



ORIGINAL RESEARCH ARTICLE

Impact of work place psychological hazards upon nurse midwives quality of care at delivery rooms in Maternity Hospitals in Thi-Qar Governorate

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Abstract

To assess nurse-midwives exposures to psychological health hazards, and to find out the impact of work place psychological health hazards on nurse midwives care quality. A descriptive study was conducted on a "purposive" sample of 80 nurses midwives at five hospitals in Thi-Qar Governorate from the period of 3rd June until 3rd July 2016. The questionnaire consisted of three parts: socio-demographical & general information, health problems (chronic diseases and psychological hazards), and childbirth preparation environment. Reliability was determined through pilot study. A descriptive and inferential statistics were used to analyze the data. The highest percentage within the age group (17–27), good educational levels, married, and have less than five years of experience in midwifery, morning period practice time, and having hypertension. Results indicate that psychological hazards are assigned low assessment, and all main domains regarding childbirth preparation environment had a moderate and high assessment status, since two items had a high assessment 2(25%), while leftover reported moderate assessment 6(75%). Weak relationships with no significant differences at $P > 0.05$ between psychological health hazard, and socio-demographic characteristics, except with work practice time, highly significant at $P < 0.01$. In addition to that, the results show weak relationships with no significance at $P > 0.05$ between childbirth preparation environment and socio-demographic characteristics, except with age groups, marital status and work practice time. Psychological hazards faced at work place upon nurse midwives reported weak impact on their quality of care. The study concludes that "Childbirth Preparation Environment" of nurses staff midwives are reported moderate quality of care.

Keywords: nurse-midwives, health problem, psychological hazard, childbirth preparation environment

Introduction

It is important to assess the psychological dimensional factors that influence the health of workers in the work setting, where the community of health team identifies psychological health problems prevalent in that population, and assesses factors contributing to psychological problems.¹ It is estimated that as many as (20%) of employees experience some form of psychological problems reduce their safety and/or job performance. The psychological health problem may manifest in substance abuse, violence, psychiatric disorders such as psychosis and neurosis, somatic

complaints such as ulcers or fatigue, or general inability to cope.³ Psychological hazards are conditions that pose a threat to the psychological and/or social well being of individuals and groups. A psychological response to the work environment occurs as an employee acts selectively toward his harmonious relationship.² Certain studies have suggested that signs of intense mental fatigue are slightly more frequent in nurses who occupy positions which are hierarchically superior to nursing technicians, possibly due to workloads associated with the position held in the labor process.

Methods and Materials

A descriptive study was conducted "Non-Probability" on 80 nurses and midwives from five hospitals in Thi-Qar Governorate at Al-Hussein Teaching Hospital, Soq Al-Shukh Hospital, Al-Refae Hospital and Al-Shatra Hospital from the

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period of 3rd June to 3rd July 2016. Data were collected using a questionnaire designed and developed for the purpose of the study. The questionnaire consisted of three parts; includes participants' demographic characteristics of age, level of education, marital status, and general information regarding experience years in general and midwifery, and work practice time and place. Health problems consisted of chronic diseases faced at work place, and psychological health hazards faced at work place, consisted of 12 items. Childbirth Preparation Environment section assessing practices for nurses midwives staff at the delivery rooms, a several parts are studied of childbirth preparation environment, such that; performing procedures to prevent infection consisted of (9) items, prepare the tools and equipment needed (7) items, mother preparation (8) items, childbirth practices during first stage (10) items, practices during childbirth process (13) items, practices during newborn care (8) items, third stage practices (11) items, fourth stage practices (10) items. Psychological hazards measured throughout scoring scale (always, sometimes, and rarely) in contrasts of scales (1, 2, and 3) respectively. Childbirth preparation environment measured throughout scoring

scale (always, sometimes, and never) for psychological hazards part, and with (Always, Sometimes, and No), as well as given scales records (3, 2, and 1) respectively, for checking practices (2–3) times practices considered (always), (1) time practice considered (sometimes), and (0) considered (no). In addition to that, three sequential intervals for assessing relative sufficiency's estimates in light of preceding scoring scales (33.33–55.55, 55.55–77.77, 77.77–100), are assessed by (Low, Moderate, High) respectively. Reliability of the questionnaire is determined through a pilot study “test – retest”, as well as the validity determined through a panel of experts in the field. A descriptive and inferential statistics are used to analyze the data.

