitment, while these attitudinal changes were explained by decreased promotion orientation and increased prevention focus. Drawing from a sample of employees in a large Turkish conglomerate prior to and following a major economic crisis in

early 2001, Meyer et al. (2018) found higher levels of both turnover intentions and work withdrawal following the crisis. A cross-sectional research design involving 261 frontline nurses in the Philippines revealed that an increased level of fear of COVID-19 was associated with decreased job satisfaction, increased psychological distress, and increased organisational and professional turnover intentions (Labrague & de Los Santos, 2020). Most participants to this study were presumably teleworkers, yet this study also failed to capture differences in feelings towards various job characteristics between teleworkers and their in-office colleagues. By examining the impact of teleworking on turnover intentions in U.S. federal agencies, Caillier (2013) found that teleworkers and non-teleworkers reported similar intentions to quit; however, government workers were more likely to report a leave intention when they were denied the opportunity to telecommute. Finally, this study did not measure the impacts of teleworking on various aspects of the job such as social and professional isolation. Professional isolation's impact on job performance is increased by the amount of time spent teleworking; therefore, employees who feel professionally isolated are more likely to experience even greater uncertainty and ambiguity (Vega, 2003), which further degrades their ability to fully interpret critical information and complex understandings that aid performance (Cooper & Kurland, 2002; Golden et al., 2008).

Recommendations

An investigation of possible challenges derived from professional isolation should be considered when designing effective teleworking programs. Whereas initiatives such as training programs on how to cope with professional isolation could be useful, fundamentally, managers need to be more proactive (Golden et al., 2008). This may include structuring activities between coworkers to ensure sufficient levels of both task and affective exchanges occur, and to build and

strengthen interpersonal connections while achieving work objectives (Golden, 2007).

Performance appraisals may also need to include assessments of focused sessions in which

employees share knowledge of common topics important for professional development, as well

as informal interoffice activities that build cohesion and reinforce professional respect (Golden et

al., 2008). Additionally, human resource professionals and managers may need to devote greater

attention toward changing job designs and providing developmental assignments whereby

employees feel more integrally involved in core organizational functions. In a 2-year research

and development project, using a holistic approach and under consideration of all the relevant

disciplines, Benninghoven et al. (2005) created six rules of thumb for effective work design in

call centers, which were focused on the typical positive and negative factors of stress in call

centers such as emotional strain, social factors, lack of supportive behaviour, perceived

recognition. The method of prospective occupational design, which was applied during the

planning phase for a new call centre, has proven to be particularly effective in the prevention of

stress (Benninghoven et al., 2005). The rules included:

1. A telephoning rate of less than 60% of working time to reduce direct customer
   communication to an acceptable level.

2. A regular system of short breaks of five minutes per hour of labour on average.

3. Well-designed conditions for completing the tasks such as job requirements, room for
   manoeuvre in job tasks, optimised performance, and time targets to enrich the job tasks
   and boost satisfaction of the agents.

4. A switch between telephoning and clerical duties

5. Inclusion of the agents in the definition of job tasks and processes, performance measurement and evaluation, and in division of the work schedule to support perceived recognition for work performance.

6. Qualification and training for agents in specialist knowledge and in socio communicative areas to strengthen the support by the supervisor.

This method was successfully applied for the first time at the call centre in the Stadtsparkasse bank in Hannover, Germany, and was awarded a first prize by the European Agency for Safety and Health at Work during the European Stress Prevention Week in 2002 (Benninghoven et al., 2005). Knights & McCabe (2003) found that the flexibility of choosing work hours and schedule of and the option of working part-time at some call centers allowed parents to fit work in around family life. Performance monitoring is positively associated with wellbeing when it is used developmentally rather than punitively (Holman, 2004). Frenkel et al (1998) found that call center employees generally accepted electronic monitoring when they could see its place within a broader system of appraisal and development. While assessing the impact of a call center's electronic monitoring system on satisfaction with the monitoring system and on job satisfaction, Chalykoff & Kochan (1989) discovered that immediacy of feedback, the use of constructive feedback and the clarity of rating criteria were all positively related to satisfaction with the monitoring system, which in turn was related to job satisfaction. However, if performance monitoring is excessive and too frequent, it will have a negative association with wellbeing (Holman, 2004). Based on a survey of call center employees within a large payroll and human resources services company in New York State, Leblanc (2013) believed that feedback and skill variety were types of initiatives likely to provide organizations with the greatest return in call center work job satisfaction. Timely and effective feedback methods must be included to

enhance the motivating psychological state and knowledge of results. In addition, call center managers must make sure that trust is a strong part of the business unit's culture. Call center managers can improve feedback methods by enhancing the performance measurements and by ensuring that a variety of skills exist within in worker's job design (Leblanc, 2013).

Due to managers' inability of physically monitoring teleworkers, different metrics were recommended to assess their performance. To help in this evaluation process, companies can use workflow management systems to "break down work into different activities that are connected by business logic" and provide users with a work list that "provides details of jobs to be done, as well as where a given job is in the process" (Limburg & Jackson, 2007). To avoid breach of data security, reliably security systems for widely dispersed computers must involve a complex series of controls designed to prevent, detect, and correct problems as they occur (Raiborn & Butler, 2009). Employers should train with an emphasis on prevention and prompt teleworkers to update computer programs and comply with software license restrictions. Policies forbidding pirated software or freeware from being loaded onto a company computer can help prevent the introduction of viruses and other malware into teleworkers' computers (Raiborn & Butler, 2009). Mandating periodic password changes or the use of randomly generated. one-time-only passwords, restricting the use of teleworkers' computers to business activities, and banning the use of teleworkers' computers by others can also help to prevent problems from occurring. Use of Virtual Private Network encryption software can help ensure secure transmission of sensitive data and can prevent use of the data if they are intercepted (Raiborn & Butler, 2009). When prevention fails, monitoring software can help detect security breaches or trace incidents and provide a forensic evidence path. Collecting equipment before teleworkers exit the company or change internal jobs can help the company avoid the leak of sensitive data (Raiborn & Butler,

2009). Simultaneously, companies must make teleworkers understand the problems with using personal devices not under the company's control for work assignments. A particularly devastating teleworking nightmare for employers is the leak of internal sensitive or proprietary data, which easily impact not only the company, but also the company's clients (Raiborn & Butler, 2009). Teleworkers who carry their computers from point to point create additional vulnerability for companies when the computer is stolen. Not only does the computer contain potentially sensitive data, but it also provides an ability to enter the corporate network (Raiborn & Butler, 2009). These computers should have multifactor password authentication protocols, encrypted hard drives, and biometric protection such as fingerprints, retina, or voice recognition. Many companies have begun offering such authentication technologies at a reasonable cost and with increased ease of use. Some of the built-in biometric devices operate independently of the computer's operating system, and a failure to provide proper user identification will prevent the laptop from booting (Raiborn & Butler, 2009).

