








Predicting Quality of Life Based on Family Leisure and Mindfulness in Adolescents with Skin Diseases

Maryam Akhavan ¹, Hamdollah Jayervand ^{2,*}, Sahar Safarzadeh ¹, Farzaneh Hooman ³, Afsaneh Farashbandi ¹

¹ Department of Psychology, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran

² Department of Psychology, Abdanan Branch, Islamic Azad University, Abdanan, Iran

³ Department of Psychology, Shiraz Branch, Islamic Azad University, Shiraz, Iran

*Corresponding Author: Department of Psychology, Abdanan Branch, Islamic Azad University, Abdanan, Iran. Email: jayervandhm@gmail.com

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Abstract

Background: Skin diseases can have a profound negative impact on the lives of adolescents, leading to emotional distress, social isolation, and reduced self-esteem.

Objectives: This study aimed to investigate the relationship between family leisure, mindfulness, and quality of life in adolescents with skin diseases.

Methods: In this descriptive-correlational study, the statistical population included all adolescents with skin diseases who referred to hospitals and specialized skin centers in Babol city in 2023. A total of 206 adolescents were selected as the sample. The tools used in this study included the Teenagers' Quality of Life (T-QoL) Questionnaire to assess quality of life, the Family Leisure Scale to measure family leisure, and the Five Facet Mindfulness Questionnaire (FFMQ) to evaluate mindfulness. The data were analyzed using the Pearson correlation coefficient and stepwise regression.

Results: The study included 206 adolescents with an average age of 16.25 years. The sample was fairly evenly split between genders, with slightly more females (51.46%) than males (48.54%). The results showed that family leisure had a positive and significant relationship with quality of life ($P < 0.001$). Mindfulness also had a positive and significant relationship with quality of life ($P < 0.001$). Family leisure and mindfulness predicted 27.0% of the variance in quality of life in adolescents with skin diseases, with mindfulness having a greater influence on predicting their quality of life.

Conclusions: The study found that both family leisure and mindfulness positively impact the quality of life of adolescents with skin diseases. However, mindfulness appears to have a stronger influence on their well-being. The researchers suggest incorporating these activities into clinical interventions and therapeutic approaches to improve the overall health and well-being of these adolescents.

Keywords: Skin Diseases, Quality of Life, Family, Mindfulness, Adolescents

1. Background

Skin disorders, such as acne, psoriasis, lupus, leishmaniasis, and vitiligo, affect millions of people annually, prompting them to seek dermatological care. These conditions often lead to disturbances in physical appearance, with facial and exposed skin disorders causing significant psychological distress and impacting self-concept (1, 2). Adolescence is a period of rapid physical and hormonal changes, which can exacerbate skin issues. Before puberty, skin undergoes

constant regeneration; however, as individuals enter adolescence, this regenerative process slows down (3). While less frequent than in childhood, skin regeneration remains efficient, making skincare relatively straightforward during this period.

Hormonal fluctuations during adolescence contribute to common skin problems like acne, characterized by excessive sebum production (4). The accumulation of sebum, along with sweat, dirt, and makeup, can clog pores and lead to acne formation.

While acne is primarily associated with adolescence, it can also occur in adults due to underlying health conditions or dietary factors (5). Skin disorders, particularly those affecting the face and exposed body parts, can have a significant psychological impact on adolescents, affecting their self-esteem and social interactions. During adolescence, when peer relationships and social acceptance are paramount, visible skin conditions can lead to feelings of self-consciousness and isolation. As Lee and Bonk (6) argue, positive peer relationships can provide social support and a sense of belonging, mitigating the negative effects of stress.

Adolescents place great value on friendship, group affiliation, and peer acceptance. These social factors significantly influence learning and development, as learning often occurs within a social context (7). Researchers have shown in their studies that a decline and disruption in the quality of peer relationships can be influenced by a decrease in warm and intimate interactions with family members and other family leisure activities (8). Family leisure activities provide an opportunity for families to experience change in a relatively calm situation, which leads to greater adaptability and flexibility for families as a whole (9). Family leisure activities are those that individuals choose to engage in consistently during their discretionary time. In general, parents, through leisure time, demonstrate feelings, values, and behavioral skills to their children, which can lead to reduced stress and fewer skin diseases (10). In this regard, Rahdar et al. (11) showed that there is a significant relationship between family leisure and peer relationships, family leisure and parent-child relationships, peer relationships and social growth, and parent-child relationships and social growth.

