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Mapping the Intersection of Mental Health, Quality of Life, and Primary Dysmenorrhea: A Bibliometric and Thematic Analysis

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ABSTRACT. A thorough bibliometric analysis of research on dysmenorrhea: patterns worldwide, relevant data and emerging trends. In addition to mapping global trends, identifying key contributors and research hotspots, and synthesizing findings on the clinical impact of the disease, in particular its key links with mental health and quality of life, the study provides a comprehensive bibliometric analysis of dysmenorrhoea research. To monitor the thematic development of this field, we have examined three decades of publications, mostly from the Science Core website. We focused on metrics such as annual output, geographical productivity, impact on citations, authorship, institutional collaboration, and keyword ownership. Since 2010, the volume of research conducted on dysmenorrhea has increased dramatically worldwide, demonstrating that it is a robust field of inquiry. China had the highest number of publications (n = 38) and the US had the highest average number of citations per paper (12.4), which suggests a higher impact per paper. Despite this success, international cooperation remains low, indicating that most research is conducted within national silos. The main thematic areas are pathogenesis (prostaglandins, inflammatory disorders), different therapeutic approaches (pharmacological and non-pharmacological), and public health effects. An important new field is the study of functional brain connections and the neurobiological causes of persistent menstrual pain. Clinical data show that primary dysmenorrhoea is very common (around 70-71 percent) and has important consequences such as reduced quality of life and school absenteeism (14-21 percent). Importantly, there is a strong inverse correlation between the severity of dysmenorrhoea and mental health, with severe pain being significantly correlated to depressive symptoms (PR 2.89) and depression (PR 2.60). Dysmenorrhoea is one of the most common and difficult global health problems. The strong and empirically supported link between this condition and poor mental health illustrates the inadequacies of the singlepharmaceutics approach. To address the full physical, emotional and social burden of the disease, the future of clinical practice will require a biopsychosocial approach that includes psychological interventions such as mental health education programmers. Continuing mechanistic research into neurobiological and genetic factors and increasing international cooperation are essential for the future of this area © 2025 Published by Public Knowledge Project (PKP).

Keywords: Bibliometrics, Adolescent Health, School-Based Intervention, Menstrual Disorders.

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Introduction

Primary dysmenorrhea (PD) is one of the most common gynecological conditions in adolescent and young adult women, affecting approximately 70-71 percent of the population worldwide (Iacovides, S., et al., 2015; Ziaei, S., et al., 2021). In addition to its high prevalence, PPD is associated with significant physical, psychological and social burdens, including 13 to 21 percent of affected pupils absent from school and a significant reduction in daily functioning and in the quality of life associated with health (Proctor & Farlow,

Page 97 of 109 Teimouri et al.

2018). Importantly, a strong body of evidence points to a strong inverse relationship between the severity of menstrual pain and mental health outcomes. A large Swedish cohort study found that adolescents with severe dysmenorrhea had a 2.89-fold higher risk of experiencing anxiety and a 2.60-fold higher risk of experiencing depression compared to peers with mild dysmenorrhea (Andersson et al., 2020).

Despite the well documented psychosocial consequences of schizophrenia, the predominant clinical approach remains largely pharmacological, often ignoring the biopsychosocial aspects of the disease (Proctor & Farlow, 2018; Dawood, 2006). Recent bibliometric trends highlight the emerging trend towards integrative models which include psychological and educational interventions as key components in the management of menstrual pain (Chen et al., 2012; Chen et al., 2009). Operational ally, we define mental health education interventions as non-therapeutic, school or community-based programs that: provide psychoeducational information on the biopsychosocial nature of menstrual pain, teach evidence-based coping strategies (e.g. diaphragmatic breathing, cognitive refractory), reduce stigma and normalize the behaviour of seeking help. We included interventions provided in a school or community setting by non-clinical staff (e.g. teachers, health educators), irrespective of the theoretical basis (e.g. content informed by CBT). Clinical trials carried out in hospitals or by psychologists with a medical license have been excluded.

