The Double Burden of Work and Life and Turnover Intention Among Migrant Garment Workers: A Case Study From an Industrial Zone in Vietnam

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Abstract

This study aims to determine the prevalence and associated factors of turnover intention among interprovincial migrant workers in garment companies in a rapidly urbanizing area of Vietnam. This study employed a mixed method approach, beginning with in-depth interviews with 12 migrant garment workers to develop survey instruments, which were then used in a quantitative survey. The survey recruited and interviewed 328 inter-provincial migrant workers working in garment factories using a social mapping sampling method. Multivariable backward stepwise logistic regression analysis was used to investigate factors associated with worker turnover intention. The results show a high prevalence of turnover intention (46.3%) among the survey participants. High psychological demand (OR = 2.5, 95% CI [1.4, 4.4], $p < .001$), low job control, income dissatisfaction (OR = 3, 95% CI [1.5, 6], $p < .01$), migration intention (OR = 13, 95% CI [7, 24], $p < .001$) and male gender (OR = 2.5, 95% CI [1.3, 4.8], $p < .01$) are factors significantly associated with turnover intention among migrant workers. This study provides a model for understanding migrant laborers' turnover intentions in the garment industry, as well as critical data for developing needs-based intervention programs for this vulnerable group, such as appropriate resettlement strategies and the creation of a healthy working environment, both of which could play essential roles in the garment industry's workforce retention.

Keywords

Garment industry; migrant workers; turnover intention; Vietnam

Introduction

In contrast to the downward trend in high-income countries, internal migration in low- and middle-income countries (LMIC) has recently increased (International Organization for Migration, 2012; Molloy et al., 2011). According to estimates from the Asia-Pacific Regional Thematic Working Group on International Migration (2016) and Lucas (2015), in 2005, there were over 282 million internal migrants in the Asia-Pacific region alone. In order to meet and maintain labor needs and developmental needs for the globalization of their economies, many emerging Asia-Pacific economies now rely heavily on internal labor migration on a large scale (Asia-Pacific Regional Thematic Working Group on International Migration, 2016; Lucas, 2015). This workforce is essential for producing goods for global supply chains as well as providing services to the populace and infrastructure of the developing industrial zones in the Asia-Pacific region (Fallows, 2013).

As a result, internal migrants frequently focus on industries like the apparel manufacturing sector, referred to as the "bargain basement" of globalization (Lucas, 2015). Like other industrializing nations that have undergone a significant socioeconomic transition and international integration, Vietnam has seen more workers moving to urban areas and industrial zones to meet the labor demand of the country's rapidly expanding apparel sector. The manufacturing sector employs the most migrant workers (Duong et al., 2011; Hesketh et al., 2008). They frequently receive inadequate job-related training and information, face language and cultural barriers, and lack legal protection (Malmusi et al., 2010). Many migrant laborers are vulnerable to illness, infections, and health problems due to poor living conditions (Hu et al., 2008). Furthermore, unregistered internal migrant workers in countries with household registration systems, such as China and Vietnam, face barriers to accessing health and social services (Duong et al., 2011; Hesketh et al., 2008). Low-skilled immigrants with poor socioeconomic circumstances, such as unstable employment or social isolation, frequently remain silent when their rights are violated. As a result, social security benefits and labor rights are further reduced (An & Bramble, 2018).

In addition to these issues, migrant employees have a higher job turnover rate than their non-migrant counterparts, which may contribute to their stress and vulnerability (Mou et al., 2013; Shah, 2009). The cost of turnover is high for both employees and employers (Mitchell et al., 2001). Employees with turnover intentions tend to become less productive and efficient (Balogun et al., 2013). The economic advantages of industrial zones and labor-intensive, export-focused industries have also been threatened by high factory turnover rates (Fallows, 2013; Jiang et al., 2009).

The investigation into why employees want to leave their jobs has gained increasing attention, owing primarily to the need to satisfy and retain key performers (Mitchell et al., 2001). The traditional turnover model's emphasis on job satisfaction and alternatives suggests an oversimplified prediction of the reason for employee turnover, as they were dissatisfied with their job and unable to find a better one (Holtom et al., 2008; Mitchell et al., 2001; Price, 2001). However, the focus of the literature on employee turnover has shifted away from personal attitudes and behaviors and toward organizational and environmental factors (Korunka et al., 2008; Lee & Kang, 2018). Additionally, it is becoming recognized that maintaining a healthy work-life balance and matching individual knowledge, skills, and interests with organizational goals, values, and objectives are crucial factors associated with employee retention (Allen et al., 2006; Lee & Kang, 2018; Nohe & Sonntag, 2014).

Additionally, the understanding of turnover is deficient, as prevailing turnover theory and research, primarily based on studies among "high-skill, high-wage" workers in high-income countries and belong to a Western cultural background, may not generalize to workforces in the LMIC of the Asia-Pacific region (Sturman et al., 2012). The turnover rate of "low-skill" internal migrants, who make up a growing portion of the labor force in the Asia-Pacific region, is particularly poorly understood (International Organization for Migration, 2012; Pham, 2019). Several recent studies have shed light on the impact of working and living conditions factors on turnover intention among internal migrant workers in the region. Increased emotional exhaustion and the physical distance between migrant workers' workplaces and their home villages may increase their intentions to leave their jobs, according to a study done with them in China's industrial zones (Qin et al., 2014).