Conclusion

Call centers have attracted interests of business entrepreneurs and researchers, yet the stigma and the work environment of call centers seemingly remain unchanged for many decades. Some call center managers consider high turnover rate a part of their unavoidable business cycle, while some employees regard their job at call centers as a temporary occupation until they can land a more appealing position somewhere else. Eventually, employers' operational costs rise alongside with employees' suffering from detrimental working conditions. The study has provided a glimpse into the work environment of remote call center workers in Québec during the COVID-19 pandemic. The results are somewhat consistent with literature findings in terms of establishing the relationship between job resources, job satisfaction and turnover intentions.

The recommendations provided in this study may help call center managers move from a reactive to a proactive role in managing worker job satisfaction through job redesign, communications, and trust-building initiatives. With a properly designed constructs and a larger sample size, this study could provide greater insight to the antecedents of turnover intentions and the influence of teleworking during an economic crisis. The study could further verify the use of the JD-R model in call centers as well as its appropriateness for a wide range of job descriptions.

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Participant Consent Form

Voluntary turnover at outbound call centers

Student researcher	**Pham Phuong Mai Do**
	MSc in Psychology
	Faculty of Arts and Science – Department of Psychology
	Université de Montréal
	Email: mai.do@umontreal.ca
Research supervisor	**Robert Haccoun**
	Full professor
	Faculty of Arts and Science – Department of Psychology

You are invited to participate in a research project. Before agreeing to participate in this study, it is important that you read and understand the following explanations, so you can make an informed decision about taking part in this study.

Purpose of the Study

This study is designed to increase our understanding about factors that can influence turnover intentions of telephone employees in call centers. A quantitative study will be conducted to collect opinions of current employees who agree to participate in this study.

Research Procedures

Your contribution consists of filling out an online questionnaire created on the platform SurveyMonkey. The link to the questionnaire will be sent to your provided email.

Confidentiality

Data collected will remain strictly anonymous and confidential. All data will be used for research purposes and to write a scientific paper about the voluntary turnover intentions of telephone employees at call centers. Only people who are associated with the study will see your responses. Also, responses will not be associated with your name. No names nor identifying information will be used in any publication or presentation.

Anticipated Benefits and Potential Risks

Your participation will be a valuable addition to our research and findings that could lead to greater public understanding of turnover intentions at a research call center. The results of this

study might be used to improve your job satisfaction at outbound call centers. There are no anticipated risks associated with participation in this study. However, you might have some hesitations during the procedure. You are free to refuse to answer any questions that you deem embarrassing or sensitive in the questionnaire without providing any reasons, or to withdraw from the procedure. If some situations trigger negative reactions, please do not hesitate to inform the researcher. It is possible that some questions might remind you about an uncomfortable experience. At any moment you can refuse to answer a question.

Voluntary Participation and Withdrawal

Your participation in this research is entirely voluntary. You are free to withdraw your consent and terminate your participation at any time without giving any reasons. You simply have to notify the researcher by verbal notice.

Responsibilities of the researcher

By agreeing to participate in this study, you do not waive any of your rights or release the researcher or the institution from their civil and professional responsibilities.

Questions

If you have questions regarding any scientific aspects of this research, please contact Pham Phuong Mai Do at mai.do@umontreal.ca

For any concerns on your rights or the responsibilities of the researcher regarding your participation of this project, please contact Comité d'éthique de la recherche en éducation et en psychologie (CEREP) by email at cerep@umontreal.ca or by telephone at (514) 343-6111, ext. 1896 or visit the website http://recherche.umontreal.ca/participants.

Any complaint concerning this research may be addressed to the ombudsman of the Université de Montréal, at the telephone number (514) 343-2100 or at the email address ombudsman@umontreal.ca. The ombudsman accepts collect calls. French and English speakers will be available to receive calls between 9am and 5pm.

Consent

Participant

☐ I have reviewed the attached documentation describing the nature and course of the project as well as the risks and inconveniences that may arise.

☐ I understand that by participating in this research project, I do not waive any of my rights or release the researcher from her responsibilities.

☐ I understand that by sending my answers, I consent to take part in this research project

Participant's Printed Name	Participant's Signature
	Date :

Researcher

I have explained to the participant all the conditions of participation in this project. I have responded to the questions asked by the participant with my best knowledge and ensured the participant's understanding. I respect all the terms and conditions written in the consent form.

Researcher Printed Name	Researcher's Signature
	Date :

Formulaire D'information Et De Consentement

Voluntary turnover at outbound call centers

Chercheuse étudiante	**Pham Phuong Mai Do**
	Étudiante à la maîtrise en psychologie
	Faculté des arts et des sciences - Département de psychologie
	Université de Montréal
	Courriel: mai.do@umontreal.ca
Directeur de recherche	**Robert Haccoun**
	Professeur titulaire
	Faculté des arts et des sciences - Département de psychologie

Vous êtes invité à participer à un projet de recherche. Avant d'accepter d'y participer, veuillez prendre le temps de lire ce document présentant les conditions de participation au projet. N'hésitez pas à poser toutes les questions que vous jugerez utiles à la personne qui vous présente ce document.

Objectifs de la recherche

Cette étude est conçue pour améliorer notre compréhension des facteurs susceptibles d'influencer les intentions de quitter chez des agents de téléphone dans les centres d'appels. Une étude quantitative sera menée afin de recueillir les opinions des employés actuels qui acceptent de participer à cette étude.

Procédures de la recherche

Votre contribution consiste à remplir un questionnaire en ligne créé sur la plateforme sécurisée de SurveyMonkey. Le lien vers le questionnaire sera envoyé à l'adresse électronique fournie.

Confidentialité

Les renseignements personnels que vous nous donnerez demeureront strictement anonymes et confidentiels. Toutes les données seront utilisées à des fins de recherche et pour rédiger un article scientifique sur les intentions de quitter chez des agents de téléphone dans les centres d'appels. De plus, les réponses ne seront pas associées à votre nom. Aucune information permettant de vous identifier d'une façon ou d'une autre ne sera publiée ni dévoilée. Les résultats globaux de l'étude pourraient être utilisés dans des publications ou des communications, mais toujours de façon anonyme, c'est-à-dire sans jamais nommer ou identifier les participants.