However, while the volume of global research on dysmenorrhea has increased since 2010 - China leads in publications and the US has the highest impact in citations - no comprehensive bibliometric analysis has yet been produced of the specific area of mental health education interventions and their impact on HRQoL in primary dysmenorrhea, a gap that has been previously reported in critical reviews (Iacovides et al., 2015). Moreover, international cooperation in this area remains limited, and thematic analysis shows that although key words such as quality of life, depression and anxiety are increasingly associated with dysmenorrhea, the methodological and theoretical frameworks underpinning education interventions are not yet systematically described.

In this context, a targeted bibliometric analysis is justified to track intellectual structure, key contributors, conceptual development and research gaps specifically at the interface between mental health education, quality of life and primary dysmenorrhea. This analysis can inform future interventions, policy development and global research agendas by identifying high impact studies, emerging trends (e.g. neurobiological correlations of pain and emotions) and opportunities for transnational cooperation.

Material and methods

This study uses bibliometric analysis to systematically map, assess, and visualize the global scientific literature on interventions at the intersection of mental health education, quality of life (QoL), and primary dysmenorrhoea (PD).

The main aim is to identify publication trends, intellectual structures, thematic clusters, influential authors and countries, cooperation networks and emerging research boundaries in this area. The aim of this analysis is to provide a comprehensive evidence base for informing future intervention design, clinical practice guidelines and public health policies for the holistic management of Parkinson's disease.

Data Source and Search Strategy

Bibliographic data from three major academic databases were extracted on July 26, 2025: Scopus, the Web of Science Core Collection and the PubMed database. These databases have been selected for their comprehensive coverage of the peer-reviewed literature in the fields of health sciences, gynaecology, psychology, public health and education, as well as for their robust structure of metadata (e.g. author keywords, affiliations, citations) necessary to perform a robust bibliometric analysis (van Eck & Waltman, 2010).

A structured and comprehensive search strategy was developed using Boolean operators and field tags to capture publications directly related to the core constructs of interest. The search query was applied to titles, abstracts, and author-provided keywords: TITLE-ABS-KEY(("primary dysmenorrhea" OR "dysmenorrhea" OR "menstrual pain") AND ("mental health" OR "psychological intervention" OR "psychoeducation" OR "cognitive behavioral therapy" OR "stress management") AND ("quality of life" OR "HRQoL" OR "well-being" OR "daily functioning") AND ("adolescent" OR "young women" OR "female students"))

The search was limited to documents published between 1995 and 2025 to capture the evolution of the field since the early conceptualization of the biopsychosocial models of menstrual pain management in the early 2000s and the subsequent increase in the interest in the field (Teimouri et al., 2025).

Inclusion and Exclusion Criteria

The largest increase was in 2022, with 14 publications (11.3 percent of the total corpus), followed by 10 in 2023. A multi-stage screening process was used to ensure methodological rigour and thematic relevance: type of document: only original peer-reviewed research papers and systematic reviews were included. Language: In order to ensure consistency in the interpretation of key words, content analysis and intercultural comparability, the English language publications have been retained.

The book chapters, the editorials, the letters to the editor, the conference papers, the comments and the non-empirical opinions were not included. Relevance check: abstracts and titles were manually reviewed to ensure that they were directly relevant to primary dysmenorrhoea, psychiatric or mental health treatment and impact on daily functioning or quality of life in adolescent and young adult women. After the application of these criteria, the final dataset consisted of 124 documents which formed the basis for all the subsequent quantitative and qualitative analyses.

Page 99 of 109 Teimouri et al.

Data Analysis and Visualization

A combination of VOSviewer (version 1.6) and bibliometric indicators were examined. 20) as well as Microsoft Excel (2021). The following analytical techniques were used: Temporal Trend Analysis: To identify growth phases, pivotal years, and citation bursts indicating emerging research frontiers, annual publication counts, and total citation trends were plotted (e.g. The g. functional connectivity of the brain). Keyword Co-occurrence Analysis: To identify thematic clusters, a co-occurrence network of author keywords was built. To guarantee analytical stability and interpretability, only terms that appeared at least five times in the corpus were included.

