

Psychological Preparation for Chemotherapy in Children: A Review of Psychosocial Interventions in Pediatric Oncology

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ABSTRACT

Childhood cancer and its treatment procedures, particularly chemotherapy, are associated with substantial psychological distress among children and their families. Repeated hospitalisation, invasive procedures, uncertainty regarding prognosis, and disruption of normal developmental experiences contribute to anxiety, emotional dysregulation, behavioural distress, and reduced treatment cooperation. Increasing attention has therefore been directed toward integrating psychosocial care within pediatric oncology settings. The present narrative review aims to examine the role of psychological preparation in reducing treatment-related distress among children undergoing chemotherapy and to explore psychosocial interventions that facilitate emotional adjustment, coping, procedural cooperation, and psychosocial well-being. The study was conducted using empirical studies, clinical reports, theoretical papers, and psychosocial oncology literature retrieved from PubMed, Google Scholar, PsycINFO, and Scopus databases. Literature related to childhood cancer, psychological preparation, pediatric psycho-oncology, procedural anxiety, and psychosocial interventions published between 1997 and 2025 was reviewed and thematically synthesised. The review indicates that psychosocial interventions such as play therapy, medical play, cognitive-behavioural approaches, behavioural rehearsal, distraction techniques, art therapy, music therapy, clown therapy, and parent-focused interventions may significantly reduce procedural anxiety and improve emotional coping among children undergoing chemotherapy. The findings additionally emphasise the importance of developmental sensitivity, family-centred care, trauma-informed practice, and culturally responsive psychosocial interventions within pediatric oncology settings. Psychological preparation represents an important component of holistic pediatric oncology care. Integrating structured psychosocial interventions into chemotherapy settings may improve emotional regulation, treatment adherence, procedural cooperation, and long-term psychosocial adjustment among children with cancer and their families.

Keywords: *Pediatric oncology, psychological preparation, chemotherapy, psycho-oncology, psychosocial interventions, childhood cancer, procedural anxiety*

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Childhood cancer represents one of the most significant chronic health conditions affecting children and adolescents worldwide. According to the World Health Organization (WHO, 2025), approximately 400,000 children and adolescents aged 0–19 years are diagnosed with cancer annually, with leukemias, brain tumours, lymphomas, and solid tumours being among the most common forms of pediatric malignancies. Although advancements in medical science have substantially improved survival outcomes, especially in high-income countries, childhood cancer continues to pose profound psychological, social, developmental, and emotional challenges for children and their families (Lam et al., 2019; WHO, 2025).

The diagnosis of cancer in childhood is frequently experienced as a traumatic and life-altering event. Beyond the physical burden of the illness itself, children are often exposed to repeated hospitalisations, invasive medical procedures, prolonged treatment regimens, separation from familiar environments, uncertainty regarding prognosis, and disruptions in normal developmental experiences (Maurice-Stam et al., 2008). Chemotherapy, one of the most widely used treatment modalities in pediatric oncology, is commonly associated with anticipatory anxiety, fear of pain, nausea, fatigue, body image concerns, and emotional distress (Sherief et al., 2015). Repeated exposure to stressful medical procedures may additionally contribute to procedural fear, behavioural dysregulation, treatment non-compliance, and long-term psychological vulnerability among pediatric patients (Lioffi & Franck, 2008).

The psychosocial impact of childhood cancer extends beyond the child and significantly affects parents, caregivers, and family systems. Parents frequently experience elevated levels of anxiety, helplessness, decisional conflict, emotional exhaustion, financial stress, and anticipatory grief while managing the child's illness and treatment demands (Wu et al., 2025). Research suggests that parental emotional responses and coping patterns can substantially influence children's perception of pain, distress tolerance, and adjustment to medical procedures (Blount et al., 2001; Lioffi et al., 2007). Consequently, pediatric oncology care increasingly recognises the importance of family-centred and multidisciplinary approaches that integrate psychosocial support alongside medical treatment.