Avantages et risques

Votre participation sera un ajout précieux à notre recherche et à nos résultats, qui pourraient permettre au public de mieux comprendre les intentions de quitter dans les centres d'appels. Les résultats de cette étude pourraient être utilisés pour améliorer votre satisfaction au travail et apporter des changements positifs à votre environnement de travail. Il n'y a pas de risque particulier à participer à ce projet. Pourtant, vous pourriez avoir certaines hésitations durant le processus. Vous demeurez libre de ne pas vous prononcer sur des questions que vous estimez embarrassantes ou délicates dans le questionnaire, sans avoir à vous justifier, ou à vous retirer du processus. Si certaines situations suscitent des réactions négatives chez vous, n'hésitez pas à nous le communiquer. Il est possible aussi que certaines questions puissent raviver des souvenirs liés à une expérience désagréable. Vous pourrez à tout moment refuser de répondre à une question.

Participation volontaire et droit de retrait

Vous êtes libre d'accepter ou de refuser de participer à ce projet de recherche. Vous pouvez retirer votre consentement et mettre fin à votre participation à n'importe quel moment, sans avoir à donner de raison. Vous avez simplement à aviser la personne ressource de l'équipe de recherche par simple avis verbal.

Responsabilité de la chercheuse

En acceptant de participer à cette étude, vous ne renoncez à aucun de vos droits ni ne libérez la chercheuse ou l'établissement de leurs responsabilités civiles et professionnelles.

Questions

Si vous avez des questions sur les aspects scientifiques du projet de recherche, vous pouvez contacter Pham Phuong Mai Do au courriel mai.do@umontreal.ca

Pour toute préoccupation sur vos droits ou sur les responsabilités de la chercheuse concernant votre participation à ce projet, vous pouvez contacter Comité d'éthique de la recherche en éducation et en psychologie (CEREP) à l'adresse cerep@umontreal.ca ou au 514-343-6111, poste 1896 ou consulter le site http://recherche.umontreal.ca/participants.

Toute plainte concernant cette recherche peut être adressée à l'ombudsman de l'Université de Montréal, au numéro de téléphone (514) 343-2100 ou à l'adresse courriel ombudsman@umontreal.ca. L'ombudsman accepte les appels à frais virés. Il s'exprime en français et en anglais et prend les appels entre 9h et 17h.

Consentement

Déclaration du participant

☐ J'ai pris connaissance de la documentation ci-jointe, décrivant la nature et le déroulement du projet de même que des risques et des inconvénients qui pourraient survenir.

☐ Je comprends qu'en participant à ce projet de recherche, je ne renonce à aucun de mes droits ni ne dégage la chercheuse de ses responsabilités.

☐ Je comprends qu'en envoyant mes réponses, je témoigne de mon consentement à prendre part à ce projet de recherche.

Prénom et nom du participant
(Caractères d'imprimerie)

Signature du participant

Date :

Engagement de la chercheuse

J'ai expliqué les conditions de participation au projet de recherche au participant. J'ai répondu au meilleur de ma connaissance aux questions posées et me suis assuré de la compréhension du participant. Je m'engage à respecter ce qui a été convenu au présent formulaire d'information et de consentement.

Prénom et nom de la chercheuse
(Caractères d'imprimerie)

Signature de la chercheuse

Date :

Appendix B – Questionnaires

Turnover Intentions Questionnaire

SECTION I: General Information

Please provide the following information

1. Your Gender:
   a. Male
   b. Female

2. Your age:

   a. 18-24 years old
   b. 25-34 years old
   c. 35-44 years old
   d. 45-54 years old
   e. 55-64 years old
   f. 65 years or older

3. Your highest level of completed education

   a. No diploma
   b. High school diploma
   c. Post-secondary certificate, diploma, or degree below bachelor's degree
   d. Bachelor's degree
   e. University degree above bachelor's degree

4. Employment status:

   a. Full-time
   b. Part-time

5. How long have you been working for this organization?

   a. Less than 6 months

b. 6 to 12 months

c. 1 to 3 years

d. 3 to 5 years

e. 5 years and over

6. How many hours per week do you work for this organization? _____ hours

SECTION II (Organizational stressors)

Please choose the answer which indicates how much you agree or disagree with each of the following statements.

     Strongly disagree   = 1

     Disagree   = 2

     Neither agree nor disagree   = 3

     Agree = 4

     Strongly agree = 5

1. My job responsibilities are clear to me.	1	2	3	4	5
2. My job objectives are well-defined	1	2	3	4	5
3. It is clear to me what others expect of me at my job.	1	2	3	4	5
4. At my job, I cannot satisfy everybody at the same time	1	2	3	4	5
5. To satisfy some people at my job, I have to upset others.	1	2	3	4	5
6. At my job, I have to do things which should be done differently	1	2	3	4	5
7. I am given enough time to do what is expected of me at my job.	1	2	3	4	5
8. It seems that I have more work at my job than I can handle	1	2	3	4	5
9. My job requires that I work very hard.	1	2	3	4	5
10. My job schedule interferes with my family life.	1	2	3	4	5
11. My job makes me too tired to enjoy my family life.	1	2	3	4	5
12. My job does not give me enough time for family activities	1	2	3	4	5

SECTION III (Mental load)

When you think about yourself and your job, how often do you feel each of the following ways?

     Never = 1

     Rarely = 2

     Sometimes   = 3

1. Does your work demand a lot of concentration?	1 2 3 4 5
2. Does your work require continual thought?	1 2 3 4 5
3. Do you have to give continuous attention to your work?	1 2 3 4 5
4. Does your work require a great deal of carefulness?	1 2 3 4 5

SECTION IV (Emotional load)

When you think about yourself and your job, how often do you feel each of the following ways?

Please choose the answer that best describes your feeling for the following statements.

Never = 1

Rarely = 2

Sometimes   = 3

Often = 4

Always = 5

1. Does your work demand a lot from you emotionally?	1 2 3 4 5
2. In your work, do you have to be able to convince or persuade people?	1 2 3 4 5
3. Are you confronted with things that affect you personally in your work?	1 2 3 4 5
4. Does your work put you in emotionally upsetting situations?	1 2 3 4 5

SECTION V (Independence in the work)

When you think about yourself and your job, how often do you feel each of the following ways?

Please choose the answer that best describes your feeling for the following statements.

