

Primary Dysmenorrhea, Coping Strategies and Psychological Empowerment among Young Girls

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Abstract

This study investigates the relation between primary dysmenorrhea, coping strategies and psychological empowerment among young women. Using a correlational research design data was collected from 100 female participants aged 18-35 years, including both married and unmarried women, all of whom were employed for at least six months. Menstrual Symptom Questionnaire (MSQ; Chesney & Tasto, 1975), the coping scale (Hamby et al., 2013), and the Psychological Empowerment Instrument (Spreitzer, 1995; 1996) were employed to assess primary dysmenorrhea, coping mechanisms, and psychological empowerment, respectively. Findings reveal a significant positive relationship between primary dysmenorrhea, coping strategies, and psychological empowerment. Specifically, emotion-focused and problem-focused coping strategies significantly predicted psychological empowerment levels among participants. These results align with both the local and international literature, suggesting that the effective coping mechanisms can enhance psychological empowerment in women experiencing menstrual pain. Future research should consider broader participants groups, including those with other medical conditions, to deepen insights into coping processes and empowerment dynamics.

Keywords: Primary Dysmenorrhea, Coping Strategies, Psychological Empowerment, Young Girls

Introduction

Dysmenorrhea is one of the most prevalent gynecologic conditions, is characterized by painful menstrual cramps and is broadly categorized into primary and secondary types. Primary dysmenorrhea occurs without any identifiable pelvic pathology and typically begins six to twelve months after menarche, predominantly affecting adolescents and young adults (Iacovides et al., 2015; Armour et al., 2019). In contrast, secondary dysmenorrhea is associated with underlying conditions such as endometriosis or pelvic inflammatory disease and is more common among women aged 30-45 years (Ju et al., 2014; Celik, 2021). It causes severe discomfort during the menstrual cycle (Harel, 2006). Since appropriate coping mechanisms can empower young girls mentally and enhance their general well-being, it is imperative to understand how they manage this illness. Menstrual cramps that are severe and do not accompany any discernible pelvic disease are the hallmark of primary dysmenorrhea.

According to Celik (2021), discomfort associated with some medical diseases, including endometriosis or chronic pelvic inflammatory disease, is a component of secondary dysmenorrhea. Secondary dysmenorrhea is more prevalent in women between the ages of 30 and 45, whereas primary dysmenorrhea usually starts six to seven months after menarche and frequently affects teenagers throughout their first two years of menstruation (Guimaraes, 2020). It is mostly common among young women. Primary dysmenorrhea is marked by unpleasant menstrual cramps without underlying pelvic disease. Globally, it affects up to 90% of women to some degree and is a leading cause of missed school and work. Research in Pakistan has revealed disturbingly high incidence rates among female university students. Of those polled in Lahore, 91.5% had dysmenorrhea and 65.8% said they had moderate to severe pain. Research in Karachi also showed that 71.1% of female students had dysmenorrhea and 23.2% had severe symptoms. These figures draw attention to the prevalence of primary dysmenorrhea in Pakistan, hence stressing the need of handling this problem in young women. Understanding how young women manage primary dysmenorrhea is critical, particularly given its significant impact on quality of life, psychological well-being, and daily functioning (Rencz et al., 2021). Coping strategies defined as

cognitive and behavioral efforts to manage stress are essential in determining how individuals handle health-related challenges (Carver, 1997). These strategies are generally classified into problem-focused coping (e.g., planning, active efforts) and emotion-focused coping (e.g., emotional support, acceptance). Research shows that individuals employing adaptive coping strategies often report better mental health outcomes and reduced perception of pain (Chen et al., 2022). The relationship between coping strategies and psychological empowerment has gained increasing attention. Psychological empowerment, as defined by Zimmerman (1995), involves a sense of control, competence, and a proactive orientation toward one's environment. Recent studies suggest that individuals who perceive greater psychological empowerment are more likely to engage in adaptive coping and experience better psychological outcomes (Van Lente et al., 2021; Sun et al., 2020).

