

Migrant workers' well-being after the rampant sweep of the Omicron wave in Hong Kong

Kitty KY Lai, Hong Qiu, Eliza LY Wong *

ABSTRACT

Introduction: The impact of the coronavirus disease 2019 pandemic has rendered migrant workers a vulnerable population susceptible to psychological distress. This cross-sectional study aimed to estimate the prevalence of anxiety and examine associations of perceived social support and working conditions with anxiety among Filipina domestic workers (FDWs) after the peak of the Omicron wave in Hong Kong.

Methods: In total, 370 female FDWs were recruited through convenience sampling in Central, Hong Kong, during holiday gatherings from June to August 2022; social normalcy had begun to return during this period after the peak of the Omicron pandemic. Anxiety levels were assessed using the Generalised Anxiety Disorder-7 (GAD-7) scale. Perceived social support and working conditions were measured using validated instruments. Socio-demographic characteristics and health-related information were recorded for consideration as covariates.

Results: The estimated prevalence of anxiety (GAD-7 score ≥ 10) was 8.6% (95% confidence interval [CI]=5.8%-11.5%). Multivariable logistic regression demonstrated that greater satisfaction with compensation and salary (adjusted odds ratio [aOR]=0.825, 95% CI=0.728-0.935), increased free

time and rest periods (aOR=0.878, 95% CI=0.780-0.987), and higher satisfaction with value orientation (aOR=0.887, 95% CI=0.796-0.989) were associated with lower anxiety risk.

Conclusion: Migrant workers constitute a vital workforce but are often neglected in preventive care. Based on these findings, preventive measures such as labour protection, compensation for overtime work, adequate rest periods, and improved working conditions are crucial in mitigating anxiety. This study highlights key areas for policy refinement and governmental support to enhance migrant workers' well-being.

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New knowledge added by this study

- Overall, 8.6% of Filipina domestic workers (FDWs) experienced probable anxiety after the Omicron wave of the coronavirus disease 2019 pandemic in Hong Kong.
- Associations between anxiety and working conditions were identified, indicating potential factors that influence the mental well-being of FDWs.
- No significant association was observed between anxiety and perceived social support.

Implications for clinical practice or policy

- The Hong Kong government could prioritise refining policies to support favourable working conditions for migrant workers, including negotiation of an increase in meal allowances and strict enforcement of regular working hours.
- Non-governmental organisations could tailor psychological interventions to migrant workers to address diverse mental health needs.

Introduction

Declared a public health emergency of international concern by the World Health Organization, coronavirus disease 2019 (COVID-19) has continuously posed a threat to both physical and psychological health.¹ Beginning in December 2021, the Omicron variant triggered the fifth wave of the pandemic in Hong Kong, endangering psychological

well-being.^{1,2} Filipina domestic workers (FDWs), the primary group of migrant domestic workers, constitute >2.5% of the Hong Kong population³ and are considered a vulnerable population. Before the Hong Kong government reiterated the rights of migrant workers, many FDWs faced mistreatment, including abuse, exploitation, and illegal dismissal upon infection with severe acute respiratory

syndrome coronavirus 2 (SARS-CoV-2).⁴⁻⁶ Filipina domestic workers were susceptible to both direct and indirect consequences of the COVID-19 pandemic.

Migrant workers often experience poor psychosocial conditions and substandard working environments.⁴⁻⁸ However, few studies have consistently examined the well-being of FDWs.⁸⁻¹⁰ Anxiety, a key indicator of well-being, commonly coexists with other psychological conditions. Considering the large number of domestic workers in Hong Kong, efforts to safeguard the psychological health of this minority population are essential to prevent excessive strain on the healthcare system.¹¹ Additionally, various aspects of working conditions should be investigated in relation to anxiety.¹²

This study aimed to estimate the prevalence of anxiety and examine its relationships with perceived social support and decent work among FDWs after the peak of the Omicron wave during the COVID-19 pandemic in Hong Kong. Insights regarding the psychosocial conditions encountered by FDWs during the aftermath of the pandemic may contribute to existing literature.