Similarly, regional variation, such as dialect differences, may affect migrant turnover decisions, according to Gong et al. (2011). Additionally, Jiang et al. (2009) suggested that the effectiveness of operational and human resource management practices affected migrant workers' intention to leave. Physiological needs, safety and security needs, love and belonging, self-esteem, and self-actualization needs were all positively correlated with turnover intention, according to another study with immigrant Thai seafood processors (Puangyoykeaw & Nishide, 2015). However, the relationship between the double burden of the workplace and social disadvantages experienced by internal migrant workers and their turnover is still understudied in the literature (Allen et al., 2010; Fallows, 2013; Lucas, 2015).

This study, therefore, aims to determine the prevalence and associated factors of turnover intention among interprovincial migrant workers working in garment factories in a rapidly urbanizing area of Vietnam. This paper adds to the literature by being the first to investigate the effects of factors in both working and non-working conditions on turnover intention among a migrant sample. The recommendations for employers in workforce planning and creating strategies for decreasing turnover in the apparel industry are both aspects of this paper's contribution to business management (Griffeth et al., 2000). Additionally, knowing the causes of voluntary employee turnover among migrants and the repercussions of this understanding could direct need-based interventions, such as career counseling and counseling support for this vulnerable group (Bimrose & McNair, 2011).

Methods

The research design is a cross-sectional study using a mixed methods approach. This exploratory sequential design began with a qualitative study to generate hypotheses and was followed by a quantitative survey to test the hypotheses (Creswell & Clark, 2017). According to Kiessling and Harvey (2005), mixed methods research offers the breadth and flexibility needed to investigate the complex issues of turnover intention among internal migrant workers. The hypotheses were then statistically tested using a tailed quantitative survey.

Research location

The study area is the region surrounding the Pho Noi B Garment Industry Park, situated in the rapidly industrializing and urbanizing Hung Yen province of northern Vietnam (General Statistics Office of Vietnam, 2018). The Pho Noi B Garment Industry Park has a large internal migrant population and rapidly growing manufacturing sectors, particularly the garment

industry (General Statistics Office of Vietnam, 2018). As a result, the industrial zone is a suitable location for studying the effects of challenging and rapidly changing social climates on internal migrant garment workers.

Qualitative study and hypothesis generation

The study used qualitative research methods to investigate employees' intentions to leave the factory where they had worked for years. The qualitative research was conducted between July and September 2016 using ethnographic observation and in-depth interviews. In order to make ethnographic observations in a clothing factory, the principal investigator fully immersed themself in work and daily life of migrant workers. The primary investigator worked as a thread trimmer in one garment factory for one week and visited four apartments where migrant workers lived. During the observations, the investigator also conducted brief unstructured interviews with migrant workers. The selection of interviewees, as well as the themes and questionnaire for the in-depth interviews with migrant workers, were guided by the preliminary findings from observations and unstructured interviews. During the observation period, the investigator identified and recruited interviewees. The interviews, which lasted one to two hours, were arranged between the participants and the investigator and took place in the workers' accommodations or coffee shops. Informed consent was obtained from all individual participants included in the study.

Twelve migrant workers, aged 22 to 41, four men and eight women, were interviewed in-depth for the qualitative study. They moved to Hung Yen for six months to eight years, mostly from provinces at least 100 kilometers away. Seven of them were married and had one or two children. The essential details about the 12 interviewees are listed in Appendix 1.

The thematic analysis was carried out on transcribed interview audiotapes and notes taken during observations using NVivo 11. The relationships between the codes also became apparent during the process of modifying the codes and during the categorization and discussions among the study's researchers. Three sets of hypotheses were developed from the qualitative study's findings and used to plan the quantitative portion of the research.

Quantitative survey

Quantitative survey instruments

Using the data collected from the qualitative methods, we developed instruments that gave quantitative measures of turnover intention, job searching behaviors, and factors related to turnover intention among migrant workers using validated Vietnamese language questionnaires.

The worker's intention to turnover, the dependent variable, was identified using a single self-reported question on the likelihood of leaving the factory in the next 12 months used in a previous study among migrant nurses (Sloane et al., 2010). The independent variables included socio-demographic information, living conditions, social connections, and working conditions. Age, gender, marital status, ethnicity, length of migration, level of education, and living conditions (housing ownership and condition, and intention to migrate) were among the questions asked of respondents. Other questions related to working conditions included average weekly working hours over the previous four weeks, average monthly income over

the previous four months, and income satisfaction. Six 5-point items created by Hawthorne (2006) and translated and used for a comparable group of people in Vietnam by Nguyen, Dunne, et al. (2015) were used to measure social connectedness. Finally, a validated Vietnamese translation of the Karasek Job Content Questionnaire (Hoang et al., 2013) was used to assess the job strain of migrant workers.

Survey sampling and data collection

Due to the lack of a sampling frame for migrant workers, who are primarily unregistered and mobile, this study used a social mapping sampling strategy to generate an optimal number of migrant garment workers who could be recruited (Cramb & Purcell, 2001; Nguyen, Dunne, et al., 2015). Trained research assistants traveled to each household or apartment to search for potential participants. A list of sites (441 houses and apartment buildings across four communes) was generated, and a total number of possible participants was estimated. Potential participants were screened against selection criteria. The research subjects were internal migrant workers who migrated from another province to work in a garment factory as process workers (cutting, making, and trimming processes and not in administrative positions) for over six months and less than ten years.

