

“Effect Of QOL During 1st Trimester Of Pregnancy On Birth Weight Of New Born”

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Abstract

Objective:

1. To assess the QOL during 1st trimester of pregnancy
2. To assess the effect of quality of life on birth weight of new born.

Methods: An observational research approach with Prospective research design with consecutive sampling technique was used to select samples. Antenatal woman who had booked at 12 or before 12 weeks of pregnancy with singleton pregnancy were included in the study. Study conducted after approval of Ethics Committee of Krishna Institute of Medical Sciences Deemed to be University Karad conducted at Krishna Hospital & MRC, Karad Written consent was obtained To assess the quality of life standardized WHOQOL tool was used with proper permission from concerned authority. Data analysis- Gathered data was analyzed by utilizing the SPSS20 version

RESULTS: **Overall perceived QOL score** in NBW is significantly high than LBW with Mean \pm SD of NBW 4.40 \pm 0.49, LBW-4.14 \pm 0.57 (t value=2.712, P value=0.0076). **Overall perceived health score** in NBW and LBW are similar with (t value=1.744, P value=0.837). **At Physical domain score** in NBW is significantly high than LBW with Mean \pm SD of NBW 80.90 \pm 11.91, LBW-70.34 \pm 11.36 (t value=4.934, P value=<0.0001). **At Psychological domain score** in NBW is significantly high than LBW with Mean \pm SD of NBW 80.47 \pm 13.07, LBW-75.64 \pm 9.18 (t value=2.262, P value= 0.0255). **At Social relationships domain score** in NBW is significantly high than LBW with Mean \pm SD of NBW 83.31 \pm 13.80, LBW-77.76 \pm 11.48 (t value=2.347, P value= 0.0205). **At Environment domain score** in NBW is significantly high than LBW with Mean \pm SD of NBW 81.77 \pm 10.48, LBW-72.9 \pm 7.39 (t value=5.175, P value= <0.0001).

CONCLUSION: Means score of Quality Of Life during 1st trimesters of pregnancy in mothers who gave birth to Normal Birth Weight babies was higher than the mothers who gave birth to Low Birth Weight babies.

Key words: Quality Of Life, 1st trimester of pregnancy, Birth weight of new born

INTRODUCTION

Pregnancy is a singular moment and it has been recognized as natural stressful event in reproductive age women, is thought to be a time of happiness for the expectant mother often it is introduced as an exciting time. Its natural process and gestation which is a period characterized by intense transformation in the life of pregnant woman demanding for an adaptation towards motherhood, these changes are beyond her control and these are considered as first changes makes woman vulnerable spiritually, physically and mentally¹⁻⁴.

Pregnancy is a condition it's not a disease, during this time many more changes occurs in woman's body like biochemical, anatomical, physiological, emotional, hormonal and chemical changes that affects bodily functions 5-6.

Low birth weight is well said by World Health Organization as irrespective of gestational age of woman if she delivers new born infant weighs about 2.499gram or less is referred as LBW. Globally LBW is associated with short term and long term problems in baby. More than 20 million births occurs one year. 15% to 20% of all births worldwide are lower birth weight. The goal till the Year 2025 is to achieve 30% reduction in LBW. Which may reduction in LBW from 20 million to 14million per year 7.

Pregnancy is a time of intense physical changes and it is associated with a great deal of emotional of upheaval in many women.8. In normal pregnancies, women experiences subtle changes that may alter their ability to carry out their usual roles and they may detract from their overall health related quality of life and is a period of physical and emotional stress which can have a significant impact on the well-being of an pregnant mother 9. In addition pregnancy also seems to be

vulnerable time for depression and lowers the quality of life when it is compared with non pregnant state **10-12.**

Danielle Mourady et al. conducted a prospective observational cross-sectional study on Associations between quality of life, physical activity, worry, depression and insomnia: A cross-sectional designed study in healthy pregnant women. Results showed that Pre-gestational BMI was inversely correlated to overall health while education was positively correlated to psychological health, social relationships and environment domains. Smoking before and during pregnancy significantly impacted the general health and psychological health **13.**

OBJECTIVES

1. To assess the QOL during 1st trimester of pregnancy
2. To assess the effect of quality of life on birth weight of new born.