Methods

Study design

A cross-sectional survey, written in English, was administered between June and August 2022. The target population comprised FDWs. Eligibility criteria included age ≥ 18 years, ability to read and understand English, and ability to provide informed consent. Filipina domestic workers who began employment on or after 1 February 2022 in Hong Kong, as well as male FDWs, were excluded from the present study. Because the majority of FDWs are women (97.8%), the inclusion of a small sample of male FDWs could compromise representativeness.³

Convenience sampling was utilised. Recruitment was conducted at gathering places in Central, Hong Kong, where a large proportion of FDWs spend their days off. Data collection was performed on rest days (Sundays and statutory holidays). Support and clarifications were provided to respondents who required assistance in understanding the questions. Respondents were offered a gratuity of HK\$20 in cash as a token of appreciation for their time and assistance. According to Yeung et al,¹⁰ the prevalence of anxiety among FDWs in Hong Kong at the beginning of the pandemic was 25%. With a 95% confidence interval (95% CI) and a desired margin of error of $\pm 5\%$, the minimum required sample size was estimated to be 289.

Data collection tool and measurement

The questionnaire consisted of four sections, namely, anxiety, perceived social support, working

外籍勞工在Omicron病毒肆虐香港後的精神健康

黎潔凝、邱宏、黃麗儀

引言：新冠肺炎大流行令外籍勞工成為容易受到心理影響的弱勢群體。這項橫斷面研究旨在評估香港的菲律賓籍家庭傭工於Omicron高峰期過後焦慮的患病率，並研究自我感知的社會支持和工作條件與焦慮的關係。

方法：我們於2022年6月至8月的假日，即第五波Omicron病例高峰期過後以便利抽樣法在香港中環招募了370名菲律賓女性家庭傭工。我們以焦慮程度評估問卷-7（GAD-7）量度焦慮程度，以及有效的問卷工具量度自我感知的社會支持和工作條件。我們亦收集了社會人口統計資料和健康狀況作共變數。

結果：菲律賓籍家庭傭工焦慮（GAD-7分數 ≥ 10 ）的估計患病率為8.6%（95%置信區間=5.8%-11.5%）。多元邏輯斯迴歸分析顯示較高薪酬滿意度（經調整比值比=0.825，95%置信區間=0.728-0.935）、更多空餘時間和休息時間（經調整比值比=0.878，95%置信區間=0.780-0.987）和較高價值觀滿意度（經調整比值比=0.887，95%置信區間=0.796-0.989）與較低焦慮風險有關。

結論：外籍勞工是容易在預防醫學被忽視的重要勞動力。研究結果顯示勞工保障、加班補償、充分休息和調整工作環境等預防措施對緩和焦慮至為重要。此研究強調了政府在完善相關政策和支持方面可以重點關注的範疇。

conditions, and potential covariates (eg, socio-demographic and health-related factors). The questionnaire was developed based on validated instruments and a literature review of similar contexts.¹²⁻¹⁷

The Generalised Anxiety Disorder-7 (GAD-7) scale was adopted to assess anxiety levels.¹³ The total score ranges from 0 to 21; a threshold score of ≥ 10 to identify self-reported anxiety provides optimal sensitivity (89%) and specificity (82%).¹³ The GAD-7 has demonstrated high internal consistency in the general population (Cronbach's $\alpha=0.92$) and among FDWs working in Chinese regions (Cronbach's $\alpha=0.80$).^{18,19}

The Multidimensional Scale of Perceived Social Support, using a 7-point Likert scale, was used to measure perceived social support across three domains, namely, significant others, family, and peers.¹⁴ Each domain comprises four items. We calculated a mean score for each domain ranging from 1 to 7 and a total mean score averaged from the three concerned domains to represent the total score of perceived social support. A higher score indicates a greater level of perceived social support. The authors of the scale proposed multiple approaches for interpreting perceived social support, one of which involved analysing continuous data for the three domains and the overall score.¹⁴ This scale has been validated with high internal consistency among Southeast Asian domestic workers in Hong Kong (Cronbach's $\alpha=0.96$).^{16,20}