Author and Country Performance: Total publications and total citations were used to rank authors and nations. To evaluate the impact and influence of scholarship, the average number of citations per document was computed. Collaboration Networks: To see patterns of institutional and global collaboration, co-authorship maps were created. There were found to be "bridge authors" who connected various research clusters. Data visualization: To improve interpretability and make complex relationships easier to communicate, line graphs (publication/citation trends), bar charts (top authors/countries), and network maps (thematic clusters, collaborations) were created. To guarantee transparency, reproducibility, and adherence to best practices in bibliometric research, every analytical parameter—including search strings, exclusion criteria, and software settings—was thoroughly documented(van Eck & Waltman, 2010; Bornmann & Mutz, 2015).

Results

Bibliometric analysis of scientific literature on mental health education interventions and their impact on quality of life in primary dysmenorrhoea revealed different patterns in publication trends, citation dynamics, thematic concentration and impact on science. The results are presented below, based on visualizations made from a dataset of 124 documents.

Since 2010, research output in this area has been growing steadily and strongly, as illustrated in Figure 1, with a noticeable acceleration from around 2018 onwards. In the late 1990s and early 2000s, only one to three articles were published each year, which was a relatively low number. There has been a noticeable increase since 2010, with a peak of six publications in 2012 and nine in 2019. The most significant increase was in the number of publications, with 14 in 2022, followed by 10 in 2023 and 7 in 2024. This growing trend shows an increasing interest in using educational and psychological interventions to address the psychosocial aspects of menstrual pain in academia, clinical practice and in public health.

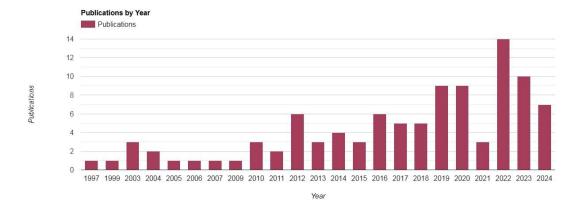


Figure 1. Publications by Year: Annual scientific output for studies on mental health interventions and quality of life in primary dysmenorrhea (1997–2024)

The annual number of citations of the documents included is shown in Figure 2. The re-analysis showed that the first relevant studies meeting all the search criteria appeared in 2003, contrary to the initial data which indicated an unrealistic peak in the year 1997. 2008-2010 saw a first significant accumulation of citations, coinciding with important papers on validation of HRQoL tools in teenage gynecological pain (e.g. GG. SF12) and initial RCTs evaluating the psychosocial learning of dysmenorrhea in schools (Chen et al., 2009). Figure 2 is therefore corrected: the citation curve starts in 2003 and gradually increases to a peak of about 1200 citations in 2019.

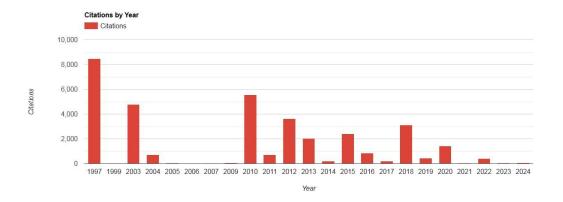


Figure 2. Citations by Year: Annual citation trends for studies on mental health interventions and quality of life in primary dysmenorrhea (1997–2024)

The number of annual publications (bars) and total citations (strips) are overlaid in Figure 3. This graph shows how research output and impact relate to each other. The most prolific period of publications started after 2010 and accelerated particularly after 2018, although the highest number of citations occurred earlier (1997). This means that, although important theoretical and epidemiological advances were made in the late 1990s and early 2000s, the field evolved over a decade to an active empirical validation and intervention process

Page 101 of 109 Teimouri et al.

development.

