BRIEF RESEARCH

MOOD DISORDER IN GREEK SCHOOL-AGE CHILDREN WITH THALASSAEMIA MAJOR: CONTRIBUTING FACTORS

Ioannis G. Koutelekos

Associate Professor, University of West Attica, Department of Nursing, Athens, Greece

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Abstract

Introduction: Depression is considered to be a common disorder among people living with thalassaemia major, especially among adolescents with thalassaemia major (ATMs). Certain factors, such as poor social integration, are thought to have an impact on ATMs' depression occurrence. The aim of the study was to explore the impact of Greek ATMs' self-reports on depression. **Materials and methods** Forty-four Greek ATMs, aged 13-18 years (median age:16 years), were invited to self-complete the Beck's Depression Inventory (BDI) and an ad hoc questionnaire on their demographic characteristics (e.g. gender), family relations (e.g. self-reliance), social incorporation (e.g. body image) and relationships with healthcare stakeholders (e.g. hospital policies and procedures). Regarding BDI scoring, total scores 11-16 and>16 indicated mild mood disturbance and depression, respectively. A p-value<0.05 was referred as statistically significant. **Results** Of the 44 participants, the 41(93%) Greek ATMs fully completed the questionnaires. The 26/41(63%) were girls. Their median age stood at 16 years. The 9/41(22%) Greek ATMs experienced mild mood disturbance. Demographic characteristics had no impact on Greek ATM level of depression. Greek adolescents with thalassaemia major ATMs reporting that they were not self-reliant were almost nine times as likely as those not reporting to experience mild mood disturbance [6/12(50%)vs.3/29(10%), PR=8.67(95%CI:1.67-44.9), p=0.010]. Greek ATMs reporting that their body image has changed during the course of their illness were six times as likely as those not reporting to experience mild mood disturbance [6/14(43%)vs.3/27(11%), PR=6.00(95%CI:1.21-29.7), p=0.028]. Greek ATMs reporting that they were encumbered by hospital policies and procedures were almost six times as likely as those not reporting mild mood disturbance [4/8(50%) vs.5/33(15%), PR=5.60(95%CI:1.06-30.1), p=0.045]. All 4/41(9.8%) Greek ATMs with depression reported that they were not self-reliant and were encumbered by hospital policies and procedures. **Conclusions** Psychological profiling and established tools such as the BDI need to be employed to recognize the risk of depression among ATMs. Actions against patient encumbrance due to poor hospital service delivery would improve the quality of healthcare provided to ATM patients in Greece.

Keywords: Thalassaemia major, depression, adolescence

Corresponding author: *Ioannis Koutelekos. Email:ikoutel@uniwa.gr*

Introduction

Thalassemia is an inherited blood disorder that poses a significant public health challenge across the Mediterranean region, the Middle East, the Indian subcontinent, and Southeast Asia. Beta-thalassemia is characterized by severe hemolytic anemia due to deficient synthesis of beta chains in hemoglobin, necessitating frequent blood transfusions and ongoing iron chelation therapy to manage complications such as hemosiderosis. The disease presents a range of clinical and psychological challenges, including physical deformities, growth retardation, delayed puberty, and poor self-image linked to bone deformities and short stature. Patients also face severe complications such as heart failure, liver disease, endocrine dysfunctions, and infections.[1,2]

Adolescence is a critical developmental stage marked by rapid physical, emotional, and social changes, but the presence of a chronic disease can significantly complicate this process. Chronic illness impacts not only the physical health of affected adolescents but also their psychosocial and family functioning. Adolescents with chronic diseases often face additional challenges such as physical limitations, recurrent hospitalizations, pain, fatigue, mental health difficulties, impaired social interactions, and experiences of stigmatization which contribute to heightened emotional distress. Furthermore, both internalizing and externalizing behavioral problems are more prevalent in adolescents with chronic conditions than in their healthy peers and may persist into adulthood. Chronic illness exerts effects that extend beyond the individual patient, influencing the functioning of the entire family system. Moreover, presence of a chronically ill family member can create significant physical, emotional, social, and financial stress, disrupting daily routines and caregiving roles. Likewise, siblings of children with chronic illnesses demonstrate higher risks of psychosocial difficulties and diminished cognitive and academic performance.[3-8]

Despite advancements in the psychological assessment of chronic illnesses, research specifically addressing the health-related psychological issues in patients with thalassemia major remains limited. Nevertheless, as life expectancy for these patients increases, psychosocial issues gain greater prominence. Despite growing recognition of these effects, there remains a notable gap in research exploring depression among Greek ATMs, aged 13-18 years.

The aim of the present brief research report was to explore depression among adolescents with thalassaemia major (ATMs) and the associated factors.

Materials and methods

In the present study were enrolled forty-four Greek ATMs, aged 13-18 years (median age:16 years). The sample method was a convenience one.