RESEARCH METHODOLOGY:

An observational research approach was used for the present study Prospective research design with consecutive sampling technique was used to select samples as per inclusion and exclusion criteria. In the present study the study population comprises of an antenatal woman who had booked at 12 or before 12 weeks of pregnancy with singleton pregnancy. Study conducted after approval of Ethics Committee of Krishna Institute of Medical Sciences Deemed to be University Karad. Study setting was Krishna Hospital & MRC, Karad which is multispecialty Hospital. Which provides comprehensive nursing care to all the types of patients. Informed written consent was obtained from the study participants after explanation of study purpose. Baseline socio demographic and obstetrical information were gathered by structured questionnaire and to assess the quality of life standardized WHOQOL tool was used with proper permission from concerned authority. To collect all above data we had used surveys, one to one meetings and patients records were used to gather necessary data. Data analysis- Gathered data was analyzed by utilizing the SPSS20 version

RESULTS-

Table 1: Frequency and percentage distribution of antenatal women according to age wise distribution. N=124

Age in years	No.	%
17- 21 yrs	27	21.77
22-26	72	58.06
27- and above	25	20.16

Data in table 1 shows out of 124 enrolled antenatal women age wise distribution of antenatal women Minimum 17Years and maximum 34 Years with Mean 24.07and SD 3.352.

Table 2: Distribution of antenatal women according their age at marriage. N=124

Age at marriage (years)	No.	%
Below 18	24	19.35
19-22	63	50.81
23-26	31	25.00
27 and above	06	4.84

Data in table 2 shows out of 124 enrolled antenatal women age at marriage wise distribution of antenatal women out of 124 enrolled antenatal women maximum were married at 17 to 24 years of age with mean 21.04 and SD 2.881.

Table 3: Distribution of antenatal women according their Gravida. N=124

Gravida	No.	%
Less than 2	103	83.06
3-4	21	16.94

Data in table 3 shows Maximum women 103 (83.06%) were having Less than 2 gravida and 21(16.94%) were having 3-4 gravida.

Table No-4: Means and Standard Deviations of overall perceived QOL and Overall perceived health in 1st trimester in women who gave birth to NBW & LBW babies N=124

	NBW (74)	LBW (50)	Unpaired 't' value	p value
Q1-Overall perceived QOL	4.40±0.49	4.14±0.57	2.712	0.0076
Q2-Overall perceived health	4.41±0.49	4.24±0.59	1.744	0.837

Q1-Overall perceived QOL- Overall perceived Quality Of Life score in mothers who gave birth to NBW babies is significantly high than mothers who gave birth to LBW as t value=2.712, p value=0.0076.

Q2-Overall perceived health- Overall perceived health score in mothers who gave birth to NBW and mothers who gave birth to LBW are similar as t value=1.744, p value=0.837.

Table No-5: Means and Standard Deviations of QOL in Physical domain and Psychological Domain in 1st trimester in women who gave birth to NBW and LBW babies. N=124

	NBW (74)	LBW (50)	Unpaired 't' value	p value
Physical domain	80.90±11.91	70.34±11.36	4.934	<0.0001
Psychological domain	80.47±13.07	75.64±9.18	2.262	0.0255

Physical domain- Physical domain score in mothers who gave birth to NBW is significantly higher than mothers who gave birth to LBW as t value=4.934, p value=<0.0001.

Psychological domain- Psychological domain score in mothers who gave birth to NBW is significantly high than mothers who gave birth to LBW t value=2.262, p value= 0.0255.

Table No-6: Means and Standard Deviations of QOL in Social relationships and Environment Domain in 1st trimester in women who gave birth to NBW and LBW babies. N=124

	NBW (74)	LBW (50)	Unpaired 't' value	p value
Social relationships domain	83.31±13.80	77.76±11.48	2.347	0.0205
Environment domain	81.77±10.48	72.9±7.39	5.175	<0.0001

Social relationships domain- Social relationships domain score in mothers who gave birth to NBW is significantly high than in mothers who gave birth to LBW as t value=2.347, p value= 0.0205.