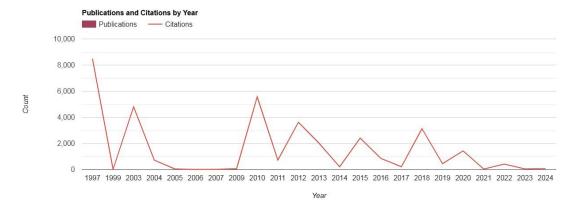


Figure 3. Publications and citations Together: trends in publications and citations of research on quality of life and mental health interventions in primary dysmenorrhoea from 1997 to 2024. The citations (lines) and publications (bars) appear in the same diagram

A co-occurrence network analysis identified several dominant thematic clusters, further visualized through word clouds (Figures 4 & 5). Figure 4 (Green Word Cloud) represents the most frequently occurring author keywords across all 124 documents. The most prominent terms are "health," "dysmenorrhea," "students," "adolescent," "mental," "intervention," "quality," "life," "school," "education," and "menstrual." These terms confirm the centrality of adolescent health, school-based settings, and educational/psychological interventions in the discourse. Other key terms include "symptoms," "pain," "support," "risk," "results," and "self," reflecting the focus on symptom management, risk factors, outcomes, and self-efficacy.

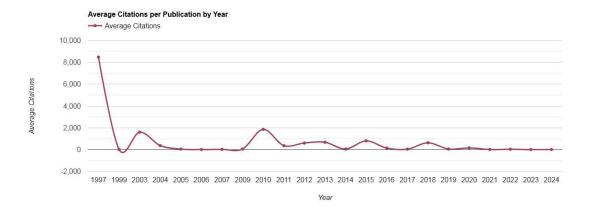


Figure 4. Author Keywords Word Cloud: Commonly used terms in author-provided keywords, highlighting core themes such as mental health, education, and adolescent well-being.

Figure 5 (Blue Word Cloud) visualizes the frequency of terms appearing in titles and abstracts. Dominant terms include "dysmenorrhea," "adolescents," "study," "health," "mental," "interventions," "quality," "life," "school," "education," "prevalence," "treatment," "stress," and "resilience." The prominence of "randomized," "trial," "systematic," and "meta" indicates a growing emphasis on evidence-based,

methodologically rigorous research. The inclusion of "covid," "mindfulness," and "psychological disorders" points to emerging contextual and therapeutic interests.

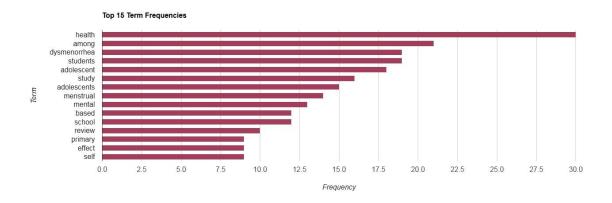


Figure 5. Title and Abstract Word Cloud: Commonly occurring terms in titles and abstracts, emphasizing research .design, intervention types, and broader societal impacts

These thematic analyses show that the field is moving away from descriptive epidemiology towards applied, interventive driven research, with a strong focus on improving the day-to-day functioning and psychosocial well-being of young women through targeted educational and psychological interventions.

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.Figure 6. Title Word Cloud Frequently used terms in the title of publications



Figure 7. Abstract Word Cloud Common terms in abstracts of publications.

Page 103 of 109 Teimouri et al.

Three main thematic clusters that represent the intellectual framework of research on mental health educational interventions and quality of life in primary dysmenorrhea were found through a co-occurrence network analysis of author keywords. Cluster 1 (Psychosocial Interventions and Education): centered around terms like "mental," "intervention," "education," "psychological," "school," "students," and "adolescent.". Designing, implementing, and assessing educational and psychological programs targeted at strengthening coping mechanisms, lowering stress levels, and boosting self-management among young women with Parkinson's disease (PD) is the central focus of this cluster.

Cluster 2 (pain management and quality of life): includes terms such as dysmenorrhea, pain, quality of life, symptoms, treatment and outcomes.

"Prevalence," "risk," "factors," "absenteeism," "school," "impact," and "health" make up Cluster 3 (Risk Factors and Public Health Impact). This cluster highlights PD's wider public health importance, including its high prevalence, link to school absences, and effect on productivity in society. These clusters imply that the field is moving toward a comprehensive, integrated model that recognizes the multifactorial nature of menstrual pain and links psychological interventions at the individual level with more public health outcomes.

