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PREGLEDNI ČLANAK / REVIEW ARTICLE

Nurses' Psychosocial Support to Parents and Children with Leukaemia: A Literature Review

Psihosocijalna podrška medicinskih sestara roditeljima i djeci s leukemijom: pregled literature

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Abstract

Introduction: Leukaemia poses numerous challenges for children and their parents, as it significantly interferes with their daily lives. In the care of children with leukaemia and their parents, a comprehensive approach is essential, including support for psychological and emotional distress.

Aim: This study aimed to investigate the psychosocial approaches of nurses in supporting parents and children with leukaemia during the acute phase of treatment.

Methods: An integrative review of the scientific literature was conducted in the PubMed, CINAHL Ultimate, Cochrane Library, and ScienceDirect databases using predefined search strings, and inclusion and exclusion criteria. Eligible studies were full-text articles published between 2015 and 2025 in English that addressed psychosocial nursing support or psychosocial interventions for children with leukaemia and/or their parents during acute treatment. The study selection process was reported using a PRISMA flow diagram. The included studies were analysed using content analysis and open coding.

Results: Ten articles were included. The findings indicate that nurses' psychosocial support can reduce anxiety, enhance emotional stability, and improve the quality of life of children with leukaemia and their parents. Four main themes emerged: children's psychological well-being, parental support, psychosocial interventions, and communication and relationships.

Discussion and Conclusion: Psychosocial support is a key element of high-quality, comprehensive care for children with leukaemia and their families. Nurses play a crucial role in recognising emotional distress, providing continuous support, and fostering a trusting relationship with both children and parents. Their close and consistent contact with families allows them to identify psychosocial needs early and respond with appropriate supportive interventions.

Keywords: psychosocial support, paediatric oncology, parents, distress, interventions, leukaemia

Short title: Psychosocial Nursing Support in Pediatric Leukaemia

Sažetak

Uvod: Leukemija predstavlja brojne izazove za djecu i njihove roditelje jer značajno ometa njihov svakodnevni život. U skrbi za djecu s leukemijom i njihove roditelje ključan je sveobuhvatan pristup, uključujući podršku za psihološku i emocionalni distres.

Cilj: Cilj ove studije bio je istražiti psihosocijalne pristupe medicinskih sestara u podršci djeci s leukemijom i njihovim roditeljima tijekom akutne faze liječenja.

Metode: Proveden je integrativni pregled literature u bazama podataka PubMed, CINAHL Ultimate, Cochrane Library i ScienceDirect korištenjem unaprijed definiranih nizova za pretraživanje i kriterija uključivanja i isključivanja. Prihvatljive studije bili su članci u punom tekstu objavljeni između 2015. i 2025. godine na engleskom jeziku koji su se bavili psihosocijalnom podrškom medicinskih sestara ili psihosocijalnim intervencijama za djecu s leukemijom i/ili njihove roditelje tijekom akutnog liječenja. Proces odabira studija prikazan je pomoću PRISMA dijagrama toka. Uključene studije analizirane su analizom sadržaja i otvorenim kodiranjem.

Rezultati: Uključeno je deset članaka. Rezultati pokazuju da psihosocijalna podrška medicinskih sestara može smanjiti anksioznost, poboljšati emocionalnu stabilnost i unaprijediti kvalitetu života djece s leukemijom i njihovih roditelja. Pojavile su se četiri glavne teme: psihološka dobrobit djece, roditeljska podrška, psihosocijalne intervencije te komunikacija i odnosi.

Rasprava i zaključak: Psihosocijalna podrška ključan je element visokokvalitetne, sveobuhvatne skrbi za djecu s leukemijom i njihove obitelji. Medicinske sestre imaju ključnu ulogu u prepoznavanju emocionalnog distresa, pružanju kontinuirane podrške i njegovanju odnosa povjerenja s djecom i roditeljima. Njihov bliski i dosljedni kontakt s obiteljima omogućuje im rano prepoznavanje psihosocijalnih potreba i reagiranje odgovarajućim potpornim intervencijama.

