

Sleep Position and Pregnancy; Knowledge among Pregnant Mothers and Maternity Nurses

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Abstract

Purpose: The study aimed to explore knowledge regarding the adverse expected effects of sleep position during pregnancy among pregnant women and maternity nurses.

Methods and Materials: The study depended on descriptive study design on (490 pregnant mothers, and 145 maternity nurses) for the period (25th September / 2020 through 3rd August / 2021). Data were collected by self-administered questionnaire exposed to the nurses, and interview method with the pregnant mothers at Al-Salam teaching hospital, Al-Khansa'a teaching hospital, and Al-Qudis health care center after reviewing by a panel of experts in related specialties.

Results: The main results were lack of acquisition of knowledge among both samples (pregnant mothers and maternity nurses) 'despite the differences between them' while the educational qualification of nurses had significant differences.

Conclusion: The study concluded that adverse effects can be happened to the pregnant mothers alongside the pregnancy in addition to the pregnancy outcomes.

Keywords: sleep, pregnancy, knowledge, maternity nurse.

Introduction

One of the human needs for healthy life is good quality sleep daily [1]. It plays an important role in the brain functions and systemic physiology, as appetite regulation, metabolism, functioning of hormones, immunity, and cardiovascular systems [2]. A normal healthy sleep is recognized by adequate hours' period, good quality, appropriate and regular time, and absence of sleep disturbances [3]. Sleep disturbances considers an important public health problem, for healthy sleep consumes one-third of the human existence, while unhealthy sleep can weaken the other two-thirds [4-5].

Pregnancy is a natural phenomenon during a woman's life that considers the most important period [6], during which sleep disturbances, sleep deprivation, insufficient duration, disturbed sleep apnea, insomnia and poor sleep quality can easily affect pregnant women [7] as a result of physical discomfort, psychological problems and hormonal changes [8,9]. It has cumulative effects, for slight decrease in sleep nocturnal duration over time leading to significant functional deficits [11]. Chronic sleep deprivation has adverse effects on social relations, learning and cognitive performance, mental health, job performance, metabolism of fat and glucose, inflammatory processes [12], severe reductions in the activities of immune cells, and the overall quality of life. Sleep deprivation can increase the adverse consequences on maternal and fetal outcomes [10]. More than 79% of pregnant women referred that their sleep has changed during pregnancy [13]. One in four pregnant women reported poor sleep, one in five described excessive sleeps, and nearly one in six had poor sleep quality [14].

Sleep quality often deteriorates during pregnancy, characterized by less overall sleep time and restless sleep [11,15]. In late pregnancy, maternal supine position can interfere with the blood flow to the fetus, it can increase the risk of stillbirth by 2-6 fold (2-6), for it

compress the inferior vena cava, and the aorta [16] that lead to reduced maternal cardiac blood flow [16,17], decreased blood flow in the uterine artery, thus reduced placental perfusion, and growth restriction of the fetus [12,18] Recent studies have shown that supine sleep associated with adverse pregnancy outcomes as low birth weight, in addition to stillbirth [4,18-21].

Many pregnant women sleep inadequately in part, for they have less knowledge of the harmful effects of this phenomenon on their health. Also, because they have not been well trained regarding healthy sleep procedures [14]. Therefore, the study aimed to explore knowledge regarding the adverse expected effects of sleep during pregnancy among pregnant women and maternal nurses.

Methodology

Design: Descriptive study design was depended to accomplish the study.

Sample: The participants were 490 mothers [Mean age was 32.9 ± 8.9 years; 28.2% was primary educational qualification, 30% was of university educational qualification; 68.4% had (5-7 gravida)], while the maternity nurses were 145 [Mean of tenure of work in nursing = 8.9 ± 9.3 years; 34.5% had secondary vocational nursing school level, and 65.5% had university nursing educational level (Diploma and bachelor)].

Setting: Al-Salam teaching hospital and Al-Khansa'a teaching hospital were the settings of the study at which maternity nurses were collected, while Al-Qudis health care center was another setting at which the pregnant mothers were collected.

Instrument: It was developed after reviewing many related literatures and consultation of three medical and five nursing professionals in maternity and gynecology field. It composed of (22) items distributed in respect to adverse effects of sleep during pregnancy on the human body systems (Expected disturbances). Each item has three options (Don't agree=0, No opinion=1, and Agree=2).

Period: Data were collected from 25th September / 2020 through 3rd August / 2021.

Pilot study; The tool of the study exposed to seven experts in the field of the study (Medicine and Nursing). They presented some comments which were taken into consideration in the final draft of the tool used in the study.

Method of data collection: Self-administered method was depended to collect data from maternity nurses, while interview method was depended to collect data from the pregnant women (each interview lasted ≥ 30 minutes).

Statistical analysis: Descriptive statistical means were used as (Mean, Standard Deviation, Mean of scores, Minimum and Maximum), while inferential statistical means were used as (Independent T-test, and Analysis of (ANOVA).

Results

It was obvious from Table (1) that the actual means of knowledge for both groups were under the theoretical mean of scores of the knowledge. Table (2) presents that there is a significant differences regarding knowledge of adverse effects of sleep position on pregnancy mothers and the pregnancy outcomes between pregnant mothers and maternity nurses.

