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THE ROLE OF ART-BASED INTERVENTIONS IN ANXIETY AND PSYCHOLOGICAL WELL-BEING AMONG ADOLESCENTS WHO HAVE A SIBLING WITH A DISABILITY: A REVIEW

ENGELLİ KARDEŞİ OLAN ERGENLERDE KAYGI VE PSİKOLOJİK İYİ OLUŞ ÜZERİNDE SANAT TEMELLİ MÜDAHALELERİN ROLÜ: BİR DERLEME

Süleyman ŞAHİN[1], Selma ÖNCEL[2]
[1]Department of Public Health Nursing, Faculty of Health Sciences, Kafkas University, Kars, Türkiye
[2]Department of Public Health Nursing, Faculty of Nursing, Akdeniz University, Antalya, Türkiye

ABSTRACT

Objective: To examine the role of art-based interventions, particularly mandala-based activities, in relation to anxiety and psychological well-being among adolescents who have a sibling with a disability, with consideration of the broader literature on sibling psychosocial experiences and psychosocial interventions.

Methods: The review synthesized literature addressing the psychosocial experiences of siblings of individuals with disabilities; psychological and psychosocial interventions; art therapy and visual art-based approaches; and mandala drawing or coloring among adolescent, pediatric, and related sibling populations. Evidence was examined with particular attention to anxiety and psychological well-being as distinct mental health outcomes.

Results: Sibling-focused intervention literature suggests potential benefits in coping, social support, sibling relationships, and selected mental health outcomes; however, studies vary considerably in age ranges, intervention formats, and outcome measures. Direct evidence regarding art-based interventions among siblings is limited. The directly relevant study identified in this review included participants aged 7–13 years and evaluated stress and self-esteem rather than anxiety or psychological well-being. Evidence from other pediatric and adolescent populations suggests that art therapy and some mandala-based activities may reduce anxiety, while findings regarding psychological well-being are less consistent. Generalization of these findings is limited by mixed-age samples, condition-specific populations, small sample sizes, heterogeneous intervention protocols, and the use of outcomes such as stress, self-esteem, quality of life, and coping, which should not be considered direct substitutes for psychological well-being.

Conclusion: Art-based and mandala-based activities may represent promising adjunctive or investigational approaches for adolescents who have a sibling with a disability; however, they cannot currently be considered established treatments for anxiety or psychological well-being in this population. Future research should employ adequately powered randomized designs, adolescent-specific samples, standardized intervention protocols, separate validated measures of anxiety and psychological well-being, and longer-term follow-up. In nursing and healthcare practice, optional art-based activities may complement, but should not replace, psychosocial assessment, supportive communication, and referral when indicated.

Keywords: Adolescent Siblings, Anxiety, Mandala, Nursing, Psychological Well-Being

ÖZET

Amaç: Bu derlemenin amacı, engeli bir kardeşi olan ergenlerde kaygı ve psikolojik iyi oluş açısından sanat temelli müdahalelerin, özellikle mandala temelli aktivitelerin, rolünü incelemektir. Ayrıca kardeşlerin psikososyal deneyimleri ve bu gruba yönelik psikolojik ve psikososyal müdahalelere ilişkin mevcut kanıtların değerlendirilmesi amaçlanmıştır.

Yöntem: Derlemede; engeli olan bireylerin kardeşlerinin psikososyal deneyimleri, psikolojik ve psikososyal müdahaleler, sanat terapisi ve diğer görsel sanat temelli yaklaşımlar ile ergen, pediatrik ve benzer kardeş popülasyonlarında mandala çizimi veya boyama uygulamalarına ilişkin literatür sentezlenmiştir. Çalışmalar özellikle kaygı ve psikolojik iyi oluşun ayrı ruh sağlığı boyutları olarak değerlendirilmesine odaklanmıştır.

