ACADEMIA International Journal for Social Sciences
Volume 5, Issue 1, 2026 ISSN-L (Online): 3006-6638

Predictive Relationship between Life Satisfaction and Negative Emotional States among Mothers of Children with Thalassemia Major

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Received: 16-11-2025 **Revised:** 23-12-2025 **Accepted:** 06-01-2026 **Published:** 17-01-2026

ABSTRACT

Objectives: *The aim of this study was to examine the predictive relationship between Life satisfaction and negative emotional states (NES; depression, anxiety and stress) among mothers of children with thalassemia (MCWT).*

Methods: *The sample of this study was consist on 150 mothers their children are suffering with thalassemia with age range of 35 years to 50 years (Mean age = 37.71, SD = 3.69). Data was gathered from different centers of thalassemia of Karachi, Pakistan. Demographic Form, Satisfaction with Life Scale ([SWLS], Mussaffa, Aamna, & Shahrukh, 2014) and Depression, Anxiety and Stress Scale ([DASS], Habib, 2010) were administered on all participants.*

Results: *Data was analyzed through SPSS (V-23). Linear Regression Analysis revealed significant relationship between Life satisfaction and negative emotional states among mothers of children with thalassemia. Further directions and implications for future researches are proposed.*

Conclusion: *This study investigated the relationship between life satisfaction and negative emotional states among mothers of children with thalassemia. Findings indicated that lower life satisfaction significantly predicted higher levels of depression, anxiety, and stress. The results emphasize the need for psychological interventions to support mothers' well-being.*

Keywords: *life satisfaction, negative emotional states, thalassemia major, Mothers*

INTRODUCTION

Thalassemia is a blood condition that is hereditary. This condition is caused by unusual plasma production. Furthermore, unusual production of hemoglobin results in abnormal deduction of one or more globin chains. Because the prevalent blood remains developing hemoglobin, infants with thalassemia seem totally healthy at birth (Taher & Cappellini , 2018). Thalassemia is found in almost every region of Pakistan (Khanzada et al., 2024). Each year, 5000 infants are born with thalassemia - 5 out of every 100 persons are impacted by this long-term illness, and 8 million people are affected (Khalid et al., 2020; Tanveer et al., 2025). Children infected with thalassemia have a life expectancy of roughly 10 years, if they do not receive effective treatment and regular blood transfusions (Talha et al., 2022).

At this era of repeated transfusions of blood, children with chronic illnesses suffer a number of physical and psychological concerns, including severe health conditions and frequent blood transfusions (Obeagu, 2024). People with the infection blame themselves when they observe parents worrying about their

children serious health issues, completing their appointments on time, managing finances, and so on (Page et al., 2020). These variables not only bother the afflicted person yet influence those around them. As women are the primary caregivers for their children, they are the family members that suffer the most as a result of their child's chronic health conditions (Piran, 2017). Mothers face psychological challenges not just during their child's blood transfusion, but also as a result of additional pressures associated with their children's long-term medical concerns (Cousino & Hazen, 2013; Shattnawi et al., 2023).

The present research examines mothers' life satisfaction and NES in relation to their children's chronic health conditions, one of which being thalassemia major. Besides blood transfusion the most frequent cause of stress, but additional healthcare, social, and emotional challenges also influence mothers' predisposition to depression, anxiety, and stress. Nutritional limitations, muscle weakness, persistent fever, social exclusion, continual stress and worry are all examples of stresses. These mothers satisfaction of life suffers as a result of various causes of stress (Pavić et al., 2024).

Due to ongoing stressful circumstances mothers experience an agonizing knowledge of the condition, as well as impairments in physical and psychological health, which decreases the mothers' quality of life. Being diagnosed with a children with Thalassemia Major includes severe iron deficiency side effects, recurrence of transfusion, and concurrent medical conditions in the child, all of which are significant causes of mental health problems in mothers of children with thalassemia (Anum & Dasti, 2024). A feeling of shame for having an infant with an inheritable disorder could account for poor parental quality of life (QOL) which leads to experience depression, anxiety, and stress (Amin, 2026). Depression, anxiety, and stress are including in negative emotional states (Adetunji & Ademuyiwa, 2019).