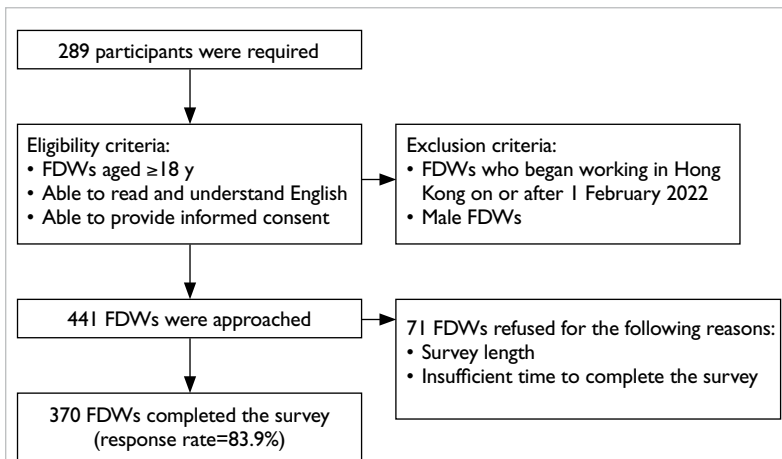


FIG 1. Participants' recruitment
Abbreviation: FDWs = Filipina domestic workers

Data analyses

Statistical analysis was performed using SPSS (Windows version 27.0; IBM Corp, Armonk [NY], US). Confidence intervals were established at the 95% level, and P values <0.05 were considered statistically significant. We computed 95% CIs for anxiety prevalence. Socio-demographic variables were compared between anxiety statuses using the Chi squared test, whereas scores for perceived social support and working conditions were compared using the independent samples *t* test.

Odds ratios (ORs) with 95% CIs were computed using a binary logistic regression model. For univariable analysis, simple logistic regression was conducted; perceived social support and working conditions constituted the main independent variables. Multivariable logistic regression analysis was performed to estimate the independent effects of these variables while adjusting for potential confounders.

The GAD-7 scores were categorised into four levels of anxiety severity: minimal (0-4), mild (5-9), moderate (10-14), and severe (15-21).¹³ We conducted sensitivity analysis using the GAD-7 score as an ordinal outcome and constructed an ordinal logistic regression model to assess the robustness of previously identified anxiety-associated factors.

Results

Among the 441 FDWs approached, 71 declined to participate, yielding a response rate of 83.9% (Fig 1). Primary reasons for refusal were survey length and time constraints. The distribution of GAD-7 scores was positively skewed (Fig 2). The estimated prevalence of probable anxiety (GAD-7 score ≥ 10) was 8.6% (95% CI=5.8-11.5). Among the 370 respondents, approximately half were aged 35 to 44 years (51.1%) and married (48.4%). Most respondents had attained a university-level education or higher (60.3%), reported a monthly income ranging from HK\$4630 to HK\$4999 (68.6%), and had children residing in their home country (82.7%). The proportions of respondents residing on Hong Kong Island, in Kowloon and the New Territories were evenly distributed. The median (interquartile range) duration of employment in Hong Kong was 5.0 years (interquartile range, 3.0-9.0). Most respondents had no history of COVID-19 (81.9%) and no chronic diseases (97.8%) [Table 1]. Table 2 shows that the mean scores for the three domains of perceived social support ranged from 5.5 to 5.7 out of 7, whereas the mean score for decent work was 78.1 out of 105. Among the five components of working conditions measured by the Decent Work Scale, the lowest mean score was observed for rest periods (14.1); access to healthcare had the highest mean score (17.1).

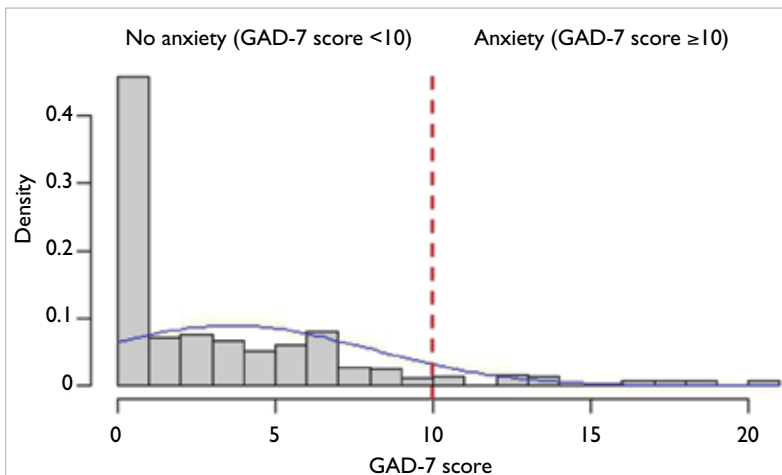


FIG 2. Distribution of Generalised Anxiety Disorder-7 scores
Abbreviation: GAD-7 = Generalised Anxiety Disorder-7

