

Anxiety and Fear Level toward Childbirth among Primigravida versus Multigravida

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Background: there is many changes occur during the pregnancy that make them very stressful. And respond to this stress by feeling anxious which may be influenced on the woman herself and her baby. As anxiety and fear of childbirth may cause many complications such as severe labour pain, postpartum depression, and impaired mother-fetus attachment.

The study aimed to investigate and compare the anxiety and fear level toward childbirth among primigravida versus multigravida at antenatal outpatient clinic at Sohag University hospital and maternal and child health center (Dar El -Salam Abed- Allah health center) at Sohag city.

Design: A comparative and descriptive design was used for the study.

Sample: - included 600 women were equally and randomly assigned into two groups, from primigravida versus multigravida mothers, their ages ranged from 18-35 years at gestational ages of between 30 and 40 weeks.

Tools: A structured self administered questionnaire was used for data collection; Beck Anxiety Inventory (BAI) and Wijma Delivery Expectation / Experience Questionnaire (W-DEQ-A)" were utilized as a valid and reliable tools for collecting the data.

Results: women' age ranged from 18 - 33 years, and that women were mostly between 22 < 26 years in primigravida (50.0%) and their mean age 19.10 ± 8.68 and (37.0%) in multigravida which their mean age 23.10 ± 9.88 , it was observed that (51.3 %) had sever fear levels in primigravida and (61.2%) in multigravida. it was display that a significant positive relation was observed between the level of W-DEQ-A and BAI scores ($p = 0.000 < 0.05$).

Conclusion: It was found majority of multigravida mothers are experienced high and severe anxiety and fear scores towards childbirth compared to primigravida mothers. **Recommendations:** prepares mothers for child birth by providing them health educational program about the effect of anxiety and fear on them and their babies, and improve their knowledge, practical skills and confidence to cope with labour.

Keywords: anxiety, fear, childbirth, primigravida, multigravida.

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I. Introduction

Pregnancy is considered one of the most important events in a women's life. So, she does the best to maintain good health to bring into this world a healthy baby. Although Pregnancy and giving birth to a child are two of the most significant events in most women's lives, but some women become stressful and may have severe fear of childbirth (Adams et al., 2012).

Anxiety is common disorder accompanies pregnant women during pregnancy is found stressful as lead to many changes that occur during this period. So that women respond to this stress by feeling anxious. And accompanied with mood swings, narrowing of interest, depression, feeling of loneliness and impatience are experienced during the last weeks of pregnancy (Li and Graham, 2017).

The frequency and the intensity of the women reaction to anxiety is depend on women's perception of the stressors and her ability to cope with it, that affected the woman herself and her ability to cope with the changes, because anxiety and stress can increase the levels of catecholamine, which can decrease uterine contraction and prolong labor duration that potentially related to role of sex hormones (Li and Graham, 2017).

The rate of incidence for anxiety disorder diagnoses during pregnancy is 15.2% and anxiety disorder diagnoses are 9.9%. According to a recent study involving 221,974 women from 34 countries; it was observed that anxiety symptoms in the perinatal period were to be 18.2% in the first trimester among women (Dennis et al. 2017).

Fear of child birth is experienced by 20% of women. Severe fear of childbirth is interfered with the daily life of 6% to 10% of women. fear of childbirth is categorized into domains that include pain, obstetric injuries, loneliness, loss of control, insufficient support, and loss of the baby's or the mother's life fear of pain, of pelvic floor injuries, of losing the baby, sex of the child, of losing one's own life, of losing self-control and of being left without assistance during labour, fear to have a premature child, have child with mental retardation or congenital malformation, fear of operation, fear of family's undesirable attitude of the new environment (Adams et al., 2012).

Fear of childbirth may cause many complications such as experiencing severe labour pain, postpartum depression, and impaired mother–fetus attachment, also causes uterine dysfunction and uterine hypoxia that may be the reason for the occurrence of stillbirth (Krause et al., 2017).

So that screening for and recognizing the signs of anxiety disorders during the perinatal period are very important, Because If not identified and treated, they may have adverse effects on both mother and baby (Yucel et al., 2013).

