INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND ANALYSIS

ISSN(print): 2643-9840, ISSN(online): 2643-9875

Volume 07 Issue 12 December 2024

DOI: 10.47191/ijmra/v7-i12-21, Impact Factor: 8.22

Page No. 5529-5542

Post-Migration Mental Health of Black African Migrant Nurses in England

Harmony Owhotake RN, BSN, MPH
Independent researcher

ABSTRACT: International nurse migration has become increasingly prevalent, with nurses from developing nations, particularly in Africa, moving to high-income countries like the UK. While this movement offers better economic and professional opportunities, it also presents significant challenges, particularly regarding mental health. Migration-induced stress, exacerbated by acculturative pressures, can contribute to mental health issues such as depression and anxiety among migrant nurses. Despite the importance of this issue, there has been limited research into the mental health status of Black African migrant nurses in England.

This cross-sectional study aimed to explore the mental health well-being of Black African migrant nurses in England, using validated scales: the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS) and the Hopkins Symptom Checklist-10 (HSCL-10). Findings revealed that while the overall mental well-being of participants was comparable to the national average, the prevalence of depressive and anxiety symptoms was significantly higher. Specifically, 60.8% of respondents reported HSCL-10 scores indicative of mental health issues, a rate nearly three times higher than that reported in hospital staff and the general population. Notably, those whose symptoms began after migration had significantly higher levels of psychological distress, emphasising the role of migration in exacerbating mental health issues.

Factors such as racism and discrimination were found to be the strongest predictors of poor mental health, followed by spending time alone when off work, job stress, age and health status. These findings highlight the need for targeted mental health interventions and policies addressing the specific challenges faced by Black African migrant nurses, particularly in the areas of workplace discrimination and social integration.

INTRODUCTION

Background

The global trend in international nurse migration has seen nurses moving from developing countries to industrialised nations (Kline, 2003) largely due to push and pull factors such as better pay, working conditions, and professional opportunities (Buchan and Calman, 2004; Buchan, Seccombe and Thomas, 1997). In 2000, over 70,000 nurses who were born in Africa had migrated to an industrialised nation and were working there (Clemens and Pettersson, 2008). Of all countries that appear to be desirable destinations for migrant nurses, the US, the UK, and Australia are the largest recipients of this workforce (Kline, 2003). The UK has seen a sharp rise in the number of internationally educated nurses from different parts of the world. The report from the NHS Workforce Statistics showed that 16% of nurses in June 2023 identified as having an Asian nationality, which showed a significant increase from 7% in March 2019, and Africans constituted 5% (Baker, 2023). Nigeria, Ghana, Zimbabwe, and Kenya have consistently been among the top 10 countries for training internationally recruited professionals registered by the NMC as new joiners from 2018 to 2022 despite active recruitment has been discouraged (NMC: Nursing and Midwifery Council, 2022).

There is growing evidence that migration is gradually being recognised as a social determinant of health (Marmot *et al.*, 2012), associated with increased susceptibility to a wide range of illnesses, including mental health disorders (Hasan *et al.*, 2021; Rechel *et al*., 2011). The prevalence of depression and anxiety is significantly higher in migrant workers when compared with the non-migrant population, and this prevalence rate has seen a consistent rise over the years (Hasan *et al*., 2021), likely due to the effect of acculturative stress (Kesornsri, Sitthimongkol, and Hegadoren, 2014).

There is research that has been carried out in the US and other countries on the mental health of minority nurses; however, few articles exist in England and wider Europe.

The aim of this paper is to assess the mental health and well-being of Black African migrant nurses living in England, and it has the following objectives:

- To determine their level of mental well-being,
- To determine the prevalence of depressive and anxiety issues,
- To determine the difference in mental health issues across the migration timelines,
- To identify factors associated with depressive and anxiety issues.

LITERATURE REVIEW

Mental Health of Nurses

The mental health of nurses has been recognised to be at dangerously low levels (Ford, 2023). Using the Hospital Anxiety Depression Scale, 27.3% of nurses scored above the clinical cutoff for depression and anxiety, which aligns with the findings from a study by Calnan et al. (2001) on hospital staff and the general population, who used a different assessment tool, the 12-item General Health Questionnaire.

High job demands have been associated with poorer mental health outcomes (Tajvar et al., 2015; Mark and Smith, 2011). Factors such as intrinsic reward, decision-making authority, and skill discretion have shown negative relationships with anxiety and depression (Mark and Smith, 2011). Age, job positions, and years of work experience have also been found to be linked to mental health outcomes (Tajvar et al., 2015; Wei et al., 2023). Married nurses were reported to have higher rates of mental health issues, although no significant relationship was found between the two variables (Tajvar et al., 2015). These findings, however, seem to contradict the results of Mark and Smith (2011), Perry et al. (2015), and Calnan et al. (2001), who reported that the presence of social support was associated with better mental health. Furthermore, Mark and Smith (2011) identified social support as the strongest indicator of depression in nurses, while job stress was identified as the strongest predictor of anxiety.

Experiences of Black African Migrant Nurses in the UK

Racial discrimination is a common issue for Black African nurses in the UK. Two out of five ethnic minority nurses have experienced abuse from colleagues, and almost two out of three have been harassed by patients, leading to decreased job satisfaction (Shields and Price, 2002). These experiences vary by nationality, with Black African nurses reporting higher levels than Black Caribbean or Black British nurses (Shields and Price, 2002). Males, having higher qualifications and Married were all associated with higher rates of discrimination (Shields and Price, 2002). A possible reason for this could be members of these groups may be more likely to report incidents of discrimination due to their higher education levels and support from partners (Likupe, 2005).

Migrant nurses often find themselves employed in the lowest grade possible without recognition of previous skills (Likupe, 2005). They struggle to obtain mortgages and other benefits (Likupe, 2005), and this poorer accommodation has been associated with negative experiences in the UK (Allan and Larsen, 2003). In addition, some have reduced access to training and career opportunities (Likupe, 2005). Language barriers have also been reported to impact their living and working experience (Allan and Larsen, 2003).

The experiences of these groups of nurses are not always negative. Some report positive stories, but this can vary across different employers (Allan and Larsen, 2003). Positive experiences are linked to a strong support system, while negative experiences to a weaker support system, leading to feelings of isolation and homesickness (Allan and Larsen, 2003). This has been recognised as a factor influencing health (Wilkinson and Marmot, 2005).

Few studies have investigated the mental health status of migrant Black African nurses. However, numerous studies have found a correlation between discrimination and mental health outcomes, indicating a negative relationship between these variables (Paradies, 2006; Lewis, Cogburn and Williams, 2015). With the high level of discrimination experienced, migrant Black African nurses may be more susceptible to mental health issues than other ethnicities.

