

Depressive disorder in the mothers of Thalassemia patients in Punjab, Pakistan

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Objective: To investigate the depressive disorder in the mothers of Thalassemia Patients using Hamilton Depression Rating Scale (HDRS), and to suggest apposite policy initiatives.

Methodology: This cross sectional correlational study was carried out in Thalassemia centers in the Punjab, Pakistan during November 2019 and 120 mothers were conveniently interviewed. The socio-economic status of the respondents was studied using a self-designed interview schedule and the depressive disorder was measured by using HDRS. The influence of various variables on the depressive disorder was analyzed through multiple liner regression analysis.

Results: High scores of the respondents on HDRS were observed. Among 20.8% respondents, the depression was at very severe level, in 22.5% at severe level, in 28.3% at

moderate level, and in the 25.0% it was mild. Only 3.3% respondents were normal. There was inability to concentrate on routine activities, impact of disease on economic status, poor behavior of the relatives, inability to attend social gatherings and the poor relationship with the husband were the outcomes of caregiving. Multiple linear regression analysis showed these were the major causes of depression among the respondents.

Conclusion: There is high prevalence of depression among the mothers of thalassemia patients. There is need to initiate an effective policy to address the incidence of depression among this segment. (Rawal Med J 202;45:882-885).

Keywords: Depressive disorder, thalassemia, depression.

INTRODUCTION

Mothers of children with disabilities have significant part in support and care that such children require, hence at increased risks of depression.¹ Thalassemia is the most common form of inherited anemia globally.² They need lifelong management that comprises of regular blood transfusion, use of several medicines and iron chelation.³ Every year, more than 5,000 patients are born with thalassemia in Pakistan and thalassemia carrier rate is about 5-7%, with 9.8 million carriers in the whole population.^{4,5} In Pakistan, around 2.7 million blood donations are gathered per annum, and about a fourth of them are consumed on thalassemia patients.⁶ Thalassemia patients in the developing countries are unable to avail standardized treatments.⁷ This chronic disease is associated with many difficulties not only for the patients but also for their families.⁸ The process of availing medical treatments of a family member,

especially children results a significant psychological effect on the family.⁹

It creates problems for the caregivers to maintain their routine activities and going to the hospitals with their children.¹⁰ Some researchers also found prevalence of psychiatric disorders among the parents, and specifically in mothers of children having chronic diseases.¹¹ The identified factors of depression were frequent hospital visits, low life expectancy, expected complication due to disease and economic burden.¹² A study reported that 60.6% caregivers of Thalassemia patients were depressed and there was no distinction in depression among school and college educated caregivers.¹³ This study aimed to investigate the incidence of depressive disorder among the mothers of thalassemia Patients in Punjab, Pakistan.

METHODOLOGY

This cross-sectional study was conducted on the

mothers of thalassemia patients in Punjab Pakistan in November 2019. Multistage sampling technique was used in this study. At first step, one thalassemia center in Punjab Province and registered with Thalassemia Federation of Pakistan was selected randomly. Then respondents were purposively taken from Ali Zaib Foundation, Faisalabad. Ethical approval for the study was obtained from the management of thalassemia centers. One hundred and twenty mothers of Thalassemia Major patients receiving blood transfusion and medical treatments for minimum of two years, were interviewed and the respondents were selected using non -probability purposive sampling technique.

Three experts (one senior medical officer, the coordinator of thalassemia center and one sociologist) having broad experience of dealing with patients of Thalassemia, and research were consulted to assure the validity of interview schedule. The interview schedule was further modified in view of subsequent pilot study conducted on ten respondents.

The degree of depression in the respondents was measured through Hamilton Depression Rating Scale (HDRS).¹⁴ This is considered as one of the most frequently used measures of the severity of depression in clinical practice and research.¹⁵ Socioeconomic status was measured through combining the occupation, income, and education to help expose discriminations about access to capitals, and issues regarding Power, privilege, and control.¹⁶

Statistical Analysis: Statistical analysis was performed using SPSS version 24. Data analysis was done by applying descriptive (Frequency Distribution) and inferential statistics (Gamma and Multiple linear regressions).