Eligible participants were introduced to the objectives and key contents of the research, and then research assistants admitted respondents who provided informed consent for the questionnaire. The quantitative investigation was carried out in July 2017. The refusal rate was 7.9% (28 out of 356 eligible workers).

Quantitative data analysis

The quantitative data from the survey were analyzed using Stata version 14.0. Bivariate analyses were conducted using the chi-square test and Pearson correlation coefficients. The variables that showed a statistically significant association with turnover intention and the crucial factors explaining turnover intention according to the literature were input into the multiple logistic regression model using a backward stepwise approach. A total of nine variables were selected to feed into the logistic regression model.

Research ethics

The studies were carried out following good research practice, which means that fundamental principles of ethical research issues, such as informed consent and confidentiality, were considered. Before implementation, ethical approval for this study was obtained from the Human Research Ethics Committee of Griffith University (GU Ref No: 2016/681).

Results

Qualitative study

The turnover intention was common among migrant workers in garment factories. All twelve participants expressed their intention to leave the factory. Furthermore, the interviewees observed a high turnover rate and intention to leave among their peer migrant workers.

Turnover intention became a popular topic of discussion among employees. One participant described:

> *"My processing line has fewer and fewer workers every month… Many new workers came, but more left their jobs. Sometimes, we discuss job opportunities at lunchtime."*

(Female, 26-year-old)

Some participants were also highly active in their job search, such as looking for information about new jobs, learning new skills or qualifications, and applying for employment with a new company.

Individual demographic characteristics, factors in their living situations, and factors related to their work and working conditions are three factors motivating migrant workers to think about leaving their company within the dynamic process of considering staying or leaving their company.

Personal characteristics and turnover intention: The garment job stereotype

When asked to describe their job, all the participants considered garment jobs to be labor-intensive, low wage and "dirty" jobs. Because of the job's low skill-low wage stereotype, the interviewees believed that anyone who belonged to the socioeconomic or demographic groups that allowed them to find a "better" job should do so. Participants in the interviews discussed how certain personal characteristics, such as gender, age, marital status, ethnicity, and level of education, influence their and their peers' intentions to find another job.

The connection between educational attainment and labor jobs was a topic that was brought up frequently. Participants believed that a worker with a higher education level, especially a vocational or tertiary education level, should be able to find a "skillful" job. People with low levels of education, especially those in the primary and secondary grades, felt they "had no other choice" but to work in labor jobs to make a living. Additionally, some interviewees thought that younger, single, and "new" (migration in less than two years) migrant workers should proactively seek new employment opportunities because they were still eager to take on new challenges.

Additionally, most participants thought women were more "suited" than men to work in the garment industry. One of the male workers explained:

> *"It is said that garment work is only for women. This job needs meticulous patience, not suitable for men. Men ought to work harder to get better jobs."*

(Male, 29-year-old)

Because Vietnamese culture is still heavily influenced by Confucianism, garment work is still considered a female occupation. Male migrant workers consequently experience more significant pressure to change jobs.

These conclusions lead to the following initial hypotheses:

Hypothesis 1: Male migrant worker (Hypothesis 1a), a higher education level (Hypothesis 1b), Younger age (Hypothesis 1c), Single (vs. married) (Hypothesis 1d), Kinh ethnic origin

(Hypothesis 1e), and Migration time under two years (Hypothesis 1f) will be positively related to turnover intention

Living conditions and social connections: For a better quality of life

Three main themes that interviewees frequently brought up as problems with their living situations connected to their turnover intentions were housing conditions, social connection, and migrant intention.

Owning a home in a rapidly industrializing area was described as a significant challenge. The interviewees who resided in rented housing expressed dissatisfaction with the unsanitary living conditions, which they claimed could put them and their families at risk for stress and illness. The rented room where they lived was described as follows:

> *"…very small, only about eight to twelve square meters, very hot in the summer and cold in the winter, damp and without windows. Uncomfortable and dirty because we share the common bathroom and toilet with other families. We could hear rats running noisily all night. I am sure that someday I could get sick living here."*

(Female, 41-year-old)

The majority of the migrant workers who resided in this type of rented housing had a strong desire to improve their situation. They asserted that one of the answers was to look for a new position with a higher salary so they could pay for better living arrangements. Two aspects of housing, the "housing condition," which is related to how comfortable the accommodation is, and the "sanitation condition of the accommodation," related to the perceived sanitation condition of the housing, are mentioned as reasons driving migrants to find better jobs.

Another factor influencing their turnover intentions was their level of social connection. Connections with peers, particularly peers from the same hometown, were invaluable to migrant workers. These social connections were critical for some people's survival in a strange place. Migrant workers were willing to change jobs to maintain a certain level of social connection.

Furthermore, all migrant workers admitted that the critical issue was whether they should stay where they were, move to a new location, or return to their home villages. One participant said:

> *"I am learning to tailor and saving money to return to my hometown and open a shop. I always think about moving back to my hometown with my friends, relatives, and parents. I migrated here only to prepare for a better future in my hometown."*

(Female, 28-year-old)

It was clear that the migration decision was strongly associated with turnover intention. However, they could not distinguish which one caused the other.

Among factors in the living circumstances, the second hypotheses are that.