THEORETICAL FRAMEWORK

Acculturative Stress

Previous researchers have attempted to explore the factors affecting the mental health of migrant workers in Asian countries, and they have focused on the link between acculturative stress and anxiety or depression (Kesornsri, Sitthimongkol and Hegadoren, 2014). Acculturation is the process of learning the new culture of a country immigrants live in, including behaviours that can impact their health (Walker and Barnett, 2007). Berry (2005) explained that acculturation takes place at two levels: the group level, which involves a change in social institutions, and the individual level, involving a change in the individual's behaviour. This change can occur smoothly, but sometimes, there can be cultural conflict and acculturative stress (Berry, 2005). Migrant workers tend to suffer from acculturative stress, and this increases the likelihood of anxiety and depression (Kesornsri, Sitthimongkol, and Hegadoren, 2014).

Post-Migration Mental Health of Black African Migrant Nurses in England

Migration as a social determinant of health

Migrants often face barriers accessing healthcare, even with legal status and economic stability (Davies, Basten, and Frattini, 2005). However, these groups are generally healthier than the residents of their new countries, possibly because migrants undertaking the challenging journey are more likely to be in good health (Vissandjee et al., 2004). Nonetheless, their health tends to decline with increased duration of stay in their new destination (Vissandjee et al., 2004), likely attributed to their lower socioeconomic status, as poverty is recognised as a determinant of health (Davies, Basten, and Frattini, 2005).

Migration can also lead to a feeling of happiness, satisfaction, accomplishment and escape from violence, while in others, it can lead to isolation (Tankwanchi, 2018; Vandenberg et al., 2019), ultimately leading to the emotional feeling of desiring home (Nesbitt, 2002). These factors have been established to significantly impact wellbeing, including mental health (Marmot and UCL Institute of Health Equity, 2014; Carballo, Divino and Zeric, 1998).

Research Gap

More research needs to be carried out on the mental health of minority nurses in European countries (Schilgen *et al*., 2017). Few articles have explored the mental health of Black African nurses in the UK, and even fewer included internationally trained nurses in their research. The little that did, employed qualitative study designs, using sample sizes that may not have been a true representation of this population. This leaves a gap in the current knowledge of the mental well-being of migrant nurses, especially since Zaghloul et al. (2019) have shown that the mental health burden varies between nationalities. This creates the need to consider multiple nationalities in the assessment of mental health. Further insight is needed into the mental health state of foreign-trained nurses from countries other than the Philippines (Schilgen *et al.*, 2017).

METHODS

The population size of black nurses, including both Black Africans and black British, in the NHS workforce in England is 36,323 (NHS Digital, 2022). The study's sample size was calculated by assuming a confidence interval of 95% (Z= 1.96), a margin of error of 0.05, and a population proportion of 0.5.

Using the formula for finite population:

$$N = \frac{\frac{Z^2 * p\,(1-p)}{\varepsilon^2}}{1 + \frac{\frac{Z^2 * p\,(1-p)}{\varepsilon^2}}{Population}}$$

N= 381 samples.

Sampling Methodology

Convenience sampling was used in the first stage. An online questionnaire was shared through WhatsApp, X, Facebook and LinkedIn to recruit participants. This strategy was chosen because it allowed the researcher to recruit respondents promptly. Snowball sampling was utilised in the second stage. Participants were asked to share the questionnaire link with others they know who meet the study's inclusion criteria to increase representation from different regions and maximise recruitment to the study.

Selection of study subjects

Black African UK registered nurses who are internationally educated, working and living in England, and moved to England after qualifying as a nurse were recruited in this study. While those who possessed dual citizenship obtained their nursing qualifications from a non-African country and resided outside England were excluded.

Data Collection Tool

Two tools were used in the study. The first was the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS), used to assess the participants' levels of mental well-being. This scale was chosen because it has been widely used to evaluate the mental health and well-being of diverse population groups (Warwick Medical School, 2020b), and it provides a more precise measurement than the 14-item scale (Warwick Medical School, 2020a). It has 7 questions listed below:

1. I've been feeling optimistic about the future,
2. I've been feeling useful,
3. I've been feeling relaxed,
4. I've been dealing with problems well,
5. I've been thinking clearly,
6. I've been feeling close to other people, and

7. I've been able to make up my own mind about things.

Each criterion is scored 1-5. With 1 meaning 'none of the time', 2 'rarely', 3 'some of the time', 4 'often', and 5 'all of the time' (Warwick Medical School, 2020a). A mean score of >27.4 is regarded as high mental well-being, while a mean score of < 19.5 represents low mental well-being. The final scores will also be compared against the population norms in England. The mean score for the UK population is 23.6093 ('WEMWBS Population Norms in Health Survey for England Data 2011,' no date), with men and women having mean scores of 23.7 and 23.6, respectively (Fat *et al.*, 2016).

The second tool was the Hopkins Symptom Checklist-10 (HSCL-10), a reliable tool (Strand *et al.*, 2003) used when researching mental health issues as it focuses on depressive and anxiety symptoms (Kleppang and Hagquist, 2016). It is also valid for research in different cultures (Attal, Lurie and Neumark, 2020) which was why it was chosen. It comprises 10 questions, with the first four being anxiety-related and the latter six on depression. Each question requires the participant to respond on the Likert scale with 'not at all', 'a little', 'quite a bit', or 'extremely' (Attal, Lurie and Neumark, 2020). Kleppang and Hagquist (2016) and (Strand *et al.*, 2003) gave a list of the questions used in the checklist and they are:

1. Suddenly scared for no reason,
2. Feeling fearful,
3. Faintness, dizziness, or weakness,
4. Feeling tense or keyed up,
5. Blaming yourself for things,
6. Difficulties in falling asleep or staying asleep,
7. Feeling blue,
8. Feelings of worthlessness,
9. Feeling everything is an effort,
10. Feeling hopeless about the future.

'Not at all' is given a value of 1, 'a little' 2, 'quite a bit' a 3, and 'extremely' 4 (Derogatis *et al.*, 1974). A score ≥ 1.85 is indicative of mental health issues (Strand *et al.*, 2003).

A question was included to identify when participants started experiencing symptoms in the migration timeline to determine the time of symptom onset.

The questionnaire also includes factors identified in the literature review: gender, social support, marital status, educational qualification, duration of stay, physical health, accommodation type, monthly income, career satisfaction, access to medical care, job stress, and discrimination, which can influence mental health outcome to address the second research question.