Environment domain- Environment domain score in mothers who gave birth to NBW is significantly high than in mothers who gave birth to LBW as t value=5.175, p value= <0.0001.

MAJOR FINDINGS AND DISCUSSION:

Data in table 1 shows out of 124 enrolled antenatal women age wise distribution of antenatal women Minimum 17 Years and maximum 34 Years with Mean 24.07 and SD 3.352. similar finding was found in a study conducted by **Danielle Mourady et al** ¹³ where mean ± SD 28.63±5.22, **Noor, et al** ¹⁴ where Mean 23.09 and SD 4.0; also study findings supported by **Onesmus Maina Muchemi, & Elizabeth Echoka, Anselimo Makokha** ¹⁵ found that mean ± SD of age of respondents' was 25.6±6.2 years.

Distribution of antenatal women age at marriage wise distribution of antenatal women out of 124 enrolled antenatal women maximum were married at 17 to 24 years of age with mean 21.04 and SD 2.881. Maximum women 103 (83.06%) were having Less than 2 gravida and 21(16.94%) were having 3-4 gravida.

Q1-Overall perceived QOL- Overall perceived Quality Of Life score in mothers who gave birth to NBW babies is significantly high than mothers who gave birth to LBW as t value=2.712, P value=0.0076.

Q2-Overall perceived health - Overall perceived health score in mothers who gave birth to NBW and mothers who gave birth to LBW are similar as t value=1.744, P value=0.837.

Physical domain- Physical domain score in mothers who gave birth to NBW is significantly higher than mothers who gave birth to LBW as t value=4.934, p value=<0.0001.

Psychological domain- Psychological domain score in mothers who gave birth to NBW is significantly high than mothers who gave birth to LBW t value=2.262, p value= 0.0255. Similar findings seen in study conducted by **Wang et al.** ¹⁶ found that low birth weight babies seen in mothers who had poor mental health at early pregnancy.

Social relationships domain- Social relationships domain score in mothers who gave birth to NBW is significantly high than in mothers who gave birth to LBW as t value=2.347, P value= 0.0205. **Sara Shishegarv et al** ¹⁷ showed that lack of social support during pregnancy had direct effect on quality of life which leads to more pregnancy stress. **Elsenbruch S et al,** ¹⁸ results showed that lack of social support during pregnancy adversely affects the mothers mental

state, same study found that mothers who had low social support during 1st trimester of pregnancy gave birth to smaller babies and these babies were markedly reduced their birth weight by 200grms.

Environment domain- Environment domain score in mothers who gave birth to NBW is significantly high than in mothers who gave birth to LBW as t value=5.175, P value= <0.0001.

CONCLUSION

Based on the findings of the present study conducted the following conclusions were drawn by researcher

- ✓ Means score of Quality Of Life during 1st trimesters of pregnancy in mothers who gave birth to Normal Birth Weight babies was higher than the mothers who gave birth to Low Birth Weight babies in all domains.
- ✓ Overall perceived Quality Of Life score in NBW is significantly high than LBW. Overall perceived health score in NBW and LBW are similar during their 1st trimester.
- ✓ In Physical domain, Psychological domain, Social relationships and at Environment domain score of NBW delivered mothers is significantly high than mothers delivered LBW during their 1st trimester.

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• FUNDING:

Nil

• AVAILABILITY OF DATA AND MATERIALS:

Yes it's available

• AUTHORS' CONTRIBUTIONS:

All the authors *DR. Nitantjali Patil · **Dr. R. P. Patange**, **Dr. SV Kakade**, and **Dr. Suprya Patil**, Dean Academics has contributed from selection of topic till preparation of manuscript for publication equally.

• ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study was conducted after the study protocol approved by the Institutional Ethical Committee and ethical committee of KIMSDU, Karad. Consent to participate in the study was obtained from the all the study participants.

• PATIENT CONSENT FOR PUBLICATION:

Yes

• COMPETING INTERESTS

There is no Competing interests

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