Bulgular: Kardeş odaklı müdahale literatürü; baş etme, sosyal destek, kardeş ilişkileri ve seçilmiş ruh sağlığı sonuçları açısından olası yararlara işaret etmekle birlikte yaş aralıkları, müdahale biçimleri ve sonuç ölçümleri bakımından belirgin heterojenlik göstermektedir. Kardeşlerde sanat temelli müdahalelere ilişkin doğrudan kanıt oldukça sınırlıdır. Derlemede ele alınan doğrudan ilgili çalışma 7–13 yaş grubundaki katılımcıları içermiş ve kaygı ile psikolojik iyi oluş yerine stres ve benlik saygısını değerlendirmiştir. Diğer pediatrik ve ergen popülasyonlarından elde edilen bulgular, sanat terapisi ve bazı mandala temelli aktivitelerin kaygıyı azaltabileceğine işaret ederken psikolojik iyi oluş üzerindeki etkilerine ilişkin bulgular daha az tutarlıdır. Karma yaş grupları, hastalığa özgü popülasyonlar, küçük örneklem büyüklükleri, değişken müdahale protokolleri ve stres, benlik saygısı, yaşam kalitesi veya baş etme gibi sonuçların psikolojik iyi oluşun yerine kullanılması, bulguların genellenebilirliğini sınırlandırmaktadır.

Sonuç: Sanat temelli ve mandala temelli aktiviteler, engeli bir kardeşi olan ergenlerde kaygı ve psikolojik iyi oluşun desteklenmesi açısından umut verici tamamlayıcı veya araştırma aşamasındaki yaklaşımlar olarak değerlendirilebilir. Bununla birlikte, mevcut kanıtlar bu uygulamaların söz konusu popülasyonda kanıtlanmış tedaviler olarak kabul edilmesi için yeterli değildir. Gelecekteki araştırmalarda yeterli örneklem gücüne sahip randomize araştırma tasarımları, ergenlere özgü örneklemler, standartlaştırılmış müdahale protokolleri, kaygı ve psikolojik iyi oluşu ayrı ayrı değerlendiren geçerli ve güvenilir ölçüm araçları ile uzun dönemli izlem kullanılmalıdır. Hemşirelik ve sağlık hizmetlerinde isteğe bağlı sanat temelli aktiviteler; psikososyal değerlendirme, destekleyici iletişim ve gerektiğinde uygun yönlendirmeyi tamamlayabilir, ancak bunların yerine geçmemelidir.

Anahtar Kelimeler: Ergen Kardeşler, Hemşirelik, Kaygı, Mandala, Psikolojik İyi Oluş

Corresponding Author: Süleyman ŞAHİN. Department of Public Health Nursing, Faculty of Health Sciences, Kafkas University, Kars, Türkiye· ***E-mail:*** sahinsuleyman44@gmail.com

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INTRODUCTION

Developmental disabilities are associated with health conditions that affect the developing nervous system and may influence motor, cognitive, language, behavioral, or sensory functioning. In 2019, approximately 317 million children and young people worldwide were affected by health conditions contributing to developmental disabilities (World Health Organization [WHO] & United Nations Children's Fund [UNICEF], 2023).

Having a sibling with a disability can shape emotional experiences, family relationships, and responsibilities without producing uniformly negative outcomes. A systematic integrative review identified sibling relationships, sibling-focused parentification, and emotional and behavioral adjustment as the principal psychological constructs studied and also described empathy, competence, psychosocial development, and family cohesion among positive dimensions of sibling experience (Levante et al., 2025). Qualitative syntheses involving siblings of individuals with developmental disabilities or chronic pediatric conditions likewise described mixed emotions, caregiving-related maturation, coping, and continuing processes of acceptance and adaptation (Lee et al., 2025; Tan et al., 2025).

Anxiety and depressive symptoms are particularly relevant within this broader psychosocial context. A systematic review of siblings aged 8–18 years who had a brother or sister with special health care needs reported elevated anxiety and depression and identified individual, parental, relational, condition-related, quality-of-life, and social-support factors associated with these outcomes (Gonzalez & Isik, 2024). A nationwide cohort study also found increased risks of anxiety disorders among siblings of individuals with autism spectrum disorder, with unipolar depression additionally reported among sisters (Lin et al., 2022). Social support has been positively associated with prosocial behavior, academic and social competence, problem-focused coping, and family quality of life among siblings of children with neurodevelopmental disorders (Kirchhofer et al., 2022).