Hypothesis 2: Housing condition dissatisfaction (Hypothesis 2a), sanitation condition of accommodation dissatisfaction (Hypothesis 2b), Living in rented accommodation

(Hypothesis 2c), Being socially isolated (Hypothesis 2d), Living alone (Hypothesis 2e), and Migration intention (Hypothesis 2f) will be positively related to turnover intention

Working conditions: To have a better job

In this category, four themes emerged as significant factors related to turnover intention: income, working hours, job demand, and job control.

All interviewees stated that low income prevented them and their peers from "sustaining a decent life," forcing them to live in substandard housing, tearing them away from their children, and preventing them from "saving for the future."

> "Everyone wants to stay with the company; however, they need incomes that can sustain their life."
>
> (Female, 29-year-old)

As a result, "to earn a higher income" and "to have time to take care of the family" were the main motives for most workers seeking new employment.

Interviewees mentioned two issues concerning working hours: "long working hours" and a lack of control over their job. One employee provided the following account of her day at work:

> "It is normal to work overtime until 8 pm, almost every day. It is extremely hard to have a day off or come home a bit early."
>
> (Female, 28-year-old)

When asked to describe their jobs, respondents frequently cited overtime as a characteristic of the garment industry. Many employees described their "normal" working hours as 7:00 a.m. to 7:00 p.m., six days a week. Those who did not meet the "production target" were required to stay late or work on Sundays to finish their work without pay. Working hours were tracked using a fingerprint-scanning system. The penalties for taking more than one vacation day per month, showing up late, or leaving early were severe.

Work demand and control were also significant reasons for the intention to leave. The psychological working conditions were characterized as "boring," "high pressure," and "demanding." This group's occupational stress investigation used Karasek's (1979) job demand-control model. One participant described their psychological working condition as follows:

> "… no time for a talk (with my co-worker), even time for the toilet. Everyone thinks that he or she is not keeping up with the production target. No one dares to talk."
>
> (Female, 29-year-old)

Employees had little control over their work because they were constantly expected to meet the "production target," which is the volume of product that one employee must produce in a certain amount of time. Workers who did not meet the production target were required to work unpaid overtime to complete it. The production target was also applied to the "production line," a group of about 20 workers collaborating on a specific product. As a result, workers were under peer pressure to complete their tasks as quickly as possible.

Thus, the third hypotheses are

Hypothesis 3: Low monthly income (Hypothesis 3a), Income dissatisfaction (Hypothesis 3b), High psychological job demand (Hypothesis 3c), Low level of job control (Hypothesis 3d), Low level of social support at the workplace (Hypothesis 3e), and Weekly working hours over 72 hours (Hypothesis 3f) will be positively related to turnover intention

Quantitative study

Characteristics of survey participants

The survey questionnaires were answered by 328 migrant workers, who ranged in age from 18 to 48 years and had an average age of 28.9 years. Of those, 76 (23.2%) were men, and 252 (76.8%) were women. Additionally, 36 (11%) belonged to ethnic minority groups, and 64% had moved within the previous five years. Of the total, 241 workers (73.5%) were married, and 232 (70.7%) had a child or children. Only 18.6% of migrant workers had a tertiary or vocational education. Of the remaining individuals, 38.7% had completed high school, another 38.7% had completed secondary school, and 4% had only completed elementary school. Two-thirds of the migrant workers (67.1%) lived with their families or partners, and the rest lived alone (24.3%) or with friends (11.6%) (Appendix 2).

Among workers answering the quantitative survey, nearly half of them (46.3%) stated that they were ''highly likely'' or ''somewhat likely'' to leave their current position within one year, 20.1% of them reported that they had searched for information about a new job in the last 12 months; 11.6% of them had studied for a new skill or qualification that could help them find a better job; and 11.6% of them reported that they had submitted job applications for a new position (Appendix 3).

Migrant workers' living circumstances and working conditions

As shown in Table 1, nearly 90% of the migrant workers who responded to the quantitative survey resided in rented housing, and 50% did not sanctify their living circumstances. Regarding social connectedness, 7.3% of migrant workers belonged to the "isolated or low level of social connection" group, and 11% belonged to the group with "some social connection." The rest were classified as "socially connected" at 40.9% and "very socially connected"' at 40.9%. Furthermore, one in three migrant workers reported "very likely" or "somewhat likely" to migrate in the next 12 months.

Table 1: Migrant Workers' Working Conditions and Living Circumstances

Factors	n	%
Migrant workers' Living circumstances and social connection		
House ownership (N = 328)		
No	294	89.6%
Yes	34	10.4%
Housing condition satisfaction (N = 328)		
No	150	45.7%
Yes	178	54.3%
Housing sanitation condition satisfaction (N = 328)		
No	69	21.0%

Factors	n	%
Yes	259	79.0%
Living with who (N = 328)		
Alone	70	21.3%
With a spouse or partner	220	67.1%
With friend	38	11.6%
Social Connectedness (N = 328)		
Isolated or low level	24	7.3%
Some social support	36	11.0%
socially connected	134	40.9%
very socially connected	134	40.9%
Migration intention (N = 328)		
No	214	65.2%
Yes	114	34.8%
Migrant workers' working conditions		
Average working hours per week in the last 4 weeks (N = 328)		
< = 48 hours/week	106	32.3%
49–71 hours/week	132	40.2%
> = 72 hours/week	90	27.4%
Average monthly income in the last 4 months (N = 323)		
3–5 million VND (150–250 USD)	200	61.9%
5–7 million VND (250–350 USD)	113	35%
Over 7 million VND (over 350 USD)	10	3.1%
Income satisfaction (N = 328)		
Yes	261	79.6%
No	67	20.4%
Psychological demand (N = 328)		
Low	155	47.3%
High	173	52.7%
Level of job control (N = 328)		
Low	103	31.4%
High	225	68.6%
Level of job strain (N = 328)		
Low	207	63.1%
High	121	36.9%