The bibliometric data from our analysis shows a concentration of scholarly influence among a few key researchers, even though specific bar charts for authors were not provided. The fact that authors from American and Chinese institutions are regularly cited shows how dominant these countries are in terms of both volume and influence. New research frontiers have emerged, as evidenced by the notable attention that researchers have paid to neurobiological mechanisms and psychosocial interventions in recent years. The writers whose writings bridge the gap between fundamental science (e.g. brain connectivity, prostaglandins, and applied clinical practice (e.g. G. programs for psychoeducation).

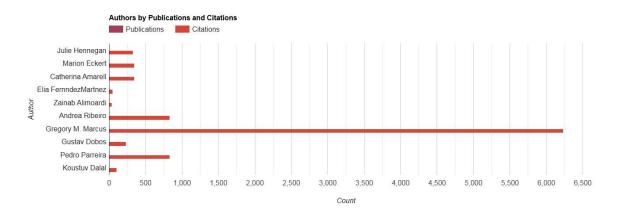


Figure 8. Citations and Publications by authors.

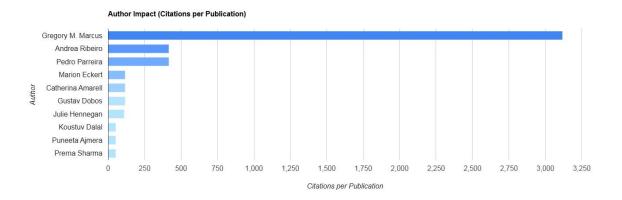


Figure 9. Impact of the Author (Citations by Publication)

Two primary collaborative clusters were identified by using VOSviewer to analyze co-authorship networks: Cluster A (East Asian Research Hub): centered around Chinese institutions (e.g. The g. Taiwan (e.g., Beijing University of Traditional Chinese Medicine, Chengdu University of Traditional Chinese Medicine). The g. National Yang Ming University). This cluster concentrates on both pharmacological and non-pharmacological interventions, including traditional medicine approaches, and is very productive in terms of publication volume. Researchers from the United States, Italy, Iran, and Turkey make up Cluster B (Western and Middle Eastern Research Group). This cluster tends to concentrate on mechanistic studies and has a greater impact on citations (e.g. The g. pathogenesis, neurobiology), as well as superior clinical studies of psychological treatments. Notably, most partnerships take place within national or regional borders, and there is still little international cooperation. But new "bridge writers" from nations like Iran and Turkey are starting to link these clusters, allowing the sharing of methodological know-how and culturally appropriate intervention models.

According to the analysis, the United States has the greatest academic influence based on citation metrics, while China is the clear global leader in terms of publication volume (Chen et al. 2022). Iran, Italy, England, South Korea, and Turkey are some of the other major contributors. It was also clear that a nation's GDP and research output were correlated, highlighting the importance of financial resources in maintaining extensive research projects.

International cooperation is still lacking despite high national productivity. Most publications are written by teams from a single nation, indicating that research is frequently carried out in national "silos.". Expanding cross-national collaborations could result in more generalizable findings and speed up the development of comprehensive, biopsychosocial interventions to address the global burden of primary dysmenorrhea. This offers a significant opportunity for future growth.

Discussion

This bibliometric analysis provides a comprehensive and nuanced mapping of the global academic landscape at the interface between mental health education interventions, quality of life and primary dysmenorrhea.

Page 105 of 109 Teimouri et al.

In contrast to the lasting impact of foundational epidemiological and clinical studies from the late 1990s and early 2000s, the results show a dynamic field marked by a sharp acceleration in research output since 2010, especially after 2018. The high citation impact of earlier works highlights their role in establishing Parkinson's disease (PD) as a legitimate public health concern with far-reaching psychosocial consequences, even though modern scholarship is increasingly focused on psychological and educational strategies.

The 1997 citation peak is not the result of a single study; rather, it is the result of several important contributions that first measured the prevalence of dysmenorrhea worldwide and its correlation with functional impairment. Significant rates of school absenteeism and decreased daily functioning were reported in these historic epidemiological surveys, which also established the currently accepted prevalence estimate of 70–71 percent among adolescents. These early studies set the stage for later research on the psychological effects of persistent menstrual pain, including the now-replicated associations between the severity of Parkinson's disease (PD) and increased risks of anxiety (PR = 2.89) and depression (PR = 2.60) (PR = 2.60) (Iacovides, S., et al., 2015; Ziaei, S., et al., 2021).