Results

Table 1 shows the distribution of socio-demographic characteristics and general information variables, with comparisons significance to explore the behavior of studied variables either randomly or none randomly distributed comparing with an expected outcomes, which showed a highly significant differences at $P < 0.01$ among different levels of that variables. Relative to nurse mid-

Table 1 Distribution of the studied sample according to socio-demographic characteristic variable (no. 80)

Socio-demographic & general information	Groups	No.	%	C.S. (*) P-value
Age/years	17–27	44	55	$\chi^2 = 43.200$ $P = 0.000$ (HS)
	28–38	16	20	
	39–49	16	20	
	50–60	4	5	
Level of education	Nursing School	6	7.5	$\chi^2 = 46.625$ $P = 0.000$ (HS)
	Midwifery School	38	47.5	
	Nursing Institute	4	5	
	Nursing College	19	23.8	
	High Studies	13	16.3	
Experience years in nursing	1–5	59	73.8	$\chi^2 = 107.700$ $P = 0.000$ (HS)
	6–10	16	20	
	11–15	4	5	
	16 +	1	1.3	
Experience years in midwifery	1–5	59	73.8	$\chi^2 = 106.300$ $P = 0.000$ (HS)
	6–10	15	18.8	
	11–15	4	5	
	16 +	2	2.5	
Marital status	Single	18	22.5	$\chi^2 = 78.900$ $P = 0.000$ (HS)
	Married	53	66.3	
	Divorced	3	3.8	
	Widow	6	7.5	
Work practice time	Morning	38	47.5	$\chi^2 = 8.425$ $P = 0.015$ (S)
	Evening	25	31.3	
	Morning & Evening	17	21.3	

wives “Age Groups”, results illustrated that 44(55%) of the studied sample are accounted at (17–27). With respect to “Educational Levels”, 36(45%) of the studied sample are seems to be focused on the good educational levels, since who had nursing and midwifery school accounted 44(55%). Regarding “Experience years in nursing”, results illustrated that who had five years & less are accounted 59(73.8%). “Experience years in midwifery”, who had five years & less are accounted 59(73.8%). Most of studied sample are married and single, 53(66.3%), and 18(22.5%), respectively. Work practice time shows that morning period reported nearly 50% of studied individuals, and they are accounted 38(47.5%), then followed with who are working at evening period, and they are accounted 25(31.3%), then finally who are working at the both periods are accounted 17(21.3%).

Table 2 results indicate that there are a highly significant differences at $P < 0.01$ among an observed frequencies in contrasts of their an expected outcomes under the assumption of randomly distribution. Most of studied staff responded are recorded within no chronic diseases faced at work place, but it doesn't mean that the studied sample are not attendance with this health problems, the highest percentage 26(32.5%) having hypertension, then followed with diabetes 9(11.3%), stomach ulcer 4(5.0%), then leftover of chronic diseases, bronchial allergies (bronchial asthma), cardiovascular and vascular disease, and thyroid disorders, are recorded 3(3.8%) for each one, then finally only one respondent who had “duodenal ulcer” and accounted 1(1.3%).