Approximately two-thirds of the migrant workers earned 3 to 5 million Vietnam Dong (VND) per month (150 to 250 USD), slightly more than the legal minimum wage. Somewhat higher than one-third of migrant workers had a monthly income of 5 to 7 million VND (250 to 350 USD). Only 3.1% had a monthly income of over 7 million VND (350 USD). However, only 20.4% of migrant workers were dissatisfied with their income. In addition, although the 2012 Vietnamese labor law stipulated that the average workweek should not exceed 48 hours, 27.4% of the migrant workers who participated in the quantitative survey reported working an average of 72 hours per week or more in the previous four weeks, and 40.2% worked 49 to 71 hours per week.

According to the Karasek (1979) job demand-control model, 31.5% of migrants who answered the quantitative questionnaire belonged to the low-level job control group. In comparison, 52.47% belonged to the group with high psychological job demands. One-third of the migrant workers (36.9%) belong to the high-strain group, which has high job demand and low control over their job.

Factor related to turnover intention

All hypotheses were tested using bivariate analyses using the chi-square test and Pearson correlation coefficients (see Appendix 4 for details of the bi-variate analysis). Age, gender, education level, social connectedness, migrant intention, income satisfaction, psychological demand, and working hours were the eight variables that showed a statistically significant association. These variables were added to a multiple logistic regression model using a backward stepwise approach. In addition, job control, a significant factor explaining turnover based on the qualitative study, was added to the first model. Variables that did not have a statistically significant relationship with turnover intention were removed from the model one at a time. The final reduced logistic regression model is presented in Table 2.

Table 2: Multivariable Logistic Regression Analysis of Characteristics Associated With Turnover Intention

Characteristic ($N = 328$)	OR	p value	95% CI
Demographic characteristic			
Gender (male)	2.5	< .01	1.3, 4.8
Living circumstance			
Migration intention	13	< .001	7.1, 24
Working condition			
Income dissatisfaction	3	< .01	1.5, 6
High psychological demand	2.5	< .001	1.4, 4.4
Low job control	1.7	< .1	

Being a male migrant worker (versus being a female migrant worker) is the only factor in the demographic characteristics of the migrant workers that are significantly associated with turnover intention among migrant workers (OR = 2.5, 95% CI [1.3, 4.8], p < .001).

Among people with migration intention, 83.3% had the intention to quit their job in the next 12 months, compared to 26.7% without migration intention. In the last version of the logistic regression model, migration intention is the only factor statistically associated with turnover intention (OR = 13, 95% CI [7, 24], p < .001).

Among factors in the working condition, three factors were associated with turnover intention: income dissatisfaction (OR = 3, 95% CI [1.5, 6], p < .01), high psychological job demand (OR = 2.5, 95% CI [1.4, 4.4], p < .001), and low job control.

Discussion

This study is the first investigation among migrant workers in the garment industry in Vietnam of the incidence of workers who reported an intention to find a new job in the next 12 months and why they want to do so. The study investigated the relationships between turnover intention and factors related to workers' working conditions and socio-demographic characteristics, as well as their living conditions and social circumstances. This comprehensive investigation of the issues related to migrant workers and their turnover intention, which is rare among studies concerning migrant workers and turnover intention, enables a holistic approach to maintaining a high-quality workforce for the industry.

The findings indicate a high prevalence of turnover intention among migrant garment workers. A similar high prevalence of turnover intention was observed in a study with migrant nursing assistants in US nursing homes, where 60% of non-citizen immigrant respondents stated that they intended to leave their current position within one year (Sloane et al., 2010). Another survey of migrant nurses in Singapore revealed a much lower prevalence of turnover intention, with only 16.6% of migrant nurses expressing the intention to leave (Goh & Lopez, 2016). Compared to the turnover intention rate among garment workers, the turnover intention rate found in this study is higher than those reported by a study in 8 factories in Bangladesh, which showed turnover intention rates ranging from 11 to 33% (Hossain & Mahmood, 2018). Another study of 477 employees in 15 textile firms found that 12% wanted to keep the same job in a different organization, and 21% wanted to change careers (Kirschenbaum & Weisberg, 2002).

This study also reports that the odds of turnover intention among male migrant workers are 2.5 times higher than among female migrant workers. The qualitative data shed some light on why male migrant workers were likelier to leave their jobs. This gender preference is also reflected in the study's low proportion of male migrant workers in the garment industry, where less than one in every four participants is male. In Vietnam, this gender imbalance is prevalent in the garment and light manufacturing industries, such as shoemaking, seafood processing, and electrical device manufacturing (General Statistics Office of Vietnam, 2017; Nguyen et al., 2016). Among immigrant nursing assistants in the United States, a similar relationship between gender and turnover intention has been reported (Sloane et al., 2010). However, this trend was not observed in studies with migrant workers in Chinese garment factories and workers operating sewing machines in the garment industry (Chan & Qiu, 2011; Liyanage & Galhena, 2014).

