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Original Research Paper

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EVALUATION OF DISABILITY AND FUNCTIONING IN WOMEN WITH LOW-RISK PREGNANCY USING WORLD HEALTH ORGANISATION DISABILITY ASSESSMENT SCHEDULE 2.0 (WHODAS 2.0)

Nupur Gupta HOD(OBGYN), ESI- Okhla

Shipra Raj Verma Senior Resident(OBGYN) ESI- Basaidarapur

Nausheen Anis* Senior Resident(OBGYN) ESI- Basaidarapur *Corresponding Author

ABSTRACT WHO developed questionnaire to quantify the level of disability and functioning called World Health Organisation Disability Assessment Schedule 2.0 36 item score (WHODAS 2.0) on background of ICF (International Classification of functioning and disability) It has six domains cognition, mobility, selfcare, getting along, life activities and participation. Each domains have variable number of questions and a score from 1 to 5 corresponding to none, mild, moderate, severe and extreme. Our objective was to evaluate disability and functioning in low-risk pregnancy using WHODAS 2.0, 36 item score in late second and third trimesters. The study was prospective observational cohort study on women with low-risk singleton pregnancy in late second and third trimester using World Health Organisation Disability Assessment Schedule 2.0, 36 item score. On comparing the scores of both trimesters and total scores statistically significant results were obtained p value < 0.001. The first domain cognition had significant decrease in scores in third trimester while rest five domains had an increase in disability in third trimester. Low risk pregnancy causes significant reduction in functioning and increased disability than that normally perceived.

KEYWORDS : WHODAS 2.0, ICF, Disability, functioning, low risk pregnancy

INTRODUCTION

Pregnancy is a physiological state in which there is progressive change in anatomical and physiological state of body leading to symptoms (such as pain), limitation in daily activities which were otherwise simple affecting functioning. Functioning here refers to body functions, activities and participation and disability includes impairments, limitation of activity and restriction in participation (1).

WHO developed International Classification of functioning, disability, and health (ICF) which is based on biopsychosocial model integrating biological, individual and social aspect of health and its related issues (2). ICF has domain classified in view of body function, structure, activity and participation on which WHO developed WHODAS 2.0 scoring system. the present 36-point scoring system (3).

Pregnancy being a physiological phenomenon, the disability and functioning has been overlooked with very few researches on low-risk pregnancy and its effect on life of women. The study has integrated a well-defined tool WHODAS 2.0, 36 item score and low risk pregnancy to help understand the morbidity and improve care in pregnancy and postpartum.

METHODS

The study was prospective observational cohort study involving interviews on out-patient basis after taking due clearance from ethical body (Institutional Ethical Committee) along with informed and written consent from concerned party.

The participants were randomly selected, detailed evaluation of clinical, socioeconomical, educational and data of present pregnancy was done. The inclusion criteria were a low-risk pregnancy with no risk factors complicating the maternal and foetal well-being. The first interview was taken in late second trimester (18-24weeks) using WHODAS 2.0 questionnaire which was followed by second interview in third trimester with minimum gap of eight weeks.

The questions were asked taking into account the level of difficulty faced in last 30 days; 1, none; 2, mild; 3, moderate; 4, severe and 5, extreme. The total scores were calculated and higher score signified increased difficulty. Individual and total average scores were calculated by dividing the specific scores by five, observation and results interpreted.

The presentation of Categorical variables was done in number and percentage, quantitative data were presented as means ± SD and median with 25th and 75th percentiles (interquartile range). The data normality was checked by Kolmogorov- Smirnov test. The cases in which the data was not normal non parametric tests was used.

The following statistical tests were applied for the results: The comparison of the variables which were quantitative and not normally distributed in nature were analysed using Mann-Whitney Test (for two groups) and Kruskal Wallis test (for more than two groups). Wilcoxon signed rank test was used for comparison across follow. Qualitative variables were compared and analysed using Chi- Square test, p value < 0.005 was considered statistically significant.

RESULTS

Among the 135 women enrolled during antenatal visit, 130 women completed the study protocol. Cognition in 2nd trimester was 17 which was significantly higher as compared to 3rd trimester 11.5, Median of mobility, self-care, getting along, life activity, participation in 3rd trimester was 17, 10, 10, 15, 14 which was significantly higher as compared to 2nd trimester 10, 6, 7, 9 and 12 also total WHODAS 2.0 in 3rd trimester was 78 which was significantly higher as compared to 2nd trimester 60.

The cognition domain had decrease in mean score from 17 to 11.62 in successive interviews. Women in first interview had greater difficulties in concentrating and remembering things however in third trimester there was decrease in overall all the scores of these domains due to better coping mechanism at individual level. T.H.M. Dantas et al study also showed a statistically significant decrease in cognitive disability from mean score of 10 to 5 in subsequent interviews and the p value was 0.021 which was statistically significant. Our study had a significant p value < 0.001.