These concerns may be especially important during adolescence. Globally, one in seven 10–19-year-olds experiences a mental health condition, while depression, anxiety, and behavioral disorders are among the leading causes of illness and disability in this age group (WHO, 2025). Identity development and emotion regulation undergo important developmental changes during adolescence and are shaped in part by ongoing experiences and close relationships, including caregiving contexts (Branje et al., 2021; Silvers, 2022). Mental health problems and psychological well-being are nevertheless related but distinct dimensions; low psychopathology does not necessarily indicate high well-being (Magalhães, 2024).

Psychosocial interventions have been developed to support siblings of individuals with neurodevelopmental or chronic conditions. A mixed-methods systematic review reported generally positive changes across several sibling-reported outcomes but emphasized substantial heterogeneity in intervention content, delivery, outcomes, and methodological quality (Wolff et al., 2023). More recently, a cluster randomized controlled trial of the SIBS intervention found small, consistently positive effects on sibling mental health and parent–child communication, although between-group differences were not

statistically significant at three months (Kirchhofer et al., 2025a). These findings suggest that sibling-focused support is promising but that additional developmentally appropriate approaches warrant examination.

Art-based approaches were selected for focused examination because adolescent siblings may experience mixed emotions and caregiving-related concerns that are not always readily communicated through verbal discussion alone (Lee et al., 2025; Tan et al., 2025). Visual art-making offers symbolic and experiential routes for expression, emotional exploration, and meaning-making (Bosgraaf et al., 2020; de Witte et al., 2021). A meta-analysis reported a pooled effect in the direction of lower anxiety among children and adolescents, although very high heterogeneity limited confidence in the consistency and generalizability of the estimate (B. Zhang et al., 2024).

For the purposes of this narrative review, adolescence is defined as 10–19 years, and the population of interest is adolescents who have a sibling with a disability (WHO, 2025). Given the limited population-specific literature, relevant studies involving adjacent sibling, pediatric, and adolescent populations are also considered. Accordingly, this review aims to examine the role of art-based interventions in relation to anxiety and psychological well-being among adolescents who have a sibling with a disability and to provide directions for future research and healthcare practice.

Psychosocial Experiences of Adolescents Who Have A Sibling With A Disability

The evidence summarized in this section frequently includes broad age ranges rather than adolescent-only samples; therefore, the findings should not be interpreted as evidence derived exclusively from adolescents (Lee et al., 2025; Levante et al., 2025). Accordingly, these findings are used to contextualize the psychosocial experiences of the adolescent population targeted in this review rather than to imply developmental equivalence across age groups.

Qualitative syntheses describe sibling experiences as emotionally mixed, involving difficult emotions alongside coping, maturation, acceptance, and adaptation (Lee et al., 2025; Tan et al., 2025). Caregiving responsibilities may also form part of these experiences. Sibling-focused parentification and caregiving roles have been identified as recurring features among siblings of individuals with disabilities (Levante et al., 2025). Among siblings of young people with chronic illness, caring responsibilities were common and could contribute to maturation while also being perceived as burdensome (Kelada et al., 2022).

Family interactions and perceived social support may influence psychosocial adjustment. Interactions with parents, other family members, and healthcare professionals can shape siblings' understanding of a brother's or sister's condition and their efforts to cope with related experiences (Tan et al., 2025). Among siblings of children with neurodevelopmental disorders, higher perceived social support was associated with more favorable psychosocial outcomes, including prosocial behavior, academic and social competence, problem-focused coping, and family quality of life, whereas lower social support was associated with poorer psychosocial adjustment (Kirchhofer et al., 2022). These findings support considering social support as a protective factor while avoiding causal interpretations based on predominantly observational evidence.

Sibling experiences also extend beyond emotional adjustment to participation in everyday life. A scoping review identified participation across family and home life, school, leisure activities, peer-related social situations, information seeking, and continuing meaning-making among siblings of children with childhood-onset disabilities or chronic conditions (Linimayr et al., 2025). These findings highlight that sibling experiences may affect multiple areas of daily functioning and participation rather than psychological symptoms alone.