Data Analysis

The data was analysed using SPSS. A p-value of 0.05 or lower was considered significant. The first phase involved descriptive analysis to identify the level of mental well-being and the prevalence of depressive and anxiety issues. The second phase involved ANOVA to assess the relationship between the time of symptom onset and the HSCL-10 score and also multiple linear regression to analyse the association between the factors identified and the scores from the HSCL-10.

RESULTS

Data Quality and Imputation

At the start of the analysis, an issue was identified in the data collection process. One of the questions for the SWEMWBS- "I've been feeling relaxed"- was omitted in error from the questionnaire. The absence of this data could impact the analysis as the calculated score for this scale would no longer be comparable to the national average. Also, the cut-off for low and high mental well-being would no longer be appropriate to use in interpreting the data.

To address this problem, multiple imputation was used to fill in the missing data. Multiple imputation predicts missing values, using observed data as predictors (Shrive *et al.*, 2006). This analysis was completed using the advanced statistical package, Multiple Imputation using Chained Equations (MICE) on Python, using the completed responses for the other SWEMWBS for the individual as the predictors. This method was chosen because it imputes missing values with a fine level of accuracy and precision while maintaining the overall data structure and variable relationships (Shrive *et al.*, 2006).

Correlation Analysis

A correlation matrix analysis (Table 1) was completed to ensure the imputed data did not change the data structure. The Pearson Correlation Coefficient was perfectly correlated with the numeric value C, which shows it relied heavily on this variable. However, it appears to mirror all others proving the overall data structure was maintained after imputation.

Table 1 Correlation Matrix Analysis

		Numeric Value A	Numeric Value B	Numeric value C	Numeric value D	Numeric value E	Numeric value F	Imputed numeric value
Numeric Value A	Pearson Correlation	1	.569**	.455**	.470**	.272**	.406**	.455**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001	<.001	<.001
	N	270	270	270	270	270	270	270
Numeric Value B	Pearson Correlation	.569**	1	.503**	.633**	.400**	.441**	.503**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001	<.001	<.001
	N	270	270	270	270	270	270	270
Numeric value C	Pearson Correlation	.455**	.503**	1	.542**	.335**	.376**	1.000**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001	<.001	<.001
	N	270	270	270	270	270	270	270
Numeric value D	Pearson Correlation	.470**	.633**	.542**	1	.543**	.533**	.542**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001	<.001	<.001
	N	270	270	270	270	270	270	270
Numeric value E	Pearson Correlation	.272**	.400**	.335**	.543**	1	.407**	.335**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001	<.001
	N	270	270	270	270	270	270	270
Numeric value F	Pearson Correlation	.406**	.441**	.376**	.533**	.407**	1	.376**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001		<.001
	N	270	270	270	270	270	270	270
Imputed numeric value	Pearson Correlation	.455**	.503**	1.000**	.542**	.335**	.376**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	<.001	
	N	270	270	270	270	270	270	270

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

Participant Demographics

270 participants were successfully recruited into the study. Two participants reported their nationality as Indians, one Black, three African, and one did not report their nationality. Due to the small number, Listwise Deletion was used, and these 7 participants were excluded from the study. The remaining 263 participants had unevenly distributed nationality with Nigerians constituting 84.4% of participants as shown below:

Table 2- Nationality Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ghanaian	24	9.1	9.1	9.1
	Kenyan	16	6.1	6.1	15.2
	Nigerian	222	84.4	84.4	99.6
	Zimbabwea	1	.4	.4	100.0
	Total	263	100.0	100.0	

Level of Mental Wellbeing

The mean SWEMWBS score was 23.8403, with the lowest score obtained being 10 and the maximum score 35. The mean score for men was 25.4444 and women was 23.5115 as shown below:

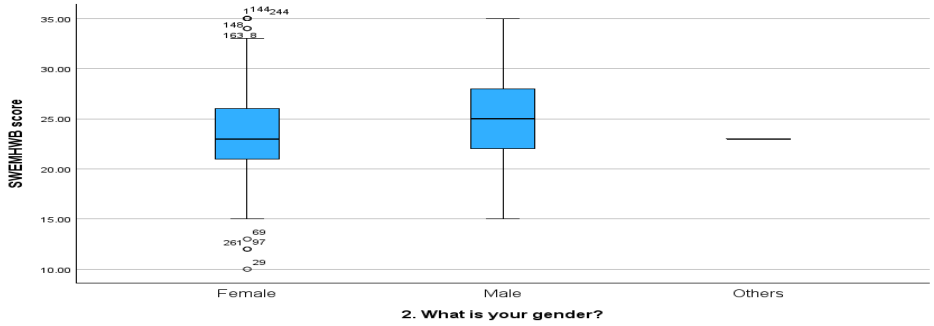

Chart 1 – SWEMWBS scores and genders

13.3% (35) of the respondents were classified as having low mental well-being, 68.4% (180) had neither low nor high and so were classified as having moderate mental well-being, and 18.3% (48) had high mental well-being. See below:

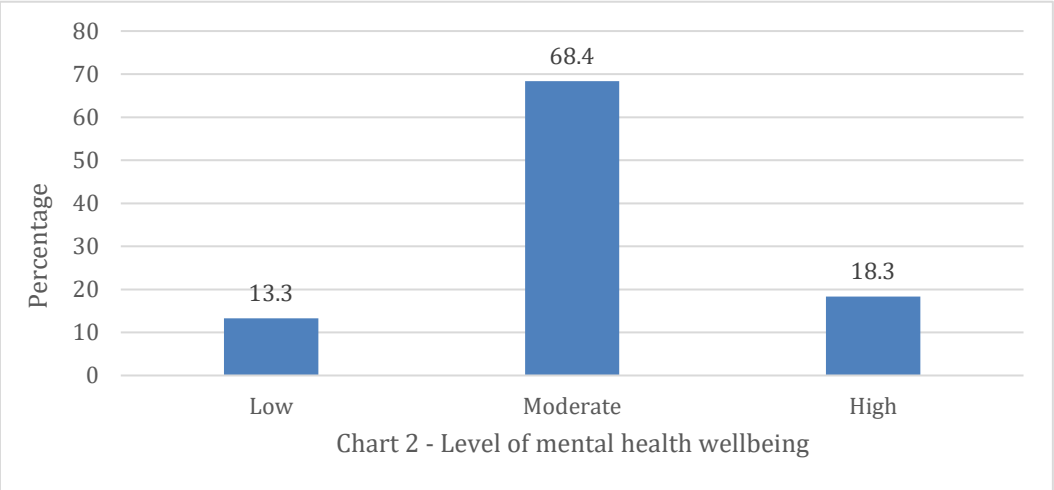

Chart 2 - Level of mental health wellbeing

Prevalence of Depressive and Anxiety Issues

The HSCL-10 was used to assess the prevalence rate of depressive and anxiety issues. 60.8% (160) scored 1.85 or higher, indicating mental health issues as shown below:

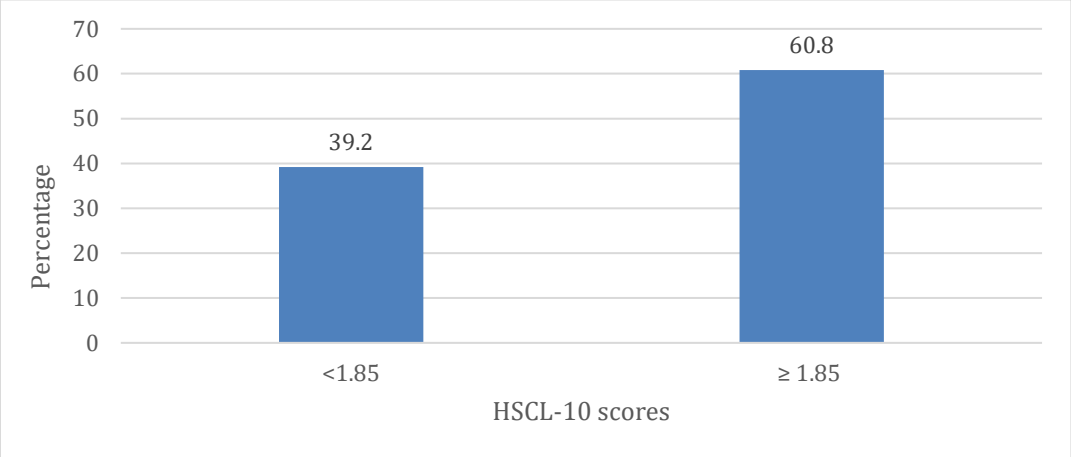

Chart 3 – Percentage scored above HSCL-10 threshold

Time of Onset of Symptoms

73.8% (194) reported that their symptoms started after arriving in England, and of this percentage, 76.3% (122) scored higher than the threshold for mental health issues. See below:

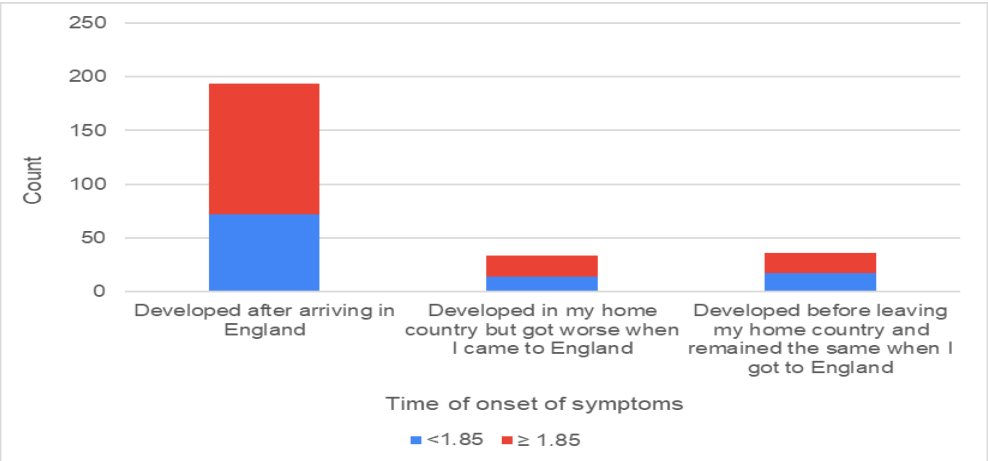

Chart 4 – Number of respondents, time of onset of symptoms and their HSCL-10 scores

A one-way ANOVA was conducted to examine the impact of the time when symptoms started on the HSCL-10 scores and the mean scores were compared across the three groups.

Post hoc comparisons using the Tukey HSD test indicated that the mean score for those who developed symptoms after arriving in England (M = 2.1412) was higher than those who developed symptoms before leaving their home country and remained the same when they got to England (M = 1.7972). This difference was statistically significant (p = .008). However, no significant differences were found between other groups. See Tables 3 and 4 below:

Table 3 – Turkey HSD test on HSCL-10 scores

Tukey HSD[a,b]

Symptom_Start_Coded	N	Subset for alpha = 0.05	
		1	2
Developed before leaving my home co	36	1.7972	
Developed in my home country but go	33	2.0364	2.0364
Developed after arriving in England	194		2.1412
Sig.		.159	.699

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 47.442.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 4 – Multiple comparisons of the mean HSCL-10 scores

Dependent Variable: HSCL-10 score

Tukey HSD

(I) Symptom_Start_Coded	(J) Symptom_Start_Coded	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Developed before leaving my home co	Developed in my home country but go	-.23914	.15258	.262	-.5988	.1205
	Developed after arriving in England	-.34401*	.11489	.008	-.6148	-.0732
Developed in my home country but go	Developed before leaving my home co	.23914	.15258	.262	-.1205	.5988
	Developed after arriving in England	-.10487	.11922	.654	-.3859	.1761
Developed after arriving in England	Developed before leaving my home co	.34401*	.11489	.008	.0732	.6148
	Developed in my home country but go	.10487	.11922	.654	-.1761	.3859

*. The mean difference is significant at the 0.05 level.

The one-way ANOVA indicated a statistically significant difference in HSCL-10 scores based on when symptoms started, F = 4.576, p = 0.011. The effect size, measured by eta-squared, was 0.034, indicating that approximately 3.4% of the variance in HSCL-10 scores can be explained by the timing of symptom onset as shown below:

Table 5 – ANOVA analysis

HSCL-10 score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.669	2	1.834	4.576	.011
Within Groups	104.216	260	.401		
Total	107.885	262			

Table 6 – ANOVA effect sizes

		Point Estimate	95% Confidence Interval Lower	Upper
HSCL-10 score	Eta-squared	.034	.002	.083
	Epsilon-squared	.027	-.006	.076
	Omega-squared Fixed-effect	.026	-.006	.075
	Omega-squared Random-effect	.013	-.003	.039

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

b. Negative but less biased estimates are retained, not rounded to zero.

Factors Associated with Mental Health Issues

A. Regression Model Summary

According to the regression analysis model summary (Table 7), the model accounts for 29.6% of the variance in mental health issues ($R^2 = 0.296$). However, after adjusting for the number of independent variables, the explained variance decreases to 22.5% (adjusted $R^2 = 0.225$). The regression model (Table 8) was statistically significant ($F = 4.166$, $p < 0.001$), indicating that the independent variables have a significant effect on the HSCL-10 scores.