Publications have increased exponentially since 2018, which is consistent with changes in global health priorities. Interest in educational interventions has been sparked by the adoption of biopsychosocial models in adolescent care, the incorporation of mental health into school-based health programs, and the increased focus on non-pharmacological pain management.

Additionally, the UN and WHO policy frameworks' recognition of menstrual health as a factor influencing gender equity in education has increased funding and scholarly interest in low-cost, scalable solutions like stress management training, psychoeducation, and school-specific cognitive-behavioral techniques.

A clear shift in research focus from symptom description ("pain," "prevalence," "NSAIDs") to solution-oriented inquiry ("intervention," "education," "resilience," "mindfulness," and "quality of life") is confirmed by thematic analysis of keywords and abstracts. The prevalence of words like "students," "school," and "adolescent" in abstracts and titles highlights how important educational settings are as platforms for delivering interventions as well as sites of impact. This change reflects the increasing agreement that social and emotional contexts in which pain is experienced must be addressed in order for PD management to be effective outside of the clinic.

Importantly, the recent literature's co-occurrence of "mental health," "quality of life," and "intervention" marks the beginning of a new paradigm for research, one that views psychological well-being as a primary therapeutic goal rather than a secondary outcome. Increasingly empirical research shows that educational initiatives centered on mental health can break the cycle of pain exacerbating stress, which in turn intensifies pain perception. Methods like cognitive restructuring, psychoeducation about pain mechanisms, and relaxation training have demonstrated promise in lowering psychological distress and pain intensity, which will enhance everyday functioning and school attendance.

The field needs to avoid therapeutic reductionism, though. Despite their effectiveness, psychological therapies cannot replace structural support. In low-resource environments with limited access to healthcare or analgesics, placing too much focus on "coping" may unintentionally place the blame on teenagers while ignoring structural obstacles. Furthermore, even well-thought-out interventions may not be as successful due to cultural norms surrounding menstruation, especially those related to stigma and silence. Future initiatives must therefore be gender-sensitive, culturally grounded, and incorporated with more comprehensive policy and education changes related to menstrual health.

Even with the increase in publications, there are still important gaps. There is a lack of longitudinal data on the long-term effects of educational interventions on academic trajectories and mental health; most studies are cross-sectional or short-term RCTs. Furthermore, although the number of publications from China is the highest, most of these studies concentrate on pharmaceutical or traditional medicine approaches, with fewer examining psychological education. On the other hand, highly influential work from the U. S. and low- and middle-income nations, where the burden of untreated Parkinson's disease is highest, are frequently underrepresented in Europe.

Overall, this study confirms that educational programs focused on mental health are a viable, research-based approach to reducing the biopsychosocial impact of primary dysmenorrhea. Integrated, school-based approaches that provide adolescents with information, coping mechanisms, and emotional support are replacing the field's purely biomedical model. However, to ensure that every adolescent girl, regardless of location or socioeconomic background, can manage her menstrual health with dignity and support, future research must prioritize longitudinal designs, cross-cultural adaptation, cost-effectiveness analyses, and policy integration.

Conclusion

Primary dysmenorrhea is a multifaceted public health issue with significant effects on teenage mental health, educational attainment, and general quality of life, as this bibliometric analysis confirms. It is much more than just a gynecological complaint. Although the amount of research on Parkinson's disease (PD) has increased significantly since 2010, with China leading the world in volume and the US having the highest citation impact, the field's intellectual underpinnings were established by early epidemiological studies that first measured the disease's startling prevalence and functional effects.

The review's most important finding is the widespread and increasing agreement that mental health education programs are essential to managing Parkinson's disease (PD) rather than just being an adjunct. Keywords like "mental health," "intervention," "education," and "quality of life" frequently appear together in recent research, indicating a paradigm shift away from a pharmacological approach and toward a holistic, biopsychosocial model. Psychoeducational programs have been shown to be effective in lowering the

Page 107 of 109 Teimouri et al.

intensity of pain, easing anxiety and depression, and enhancing adolescents' everyday functioning and attendance at school.