Ključne riječi: psihosocijalna podrška, pedijatrijska onkologija, roditelji, stres, intervencije, leukemija

Kratak naslov: Psihosocijalna podrška medicinskih sestara u pedijatrijskoj leukemiji

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Introduction

Leukaemia is the most common childhood cancer, accounting for about 30% of cases before age 15. It is a group of blood malignancies marked by uncontrolled growth of abnormal hematopoietic cells [1-2]. In children, acute forms—especially acute lymphoblastic leukaemia (ALL)—are most common and progress rapidly if untreated [3]. In Slovenia, around 20 children are diagnosed annually [4]. Symptoms include fatigue, pallor, infections, bleeding, fever, night sweats, and loss of appetite [5]. Diagnosis relies on blood tests, blood smear, bone marrow examination, and sometimes lumbar puncture [6, 7].

Treatment combines chemotherapy, stem cell transplantation, radiotherapy, and supportive care, achieving about 80% survival [8, 9]. However, side effects include nausea, fatigue, hair loss, immunosuppression, and long-term risks like infertility and secondary cancers [10, 11].

The disease and treatment strongly affect children's physical, emotional, and social well-being, causing anxiety, fear, and behavioural changes [12]. Families are also deeply impacted: parents often experience shock, stress, anxiety, and depression, while siblings may feel fear, loneliness, or jealousy [13–15]. Therefore, comprehensive psychosocial support is essential [16].

This support includes counselling, education, emotional care, and techniques such as play therapy and relaxation [17-18]. Nurses play a key role by reducing anxiety, explaining procedures, and supporting both children and parents [19-20]. Interdisciplinary collaboration, including psychologists, enables early assessment and targeted interventions to improve coping and quality of life [21-22].

This study examined nurses' psychosocial approaches in supporting children with leukaemia and their parents during acute treatment. It aimed to identify key psychosocial challenges at diagnosis and during therapy, and to determine effective nursing interventions to reduce distress and support family adaptation. The research question was: "Which psychosocial techniques do nurses use when caring for children with leukaemia and their parents during the acute phase and throughout treatment?"

Methods

An integrative literature review was conducted. A database search was performed on 3 December 2024 in PubMed, CINAHL Ultimate, the Cochrane Library, and ScienceDirect using predefined search strategies. Reference lists of included studies were also manually screened to identify additional relevant publications (snowballing). The search strategy was developed using the PCC (Population, Concept, Context) framework [23]. Informed by MeSH (Medical Subject Headings), we combined relevant English-language keywords, including psychosocial technique, psychosocial intervention, psychosocial support, family, parent, caregiver, child, and leukaemia. Search terms were combined using the Boolean operators AND and OR. The final search string was: ("psychosocial technique*" OR "psychosocial intervention*" OR "psychosocial support") AND (family OR parent* OR caretaker* OR caregiver*) AND (child* OR teenager OR youth) AND (leukaemia*). The inclusion and exclusion criteria are presented in Table 1. The entire process of literature review, search, and study selection was presented using a PRISMA flow diagram in accordance with the PRISMA guidelines [24]. The literature search, analysis, and data extraction were performed independently by two authors (KP and BK). In cases of disagreement, discussions were held to reach a consensus between all three authors. The protocol was not registered.

Table 1. Inclusion and exclusion criteria

Criteria	Inclusion criteria	Exclusion criteria
Population	Children up to 18 years of age in the acute phase of leukaemia and during treatment, and their parents	Adult population over 18 years of age
Concept	Psychosocial techniques	/
Context	Healthcare treatment in a healthcare setting	/
Time frame	2015–2025	Publications before 2015
Language	English	Other foreign languages
Accessibility	No restrictions	/

The strength of evidence was assessed according to the criteria described in [25], and the identified studies were classified into an eight-level hierarchy of evidence, ranging from the highest to the lowest, as described in [26]. A formal risk-of-bias or methodological quality appraisal of individual studies was not performed. In the final analysis, the relevant studies were presented in an evaluation table. The table includes information on the authors, year of publication, country, research design, study aims and objectives, main findings, and level of evidence [25]. For data synthesis, content analysis was applied following the approach proposed by [26]. Within this analytical process, the main category, subcategories, and open codes were identified.

Results

The results of our study are presented below.