Never = 1

Rarely = 2

Sometimes = 3

Often = 4

Always = 5

1. Do you have an influence on the pace of work?	1 2 3 4 5
2. Can you personally decide how much time you need for a specific activity?	1 2 3 4 5
3. Can you decide the order in which you carry out your work on your own?	1 2 3 4 5

4. Can you participate in the decision about when something must be completed?   1 2 3 4 5

SECTION VI (Participation)

When you think about yourself and your job, how often do you feel each of the following ways?

Please choose the answer that best describes your feeling for the following statements.

Never = 1

Rarely = 2

Sometimes   = 3

Often = 4

Always = 5

1. Can you participate in decisions about what your job does or does not entail?	1 2 3 4 5
2. Can you participate in decisions affecting issues related to your work?	1 2 3 4 5
3. Can you participate in decisions about the nature of your work?	1 2 3 4 5
4. Do you have a direct influence on your department's/company's decisions?	1 2 3 4 5

SECTION VII (Relationships with supervisors)

Please choose the answer that best describes your feeling for the following statements.

Never = 1

Rarely = 2

Sometimes   = 3

Often = 4

Always = 5

1. In your work, do you feel appreciated by your superior?	1 2 3 4 5
2. Can you count on your superior when you come across difficulties in your work?	1 2 3 4 5
3. Do you get on well with you superior?	1 2 3 4 5
4. Is there a good atmosphere between you and your superior?	1 2 3 4 5

SECTION VIII (Organizational commitment)

Now, we would like to know how you feel about working for this organization. Please choose the answer which indicates how much you agree or disagree with each of the following statements.

Strongly disagree = 1
Disagree = 2
Neither agree nor disagree = 3
Agree = 4
Strongly agree = 5

1. I would be very happy to spend the rest of my career with this organization. 1 2 3 4 5

2. I really feel as if this organization's problems are my own. 1 2 3 4 5

3. I do not feel a strong sense of belonging to my organization. 1 2 3 4 5

4. I do not feel "emotionally attached" to this organization. 1 2 3 4 5

5. I do not feel like "part of the family" at my organization. 1 2 3 4 5

6. This organization has a great deal of personal meaning for me. 1 2 3 4 5

7. Right now, staying with my job at this organization is a matter of necessity as much as desire. 1 2 3 4 5

8. It would be very hard for me to leave my job at this organization right now even if I wanted to. 1 2 3 4 5

9. Too much of my life would be disrupted if I leave my organization. 1 2 3 4 5

10. I feel that I have too few options to consider leaving this organization. 1 2 3 4 5

11. If I had not already put so much of myself into this organization, I might consider working elsewhere. 1 2 3 4 5

12. One of the few negative consequences of leaving this organization would be the scarcity of available alternatives. 1 2 3 4 5

13. I do not feel any obligation to remain with my organization. 1 2 3 4 5

14. Even if it were to my advantage, I do not feel it would be right to leave. 1 2 3 4 5

15. I would feel guilty if I left this organization now. 1 2 3 4 5

16. This organization deserves my loyalty. 1 2 3 4 5

17. I would not leave my organization right now because I have a sense of obligation to the people in it. 1 2 3 4 5

18. I owe a great deal to this organization.   1 2 3 4 5

SECTION IX (Job Satisfaction)

In this section, please choose the appropriate answer to indicate how satisfied you are with various aspects of your job.

Ask yourself: How satisfied am I with this aspect of my job?

Not Satisfied   = 1

Somewhat Satisfied   = 2

Satisfied   = 3

Very Satisfied = 4

Extremely Satisfied   = 5

1. Being able to keep busy all the time.   1 2 3 4 5

2. The chance to work alone on the job.   1 2 3 4 5

3. The chance to do different things from time to time.   1 2 3 4 5

4. The chance to be "somebody" in the community.   1 2 3 4 5

5. The way my boss handles his/her workers.   1 2 3 4 5

6. The competence of my supervisor in making decisions.   1 2 3 4 5

7. Being able to do things that don't go against my conscience.   1 2 3 4 5

8. The way my job provides for steady employment.   1 2 3 4 5

9. The chance to do things for other people.   1 2 3 4 5

10. The chance to tell people what to do.   1 2 3 4 5

11. The chance to do something that makes use of my abilities.   1 2 3 4 5

12. The way company policies are put into practice.   1 2 3 4 5

13. My pay and the amount of work I do.   1 2 3 4 5

14. The chances for advancement on this job.   1 2 3 4 5

15. The freedom to use my own judgment.   1 2 3 4 5

16. The chance to try my own methods of doing the job.	1 2 3 4 5
17. The working conditions.	1 2 3 4 5
18. The way my co-workers get along with each other.	1 2 3 4 5
19. The praise I get for doing a good job.	1 2 3 4 5
20. The feeling of accomplishment I get from the job.	1 2 3 4 5

SECTION X (Turnover Intentions)

The following statements are related to your job performance and intention to stop working for this organization. Please answer each of the following items.

1. How often do you think of leaving your present job?

   a. Rarely or Never
   b. Occasionally
   c. Sometimes
   d. Fairly often
   e. Very often

2. How likely are you to look for a new job within the next year?
   a. 0% - 20%
   b. 21% - 40%
   c. 41% - 60%
   d. 61% - 80%
   e. 81% - 100%

Questionnaire sur le roulement volontaire dans les centres d'appel

SECTION I: Information Générale

Veuillez fournir les informations suivantes:

1. Votre genre:
   a. Masculin
   b. Féminin

2. Votre âge:
   a. 18-24 ans
   b. 25-34 ans
   c. 35-44 ans
   d. 45-54 ans
   e. 55-64 ans
   f. 65 ans et plus

3. Votre plus haut niveau d'étude complété:
   a. Aucun diplôme
   b. Diplôme d'études secondaires (DES)
   c. Certificat, diplôme ou grade postsecondaire inférieur au baccalauréat
   d. Baccalauréat
   e. Diplôme universitaire supérieur au baccalauréat

4. Statut d'emploi:
   a. Temps plein
   b. Temps partiel

5. Depuis combien de temps travaillez-vous pour cette entreprise?
   a. Moins de 6 mois
   b. 6 à 12 mois
   c. 1 à 3 ans
   d. 3 à 5 ans
   e. 5 ans et plus

6. Combien d'heures par semaine travaillez-vous pour cette entreprise?   _____ heures

SECTION II (Facteurs de stress)

Veuillez choisir la réponse qui représente à quel point vous êtes en accord avec chacun des énoncés suivants

