

ORIGINAL RESEARCH ARTICLE

Effects of psychological distress on health anxiety among nurses in Riyadh, Saudi Arabia

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Abstract

Nurses often experience high levels of psychological distress due to stressful work environments, which can lead to increased health anxiety. The aim of this study was to investigate the effect of psychological distress on health anxiety among nurses in Riyadh, Saudi Arabia. A descriptive-survey research design was used, with a sample of 311 nurses selected through simple random sampling from a population of 1630 nurses. Data were collected using the Salkovskis and Warwick Health Anxiety Questionnaire and the Kessler *et al.* Psychological Distress Questionnaire. The reliability of the questionnaires was confirmed with Cronbach's alpha coefficients of 0.84 and 0.79, respectively. Data analysis was performed using linear regression via SPSS software. The results showed a significant positive effect of psychological distress on health anxiety. These findings highlight the importance of psychological support and interventions in reducing health anxiety among nurses and improving their overall well-being. (*Afr J Reprod Health* 2025; 29 [8s]: 54-59).

Keywords: Psychological Distress; Health Anxiety; Burnout

Résumé

Les infirmières éprouvent souvent des niveaux élevés de détresse psychologique en raison d'environnements de travail stressants, ce qui peut entraîner une anxiété accrue liée à la santé. L'objectif de cette étude était d'étudier l'effet de la détresse psychologique sur l'anxiété liée à la santé chez les infirmières à Riyad, en Arabie saoudite. Un modèle de recherche descriptif a été utilisé, avec un échantillon de 311 infirmières sélectionnées par échantillonnage aléatoire simple parmi une population de 1630 infirmières. Les données ont été collectées à l'aide du questionnaire d'anxiété liée à la santé de Salkovskis et Warwick et du questionnaire de détresse psychologique de Kessler et al. La fiabilité des questionnaires a été confirmée avec des coefficients alpha de Cronbach de 0,84 et 0,79, respectivement. L'analyse des données a été effectuée à l'aide d'une régression linéaire via le logiciel SPSS. Les résultats ont montré un effet positif significatif de la détresse psychologique sur l'anxiété liée à la santé. Ces résultats soulignent l'importance du soutien psychologique et des interventions pour réduire l'anxiété liée à la santé chez les infirmières et améliorer leur bien-être général. (*Afr J Reprod Health* 2025; 29 [8s]: 54-59).

Mots-clés: Détresse psychologique; anxiété liée à la santé; épuisement professionnel

Introduction

Among various professions, nurses play a key and important role in educating patients and their families. Nurses who base their actions on reliable health information can make better decisions and provide higher quality care¹. On the other hand, nursing is an essential profession that is needed to provide safety and quality patient care in any situation². The National Institute for Occupational Safety and Health (NIOSH) has stated that out of 130 occupations surveyed, nursing ranks 20th in

terms of doctor visits for physical and mental health problems³. Due to the nature of their job, nursing staff are exposed to numerous stresses, including long and continuous contact with critically ill and dying patients, extraordinary responsibility, excessive personal demands from patients and those around them, rapid technological advances, frequent confrontation with the reality of death, and more. The subsequent destructive physiological and psychological effects lead to other negative consequences such as illness, absenteeism, decreased job performance, impaired emotion

regulation, decreased productivity, increased risk of health anxiety, and endangering human lives. In addition to the problems mentioned, nurses are exposed to health anxiety due to their work environment⁴. The results of various studies also indicate that people working in professions such as nursing experience a lot of stress and are at risk of developing anxiety disorders^{5,6}.

The most commonly known psychiatric disorder in nurses is anxiety⁷. The prevalence of health anxiety disorder among medical staff has been estimated at 30%, and among nurses, it ranges between 30% and 50%, which is very significant⁸. Health anxiety is defined as excessive, unrealistic, and persistent worry about having a disease and is an uncommon condition⁹. Health anxiety includes a broad range of concerns that individuals may have about their health, which includes emotional, cognitive, behavioral, and perceptual components⁸. According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders, also known as DSM-5, health anxiety is similar to a new diagnosis called illness anxiety disorder¹⁰.

Various factors cause health anxiety, one of which is psychological distress^{11,12}. Psychological distress is a common mental health issue in society¹³. It is an unpleasant emotional state of a psychological or social nature that affects a person's ability to cope with a particular set of circumstances¹⁴. Psychosocial distress refers to the general concept of maladaptive psychological functioning in the face of specific stressful life events that can cause permanent or temporary harms to the individuals¹⁵. According to the dual model of mental health, psychological distress is another aspect of psychological well-being. In other words, psychological distress is a higher-order psychological state that includes depressive symptoms (e.g., inadequacy, hopelessness, diminished value of life, self-deprecation), anxiety features (e.g., situational anxiety, experiencing anxiety effects), and stress (e.g., chronic levels of nonspecific emotions)¹⁶.