Lack of interest in everyday duties, hopelessness, grief, a lack of pleasure in pleasure activities, sleep problems, loss of motivation, guilt emotions, and negative thinking suicidal ideation, panic and worry (World Health Organization [WHO], 2023). Mothers of children with thalassemia frequently face challenging circumstances as a result of the uncertainties surrounding their children's chronic health condition and other daily routine chores (Bantali & Athar, 2025).

The above mentioned studies stated that there exist an association between satisfaction with life and NES among MCWT. Furthermore, a large amount of data is present on this topic that have few researches conducted in Pakistan. The current study is to explore the predictive relationship between satisfaction with life and NES among MCWT.

In view of above mentioned researches, the research hypothesis was formed:

- Satisfaction with life is predict negative emotional states (i.e. depression, anxiety, and stress) among mothers of child with Thalassemia Major.

MATERIALS AND METHODS

Research design

The current study investigates the predictive relationship with life satisfaction and NES among MCWT. This study adopted a qualitative approach to investigate how negative emotional states influence life satisfaction in this population. Purposive sampling technique was adopted for present research.

Sample

In the present research, 150 participant’s i-e MCWT is taken from different thalassemia major centers. The age range of mother is from 35-50 years old, having a 37.71 years of mean age. The age ranged for children is from 6-10 years old. Mothers who were single, divorced, or widowed were omitted from the sample. Only mothers who had just one kid with Thalassemia were considered.

Operational definitions

Thalassemia (Major)

This state is a mixed collection of genetic disorder having hemoglobin fusion due to decrease in one or more of the globin chains during formation that lead to imbalanced globin- chain, malfunctioning hemoglobin production that causing anemia (Cohen et al., 2017).

Spirituality

Hill and Pargament (2008) defined spirituality is a combination of different variable that includes cognitive, emotional, behavioral, interpersonal, and physiological dimensions.

Life Satisfaction

Satisfaction of life is a person's general evaluation of attitudes and feelings about life at a specific point in time from negative to positive. Satisfaction of life of a person is the degree to measure a individuals quality of life as a whole in a positive way (Proctor et al., 2009).

Instruments

Personal Information Form

A demographic information questionnaire was created for this study in order to collect personal as well as illness-related information. Personal information includes age, education of children and ages, financial status, level of education, type of employment, and parental designations.

Satisfaction with Life Scale (SWLS)

Mussaffa, Aamna, and Shahrukh, 2014 gives Satisfaction with Life Scale (SWLS) to assess subjective parameters of life satisfaction on five items. The potential mark range is 5-35. Coefficient of alpha has varied from 0.79 to 0.89. Its internal consistency is high and modest stability over time. Diener et al., 1985 stated a coefficient alpha value of scale is 0.87 and a test-retest stability value of 0.82 after two months. The present investigation utilized the Urdu version of the Satisfaction with Life Scale. This scale has alpha reliability of 0.87.

The Depression, Anxiety, and Stress Scale (DASS)

Depression, Anxiety, and Stress Scale (DASS) (Habib, 2010) is consists of 42-item scale having a rating that varies from 0-42 on the every sub-scale. The scores of on 20, 14, and 25 of sub-scales on the anxiety, depression and stress shows level of severity. This scale shows better internal coherence with Cronbach's alpha value for depression is 0.97, 0.92 for anxiety, and for stress is 0.95 (Basha & Kaya, 2016).

Procedure

The present study comprises of participants that have been selected from thalassemia treatment institutions of Karachi by using convenient and purposive sampling technique. The participants were assured of confidentiality, and the purpose of the study was conveyed to them. Participants signed informed consent forms. Following that, the Demographic Information Form, Satisfaction with life scale, and the Depression, Anxiety, and Stress Scale was filled out. Following the administration of the scales, scores were acquired and the findings were statistically analyzed.