Despite growing awareness of the psychological and functional impact of dysmenorrhea, few studies have explored how coping strategies directly relate to psychological empowerment in young women suffering from primary dysmenorrhea. Addressing this gap, the current study examines the predictive value of coping strategies on psychological empowerment among women experiencing primary dysmenorrhea. By doing so, the study contributes to a deeper understanding of how mental resilience and coping mechanisms interact with gynecological health challenges, offering valuable insights for intervention and support programs. Among young women, especially university students, dysmenorrhea is a common problem in Pakistan. Imran (2022) found in a study that 72% of university students suffered dysmenorrhea, which had notable effects on their daily activities and academic performance. The study also found other coping mechanisms used by students, including self-medication and lifestyle changes. Rasool (2023), undertook a prospective study in Karachi stressing the significance of lifestyle changes like stress management and physical activity in reducing menstruation discomfort among university girls. These results highlight the need of knowing the coping strategies used by young women in Pakistan to control dysmenorrhea and their possible influence on psychological empowerment.

Research from other developing nations in Asia and Africa done abroad offers insightful analysis on the link between dysmenorrhea, coping mechanisms, and psychological empowerment. A qualitative study by Amoah (2015) in Ghana looked at how young adults and teenagers with dysmenorrhea coped; it found that those who participated used both pharmacologic and non-pharmacologic techniques included warm compresses and exercise. The study underlined health professionals' negative views on dysmenorrhea management as well as the need of better education and awareness. According to recent data, primary dysmenorrhea is still a major concern for young women and adolescent girls. According to Kassa et al. (2022), menstrual discomfort affected almost 70% of Ethiopian secondary school students, frequently leading to missed classes and subpar academic results. Al-Saleem et al. (2021), 85.6% of Saudi Arabian female university students reported having dysmenorrhea, and many of them limited their daily activities or used self-medication. These results highlight the significance of culturally relevant health interventions and imply that the psychological toll of dysmenorrhea may be reduced by employing useful coping mechanisms (Abd El-Mawgod et al., 2019).

This is further supported by Verma and Singh (2020), who observed that many Indian women in their university years experienced moderate to severe menstrual pain, which interfered with their ability to concentrate and participate in class. Unsal et al. (2021) discovered a significant correlation between lower psychological resilience and severe menstrual symptoms in Turkey. According to Mohamed and Houfey (2023), adolescents in Egypt who experience unmanaged menstrual pain report feeling more stressed and less happy. Osei and Appiah (2022) found that emotional stability during menstruation was improved for young women in Ghana who used healthier coping strategies. When taken as a whole, these studies highlight how important it is to give girls coping mechanisms and encouraging education in order to improve their mental and emotional well-being during their periods.

This study is grounded in Lazarus and Folkman's (1984) Transactional Model of Stress and Coping, which emphasizes the dynamic interaction between individuals and their environment in response to stressors. The model posits that coping strategies play a crucial role in mediating the effects of stress such as menstrual pain from dysmenorrhea on psychological outcomes. In this context, dysmenorrhea functions as a stressor that may negatively affect mental well-being, while effective coping strategies can enhance psychological empowerment and support resilience. Coping mechanisms are central to this framework, as they influence how individuals respond to menstrual discomfort. This model not only supports the investigation of psychological empowerment, coping strategies, and dysmenorrhea as interrelated variables, but also highlights the importance of exploring how coping may shape the relationship between menstrual pain and psychological empowerment. By examining these interactions, the study seeks to better understand the lived experiences of young women with dysmenorrhea and inform interventions aimed at strengthening their coping capacity and sense of empowerment.

Objectives

- To assess the relationship between Primary dysmenorrhea, coping strategies and psychological empowerment among young girls.

- To find the problem regarding primary dysmenorrhea among and psychological empowerment among young girls.
- To investigate the moderating role of coping strategies on psychological empowerment.

Hypotheses

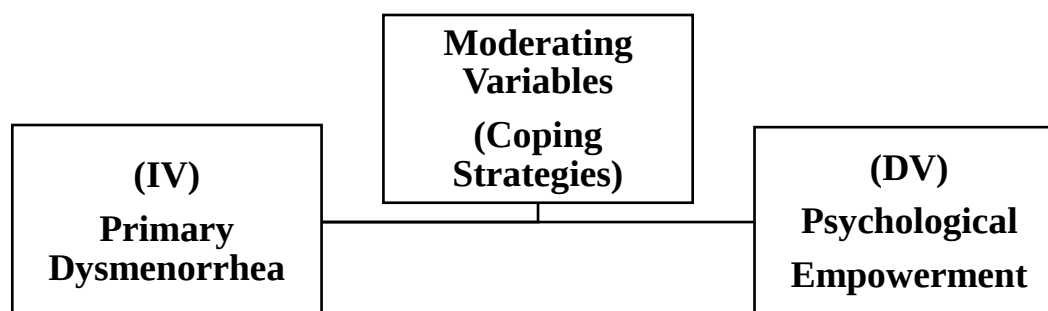
H₁: There is significant positive relationship between Primary Dysmenorrhea, Coping Strategies and Psychological Empowerment among girls.