Psychological distress is often associated with cognitive, behavioral, and occupational issues^{12,17-20}. Inability to deal with stressors leads to psychological distress. It can manifest as a range of adverse mental health and psychiatric outcomes, including depression, anxiety, acute stress, post-traumatic stress, burnout, and psychiatric complications. Although psychological distress is

often considered a transient state that negatively influences daily and social functioning, it can persist and have long-term negative effects on mental health²¹. Additionally, psychological distress causes a decrease in self-esteem and self-efficacy by disrupting the cognitive processing system²². Due to the negative effects of this issue on an individual's health, performance, and productivity, it is considered a public health priority²³.

Studies conducted in Saudi Arabia have shown that nurses in the country suffer from high level of anxiety. Alsubaie *et al.* study found that about 33% of nurses experienced minimal or no depression, and 49.3% had minimal or no anxiety, while the rest experienced mood disorders during their work shifts²⁴. The study by Al Sulaiman *et al.* showed that the annual prevalence of insomnia, anxiety, and depression was 78.8%, 85.2%, and 85.3% of study participants, respectively²⁵. Alharbi *et al.* reported moderate levels of psychological distress in Saudi Arabian nurses²⁶. Given that the city of Riyadh known as one of the main healthcare centers in Saudi Arabia, studying the effect of psychological distress on health anxiety among nurses raises its particular importance. The findings of this study can help hospital managers and health system policymakers. They can improve the subject by developing appropriate solutions, increase the mental health of nurses and prevent a decline in the quality of healthcare.

Methods

The research method of this study is descriptive-survey. The statistical population of the study is the nurses in Riyadh, Saudi Arabia, whose number were equal to 1630 people. The sample size was 311 using the Cochran formula and selected by simple random sampling. To collect data, the Salkovskis and Warwick health anxiety questionnaire and the Kessler *et al.* psychological distress questionnaire used^{27,28}. Seven professors of management and nursing confirmed the validity of the questionnaires, and the reliability of the questionnaires obtained with Cronbach's alpha of 0.84 and 0.79, respectively. Data analysis performed using linear regression with the help of SPSS software.

Results

The mean age of the nurses was 35.70 years with a standard deviation of 6.78 years (ranging from 24 to

Table 1: Descriptive statistics indicators of research variables and Kolmogorov-Smirnov test

Variable	M	SD	skewness	kurtosis	Zt	P
Psychological distress	28.31	6.953	1.995	-1.740	0.976	0.165
Health anxiety	36.78	4.457	0.994	1.765	1.045	0.099
illness Anxiety	14.65	3.651	0.796	1.431	0.740	0.196
Anxiety about Disease Consequences	12.42	3.076	0.665	- 0.329	1.123	0.076
General health concerns	9.71	2.431	- 0541	0.890	0.899	0.175

Table 2: Summary of the simple linear regression model to examine the effect of psychological distress on health anxiety and its components

Dependent Variable		Independent Variable	R ²	Durbin-Watson Statistic	ANOVA	
Health anxiety					P	F
Component	Illness Anxiety	Psychological distress	0.658	2.168	0.001	87.543
	Anxiety about Disease Consequences		0.253	1.986	0.001	65.287
	General Health Concerns		0.226	1.765	0.001	48.543
			0.179	1.522	0.001	39.890

Table 3: Estimation of simple linear regression coefficients of the effect of psychological distress on health anxiety and its components

Dependant Variable	INDIPENDANT VARIABLE	β	t	P
Health Anxiety	Psychological distress	0.811	15.876	0.001
COMP ANENT Illness Anxiety		0.502	13.322	0.001
Anxiety about Disease Consequences		0.475	10.129	0.001
General Health Concerns		0.423	8.765	0.001

58 years). Among the participants, 24.14% were male, and 16.1% were married. The majority of nurses (90.8%) resided in urban areas. Most participants (83.9%) held a bachelor’s degree. Additionally, 77.9% reported no history of specific diseases, and 87.2% had no family history of depression.

Descriptive statistics indicators of mean, standard deviation, skewness, and kurtosis to describe each of the research variables, as well as the Kolmogorov-Smirnov test to measure the normality of the statistical distribution of the research variables, listed in Table 1.

As it shows, the values of the skewness and kurtosis indices for the research variables are in the range (2,-2); this means that the statistical distribution of the variables is approximately normal and symmetrical in terms of skewness and kurtosis. In addition, the significance level of the Kolmogorov-Smirnov test is greater than the error level of 0.01 (P>0.01), meaning that the distribution

of the research variables is normal with 99% confidence.