Importantly, psychosocial outcomes are not uniformly negative. An updated meta-analysis found very small to small elevations in internalizing, externalizing, and total behavior problems among siblings of children with chronic physical health conditions, but no significant differences in self-esteem or positive self-concept and higher average levels of prosocial behavior compared with control groups (Pinquart, 2023). Warmth, closeness, caregiving, and adaptation have likewise been described alongside psychological challenges in the broader sibling literature (Lee et al., 2025; Levante et al., 2025). Taken together, these findings support a balanced view in which psychological vulnerability and developmental strengths may coexist. Healthcare professionals should therefore recognize siblings' emotional and psychosocial needs while considering family communication and available social support as relevant aspects of care (Kirchhofer et al., 2022; Tan et al., 2025).

Anxiety And Psychological Well-Being Among Adolescents Who Have A Sibling With A Disability

Anxiety symptoms and psychological well-being are related but distinct domains of mental health. Dual-factor models conceptualize psychopathology and well-being as interrelated but separate dimensions, such that low levels of psychological symptoms do not necessarily indicate high psychological well-being (Magalhães, 2024). This distinction is particularly important in the present review because reducing anxiety and promoting psychological well-being represent related but conceptually different intervention goals.

Evidence directly concerning anxiety in sibling populations frequently includes children and adolescents together rather than adolescent-only samples. A systematic review of eight studies involving siblings aged 8–18 years who had a brother or sister with special health care needs reported a higher prevalence of anxiety and depression and identified individual, parental, relational, condition-related, quality-of-life, and social-support factors associated with these outcomes (Gonzalez & Isik, 2024). A nationwide cohort study similarly found an increased risk of anxiety disorders among both brothers and sisters of individuals with autism spectrum disorder, while an increased risk of unipolar depression was additionally reported among sisters (Lin et al., 2022).

Age and diagnostic heterogeneity further complicate interpretation of sibling mental health findings. In a study of 288 siblings aged 8–16 years, no individual primary diagnosis predicted internalizing or externalizing problems, whereas parent-reported condition severity predicted selected sibling mental health outcomes, with results differing according to the informant (Fredriksen et al., 2026). In another study involving 107 siblings with a mean age of 11.5 years, sibling-reported relationship quality with parents significantly predicted sibling mental health reported by siblings, mothers, and fathers (Fredriksen et al., 2023). These findings suggest that family and condition-related factors may be relevant to mental health without establishing adolescent-specific causal relationships.

Evidence concerning psychological well-being is comparatively limited. A systematic integrative review of 60 studies found that only four specifically focused on the well-being of siblings of individuals with disabilities, and findings concerning well-being were inconsistent (Levante et al., 2025). Among 288 siblings aged 8–16 years, better parent–sibling communication was associated with better sibling-reported quality of life and greater prosocial behavior but not with fewer mental health or condition-related adjustment problems; lower paternal depressive symptoms were associated with better sibling-reported quality of life and mental health (Kirchhofer et al., 2025b). In the present review, quality of life, prosocial behavior, self-esteem, coping, and related psychosocial outcomes are therefore treated as supportive evidence rather than as interchangeable measures of psychological well-being.

Taken together, the available evidence supports examining anxiety and psychological well-being as separate outcomes while acknowledging the limited adolescent-specific evidence base (Levante et al., 2025; Magalhães, 2024). This distinction is maintained when evaluating art-based interventions: reductions in anxiety or other psychological symptoms are not assumed to demonstrate improved psychological well-being unless well-being itself was assessed.

Psychosocial Interventions For Siblings Of Individuals With Disabilities

Sibling-focused interventions vary considerably in content, delivery, and measured outcomes; a 2025 scoping review of 48 interventions found that 36 (75.0%) were group-based and delivered in person, with educational topics, activities, and social components commonly represented (Al-Hakeem et al., 2025). A more recent systematic review and meta-analysis included 22 studies, of which 11 were eligible for meta-analysis, and reported moderate-to-large effects favoring psychological and psychosocial interventions for attitudes and relationships, behavioral problems, perceived social support, and coping ability, but no significant effect on self-esteem; substantial heterogeneity was observed across several outcomes (Yang et al., 2026).