H₂: Primary Dysmenorrhea and Coping Strategies are likely to predict Psychological Empowerment among girls.

H₃: Coping Strategies would likely to moderate the relationship between Primary Dysmenorrhea and Psychological Empowerment among girls.

Conceptual Framework

Independent variable of this study was primary dysmenorrhea; moderating variable was coping strategies and dependent variable was psychological empowerment. The conceptual framework was given below:



METHODOLOGY

Research Design and Sampling: A correlational research design was used in the current study. The sample was drawn by using the non-probability purposive sampling. The sample was taken from gynecology department of 10 different private and government hospitals of city Gujrat Punjab Pakistan. The sample of the present study consists of $N = 100$ girls and their age is between 18-35 years. By using G-Power analysis sample of current study was determined.

Inclusion Criteria: Total Sample consists of 100 girls diagnosed with primary dysmenorrhea, Minimum duration for dysmenorrhea at least 1 year. Only female respondents were included in the present study and their age ranges from 18 years to 35 years, Married and unmarried girls, Professional girls having job for at least 6 months were included.

Exclusion Criteria: Participants who had physical disability, Participants previously diagnosed with a chronic mental illness and those who had undergone psychological treatment or were currently under medical treatment, Students or unprofessional girls were excluded.

Research Instruments:

- 1) **Demographics Information Questionnaire:** Demographic form was used to collect detailed that include information regarding participant age, gender, education, no. of siblings, marital status, monthly income, and family system, etc.
- 2) **Menstrual Symptoms Questionnaire (MSQ):** The Menstrual Symptom Questionnaire (MSQ) was used to measure menstrual symptoms (Chesney & Tasto, 1975). The purpose of the Menstrual Symptom Questionnaire (MSQ) is to assess the severity of various menstrual symptoms and their impact on daily life. The questionnaire consists of 24 items, which evaluate symptoms such as cramps, mood changes, and physical discomfort. The MSQ does not have specific subscales; instead, it provides a comprehensive overview of menstrual symptoms. Each item is scored using a 5-point Likert scale, where 1 indicates "never" and 5 indicates "always." Higher total scores reflect greater symptom severity. The reliability of the MSQ has been established in previous research, with a reported Cronbach's alpha of 0.85, indicating good internal consistency (Chesney & Tasto, 1975). This makes the MSQ a reliable tool for evaluating menstrual symptoms in research settings.
- 3) **Coping Scale (CS):** The Coping Scale used in the present study was originally developed by Hamby, Grych, and Banyard (2013) as part of the Life Paths Research Program to assess cognitive, emotional, and behavioral coping strategies. For this research, 8 items were adapted from their well-known Coping Strategies Scale, focusing specifically on cognitive and emotional coping techniques. Participants respond to each item using a 5-point Likert scale ranging from 1 (never) to 5 (always), with higher scores reflecting more effective coping. Previous studies have reported strong reliability for this scale, with a Cronbach's alpha of .85, indicating excellent internal consistency (Holahan & Moos, 1987; Spitzberg & Cupach, 2008). These findings support its usefulness in assessing coping strategies across different groups.

- 4) ***Psychological Empowerment Instrument (PEI)***: This instrument was developed by Spreitzer (1995; 1996). The purpose of the Psychological Empowerment Instrument (PEI) is to assess individuals' perceptions of their psychological empowerment in various contexts. This instrument comprises 12 items that measure four sub-dimensions: meaning, competence (ability), self-determination, and impact. Each sub-dimension includes 3 items, allowing for both individual and combined assessments of psychological empowerment. The items are rated on a 5-point Likert scale, where responses range from 1 (strongly disagree) to 5 (strongly agree). Higher total scores reflect greater levels of psychological empowerment. The reliability of the Psychological Empowerment Instrument (PEI) has been demonstrated through research, with test-retest reliability typically reported around 0.80, indicating good consistency over time (Spreitzer, 1995; 1996). This reliability confirms the instrument's effectiveness in measuring psychological empowerment across different settings.