Research Instrument

The Beck's Depression Inventory scale (BDI) was used as well as an ad hoc questionnaire on gender, self-reliance, body image, and relationships with healthcare stakeholders (e.g. hospital policies and procedures). Regarding BDI scoring, total scores 11-16 and>16 indicated mild mood disturbance and depression, respectively.[9] Prevalence ratios (PR) and 95% confidence intervals (95%CI) were assessed. A p-value<0.05 was referred as statistically significant.

Results

Of the 44 participants, the 41(93%) Greek ATMs fully completed the questionnaires. The 26/41(63%) were girls. Their median age stood at 16 years. The 9/41(22%) Greek ATMs experienced mild mood disturbance. Demographic characteristics had no impact on Greek ATM level of depression.

Greek adolescents with thalassaemia major ATMs reporting that they were not self-reliant were almost nine times as likely as those not reporting to experience mild mood disturbance [6/12(50%)vs.3/29(10%), PR=8.67(95%CI:1.67-44.9), p=0.010].

Greek ATMs reporting that their body image has changed during the course of their illness were six times as likely as those not reporting to experience mild mood disturbance [6/14(43%)vs.3/27(11%), PR=6.00(95%CI:1.21-29.7), p=0.028].

Greek ATMs reporting that they were encumbered by hospital policies and procedures were almost six times as likely as those not reporting to experience mild mood disturbance [4/8(50%)vs.5/33(15%), PR=5.60(95%CI:1.06-30.1), p=0.045].

All 4/41(9.8%) Greek ATMs with depression reported that they were not self-reliant and were encumbered by hospital policies and procedures.

Discussion

Adolescents who reported that they were not self-reliant were found to be almost nine times more likely to experience mild mood disturbances compared to those who identified as self-reliant. This finding indicates a strong association between perceived self-reliance and psychological adjustment among youths living with chronic illness. The higher likelihood of mood disturbance among that that lacking self-reliance suggests that dependence on others may contribute to feelings of helplessness or reduced self-efficacy, which, negatively affects emotional stability. Consequently, interventions aimed at fostering autonomy and self-management skills in adolescents with thalassaemia major may play a crucial role in promoting better mental health outcomes.[1,10]

The results also demonstrated that Greek adolescents with thalassaemia major, who reported changes in their body image during the course of their illness were found to be six times more likely to experience mild mood disturbances compared to those who did not report such changes. This significant association highlights the critical role of body image perception in the psychological well-being of adolescents managing chronic health conditions. Physical alterations resulting from the illness or its treatment, such as delayed growth or changes in facial features may negatively impact self-esteem and social confidence, thereby increasing the risk of emotional distress. This finding underscores the importance of addressing body image concerns as part of psychosocial support for adolescents with thalassaemia major, to promote better mental health outcomes.[7,10,11] A relevant study in Greece showed that individuals of all ages with β-thalassaemia major who have undergone multiple transfusions face distinct psychosocial obstacles stemming from a distorted body image. Specific physical traits related to the illness and treatment, such as short stature, characteristic facial features, and hypogonadism, were identified as contributing factors to the negative body image. As a consequence of the altered body image, patients often experienced feelings of inadequacy, and were more vulnerable to both physical and mental health issues. This in turn affected their relationships with family and peers, their performance and participation in educational activities, and their interactions with health professionals. [12] Notably, in chronic illness, levels of body dissatisfaction vary globally based on factors including age at disease onset, assessment methods for body image, ethnicity, and the nature of the comparison group. Recommendations are needed to mitigate the impact of chronic illness on the body image of affected individuals.[13]

The present finding that participants feeling encumbered by hospital policies and procedures were nearly six times more likely to experience mild mood disturbances compared to their counterparts who did not report such feelings underscores the impact that healthcare environments and institutional practices can have on the psychological well-being of adolescents managing chronic illnesses. The perception of hospital policies as restrictive or burdensome may contribute to increased stress, helplessness, and reduced autonomy, thereby exacerbating emotional distress.[14]

Last but not least, adolescence represents a pivotal developmental stage during which psychological interventions can significantly influence the trajectory of chronic illness. Effective treatment for adolescents with chronic medical conditions necessitates a thorough biopsychosocial evaluation that accounts for biological, psychological, and sociocultural dimensions. A culturally responsive assessment should adopt a person-centered framework, incorporating multicultural identity, social determinants of health, and patient and family healing beliefs. Health service psychologists are essential collaborators in supporting patients and families to mitigate the challenges associated with chronic disease management.[2,3,15]

Conclusion

These findings underscore the importance of early psychosocial support and structured transition programs that promote resilience. Furthermore, results highlight the necessity for healthcare systems to consider the psychosocial needs of adolescent patients by adopting flexible, patient-centered approaches that mitigate the negative emotional consequences of treatment-related procedures. Addressing these factors may be critical in improving mental health outcomes and overall quality of life for this vulnerable group.

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