



Original Article

Association Between Morning Sickness and Quality of Life Among Pregnant Females

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ABSTRACT

Nausea and vomiting during pregnancy (NVP) is very common and may have great impact on quality of life of women. Nausea and vomiting causes negative effect on physical and mental health of women. **Objective:** To find the association between morning sickness and nausea and vomiting in pregnant women. **Methods:** A Cross Sectional study performed at Sir Ganga Ram Hospital Lahore for period of 4 months. 100 pregnant females were selected by non-probability sampling technique. The information on nausea and vomiting was measured by using questionnaire at enrollment, as well as potential confounders (i.e., maternal/gestational age, educational level, parity, body mass index, chronic/infectious conditions, sleep quality, headache, anxiety, and depression) WHOQOL scale was used to assess the quality of life of patients. **Results:** Out of 100 pregnant females, 45 females were in their 1st trimester, 37 females were in their 2nd trimester and 18 were in their 3rd trimester of pregnancy. The mean age of patients was 1.85 ± 0.989 . 76 were suffering from morning sickness at some point. Low scores were found for physical health domain, psychological domain and environmental domain of WHOQOL among pregnant females. There was a strong association between fatigue due to nausea and physical health domain and psychological health domain of WHOQOL. There was also a strong association between depression and disturbed activities due to nausea and vomiting. There was no significant association found in socio-economic status and nausea and vomiting. **Conclusions:** Nausea and vomiting is a physically morbid disease, affecting most pregnancies. Nausea and vomiting have a significant detrimental impact on quality of life, especially physical quality of life. It also affects psychological health of a person causing depression. Despite this, we found low treatment, even in those with moderate/severe symptoms. Women should be encouraged to seek assistance for morning sickness and hyperemesis gravidarum from the health practitioner.

INTRODUCTION

Pregnant women (approximately 80%) experience nausea and vomiting during 1st trimester all across the world [1]. Almost 40,000,000 women in USA and 350,000 in Canada are affected each, year [2]. Western countries are more prone to nausea and vomiting while it is rare among African, native American, Eskimos and most Asian populations [3]. In Canada a study on 367 women found that Caucasian are more likely to show symptoms than Asians and blacks which showed that genetic and cultural factors may play a part in this condition [4]. Hyperemesis gravidarum (HG) occurs in 0.3 to 2% of all pregnancies. It is also related to ethnicity and ranges between 3 to 20 per 1000 pregnancies and is more commonly diagnosed in women in India, Pakistan, Asia, New Zealanders compared to European, American, Indians and Eskimo populations [5]. Studies also shows that young women, women with less education, nonsmokers and obese are more prone to nausea and

vomiting. It is also associated with low-income levels and part time employment. Studies also shows that women who consume more amount of fat especially saturated fat before pregnancy has increased risk of hyperemesis gravidarum while smoking and use of vitamins before or early pregnancy reduce the risk of nausea and vomiting [6].

In a study in Norwegian medical registry (MBRN) showed the prevalence of HG among Norwegian, Pakistanis and Turkish women. The prevalence was 0.9% in Norwegian women, 2.2% in Pakistanis and 1.9% in Turkish women. According to this study Pakistanis are more prone to HG than Norwegian. Other larger studies showed that Pakistani's women are twice as high risk of having HG than Norwegians [7]. A pregnancy almost last for 40 weeks. The weeks are categorized into three trimesters. The first trimester of pregnancy is the time between fertilization of egg by the sperm which is called conception and 12th week of pregnancy. The second trimester starts from 13th week and end on 28th week and fetus movement start in the middle of this trimester. The 3rd trimester is from 29th week till the birth [8].

Women experience many symptoms while going through this time period which includes tender swollen breast, morning sickness, increased urination, fatigue, food aversions, heart burns and constipation [9]. Morning sickness is the most common symptom of early pregnancy which includes nausea, vomiting, dizziness, and sensitivity to smell. It is result of increased hormones in body and placental development. Morning sickness starts from 6th to 8th weeks and almost ends in 12th week but some symptoms extended up to 20 weeks of gestation. This condition is called hyperemesis gravidarum. Hyperemesis gravidarum includes stubborn vomiting associated with weight loss, dehydration, electrolyte imbalances, and ketosis [10]. Women with HG has also had high risk of pre-eclampsia (high blood pressure during pregnancy) and placental dysfunction disorders [11].