The growing emphasis on psychosocial oncology is closely aligned with the biopsychosocial model proposed by Engel, which conceptualises illness as an interaction between biological, psychological, and social factors rather than a purely biomedical phenomenon. Within pediatric oncology, this framework highlights that the child's emotional experiences, cognitive interpretations, family relationships, developmental stage, cultural context, and healthcare interactions significantly influence adaptation to illness and treatment outcomes. Similarly, Lazarus and Folkman's transactional model of stress and coping provides an important theoretical basis for understanding how children and parents cognitively appraise cancer-related stressors and utilise coping mechanisms to manage emotional distress.

Developmental psychology perspectives further emphasise that children's responses to cancer treatment vary according to their cognitive maturity, emotional development, communication abilities, and understanding of illness. Infants and toddlers may exhibit separation anxiety and irritability during hospitalisation, whereas preschool children may demonstrate regressive behaviours, fear of bodily harm, or magical thinking related to illness. School-aged children and adolescents may experience concerns related to peer

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acceptance, altered body image, autonomy, academic disruption, and existential fears regarding mortality (Epelman & Epelman, 2015). Such developmental vulnerabilities make psychologically supportive interventions particularly essential in pediatric oncology settings.

In response to these concerns, psychological preparation has emerged as an important component of comprehensive pediatric cancer care. Psychological preparation refers to structured psychosocial interventions aimed at reducing treatment-related distress by helping children understand medical procedures, anticipate sensory experiences, develop coping strategies, and gain a greater sense of emotional control before undergoing stressful interventions such as chemotherapy (Lioffi & Franck, 2008). These interventions may include play therapy, medical play, cognitive-behavioural techniques, behavioural rehearsal, distraction methods, art and music therapy, psychoeducation, and parent-focused interventions. Evidence suggests that such approaches can reduce procedural anxiety, improve emotional resilience, enhance treatment cooperation, and strengthen overall psychosocial adjustment among children with cancer (Koller & Gryski, 2008; Lopes-Júnior et al., 2020).

Within the Indian context, the integration of psychosocial care into pediatric oncology remains an evolving area. Challenges such as limited psycho-oncology services, disparities in healthcare access, financial burden, cultural stigma associated with cancer, communication barriers, and variations in health literacy can influence children's psychological experiences and access to supportive care (Bagai et al., 2024). Furthermore, collectivistic family structures in India often shape healthcare decision-making processes, emotional communication patterns, and disclosure practices related to diagnosis and prognosis. These sociocultural factors necessitate psychologically informed and culturally sensitive approaches in pediatric oncology care.

Despite increasing recognition of psychosocial needs in childhood cancer, psychological preparation before chemotherapy procedures remains relatively underexplored in Indian review literature. Much of the existing focus in oncology care continues to prioritise biomedical treatment outcomes, while emotional preparedness and psychosocial adaptation receive comparatively less structured attention. Therefore, there is a need to consolidate existing evidence regarding psychological preparation strategies and their role in improving treatment experiences among pediatric cancer patients.

The present narrative review aims to examine the role of psychological preparation in children undergoing chemotherapy and to critically explore psychosocial interventions that contribute to emotional regulation, coping, procedural cooperation, and psychosocial well-being in pediatric oncology settings. The review additionally discusses developmental considerations, parental involvement, and ethical concerns relevant to the Indian healthcare context.

METHODOLOGY

The present study adopted a narrative review methodology to examine psychosocial interventions and psychological preparation approaches for children undergoing chemotherapy in pediatric oncology settings. Relevant literature was identified through electronic database searches using PubMed, Google Scholar, PsycINFO, and Scopus. Keywords used in the search process included “pediatric oncology,” “childhood cancer,” “psychological preparation,” “chemotherapy anxiety,” “psychosocial interventions,” “play

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therapy,” “medical play,” “pediatric psycho-oncology,” “procedural distress,” and “family-centred care.”