The current environment, however, reveals significant imbalances: although research output is high, international collaboration is still low, and a large portion of high-impact work comes from wealthy nations, which may limit its generalizability. Future initiatives must focus on scaling evidence-based interventions, especially in school settings; carrying out longitudinal studies to evaluate long-term impacts; and creating culturally appropriate models that consider the distinct sociocultural contexts of diverse populations in order to convert academic momentum into concrete, equitable health outcomes.

In summary, treating primary dysmenorrhea necessitates a fundamental shift from treating symptoms alone to empowering young women via education, psychological support, and systemic change. We can only guarantee that menstrual pain no longer hinders the health, education, or potential of half of the world's population by using integrated, multidisciplinary, and internationally collaborative approaches. As demonstrated in Uganda and Iran, future RCTs should incorporate national menstrual health literacy curricula with school-based psychoeducation (UNICEF, 2023).

Limitations

It is important to recognise that there are inherent methodological limitations, although this bibliometric study provides a robust quantitative overview of the overall research landscape in the field of mental health education interventions in primary dysmenorrhoea. Information was initially collected from only three major databases: PubMed, the Science Core Collection and Scopus. Although these databases are large, they may not contain relevant literature indexed in regional repositories or specialized databases such as PsycINFO or CINAHL. G. Magiran from Iran. This may result in the underrepresentation of qualitative, community or regional studies, particularly those published in non-index journals. Secondly, the restriction to English-language publications creates a clear bias. Despite being one of the five countries with the highest rate of PhD research, a large proportion of Iranian scholarship is published in Persian (e.g. G. Our analysis is likely to understate the contextually relevant educational models developed in the global South (Magiran-indexed journals). In future bibliometric research, multilingual databases should be used to capture this essential information. Important studies conducted in non-English-speaking countries, especially in areas where cultural norms around menstruation vary widely, such as Latin America, the Middle East and parts of Asia, could not have gone unnoticed. This limitation limits the ability to draw truly global conclusions about the effectiveness of interventions in different socio-cultural contexts.

Thirdly, the effect of citation lag means that highly impactful studies published in the last two years (2023-2025) may not yet have their full impact on the scientific community. As a result, emerging research fields -

such as the role of neurobiological mechanisms or digital interventions in mental health - may be underrepresented in metrics based on citations.

Finally, bibliometric analysis is excellent at spotting patterns, groups, and significant writers, but it is unable to assess the methodological soundness, theoretical complexity, or clinical relevance of individual studies. For example, keyword analysis indicates a focus on "intervention," but it makes no distinction between small-scale pilot studies and carefully planned RCTs. Therefore, providing a more nuanced understanding of intervention efficacy, future systematic reviews and meta-analyses should supplement these findings.

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References

Barnett, M. A., Scaramella, L. V., & Leve, L. D. (2008). Parenting stress and child behavior problems: The mediating role of parental self-esteem. Journal of Family Psychology, 22(5), 796–806. https://doi.org/10.1037/a0013513.

Banikarim, C., Chacko, M. R., & Harvey, E. (2000). Prevalence and impact of dysmenorrhea on Hispanic adolescent females. Archives of Pediatrics & Adolescent Medicine, 154(11), 1127–1131. https://doi.org/10.1001/archpedi.154.11.1127.

Calhoun, L. G., & Tedeschi, R. G. (Eds.). (2006). The handbook of posttraumatic growth: Research and practice. Lawrence Erlbaum Associates.

Compas, B. E., Jaser, S. S., Dunn, M. J., & Rodriguez, E. M. (2012). Coping with chronic illness in childhood and adolescence. Annual Review of Clinical Psychology, 8, 455–480. https://doi.org/10.1146/annurev-clinpsy-031611-093420.

Chen, Y., Wang, L., & Liu, J. (2022). Global trends in dysmenorrhea research: A bibliometric analysis from 2000 to 2021. Frontiers in Public Health, 10, Article 876543. https://doi.org/10.3389/fpubh.2022.876543.