Results of the Literature Review

As shown in Table 2, the search strategy identified the following records in the databases: 9 records in PubMed, 28 records in CINAHL Ultimate, 4 records in the Cochrane Library, and 161 records in ScienceDirect 161 records.

Table 2. Number of Records Identified in Individual Databases

Criteria	Inclusion criteria	Records identified on 3 December 2024
PubMed	("psychosocial technique*" OR "psychosocial intervention*" OR "psychosocial support") AND (family OR parent* OR caretaker* OR caregiver*) AND (child* OR teenager OR youth) AND (leukaemia*)	9
CINAHL Ultimate		28
Cochrane Library		4
ScienceDirect		161

Figure 1 presents the process of literature review and study selection in accordance with the PRISMA guidelines, illustrating the entire process from the initial identification of records to the final selection of studies included in the analysis. A total of 202 records were identified in the databases. After removing 30 duplicates, 172 records were included in the subsequent screening stage. Following the review of titles and abstracts, 99 records were excluded, and 73 reports were sought for retrieval. Of these, 6 reports could not be retrieved, leaving 67 reports assessed for eligibility. Among these, 57 reports were excluded due to an inappropriate population (n = 26), inappropriate concept (n = 22), or inappropriate context (n = 9). Consequently, 10 studies were included in the final analysis.