The review primarily included peer-reviewed journal articles, clinical reports, theoretical papers, and international healthcare guidelines published in English between 1997 and 2025. Studies focusing on psychological interventions, emotional adjustment, coping mechanisms, and psychosocial support for children undergoing cancer treatment were included. Literature focusing exclusively on adult oncology populations or pharmacological interventions without psychosocial components was excluded.

The selected literature was narratively synthesised to identify major themes related to psychological concerns associated with chemotherapy, psychosocial preparation techniques, family involvement, developmental considerations, ethical concerns, and psycho-oncological implications within pediatric cancer care.

Psychological Concerns Associated with Chemotherapy in Children

Childhood cancer and chemotherapy are associated with multidimensional psychological challenges that affect emotional, cognitive, behavioural, social, and developmental functioning. The experience of repeated hospitalisation, painful procedures, uncertainty regarding treatment outcomes, and prolonged separation from normal routines contributes to substantial emotional distress among children.

- 1. Emotional Impact:** Children undergoing chemotherapy commonly experience anxiety, fear, sadness, irritability, emotional dysregulation, and low mood. Sherief et al. (2015) reported significantly elevated emotional distress among children receiving treatment for acute lymphoblastic leukemia. Children may additionally experience fear related to medical procedures, anticipation of pain, fear of death, and uncertainty regarding prognosis (Maurice-Stam et al., 2008). Emotional vulnerability is often intensified by changes in body image, fatigue, physical discomfort, and social isolation.
- 2. Cognitive Impact:** Children with cancer may develop negative cognitive appraisals related to illness, treatment, and self-image. Common concerns include uncertainty regarding relapse, fear of treatment failure, loss of control, misunderstanding procedural information, and concerns regarding peer acceptance and social reintegration (Sherief et al., 2015). Adolescents may additionally experience existential concerns, altered self-concept, and worries regarding future functioning.
- 3. Behavioural and Social Impact:** Cancer treatment may contribute to behavioural withdrawal, aggression, treatment avoidance, temper tantrums, and reduced participation in social activities. School absenteeism and prolonged hospitalisation may further disrupt peer relationships and academic functioning. Children may feel socially isolated or different from their peers because of visible treatment effects such as hair loss, weakness, or physical changes.
- 4. Family and Psychosocial Impact:** The psychological burden of childhood cancer extends significantly to parents and caregivers. Parents often report elevated levels of anxiety, depressive symptoms, helplessness, emotional exhaustion, financial stress, and social isolation (Sherief et al., 2015). Family functioning, marital relationships, and sibling relationships may additionally be affected. Consequently, childhood cancer should be understood not merely as an individual medical condition but as a family-centred psychosocial experience.

Psychological Preparation in Pediatric Oncology

Psychological preparation refers to structured psychosocial interventions designed to reduce distress associated with medical procedures and improve children's emotional readiness before treatment. Such interventions aim to familiarise children with treatment procedures, prepare them for expected sensory experiences, strengthen coping abilities, and increase their perceived sense of control.

Lioffi and Franck (2008) proposed that effective psychological preparation includes three essential components: procedural information, sensory information, and coping instructions. Procedural information involves explaining the sequence of treatment-related events, sensory information helps children anticipate physical sensations associated with procedures, and coping instructions provide strategies to manage anxiety and distress.

Psychological preparation is particularly important within pediatric oncology because children's developmental stage influences their understanding of illness and capacity to regulate emotional responses. Structured psychosocial support can therefore help reduce anticipatory anxiety, improve treatment cooperation, and promote adaptive coping during chemotherapy.

Psychosocial Interventions in Psychological Preparation

1. Play Therapy

Play therapy represents one of the most widely utilised psychosocial interventions in pediatric healthcare settings because it facilitates symbolic expression, emotional processing, and developmental coping among children exposed to stressful medical experiences (Koller, 2008; Li et al., 2016). Through play activities, children are provided opportunities to express emotions, process stressful experiences, and develop a sense of mastery over unfamiliar medical situations. Therapeutic play may involve role-play, storytelling, dolls, drawing activities, and symbolic representation of medical procedures.