RESULTS

Table 1 shows the demographic characteristics of study population. The depression was measured through HDRC which has been used in many key studies of depression and its treatment.¹⁷ Table 2 illustrates that although the degree of depression is varying but the depression exists in most of the respondents. Depression among 28.3 percent respondents was moderate, in 22.5 percent was severe, among 20.8 percent was very severe, and in

25.0 percent was mild. Only 3.3 percent respondents were normal.

Table 1. Socio-economic characteristics of the respondents (N=120).

Characteristics	Number	%
Age Group		
Up to 30 Years	32	26.7
31 to 40	65	54.2
41 to 50	13	10.8
Above 50	10	8.3
Residential Area		
Rural	64	53.3
Urban	56	46.7
Monthly Household income		
Up to Rs. 20,000	22	18.3
Rs. 20,001 to Rs. 40,000	48	40.0
Rs. 40,001 to Rs. 60,000	39	32.5
Above Rs. 60,000	11	9.2
Occupation		
House wives	109	90.8
Government Employee	2	1.7
Private sector Employee	7	5.8
Doing own business	2	1.7
Years of Schooling		
Non-literate	31	25.8
1-5	51	42.5
6 to 10	29	24.2
11 to 15	6	5.0
Above 15	3	2.5

Table 2. Scores on Hamilton Depression Rating Scale.

Scores Categories	Number	%
0-7 (Normal)	4	3.3
8-13 (Mild Depression)	30	25.0
14-18 (Moderate Depression)	34	28.3
19-22 (Severe Depression)	27	22.5
23 or above (Very Severe Depression)	25	20.8
Total	120	100
Mean 3.33	SD 1.161	

Table 3. Multiple Linear Regression Analysis.

Variables	Standardized Coefficients Beta	T	Sig.
Unable to concentrate on routine activities X_1	0.216	2.584	0.011
Disease of child affected economic status X_2	0.203	2.511	0.013
Downgraded by the relatives X_3	-0.244	-3.078	0.003
Unable to attend social gatherings X_4	0.212	2.604	0.010
Relations with husband are affected X_5	0.200	2.486	0.014

Analysis shows the standardized coefficient beta score of inability of the respondents to concentrate in routine activities (X_1) is 0.216 which means that the depression of the 0.216 units of the respondents' depression is increased due to this variable. The 2nd variable in the above table has 0.203 standardized coefficient beta score which narrates that the impact on economic status of the respondents due to the disease of their children enhances 0.203 units of their depression. Most of the respondents were downgraded by their relative due to the disease of their children. -0.244 score on X_3 explains the impact of 0.244 units of this behavior on the incidence of depression among the patients. The respondents more downgraded by their relative had high scores on HDRC. The variable (X_4) have 0.212 standardized coefficients beta as to table number 3 that shows that 0.212 units of depression in the respondents were increasing due to the inability to attend their social gatherings (Table 3).

DISCUSSION

Socio-economic characteristics shows that majority of the respondents were middle-aged housewives with least level of education and belonged to lower class. Some researchers suggest overcoming the prevalence of thalassemia there is dire need to launch educational and awareness programs especially the education of mothers is more important than of fathers.¹⁸

The results obtained through HDRC shows that 71.6 percent respondents were the victims of "moderate depression" to "very severe level of depression" with minor differences of frequency in each

category and more importantly 20.8 percent respondents were the victim of "very severe depression". The results from previous studies also explored high rates of depression among parents especially mothers of such patients.^{19,20}

These issues, during multiple linear regression analysis, were found to be the significant factors of depression among the mothers of thalassemia major patients. Likewise, findings from a previous study that explored that the problems created due to the disease and hospitalization of children cause adverse impression on the whole family, while another study concluded that thalassemia had adverse impact on financial status of the families of the patients.^{21,22}

Also due to the repetitive nature of the disease management, the mothers (respondents) are usually unable to attend social gatherings and parents of such patients face stress, depression, anxiety, low confidence and, they have poor relationships with the people around them.^{23,24}

CONCLUSION

The present study found high prevalence of depression among the mothers of thalassemia patients. Management of thalassemia need multifaceted attention which causes many problems to their caregivers (mothers) and hinder them to live a normal life.

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