Results shows that items regarding to psychological hazards are assigned low assess, except for “permanent feeling of sadness at work”, since a moderately assessed are reported. For summarizing of preceding result, it could be

Table 2 Nursing Staff distributed according to (Chronic diseases) faced at the work place (no. 80)

Chronic diseases	Response	No.	%	C.S. (°) P-value
Hypertension	Yes	26	32.5	$P = 0.003$ (HS)
	No	54	67.5	
Diabetes	Yes	9	11.3	$P = 0.000$ (HS)
	No	71	88.8	
Bronchial allergies (bronchial asthma)	Yes	3	3.80	$P = 0.000$ (HS)
	No	77	96.3	
Cardiovascular and vascular disease	Yes	3	3.80	$P = 0.000$ (HS)
	No	77	96.3	
Stomach ulcer	Yes	4	5.00	$P = 0.000$ (HS)
	No	76	95.0	
Duodenal ulcer	Yes	1	1.30	$P = 0.000$ (HS)
	No	79	98.8	
Incidence of thyroid disorders	Yes	3	3.80	$P = 0.000$ (HS)
	No	77	96.3	

(°) HS, Highly Sig. at $P < 0.01$; S, Sig. at $P < 0.05$; Testing based on Binomial test.

conclude that “Psychological Hazards” faced at work place upon nurse midwives reported weak impact on their quality of care at delivery rooms in maternity hospitals.

Table 4 results show that main domains with regard to health problems had low assess status according to cutoff points.

Table 5 results show that all main domains with regard to childbirth preparation environment had a moderate and high assess status according to cutoff points, since two items had a high assessed 2(25%), while leftover reported moderate assess, and they are accounted 6(75%).

Table 6 results show that a meaningful linear regression model tested in two-tailed alternative for statistical hypothesis between “Health Problems” and “Childbirth Preparation Environment” factors. The slope value indicating that with increasing one unit of (Health Problems) throughout reverse scoring scale, a negative effectiveness should be occurred for unit of childbirth preparation environment factor, and estimated with (-0.292366) by the Linear-Shape mode, and that decrement recorded a highly significant impact at $P < 0.01$, as well as, strong correlation coefficient had reported between studied factors, and accounted (0.29019) with highly significant at $P < 0.01$.

Table 7 shows relationships concerning health problems, childbirth preparation environment, socio-demographic characteristic variable, and some related variables, throughout contingency coefficients and their testing significant. Results show that regarding to contingency coefficients and testing significant, weak relationships are accounted with no significant at $P > 0.05$ between health problems, and socio-demographic characteristic variable, and some related variables, except with work practices time, since a highly significant relationship are accounted at $P < 0.01$. In addition to that, the results show that regarding to contingency coefficients and testing significant, weak relationships are accounted with no significant at $P > 0.05$ between childbirth preparation environment, and socio-demographic characteristic variable, and some related variables, except with age groups, and work practices, since a significant relationship are accounted at $P < 0.05$, and at $P < 0.05$, respectively.

Discussion

The findings of the study indicate that the majority of nurse midwives are 17–27 years old. These results agree with the study of Tziaferi et al. (2009). They have found that most workers in nursing midwives with a mean age of 19–30 years old.⁵ With respect to educational levels, the studied sample is midwifery school. This result is consistent with the study of Marziale and Hong, (2005), who have found that in relation to the level of schooling, most nurses have midwifery school education (54.3%) which is the minimum requirement to carry out the function. Regarding years of experience in nursing, results illustrated that most of studied sample are contemporary workers, since who had five years or less.⁶ Moreover, the work practice time shows that morning period

Table 3 Nursing staff distributed according (Psychological hazards) as a result of work with term of assessment