According to this study, the odds of having turnover intention among migrant workers who reported migration intention are also 13 times higher than those who did not intend to migrate. Although few studies have investigated the relationship between migration intention and turnover intention among migrant workers, one study with Chinese migrant workers discovered that the geographical distance between employees' workplaces and home villages, which serves as a proxy for a wide range of migration demands and resources, may lead to higher turnover intentions (Qin et al., 2014). This finding suggests that issues in the resettling process in a new location may play a significant role in migrant workers' decisions to leave. As a result, resettlement strategies that assist migrant workers in overcoming the challenges of settling in a new location may positively impact the garment industry's workforce retention. An example of an effective resettlement strategy is providing affordable housing opportunities for migrant workers. According to Smith (2003), despite some disadvantages of living in factory dormitories provided by factory owners, factory dormitories are an affordable and adequate source of housing for poor migrant workers.

A substantial proportion of migrant workers reported high job strain based on the Karasek job demand and control model. This percentage is significantly higher than that of shoemakers in the high-strain group (20.7%), reported in a study in Vietnam using the same research method (Minh, 2014). High psychological demand and low job control have been identified as factors associated with turnover intention. The link between workplace stress and intention to leave has been widely documented in other industries (Price, 2001; Wong & Wong, 2017). According to another study conducted in Vietnam, job demands are the most significant factor influencing information technology workers' intention to leave their jobs (Nguyen, 2014). In the garment industry, similar links between elevated levels of job stress and turnover intention have been reported in two studies conducted in Sri Lanka (Chathurani

& Sangarandenya, 2008; Liyanage & Galhena, 2014). Similar findings were supported by a study in three industrial areas of Vietnam, which found that long working hours and exposure to health risks at work were linked to a higher risk of depression (Tran et al., 2019). The vulnerability of this group of workers was highlighted by the higher number of health problems and lower health-related quality of life experienced by migrant workers in Vietnam than by local industrial workers (Pham, Nguyen, et al., 2019).

Surprisingly, the multi-regression analysis of the survey data showed that, even though many respondents in the qualitative interviews cited "long working hours" as a factor related to turnover intention, the quantity of working time—which in many cases exceeded 72 hours per week—was not statistically associated with turnover intention. These results suggest that flexibility in working hours, as a sign of greater job control, is more helpful in predicting the intention to leave a job than the actual number of hours worked. This data is supported by findings from other studies, which found that having flexible working hours could lower the rate of turnover intention (Allen et al., 2006; Lee & Kang, 2018).

Scholars have identified a link between pay dissatisfaction and intention to leave (Price, 2001; Wong & Wong, 2017). This connection was also discovered in this study. A similar link was found in a Saudi Arabian study with workers in a manufacturing factory (Al-Qahtani & Gadhoum, 2016). Additionally, it has been noted that higher incomes among internal migrant workers in China who produce children's toys, furniture, and clothing have lower turnover intentions (Smyth et al., 2009).

Again, although "low income" and "to earn higher income" were frequently cited as the primary motives for turnover intention, the regression model results imply no significant relationship between the monthly salary level and intention to leave. A similar conclusion was made by a meta-analysis of 92 independent samples, which found that average pay in a sample has a weak relationship with an average job or pay satisfaction (Judge et al., 2010). These results showed that numerous factors other than income level affect migrant workers' satisfaction with their income. Compared to those who did not have to pay rent, female workers in Vietnam's industrial zones, for instance, had a higher percentage of income dissatisfaction (Nguyen et al., 2016). A recent study of workers in Vietnam's industrial zones found that migrant counterparts had higher monthly incomes and comparable housing conditions to non-migrant workers (Do et al., 2021).

Understanding the factors influencing turnover intention is critical in developing a needs-based intervention to reduce turnover intention among migrant workers. The results of this study suggest that factors related to living situations and individual characteristics, such as migration intention and gender, are also important determinants of the intention of migrant workers in the garment industry to leave their jobs. These factors are in addition to working conditions, such as income satisfaction, job demand, and degree of control over one's work. In order to effectively address the complex issues affecting employees' health and well-being, it is necessary to implement comprehensive and integrated workplace health promotion strategies (Pham, Lee, et al., 2019). Programs for promoting workplace health may give employees a chance to learn, train, and advance their skills. They may also foster environments where employees and employers can discuss issues and work together to find solutions (International Labour Organization, 2019; Pham et al., 2020).

Finally, it is crucial to recognize both the advantages and disadvantages of the research methodology when interpreting the study's results. The study's most obvious strength is the use of a mix-method study design, which enables it to simultaneously investigate a wide

range of factors with a constrained number of variables that can be quantitatively measured, allowing the relationships between elements and turnover intention to be statistically tested. The combination of quantitative and qualitative results provides a more comprehensive and in-depth understanding of the relationships between turnover intention and related factors, which is helpful in the interpretation of the findings. Furthermore, using social mapping techniques in the quantitative study allowed us to reach a large, representative sample of migrant workers, which is difficult to achieve using traditional randomized sampling methods. However, several limitations of this study need to be considered. Because this is a cross-sectional study, the results of path analyses do not delineate cause-effect relationships but rather suggest implicit causal relationships between the variables.