Data Collection: Firstly, responses were collected from participants at various gynecological centers and hospitals in Gujrat. Following the ethical protocols, the researcher obtained a formal approval to carry out study from institutional ethical committee and permission from the authors of the assessment measures used. A pilot study involving 10 individuals, both married and unmarried girls, was conducted to identify any issues during assessment. Participants were informed about the study's purpose and requested to report any difficulties. For the main study, data were collected from 10 different public and private hospitals in Gujrat, with the university's letter of approval facilitating this process. The study included 100 girls diagnosed with primary dysmenorrhea. Prior to the survey, permission to collect data was from the concerned hospital authorities. Participants were provided with an information sheet outlining the study's purpose, procedures, and their role, and were given contact details for any issues. The researcher administered all the assessment measures after receiving an informed consent from participants, ensuring they understood their information would be used solely for educational and research purposes. Participants were also advised they could seek help if they experienced stress during the process. All collected information was kept confidential and used exclusively for research purposes.

Results

The data was analyzed using SPSS v.25 and the findings of the study were presented below.

Table 1: Characteristics of the Sample (N=100)

Variables	Categories	f (%)
Birth Order	1 st Born	16 (13.0)
	Middle Born	41 (33.3)
	Last Born	37 (30.1)
	Only Child	6 (4.9)
Number of Siblings	1	3 (2.4)
	2	28 (22.8)
	3	39 (31.7)
	4	24 (19.5)
	5	6 (4.9)
	Married	16 (13.0)
Marital Status	Unmarried	59 (48.0)
	Divorced	13 (10.0)
	Separated	8 (6.5)
	Widow	4 (3.3)
	I2	4 (3.3)
Age at First Period	I3	58 (47.2)
	I4	31 (25.2)
	I5	7 (5.7)
	Yes	80 (65.0)
Sadness at First Period	No	20 (16.3)
	Mother	58 (47.2)
Who Gave Private Information About First Period	Sister	34 (27.6)
	Friends or others	8 (6.5)
Family History of Dysmenorrhea	Yes	56 (45.5)
	No	56 (45.5)
Reason of Dysmenorrhea	Hormonal issue	34 (27.6)
	Use of oily things	1 (8)
	Genetics	51 (41.5)

Duration of Treatment	Other	14 (11.4)
	6 months	15 (12.2)
	1 year	29 (23.6)
	2-3 years	40 (32.5)
	More than 3 years	16 (13.0)
Treatment Used for Dysmenorrhea Problem	Homeopathic	9 (7.3)
	Allopathic	64 (52.0)
	Homemade remedies	24 (19.5)
	Other	3 (2.4)
Improvement By Treatment (In %)	30	12 (9.8)
	30-60	71 (57.7)
	60-90	17 (13.8)

Table 1 showed that Most of the participants (33.3%) were 2nd born. Majority of the participants (48 %) were unmarried, (47.2 %) have an age 13 at the first time period, (65 %) participant feel sad at first time period, (47.2 %) participants are those who are informed by her mother about first time period situation, (45.5%) have history of family dysmenorrhea, (41.5 %) participant believed that dysmenorrhea is due to genetic issues, (32.2 %) participant was those who received treatment from 2-3 years.

Table 2: Psychometric Properties of Menstrual Symptoms Questionnaire, Coping Strategies, and Psychological Empowerment Instrument

Scales	k	M	SD	Range	α
Menstrual symptoms Questionnaire	24	84.91	12.49	42-144	.75
Coping Scale	8	35.15	8.00	21-44	.82
Psychological Empowerment Instrument	12	56.13	9.59	39-76	.92

k = Number of Items in the subscales, M = Mean, SD = Standard Deviation, Min = Minimum Score, Max = Maximum Score, α = Alpha Reliability Co-efficient

The psychometric properties of the measures show that all the measures were psychometrically sound.

Table 3: Correlation between primary dysmenorrhea, coping strategies and psychological empowerment.

Variables	1	2	3
Primary dysmenorrhea	1		
Coping strategies	.04*	1	
Psychological Empowerment	.07**	.03**	1

* & ** mean correlation is significant at 0.05 and 0.01 level.