The main important role of midwives and nurses to reduce the physical and psychological problems, give emotional support by including a pregnant woman and her family, in addition to, provide care and health education about a better pregnancy and delivery that will take place (Yenieli, & Kavlak, 2014).

Hence, the present study was conducted to investigate and compare the anxiety and fear level toward childbirth among primigravida versus multigravida at antenatal outpatient clinic at Sohag University hospital and maternal and child health center (Dar El –Salam Abed- Allah health center) at Sohag city.

Significance of the study

The primigravida mothers who experienced childbirth for the first time or multigravida are had a lot of fears and anxieties about the baby and if he will be normal and healthy; about their reaction to labour and also about the attitude of people who will help and care for them. And excessive fears and anxieties are affected progress of labour and may lead to decrease uterine contractions and slow of labour.

Aim of the study

The aim of this study is to investigate and compare the anxiety and fear level toward childbirth among primigravida versus multigravida at antenatal outpatient clinic at Sohag University hospital and maternal and child health center (Dar El –Salam Abed- Allah health center) at Sohag city.

Research questions:

1. What is the anxiety and fear level toward childbirth among primigravida?
2. What is the anxiety and fear level toward childbirth among multigravida t?
3. Is there is a relationship between the anxiety and fear level toward childbirth among primigravida and multigravida?
4. Is there is a relationship between anxiety and fear scores toward childbirth among primigravida and multigravida and their socio – demographic characteristics?

II. Subjects And Methods

Research design:-

A comparative and descriptive design was used in the present study.

Setting

This study was conducted at antenatal outpatient clinic at Sohag University hospital in Egypt and maternal and child health center (Dar El –Salam Abed- Allah health center) at Sohag city.

Subjects:

Non probability purposive random sampling technique were be used in this study, the study sample included 600 women were equally and randomly assigned into two groups, from primigravida and multigravida women, they were recruited within a period of 6 months (from April to September 2018). The inclusion criteria were: their ages ranged from 18-35 years at gestational ages of between 30 and 40 weeks, primigravida and multigravida women who are available at the time of the study at selected hospital and who are willing to participate in the study.

Tools and techniques of data collection:-

It was developed by the researcher after reviewing related literatures. There were two tools used in the present study as the following:

Tool (1):- A structured self administered questionnaire: It was composed of two parts:

Part (1): it includes personal data related to age, educational level, occupation, and residence.

Part (2): Includes the obstetrical history of mothers, It contains 4 questions about number of gravida, past medical history, history of abortion, and gestational weeks.

Tool (2):- Beck Anxiety Inventory (BAI)

It was used as a data collection device in this study. The (BAI) adopted by (Beck et al., 1988) , it was developed to determine the severity of the anxiety symptoms, this scale consists of 21 questions and total scores range between 0 and 63 .It measures physical, emotional, and cognitive aspects of anxiety and fear of losing control. The score for each item ranges from 0 to 3.The maximum score on the scale. Beck's original version had internal consistency with a Cronbach's Alpha of 0.92, and a retest reliability co-efficiency of $r = 0.75$ (Beck, Epstein, Brown, & Steer, 1988).

Validity:

The BAI was correlated with the revised Hamilton Anxiety Rating Scale (.51), and mildly was correlated with the Hamilton Depression Rating Scale (.25) (Beck et al., 1988).

Scoring:

The total score is calculated by finding the sum of the 21 items.

Score of 0-21 = mild anxiety

Score of 22-35 = moderate anxiety

Score of 36 and above = sever levels of anxiety

Tool (3):- Wijma Delivery Expectation /Experience Questionnaire (W-DEQ-A).

It is consider a Likert-type scale consisting of 33 items used to measure stress and fear during pregnancy and delivery. It has 6 subscales and each question is scored from 1 to 6 points (Korukçu, & Kukulu, 2009). The W-DEQ11 was developed to investigate the fear of childbirth during pregnancy in both primigravida - and multigravida women. Wijma and colleagues examined the construct validity of the scale and found that the W-DEQ might comprehend a psychological construct related to childbirth fear.