Psychological hazards	Resp	No.	%	MS	SD	RS%	Ass.
Permanent feeling of sadness at work	Always	8	10.0	2.28	0.64	76.0	M
	Sometimes	42	52.5				
	Rarely	30	37.5				
Nervous feeling	Always	5	6.3	2.41	0.61	80.3	L
	Sometimes	37	46.3				
	Rarely	38	47.5				
Crying for no apparent reason	Always	4	5.0	2.66	0.57	88.7	L
	Sometimes	19	23.8				
	Rarely	57	71.3				
Self-confidence loss	Always	1	1.3	2.90	0.34	96.7	L
	Sometimes	6	7.5				
	Rarely	73	91.3				
Fear of the unknown	Always	10	12.5	2.58	0.71	86.0	L
	Sometimes	14	17.5				
	Rarely	56	70				
Vanities	Always	4	5	2.71	0.56	90.3	L
	Sometimes	15	18.8				
	Rarely	61	76.3				
Loss of self-control	Always	2	2.5	2.76	0.48	92.0	L
	Sometimes	15	18.8				
	Rarely	63	78.8				
Feeling with despair	Always	2	2.5	2.76	0.48	92.0	L
	Sometimes	15	18.8				
	Rarely	63	78.8				
Strained relation with officials	Always	5	6.3	2.61	0.61	87.0	L
	Sometimes	21	26.3				
	Rarely	54	67.5				
Feeling defeated	Always	0	0	2.90	0.30	96.7	L
	Sometimes	8	10				
	Rarely	72	90				
Tense relation with colleagues	Always	2	2.5	2.72	0.50	90.7	L
	Sometimes	18	22.5				
	Rarely	60	75				
Social isolation or introversion	Always	0	0	2.89	0.32	96.3	L
	Sometimes	9	11.3				
	Rarely	71	88.8				

reported the highest percentage, and most of studied sample are married. These results agree with the study results by Farrington, (2011), which includes the majority of the study subject who are short of services and married.⁷ The finding of the study reveals that most of studied staff responding are recorded within no chronic diseases faced at work place, but it doesn't mean that the studied samples are not attendance with this health problems. This finding of the study is supported by Al-Isaa (2014), who founded the majority of the

study sample don't have the chronic disease. However, these characteristics depend on the aging process because most of the sample studies are within the 19–30 year-old age group, where the incidence of chronic diseases in such age group is very limited, and would be increased by increasing age, where the catabolism rate outweigh the anabolism rate.⁸ The psychological hazards are low in severity for the vast majority of participants. This result is consistent with the study of Lee, Song, Cho, et al. (2007), who formed a comprehen-

sive model of burnout among Korean nurses in light of the lack of literature on the subject in Asia. They have found that Korean nurses have higher levels of burnout compared to those in western countries such as Germany.⁹ The study results indicate that the main domains with regard to childbirth preparation environment had a moderate of quality of care at delivery for childbirth preparation environments of nurses staff midwives. El Fattah & Zein El Dein (2012) assess the quality of nursing care provided immediately after birth for newborn and mothers. Their findings indicate that nurses have an around average of knowledge and quality of practice

Table 4 Health problem's main domains faced during the work of nursing staff with term of an overall assessment

Health problems	No.	GMS	SD	D%	Ass.
Chronic diseases	80	2.09	0.13	8.757	L
Psychological hazards	80	2.68	0.27	15.886	L

GMS, grand means of score; SD, standard deviation; D%, estimated numbers of defective individuals.

Table 5 Childbirth preparation environment's main domains faced during the work of nursing staff with term of an overall assessment

Childbirth preparation environment	No.	GMS	SD	D%	Ass.
Performing procedures to prevent infection	80	2.622	0.15	81.1	H
Prepare the tools and equipment	80	2.288	0.19	64.4	M
Mother preparation	80	1.756	0.23	37.8	M
Practices during first stage	80	1.986	0.19	49.3	M
Practices during childbirth process (second stage)	80	2.636	0.10	81.8	H
Practices during newborn care	80	1.836	0.21	41.8	M
Practices during third stage	80	1.746	0.24	37.3	M
Practices during fourth stage	80	1.898	0.28	44.9	M
Childbirth preparation environment	80	2.096	0.13	54.8	M

GMS, grand means of score; SD, standard deviation; D%, Estimated numbers of defective individuals.