The Decent Work Scale was adopted to evaluate working conditions, including 15 items grouped into five components, namely, physically and interpersonally safe working conditions, access to essential healthcare support, sufficient income, adequate rest time, and alignment of working settings with social values.¹² Each item scored from 1 to 7, resulting in component scores ranging from 3 to 21 and a total score ranging from 15 to 105, with higher scores indicating better working conditions. This scale has been validated with high internal consistency among the working population in the US (Cronbach's $\alpha=0.86$).¹²

TABLE I. Demographic characteristics of participants*

	All participants (n=370)	Anxiety (n=32)	No anxiety (n=338)	P value (χ^2 test)
Socio-demographic characteristics				
Age, y				
18-34	103 (27.8%)	6 (18.8%)	97 (28.7%)	0.467
35-44	189 (51.1%)	19 (59.4%)	170 (50.3%)	
≥45	78 (21.1%)	7 (21.9%)	71 (21.0%)	
Education level				
High school or below	147 (39.7%)	12 (37.5%)	135 (39.9%)	0.787
University or above	223 (60.3%)	20 (62.5%)	203 (60.1%)	
Marital status				
Single	153 (41.4%)	9 (28.1%)	144 (42.6%)	0.047
Married	179 (48.4%)	16 (50.0%)	163 (48.2%)	
Separated/divorced/widowed	38 (10.3%)	7 (21.9%)	31 (9.2%)	
Have children				
Yes	306 (82.7%)	28 (87.5%)	278 (82.2%)	0.453
No	64 (17.3%)	4 (12.5%)	60 (17.8%)	
Residence area				
Hong Kong Island	139 (37.6%)	13 (40.6%)	126 (37.3%)	0.844
Kowloon	110 (29.7%)	10 (31.3%)	100 (29.6%)	
New Territories	121 (32.7%)	9 (28.1%)	112 (33.1%)	
Monthly income, HK\$				
4630-4999	254 (68.6%)	27 (84.4%)	227 (67.2%)	0.045
≥5000	116 (31.4%)	5 (15.6%)	111 (32.8%)	
Religious belief				
Catholic	284 (76.8%)	25 (78.1%)	259 (76.6%)	0.823
Christian	82 (22.2%)	7 (21.9%)	75 (22.2%)	
None	4 (1.1%)	0	4 (1.2%)	
Working years in Hong Kong, median (IQR) [†]				
≤5	191 (51.6%)	15 (46.9%)	176 (52.1%)	0.574
>5	179 (48.4%)	17 (53.1%)	162 (47.9%)	
Health conditions				
History of COVID-19				
Yes	67 (18.1%)	9 (28.1%)	58 (17.2%)	0.124
No	303 (81.9%)	23 (71.9%)	280 (82.8%)	
Presence of chronic diseases [§]				
Yes	8 (2.2%)	3 (9.4%)	5 (1.5%)	0.024
No	362 (97.8%)	29 (90.6%)	333 (98.5%)	

Abbreviations: COVID-19 = coronavirus disease 2019; HK\$ = Hong Kong dollars; IQR = interquartile range

* Data are shown as No. (%), unless otherwise specified

[†] Medians and IQRs are presented due to the skewed variable distribution

[‡] Non-parametric Wilcoxon test

[§] Fisher's exact test

Participants with probable anxiety had a worse perceptions of social support and working conditions; they had lower scores across all domains relative to those of respondents without anxiety (Table 2).

Participants with probable anxiety had a higher proportion of chronic diseases relative to those without anxiety (9.4% vs 1.5%; $P=0.024$) [Table 1]. Respondents with probable anxiety reported

TABLE 2. Perceived social support and working conditions among participants*

	All participants (n=370)	Anxiety (n=32)	No anxiety (n=338)	P value†
Perceived social support (MSPSS)				
Family domain	5.7±1.1	5.4±1.3	5.7±1.1	0.153
Friends domain	5.5±1.0	5.4±1.0	5.6±1.0	0.309
Significant others domain	5.6±1.1	5.2±1.3	5.6±1.1	0.089
MSPSS total score	5.6±1.0	5.3±1.0	5.6±0.9	0.085
Working conditions (DWS)				
Safe working conditions	15.7±3.9	14.8±4.5	15.8±3.8	0.166
Access to healthcare	17.1±3.1	15.6±4.2	17.2±3.0	0.046
Adequate compensation	15.5±3.5	12.5±3.9	15.7±3.4	<0.001
Rest periods	14.1±4.0	11.0±4.3	14.3±3.8	<0.001
Value orientation	15.8±3.9	13.0±5.3	16.0±3.6	0.003
DWS total score	78.1±11.9	66.9±15.7	79.1±10.9	<0.001