Table 7 – Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.544[a]	.296	.225	.56498

a. Predictors: (Constant), 24. Access to religious groups and activities, 18. Monthly salary can cover monthly expenses without extra work hours, 15. Job role/type , 10. Presence of social support, 22. Experiences of racism and discrimination , 14. Accommodation satisfaction, 4. Highest educational qualification, 23. Access to medical care, 5. What is your nationality?, 8. Health status , 21. Overwhelmed with stress from work, 12. How often do you travel home?, 17. Average extra work hours per week (outside of 37.5 contracted work hours), 1. What is your age?, 7. Which organisation do you currently work with?, 20. Fear of litigation, 2. What is your gender?, 19. Job satisfaction with current roles and duties, 13. Accommodation type, 16. Monthly salary from your full-time job, 6. Duration of stay in England, 11. How do you spend most of your time off work?, 3. Martial status, 9. Living status

Table 8 – Regression ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.915	24	1.330	4.166	<.001[b]
	Residual	75.970	238	.319		
	Total	107.885	262			

a. Dependent Variable: HSCL-10 score

b. Predictors: (Constant), 24. Access to religious groups and activities, 18. Monthly salary can cover monthly expenses without extra work hours, 15. Job role/type , 10. Presence of social support, 22. Experiences of racism and discrimination , 14. Accommodation satisfaction, 4. Highest educational qualification, 23. Access to medical care, 5. What is your nationality?, 8. Health status , 21. Overwhelmed with stress from work, 12. How often do you travel home?, 17. Average extra work hours per week (outside of 37.5 contracted work hours), 1. What is your age?, 7. Which organisation do you currently work with?, 20. Fear of litigation, 2. What is your gender?, 19. Job satisfaction with current roles and duties, 13. Accommodation type, 16. Monthly salary from your full-time job, 6. Duration of stay in England, 11. How do you spend most of your time off work?, 3. Martial status, 9. Living status

B. Independent variables and their relationships

Age, health status, how you spend time off work, overwhelmed with stress from work and experiences of racism and discrimination all had significant relationships with the HSCL-10 scores with p-values < 0.05. Of all these, experiences of racism and discrimination had the highest standardised coefficients (Beta), 0.234, followed by how you spend time off work, then overwhelmed with stress from work, then age, and lastly, health status having the lowest score of 0.128. All other factors were not statistically significant as p-values > 0.05. See below:

Table 9 – Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.216	.628		5.119	<.001
	1. What is your age?	.120	.055	.136	2.185	.030
	2. What is your gender?	-.133	.097	-.081	-1.365	.174
	3. Martial status	.145	.111	.107	1.302	.194
	4. Highest educational qualification	-.021	.028	-.042	-.741	.459
	5. What is your nationality?	.038	.060	.036	.622	.535
	6. Duration of stay in England	-.006	.039	-.010	-.154	.878
	7. Which organisation do you currently work with?	.010	.074	.009	.138	.890
	8. Health status	-.157	.074	-.128	-2.123	.035
	9. Living status	.068	.064	.093	1.064	.288
	10. Presence of social support	.056	.085	.044	.663	.508
	11. How do you spend most of your time off work?	-.284	.096	-.220	-2.967	.003
	12. How often do you travel home?	.008	.042	.012	.199	.843
	13. Accommodation type	-.017	.052	-.021	-.320	.749
	14. Accommodation satisfaction	-.041	.053	-.044	-.769	.443
	15. Job role/type	.001	.048	.001	.022	.982
	16. Monthly salary from your full-time job	-.029	.051	-.037	-.576	.565
	17. Average extra work hours per week (outside of 37.5 contracted work hours)	.027	.031	.050	.848	.398
	18. Monthly salary can cover monthly expenses without extra work hours	-.003	.043	-.004	-.067	.946
	19. Job satisfaction with current roles and duties	.007	.046	.009	.150	.881
	20. Fear of litigation	-.059	.032	-.110	-1.836	.068
	21. Overwhelmed with stress from work	-.089	.031	-.177	-2.925	.004
	22. Experiences of racism and discrimination	-.113	.028	-.234	-3.952	<.001
	23. Access to medical care	.043	.072	.034	.592	.555
	24. Access to religious groups and activities	-.091	.093	-.058	-.977	.329

a. Dependent Variable: HSCL-10 score

DISCUSSIONS

Overview of Findings

The findings from this study offer key insights into the mental health of Black African migrant nurses in England. The distribution of respondents illuminates the known trends in migration, with Nigerians comprising 84.4% of the sample, followed by Ghanaians, Kenyans, and Zimbabweans with 9.1%, 6.1% and 4%, respectively. These findings align with existing data identifying Nigeria as Africa's leading source of internationally recruited nurses, followed by Ghana, Zimbabwe and lastly Kenya (NMC: Nursing and Midwifery Council, 2022).

The mean score on the SWEMWBS was 23.8403, similar to the national average of 23.6093 ('WEMWBS Population Norms in Health Survey for England Data 2011,' no date). This suggests that, overall, the mental well-being of the sample is not dramatically different from the general population. However, gender differences were noted. Men scored slightly higher when compared with the national average, 25.4444 vs. 23.7, respectively (Fat *et al.*, 2016), a difference of nearly 2 points. In contrast, women had similar scores, 23.5115 vs 23.6, respectively (Fat *et al.*, 2016). This reflects wider patterns in health research, where gender imbalances often result in women having higher rates of anxiety and mood disorders (Kuehner, 2003). The variation in men's average scores may also be attributed to the smaller percentage of male respondents (17.1%) compared to females (82.5%). Also, a crucial finding of the study is that 68.4% of respondents fell into the category of moderate mental well-being, with 13.3% classified as low. These results challenge the initial hypothesis that Black African migrant nurses would exhibit lower overall mental well-being. This could be due to effective coping mechanisms developed during migration or the resilience of individuals who choose to migrate for work, leading to the positive feelings associated with migration (Tankwanchi, 2018; Vandenberg et al., 2019).

This study revealed a shocking prevalence of 60.8% for depressive and anxiety issues using the HSCL-10 among the participants, emphasising an important public health issue. This elevated prevalence markedly exceeds findings from prior studies by Mark and Smith (2011) and Calnan et al. (2001), where the prevalence stood at approximately 27.3%. The difference in these figures may be attributed to disparities in assessment tools, with the former studies utilising the Hospital Anxiety Depression Scale (HADS) and the General Health Questionnaire (GHQ), both recognised as suboptimal, in comparison with the HSCL-10, for assessing depression and anxiety within multicultural contexts. Moreover, Mark and Smith (2011) specifically examined clinical anxiety and clinical depression, which used higher thresholds than those commonly applied in assessing depressive and anxiety issues in their data collection tool. This differential approach may have led to an underestimation of the magnitude of the problem within their study.