Statistical Analysis

The information collected was statistically analyzed using SPSS, version 23. A simple linear regression analysis was run to check the hypothesis.

RESULTS

Table 1: Frequency Distribution of Mothers' Demographic Characteristics (N=150)

Characteristics	F	%
Age		
35-40	135	90
41-45	07	4.7
46-50	08	5.3
SES		
Middle	41	27.3
Lower Middle	89	59.3
Lower	20	13.4
Family Structure		
Nuclear	100	66.7
Joint	50	33.3
Qualification		
None	73	48.7
Primary	25	16.7
Middle	10	6.7
Matric	26	17.3
Intermediate	11	7.3
Graduation	04	2.7
Master	01	0.6

In Table 1Most mothers (90%) are aged 35-40, with a minority above 45 years. A significant portion (59.3%) belongs to the lower-middle socioeconomic class, reflecting financial challenges, while 27.3% are in the middle class and 13.4% in the lower class, indicating some diversity. Family structures are predominantly nuclear (66.7%), potentially concentrating caregiving responsibilities, with only 33.3% in joint families, which may offer shared support. Educational levels are notably low, as nearly half (48.7%) have no formal education, and few have achieved matriculation (17.3%), intermediate (7.3%), or higher degrees (3.3%). These characteristics highlight economic constraints, limited education, and isolated caregiving as key factors affecting this population.

***Table 2*: *Frequency Distribution of Children Demographic Characteristics* (N=150)**

Characteristics	F	%
Age		
6 years	28	18.7
7 years	25	16.7
8 years	35	23.3
9 years	18	12
10 years	44	29.3
Gender		
Male	81	54
Female	69	46

Table 3: Linear Regression Analysis with Satisfaction with life as Predictor of Depression, Anxiety and Stress among Mothers of Children with Thalassemia Major

Outcome Variables	B	SE	β	R^2	F	Sig.
Depression	-.86	.11	-.52	.27	57.4	.000
Anxiety	-.43	.09	-.35	.12	20.6	.000
Stress	-.66	.12	-.41	.16	29.9	.000

Life satisfaction shows a strong negative relationship with depression, with a one-unit increase in life satisfaction predicting a 0.86-unit decrease in depression scores ($\beta = -0.52$, $R^2 = 0.27$). This indicates life satisfaction explains 27% of the variance in depression, making it the most strongly influenced emotional state. The model is highly significant ($p < 0.001$). A moderate negative relationship exists between life satisfaction and anxiety, where a one-unit increase in life satisfaction predicts a 0.43-unit decrease in anxiety scores ($\beta = -0.35$, $R^2 = 0.12$). Life satisfaction accounts for 12% of the variance in anxiety, and the relationship is statistically significant ($p < 0.001$).Life satisfaction predicts a 0.66-unit decrease in stress scores for every one-unit increase ($\beta = -0.41$, $R^2 = 0.16$). This highlights a substantial negative relationship, with life satisfaction explaining 16% of the variance. The model is also significant (**$p < 0.001$**). These results suggested that higher life satisfaction consistently correlates with lower levels of depression, anxiety, and stress, underscoring its psychological benefit for this vulnerable group.

DISCUSSION

The current research investigated the predictive link between satisfaction with life and NES in MCWT. The table-3 shows satisfaction with life is a significant predictor of NES. The Satisfaction with life demonstrate variance of 2% for depression, 1% for anxiety and 1% for stress. Therefore many researches suggests that life satisfaction is a protective factor in relative to NESS. Studies indicate that decrease amount of red blood cells is the main source of negative impact on child health and promote the chances of infection. This status of child's health has great impact on mother's psychological wellbeing. Due to this mothers find it difficult to manage household activities and other siblings of the infected child with his chronic illness and related responsibilities. This burden of many things at a time negatively impacted on mother's satisfaction with life and cause medical and mental health related challenges.