Abbreviations: DWS = Decent Work Scale; MSPSS = Multidimensional Scale of Perceived Social Support

* Data are shown as mean±standard deviation

† Independent samples t test

Associations of perceived social support and working conditions with anxiety

Simple logistic regression analysis indicated that one domain of perceived social support and multiple subscales of working conditions were significantly associated with anxiety (Table 3). Filipina domestic workers with higher perceived social support from significant others, better access to healthcare, greater satisfaction with compensation and salary, increased free time and rest periods, and higher satisfaction with their employer's value orientation exhibited a lower likelihood of experiencing probable anxiety. Multivariable logistic regression analysis—adjusted for all relevant socio-demographic variables, health status, and subscales of perceived social support and working conditions—identified three variables that remained statistically significant (Table 3). Greater satisfaction with compensation and salary (adjusted odds ratio [aOR]=0.825, 95% CI=0.728-0.935), increased free time and rest periods (aOR=0.878, 95% CI=0.780-0.987), and higher satisfaction with value orientation (aOR=0.887, 95% CI=0.796-0.989) were associated with lower anxiety risk. Sensitivity analysis, which examined the four levels of anxiety as an ordinal outcome using an ordinal logistic regression model, showed that effect estimates were slightly attenuated. However, the findings confirmed the association between anxiety levels and inadequate compensation, while also identifying a history of chronic diseases as a risk factor for increased anxiety severity (Table 4).

Discussion

Estimated prevalence of anxiety

The observed prevalence of anxiety among FDWs was 8.6%, representing a lower proportion compared

with previous studies.^{10,11,21,22} The Omicron variant led to an unprecedented surge in cases, which peaked in early March 2022. Compared with a local study conducted at the onset of the COVID-19 pandemic,¹⁰ the prevalence of probable anxiety among FDWs declined from 25% to 8.6%. A remarkably lower prevalence of anxiety was observed when using the official cut-off score of ≥ 7 for the Anxiety subscale of the Depression, Anxiety, and Stress Scale-21 Items (DASS-21-A) in both the general population of Hong Kong (14%)¹¹ and the Philippines (38.4%).²¹ In Singapore, 17.5% of migrant workers exhibited probable anxiety (DASS-21-A score ≥ 8).²² The discrepancy in anxiety prevalence across studies may be attributed to differences in study contexts and timeframes. Although the fifth wave of COVID-19 had nearly subsided in Hong Kong during the present study period, other regions were still experiencing high caseloads. The relatively low prevalence of anxiety among FDWs may indicate the development of psychological resilience after the Omicron pandemic. Additionally, information dissemination and vaccine availability were more established compared with the second and third waves of the pandemic.¹⁰

In response to the fifth wave of the COVID-19 pandemic, the local government implemented comprehensive public health policies to safeguard rights and facilitate risk communication among minority populations in Hong Kong. Coronavirus disease 2019 and vaccine-related information were made available in multiple languages, including Tagalog and English, thereby improving access to formal and accurate health information for FDWs. Access to adequate and accurate health information is essential for mitigating psychological distress and reducing anxiety levels associated with the

pandemic, as demonstrated by the findings of a study conducted in the Philippines.²¹

Access to COVID-19 vaccines may partially explain the findings. In Hong Kong, domestic workers were designated as a priority group for vaccination within 1 month of launching the COVID-19 vaccination programme.²³ Furthermore, the initial procurement of 22.5 million vaccine doses ensured sufficient supply for the entire population, allowing domestic workers to choose between Sinovac and BioNTech vaccines at no cost. The high effectiveness of COVID-19 vaccination may have contributed to anxiety reduction. As of August 2021, the majority of sampled domestic workers (80%) had received at least one dose of COVID-19 vaccine.²⁴ A study by McMenamin et al²⁵ demonstrated the substantial protective effect of COVID-19 vaccines against severe or fatal outcomes (BioNTech: two doses=83.9%; three doses=97.9%). Vaccination significantly reduces the risk of severe COVID-19 complications, hospitalisation, and mortality, which may have indirectly alleviated probable anxiety among FDWs. This assumption is supported by the results of a study examining the psychological impact of COVID-19 vaccination, which revealed lower anxiety levels among vaccinated individuals.²⁶ However, the aforementioned local^{10,11,20} and Singapore studies²² assessing the anxiety of migrant workers were conducted during periods when no pharmaceutical preventive measures were available. Therefore, access to COVID-19 vaccines is a plausible explanation for the lower prevalence of probable anxiety among FDWs.