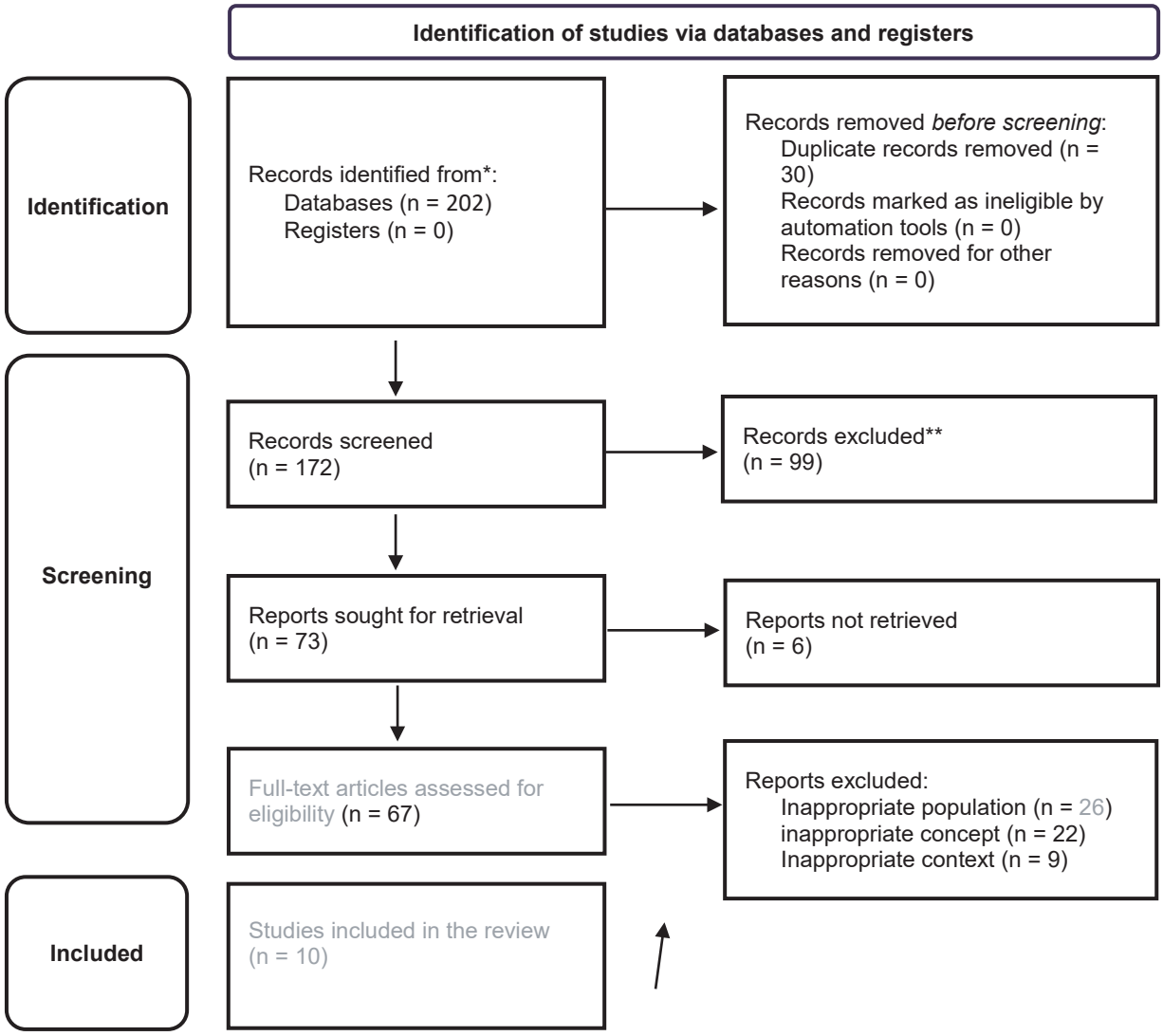

Figure 1. Review Process Using the PRISMA Flow Diagram

Given the integrative review and diverse study designs, the aim was to synthesize and analyse existing evidence rather than compare effect sizes or overall efficacy.

Results of the Analysis and Synthesis of the Identified Sources

The highest level of evidence comes from systematic reviews (Level 1) [28–30], followed by randomized controlled trials (Level 2) [31–32], and mainly quasi-experimental studies (Level 3) [33–36].

Studies were conducted in the USA [32, 36], UK [28], India [33], Italy [29], Türkiye [34], China [35, 37], Indonesia [30], and Iran [31]. Samples included children with leukaemia (often ALL) and/or their parents [33, 35, 37], with some studies focusing on parents' coping and stress [32], and others on children receiving psychosocial interventions [31, 34, 36]. Systematic reviews covered broader populations [28–30].

Sample sizes ranged from small groups (21–31 participants) [31, 34, 36] to larger parent samples (94–112) [32, 35, 37], with mixed groups (64 participants) [33]. Reviews included 11–16 studies [28–30].

Overall, the reviewed studies show that psychosocial interventions delivered by nurses or interdisciplinary teams reduce anxiety, improve emotional well-being, and increase the involvement of children and their parents in the treatment process. Further details of the included studies are presented in Table 3.

Table 3. Characteristics of included studies on psychosocial interventions by nurses with children with leukaemia and their parents

Author	Research design	Aim/objective	Study sample (n)	Key findings	Level of evidence hierarchy
Facchini & Ruini [29]	Systematic literature review	To analyse the effectiveness of music therapy in children with cancer.	n = 11 studies	Music therapy significantly reduces stress and anxiety and contributes to greater emotional calmness in children with leukaemia. It enables nonverbal expression of emotions and reduces social isolation. Nurses participate as coordinators and observers of the therapeutic process, which increases children's engagement in treatment.	Level 1
Kaushal et al. [33]	Qualitative methodology, Phenomenological prospective study	To evaluate the effectiveness of a hospital-based psychosocial support program from the perspectives of children, parents, and nurses.	n = 64 (23 children with ALL, 31 parents, 10 healthcare professionals	The psychosocial program reduced children's anxiety, improved their cooperation, and enabled parents to take a more active role in the treatment process. Nurses played a key role in recognizing emotional needs, providing information, and offering individualized support, although the burden remained particularly high among socially vulnerable mothers.	Level 3
Rosenberg et al. [32]	Quantitative methodology, RCT	To evaluate the effectiveness of a novel psychosocial intervention, PRISM-P program, among parents of children with newly diagnosed cancer.	n = 94 parents of children with cancer (n = 32 in individual sessions, n = 32 in group sessions, n = 30 receiving usual care)	The PRISM-P program significantly improved parents' psychological resilience, sense of meaning, and emotional stability. Parents reported better stress management. The intervention was delivered by specially trained nurses based on cognitive-behavioural principles.	Level 2
Coughtrey et al. [28]	Systematic review	To determine the effectiveness of psychosocial interventions on psychological outcomes in children with cancer.	n = 12 studies	Psychosocial interventions, including emotional support, counselling, and cognitive-behavioural approaches, reduce stress and anxiety and improve the emotional well-being of children and their parents. The most effective interventions were those delivered by trained healthcare professionals, particularly nurses.	Level 1