The discrepancy between the mental well-being scores on the SWEMWBS and the HSCL-10 can be explained by the different focuses of these tools: while the SWEMWBS primarily captures overall mental well-being, particularly depressive symptoms, the HSCL-10 assesses both depression and anxiety, offering a more comprehensive evaluation of psychological distress.

Migration and Mental Health

The fact that 73.8% of respondents reported that their mental health symptoms started after arriving in England and 76.3% of this group scored above the threshold for depressive and anxiety symptoms highlights the significant impact migration may have on mental health. The statistically significant higher mean HSCL-10 score of 2.1412 for those whose symptoms began post-migration further emphasises the influence of acculturative stress, as described by Berry (2005) and supported by Kesornsri, Sitthimongkol, and Hegadoren (2014). Migration as a social determinant of health (Marmot *et al*., 2012; Hasan *et al*., 2021; Rechel *et al*., 2011) is thus reinforced here, suggesting that Black African migrant nurses in England are at increased risk of developing mental health issues due to the stresses associated with adjusting to a new cultural environment.

Factors Contributing to Mental Health Issues

The analysis identified racism and discrimination as the strongest predictors of mental health issues, with 68.4% of respondents reporting experiences of discrimination. This supports existing research on the negative impact of discrimination on mental health (Paradies, 2006; Lewis, Cogburn, and Williams, 2015). Black African migrant nurses, as a group, experience higher levels of discrimination than other Black ethnicities (Shields and Price, 2002), perhaps providing some explanation for the high prevalence of depressive and anxiety issues. The persistence of these experiences, despite policies aimed at reducing workplace discrimination, suggests that existing strategies may be insufficient. The recent report from the Nursing and Midwifery Council shows us that discrimination in nursing remains an ongoing issue, with Black nurses reporting higher rates of workplace abuse, nearly double those reported by their white colleagues. (Nursing and Midwifery Council, 2024).

Job stress was another significant predictor, in line with Mark and Smith (2011) and Tajvar et al. (2015). While 77.6% of respondents were on the lowest band (Band 5) for registered nurses, only 31.2% reported dissatisfaction with their roles. This could suggest that, while job demands are high, the actual dissatisfaction with roles may be mitigated by other factors such as financial stability or professional development opportunities, which are areas worth exploring in future studies.

How respondents spent their time off work was significantly associated with their HSCL-10 scores. Specifically, spending time with family and friends was correlated with lower HSCL-10 scores, suggesting that social engagement outside of work plays a critical role in tackling psychological distress. This finding is consistent with the existing body of evidence that highlights the protective effects of social support on mental health outcomes (Mark and Smith, 2011; Perry et al., 2015; Calnan et al., 2001; Allan and Larsen, 2003; Wilkinson and Marmot, 2005). Interestingly, the presence of family in England and marital status were not significantly associated with lower HSCL-10 scores. This finding may reflect the complexities of personal relationships during the migration process, where marital ties do not always provide the expected emotional support emphasising that social support does not necessarily need to come from family members living in the same country; rather, the presence of a broader social network can provide a buffer against mental health issues.

Health status was another important factor associated with HSCL-10 scores. The findings indicate that individuals with more medical conditions were more likely to experience worse mental health outcomes, a relationship that has been documented in prior research (Vissandjee et al., 2004). However, only 16.7% of respondents reported having at least one medical diagnosis, suggesting that this factor may not hold as much public health significance in this population as other variables, such as racism, discrimination and job stress.

Implications for Theory

These findings provide further support to the acculturative stress theory (Berry, 2005), reinforcing the idea that migration induces stress through cultural conflict and adjustment difficulties. The high prevalence of mental health issues among Black African migrant nurses is not merely a reflection of individual susceptibility but is instead intertwined with broader systemic challenges such as racism, discrimination, and job stress.

Implications for Policy

The high prevalence of mental health issues among Black African migrant nurses in England highlights the need for targeted mental health interventions within the healthcare system. Current policies, such as those focused on refugees and victims of trafficking, overlook the specific needs of migrant healthcare workers. Policies that address acculturative stress and provide mental health support for all migrant populations, not just the most vulnerable, should be considered. In particular, discrimination in the workplace remains a significant barrier to mental health improvement. The findings of this study suggest that more extensive anti-discrimination policies are needed, alongside mandatory training for staff on how to address and report discrimination.

Implications for Practice

At the practical level, healthcare institutions must recognise the mental health challenges faced by Black African migrant nurses and provide better support systems. Employers should implement programs that foster social integration, such as mentorship schemes and social activities that help newly arrived migrant nurses adapt to their new environment. Occupational health programs should also prioritise mental health, offering proactive support rather than waiting for symptoms to worsen before intervention.

Addressing job stress through workload management, flexible working hours, and improved job satisfaction mechanisms could also alleviate some of the pressure experienced by these nurses. Regular mental health check-ups and access to counselling services should be part of the standard support offered to internationally recruited nurses.

CONCLUSION

Summary

This study investigated the mental well-being of Black African migrant nurses living in England. The findings demonstrated that while the overall mental well-being of participants, as measured by the SWEMWBS, was comparable to that of the general population, the prevalence of depressive and anxiety issues was alarmingly high. Using the HSCL-10, it was found that 60.8% of participants had depressive and anxiety issues, a rate nearly three times higher than that reported in previous studies of hospital staff and the general population.

The study also identified several factors significantly associated with mental health outcomes, with racism and discrimination emerging as the strongest predictors. Job stress, age, health status, and how participants spent their time off work also had significant relationships with mental health issues.

Strengths and Limitations

The strengths of this study lie in its rigorous quantitative design and the use of validated measurement tools (HSCL-10 and SWEMWBS) in the cross-sectional study. These allowed the researcher to maximise participants and use statistical approaches to

determine significant associations, minimising individual bias. Using a culturally sensitive tool also helped to ensure high accuracy of results.

A significant limitation of this study was the omission of a question from the SWEMWBS, which necessitated the use of multiple imputation to fill in the missing data. Although the imputation process was handled rigorously and did not significantly alter the data structure, the missing question may have affected the overall reliability of the SWEMWBS results. However, by using this scale together with the HSCL-10, the impact of this missing data was minimised.

Also, the time of symptom onset may have been affected by recall bias, and respondents may have been more likely to report better mental health levels before migration. Self-completing the tool may have led to misinterpretation errors potentially affecting the accuracy of responses from the participants.

Finally, the study's sample size, while sufficient for statistical analysis, was not fully representative of the broader population of Black African migrant nurses in England, with Nigerians being overwhelmingly represented. This uneven distribution of nationalities may limit the generalisability of the findings to other Black African migrant groups.