Nausea and vomiting also affect the quality of life of pregnant women. Quality of life is a condition which involves different factors including psychological health, physical health, social health and environmental factors [12]. Nausea and vomiting not only effect the physical health of women but also the mental health. Nausea and vomiting leads to fatigue and tiredness due to which they are not able to give time to their family which results in poor family relations. Often women don't get enough support from their families and spouses which leads to high level of stress and depression [13]. Morning sickness is also related to certain smell and look of food cooking and it can bring feeling of nausea. Fat and fried food even some common smell causes the symptoms of nausea [14].

Protein that are rich in vitamin B6 can also prevent nausea. Processed food should be replaced by fresh fruits and vegetables [15]. Nausea and vomiting can also be treated through medication. The frequency of morning sickness is seen to reduce through anti-emetic drugs like prepatent, dexamethasone and oleaster etc. Vitamin B6 have also shown positive results for nausea. Acupuncture and ginger are also helpful [16]. Different herbs like ginger, chamomile, pepper mint and raspberry leaves has been used for decades to treat the symptoms of nausea and vomiting naturally specially [17]. Ginger are naturally anti-inflammatory, anti-spasmodic, and calms the digestive tract. Active ingredient like gingerol is present in ginger which helps in decreasing the symptom of nausea and vomiting [18]. This study was conducted to determine the effect of morning sickness on quality of life among pregnant women. In order to spread awareness for prevention of these risk factors through exclusive and extensive health education, so that morbidity and mortality in the society can be reduced.

METHODS

A cross-sectional study was conducted, 100 pregnant women was selected with non-probability convenient sampling technique. This study was conducted at Sir Ganga Ram hospital, Lahore. Data were collected with the help of pre-tested data collection tool (questionnaire/Proforma).

RESULTS

The WHOQOL scores quality of life among morning sickness females according to the physical health domain 71 females showed having low quality of life, in psychological health domain 60 scored low quality of life, in social relationship domain 47 scored moderate for socio-relationships and in environmental domain of WHOQOL scored for quality of life 56 of the females scored low for environmental domain.

Domains of WHOQOL	Low	Moderate	High
Physical health domain	71	26	3
Physiological health domain	60	35	5
Social relationship domain	43	47	10
Environmental domain	56	31	33

Table 1: Distribution of patients according to different domains

Morning Sickness	Socio-relationship domain			Total	P value
	Low	Moderate	High		
Yes	33	37	6	76	0.448
No	10	10	4	24	
Total	43	47	10	100	

Table 2: Association between morning sickness and socio-relationship domain

According to table 2, there was no association between nausea and vomiting and socio-relationship domain of WHOQOL as the p value is greater than 0.05(0.448).

Morning sickness	Environmental domain			Total	p-value
	Low	Moderate	High		
Yes	46	18	12	76	0.014
No	10	13	1	24	
Total	56	31	13	100	

Table 3: Association between morning sickness and environmental health domain of WHOQOL among pregnant females

According to table 3, there was a significant association between morning sickness and environmental domain as the p value is less than 0.05(0.014).

Fatigue	Physical health domain			Total	P value
	Low	Moderate	High		
Severe	44	4	0	48	0.001
Mild	18	17	2	37	
Little	4	4	1	9	
None	5	1	0	6	
Total	71	26	3	100	

Table 4: Association between fatigue due to nausea, vomiting and physical domain of WHOQOL among nausea patients

According to table 4, there was a significant association between fatigue and physical health domain of WHOQOL among pregnant females as the p value is less than 0.05(0.001).

Fatigue	Psychological health domain			Total	P-value
	Low	Moderate	High		
Severe	38	10	0	48	0.009
Mild	16	17	4	37	
Little	3	5	1	9	
None	3	3	0	6	
Total	60	35	5	100	

Table 5: Association between fatigue due to nausea, vomiting and psychological domain of WHOQOL among pregnant females

According to table 5, there was a significant association between fatigue due to nausea, vomiting and psychological domain of WHOQOL among pregnant females as the p value is less than 0.05(0.009).