The scale also measured the psychological construct more clearly in multigravida than primigravida. W-DEQ contains 33 items that are rated on a six-point Likert scale ranging from zero (not at all) to five (extremely). The minimum and maximum total scores of the questionnaire are 0 and 165, respectively, with higher scores indicating higher fear. During the developmental process, the scale showed an excellent internal consistency (Cronbach's alpha = 0.93).

Tool validity:

Content validity of the tools was determined through an extensive review of literature about to the anxiety and fear level toward childbirth among primigravida versus multigravida at antenatal outpatient clinic at Sohag University hospital. The content of the data collection tools was submitted to a panel of five experts in the Obstetric health nursing field and community health nursing with more than ten years of experience in the field. Modifications of the tools was done according to the panel judgment on clarity of sentences, appropriateness of the content, sequence of items, and accuracy of scoring and recording of the items.

Tool Reliability

The tools reliability was estimated through using the Pearson correlation coefficient test to compare between variables. The Pearson correlation coefficient for the variables ranged between ($P. < 0.5$) and ($P. < 0.001$), which indicated a highly significant positive correlation between variables of the subjects. The findings from the validity and reliability suggested that, the tools of the study could be used as valid and reliable data collection tools for the current study.

Methods of data collection:

- **Approval:** - An official permit was taken from Sohag University Hospital administrators and the manager of the outpatient clinics. Permission also was obtained from the head nurse of the Gynecology & Obstetric outpatient clinic to gain her cooperation and the manager of child health center (Dar El –Salam Abed- Allah health center) at Sohag city. A clear explanation was given about the nature, importance and expected outcomes of the study to administrators.
- **Ethical consideration:** - All women were informed about the aim of the study, its benefits, and data collection tools in order to obtain their acceptance and cooperation. The researcher informed them that the participation in the study is voluntary; they have the right to withdraw from the study at any time, without giving any reason and that their responses would be held confidentially.

- **Review of current and past** local and international literature related to the research task was made so as to be oriented with relevant research articles and magazines. It was done at antenatal outpatient clinic at Sohag University hospital in Egypt and maternal and child health center (Dar El –Salam Abed- Allah health center) at Sohag city; hence this review was helpful in developing the data collection tools used.
- **Pilot study:** It was carried out on 10 % of the women, for the purpose of modification and clarification and estimation of the time needed for data collection. The designed tool was tested on women. To fill in the sheets unclear items were clarified, unnecessary items were omitted and new items were added. Those who shared in the pilot study will be excluded from the study sample.
- **Study period:** Data was collected from April to September 2018 after obtaining the permission from the authorities.
- **Field work:**
 - The mothers were informed about the purpose of the study, and confidentiality of data.
 - The researchers visited each place two times to collect the data from 9.00 a.m. to 12.00 p.m.
 - The researchers was introduced herself to the mothers and the purpose of the visit and the way of the interview was explained to them. A direct interview was done by the researchers themselves with each woman separately and privately using a questionnaire composing of questions regarding their socio – demographic characteristics, anxiety and fear levels.
 - The interview was carried out in the waiting area at antenatal outpatient clinic at Sohag University hospital in Egypt and maternal and child health center (Dar El –Salam Abed- Allah health center) at Sohag city
 - The average time spent by mothers for completion took around 25-23 minutes.
 - The researchers were available for more clarification whenever needed. Once the participants completed the questionnaires, the researchers collected it from the participants by themselves in the same time.
 - Researchers faced the mothers and asked them the questions in Arabic and recorded their answers in the structured interviewing questionnaire sheet.

Statistical analysis:

Data was collected and analyzed by the computer program SPSS" version. 21" Chicago. USA. Data expressed as mean, standard deviation and number, percentage, so nonparametric methods were used. Mann Whitney U test, Kruskal-Wallis test and was used Person's correlation used to determine significance between variables in same group. N.s P > 0.05 no significant, * P < 0.05 significant, ** P<0.001 moderate significance and *** p<0.000 highly significance.