Additionally, job security may explain the decline in probable anxiety. Some FDWs expressed concerns regarding job insecurity and experienced distress due to job loss.⁴ Amid increasing reports of illegal contract terminations, the government intervened to uphold FDWs' employment rights.²⁷ On 5 March 2022, a government spokesperson emphasised zero tolerance for employers who illegally dismissed FDWs exhibiting SARS-CoV-2 infection.²⁷ Any violation of the Employment Ordinance and related laws was subject to prosecution and fines.²⁷ Filipina domestic workers exhibiting SARS-CoV-2 infection or identified as close contacts of individuals with COVID-19 receive the same assistance and support as other Hong Kong citizens, including quarantine and isolation arrangements.²⁷ Greater institutional support for their employment may have contributed to the lower prevalence of anxiety among FDWs.

Perceived social support and anxiety

The significant others domain of perceived social support was negatively associated with anxiety in univariable analysis but was no longer significant according to multivariable regression. Significant

TABLE 3. Associations of socio-demographic characteristics, health status, perceived social support, and working conditions of participants (n=370)*

	Simple regression, cOR (95% CI)	Multivariable regression, aOR (95% CI)
Age, y		
18-34	1.00	1.00
35-44	1.807 (0.698-4.677)	1.798 (0.608-5.316)
≥45	1.594 (0.514-1.947)	1.931 (0.469-7.941)
Education level (University or above vs High school or below)	1.108 (0.525-1.342)	0.898 (0.376, 2.149)
Marital status (Married vs Single/separated/divorced/widowed)	1.074 (0.520-2.217)	1.074 (0.445-2.594)
Have children (Yes vs No)	1.511 (0.511-4.467)	1.822 (0.464-7.155)
Residence area		
Hong Kong Island	1.284 (0.529-3.118)	1.108 (0.390-3.143)
Kowloon	1.244 (0.486-3.186)	1.173 (0.397-3.463)
New Territories	1.00	1.00
Monthly income (≥HK\$5000 vs HK\$4630-4999)	0.379 (0.142-1.010)	0.555 (0.185-1.664)
Working years in Hong Kong (>5 vs ≤5)	1.231 (0.596-2.546)	1.468 (0.569-3.790)
Health status		
COVID-19 (Yes vs No)	1.889 (0.831-4.293)	1.173 (0.410-3.359)
Chronic diseases (Yes vs No)	6.890 (1.567-30.29)	3.992 (0.677-23.542)
Perceived social support (MSPSS)		
Family domain	0.819 (0.620-1.080)	0.992 (0.577-1.703)
Friends domain	0.847 (0.614-1.167)	1.105 (0.573-2.132)
Significant others domain	0.757 (0.579-0.990)	0.743 (0.433-1.275)
MSPSS total score†	0.762 (0.557-1.042)	N/A
Working conditions (DWS)		
Safe working condition	0.943 (0.867-1.025)	1.036 (0.904-1.188)
Access to healthcare	0.890 (0.815-0.972)	0.988 (0.856-1.141)
Adequate compensation	0.787 (0.711-0.871)	0.825 (0.728-0.935)
Rest periods	0.814 (0.741-0.895)	0.878 (0.780-0.987)
Value orientation	0.857 (0.794-0.925)	0.887 (0.796-0.989)
DWS total score†	0.928 (0.902-0.955)	N/A

Abbreviations: 95% CI = 95% confidence interval; aOR = adjusted odds ratio; cOR = crude odds ratio; COVID-19 = coronavirus disease 2019; DWS = Decent Work Scale; HK\$ = Hong Kong dollars; MSPSS = Multidimensional Scale of Perceived Social Support; N/A = not applicable

* The GAD-7 score was categorised using a cut-off point of 10 to classify probable anxiety (GAD-7 score ≥10) or no anxiety (GAD-7 score <10). Crude and adjusted ORs (95% CIs) were estimated using simple and multivariable binary logistic regression, respectively

