



Differences in Psychological Hardiness with regard to Nurses' Socio-demographic Variables

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Abstract

ARTICLE INFO

Article history:

Received 18 February 2023

Accepted 21 June 2023

Keywords:

Psychological

Hardiness,

Sociodemographic

variables,

Nurses

Objective(s): The study aims to identify the differences in psychological hardiness with regard to nurses' socio-demographic variables.

Methodology: A descriptive study conducted in the Medical City hospitals in the city of Baghdad during the period from November 1, 2022 to May 1, 2023 on a simple random sample of 156 male and female nurses. The study adopted the Arabic version of the psychological hardiness scale for the data collection. The validity of the questionnaire was verified by presenting it to experts, and its reliability was verified through a pilot study. Data analysis was carried out using (SPSS, version 26) program.

Results: Results showed that more than half of nurses reported a fair level of psychological hardiness, less than have of sample nurses are associated with good level of psychological hardiness. Also the study found no significant difference between nurses' age, gender, marital status, socioeconomic status, qualification, workplace, and years of experience and their overall psychological hardiness score.

Conclusion: The study concluded that most nurses are associated with fair level of hardiness and socio-demographic factors do not affect the level of psychological hardiness among nurses.

Recommendations: To further investigate the impact of demographic and work-related factors on psychological hardiness, future research should include larger and more diverse samples of nurses, particularly those from different cultural and socioeconomic backgrounds.

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الاختلافات في الصلابة النفسية فيما يتعلق بالمتغيرات الاجتماعية-الديموغرافية للمرضين

المستخلص

الأهداف: هدف الدراسة هو التعرف على الاختلافات في الصلابة النفسية فيما يتعلق بالمتغيرات الاجتماعية الديموغرافية للمرضين.

المنهجية: دراسة وصفية أجريت في مستشفيات مدينة الطب في مدينة بغداد خلال الفترة من ١ نوفمبر ٢٠٢٢ إلى ١ مايو ٢٠٢٣ على عينة بسيطة عشوائية مكونة من ١٥٦ ممرض وممرضة. تم تبني النسخة العربية من مقياس الصلابة النفسية. تم التحقق من مصداقية الاستبيان من خلال عرضها على الخبراء وتم التحقق من موثوقيتها من خلال دراسة تجريبية. تم إجراء تحليل البيانات باستخدام برنامج SPSS, version ٢٦.

النتائج: أظهرت النتائج أن أكثر من نصف الممرضين أفادوا بمستوى متوسط من الصلابة النفسية، وأقل من نصف عينة الممرضين مرتبطين بمستوى عالٍ من الصلابة النفسية. كما وجدت الدراسة عدم وجود فروق ذات دلالة إحصائية بين عمر الممرضين، والجنس، والحالة الاجتماعية، والدخل الشهري، والمؤهل التعليمي، ومكان العمل، وسنوات الخبرة ودرجة الصلابة النفسية الكلية.

الاستنتاجات: خلصت الدراسة أن أغلب الممرضين مرتبطين بمستوى متوسط من الصلابة النفسية والعوامل الاجتماعية الديموغرافية لا تؤثر بمستوى الصلابة النفسية لدى الممرضين.

التوصيات: إجراء المزيد من الدراسات في تأثير العوامل الديموغرافية على الصلابة النفسية، يجب أن تشمل البحوث المستقبلية على عينات أكبر وأكثر تنوعاً من الممرضين، لا سيما أولئك الذين ينتمون إلى خلفيات ثقافية واجتماعية اقتصادية مختلفة.

الكلمات المفتاحية: الصلابة النفسية، المتغيرات الاجتماعية الديموغرافية، الممرضين.

Introduction

The nursing profession is considered to be a highly stressful field due to the nature of the job; occupational stressors are due to the long working hours, high workload, emotional and physical demands, organizational challenges, and potential negative effects on mental and physical health. Nurses are an integral part of the healthcare system, providing essential care to patients and often working under stressful and challenging conditions⁽¹⁾⁽²⁾.