The second domain; mobility had mean score of 9.62 and 16.87 in successive interviews signifying mild level of difficulty in second trimester followed by moderate subsequently also higher scores were given to question like standing for long periods, standing up from sitting down and walking for long distances. T.H.M. Dantas et al study had a mean score of 27.4 and 34.0 which was statistically significant and our p value <0.001 which was statistically significant.

The third domain had mean score of 6.18 followed by 10.31 implying they had a mild level of difficulty in third trimester. Women gave higher score to question of staying by herself than the rest three questions and result was statistically significant. Getting along had mean score of 7.32 in second trimester and 9.71in third trimester which was statistically significant with a p value of less than 0.001. Most of the women scored higher in question related to sexual activities than the rest four questions of dealing with strangers, maintaining friendship, getting along with close people and making new friend. T.H.M. Dantas et al study had no statistically significant change on comparing concerned trimesters

The life activity domain had total score of 8.9 in second trimester and 14.56 in third trimester which was statistically significant with p value of less than 0.001 and indicated that women suffered from none to mild level of difficulty in second trimester and moderate level of difficulty in third trimester. In our study majority of participants were unemployed (homemaker) howsoever higher level of difficulties were faced by them in getting their task done quickly and taking care of responsibilities than the rest of questions. T.H.M Dantas et al had mean score of 31.9 in second trimester and 39.2 in third trimester and p value of 0.029 which was statistically significant.

Participation domain the mean scores of 11.49 in second trimester and 14.29 in third trimester signifying an increase in difficulties faced in participation in society. The women had difficulty in joining in community activities, difficulty due to barriers and hinderances, emotionally stressed out with advancing gestation and spent more on their health than they usually did in routine. Our study had value < 0.001 which was statistically significant however T.H.M. Dantas et al study had no statistical relation in participation and low risk pregnancy.

CONCLUSION

Low risk pregnancy had an increasingly higher level of disabilities as pregnancy progressed pointing to changes in weight, posture and gait along with varied social support decreased functioning in performing their routine life activities. As changes in pregnancy occurs at a fast pace along with coping way a more specific and modified scoring system and follow up is needed to provide appropriate counselling and intervention to overcome the maternal morbidity at earliest.

As workplaces become more women centered our approach to low-risk pregnancy and its related complications need changes for early interventions, better work conditions, improved health and social services. World Health Organisation has changed the axis of disability from what an individual cannot perform to a society or environment that do not provide adequate time, space and services to people who live with disability irrespective of time frame.

There are limited studies worldwide on disability and functioning in pregnancy with still fewer on women with low - risk pregnancy. More studies are required on pregnancy especially first trimester and puerperium to better understand the disability that pregnancy and puerperium has in life of women.

Table 1:-Comparison of total WHODAS 2.0 domain between 2nd and 3rd trimester.

Total WHODAS 2.0 domain	2nd trimester (n=130)	3rd trimester(n=130)	P value
Cognition			
Mean ± SD	17 ± 2.69	11.62 ± 2.13	<.0001*
Median(25th 75th percentile)	17(15-19)	11.5(10-13)	
Average score (median)	3.4(3-3.8)	2.2(2-2.6)	
Mobility			
Mean ± SD	9.62 ± 1.71	16.87 ± 1.9	<.0001*
Median(25th-75th percentile)	10(9-10)	17(15-18)	
Average score(median)	2(1.8-2)	3.4(3-3.6)	
Self care			
Mean ± SD	6.18 ± 1.64	10.31 ± 2.13	<.0001*
Median(25th- 75th percentile)	6(5-7)	10(9-12)	
Average score (median)	1.2(1-1.4)	2(1.8-2.4)	
Getting along			
Mean ± SD	7.32 ± 1.59	9.71 ± 1.7	<.0001*
Median(25th- 75th percentile)	7(6-9)	10(8-10)	
Average score(median)	1.4(1.2_1.8)	2(1.6-2)	
Life activity			
Mean ± SD	8.9 ± 1.42	14.56 ± 1.83	<.0001*
Median(25th- 75th percentile)	9(8-10)	15(14-16)	
Average score(median)	1.8(1.6-2)	3(2.8-3.2)	
Participation			
Mean ± SD	11.49 ± 1.83	14.29 ± 1.96	<.0001*
Median(25th-75th percentile)	12(10-13)	14(13-16)	
Average score(median)	2.4(2-2.6)	2.8(2.6-3.2)	
Total WHODAS 2.0			
Mean ±SD	60.52±4.79	77.33±5.79	<.0001*
Median(25th-75th percentile)	60(58-63)	78(73-81)	
Average (median)	2.4(2.32-2.52)	3.12(2.92-3.24)	

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