An autism-focused randomized controlled trial compared a 10-week sibling support group with an attention-only social control; the intervention emphasized discussion of feelings, coping and problem-solving skills, and development of a peer network. Although some mental health domains improved, a later systematic synthesis noted that anxiety increased in both the intervention and comparison groups and that the between-group improvement reported in this trial was nonsignificant (Jones et al., 2020; Wolff et al., 2023). A subsequent publication evaluating sibling-relationship

outcomes from this support-group trial found significantly greater improvements in sibling relationship quality in the intervention group than in the control group (Zucker et al., 2022).

SibChat provides a more developmentally specific example because it was designed for adolescent siblings aged 14–17 years who had a sibling with autism spectrum disorder. The randomized pilot trial delivered eight weekly 60-min videoconference group sessions and reported favorable effect sizes for stress coping (d = 0.60) and resiliency (d = 0.24), with the authors interpreting the findings as preliminary evidence of feasibility, acceptability, and efficacy (Kuhlthau et al., 2023). These outcomes are relevant to psychosocial functioning but should not be interpreted as direct evidence of improvement in anxiety or psychological well-being.

Family-oriented approaches have also incorporated parents into sibling interventions. The manual-based SIBS program consists of five sessions, including three separate group sessions for siblings and parents and two integrated sibling–parent dialogues (Fjermestad et al., 2020). A subsequent cluster randomized controlled trial included 288 siblings aged 8–16 years and found small, consistently positive but statistically nonsignificant between-group effects on sibling mental health and parent–child communication at three months.(Kirchhofer et al., 2025a).

Taken together, existing sibling interventions show promise for relationships, coping, social support, and selected mental health outcomes, but the most recent meta-analysis emphasizes the scarcity of randomized controlled trials examining anxiety, depression, and stress as distinct outcomes and the limited availability of long-term follow-up data (Yang et al., 2026). Existing programs predominantly emphasize psychoeducation, coping and problem-solving, peer support, resilience, and parent–sibling communication (Fjermestad et al., 2020; Jones et al., 2020; Kuhlthau et al., 2023). Art-based approaches can therefore be considered a distinct complementary modality for further investigation.

Art-Based Interventions In Adolescent Mental Health

Creative arts therapies comprise distinct therapeutic disciplines, including art therapy, music therapy, dance/movement therapy, drama therapy, psychodrama, and poetry/bibliotherapy. Within this broader field, art therapy specifically uses visual art media and the process and products of art-making within a psychotherapeutic relationship facilitated by an art therapist (Bosgraaf et al., 2020; de Witte et al., 2021).

For terminological consistency, this review uses “art-based interventions” as an umbrella term for structured activities involving visual artistic processes. The term “art therapy” is retained only when the original study explicitly identifies the intervention as art therapy, whereas “mandala-based activities” refers specifically to structured mandala drawing or coloring activities. These terms are therefore not used interchangeably throughout the review.

A systematic narrative review of art therapy for children and adolescents described mechanisms including visualizing and communicating internal experiences, expressing and regulating emotions, constructing narratives, exploring and reflecting on experiences, practicing skills, and experiencing art therapy as accessible and psychologically safe (Bosgraaf et al., 2020). A broader scoping review of 67 publications on creative arts therapies organized therapeutic factors into 19 domains and identified embodiment, concretization, and symbolism and metaphors as domains composed solely of factors specific to creative arts therapies (de Witte et al., 2021). In the present review, these proposed mechanisms are treated as a conceptual rationale rather than as evidence of effectiveness for a particular activity, outcome, or population.

Art therapy interventions for children and adolescents vary in materials and techniques, degree of structure, use of language, and therapist behavior (Bosgraaf et al., 2020). A systematic review likewise found variation in delivery method, dose, and duration and reported acceptability in 20 of 23 original studies (Versitano et al., 2025). Accordingly, evidence concerning anxiety and psychological well-being is evaluated separately in the following section, with attention to population, age range, intervention type, and outcome.