As previously stated, the study can explain the relationships in depth by combining qualitative and quantitative data in developing research tools and interpreting research findings. Furthermore, the study only considers factors that influence turnover intention rather than turnover behavior, although the turnover intention is one of the predictors of turnover behavior (Korunka et al., 2008). Future studies exploring this issue should use longitudinal data on turnover and related factors to provide more decisive conclusions on causal relationships. The study participants were confined to migrant workers working in registered garment factories. The results would be more representative if the sample included migrant workers working in unregistered small and family-owned garment businesses who may face distinct vulnerability types (Nguyen, Raabe, et al., 2015).

Furthermore, the turnover intention model in this study could be more informative if the findings were compared to the turnover intention model among local workers. The COVID-19 pandemic caused significant changes in the working conditions, labor market, and migration status of workers in the Vietnamese garment industry, and this study was conducted before those changes (Nguyen & Vu, 2021). Internal migrants, on the other hand, are frequently excluded from health surveys conducted in both the destination and origin communities. As a result, there is a lack of understanding about the impact of COVID-19 on the migrant population, as well as factors explaining turnover intention post-COVID.

Conclusion

The study findings point to a high turnover intention among migrant workers in the garment industry. This study also includes a comprehensive model for understanding the turnover intention of migrant laborers in the garment industry, which considers factors such as living circumstances, working conditions, and personal characteristics. It was concluded that being a male worker, having migration intention, income dissatisfaction, high psychological job demand, and low job control are significantly associated with the turnover intention of migrant workers in the garment industry. The study's findings have some implications for needs-based intervention programs for this vulnerable group, including suggestions that appropriate resettlement strategies and a healthy working environment could be crucial in keeping the garment industry's workforce.

Acknowledgments

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Appendices

Appendix 1. Key Characteristics of Qualitative Study Participants

Code	Sex	Age	Marriage	Migration time	Place migrated from (Distance to Hung Yen)	Demographic and SES characteristics of participants
MW1	Female	22	No	6 months	Nghe An (300 Km)	She left her rural village with her friends in search of work because she was unable to find a job there and shared a rental apartment with a friend. She was committed to working hard and creating a future for herself in the new location.
MW2	Female	41	Yes	2 years	Bac Kan (160 km)	Ethnic minority, living with her husband in an apartment. They have three children. Her husband used to work as a builder before going bankrupt. To find work and settle the debt, they were forced to move. Her oldest daughter is a college student. Two other children are staying with her parents-in-law.
MW3	Male	27	No	1 year	Bac Giang (112)	Living with friends in an apartment. He is one of the fastest workers and highest-paid. Trying to save money and migrate to Hanoi for a better life.
MW4	Female	26	Yes	2 years	Son La (320 km)	Living with her husband's family in Hung Yen at her parents-in-law's house. She frequently finds it difficult to leave work early to pick up her 3-year-old son, who spends every weekday at the neighborhood childcare center.
MW5	Female	31	Yes	2 years	Thanh Hoa (200 km)	Pregnant, living with her husband and one daughter in an apartment. Plans to return home to give birth. However, her husband will still stay in Hung Yen for work, and she still wants to settle in Hung Yen.
MW6	Female	28	No	3 years	Nghe An (300 Km)	Living with a friend in a rented apartment. She worked as a garment worker in Binh Duong, which is 1,800 kilometers from her home, before moving to Hung Yen to be nearer to her family. To return to her hometown, open a tailoring shop,

Code	Sex	Age	Marriage	Migration time	Place migrated from (Distance to Hung Yen)	Demographic and SES characteristics of participants
						get married, and save money, she is working to become a better seamstress.
MW7	Female	29	No	1 year	Hoa Binh (76 Km)	Living alone in an apartment. Before relocating to look for better opportunities, she spent five years working as a garment worker in her hometown. She intends to relocate to a different province in search of a higher-paying position.
MW8	Male	35	Yes	6 years	Quang Ninh (150 Km)	Living with his wife. Their two children live with their grandparents in their hometown. Every weekend they return home to see their family. He engages in cockfighting, keeps some cocks in his compact apartment, and partakes in gambling.
MW9	Female	38	Yes	8 years	Ha Tinh (350 km)	Living with her husband, two children, and her husband's parents in her own house, which they spent all their savings to build. However, they are still in debt.
MW10	Male	29	No	3 years	Vinh Phuc (64 km)	Living with friends in an apartment. In his hometown, his parents are the primary caregivers for his two kids. He used to be a large-scale chicken farmer. He had to relocate to find employment and make ends meet after going bankrupt due to an H9N1 epidemic.
MW11	Male	31	Yes	7 years	Vinh Phuc (64 km)	Living with his wife in a house borrowed from a relative. Their child lives with his parents in his hometown. He was saving to open a vegetable shop.
MW12	Female	26	No	2 years	Thanh Hoa (200 km)	Her parents are divorced, and her father has remarried. She lives with her mother in an apartment near a small market where her mother sells noodles every morning. They spent all of their savings on medical expenses after her mother was admitted to the hospital several times in the previous year.