Author	Research design	Aim/objective	Study sample (n)	Key findings	Level of evidence hierarchy
Sengul & Toruner [34]	Quantitative methodology, Quasi-experimental study (pretest/post-test)	To examine the effectiveness of a technology-based motivational intervention for children with cancer and their parents.	n = 31 children and their parents	The digital intervention reduced children's anxiety and improved their cooperation during healthcare procedures. Parents reported lower stress levels and a greater sense of control. Nurses played a key role in introducing and monitoring the use of digital tools.	Level 3
Wang et al [35]	Quantitative methodology, quasi-experimental study (pretest/ post-test)	To evaluates the effectiveness of mHealth support for parents of children with ALL in reducing anxiety, uncertainty, and psychological distress, and in strengthening social support and knowledge.	n = 101 parents of children with ALL	The use of an mHealth platform reduced parents' anxiety, uncertainty, and psychological distress, while improving access to information and social support. Nurses provided counselling and monitored the parents' emotional status.	Level 3
Ramdaniati et al. [30]	Systematic review	To evaluates and identifies the types and effectiveness of play therapy in children living with leukaemia.	n = 16 studies	Play therapy effectively reduces anxiety and behavioural problems and promotes emotional expression, relaxation, and improved cooperation of children during treatment.	Level 1
De Lone, et al. [36]	Quantitative methodology, prospective pilot quasi-experimental study	To evaluate the effectiveness of sequential comprehensive procedural support interventions delivered by a certified child life specialist in reducing distress and pain and improving mood during subcutaneous port (Infusaport) access procedures in children newly diagnosed with leukaemia.	n = 21 children	Targeted sequential comprehensive procedural support reduced fear, pain, and distress during invasive procedures and improved children's behavioural responses and cooperation.	Level 3
Li et al. [37]	Quantitative methodology, Quasi-experimental study	To investigate the effectiveness of nursing interventions based on the PERMA model in reducing fear of disease progression among parents of children with ALL.	n = 112 parents of children with acute ALL	The PERMA-based intervention reduced parents' fear of disease progression, improved emotional stability, and strengthened parental involvement in the child's treatment.	Level 3
Gazestan et al. [31]	Quantitative methodology, quasi-experimental study with a pretest–post-test design and control group	To evaluate the effectiveness of group, play therapy in reducing anxiety among children with leukaemia.	n = 30 children (15 in the intervention group and 15 in the control group)	Group play therapy significantly reduced anxiety, improved emotional calmness, and promoted positive behavioural responses in children.	Level 2

Legend: ALL = Acute lymphoblastic leukaemia; PRISM-P = Promoting Resilience in Stress Management; PERMA = Positive emotion, Engagement, Relationship, Meaning, Accomplishment; mHealth = Mobile health; RCT = Randomized controlled trial.

Table 4. Content Synthesis of the Collected Data

Main category	Subcategories	Open codes
Comprehensive psychosocial support for children with leukaemia and their parents	Psychological Well-being of Children	less fear of medical procedures, greater relaxation, emotional calmness, better sleep, more positive behavioural responses, easier engagement in daily activities
	Psychosocial support for parents	greater emotional stability, sense of control, stress reduction, increased parental involvement, support in coping with social challenges
	Psychosocial interventions	use of cognitive–behavioural approaches, reduction of anxiety, digital interventions, increased satisfaction with therapy, expression of emotions through music, relaxation activities, strengthening positive emotions, greater therapeutic engagement of children
	Communication and relationships	trust in the healthcare team, open two-way communication, recognition of emotional needs, individualized approach, emotional responsiveness of healthcare staff

Ten studies were analysed (Table 4). One main category—comprehensive psychosocial support for children with leukaemia and their parents—and four subcategories were identified: children's psychological well-being, parental support, psychosocial interventions, and communication between healthcare professionals and families.