One factor closely related to quality of life is mindfulness (12). As defined by Kabat-Zinn (13), mindfulness involves paying attention on purpose, in the present moment, and nonjudgmentally. This practice encourages individuals to be fully aware of their thoughts, feelings, and bodily sensations. Mindfulness techniques, such as meditation and deep breathing exercises, can be particularly beneficial for adolescents with skin disorders (14, 15). By reducing stress and anxiety, mindfulness can help alleviate the psychological distress often associated with these conditions (16). For example, studies have shown that

mindfulness-based interventions can help manage symptoms of acne, psoriasis, and eczema (17). Additionally, mindfulness can improve sleep quality, boost mood, and enhance overall well-being. Crego et al. (18) demonstrated a positive and significant relationship between mindfulness and quality of life. By incorporating mindfulness practices into daily routines, adolescents with skin disorders can improve their psychological well-being and enhance their overall quality of life.

Skin conditions, such as acne, eczema, and psoriasis, can significantly impair an individual's quality of life, leading to increased anxiety, depression, and decreased productivity in both academic and familial settings. Furthermore, these conditions can impose substantial financial burdens due to medical expenses, increased absenteeism, and disruptions in social functioning. While previous research has explored the psychological impact of skin disorders, there is a lack of research examining the role of family leisure and mindfulness in mitigating these negative effects, particularly in adolescent populations.

2. Objectives

The aim of this study was to predict the quality of life based on family leisure and mindfulness in adolescents with skin diseases.

3. Methods

3.1. Design

This study employed a descriptive-correlational design to investigate the relationship between family leisure, mindfulness, and quality of life in adolescents with skin diseases.

3.2. Participants

The study population comprised all adolescents aged 14 - 18 years who were diagnosed with skin diseases (acne, alopecia, vitiligo, or psoriasis) and sought treatment at the dermatology department of Babol Hospital in 2023. A convenience sample of 206 adolescents was selected. The sample size was determined based on the number of research variables and the expected effect size. While a larger sample size of 220 individuals was initially planned to account for potential missing data and outliers, the final analysis

included 206 fully completed questionnaires. Questionnaires were administered online to participants.

3.3. Inclusion and Exclusion Criteria

The inclusion criteria for the study consisted of participants aged 14 to 18 years who had been diagnosed with acne, alopecia, vitiligo, or psoriasis and were actively seeking treatment at the dermatology department of Babol Hospital. Exclusion criteria included individuals with severe cognitive impairment and those unable to complete the questionnaires independently.

3.4. Ethical Considerations

To ensure ethical compliance, all data were collected and analyzed anonymously and confidentially. Results were reported at the aggregate level to safeguard participant privacy. Informed consent was obtained from all participants prior to their participation, and parental consent was secured for participants under the age of 18.

3.5. Research Tools

3.5.1. Teenagers' Quality of Life Questionnaire

The Teenagers' Quality of Life (T-QoL) Questionnaire, developed by Alonso-Naranjo et al. (19), was used to assess the quality of life among adolescents. This 18-item instrument consists of three subscales: Self-image, physical health and future aspirations, and psychological impact and relationships. Each item is rated on a 5-point Likert Scale ranging from 1 (never) to 5 (always), with higher scores indicating a higher quality of life. In the present study, the T-QoL Questionnaire demonstrated excellent internal consistency, with Cronbach's alpha coefficients of 0.95 for the total scale, 0.87 for the physical health and future aspirations factor, 0.95 for the self-image factor, and 0.92 for the psychological impact and relationships factor.

3.5.2. Family Leisure Scale

Developed by Zabriskie (20), the Family Leisure Scale assesses core family leisure patterns and indicators of family leisure balance. The scale consists of 64 items designed to measure individuals' attitudes toward leisure time. The components of the questionnaire

include decision-making skills, leisure awareness skills, social relationship skills, and self-awareness skills. Responses are rated on a 5-point Likert Scale (strongly disagree = 1, disagree = 2, neither agree nor disagree = 3, agree = 4, strongly agree = 5). The minimum and maximum possible scores are 64 and 320, respectively. Ebrahimi et al. (21) reported a reliability coefficient of 0.95 for this instrument. In the present study, Cronbach's alpha was used to assess the reliability of the Family Leisure Scale, yielding a coefficient of 0.86.