Within pediatric oncology settings, play therapy assists children in understanding chemotherapy-related procedures in a developmentally appropriate manner while reducing anticipatory anxiety and emotional distress (Li et al., 2016). Role-playing medical procedures using dolls and toy medical equipment may increase predictability, reduce fear associated with invasive procedures, and strengthen emotional coping during treatment.

2. Medical Play

Medical play specifically involves the use of toy medical equipment and simulated treatment scenarios to familiarise children with healthcare environments and procedures. According to Tonetto et al. (2021), medical play allows children to explore treatment experiences safely while developing a greater sense of predictability and emotional control.

Medical play additionally facilitates communication between healthcare professionals and children by allowing complex medical procedures to be explained through child-friendly and developmentally appropriate methods.

3. Art Therapy

Art therapy provides children with non-verbal avenues for emotional expression through drawing, painting, colouring, and creative activities. Since children may struggle to verbalise

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complex emotional experiences associated with illness and treatment, artistic expression can facilitate emotional processing, communication, and psychological adjustment.

Research suggests that art therapy may reduce anxiety, improve mood, strengthen emotional coping, and enhance psychological well-being among pediatric oncology patients (Malchiodi, 2013). Creative therapeutic activities may additionally help children regain a sense of autonomy, identity, and normalcy during prolonged chemotherapy treatment.

4. Music Therapy

Music therapy utilises music-based interventions such as listening to music, singing, playing instruments, songwriting, and guided relaxation exercises to reduce emotional distress. Evidence suggests that music therapy may reduce anxiety, improve mood, facilitate emotional expression, and promote psychological comfort among pediatric oncology patients undergoing stressful treatment procedures (Robb, 2010).

Interactive music therapy has additionally been associated with reduced procedural anxiety, improved emotional engagement, and enhanced coping among children undergoing invasive medical procedures (Kain et al., 2004). Music-based interventions may therefore function as supportive emotional regulation strategies within pediatric chemotherapy settings.

5. Cognitive-Behavioural Interventions

Cognitive-behavioural therapy (CBT) focuses on identifying and modifying maladaptive thought patterns associated with illness, fear, and treatment experiences. CBT-based interventions commonly include relaxation training, cognitive restructuring, guided imagery, positive self-talk, breathing exercises, and problem-solving techniques.

Research within pediatric oncology settings suggests that CBT-based interventions may significantly reduce treatment-related anxiety, emotional distress, and maladaptive coping responses among children undergoing chemotherapy (Shivappa et al., 2025). These interventions strengthen emotional regulation and coping efficacy by helping children recognise anxious thoughts, develop adaptive coping strategies, and improve perceived control during medical procedures. CBT approaches have additionally been associated with reductions in post-traumatic stress symptoms and emotional distress among pediatric cancer populations (Phipps et al., 2006; Streisand et al., 2003).

6. Behavioural Rehearsal and Filmed Modelling

Behavioural rehearsal involves practicing medical procedures through role-play and simulation exercises. Children may rehearse coping behaviours such as deep breathing, relaxation, and guided imagery before undergoing chemotherapy procedures. Filmed modelling involves observing another child successfully coping with a similar medical procedure (DuHamel et al., 1999). These approaches may reduce uncertainty, increase familiarity with procedures, and improve treatment cooperation.

7. Distraction Techniques

Distraction-based interventions aim to divert children's attention away from pain and procedural anxiety. Common distraction methods include video games, storytelling, cartoons, virtual reality, toys, breathing exercises, and interactive activities.

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Research suggests that distraction techniques may significantly reduce perceived pain, nausea, anxiety, and physiological stress responses during treatment procedures (Patel et al., 2006; Griffiths, 2005). Such interventions are particularly useful during painful or repetitive procedures associated with chemotherapy.

8. Clown Therapy

Therapeutic clowning programmes involve trained hospital clowns who use humour, storytelling, puppetry, music, and playful interaction to create positive emotional experiences within healthcare settings. Clown therapy has been associated with reduced anxiety, improved mood, and enhanced emotional engagement among pediatric patients (Koller & Gryski, 2008). The use of humour and playfulness may help children perceive healthcare environments as less threatening while promoting emotional resilience during treatment.