Contribution to Knowledge

This study makes a significant contribution to the growing body of research on the mental health of migrant healthcare workers, particularly in the UK context. It is among the first to provide evidence of the high prevalence of mental health issues among Black African migrant nurses in England, highlighting the need for targeted mental health interventions for this group. The findings emphasise the importance of using culturally sensitive tools, such as the HSCL-10, for assessing mental health in diverse populations, as general well-being scales may not fully capture the extent of psychological distress. Moreover, the study's identification of key risk factors such as racism, discrimination, and job stress offers valuable insights for policymakers and healthcare organisations seeking to improve the well-being of ethnic minority nurses.

RECOMMENDATIONS FOR FUTURE STUDIES

Future research should explore the relationship between job stress and mental health in greater depth. While 98.9% of nurses in this study reported experiencing some level of job stress, only 31.2% were dissatisfied with their roles, suggesting that there may be hidden factors mitigating the impact of stress, such as personal resilience or financial stability.

Other epidemiology designs may be explored as well. Longitudinal studies could track participants from their home countries through their migration journey, using tools like the HSCL-10 to assess changes in mental health over time. This approach would help minimise recall bias and offer a more accurate picture of how acculturation and migration as a whole affect mental health.

Additionally, future research should aim for more representative samples, including a broader range of nationalities within the Black African migrant nurse population.

REFERENCES

1) Allan, H. and Larsen, J. (2003) *We need respect'': experiences of internationally recruited nurses in the UK*. London, United Kingdom of Great Britain and Northern Ireland: Royal College of Nursing.
2) Attal, J.H., Lurie, I. and Neumark, Y. (2020) 'A rapid assessment of migrant careworkers' psychosocial status during Israel's COVID-19 lockdown,' *Israel Journal of Health Policy Research*, 9(1). https://doi.org/10.1186/s13584-020-00422-0.
3) Baker, C. (2023) *NHS staff from overseas: Statistics*. House of Commons library. https://researchbriefings.files.parliament.uk/documents/CBP-7783/CBP-7783.pdf.
4) Berry, J.W. (2005) 'Acculturation: Living successfully in two cultures,' *International Journal of Intercultural Relations*, 29(6), pp. 697–712. https://doi.org/10.1016/j.ijintrel.2005.07.013.
5) Bhugra, D. (2004) 'Migration and mental health,' *Acta Psychiatrica Scandinavica*, 109(4), pp. 243–258. https://doi.org/10.1046/j.0001-690x.2003.00246.x.
6) Bhugra, D. and Becker, M.L. (2005) 'Migration, cultural bereavement and cultural identity.' *World Psychiatry* [Preprint].
7) Buchan, J. and Calman, L. (2004) *The Global Shortage of Registered Nurses: An overview of issues and actions*. Geneva, Switzerland: International council of nurses. https://eprints.soton.ac.uk/366546/.
8) Buchan, J., Seccombe, I. and Thomas, S. (1997) 'Overseas mobility of UK based nurses,' *International Journal of Nursing Studies*, 34, pp. 54–62.
9) Calnan, M., Wainwright, D., Forsythe, M., Wall, B., Almond, S. (2001) 'Mental health and stress in the workplace: the case of general practice in the UK,' *Social Science & Medicine*, 52(4), pp. 499–507. https://doi.org/10.1016/s0277-9536(00)00155-6.

10) Carballo, M., Divino, J.J. and Zeric, D. (1998) 'Migration and health in the European Union,' *Tropical Medicine & International Health*, 3(12), pp. 936–944. https://doi.org/10.1046/j.1365-3156.1998.00337.x.
11) Clemens, M.A. and Pettersson, G. (2008) 'New data on African health professionals abroad,' *Human Resources for Health*, 6(1). https://doi.org/10.1186/1478-4491-6-1.
12) Derogatis, L.R., Lipman, R., Rickels, K., Uhlenhuth, E. H., Covi, L. (1974) 'The Hopkins Symptom Checklist (HSCL): A self-report symptom inventory,' *Behavioral Science*, 19(1), pp. 1–15. https://doi.org/10.1002/bs.3830190102.
13) Fat, L.N., Scholes, S., Boniface, S., Mindell, J., Stewart-Brown, S. (2016) 'Evaluating and establishing national norms for mental wellbeing using the short Warwick–Edinburgh Mental Well-being Scale (SWEMWBS): findings from the Health Survey for England,' *Quality of Life Research*, 26(5), pp. 1129–1144. https://doi.org/10.1007/s11136-016-1454-8.
14) Ford, M. (2023) *Exclusive: Mental health at perilous low, warn nursing staff*. https://www.nursingtimes.net/news/nurse-wellbeing/exclusive-mental-health-at-perilous-low-warn-nursing-staff-01-02-2023/ (Accessed: August 1, 2024).
15) Hasan, S.N., Yee, A., Rinaldi, A., Azham, A. A., Hairi, F. M., Nordin, A. S. S. (2021) 'Prevalence of common mental health issues among migrant workers: A systematic review and meta-analysis,' *PLOS ONE*, 16(12), p. e0260221. https://doi.org/10.1371/journal.pone.0260221.
16) Kesornsri, S., Sitthimongkol, Y. and Hegadoren, K. (2014) 'Mental Health Problems among Migrant Workers: Challenges for Nurses in Thailand,' *Journal of Nursing Science (วารสารพยาบาลศาสตร์)*, 32(3), pp. 9–19. https://www.tci-thaijo.org/index.php/ns/article/view/27169.
17) Kleppang, A.L. and Hagquist, C. (2016) 'the psychometric properties of the Hopkins Symptom Checklist-10: a Rasch analysis based on adolescent data from Norway,' *Family Practice*, 33(6), pp. 740–745. https://doi.org/10.1093/fampra/cmw091.
18) Kline, D. (2003) 'Push and Pull Factors in International Nurse Migration,' *Journal of Nursing Scholarship*, 35(2), pp. 107–111. https://doi.org/10.1111/j.1547-5069.2003.00107.x.
19) Kuehner, C. (2003) 'Gender differences in unipolar depression: an update of epidemiological findings and possible explanations,' *Acta Psychiatrica Scandinavica*, 108(3), pp. 163–174. https://doi.org/10.1034/j.1600-0447.2003.00204.x.
20) Lewis, T. T, Cogburn, C. D and Williams, D. R (2015) 'Self-reported experiences of discrimination and health: scientific advances, ongoing controversies, and emerging issues,' *Annual Review of Clinical Psychology*, 11, pp. 407–440. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5555118/.
21) Likupe, G. (2005) 'Experiences of African nurses in the UK National Health Service: A literature review,' *Journal of Clinical Nursing*, 15, pp. 1213–1220. https://doi.org/10.1111/j.1365-2702.2006.01380.x.
22) Mark, G. and Smith, A.P. (2011) 'Occupational stress, job characteristics, coping, and the mental health of nurses,' *British Journal of Health Psychology*, 17(3), pp. 505–521. https://doi.org/10.1111/j.2044-8287.2011.02051.x.
23) Marmot, M., Allen, J., Bell, R., Bloomer, E., Goldblatt, P. (2012) 'WHO European review of social determinants of health and the health divide,' *The Lancet*, 380(9846), pp. 1011–1029. https://doi.org/10.1016/s0140-6736(12)61228-8.
24) Marmot and UCL Institute of Health Equity (2014) *Review of Social Determinants and the Health Divide in the WHO European Region: Final report*. World Health Organisation. https://iris.who.int/handle/10665/108636.
25) Nesbitt, F.N. (2002) 'African Intellectuals in the Belly of the Beast: Migration, Identity, and the Politics of Exile,' *African Issues*, 30(1), p. 70. https://doi.org/10.2307/1167095.
26) NHS Digital (2022) 'NHS Workforce Statistics - June 2022 (Including selected provisional statistics for July 2022).' https://digital.nhs.uk/data-and-information/publications/statistical/nhs-workforce-statistics/june-2022.
27) NMC: Nursing and Midwifery Council (2022) *The NMC Register mid-year update*. https://www.nmc.org.uk/globalassets/sitedocuments/data-reports/sep-2022/0082a-mid-year-data-report-uk-web.pdf.
28) Nursing and Midwifery Council (2024) *Independent Culture Review*, *Nursing and Midwifery Council*. Nursing and Midwifery Council. https://www.nmc.org.uk/about-us/independent-reviews/ (Accessed: September 12, 2024).
29) Paradies, Y. (2006) 'A systematic review of empirical research on self-reported racism and health,' *International Journal of Epidemiology*, 35, pp. 888–901. https://doi.org/10.1093/ije/dyl056.
30) Perry, L., Lamont, S., Brunero, S., Gallagher, R., Duffield, C. (2015) 'The mental health of nurses in acute teaching hospital settings: a cross-sectional survey,' *BMC Nursing*, 14(1). https://doi.org/10.1186/s12912-015-0068-8.
31) Rechel, B., Mladovsky, P., Devillé, W., Rijks, B., Petrova-Benedict, R., McKee, M. (2011) 'Migration and health in the European Union: an introduction,' *Open University Press eBooks* [Preprint]. https://pure.uva.nl/ws/files/1406302/112480_359915.pdf.
32) Schilgen, B., Nienhaus, A., Handtke, O., Holger, S., Mösko, M. (2017) 'Health situation of migrant and minority nurses: A systematic review,' *PLOS ONE*, 12(6), p. e0179183. https://doi.org/10.1371/journal.pone.0179183.