To investigate the effect of psychological distress on health anxiety and its components, a simple linear regression model was used, and a summary of the model is given in Table 2. As can be seen, the results of the ANOVA test indicate that the simple linear regression model is significant (P < 0.01) for examining the effect of psychological distress on health anxiety and its components. The Durbin-Watson statistic is between 1.5 and 2.5, which means that the assumption of autocorrelation between the error terms in the simple linear regression model is rejected. In other words, the estimation errors are independent of each other. Therefore, the assumption of independence of errors has not been violated. The coefficient of determination indicates that psychological distress explains 65.8% of the variance in health anxiety, 25.3% of the variance in illness anxiety component, 22.6% of the variance in the anxiety about disease

consequences component, and 17.9% of the variance in the general health concerns component.

The results of estimating the coefficients of the linear regression model are given in Table 3. According to the significance level (P), it is observed that psychological distress has a positive and significant effect on health anxiety ($\beta = 0.811$, $P < 0.01$) as well as on the components of illness anxiety ($\beta = 0.502$, $P < 0.01$), anxiety about disease consequences ($\beta = 0.475$, $P < 0.01$), and general health concerns ($\beta = 0.423$, $P < 0.01$). With an increase in psychological distress of one standard deviation, the level of nurses' health anxiety increases significantly by 0.811 standard deviations, and the components of illness anxiety, anxiety about disease consequences, and general health concerns increase significantly by 0.502, 0.475, and 0.423 standard deviations, respectively.

Discussion

The aim of this study was to investigate the effect of psychological distress on health anxiety among nurses in Riyadh, Saudi Arabia. Data analysis showed that psychological distress has a positive and significant effect on health anxiety among nurses in Riyadh. This aligns with findings from other studies^{11,12}. This relationship can be explained by the fact that nurses who experience high levels of psychological distress are more likely to suffer from severe health anxiety. This disorder is characterized by excessive worry, hyper-vigilance regarding bodily sensations, and a constant fear of illness or injury. These results are consistent with cognitive-behavioral models of health anxiety, which suggest that negative emotional states and maladaptive coping mechanisms exacerbate health-related concerns and lead to elevated levels of health anxiety and distress.

Furthermore, the analysis also indicated that psychological distress has a positive and significant effect on illness anxiety among nurses in Riyadh. This is consistent with the findings of other researchers^{11,12}. This can be explained by the fact that high levels of psychological distress reduce an individual's ability to cope with stress and daily challenges. Individuals under distress often experience unpleasant physical reactions, such as heart palpitations, shortness of breath, and dizziness. These physical symptoms exacerbate the anxiety of becoming ill instead of alleviating it.

Moreover, individuals under high distress may resort to ineffective coping strategies, such as avoidance or fleeing from challenges, rather than confronting them directly. Such avoidance behaviors increase the fear of illness because the individual fails to address the underlying issues causing the distress.

Additionally, the data analysis showed that psychological distress has a positive and significant effect on anxiety about disease consequences among nurses in Riyadh. This aligns with findings from other studies^{11,12}. People experiencing psychological distress often find their anxiety unbearable and struggle to cope with it. This inability to manage their emotions leads to feelings of shame and confusion, as they may underestimate their ability to deal with stress. When unable to alleviate their anxiety, individuals focus solely on the distressing emotion, which further impairs their performance and amplifies anxiety about disease consequences.

The study also found that psychological distress has a positive and significant effect on general health concerns among nurses in Riyadh. This is consistent with the findings of other researchers^{11,12}. Psychological distress impairs the ability to relieve emotions and manage psychological pressure in times of crisis, making it difficult for individuals to face and solve problems effectively. In other words, nurses who experience psychological distress are less able to control their emotions during traumatic life events and, instead of focusing on finding solutions to problems, may engage in avoidance strategies. As the stress from traumatic situations intensifies, these nurses may feel helpless and unable to endure the pressure, increasing their tendency to avoid confronting challenges. This cycle leads to heightened anxiety and increased general health concerns among nurses.

Conclusion

The findings of this study highlight the critical importance of addressing mental health issues within the nursing profession, particularly during crises. It is essential for managers to implement strategies that enhance the mental well-being of nurses, as they play a vital role in healthcare. Given the anxiety crisis that has developed among nurses, it is recommended that interventions be introduced,

such as rewards, encouragement, conflict resolution, psychological support, and various workshops aimed at managing anxiety levels. These actions can help improve employee commitment and motivation. Additionally, reducing consecutive shifts, minimizing shift changes, and enhancing work-rest cycles are important measures to alleviate stress. Social support should also be increased, and organizational structure improved to ensure a better work-life balance. These actions, supported by management, can significantly reduce health anxiety and psychological distress among nurses. It is important to note that the present study is cross-sectional, and its results regarding the effect of psychological distress on health anxiety only demonstrate significance within the study's specific population. To establish a cause-and-effect relationship, longitudinal and controlled studies are necessary.

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