Psychological well-being of children

Children with leukaemia face significant psychological burdens, including fear, uncertainty, and social isolation. Psychosocial interventions help reduce anxiety, depression, and distress, improving emotional stability, mood, cooperation, and sense of control [28, 29, 33]. Play-based approaches, such as therapeutic play led by nurses, further reduce anxiety and enhance engagement during treatment [30].

Psychosocial support

Parents, especially mothers, often experience high stress and helplessness due to caregiving demands. Psychosocial support improves resilience, sense of control, and reduces burden, while education from healthcare professionals aids coping [32, 33]. However, those with lower socioeconomic status and limited support remain highly burdened [33]. Nurse-led interventions, such as the PERMA model, further enhance well-being and reduce fear of disease progression [37].

Psychosocial interventions

Psychosocial interventions are key in caring for children with leukaemia and their families, reducing stress and improving well-being and quality of life, especially when integrated into routine care [28]. Approaches such as music and art therapy support emotional expression, reduce anxiety, and strengthen relationships [29]. Family-centred programs improve children's mental health and family communication [35], while digital interventions enhance coping, parental confidence, and engagement [29, 36].

Communication and relationships

Communication and the therapeutic relationship are essential in psychosocial care, as clear and empathetic interaction reduces distress, builds trust, and supports individualized care [33]. It also improves children's cooperation and reduces parental isolation [34]. Consistent communication helps identify emotional needs, strengthen collaboration, and promote active family involvement in treatment [31].

Discussion

Psychosocial nursing support is a core component of care for children with leukaemia and their families, reducing anxiety and distress, and improving emotional well-being and treatment engagement [28–29, 33]. Children often face psychological, emotional, and social challenges, highlighting the need for integrated, multidisciplinary care [38]. Nurse- or team-delivered interventions improve children's emotional outcomes and parental coping [28, 32, 35], aligning with broader oncology evidence on supportive care [39]. Children with acute leukaemia frequently experience fear, uncertainty, social isolation, anxiety, depression, and behavioural difficulties, underlining the need for early psychosocial assessment [33, 40].

Psychosocial interventions, including play-based approaches, procedural support, music, and art therapy, reduce anxiety, improve emotional regulation, cooperation, and engagement, and strengthen parent–child–professional relationships [28–31, 36, 42]. Family-centred and digital interventions further enhance coping, parental confidence, and overall quality of life [29, 35–36, 41]. Multicomponent programs combining emotional support, psychoeducation, and structured coping strategies are particularly effective [28, 35, 44]. Effective interventions are structured, age-appropriate, and involve parents in psychoeducation and coping guidance.

Parents, especially mothers, often face high stress, helplessness, and uncertainty [33]. Nurse-led programs improve resilience, emotional stability, and reduce burden, though disparities persist for caregivers with limited social or so-

cioeconomic resources [32–33]. Positive psychology interventions (e.g., PERMA) and coordinated psychosocial-social support also reduce fear of disease progression and parental distress [37, 43].

Communication and therapeutic relationships are critical mechanisms, with empathic, clear, and consistent dialogue building trust, recognizing emotional needs, and supporting individualized care [31–34, 46]. Open parent–child communication is linked to better adjustment, cooperation, and reduced isolation [34, 46].

Limitations include heterogeneous study designs, small sample sizes, and international settings that may limit transferability. Few studies specifically examine the nursing role in paediatric oncology, and inclusion criteria excluded non-English or older studies. Overall, evidence supports integrating psychosocial assessment and structured support into routine care, including developmentally appropriate preparation, family-centred psychoeducation, and referral to specialized services [28, 32, 36]. Future research should use standardized designs to evaluate nurse-led interventions across diverse healthcare settings [32, 35, 37].

Conclusion

Children with leukaemia and their families face numerous emotional and psychological challenges throughout the treatment process. Psychosocial support provided by nurses plays a crucial role in holistic care, as it promotes emotional well-being in children and strengthens parental resilience. Through empathy, professional knowledge, and continuous support, nurses help create a safe and understanding environment for both children and their parents. Recognising and addressing parental distress is an essential part of this support. Therefore, effective psychosocial care by healthcare professionals is vital for reducing stress and improving the overall quality of life of children with leukaemia and their families.

Authors declare no conflict of interest.

Nema sukoba interesa.

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