9. Parent-Focused Interventions

Parental involvement remains an essential component of psychological preparation within pediatric oncology. Parents strongly influence children's emotional responses, coping behaviours, and treatment adjustment. Consequently, psychosocial support interventions should extend beyond the child and include parents and caregivers.

- **Parent Training and Psychoeducation:** Parent-focused interventions commonly include psychoeducation regarding treatment procedures, emotional support strategies, medication management, communication skills, and coping techniques. Educational interventions may involve written materials, visual demonstrations, counselling sessions, and practical guidance from healthcare professionals. Such interventions may improve parental confidence, increase self-efficacy, reduce uncertainty, and strengthen parents' ability to support their child during treatment (El Edelbi et al., 2024).
- **Anxiety Management for Parents:** Parents of children with cancer frequently experience anxiety related to uncertainty regarding prognosis, treatment decisions, financial burden, and caregiving responsibilities (Wu et al., 2025). Counselling services, support groups, stress-management techniques, and family-focused psychological interventions may therefore improve parental emotional well-being and indirectly enhance children's adjustment to treatment.

Ethical Considerations in the Indian Context

Psychological preparation within pediatric oncology also involves important ethical considerations, particularly within culturally diverse healthcare settings such as India.

1. Assent and Consent

In pediatric healthcare, ethical decision-making involves balancing parental authority with children's participation rights. Although parents typically provide legal consent for treatment, children should be involved in decision-making processes according to their developmental level and capacity for understanding (Bagai et al., 2024).

Within the Indian context, collectivistic family systems often influence healthcare decisions, with parents assuming primary authority regarding treatment-related choices. Such cultural practices may sometimes limit children's autonomy and participation in discussions regarding diagnosis or treatment.

2. Confidentiality and Communication

Respecting confidentiality while maintaining family-centred communication can present challenges in pediatric oncology. Healthcare professionals should provide developmentally appropriate information regarding diagnosis, treatment procedures, and prognosis while remaining sensitive to family dynamics, literacy levels, and emotional vulnerability.

Research suggests that inadequate communication, use of medical jargon, and withholding information may undermine trust between families and healthcare providers (Bagai et al., 2024).

3. Justice and Accessibility

Access to psychosocial care remains unequal across healthcare settings in India because of disparities in financial resources, healthcare infrastructure, mental health services, and psycho-oncology availability. Ethical pediatric oncology care therefore requires efforts to ensure equitable access to both medical and psychosocial support services irrespective of socioeconomic background.

DISCUSSION

The present narrative review highlights that chemotherapy-related distress in children is not merely a medical concern but a complex psychosocial and developmental phenomenon requiring multidisciplinary intervention. Across the reviewed literature, psychological preparation emerged as a clinically relevant and emotionally supportive approach capable of improving children's adjustment to cancer treatment procedures.

The findings suggest that children undergoing chemotherapy frequently experience anticipatory anxiety, procedural fear, uncertainty regarding prognosis, emotional dysregulation, and disruptions in developmental functioning (Sherief et al., 2015; Maurice-Stam et al., 2008). Such experiences may become particularly overwhelming when children possess limited understanding regarding medical procedures or lack adequate coping resources. Consistent with Lazarus and Folkman's transactional model of stress and coping, children's emotional responses to treatment appear influenced not only by the severity of illness but also by cognitive appraisal, perceived predictability, emotional support, and coping efficacy.

The reviewed literature additionally indicates that psychosocial interventions may function through multiple therapeutic mechanisms. Play therapy and medical play facilitate symbolic emotional expression and developmental processing of stressful experiences. Cognitive-behavioural interventions help modify maladaptive cognitive appraisals and strengthen coping strategies. Distraction-based interventions reduce attentional focus on pain and procedural distress, whereas expressive therapies such as music and art therapy provide non-verbal channels for emotional communication and regulation.