Understanding the differences between these variables can inform the development of training programs that enhance the resilience and coping abilities of nurses, leading to improved job performance, job satisfaction, and quality of patient care

Psychological hardiness is a psychological construct that have been linked to better mental health outcomes and greater resilience in the face of stress

(3) (4)

Psychological hardiness refers to the ability to handle stressful situations with resilience and adaptability. Nurses who have a strong sense of psychological hardiness are better able to cope with the physical and emotional demands of their job, as well as with the long hours and irregular shifts. They are also more likely to view challenges as opportunities for growth and learning⁽⁵⁾⁽⁶⁾.

Nurses with strong psychological hardiness are better equipped to handle the stress of caring for patients in challenging and high-stress situations, and are less likely to experience burnout or make errors that could negatively impact patient care⁽⁷⁾. They must also be able to remain committed to their goals, maintain a sense of control over their work, and view challenges as opportunities for growth. This requires a high level of resilience and adaptability, as well as the ability to communicate

effectively with a range of stakeholders (8) (9).

Possessing high levels of psychological hardiness is essential for dealing with the demands of the job (10). Nurses are often exposed to high levels of stress, long hours, and emotionally charged situations, which can lead to burnout and decreased job satisfaction (11). By possessing high levels of psychological hardiness, nurses are better able to cope with the demands of the job and avoid burnout. This can lead to better job satisfaction, improved patient outcomes, and a healthier work environment (12).

Research has shown that psychological hardiness is positively related to job satisfaction, mental health, and overall well-being among nurses. By understanding how psychological hardiness can support nurse well-being, nurses can be helped to develop the skills they need to thrive in their roles (13).

Such study is important for several reasons. First, it can help identify the factors that contribute to psychological hardiness among nurses, which can have a positive impact on their well-being and job performance. By understanding the socio-demographic variables that are associated with psychological hardiness, healthcare organizations can develop targeted interventions and support programs to help nurses cope with stress and improve their mental health. Secondly, the study can help identify potential disparities in psychological hardiness among nurses based on their socio-demographic characteristics, such as age, gender, and education level. This information can be used to develop policies and programs that promote

equity and fairness in the workplace, and ensure that all nurses have access to the resources and support they need to thrive in their jobs. Finally, the study can contribute to the broader understanding of the relationship between socio-demographic variables and psychological well-being, which can have implications for other professions and industries beyond nursing. By identifying the factors that contribute to psychological hardiness among nurses, this study can help inform research and interventions in other fields where stress and burnout are common (14) (15). Despite the growing interest in psychological hardiness construct, the differences in psychological hardiness with regard to socio-demographic variables among nurses has not been thoroughly examined in Iraq.

The objectives is to evaluate the levels of psychological hardiness among nurses, and to find out the difference between nurse's psychological hardiness with regard to their age, gender, education, marital status, monthly income, workplace, and years of experience.

Methodology

A descriptive study has been conducted in the Medical City hospitals in the city of Baghdad during the period from November 1st, 2022 to April 5th, 2023.

Consent was obtained from the nurses to participate in the study. A sample of (156) nurses was randomly selected through the simple random technique, from the Baghdad Teaching Hospital, Ghazi al-Hariri hospital for surgery specialist, Gastroenterology and Hepatology Hospital, Oncology Teaching Hospital, Children Welfare

Teaching Hospital, and specialized burns hospital. The Scientific Research Ethical Committee at the University of Baghdad, College of Nursing has approved the study to be conducted. Using self-administered questionnaire data was collected from the study participants. The research instrument is consisted of two parts: the first part of the tool include the socio-demographic data of the nurses participating in the study (age, gender, marital status, monthly income, educational qualification, workplace, and years of experience).

The second part is the Psychological Hardiness scale. The study adopted the Psychological Hardiness Scale and used the Arabic version^{(16) (17)}, 46 items that measures the nurses' psychological hardiness; 16 items measure the commitment domain; 16 items measure the challenge domain, and 14 items measure the control domain.

The score estimation for the study scale has been evaluated according to the responses' percentages of the items. Each always answered item was assigned

a score of (3), sometimes answered items were assigned a score of (2), and rarely answered items were assigned a score of (1). Total scores were summed and ranged in percentages. Score was assessed in percentages of the mean depending on the Likert scale as follows:

- * Good score: (107.34 – 138) indicates that a nurse has good psychological hardiness.
- * Fair score: (76.67 – 107.33) indicate that nurses have fair psychological hardiness.
- * Poor score: (46 – 76.66) indicates that nurses have poor psychological hardiness. The data is collected through the utilization of the Arabic version of the scale. Data are analyzed using IBM SPSS version 26.