Fortement en désaccord = 1

En désaccord = 2

Ni en accord, Ni en désaccord = 3

En accord = 4

Fortement en accord = 5

1. Mes responsabilités au travail sont claires pour moi.	1 2 3 4 5
2. Mes objectifs de travail sont bien définis.	1 2 3 4 5
3. Il est clair pour moi ce que les autres attendent de moi dans mon travail.	1 2 3 4 5
4. À mon travail, je ne peux pas satisfaire tout le monde en même temps.	1 2 3 4 5
5. Pour satisfaire certaines personnes à mon travail, je dois en contrarier d'autres.	1 2 3 4 5
6. Au travail, je dois faire des choses qui devraient être faites différemment.	1 2 3 4 5
7. On me donne suffisamment de temps pour faire ce que l'on attend de moi dans mon travail.	1 2 3 4 5
8. J'ai l'impression que j'ai plus de travail que ce que je peux supporter.	1 2 3 4 5
9. Mon emploi exige que je travaille très fort.	1 2 3 4 5
10. Mon horaire de travail interfère avec ma vie de famille.	1 2 3 4 5
11. Mon emploi me fatigue trop pour que je profite de ma vie familiale.	1 2 3 4 5
12. Mon travail ne me donne pas assez de temps pour les activités familiales.	1 2 3 4 5

SECTION III (Charge mentale)

Au travail, à quelle fréquence avez-vous ressentis chacun des sentiments suivants? Veuillez choisir la réponse qui décrit le mieux vos sentiments pour les énoncés suivants.

Jamais = 1

Rarement = 2

De temps en temps   = 3

Souvent   = 4

Toujours   = 5

1. Votre travail demande-t-il une concentration importante ?	1 2 3 4 5
2. Votre travail demande-t-il une réflexion constante ?	1 2 3 4 5
3. Devez-vous être constamment attentif(ve) à votre travail ?	1 2 3 4 5
4. Votre travail nécessite-t-il beaucoup d'attention ?	1 2 3 4 5

SECTION IV (Charge émotionnelle)

Au travail, à quelle fréquence avez-vous ressentis chacun des sentiments suivants? Veuillez choisir la réponse qui décrit le mieux vos sentiments pour les énoncés suivants.

Jamais = 1

Rarement   = 2

De temps en temps   = 3

Souvent   = 4

Toujours   = 5

1. Votre travail nécessite-t-il une forte implication émotionnelle de votre part ?	1 2 3 4 5
2. Dans votre travail, devez-vous être capable de convaincre ou de persuader d'autres personnes ?	1 2 3 4 5
3. Êtes-vous confronté(e) à des choses qui vous touchent personnellement dans votre travail ?	1 2 3 4 5
4. Votre travail vous confronte-t-il à des situations déstabilisantes sur le plan émotionnel?	1 2 3 4 5

SECTION V (Indépendance au travail)

Au travail, à quelle fréquence avez-vous ressentis chacun des sentiments suivants? Veuillez choisir la réponse qui décrit le mieux vos sentiments pour les énoncés suivants.

Jamais = 1

Rarement   = 2

De temps en temps   = 3

Souvent = 4	
Toujours = 5	

1. Pouvez-vous déterminer votre propre rythme de travail ?	1 2 3 4 5
2. Pouvez-vous décider du temps dont vous avez besoin pour réaliser une tâche ?	1 2 3 4 5
3. Pouvez-vous décider de l'ordre dans lequel vous effectuez les différentes tâches qui vous sont assignées ?	1 2 3 4 5
4. Pouvez-vous décider du moment où les tâches doivent être réalisées ?	1 2 3 4 5

SECTION VI (Participation)

Au travail, à quelle fréquence avez-vous ressentis chacun des sentiments suivants? Veuillez choisir la réponse qui décrit le mieux vos sentiments pour les énoncés suivants.

Jamais = 1

Rarement   = 2

De temps en temps   = 3

Souvent   = 4

Toujours   = 5

1. Prenez-vous part aux décisions sur ce qu'implique votre travail ?	1 2 3 4 5
2. Pouvez-vous participer aux décisions affectant votre travail ?	1 2 3 4 5
3. Prenez-vous part aux décisions concernant la nature de votre travail ?	1 2 3 4 5
4. Avez-vous une influence directe sur les décisions prises dans votre service/entreprise ?	1 2 3 4 5

SECTION VII (Relations avec superviseurs)

Maintenant, nous voudrions savoir comment vos supérieurs immédiats vous soutiennent lorsque vous faites face à des problèmes liés à votre emploi. Veuillez choisir la réponse qui décrit le mieux vos sentiments pour les énoncés suivants.

Jamais = 1

Rarement   = 2

De temps en temps   = 3

Souvent   = 4

Toujours   = 5

1. Dans votre travail, vous sentez-vous apprécié(e) par votre supérieur(e) ?	1	2	3	4	5
2. Pouvez-vous compter sur votre supérieur(e) hiérarchique quand vous rencontrez des difficultés dans votre travail ?	1	2	3	4	5
3. Vous entendez-vous bien avec votre supérieur(e) ?	1	2	3	4	5
4. Existe-t-il une bonne ambiance entre votre supérieur(e) et vous ?	1	2	3	4	5

SECTION VIII (Engagement organisationnel)

Maintenant, nous voudrions savoir comment vous vous sentez par rapport à votre travail au sein de cette entreprise. Veuillez choisir la réponse qui décrit le mieux vos sentiments pour chacun des énoncés suivants :

Pas du tout d'accord   = 1

Plutôt pas d'accord   = 2

Ni en désaccord, ni d'accord   = 3

Plutôt d'accord   = 4

Tout à fait d'accord   = 5

1. Je serais très heureux(se) de finir ma carrière dans cette entreprise.	1	2	3	4	5
2. Je ressens les problèmes de cette entreprise comme les miens	1	2	3	4	5
3. Je ne ressens pas un fort sentiment d'appartenance à cette entreprise.	1	2	3	4	5
4. Je ne me sens pas attaché(e) affectivement à cette entreprise.	1	2	3	4	5
5. Je me sens membre à part entière de cette entreprise	1	2	3	4	5
6. Cette entreprise a une grande signification pour moi.	1	2	3	4	5
7. Rester dans cette entreprise est autant affaire de nécessité que de désir.	1	2	3	4	5
8. Ce serait très difficile pour moi de quitter l'entreprise, même si je le voulais.	1	2	3	4	5
9. Trop de choses dans ma vie pourraient être perturbées si je décidais de quitter cette entreprise actuellement.	1	2	3	4	5
10. Je pense que je n'ai pas assez d'opportunités de rechange pour quitter cette entreprise.	1	2	3	4	5
11. Si je n'avais pas tant donné à cette entreprise, je pourrais penser à travailler ailleurs.	1	2	3	4	5