The findings can further be understood within Engel's biopsychosocial model, which emphasises that medical outcomes are influenced by interactions between biological, psychological, and social factors. Within pediatric oncology, treatment adjustment appears closely linked with emotional resilience, family functioning, communication quality, healthcare interactions, and psychosocial support systems. Consequently, psychological preparation should not be conceptualised as an optional supportive service but rather as an integral component of comprehensive pediatric cancer care.

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The review additionally reinforces the importance of family-centred psycho-oncology practice. Parents often experience substantial emotional burden, uncertainty, financial strain, and anticipatory grief while caring for a child with cancer (Wu et al., 2025). Research further suggests that parental anxiety and communication patterns may directly influence children's procedural distress and coping responses (Blount et al., 2001; Lioffi et al., 2007). Therefore, psychosocial interventions should extend beyond the child and incorporate parental psychoeducation, emotional support, and coping-skills training.

Within the Indian context, the findings highlight important systemic and sociocultural challenges influencing pediatric psycho-oncology services. Limited psycho-oncology infrastructure, inadequate access to mental health professionals, financial burden, communication barriers, and stigma associated with cancer continue to affect psychosocial care delivery. Furthermore, collectivistic family systems may influence disclosure practices, autonomy, assent, and treatment decision-making processes. Such findings underscore the need for culturally sensitive and ethically informed psychosocial interventions tailored to Indian healthcare settings.

Overall, the findings of the review support growing evidence that psychological preparation may reduce treatment-related distress, improve emotional adaptation, strengthen treatment cooperation, and contribute to better psychosocial outcomes among children undergoing chemotherapy.

The present narrative review highlights the significant psychological burden experienced by children undergoing chemotherapy and emphasises the importance of integrating psychological preparation into pediatric oncology care. The findings across the reviewed literature suggest that cancer treatment in childhood extends beyond a biomedical experience and represents a multidimensional psychosocial stressor affecting emotional functioning, behavioural adjustment, family relationships, developmental experiences, and quality of life.

Children undergoing chemotherapy frequently encounter anticipatory anxiety, fear of pain, procedural distress, uncertainty regarding prognosis, social withdrawal, and disruptions in normal developmental routines (Sherief et al., 2015; Maurice-Stam et al., 2008). Repeated exposure to invasive procedures and hospital environments may contribute to heightened emotional dysregulation and treatment-related distress, particularly among younger children who possess limited cognitive and emotional resources to understand medical experiences.

The review demonstrates that psychological preparation interventions can significantly improve children's adjustment to chemotherapy procedures. Techniques such as play therapy, medical play, behavioural rehearsal, distraction methods, art therapy, music therapy, and cognitive-behavioural interventions appear effective in reducing procedural anxiety, promoting emotional expression, improving coping skills, and enhancing treatment cooperation.

The findings additionally reinforce the importance of family-centred care. Since parental emotional responses significantly influence children's coping and distress experiences, psychological preparation programmes should include psychoeducation, emotional support, and coping-skills training for caregivers.

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Within the Indian context, the review identifies important sociocultural and healthcare-related challenges influencing psychosocial care delivery. Limited psycho-oncology services, financial burden, communication barriers, and cultural stigma associated with cancer continue to affect children's access to structured psychological support.

Clinical and Psycho-Oncological Implications

The present review carries important implications for the field of psycho-oncology, particularly within pediatric cancer care. The findings reinforce the growing recognition that psychological well-being is closely interconnected with treatment adherence, emotional adjustment, coping outcomes, and overall quality of life among children undergoing chemotherapy.

One major implication is the need to integrate psychosocial care as a routine component of pediatric oncology services rather than viewing it as an optional adjunct to medical treatment. Structured psychological preparation programmes may help reduce procedural distress, minimise treatment-related trauma, and improve emotional resilience among pediatric patients.

The review also highlights the importance of trauma-informed care within pediatric oncology. Repeated hospitalisation, painful procedures, and uncertainty surrounding illness may create traumatic experiences for children, particularly when emotional needs remain unaddressed. Early psychological intervention may therefore reduce the risk of long-term psychological difficulties such as anxiety disorders, depressive symptoms, behavioural withdrawal, procedural phobia, and post-traumatic stress symptoms.