Prior study has demonstrated that chronic health concerns in children have an impact on mothers' psychological and emotional well-being. As a source of support, mothers' mental and emotional health suffers throughout the course of their children's medical care. There are two primary causes of mothers' declining health status: first, uncertainties about their child's health, and second, financial difficulties experienced by mothers because of the continuous care of their child's sickness (Anum & Dasti, 2016). These unpredictability factors cause women to worry that they may be unable to pay the medical expenses on time. The initial factor is anxiety in mothers of children with Thalassemia because there is no cure; this can be a major source of psychological distress; due to these stressors the mothers' life satisfaction decreases and anxiety, stress and depression symptoms increase (WHO, 2023). Satisfaction of life in MCWT is highly connected to psychopathological conditions like depression, anxiety, and stress (Abbas & Ashraf, 2025).

This research indicate that life satisfaction is related to stress and anxiety. The MCWT have resentment as their children has a life-long illness that affects them because this Thalassemia disease is genetically in nature (Hazlina, Rumaya, & Nor, 2017). Most mothers typically get frustrated, remain on edges exhibit anxious and irritation, have future fears related to child loss, find it difficult to make them calm and are continuously worried; all of these components of mental health reduce the life satisfaction and have a greater effect on the mental health of a mothers. Furthermore, poor life satisfaction leads to depression, pessimism and negative thoughts about their lives; moms' sleep patterns are disturbed as a result of

persistent anxieties (Miskam et al., 2017). Mothers' psychological health suffers as a result of their continual worry, and they are more likely to acquire psychological problems.

Mothers more likely to undergo from mental health issues as a result of persistent stress and worries about the years to come. With stress and worry, mothers of children are more likely to experience depression, and the reason for this is chronic health conditions in children, which need mothers to pay additional attention to their unwell kid and to take care of their child's particular requirements (Ahmad & Mushtaq, 2019). The complicated nature of a long-term medical condition has a significant influence on mothers contentment with life satisfaction , and discontent with life can lead to emotional and psychological elements of mental health in childrens' mother with Thalassemia (Weatherall & Clegg, 2001).

According to the present research, mothers who are suffering from mental illnesses have lower life satisfaction. Previous research have documented Thalassemia's adverse effects, which have a detrimental influence on child's family as well as on the mental and social elements (Alijany et al., 2020). Furthermore, mental health issues such as depression, anxiety, and stress are frequently observed in MCWT. There are several causes for this, including a lack of emotional support, a poor financial situation, a lack of knowledge and awareness about the illness, and the fact that mothers of children with Thalassemia execute many duties with no receiving any gratitude, particularly from family (Sharghi et al., 2006).

Thalassemia is a serious medical condition that affects not only affected children but also their families. Mothers frequently endure the most stress among loved ones, since they not just care for the affected child but also seek to keep a balance in their regular duties and other commitments. This research was carried out in the setting of Pakistani culture, where women play an important role in family structure. As a result, moms confront a number of concurrent obstacles, such as giving equal attention to the ailing kid and their siblings, managing household finances, and caring for other family members.

Current study was conducted in some centres with mothers having only child suffering with thalassemia major. Mothers does not have psychological disturbance were the part of this study. The present study findings demonstrate the mental health benefits for practitioners in the fields of clinical psychology and psychiatry in variety of ways in Pakistan.

CONCLUSION

The present study concludes that life satisfaction is a significant predictor of NES among MCWT. Lower levels of life satisfaction were associated with higher depression, anxiety, and stress, highlighting the psychological burden experienced by these mothers. These findings underscore the importance of incorporating psychosocial support and well-being focused interventions in thalassemia care settings. Enhancing life satisfaction may play a crucial role in reducing emotional distress and improving overall maternal mental health.

Conflicts of Interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding Disclosure

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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