Content validity of the questionnaire is determined through a panel of experts. Internal Consistency Reliability of the psychological hardiness questionnaire is determined through split half technique and the use of Cronbach Alpha Correlation Coefficient ($r = 0.82$).

Results

Table 1. Nurses' Socio-demographic Characteristics (No= 156)

List	Characteristics	f	%	
1	Age M±SD= 31.8 ± 9	20 – less than 30 years	88	56.4
		30 – less than 40 years	31	19.9
		40 – less than 50 years	27	17.3
		50 years or more	10	6.4
2	Gender	Female	101	64.7
		Male	55	35.3
3	Marital status	Unmarried	69	44.2
		Married	85	54.5
		Divorced	1	.6
		Widowed/er	1	.6
4	Socioeconomic status	Low	28	17.9
		Moderate	22	14.1
		High	106	67.9

F= Frequency, %= Percentage, M±SD= Mean±Standard Deviation,

Table 1 reveals that nurses are with age group of “20-less than 30 years” as reported among 56.4% of them; the average age is referring to “31.8 ± 9 years”. The gender variable shows that 64.7% of nurses are females and remaining are males. Regarding marital status, more than half of nurses are married (54.5%) and most of remaining are still unmarried (44.2%). Concerning socioeconomic status for nurses, 67.9% of them associated with high socioeconomic status.

Table 2. Distribution of Nurses According to their Professional Characteristics

List	Characteristics	f	%	
1	Nursing qualification	Nursing secondary school	32	20.5
		Diploma	66	42.3
		Bachelor	48	30.8
		Postgraduate	10	6.4
2	Workplace	Medical ward	69	44.2
		Surgical ward	38	24.4
		Critical care ward	49	31.4
3	Years of experience	Less than 5 years	56	35.9
		5 years and more	100	64.1

F= Frequency, %= Percentage

Table 2 indicates that the highest percentage of nurses are graduated with “diploma” in nursing as reported among 42.3% of them and 30% of them are graduated with “bachelor” degree in nursing. The workplace related finding refers that 44.2% of nurses are working in medical wards, 31.4% are working in critical care wards, and 24.4% are working in surgical wards. Concerning years of experience, 64.1% of nurses have “5 and more” years of experience while remaining have less than five years of experience.

Table 3. Overall Evaluation of Psychological Hardiness among Nurses

Psychological hardiness	f	%	M	SD
Poor	0	0	105.31	10.349
Fair	90	57.7		
Good	66	42.3		
Total	156	100		

F= Frequency, %= Percentage, M= Mean, SD= Standard Deviation, Poor= 46 – 76.66, Fair= 76.67 – 107.33, Good= 107.34 – 138.

Table 3 manifests that nurses show fair level of psychological hardiness as reported among 57.7% of them (M±SD= 105.31 ± 10.349).

Table 4. Differences between Nurses’ Psychological Hardiness with Regard to their Age (N=156)

Age	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Psychological Hardiness	Between Groups	14.471	3	4.824	.288	.834
	Within Groups	2541.760	152	16.722		
Commitment						

	Total	2556.231	155			
Challenge	Between Groups	12.919	3	4.306	.191	.902
	Within Groups	3419.978	152	22.500		
	Total	3432.897	155			
Control	Between Groups	33.654	3	11.218	.651	.583
	Within Groups	2618.570	152	17.227		
	Total	2652.224	155			
Overall	Between Groups	97.696	3	32.565	.300	.825
	Within Groups	16501.913	152	108.565		
	Total	16599.609	155			

Df= Degree of freedom, **F**= F-statistic, **Sig**= Significance

Table 4 depicts that there is no significant difference has reported in psychological hardiness with regard to nurses' age.

Table 5. Differences between Nurses' Psychological Hardiness with Regard to their Gender (N=156)

Psychological hardiness		Gender	M	SD	t	df	p≤ 0.05	Sig
Commitment	Male		36.92	4.286	1.133	154	.259	N.S
	Female		37.69	3.595				
Challenge	Male		36.37	4.445	1.784	154	.076	N.S
	Female		37.76	5.070				
Control	Male		31.12	3.996	.588	154	.557	N.S
	Female		31.53	4.409				
Overall	Male		104.41	10.241	1.491	154	.138	N.S
	Female		106.98	10.431				

M= Mean, **SD**= Standard deviation, **t**= t-test, **df**= Degree of freedom, **Sig**= Significance, **p**= Probability value, **N.S**= Not significant, **S**= Significant, **H.S**= High significant.