† Not included in the multivariable regression model due to the potential high correlation with subscales

others are individuals that the respondents regard as special persons.¹² This finding contrasts with previous studies that identified perceived social support as an essential factor in coping with psychological distress among migrant workers.^{8,9} This discrepancy may be attributable to the small sample size. However, the finding is consistent with results from a local study conducted in a similar context.¹⁰

TABLE 4. Sensitivity analysis for the associations of socio-demographic characteristics, health status, perceived social support, and working conditions of participants (n=370)*

	Simple regression, cOR (95% CI)	Multivariable regression, aOR (95% CI)
Age, y		
18-34	1.00	1.00
35-44	1.006 (0.616-1.643)	0.990 (0.582-1.686)
≥45	0.675 (0.356-1.279)	0.732 (0.346-1.547)
Education level (University or above vs High school or below)	0.981 (0.635-1.517)	0.980 (0.609-1.576)
Marital status (Married vs Single/separated/divorced/widowed)	1.312 (0.855-2.012)	1.448 (0.890-2.356)
Have children (Yes vs No)	1.231 (0.691-2.194)	1.336 (0.676-2.639)
Residence area		
Hong Kong Island	1.305 (0.777-2.192)	1.231 (0.711-2.133)
Kowloon	1.343 (0.779-2.318)	1.373 (0.774-2.435)
New Territories	1.00	1.00
Monthly income (≥ HK\$5000 vs HK\$4630-4999)	0.816 (0.513-1.297)	0.944 (0.568-1.570)
Working years in Hong Kong (>5 vs ≤5)	0.940 (0.613-1.442)	1.014 (0.619-1.661)
Health status		
COVID-19 (Yes vs No)	1.337 (0.778-2.301)	1.127 (0.622-2.043)
Chronic diseases (Yes vs No)	7.382 (1.946-27.996)	5.171 (1.281-20.867)
Perceived social support (MSPSS)		
Family domain	0.883 (0.733-1.064)	1.136 (0.836-1.545)
Friends domain	0.824 (0.674-1.008)	0.994 (0.707-1.397)
Significant others domain	0.795 (0.660-0.956)	0.781 (0.573-1.064)
MSPSS total score†	0.794 (0.641-0.983)	N/A
Working conditions (DWS)		
Safe working condition	0.949 (0.899-1.001)	1.018 (0.947-1.094)
Access to healthcare	0.901 (0.844-0.961)	0.944 (0.867-1.028)
Adequate compensation	0.880 (0.827-0.935)	0.912 (0.849-0.980)
Rest periods	0.918 (0.869-0.969)	0.961 (0.901-1.024)
Value orientation	0.911 (0.863-0.962)	0.952 (0.891-1.017)
DWS total score†	0.954 (0.936-0.972)	N/A

Abbreviations: 95% CI = 95% confidence interval; aOR = adjusted odds ratio; cOR = crude odds ratio; COVID-19 = coronavirus disease 2019; DWS = Decent Work Scale; HK\$ = Hong Kong dollars; MSPSS = Multidimensional Scale of Perceived Social Support; N/A = not applicable

* Crude and adjusted ORs (95% CIs) were estimated using simple and multivariable ordinal logistic regression, respectively

† Not included in the multivariable regression model due to the potential high correlation with subscales

Filipina domestic workers migrate to foreign countries to support their families' livelihoods; they are often portrayed as resilient and independent figures by the Philippine Government. This narrative may subtly reinforce the perception among FDWs that they are the sole breadwinners responsible for their families' well-being.²⁸ Consequently, although

FDWs may seek informal social support from significant others, their self-disclosure remains selective. Psychological concerns, in particular, may be considered sensitive topics, leading to avoidance of such discussions in an effort to protect their self-esteem. This avoidance may explain the absence of an observed association between perceived social support and anxiety.