Another important implication relates to family-centred psycho-oncology practice. Since parental emotional responses significantly influence children's coping and distress experiences, interventions should include psychoeducation, emotional support, coping-skills training, and counselling for caregivers.

The findings additionally emphasise the need for culturally competent psycho-oncology services within India. Mental health professionals working in pediatric oncology settings should remain sensitive to variations in language, literacy, socioeconomic conditions, cultural beliefs, family decision-making patterns, and stigma associated with cancer.

Limitations

The present review possesses certain limitations that should be acknowledged. First, the review adopts a narrative review methodology and does not follow the systematic procedures associated with systematic reviews or meta-analytic designs. Consequently, the selection and interpretation of studies may be influenced by subjective synthesis and variability in the available literature.

Second, the reviewed studies demonstrate considerable heterogeneity in terms of intervention approaches, treatment settings, participant age groups, outcome measures, and methodological quality. This variability limits the ability to draw uniform conclusions regarding the effectiveness of specific psychological interventions.

Third, although the review discusses psychological preparation within the Indian context, there remains limited empirical Indian literature specifically examining psychosocial

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interventions for children undergoing chemotherapy. Much of the available evidence originates from Western healthcare contexts, which may differ culturally, economically, and structurally from Indian healthcare systems.

Additionally, the review primarily focuses on psychosocial interventions related to chemotherapy procedures and may not comprehensively address broader survivorship concerns, palliative care experiences, or long-term neuropsychological outcomes associated with childhood cancer treatment.

Directions for Future Research

Future research in pediatric psycho-oncology should focus on developing culturally sensitive and evidence-based psychological preparation models specifically tailored to Indian healthcare settings. There is a need for more longitudinal and intervention-based studies examining the effectiveness of psychosocial preparation programmes among diverse pediatric cancer populations in India.

Further studies may explore the comparative effectiveness of interventions such as play therapy, cognitive-behavioural therapy, music therapy, digital interventions, virtual reality-based distraction, and parent-training programmes in reducing treatment-related distress.

Research examining the long-term psychosocial outcomes of early psychological preparation among childhood cancer survivors would additionally contribute to understanding the preventive role of psycho-oncology interventions.

Future studies should also investigate the experiences of caregivers, siblings, and healthcare professionals involved in pediatric oncology care to better understand family-system dynamics and multidisciplinary support needs. Greater emphasis should additionally be placed on developing low-cost, scalable, and resource-sensitive psychosocial interventions suitable for low- and middle-income healthcare settings.

Finally, future psycho-oncology research should prioritise culturally grounded ethical frameworks addressing assent, communication practices, autonomy, disclosure, and mental health accessibility within collectivistic healthcare environments such as India.

CONCLUSION

Psychological preparation represents an essential component of comprehensive pediatric oncology care for children undergoing chemotherapy. Childhood cancer treatment is associated with substantial emotional, behavioural, developmental, and psychosocial challenges that extend beyond the physical experience of illness. The findings of the present narrative review suggest that psychosocial interventions such as play therapy, behavioural rehearsal, cognitive-behavioural approaches, medical play, distraction techniques, music therapy, art therapy, and parent-focused interventions may significantly contribute to reducing procedural anxiety, enhancing coping abilities, improving emotional regulation, and strengthening treatment cooperation among pediatric cancer patients.

The review additionally highlights the importance of family-centred care, culturally sensitive communication, and ethically informed practice within pediatric oncology settings. Integrating structured psychological preparation into multidisciplinary cancer care may help transform treatment experiences from those characterised primarily by fear and uncertainty

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into experiences supported by emotional safety, preparedness, resilience, and psychosocial support.

Overall, the findings reinforce the need to strengthen psycho-oncology services within pediatric healthcare systems and to recognise psychological care as an integral aspect of holistic cancer treatment for children and their families.

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Conflict of Interest

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