12. Une des rares préoccupations avec mon départ serait le peu d'alternatives possibles.	1	2	3	4	5
13. Je ne ressens pas une obligation de rester chez mon employeur actuel.	1	2	3	4	5
14. Je ne ressens pas le droit de quitter cette entreprise actuellement, même si cela était à mon avantage.	1	2	3	4	5
15. Si je quittais cette entreprise maintenant, je n'aurais aucun remords.	1	2	3	4	5
16. Cette entreprise mérite ma loyauté.	1	2	3	4	5
17. Je ne quitterais pas cette entreprise, car je me sens redevable envers les personnes qui y travaillent.	1	2	3	4	5
18. Je dois beaucoup à cette entreprise	1	2	3	4	5

SECTION IX (Satisfaction au travail)

Dans cette section, veuillez choisir la réponse appropriée pour indiquer à quel point vous êtes satisfait(e) ou insatisfait(e) avec différents aspects de votre travail.

Dans votre emploi actuel, êtes-vous satisfait(e)?

Très insatisfait(e)= 1

Insatisfait(e)   = 2

Ni satisfait(e), ni insatisfait(e)= 3

Satisfait(e)   = 4

Très satisfait(e)   = 5

1. Des possibilités de rester occupé(e) tout le temps au cours de la journée de travail	1	2	3	4	5
2. Des possibilités de travailler seul(e) dans votre emploi	1	2	3	4	5
3. Des possibilités de faire des choses différentes de temps en temps	1	2	3	4	5
4. De votre importance aux yeux des autres	1	2	3	4	5
5. De la manière dont votre supérieur(e) dirige ses employés	1	2	3	4	5
6. De la compétence de votre supérieur dans les prises de décision	1	2	3	4	5
7. Des possibilités de faire des choses qui ne sont pas contraires à votre conscience	1	2	3	4	5
8. De la stabilité de votre emploi	1	2	3	4	5
9. Des possibilités d'aider les gens dans l'entreprise	1	2	3	4	5

10. Des possibilités de dire aux gens ce qu'il faut faire	1	2	3	4	5
11. Des possibilités de faire des choses qui utilisent vos capacités	1	2	3	4	5
12. De la manière dont les règles et les procédures internes de l'entreprise sont mises en application	1	2	3	4	5
13. De votre salaire par rapport à l'importance du travail que vous faites	1	2	3	4	5
14. De vos possibilités d'avancement	1	2	3	4	5
15. Des possibilités de prendre des décisions de votre propre initiative	1	2	3	4	5
16. Des possibilités d'essayer vos propres méthodes pour réaliser le travail	1	2	3	4	5
17. Des conditions de travail	1	2	3	4	5
18. De la manière dont vos collègues s'entendent entre eux	1	2	3	4	5
19. Des compliments que vous recevez pour la réalisation d'un bon travail	1	2	3	4	5
20. Du sentiment d'accomplissement que vous retirez de votre travail	1	2	3	4	5

SECTION X (Intentions de quitter)

Les énoncés suivants portent sur votre performance au travail ainsi que sur vos intentions de quitter ou non l'entreprise. Veuillez répondre à chacun des énoncés suivants.

1. À quelle fréquence pensez-vous à quitter votre emploi actuel?
    a. Rarement ou jamais
    b. Occasionnellement
    c. Parfois
    d. Assez souvent
    e. Très souvent

2. Quel est le pourcentage d'employés dans ce centre d'appels serait susceptible de chercher un nouvel emploi au cours de l'année suivante?
    a. 0% - 20%
    b. 21% - 40%
    c. 41% - 60%
    d. 61% - 80%
    e. 81% - 100%

Appendix C – Output from the PROCESS procedure for the mediation analysis of Turnover intentions predicting Job satisfaction mediated by Organizational commitment.

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.0 *****************

          Written by Andrew F. Hayes, Ph.D. www.afhayes.com
     Documentation available in Hayes (2022). www.guilford.com/p/hayes3

*************************************************************************
Model: 4
    Y: Turn_Int
    X: Job_Sat
    M: Org_com

Sample
Size:  58

*************************************************************************
OUTCOME VARIABLE:
 Org_com

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6394      .4089      .2616    38.7311     1.0000    56.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.2062      .3027     3.9846      .0002      .5998     1.8126
Job_Sat       .5403      .0868     6.2234      .0000      .3664      .7142

*************************************************************************
OUTCOME VARIABLE:
 Turn_Int

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .4504      .2029      .9296     6.9987     2.0000    55.0000      .0020

Model
              coeff         se          t          p       LLCI       ULCI
constant     4.6028      .6465     7.1200      .0000     3.3072     5.8983
Job_Sat      -.6218      .2128    -2.9214      .0050    -1.0483     -.1952
Org_com       .0179      .2519      .0710      .9437     -.4869      .5227

***************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
     -.6218      .2128    -2.9214      .0050    -1.0483     -.1952