Table 5 shows that there is no significant difference has reported in psychological hardiness with regard to nurses' gender.

Table 6. Differences between Nurses' Psychological Hardiness with Regard to their Marital Status (N=156)

Marital	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Commitment	Between Groups	95.929	3	31.976	1.976	.120
	Within Groups	2460.302	152	16.186		
	Total	2556.231	155			
Challenge	Between Groups	113.964	3	37.988	1.740	.161
	Within Groups	3318.933	152	21.835		

	Total	3432.897	155			
Control	Between Groups	101.105	3	33.702	2.008	.115
	Within Groups	2551.120	152	16.784		
	Total	2652.224	155			
Overall	Between Groups	620.812	3	206.937	1.969	.121
	Within Groups	15978.797	152	105.124		
	Total	16599.609	155			

Df= Degree of freedom, **F**= F-statistic, **Sig**= Significance.

Table 6 shows that there is no significant difference has reported in psychological hardiness with regard to nurses' marital status.

Table 7. Differences between Nurses' Psychological Hardiness with Regard to their Socioeconomic Status (N=156)

SE	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Psychological Hardiness	Between Groups	.589	2	.295	.018	.983
	Within Groups	2555.641	153	16.704		
	Total	2556.231	155			
Commitment	Between Groups	.127	2	.064	.003	.997
	Within Groups	3432.770	153	22.436		
	Total	3432.897	155			
Challenge	Between Groups	2.912	2	1.456	.084	.919
	Within Groups	2649.313	153	17.316		
	Total	2652.224	155			
Control	Between Groups	2.986	2	1.493	.014	.986
	Within Groups	16596.623	153	108.475		
	Total	16599.609	155			
Overall	Between Groups	2.986	2	1.493	.014	.986
	Within Groups	16596.623	153	108.475		
	Total	16599.609	155			

Df= Degree of freedom, **F**= F-statistic, **Sig**= Significance.

Table 7 depicts that there is no significant difference has reported in psychological hardiness with regard to nurses' socioeconomic status.

Table 8. Differences between Nurses' Psychological Hardiness with Regard to Their Nursing Qualification (N=156)

Qualification	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Psychological Hardiness	Between Groups	27.865	3	9.288	.558	.643
	Within Groups	2528.366	152	16.634		

	Total	2556.231	155			
Challenge	Between Groups	68.941	3	22.980	1.038	.377
	Within Groups	3363.956	152	22.131		
	Total	3432.897	155			
Control	Between Groups	34.660	3	11.553	.671	.571
	Within Groups	2617.564	152	17.221		
	Total	2652.224	155			
Overall	Between Groups	263.843	3	87.948	.818	.486
	Within Groups	16335.766	152	107.472		
	Total	16599.609	155			

Df= Degree of freedom, **F**= F-statistic, **Sig**= Significance.

Table 8 manifests that there is no significant difference has found in psychological hardiness with regard to nursing qualification.

Table 9 Differences between Nurses’ Psychological Hardiness with Regard to their Workplace (N=156)

Workplace	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Psychological Hardiness						
	Commitment					
Challenge	Between Groups	6.794	2	3.397	.204	.816
	Within Groups	2549.437	153	16.663		
	Total	2556.231	155			
Control	Between Groups	28.541	2	14.271	.641	.528
	Within Groups	3404.356	153	22.251		
	Total	3432.897	155			
Overall	Between Groups	32.100	2	16.050	.937	.394
	Within Groups	2620.124	153	17.125		
	Total	2652.224	155			
Overall	Between Groups	69.771	2	34.885	.323	.725
	Within Groups	16529.838	153	108.038		
	Total	16599.609	155			

Df= Degree of freedom, **F**= F-statistic, **Sig**= Significance.

Table 9 reveals that there is no significant difference has found in psychological hardiness with regard to nurses’ workplace.