Fatigue	Socio-relationship domain			Total	P-value
	Low	Moderate	High		
Severe	22	22	4	48	0.257
Mild	14	20	3	37	
Little	4	2	3	9	
None	3	3	0	6	
Total	43	47	10	100	
Fatigue	Environmental domain			Total	P-value
	Low	Moderate	High		
Severe	31	13	4	48	0.434
Mild	18	12	7	37	
Little	3	4	2	9	
None	4	2	0	6	
Total	56	31	13	100	

Table 6: Association between fatigue due to nausea, vomiting with socio-relationship domain and environmental domain of WHOQOL

According to table 6, there was an insignificant association between fatigue with socio-relationship domain and environmental domain of WHOQOL as the p value is 0.25 and 0.434 respectively (greater than 0.05).

DISCUSSION

A study was conducted to determine the association of morning sickness and quality of life among pregnant females. Patients were selected through non-probability convenient sampling technique. The current study was conducted to see whether morning sickness affect quality of life of patient in anyway. WHOQOL BPEF scale was used which consist of four domains which were physical health domain, psychological domain, socio-relationship domain and environmental domain [19].

Current results analysis revealed that out of 100, 45% of females suffering from morning sickness were in their first trimester, 37% females were in their second trimester and 18.4% females were in their third trimester. Morning sickness was seen most common in the first trimester of pregnancy. Similar study was conducted by Fejzo MS *et al.*, in 2019 among pregnant females which showed that nausea and vomiting affect 50% to 70% females in their first trimester (early pregnancy) due to fluctuation in pregnancy hormones [20].

Results of current study showed that morning sickness was more common at the young age and less in old age and young age was more prone to hyperemesis gravidarum. Similar study was conducted by Schragner NL *et al.*, they used data from four regional centres from an ongoing epidemiological study of pregnancy which showed that morning sickness is more common in young females and decreased with increasing age [21]. Current finding showed that there is no association between education, socio-economic status and morning sickness because 70 to 80% of pregnant females suffer from nausea and vomiting whether they belong to lower class or upper class. Similar study was conducted by Almond D *et al.*, using Swedish registry data but their results were slightly different from current findings as their results showed that severity of nausea and vomiting (hyperemesis gravidarum) was connected to poor conditions and less education [22].

In order to study the effects of nausea and vomiting on the health-related quality of life of pregnant, the comparison was made on 4 domains of quality of life. Current study used quality of life questionnaire of WHO to find the association between morning sickness and QOL of pregnant females. According to the results, majority of females showed low quality of life in physical health domain, psychological health domain and environmental health domain of WHOQOL where majority of females scored moderately in socio-relationship domain. Overall results showed that nausea and vomiting lower the quality of life among pregnant women suffering from NSP. The results of current study were same as the study done by Colodro-Conde L, *et al.*, to see the impact of nausea and vomiting and health related quality of life. Data was collected from 367 pregnant females. 78% of females were suffering from nausea and vomiting. Present study showed that 32% of working women were disturbed in their job due to nausea and vomiting and 17% were not able to work properly at the job. Severity of nausea and vomiting leads to disturbed work routine among pregnant women and more skipped work days which leads to less payments and eventually lowers the quality of life among them [23].

The present study stated that 51% of females had disturbed relationship with their family. There was a strong association between depression and disturbed relationship due nausea and vomiting. Severe nausea and vomiting leads to exhaustion,

fatigue and mood swings which leads to disturbed family relations, stress, depression and poor quality of life. A study conducted by Beyazit F *et al.*, showed similar results. According to the study psychosocial relations play a very important role in the onset of very important psychiatric disorders like stress and depression. High stress and depression levels tend to increase with women suffering from nausea and vomiting which showed that increased NVP and decreased family relationships leads to anxiety and depression [24].

CONCLUSION

Study concluded that morning sickness was more common in first trimester of pregnancy. Young pregnant females were more prone to hyperemesis gravidarum. Morning sickness lowered the quality of life among pregnant females. Fatigue, less physical activity, depression and stress were common symptoms of morning sickness.

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