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
Org_com      .0097      .1354     -.2588      .2655
```

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----

Appendix D – An exploratory causal model of turnover intention amongst call center employees.

Structural Equation Modeling

A SEM model was conducted to determine if the latent variables Job demands and Job resources adequately described the data. Bootstrapping was performed using a maximum of 100 iterations to determine the standard errors for the parameter estimates.

Multivariate Outliers. Influential points were identified in the data by calculating Mahalanobis distances and comparing them with the quantiles of a χ^2 distribution (Newton & Rudestam, 2012). An outlier was defined as any Mahalanobis distance that exceeds 27.88, the .999 quantile of a χ^2 distribution with 9 degrees of freedom (Kline, 2015). There were 1 observation detected as outliers.

Multicollinearity. Although variables should be correlated with one another to be considered suitable for factorization, variables that are too highly correlated can cause problems in SEM. To assess multicollinearity, the squared multiple correlations were inspected, and the determinant of the correlation matrix was calculated. Any variable with an $R^2 > .90$ can contribute to multicollinearity in the SEM model (Kline, 2015). Variables that exhibit high multicollinearity should either be removed from the analysis or combined as a composite variable. There were no variables that had an $R^2 > .90$. Another assessment for multicollinearity is to assess the determinant of the data's correlation matrix. A determinant that is ≤ 0.00001 indicates that multicollinearity exists in the data (Field, 2017). The value of the determinant for the correlation matrix was 0.0149, indicating that there was no multicollinearity in the data.

First, the reliability of the analysis was tested based on the sample size used to construct the model. Next, the results were evaluated using the Chi-square goodness of fit test and fit

indices. Lastly, the squared multiple correlations (R^2) for each endogenous variable were

examined. The results of the SEM model are presented in Table 4. The correlations between the

latent variables are presented in Table 5. The SEM diagram is shown in Figure 2.

Table 9. Unstandardized Loadings (Standard Errors), Standardized Loadings, and Significance
Levels for Each Parameter in the SEM Model (N = 58)

Parameter Estimate	Unstandardized	Standardized	p
Job Satisfaction ← Job Demands	-0.73(0.84)	-0.31	.388
Organizational commitment ← Job Demands	0.81(3.19)	0.40	.800
Organizational commitment ← Job Resources	-0.03(3.13)	-0.03	.993
Job Satisfaction ← Job Resources	1.03(0.29)	0.86	< .001
Organizational commitment ← Job Satisfaction	0.73(2.86)	0.86	.799
Turnover Intentions ← Job Satisfaction	-0.62(0.19)	-0.46	.001
Turnover Intentions ← Organizational commitment	0.02(0.25)	0.01	.942
Indirect Effect of Organizational commitment on Job Resources by Job Satisfaction	0.75(3.05)	0.74	.806
Total Effect of Organizational commitment on Job Resources	0.72(0.50)	0.71	.151
Indirect Effect of Turnover Intentions on Job Satisfaction by Organizational commitment	0.01(0.61)	0.01	.983
Total Effect of Turnover Intentions on Job Satisfaction	-0.61(0.64)	-0.45	.341
Covariance for Job Demands and Job Resources	-0.05(0.08)	-0.22	.552
Error in Job Demands	0.11(0.06)	1.00	.064
Error in Organizational stressors	0.20(0.06)	0.65	< .001
Error in Mental load	0.36(0.13)	0.77	.006
Error in Emotional load	0.47(0.10)	0.82	< .001
Error in Job Resources	0.42(0.13)	1.00	.001
Error in Independence in the work	0.58(0.13)	0.58	< .001
Error in Participation	0.54(0.12)	0.56	< .001
Error in Relationship with superiors	0.38(0.09)	0.48	< .001
Error in Job Satisfaction	0.03(0.08)	0.06	.680
Error in Organizational commitment	0.20(0.24)	0.47	.402
Error in Turnover Intentions	0.88(0.22)	0.80	< .001

Table 10. Correlation Table for the Latent Variables

Variable	Job Demands	Job Resources
Job Demands	1.00	--
Job Resources	-0.22	1.00

Figure 2. Structural equation modeling results of the research model
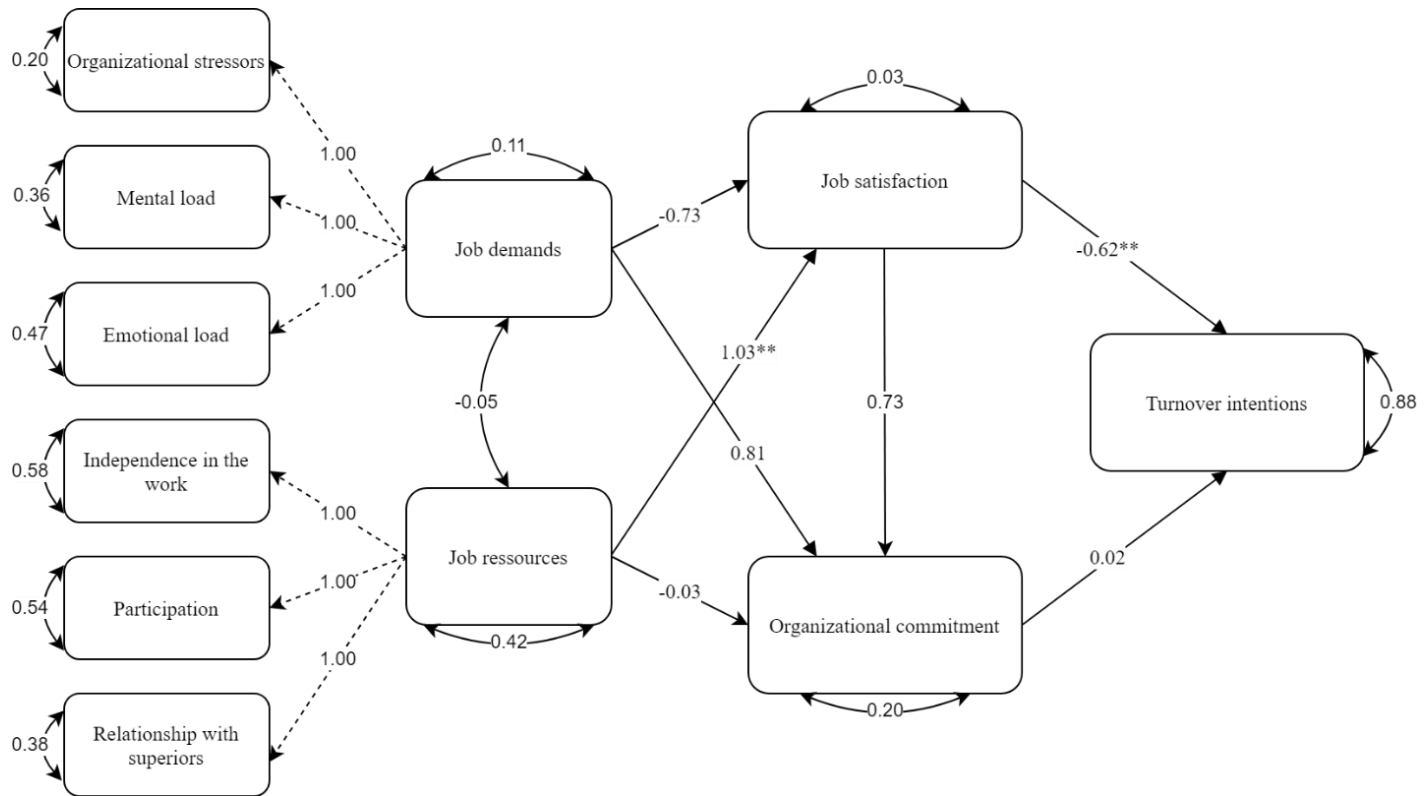
Note. ** p ≤ 0.01

Evaluating sample size. Factor analysis requires a large sample size to construct

repeatable and reliable factors. A variety of authors suggest different benchmarks to determine

sufficient sample size for SEM. Some authors use benchmarks based on overall sample size. A

common rule of thumb for determining sufficient sample size is 300 observations (Tabachnick &

Fidell, 2013; Comrey & Lee, 2013). Other authors use the ratio (*N:q*) of overall sample size to

the number of free parameter estimates (latent variable, indicator, variance, covariance, or any

regression estimates) included in the model. Kline (2015) recommends that the *N:q* ratio should

be about 20 to 1. Schreiber et al. (2006) suggest that the consensus for a sufficient *N:q* ratio is 10:1. On the lower end of the ratio, Bentler and Chou (1987) suggest that an acceptable *N:q* ratio is 5:1. The participant to item ratio for this analysis was approximately 3 to 1, where sample size was 58 and the number of variables included was 19. According to the *N:q* ratio rule-of-thumb, the given sample size is insufficient for SEM.

Model fit. There are a variety of ways to measure if the SEM model adequately describes the data. The Chi-square statistic is the most popular statistic used to measure model fit. Besides the Chi-square statistic, fit indices are also used to help researchers determine if the factor analysis model fits the data properly. Along with the Chi-square goodness of fit test, the following fit indices were used to assess the model fit: root mean square error of approximation (RMSEA), comparative fit index (CFI), Tucker-Lewis index (TLI) and standardized root mean square residual (SRMR).