Table 3 findings indicate that there was significant positive relationship between Dysmenorrhea and Psychological Empowerment among girls. There is significant positive correlation exist between Coping Strategies and Psychological Empowerment among girls.

Table 4: Multiple Regression Analysis for Prediction of Psychological Empowerment (N=100)

Variables	B	SE	β	t	p
Constant	3.98	0.039		102.051	.000
Primary Dysmenorrhea Questionnaire	.101	.004	.010	.226	.021
Coping Scale	.217	.018	.017	.387	.049

In order to determine whether CS moderates the relation between the PDQ and PEI, a moderation analysis was conducted. The regression analysis indicated that both primary dysmenorrhea and coping strategies were significant predictors of psychological empowerment. Primary dysmenorrhea showed a positive association with empowerment ($B = 0.101$, $p = .021$), and coping strategies also had a significant effect ($B = 0.217$, $p = .049$). These findings suggested that both variables played a meaningful role in influencing psychological empowerment among young women.

Table 5: Moderation Analysis

Predictor	B	SE	t-value	p-value
Constant	3.909	0.092	42.41	0.000
Coping Strategies	0.035	0.036	0.987	0.032
Primary Dysmenorrhea* Coping strategies	0.007	0.011	0.660	0.048

A moderation analysis was conducted to explore whether coping strategies influence the relationship between primary dysmenorrhea and psychological empowerment. The findings indicated that both primary dysmenorrhea and coping strategies played a significant role in predicting psychological empowerment. Additionally, coping strategies were found to moderate the impact of primary dysmenorrhea on psychological empowerment. This suggests that the way individuals cope can shape how menstrual pain affects their sense of empowerment.

DISCUSSION

The aim of present study was to explore the relationship between Primary Dysmenorrhea, coping strategies and Psychological Empowerment among girls. The present study was mainly targeting the young girls and focus on their coping problems and impacts of dysmenorrhea on psychological empowerment among girls. Immense researches had been conducted on psychological effects of dysmenorrhea like depression, anxiety and stress etc., in such circumstance, the present study would assess the Dysmenorrhea, Coping strategies and psychological empowerment among girls.

The first hypothesis of current research was there is likely to be significant relationship between Primary Dysmenorrhea, coping strategies and Psychological Empowerment among girls. Results illustrated that there is a significant positive relationship between Primary Dysmenorrhea, coping strategies and Psychological Empowerment among girls. Findings emerged in the present study findings are aligned with the existing literature. The results of this study were reported that the woman that are housewife's have high level of mood regulations and relief stress as compare to other ladies.

Hypothesis 1 posited a significant relationship between primary dysmenorrhea, coping strategies, and psychological empowerment. The results confirmed this hypothesis, aligning with previous research that highlights the impact of dysmenorrhea on psychological well-being. Recent research has continued to explore the psychological effects of primary dysmenorrhea, particularly its impact on mental health and coping behaviors. In Georgia, a case-control study of 424 adolescent girls showed that those with dysmenorrhea exhibited significantly higher levels of depression and anxiety than their peers without menstrual pain (Derycke et al., 2016). According to a Moroccan study, about three-quarters of teenage girls had dysmenorrhea, and those who used adaptive coping mechanisms reported feeling more emotionally resilient (Lghoul et al., 2020). Compared to schoolgirls without symptoms, 492 dysmenorrheal schoolgirls in remote areas of western Rajasthan had significantly higher rates of anxiety and depression (Prevalence of Depression, Anxiety, and Quality of Life..., 2021). These results underline the psychological toll that menstrual pain takes and the significance of developing healthy coping mechanisms. Few studies, nevertheless, have specifically looked at the relationship between psychological empowerment and primary dysmenorrhea, suggesting a promising area for further investigation.

The psychological and behavioral health correlates of primary dysmenorrhea have been the subject of ongoing research in recent years. Derycke et al. (2020), for instance, discovered that women with primary dysmenorrhea who used acceptance-based pain coping had a higher physical quality of life than those who used conventional coping mechanisms. Alturki and Hafez (2021) found a significant correlation between the severity of dysmenorrhea and depressive symptoms in Saudi Arabian university students. More recently, Rodríguez-Muñoz et al. (2021) found that among young women who experienced menstrual pain, increased physical activity was associated with a lower risk of catastrophic thinking and an improved quality of life related to menstruation. Kumar et al. (2021) found a favorable correlation between improved emotional resilience during menstruation and healthy coping strategies like asking for social support and practicing relaxation techniques.