3.5.3. Five Facet Mindfulness Questionnaire

The Five Facet Mindfulness Questionnaire (FFMQ), developed by Baer et al. (22), was used to measure mindfulness levels among participants. Mindfulness is defined as a non-judgmental and accepting focus on the present moment, distinct from states like rumination, worry, and automatic behavior. The FFMQ consists of 15 items rated on a 6-point Likert Scale, with higher scores indicating greater mindfulness. The total score ranges from 15 to 90. Previous research has reported an internal consistency of 0.86 for the FFMQ (23). In the present study, the reliability of the FFMQ was confirmed using Cronbach's alpha, resulting in a coefficient of 0.85.

3.6. Statistical Analysis

SPSS-27 software was used to analyze the data collected in this study. Descriptive statistics, including the mean and standard deviation, were applied to summarize the data. Inferential statistics, such as the Pearson correlation coefficient and stepwise regression, were utilized to examine the prediction of adolescents' quality of life based on family leisure and mindfulness.

4. Results

Demographic analyses indicated that the average age of adolescents in the sample was 16.25 years, with a standard deviation of 2.4 years. The sample was relatively balanced in terms of gender, with 106 (51.46%) females and 100 (48.54%) males. Table 1 provides a comprehensive overview of the descriptive statistics for all study variables, including means, standard deviations, skewness, and kurtosis.

Table 2 presents the correlation coefficients among the study variables. The findings revealed a significant positive association between mindfulness and quality of life ($r = 0.30$). This indicates a moderate positive

Table 1. Means, Standard Deviations, Skewness, and Kurtosis of the Research Variables

Variables	Mean \pm SD	Skewness	Kurtosis
Mindfulness	189.99 \pm 38.86	0.47	-1.13
Family leisure	51.83 \pm 9.39	0.36	-1.08
Quality of life (total)	48.62 \pm 16.32	0.24	0.60
Self-image	21.82 \pm 7.96	-0.04	0.35
Physical health and future aspirations	11.33 \pm 3.93	-0.26	1.15
Psychological impact and relationships	17.20 \pm 6.11	-0.32	1.27

Table 2. Pearson Correlation Coefficients Among the Research Variables

Variables	Quality of Life	
	r	P
Mindfulness	0.30	0.001
Family leisure	0.39	0.001

relationship, suggesting that as mindfulness levels increase, so does the quality of life. Additionally, a significant positive correlation was observed between family leisure and quality of life ($r = 0.29$). This moderate positive correlation suggests that increased engagement in family leisure activities is associated with improved quality of life in adolescents with skin diseases. To determine the relative contribution of mindfulness and family leisure in predicting quality of life, a stepwise regression analysis was conducted. As shown in [Table 3](#), family leisure emerged as a stronger predictor of quality of life compared to mindfulness.

As shown in [Table 3](#), in the first model, mindfulness played the most significant role in predicting quality of life. The correlation coefficient between these two variables was 0.39, and this variable accounted for 15.0% of the variance in quality of life. In the second model, after mindfulness, family leisure entered the equation. The correlation coefficient between these two variables and quality of life was 0.52, and these two variables together accounted for 27.0% of the variance in quality of life. The addition of the mindfulness variable increased the predictive power by 12%. Assuming the order of variable entry, mindfulness, with a standardized beta of 0.39, had the greatest contribution to predicting changes in quality of life. Subsequently, the variables of mindfulness and family leisure, with standardized betas of 0.39 and 0.21, respectively, played a significant role in predicting quality of life.

5. Discussion

This study sought to investigate the relationship between family leisure activities, mindfulness practices, and quality of life among adolescents with skin diseases. The first finding of this study indicated a significant positive correlation between family leisure and quality of life among adolescents with skin diseases. This finding aligns with the results of previous studies by Rahdar et al. (11), Shahzeidi (24), and Kang et al. (25), which also highlighted the positive impact of family leisure on quality of life. However, while these studies explored the relationship between family leisure and quality of life in broader populations, the present study specifically focused on adolescents with skin diseases. This unique focus allows for a deeper understanding of the specific role that family leisure plays in mitigating the psychological and social challenges associated with these conditions. Furthermore, while Rahdar et al. (11) emphasized the mediating role of parent-adolescent communication and peer relationships in the relationship between family leisure and social development, the current study did not explicitly examine these mediating factors. To explain this finding, it can be argued that family leisure activities can play a crucial role in reducing stress and strengthening family relationships. For adolescents with skin diseases, these activities can provide an opportunity to escape from daily pressures and foster a sense of belonging and social support (11). In other words, family leisure activities such as short trips, group

Table 3. Results of Simultaneous Regression Analysis

Models	Predictor Variables	F	R	R ²	B	SE	β	t	P
1	Mindfulness	73.67	0.39	0.15	0.68	0.08	0.39	8.58	0.001
2	Mindfulness and family leisure	42.21	0.52	0.28	0.06	0.02	0.21	3.04	0.003

sports, family games, or even spending time together at home can strengthen emotional bonds among family members. These strong emotional bonds can help adolescents cope with the psychological and physical challenges of skin diseases and enhance their feelings of security and support.