regarding the total score of knowledge of birth preparation, initiating attachment and breast feeding.¹⁰ Położnictwa et al. (2014) assessed the risk for midwives in the choosing place of work. Their findings indicate that there is a deficiency in midwife practices at delivery rooms due to exposure to a variety of risks.¹¹ Letvak et al. (2011) studied the impact of work environment and the nurses' health status on their quality of care. Their findings indicate that the risky environment affects the nurses' health status and quality of care.¹² Sydney (2015) studied the effects of hazardous working conditions on burnout in Macau nurses. They indicate that health hazards increased the risk of burnout and leave the clinical positions amongst clinical nurses in Macau. Better management of these factors may help to protect nursing staff and reduce the risk of burnout and attrition from the nursing.¹³ Trinkoff et al. (2007) studied the occupation-related health hazards and its effect on nurses productivity. Their findings indicate that the health hazards affect negatively on nurses' health status as well as affect their levels of

Table 7 Relationship concerning health problems, and childbirth preparation environment and socio-demographic characteristic variable and some related variables

Demographical characteristics Variables and some related variables	Health problems			Childbirth preparation environment		
	C.C.	Sig.	C.S.	C.C.	Sig.	C.S.
Age groups	0.251	0.147	NS	0.310	0.036	S
Level of education	0.270	0.180	NS	0.234	0.328	NS
Experience years of the nurse	0.125	0.737	NS	0.244	0.166	NS
Experience years of midwifery	0.141	0.656	NS	0.097	0.861	NS
Marital status	0.144	0.638	NS	0.360	0.008	HS
Work practice time	0.331	0.007	HS	0.396	0.001	HS

([†]) HS, High Sig. at $P < 0.01$; S, Sig. at $P < 0.05$; NS, Non Sig. at $P > 0.05$; Testing based on contingency coefficients.

Table 6 Impact of health problems on childbirth preparation environment according to linear shape model

Dependent variable method... linear-shape model for childbirth preparation environment					
Correlation coefficient	0.29019	Meaningful linear regression tested in two tailed alternative Statistical hypothesis			
F =	7.17261	Sign. F =		0.0090 ([†])	
Variables in the equation					
Parameters	B	SE.B	Beta	(t)	Sig. of (t)
Health problems	-0.292366	0.109166	-0.29019	-2.678	0.0090
(Constant)	2.557908	0.244676	-	10.454	0.0000

([†]) HS, Highly Sig. at $P < 0.01$.

practices.¹⁴ The finding of the present study indicates that there is a high significant relationship between health problems and the work place time of the nursing staff. In addition to that, the study results indicate that there is a high significant relationship between the childbirth preparation environment and the nurses' age group. Also, there is a high significant relationship between the childbirth preparation environment and the nurses' marital status and the work place time. These results come along with the findings of the study conducted by Alison et al. (2008). It indicates that there is a significant relationship between the health problems and the level of productivity and the work place time. Because when the work place time increased, the exposure to health hazards will increase and when the exposure to health hazards increased this precipitate the health problems, as well as affect the nurses' quality of care.¹⁵ In addition, Ayed et al. (2015) assessed night shift work and education with training developmental factors on the performance of professional nurses in north West Bank governmental hospitals, their findings indicate that there is a significant impact of nurses' age on their quality of care. Also, these results might come because when the nurses' age increased their abilities and capabilities will deteriorate, because the nursing duties require physical and mental abilities.¹⁶ Ohzono and Ueda (2013) reported that the marital status affects the nurses' value toward their work as well as affect their levels of performance.¹⁷

Conclusions

"Psychological Hazards" faced at work place upon nurse midwives reported a weak impact on their quality of care at delivery rooms in maternity hospitals. It could also be concluded that "Childbirth Preparation Environment" of nurses staff midwives are reported moderate to border high practices concerning quality of care at delivery rooms in maternity hospitals. Nurses – midwives practices during childbirth process reported good practices.

Recommendation

Ministry of Higher Education and Scientific Research should conduct team-based studies to explore new trainees in prevention and management of health hazard. Employ

a training session to increase the midwife staff knowledge about health problems and how deal with to reduce their effect. Provide a research based on solutions and a new discovered methods and programs to decrease effects of health hazards on the quality of care.

Competing interests

The authors declare that they have no competing interests.

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