33) Shields, M.A. and Price, S.W. (2002) 'Racial Harassment, Job Satisfaction and Intentions to Quit: Evidence from the British Nursing Profession,' *Economica*, 69(274), pp. 295–326. https://doi.org/10.1111/1468-0335.00284.
34) Shrive, F.M., Stuart, H., Quan, H., Ghali, W. A. (2006) 'Dealing with missing data in a multi-question depression scale: a comparison of imputation methods,' *BMC Medical Research Methodology*, 6(1). https://doi.org/10.1186/1471-2288-6-57.
35) Strand, B.H., Dalgard, O. S., Tambs, K., Rognerud, M. (2003) 'Measuring the mental health status of the Norwegian population: A comparison of the instruments SCL-25, SCL-10, SCL-5 and MHI-5 (SF-36),' *Nordic Journal of Psychiatry*, 57(2), pp. 113–118. https://doi.org/10.1080/08039480310000932.
36) Tajvar, A., Saraji, G. N., Ghanbarnejad, A., Omidi, L., Hosseini, S., Abadi, A. (2015) 'Occupational stress and mental health among nurses in a medical intensive care unit of a general hospital in Bandar Abbas in 2013.,' *PubMed*, 7(3), pp. 1108–13. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4574696/.
37) Tankwanchi, A.B.S. (2018) 'Oppression, liberation, wellbeing, and ecology: organizing metaphors for understanding health workforce migration and other social determinants of health,' *Globalization and Health*, 14(1). https://doi.org/10.1186/s12992-018-0397-y.
38) UNC Research (2022) *Nuremberg Code*. https://research.unc.edu/human-research-ethics/resources/ccm3_019064/ (Accessed: March 3, 2023).
39) Vandenberg, M., Fan, S., Cooling, N., Harris, K. M., Chin, J. (2019) 'Skilled migration: a structural determinant of health,' *International Journal of Migration Health and Social Care*, 15(4), pp. 262–271. https://doi.org/10.1108/ijmhsc-08-2018-0053.
40) Vissandjee, B., Desmeules, M., Cao, Z., Abdool, S., Kazanjian, A. (2004) 'Integrating ethnicity and migration as determinants of Canadian women's health,' *BMC Women S Health*, 4(S1). https://doi.org/10.1186/1472-6874-4-s1-s32.
41) Walker, P.F. and Barnett, E.D. (2007) *Immigrant Medicine*. Maarssen, Netherlands: Elsevier Gezondheidszorg.
42) Warwick Medical School (2020a) *WEMWBS: 14-item vs 7-item scale*. https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/about/wemwbsvsswemwbs/ (Accessed: July 3, 2024).
43) Warwick Medical School (2020b) *Why use WEMWBS?* https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/about/strengths (Accessed: July 3, 2024).
44) Wei, L., Guo, Z., Zhang, X., Niu, Y., Wang, X., Ma, L., Luo, M., Lu, B. (2023) 'Mental health and job stress of nurses in surgical system: what should we care,' *BMC Psychiatry*, 23(1). https://doi.org/10.1186/s12888-023-05336-0.
45) 'WEMWBS Population Norms in Health Survey for England Data 2011' (no date) *Health Survey for England 2011*. https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs/using/howto/.
46) Wilkinson, R.G. and Marmot, M.G. (2005) *Social Determinants of Health: The Solid Facts*. 2nd edn. https://doi.org/10.1093/acprof:oso/9780198565895.001.0001.
47) World Medical Association (ed.) (2001) *World Medical Association Declaration of Helsinki*.
48) Zaghloul, M.S., Saquib, J., AlMazrou, A., Nazmus, S. (2019) 'Mental Health Status of Expatriate Nurses in Northcentral Saudi Arabia,' *Journal of Immigrant and Minority Health*, 21(6), pp. 1233–1240. https://doi.org/10.1007/s10903-018-00853-7.