The second hypothesis of the current study was Primary Dysmenorrhea and Coping Strategies are likely to predict Psychological Empowerment among girls. The results of the study depicted that psychological empowerment is predicted by primary dysmenorrhea and coping mechanisms. Psychological Empowerment is significantly predicted by Primary Dysmenorrhea, although Coping Strategies are not significantly predicted. Hypothesis 2 suggested that primary dysmenorrhea and coping strategies would predict psychological empowerment. The findings supported this hypothesis, indicating that both variables are significant predictors. This is consistent with the work of Hassan (2021), who demonstrated that cognitive-behavioral therapy interventions targeting coping strategies led to improvements in psychological well-being among young women with primary dysmenorrhea.

Enlander and James (2019) conducted a study on the dysmenorrhea coping mechanisms and psychological wellbeing among girls. This research was conducted on 100 girls. This was also correlational research. By using correlation and regression analysis the results indicated that there was a significant relationship between dysmenorrhea and coping mechanism and psychological wellbeing. Regression analysis indicated that dysmenorrhea predicts the chances of coping

strategies and psychological wellbeing among girls. No study exists with the combination of psychological empowerment so it will provide a new way of study for further researches.

The third hypothesis of the current study was Coping Strategies would likely to moderate the relationship between Primary Dysmenorrhea and Psychological Empowerment among girls. Since the interaction term is significant and suggests a moderating impact, H3, which suggests that Coping Strategies moderate the relation between Primary Dysmenorrhea and Psychological Empowerment, is accepted. According to Kapadi and Romaana (2020), coping mechanisms have a moderating effect on the girls' quality of life and dysmenorrheal pain. 145 women made up the sample for the online survey. The study made use of the Menstrual Symptoms Questionnaire (MSQ), the Coping Scale, and the Quality of Life Scale. This study used correlational analysis. The study's conclusions showed that coping mechanisms mitigate the negative impact of menstrual pain on life satisfaction. Regression analysis revealed that young girls' quality of life and coping are predicted by menstrual pain.

These results are in line with earlier studies. The importance of adaptive coping in managing dysmenorrhea-related distress was demonstrated by Derycke et al. (2020), who discovered that women who used acceptance-based coping strategies had improved physical and mental quality of life despite menstrual pain. Likewise, a systematic review by Smith et al. (2019) showed that lifestyle-based coping strategies and self-care practices like acupressure, heat therapy, and low-intensity exercise effectively improved emotional wellbeing and decreased menstrual pain. These studies lend credence to the idea that coping mechanisms mitigate the psychological effects of dysmenorrhea. Collectively, they support the current study's conclusions and emphasize the necessity of encouraging efficient.

Conclusion

The study revealed that primary dysmenorrhea and coping strategies significantly influence psychological empowerment in young girls. Notably, coping strategies moderated the negative impact of menstrual pain, enabling girls to maintain emotional strength and personal control. Techniques such as problem-solving and emotional regulation proved especially effective in managing discomfort. These findings underscore the importance of psychological resources in enhancing resilience. Promoting healthy coping mechanisms can empower young girls to navigate challenges more confidently and maintain well-being in both academic and personal settings.

Implications

The present findings highlight the importance of adopting a comprehensive approach to support young girls dealing with primary dysmenorrhea. While medical treatment remains essential, equal emphasis should be placed on strengthening coping skills, as these play a vital role in enhancing psychological empowerment. This study points to the need for structured interventions that help girls build resilience and manage not only the physical symptoms but also the emotional and social impacts of dysmenorrhea. Empowering them through coping strategies can lead to improved well-being, academic engagement, and overall quality of life.

Limitations and Suggestions

Despite the significance of the current study, several limitations should be acknowledged. The resources and time for data collection were limited, and obtaining permission from the authors of the scales was time-consuming. Additionally, the sample size was relatively small, which may not accurately represent the larger population, and data were collected solely from Gujrat, limiting the generalizability of the findings. For future research, it is recommended to explore this topic in greater depth and to include participants with other medical conditions. Expanding the research scope will enhance the understanding of coping strategies and psychological empowerment across different populations.

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