Table 10. Differences between Nurses' Psychological Hardiness with Regard to their Years of experience (N=156)

	years	M	SD	t	df	p≤ 0.05	Sig
Psychological hardiness							
Commitment	> 5 years	37.57	3.944	.872	154	.385	N.S
	5 ≤ years	36.98	4.129				
Challenge	> 5 years	36.75	4.664	.216	154	.829	N.S
	5 ≤ years	36.92	4.752				
Control	> 5 years	30.55	4.548	1.611	154	.109	N.S
	5 ≤ years	31.66	3.854				
Overall	> 5 years	104.88	10.550	.396	154	.639	N.S
	5 ≤ years	105.56	10.279				

M= Mean, **SD**= Standard deviation, **t**= t-test, **df**= Degree of freedom, **Sig**= Significance, **p**= Probability value, **N.S**= Not significant, **S**= Significant, **H.S**= High significant.

Table 10 reveals that there is no significant difference has found in psychological hardiness with regard to nurses' years of experience.

Discussion

The findings of a data analysis on nurses shows that a majority of nurses are aged between 20 and less than 30 years, with a higher percentage of females. The data also reveal that most nurses are married, and associated with a high socioeconomic status. Nursing is a female-dominated profession due to historical gender stereotypes and preconceptions, and nursing culture being ruled by women^{(18) (19) (20)}.

The demand for trained nurses has increased globally, resulting in better income and benefits, and nurses specializing in certain areas can earn higher salaries^{(21) (22)}.

Findings also indicates that the majority of nurses in the sample possess a diploma rather than a higher degree in nursing, with several possible reasons for this, including accessibility, affordability, and administrative facilitation⁽²³⁾.

The majority of nurses work in medical wards, and this could be due to the greater demand for medical wards in healthcare facilities, as well as the basic

level of nursing knowledge and skills required for this type of work. The majority of sample nurses have 5 or more years of experience, which could be due to factors related to the nursing profession, career advancement opportunities, and job market conditions^{(22) (23)}.

The study assessed the psychological hardiness levels of 156 nurses using three domains: commitment, challenge, and control. Results showed that the nurses had a fair level of psychological hardiness overall, with fair levels observed in each domain. The findings may have implications for the nurses' ability to cope with stress and adapt to changes in their work environment. The study suggests that several factors may contribute to the nurses' fair level of psychological hardiness, including the nature of nursing work, lack of work-life balance, and individual differences. The study's findings were consistent with another recent study that reported a fair level of hardiness⁽²⁴⁾, but differed from a study

conducted in Indonesia who found that most nurses reported a high level of hardiness⁽²⁵⁾.

The results demonstrated in Tables (4, 5, 6, 7, 8, 9, 10) showed a significant difference between the nurse's age, gender, marital status, socioeconomic status, qualification, workplace, years of experience, and the overall psychological hardiness score. It indicates that these different factors do not appear to have a significant impact on a nurse's level of psychological hardiness. These findings disagree with some of this recent research finding, who found that females are harder than male nurses⁽²⁶⁾. Also it was reported that hardiness positively correlates with the nursing qualification, meaning as higher the nursing degree is as high the psychological hardiness will be. But found no differences between nurses' age, marital status, socioeconomic status, workplace, years of experience and the level of psychological hardiness⁽²⁷⁾.

The level of psychological hardiness among nurses may be influenced more by shared experiences and demands of their profession rather than demographic or work-related factors such as age or marital status. Nurses may have personality traits or coping mechanisms that contribute to their overall level of psychological hardiness, such as a strong sense of purpose or empathy⁽²⁸⁾.

Additionally, nurses may have a relatively homogeneous demographic and work-related profile, particularly in terms of age, gender, and qualification. This could limit the potential for significant differences between these groups to emerge, as there may not be enough variation in these factors to influence psychological hardiness⁽²⁹⁾.

Conclusion

The study concluded that most nurses have a fair level of psychological hardiness and there is no significant difference between psychological hardiness and socio-demographic factors meaning, socio-demographic factors do not affect the level of psychological hardiness among nurses.

Recommendations

The study recommends the following:

1. Healthcare facilities should prioritize training programs that enhance psychological hardiness for their nursing staff.
2. Nursing schools and nursing educational programs should place greater emphasis on developing psychological hardiness skills among nursing students.
3. To further investigate the impact of demographic and work-related factors on psychological hardiness, future research should include larger and more diverse samples of nurses, particularly those from different cultural and socioeconomic backgrounds.

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