III. Results

Table (1) distributes socio-demographic characteristics of the studied women. It was observed that women' age ranged from 18 - 33 years, and that women were mostly between 22 < 26 years in primigravida (50.0%) and their mean age (19.10 ± 8.68) and (37.0%) in multigravida which their mean age (23.10 ± 9. 88). Regarding level of education, it was observed that high percentage of women (31.0%) were in primigravida compared to (39.0%) in multigravida in secondary education, As regards residence, it was noted that rural residence was more (80.0%) in primigravida women compared to (58.0) in multigravida.

Concerning the percentage distribution of studied women according to their occupation, **figure (1)** pointed out that more than half of women (43.0%) were housewives in primigravida compared to (69.0%) in multigravida.

Table (2) showed the obstetrical history of mothers, it was noted in primigravida mothers that all of them didn't have obstetrical history compared to (3.0%) only of multigravida had obstetrical history.

The present study in **figure (2)** indicated that (10 %) of the multigravida women had history of abortion compared to (3 %) of primigravida women.

Table (3): illustrated that majority of primigravida (51%) were had severe anxiety score and (42%) of them were moderate anxiety and 7% were having mild anxiety score towards childbirth compared to multigravida mothers have more anxiety where (70%) were had severe anxiety score and (22%) of them were moderate anxiety and 8% were having mild anxiety score towards childbirth as compare to primigravida mothers as multigravida mothers.

Concerning mean scores and standard deviations among primigravida and multigravida mothers for the six W-DEQ factors **table (4):** showed that there was a statistical significant difference as regard fear, lack of self-efficacy, lack of positive anticipation. Regarding to the W-DEQ-A scale scores, it was observed that (51.3 %) had sever fear levels in primigravida and (61.2%) in multigravida.

Table (5): illustrated the average scores of the BAI and W-DEQ, and it was display that a significant positive relation was observed between the level of W-DEQ-A and BAI scores (p = 0.000 <0.05). And observed that, the BAI average score was (22.70 ± 13.60) in primigravida mothers compared to (27.650 ±

13.60) in multigravida mothers, the W-DEQ-A average score was (63.80 ± 20.172) in primigravida mothers compared to (67.830 ± 20.13) in multigravida mothers

Table (6): showed relation between socio - demographic characteristics and the BAI average scores among studied women, it observed that statistical significant differences were found in both groups as regard age, women ' education, women ' occupation , residence (P= 0.013, p= 0.03, p= 0.000= P= 0.008) respectively.

Concerning relation between socio - demographic characteristics and the W-DEQ-A average scores among studied women **Table (7)** displayed that statistical significant differences were found in both groups as regard age, women ' education, women ' occupation , residence (P= 0,545, p= 0.000= p= 0,603, P= 0,022) respectively.

Table (1): Percentage distribution of studied women according to their demographic characteristics

Item	Primigravida (300)		Multigravida (300)	
	No.	%	No.	%
women ' age in years				
Range	18 - 33 years			
18 < 21	75	25.0	57	19.0
22 < 26	150	50.0	111	37.0
27 < 30	54	18.0	75	25.0
31 < 35	21	7.0	57	19.0
Mean ± Stander deviation	19.10 ± 8.68		23.10 ± 9.88	
2- women ' education				
- Illiterate	15	5.0	39	13.0
-Read and write	60	20.0	48	16.0
-Primary education	57	19.0	45	15.0
-Secondary education	93	31.0	117	39.0
-University education	75	25.0	51	17.0
3-Residence				
-Rural	240	80.0	174	58.0
-Urban	60	20.0	126	42.0