Shared leisure activities can help adolescents reduce the stress and anxiety associated with their skin conditions (24). These activities not only provide them with an opportunity to rest and rejuvenate but also allow them to share their concerns with family members and benefit from their emotional support. Given the positive effects of leisure activities on mental and emotional health, it is hypothesized that the higher the quantity and quality of family leisure activities, the higher the quality of life of adolescents with skin diseases. These activities can help adolescents better cope with the negative emotions associated with their illness and, as a result, enhance their enjoyment of life (25). Overall, this hypothesis suggests that family leisure activities play a significant role in the quality of life of adolescents with skin diseases, and focusing on this dimension can significantly contribute to improving their psychological and physical well-being.

Another finding of this study was that mindfulness had a significant positive correlation with the quality of life of adolescents with skin diseases. This finding is consistent with the results of previous studies by Crego et al. (18), Taziki et al. (26), and Al-Ghabeesh and Mahmoud (27). To explain this finding, it can be argued that adolescents living with skin diseases may be psychologically affected by various challenges such as anxiety, stress, and reduced self-esteem. Mindfulness, which refers to focusing on the present moment and accepting internal experiences without judgment, can help these adolescents cope better with these challenges (18). Mindfulness allows them to shift their attention from negative thoughts and worries related to their illness to their current feelings and experiences, distancing themselves from negative emotional reactions. Through regular mindfulness practice,

adolescents can reduce their stress and anxiety, experiencing greater feelings of calm and satisfaction in their daily lives. This improvement in mental health can directly impact their quality of life (26).

Mindfulness can enhance self-awareness and acceptance of the illness, leading to improvements in various aspects of physical, psychological, and social quality of life. The more adolescents practice and benefit from mindfulness, the higher their quality of life will be. Mindfulness predicts an overall improvement in quality of life by reducing the negative psychological impacts of the disease, such as anxiety, depression, and physical concerns. In fact, mindfulness not only improves mental and emotional health but also helps adolescents accept and adapt more effectively to their physical condition, resulting in a better quality of life.

One limitation of this study is that variables such as pre-existing psychological problems, socioeconomic status, and access to support resources may influence the results and may not have been controlled for. Given that the study was conducted in Babol city (Iran), cultural and environmental differences may affect the generalizability of the results to other regions of the country. In this regard, conducting longitudinal studies to examine the long-term effects of mindfulness training on the quality of life of adolescents with skin diseases is recommended.

5.1. Conclusions

The findings of this study demonstrate that both family leisure activities and mindfulness practices are significantly associated with improved quality of life in adolescents with skin diseases. While both factors contribute to overall well-being, mindfulness appears to have a more pronounced impact on predicting the quality of life in this population. These results have significant implications for healthcare providers, educators, and families of adolescents with skin diseases. Healthcare providers can incorporate mindfulness-based interventions into their treatment plans to help patients manage stress, anxiety, and

depression. Educators can promote mindfulness practices in schools to help students develop coping strategies and improve their overall well-being. Families can engage in family leisure activities to strengthen bonds and provide social support, while also encouraging mindfulness practices at home. By implementing these strategies, we can empower adolescents with skin diseases to lead healthier, happier, and more fulfilling lives.

Footnotes

Authors' Contribution: M. A. and H. J.: Developed the study concept and design; S. S.: Acquired the data; F. H. and A. F.: Analyzed and interpreted the data, and wrote the first draft of the manuscript; All authors contributed to the intellectual content, manuscript editing and read and approved the final manuscript; H. J. and S. S.: Provided administrative support.

Conflict of Interests Statement: The authors declare that they have no conflict of interests.

Data Availability: All data generated or analyzed during this study will be available from the corresponding author on reasonable request.

Ethical Approval: The study was approved by the Ethical Committee of Islamic Azad University-Ahvaz Branch (code: [IR.IAU.AHVZ.REC.1403.062](#)).

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Informed Consent: Informed consent was obtained from all participants prior to their participation, and parental consent was secured for participants under the age of 18.

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