Working conditions and anxiety

Another key finding was that better working conditions—including greater satisfaction with compensation and salary, increased free time and rest periods, and higher satisfaction with value orientation—were associated with a lower likelihood of probable anxiety. Working conditions are recognised as social determinants of mental health. Findings from the World Health Organization suggest that jobs offering high rewards and a greater sense of control serve as protective factors for mental well-being, thereby reinforcing the importance of favourable working conditions for employees.²⁹ Consistent with the previous findings,³⁰ high and regular monetary compensation was linked to lower probable anxiety in our study. According to the Occupational Wages Survey in the Philippines,³⁰ the median monthly income was PHP13 646 (HK\$1865, US\$239), whereas the minimum monthly wage in Hong Kong was HK\$4630 (US\$594) during the study period.³¹ Filipina domestic workers in Hong Kong earned at least 2.48-fold more than their counterparts in the Philippines. Higher monthly earnings are often allocated toward property purchases in the Philippines, meeting family obligations, and fulfilling roles and responsibilities. Thus, greater satisfaction with compensation and salary may have contributed to lower probable anxiety among FDWs. Although this factor may explain the observed association, a qualitative study would provide deeper insights into the relationship between higher compensation and reduced psychological distress.

Additionally, increased free time and rest periods were associated with a lower risk of probable anxiety. An occupational health study³² established an inverse relationship between working hours and sleep duration, where anxiety and depression scores were higher among individuals working longer hours. These findings suggest that increased free time and rest periods can help reduce anxiety risk.

Notably, greater alignment between FDWs' working environments and their social values was associated with lower anxiety risk. Value orientation refers to the principles an individual upholds, including ethics, morality, and attitudes toward work. In the workplace, each aspect of the working environment is interconnected with FDWs and their employers, influencing the likelihood of psychological distress. Employers are encouraged

to engage in discussions with FDWs regarding working conditions—such as job demands and task restructuring—to ensure alignment in value orientation between both parties.

Other covariates

While chronic disease was not a statistically significant predictor of anxiety in multivariable logistic regression model, sensitivity analysis using an ordinal outcome revealed that it remained a risk factor for increased anxiety severity. Despite the inconclusive findings regarding this association, a systematic review³³ indicated that a history of chronic diseases is linked to higher anxiety levels. The presence of chronic diseases has a negative impact on mental health.³³

Limitations and strengths

Some limitations were inherent in our sampling method and study design. First, we could not establish causality. Because cross-sectional study designs provide only short-term data regarding associations, longitudinal studies are needed to examine temporal sequences and causal relationships. Second, the use of convenience sampling may introduce selection bias; therefore, generalisations of the findings to the entire FDW population should be made with caution. However, this bias is likely minimal because all FDWs were approached, and none were selectively invited based on specific characteristics; also, the demographic distribution of the sample closely resembled that of domestic workers recorded in the Hong Kong Population Census.³⁴ The age distributions in the Census data³⁴ and the study sample were comparable: 18–34 years (29.8% vs 27.8%), 35–44 years (48.2% vs 51.1%), and ≥45 years (22.0% vs 21.1%). Additionally, the respondents' residence areas were evenly distributed across Hong Kong Island, Kowloon, and the New Territories. These findings suggest high representativeness and generalisability in the study sample. Furthermore, monetary incentives were provided, which may have contributed to higher-quality responses.

Conclusion

This study identified associations between optimal working conditions and lower probable anxiety among FDWs. The findings update the estimated prevalence of anxiety in this population and suggest that favourable working conditions may serve as protective factors. The study provides insights for the development and refinement of public health measures and occupational policies related to migrant workers, including compensation for overtime work, job security, and adequate rest periods. Psychological interventions tailored to domestic workers should be developed to address diverse mental health needs while incorporating

labour protection. Regular review and refinement of occupational policies may be necessary. The Labour Department could consider conducting large-scale quantitative surveys and qualitative interviews with domestic workers to assess and accommodate their occupational needs. Future studies should aim to include domestic workers of various nationalities and other migrant worker populations.

Author contributions

Concept or design: KKY Lai, ELY Wong.
Acquisition of data: KKY Lai.
Analysis or interpretation of data: All authors.
Drafting of the manuscript: KKY Lai.
Critical revision of the manuscript for important intellectual content: ELY Wong.

All authors had full access to the data, contributed to the study, approved the final version for publication, and take responsibility for its accuracy and integrity.

Conflicts of interest

All authors have disclosed no conflicts of interest.

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Ethics approval

This research was approved by the Survey and Behavioural Research Ethics Committee of The Chinese University of Hong Kong, Hong Kong (Ref No.: 018-22). The study was conducted in accordance with the principles of the Declaration of Helsinki. Informed consent was obtained from the participants prior to commencement of the survey.

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