Table (3) depicts that there aren't any effects of the demographic characteristics of the pregnant mothers on the knowledge of adverse effects of sleep position on pregnant mothers and the pregnancy outcomes. Table (4) shows that there is significant difference in the knowledge of adverse effects of sleep position on pregnant mothers and the pregnancy outcomes in respect to the educational qualification of nurses. Table (5) depicts that there isn't any effect of tenure of work in nursing of nurses on the knowledge of adverse effects of sleep on pregnant mothers and the pregnancy outcomes.

Table (1): Descriptive Statistics of Knowledge of the Participants

	Actual Total Mean of Scores	Total Theoretical Mean of Scores	Std. Dev.	Min.	Max.
Mother	17.406	22	± 6.862	10	37
Nurse	20.166	22	± 5.6	13	34
Total	18.04	22	± 6.689	10	37

Table (2): Differences of Knowledge about the Adverse Effects of Sleep during Pregnancy between Pregnant Mothers and Maternity Nurses by using Independent-T Test:

Group	Number	Mean	t. value	Df	Sig.
Pregnant Mother	490	17.406	4.424	633	0.001
Maternity Nurses	145	20.166			

Table (3): Differences of Knowledge about Adverse Effects of Sleep during Pregnancy according to Demographic Characteristics of the Pregnant Mothers by using Analysis of Variance.

		Sum of Squares	df	Mean Square	F. value	Sig.
Age	Between groups	1262.585	34	37.135	0.776	Non Sig.
	Within Groups	21765.597	445	47.836		
Educational Qualification	Between groups	207.375	5	41.475	0.880	Non Sig.
	Within Groups	22820.806	484	47.150		
Gravida	Between groups	171.272	6	28.545	0.603	Non Sig.
	Within Groups	22856.91	483	47.323		

Table (4): Differences of Knowledge about Adverse Effects of Sleep during Pregnancy according to Educational Nursing Qualification of the Maternity Nurses by using Independent-T Test:

Educational Qualification	Number	Mean	t. value	df	Sig.
Secondary Vocational Nursing level	50	18.8	2.156	143	0.03
University Nursing Level	95	20.884			

Table (5): Differences of Knowledge about Effects of Sleep during Pregnancy according the Years of Experience of the maternity Nurses by using Analysis of Variance.

		Sum of Squares	df	Mean Square	F. value	Sig.
Tenure of Work in Nursing	Between groups	611.797	27	22.659	0.678	Non Sig.
	Within Groups	3910.231	117	33.421		

Discussion

The researcher attempted hardly for a long time to find any related study corresponding to the present study and matching its objectives, but he didn't find any information enriched the present study findings. Therefore, all the comments and clarifications explained are for the purpose of interpreting the study results.

Due to the physical, psychological problems in addition to sleep disturbances as poor quality of sleep, and insufficient sleep duration pregnant mother suffered from, this impose her to expand her awareness regarding these adverse consequences in order to maintain the health of her and pregnancy and to prevent any possible adverse outcome. On the other hand, the nursing staff must possess good scientific knowledge, acceptable attitudes and qualified practices in this field of care to accomplish the roles they must do, such as counseling, advice, guidance, education and training in caring the individual and society as an attempt to reduce the adverse effects of bad practices carried out by them. However, this scope of the present study relates to a very important and highly influential effect in the life of the pregnant mother as well as the life of her fetus, but what the study found is that pregnant mothers as well as the nurses (participated in the study) possessed lack related awareness about this field (Table-1), whereas, this can stem from the lack of public health awareness of the health of the pregnant mother and the fetus, as well as the low level of perception of the nursing staff in possessing the sufficient amount of knowledge and practices according which they must become more qualified in order to play the healthy nursing roles in providing advice, and continuous guidance to pregnant mothers in order to pay more attention and be aware to the problems and disorders that can accompanied with the progress of pregnancy (Table-2). Thompson and colleagues (2021) indicated that health professionals in their study cited lack of knowledge about late pregnancy going-to-sleep position and stillbirth risk [22].

Conclusions

1. Pregnant women in addition to the maternity nurses possessed un acceptable level of knowledge in respect the adverse effects of sleep during pregnancy on the health of pregnant woman and her pregnancy outcomes.
2. Presence of low difference level of knowledge about the phenomenon of the study between maternity nurses and pregnant mothers.
3. There weren't any effects of the pregnant mothers' characteristics (Age, Educational qualification and Gravida) on the knowledge of the phenomenon under the study.
4. The educational qualification of the maternity nurses had an effect on the phenomenon under the study.
5. The tenure of the maternity nurses of work in nursing field hadn't any effect on the phenomenon under the study.

Recommendations

1. Emphasizing the need to use various types of social media to educate mothers about the adverse or undesirable effects resulting from poor sleep and its effect on the pregnant mother and the outcomes of pregnancy.
2. The need to include educational curricula in nursing schools at all levels on the good quality of sleep during pregnancy as well as on the adverse consequences of bad sleep during pregnancy on the pregnant mother and on the outcomes of the pregnancy.

ETHICAL APPROVAL: Technical Institute of Mosul/ Northern Technical University Ethical Committee
CONSENT TO PARTICIPATE: Informed consent was taken from each subject before their enrolment in the study.

HUMAN AND ANIMAL RIGHTS: The study conducted in adherence with Helsinki Ethical standards.

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