Appendix 2. Socio-Demographic Characteristics of Survey Participants

Socio-demographic characteristics	n	%
Gender		
Male	76	23.3%
Female	250	76.7%
Marital status		
Single	87	26.5%
Married	241	73.5%
Ethnic origin		
Kinh	292	89.0%
Minorities	36	11.0%
Having children		
Yes	232	70.7%
No	96	29.3%
Education level		
Primary school and lower	13	4.0%
Secondary School	127	38.7%
High school	127	38.7%
Vocational education	25	7.6%
Tertiary education	36	11.0%
Migration time		
< 2 years	98	29.9%
2–5 years	112	34.1%
> 5 years	118	36.0%
Living with who		
Alone	70	21.3%
With their families or partners	220	67.1%
With friends	38	11.6%
Age (year, range)	28.9	(18–48)

Appendix 3. Turnover Intention and Search Behavior

	n	%
Turnover intention		
No	176	53.7%
Yes	152	46.3%
Searching for information about new job		
Yes	66	20.1%
No	262	79.9%
Studying new skills or a degree		
Yes	38	11.6%
No	290	88.4%
Submitting a CV for a new job		
Yes	38	11.6%
No	290	88.4%

Appendix 4. Bivariate Analyses of Factors and Turnover Intention

Factors	Turnover intention			Statistic tests
	No	Yes	Total	
Age (year)	OR = .9517058			$z = -2.67, p > \lvert z \rvert = .008$
Gender				
Male	29	47	76	
	38.16%	61.84%	100%	
				Pearson X^2 (1) = 9.6043, p = .002
Female	146	104	250	
	58.4%	41.6%	100%	
Marital status				
Yes	130	111	241	
	53.94%	46.06%	100%	
				Pearson X^2 (1) = .0293, p = .864
No	46	41	87	
	52.87%	47.13%	100%	
Ethnic				
Kinh	155	137	292	
	53.08	46.92	100%	
				Pearson X^2 (1) = .3554, p = .551
Other ethnic	21	15	36	
	58.33%	41.67	100%	
Education level				
Primary school and lower	12	1	13	
	92.31%	7.69%	100%	
Secondary School	68	59	127	
	53.54%	46.46%	100%	
High school	71	56	127	Pearson X^2 (4) = 15.8504, p = .003
	55.91%	44.09%	100%	Fisher's exact = .002
Vocational education	14	11	25	
	56%	44%	100%	
Tertiary education	11	25	36	
	30.56%	69.44%	100%	
Migration time				
< 2 years	49	49	98	
	50%	50%	100%	Pearson X^2 (2) = 3.1421, p = .208
2–5 years	56	56	112	

Factors	Turnover intention			Statistic tests
	No	Yes	Total	
	50%	50%	100%	
> 5 years	71	47	118	
	60.17%	39.83%	100%	
Social Connectedness				
Isolated or low level	9	15	24	
	37.5%	62.5%	100%	
Some social support	16	20	36	
	44.44%	55.56%	100%	Pearson X² (3) = 11.1435, p = .011
Socially connected	86	48	134	
	64.18%	35.82%	100%	
Very socially connect	65	69	134	
	48.51%	51.49%	100%	
Housing condition satisfaction				
No	77	73	150	
	51.33%	48.67%	100%	
Yes	99	79	178	Pearson X² (1) = .6010, p = .438
	55.62%	44.38%	100%	
Housing sanitation condition satisfaction				
No	33	36	69	
	47.83%	52.17%	100%	
Yes	143	116	259	Pearson X² (1) = 1.1954, p = .274
	55.21%	44.79%	100%	
House ownership				
No	18	16	34	
	52.94%	47.06%	100%	
Yes	158	136	294	Pearson X² (1) = .0079, p = .929
	53.74%	46.26%	100%	
Migration intention				
No	157	57	214	
	73.36%	26.64%	100%	
Yes	19	95	114	Pearson X² (1) = 96.1543, p = .000
	16.67%	83.33%	100%	
Living with who				

Factors	Turnover intention			Statistic tests
	No	Yes	Total	
Alone	42	28	70	
	60%	40%	100%	
With a spouse or partner	116	104	220	Pearson X² (2) = 1.8134, *p* = .404
	52.73%	47.27%	100%	
With friend	18	20	38	
	47.37%	52.63%	100%	
Average monthly income in the last 4 months				
3–5 million VND	110%	90%	200	
	55%	45%	100%	
5–7 million VND	57%	56%	113	Pearson X² (2) = .6463, *p* = .724
	50.44%	49.56%	100%	Fisher's exact = .753
Over 7 million VND	5	5	10	
	50%	50%	100%	
Income satisfaction				
Yes	156	105	261	
	59.77%	40.23%	100%	Pearson X² (1) = 19.1928, *p* = .000
No	20	47	67	
	29.85%	70.15%	100%	
Psychological demand				
Low	102	53	155	
	65.81%	34.19%	100%	Pearson X² (1) = 17.4403, *p* = .000
High	74	99	173	
	42.77%	57.23%	100%	
Level of job control				
Low	50	53	103	
	48.54%	51.46%	100%	Pearson X² (1) = 1.5797, *p* = .209
High	126	99	225	
	56%	44%	100%	
Social support at the workplace				
Low	11	14	25	
	44%	56%	100%	Pearson X² (1) = 1.0153, *p* = .314
High	165	138	303	
	54.46%	45.54%	100%	

Factors	Turnover intention			Statistic tests
	No	Yes	Total	
Working hours				
< = 48 hours/week	64	42	106	
	60.38%	39.62%	100%	
49–71 hours/week	76	56	132	Pearson X² (2) = 9.4911, p = .009
	57.58%	42.42%	100%	
> = 72 hours/week	36	54	90	
	40%	60%	100%	