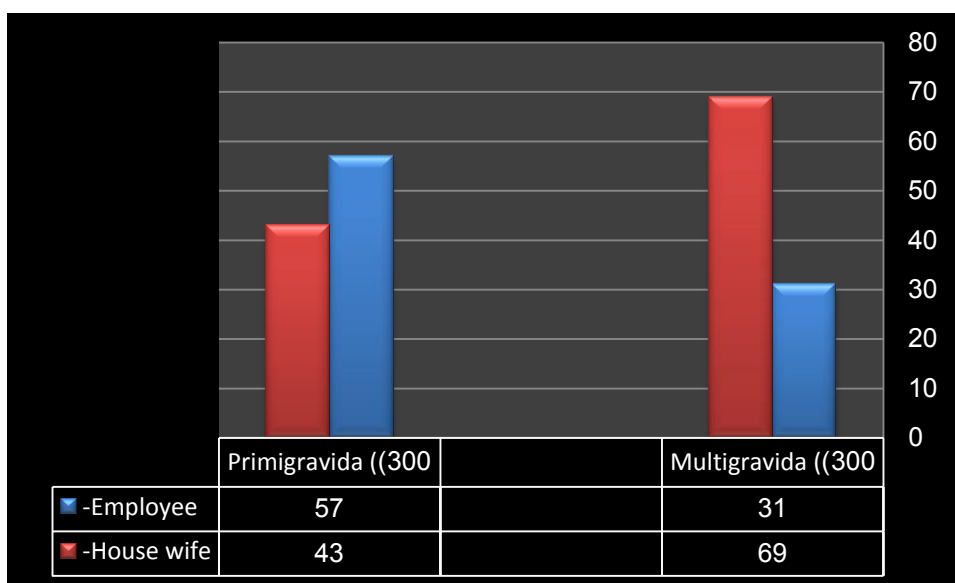


Figure (1): Percentage distribution of studied women according to their occupation

Table (2): Percentage distribution of women according to their obstetrical history of mothers

Item	Primigravida (300)		Multigravida (300)	
	No.	%	No.	%
Number of gravida				
Primigravida	300	100.0		
Multigravida			300	100.0
Past medical history				
Yes	0	0.0	9	3.0
No	300	100.0	291	97.0
Gestational weeks.				
30 < 33	63	21.0	45	15.0
34 < 37	183	61.0	225	75.0
38 < 40	54	18.0	30	10.0

Figure (2): Percentage distribution of women according to their history of abortion

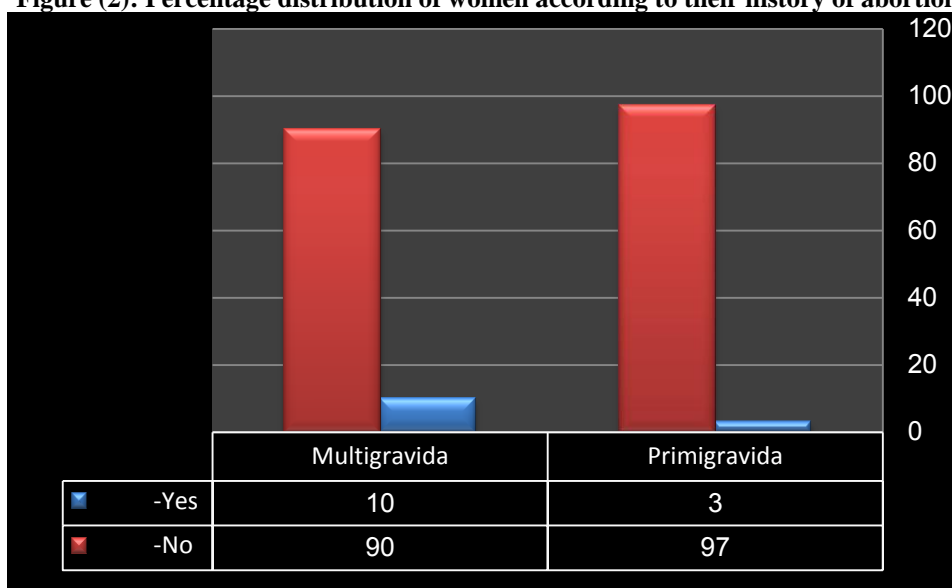


Table (3): relation between BAI anxiety level towards childbirth among Primigravida and Multigravida Mothers

BAI anxiety level	Primigravida (300)		Multigravida (300)	
	No	%	No	%
- Mild	21	7.0	24	8.0
-Moderate	126	42.0	66	22.0
-Sever	153	51.0	210	70.0

Table (4): Mean scores and standard deviations among primigravida and multigravida mothers for the six W-DEQ factors.