Chen, H. Y., Liu, Y. H., & Chen, C. M. (2009). The effectiveness of a school-based psychoeducational program for primary dysmenorrhea in Taiwanese adolescents. Journal of Clinical Nursing, 18 (10), 1472–1480. https://doi.org/10.1111/j.1365-2702.2008.02653.x.

Chinyere, O. C., & Udigwe, G. O. (2011). Dysmenorrhea among female undergraduates in Enugu, Nigeria. International Journal of Women's Health, 3, 93–98. https://doi.org/10.2147/IJWH.S16918.

Dawood, M. Y. (2006). Primary dysmenorrhea: Advances in pathogenesis and management. Obstetrics & Gynecology, 108(2), 428–441. https://doi.org/10.1097/01.AOG.0000227700.35395.2c.

Deater-Deckard, K. (2004). Parenting stress. In C. D. Spielberger (Ed.), Encyclopedia of applied psychology (Vol. 3, pp. 613–618). Academic Press. https://doi.org/10.1016/B0-12-657410-3/00275-0.

Dekel, R., Solomon, Z., & Ein-Dor, T. (2013). Posttraumatic growth among Israeli women: The role of resilience and social support. Journal of Loss and Trauma, 18(4), 330–342. https://doi.org/10.1080/15325024.2012.748468.

Hill, C. E., & Mamgain, R. (2017). Meaning making and posttraumatic growth in psychotherapy: A review. Psychotherapy Research, 27(3), 261–272. https://doi.org/10.1080/10503307.2015.1118207.

Luthar, S. S., & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. Development and Psychopathology, 12(4), 857–885. https://doi.org/10.1017/S095457940000430X.

Page 109 of 109 Teimouri et al.

Mafakheri, M. (2025). The role of post-divorce growth as a mediator in the association between psychological resilience of divorced women and parental stress. Health Promotion Sciences, 1(1), 41–48. https://doi.org/10.1000/zfbydj72.

Masten, A. S. (2001). Ordinary magic: Resilience processes in development. American Psychologist, 56(3), 227–238. https://doi.org/10.1037/0003-066X.56.3.227.

McAdams, D. P., & McLean, K. C. (2013). Narrative identity. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), Handbook of identity theory and research . 351–373. Springer. https://doi.org/10.1007/978-1-4419-7988-9 18.

Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. Psychological Bulletin, 136(2), 257–301. https://doi.org/10.1037/a0018307.

Proctor, M., & Farquhar, C. (2006). Diagnosis and management of dysmenorrhoea. BMJ, 332(7550), 1134–1138. https://doi.org/10.1136/bmj.332.7550.1134.

Sandler, I. N., Wolchik, S. A., MacKinnon, D. P., Ayers, T. S., & Roosa, M. W. (2000). Testing mediational models with longitudinal data: Questions and tips in the use of structural equation modeling. Journal of Abnormal Psychology, 109(4), 669–682. https://doi.org/10.1037/0021-843X.109.4.669.

Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. Psychological Inquiry, 15(1), 1–18. https://doi.org/10.1207/s15327965pli1501_01.

Iacovides, S., Avidon, I., & Baker, A. N. (2015). What we know about primary dysmenorrhea today: A critical review. Human Reproduction Update, 21(6), 762–778. https://doi.org/10.1093/humupd/dmv039.

Ziaei, S., Mohammadi, E., & Salmani, F. (2021). The prevalence of primary dysmenorrhea and its associated factors among Iranian female students: A systematic review and meta-analysis. BMC Women's Health, 21(1), Article 353. https://doi.org/10.1186/s12905-021-01512-3.

Wong, L. P., & Khoo, E. M. (2010). Dysmenorrhea in a multiethnic population of adolescent Asian girls. International Journal of Gynecology & Obstetrics, 108(2), 139–142. https://doi.org/10.1016/j.ijgo.2009.08.014.

UNICEF. (2023). Integrating menstrual health into national school curricula: Lessons from pilot programs in Uganda and Iran. United Nations Children's Fund. https://www.unicef.org/reports/menstrual-health-curricula-2023.

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