Goodness of fit test. A Chi-square goodness of fit test was conducted to determine if the SEM model fits the data adequately. It is standard practice for SEM to include the Chi-square test. However, this test is sensitive to sample size, which causes the test to often reject the null hypothesis and indicate a poor model fit when the sample size is large (Hooper et al., 2008). The results of the Chi-square goodness of fit test were significant, $\chi^2(26) = 91.77$, $p < .001$, suggesting that the model did not adequately fit the data.

Fit indices. The RMSEA index was greater than .10, RMSEA = 0.21, 90% CI = [0.16, 0.26], which is indicative of a poor model fit (Hooper et al., 2008). The CFI was less than .90, CFI = 0.68, suggesting that the model is indicative of a poor model fit (Hooper et al., 2008). The TLI was less than .95, TLI = 0.56, which is indicative of a poor model fit (Hooper et al., 2008).

The SRMR was greater than .08, SRMR = 0.20, which implies that the model fits the data poorly

(Hooper et al., 2008). The fit indices are presented in Table 6.

Table 11. Fit Indices for the SEM model

NFI	TLI	CFI	RMSEA	SRMR
0.62	0.56	0.68	0.21	0.20

Squared multiple correlations. The regressions in the model can be assessed by

examining the R^2 value of each endogenous variable. The R^2 value identifies how much the

endogenous variable is explained by the regressions in the model. An R^2 value $\leq$ .20 suggests the

endogenous variable is not adequately explained by the regression(s) in the model and all

regressions for that endogenous variable should be considered for removal from the model

(Hooper et al., 2008). The R^2 values, along with the error variances for each endogenous variable

are presented in Table 7.

Table 12. Estimated Error Variances and R2 Values for Each Endogenous Variable in the SEM
model.

Endogenous Variable	Standard Error	R^2
Organizational stressors	0.20	0.35
Mental load	0.36	0.23
Emotional load	0.47	0.18
Independence in the work	0.58	0.42
Participation	0.54	0.44
Relationship with superiors	0.38	0.52
Job Satisfaction	0.03	0.94
Organizational commitment	0.20	0.53
Turnover Intentions	0.88	0.20

Linear regressions. The regressions were examined based on an alpha value of 0.05.

Job demands did not significantly predict Job satisfaction, B = -0.73, z = -0.86, p = .388,

suggesting there is no relationship between Job demands and Job satisfaction.

Job resources significantly predicted Job satisfaction, $B = 1.03$, $z = 3.57$, $p < .001$, indicating a one-unit increase in Job resources will increase the expected value of Job satisfaction by 1.03 units.

Job demands did not significantly predict Organizational commitment, $B = 0.81$, $z = 0.25$, $p = .800$, suggesting there is no relationship between Job demands and Organizational commitment.

Job resources did not significantly predict Organizational commitment, $B = -0.03$, $z = -0.01$, $p = .993$, suggesting there is no relationship between Job resources and Organizational commitment.

Job satisfaction did not significantly predict Organizational commitment, $B = 0.73$, $z = 0.25$, $p = .799$, suggesting there is no relationship between Job Satisfaction and Organizational commitment.

Job satisfaction significantly predicted Turnover intentions, $B = -0.62$, $z = -3.24$, $p = .001$, indicating a one-unit increase in Job Satisfaction will decrease the expected value of Turnover intentions by 0.62 units.

Organizational commitment did not significantly predict Turnover intentions, $B = 0.02$, $z = 0.07$, $p = .942$, suggesting there is no relationship between Organizational commitment and Turnover intentions.

Moderation. For moderation to be supported, two conditions must be met (Netemeyer et al., 2001). First, the causal predictor variable must significantly predict the outcome variable in the simple effects model using linear regression. Secondly, the interaction model must explain significantly more variance of the outcome variable than the non-interaction model. If either of these conditions fail, moderation is not supported. Job demands did not significantly predict Job

satisfaction or Organizational commitment; therefore, the moderation analysis failed to confirm whether Job resources moderated the impact of Job demands on Job satisfaction or Organizational commitment.

Mediation. A test of mediation was conducted to determine whether Organizational commitment mediated the relationship between Job satisfaction and Turnover intentions. The direct effect between Job satisfaction and Turnover intentions was significant, suggesting that full mediation by Organizational commitment did not occur, although some partial mediation may still be present. Partial mediation was examined using the indirect and total effects of Organizational commitment on the relationship between Job satisfaction and Turnover intentions (Gunzler et al., 2013; Zhao et al., 2010; Preacher & Hayes, 2004). The indirect effect of Organizational commitment on the relationship of Turnover intentions regressed on Job satisfaction was not significant, $B = 0.01$, $z = 0.02$, $p = .983$, indicating a one-unit increase in Job satisfaction, based on its effect on Organizational commitment, does not have a significant effect on Turnover intentions. The total effect of Job satisfaction on Turnover intentions was not significant, $B = -0.61$, $z = -0.95$, $p = .341$, indicating a one-unit increase in Job satisfaction does not have a significant effect on Turnover intentions. Since both the indirect and total effects were not significant, partial mediation was not supported by Organizational commitment (Gunzler et al., 2013; Zhao et al., 2010; Preacher & Hayes, 2004).

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