W-DEQ factors	Primigravida	Multigravida	p- value
- Fear	2.78 ±0.70	2.38 ±0.86	0.49 *
- Negative appraisal	1.48 ±0.96	1.55 ±0.99	0.09
- Loneliness	0.77 ±0.86	0.74 ±0.89	0.02
- Lack of self-efficacy	2.20 ±0.74	1.95 ±0.77	0.32*
- Lack of positive anticipation	0.84 ±0.76	0.69 ±0.78	0.16*
- Concerns for the child	0.80 ±1.15	0.88 ±1.21	0.06

Table (5): The average scores of the BAI and W-DEQ

Items	Primigravida	Multigravida	p- value
- BAI average Scores	22.70 ± 13.60	27.650 ± 13.60	0.000
- W-DEQ average Scores	63.80 ± 20.172	67.830 ± 20.13	0.000

Table (6): relation between socio- demographic characteristics and the BAI average scores among studied women

Socio - demographic characteristics	BAI Average Scores among studied women				p- value
	Primigravida (300)		Multigravida (300)		
	No.	%	No.	%	
18 < 21	75	25.0	57	19.0	0.013
22 < 26	150	50.0	111	37.0	
27 < 30	54	18.0	75	25.0	
31 < 35	21	7.0	57	19.0	
2- women ' education					
- Illiterate	15	5.0	39	13.0	0.03
-Read and write	60	20.0	48	16.0	
-Primary education	57	19.0	45	15.0	
-Secondary education	93	31.0	117	39.0	
-University education	75	25.0	51	17.0	
3- women ' occupation					
-Employee	93	31.0	171	57.0	0.000
-House wife	207	69.0	129	43.0	
5-Residence					
-Rural	240	80.0	174	58.0	

Socio - demographic characteristics	BAI Average Scores among studied women				p- value
	Primigravida (300)		Multigravida (300)		
	No.	%	No.	%	
-Urban	60	20.0	126	42.0	0.008

Table (7): relation between socio- demographic characteristics and the W-DEQ average scores among studied women

Socio - demographic characteristics	W-DEQ average Scores among studied women				p- value
	Primigravida (300)		Multigravida (300)		
	No.	%	No.	%	
18 < 21	75	25.0	57	19.0	0,545*
22 < 26	150	50.0	111	37.0	
27 < 30	54	18.0	75	25.0	
31 < 35	21	7.0	57	19.0	
2- women ' education					
- Illiterate	15	5.0	39	13.0	0,000*
-Read and write	60	20.0	48	16.0	
-Primary education	57	19.0	45	15.0	
-Secondary education	93	31.0	117	39.0	
-University education	75	25.0	51	17.0	
3- women ' occupation					
-Employee	93	31.0	171	57.0	0,603*
-House wife	207	69.0	129	43.0	
5-Residence					
-Rural	240	80.0	174	58.0	0,022**
-Urban	60	20.0	126	42.0	

IV. Discussion

Anxiety and fear of child birth is an important women’s health topic and to enhance the conceptualization and measurement of anxiety and fear of child birth, **Wijma et al., (2009)** developed the Wijma Delivery Expectancy/Experience Questionnaire (W-DEQ) which is the most frequently used instrument to measure Anxiety and fear of child birth. The W-DEQ (version A) measures Anxiety and fear of child birth as operationalized by the cognitive appraisal of the approaching delivery. It covers a number of typical domains of fear of child birth (**Salomonsson et al., 2010**).

The present study revealed that women' age ranged from 18 - 33 years, and that women were mostly between 22 < 26 years, these results were nearly and supported by (**Reyhan, et al., 2016**) who found in his study about "Defining Childbirth Fear And Anxiety Levels In Pregnant" that the women age was mostly between 26-29 years.

The present study revealed that level of anxiety towards childbirth is majority was high in multigravida as compare to primigravida mothers, from the research point view this may due to that multigravida mothers having obstetrical history. These results were in accordance with the results conducted by (**Ningthoujam et al., 2018**) who studied level of anxiety towards childbirth among primigravida and multigravida mothers and found the same.

The current study revealed that, (51.3 %) had sever fear levels in primigravida and (61.2%) in multigravida, this result was similar with the study conducted by **Şen,& Şirin, (2013) and Alipour et al., (2011)** who studied " The Factors Affecting the Level of Anxiety, Depression and Perceived Support of the Pregnant Women Diagnosed with Preterm Labor" and "The relation between antenatal anxiety and fear toward childbirth in primigravida women" and found that (48.9 %) had severe fear level and had high BAI and W-DEQ-A scores. This is because childbirth increased the anxiety and fear of mothers.

This result also was in agreement with the study conducted by (**Forough and Jila, 2018**) who studied "Childbirth Fear and Associated Factors in a Sample of Pregnant Iranian Women" and mentioned a high level of childbirth fear among pregnant Iranian women. **Raisanen et al., (2014)** found a severe fear of childbirth was most common in pregnant women.

On the other hand, these results were in agreement with the study conducted by **Spice et al., (2009)** and studied prenatal fear of childbirth and anxiety sensitivity and noted that anxiety and fear of childbirth was significantly higher among primigravida than among multigravida women. This may be indicated to women who have birth before may be felt more confident.

The current study reflected that, there was a significant positive relation was observer between the level of W-DEQ-A and BAI scores (p = 0.000 <0.05). This result was in congruence with **Spice, (2009)** who found that there was a correlation between the anxiety and fear of birth. Similarly, **Subası et al., (2013)** found a significantly relation between the average W-DEQ-A and BAI scores.

Also these results was in the same line with (**Ningthoujam et al., 2018**) who make interviews with 43 primigravida and multigravida pregnant women on 3rd trimester who checkup at Puskesmas and testing the

difference in the level anxiety between primigravida and multigravida and indicating that there were differences in anxiety levels between primigravida and multigravida.

The current study display that, a highly statistical significant difference was found between socio - demographic characteristics, the BAI average scores and the W-DEQ-A average scores among studied women, this is explained by that childbirth anxiety and fear is a common problem among all mothers. This result was supported by **Daglar and Nur (2014)** who studied the relationship between anxiety and depression levels and stress coping strategies of the pregnant women and mentioned that there is an association between and BAI scores of the pregnant women with education level. Similarly, **Laursen et al., (2008)** reported that the childbirth fear and anxiety levels were found high for the pregnant women with low education level. It may be due to the information regarding pregnancy and birth is not provided suitably for their education level.

On the other hands, this study was not similar with **Raisanen et al., (2014)** who studied "Fear of childbirth in nulliparous and multiparous women" and found that anxiety and fear of childbirth was not associated with different categories of socioeconomic.

This is explained by the important role of community health nursing and their high effect of providing health education and counseling for the pregnant women toward child birth which result and emphasized on the importance of the readiness of pregnant women to gain more information about child birth and also covered all identified needs and knowledge gaps about the topic among the pregnant women. Because it is considered alarming as it represent insufficient health information as regard this health topic and inform the need for health counseling to increase health information among the pregnant women to be knowledgeable and may decrease anxiety and fear of childbirth.

V. Conclusion

It was found majority of multigravida mothers are experienced high and severe anxiety and fear scores towards childbirth compared to primigravida mothers.

There was a significant positive relation at the level of $p = 0.000 (<0.05)$ between W-DEQ-A total score and BAI score.

VI. Recommendation

- Prepare pregnant women for child birth before it through providing them with well planned health program to improve their deficiencies about child birth outcomes.
- Study can be used to assess mother's stress and anxiety towards childbirth.
- Study can be applied on large sample in different setting so that the findings can be generalized to large population.
- A comparative study can be done to study the coping strategies adopted among primigravida and multigravida towards childbirth
- One of the important roles for the midwives and community health nurses providing antenatal care to determine the birth fear and anxiety that pregnant women experience and offer them counseling in these topics.
- Encourage providing support by the participation of peers in the classes to provide a more positive experience about pregnancy and childbirth experience.

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