Evidence On Art-Based Interventions For Anxiety And Psychological Well-Being

A randomized controlled study evaluated nature-based group art therapy in 29 siblings aged 7–13 years of children with disabilities (18 intervention, 11 control). The intervention consisted of eight weekly 60-min sessions in a forest setting, and significant pre–post reductions in stress and increases in overall and social self-esteem were reported in the intervention group. However, anxiety and

psychological well-being were not measured, and the 7–13-year age range included both children and early adolescents. Therefore, the study provides no direct evidence concerning either anxiety or psychological well-being in an adolescent-specific sample (Kang et al., 2021).

A meta-analysis of six studies involving 422 children and adolescents reported a pooled effect in the direction of lower anxiety (SMD = −1.42, 95% CI [−2.33, −0.51]). However, heterogeneity was very high (I^2 = 94%), indicating substantial differences among studies and limiting confidence in the consistency and generalizability of the pooled estimate (B. Zhang et al., 2024). In a randomized study of 40 participants aged 7–18 years with osteosarcoma, group drawing art therapy combined with routine care resulted in lower anxiety and higher total self-acceptance scores than routine care alone; self-acceptance is treated here as a related psychosocial outcome rather than as an interchangeable measure of psychological well-being (Liu et al., 2023).

A parallel-group randomized controlled study involving 72 participants aged 9–18 years with type 1 diabetes evaluated a six-week therapeutic artistic activity program delivered through individual WhatsApp sessions. The program combined Zentangle, mandala painting, third-person drawing techniques, and a four-leaf-clover awareness activity; following the intervention, state anxiety was lower and psychological well-being was higher in the intervention group than in the standard-care group, but these effects reflect the multicomponent program and cannot be attributed specifically to its mandala component (Göcen & Sarı Öztürk, 2025).

Systematic evidence involving young people with acute or severe mental health conditions also indicates substantial variation in intervention delivery, dose, duration, study design, and methodological quality (Versitano et al., 2025). Taken together, these findings provide a rationale for population-specific evaluation of art-based approaches (Göcen & Sarı Öztürk, 2025; Kang et al., 2021; Versitano et al., 2025; B. Zhang et al., 2024). Mandala-specific evidence is considered in the following section.

Evidence On Mandala-Based Activities In Adolescents

Adolescent-specific evidence on mandala-based activities remains limited and consists largely of small or condition-specific studies (Emanuela et al., 2021; Gürcan & Atay Turan, 2021). In a randomized controlled trial involving 60 hospitalized adolescents aged 12–17 years with cancer, participants received either two individual 1–2-h mandala drawing sessions or routine care. After five days, anxiety, depression, and psychological symptom scores showed significantly greater reductions in the intervention group than in the control group; psychological well-being was not directly assessed (Gürcan & Atay Turan, 2021).

A small quasi-experimental study involving 26 students aged 15–18 years compared mandala coloring with coloring other shapes. State anxiety decreased in both groups, with a greater reduction reported in the mandala group, whereas psychological well-being did not increase significantly in either group. Because the study had a small sample, used a quasi-experimental design, and lacked a non-coloring control condition, its findings should be considered preliminary (Emanuela et al., 2021).

As described in the previous section, a randomized controlled trial involving 72 participants aged 9–18 years with type 1 diabetes reported lower state anxiety and higher psychological well-being following a six-week therapeutic artistic activity program. However, mandala painting was only one component of a multicomponent program that also included Zentangle, third-person drawing techniques, and a four-leaf-clover awareness activity; therefore, the observed effects cannot be attributed specifically to mandala painting (Göcen & Sarı Öztürk, 2025).

Evidence from broader pediatric samples is also mixed. Among patients aged 9–14 years with cancer, mandala painting was associated with lower anxiety after the intervention and at the one-month follow-up (Moharamkhani et al., 2023). A more recent randomized trial involving 120 participants aged 6–18 years with cystic fibrosis found lower post-intervention overall and state anxiety in the mandala-coloring group, whereas the between-group difference in trait anxiety was not statistically significant (Omidi et al., 2025). Conversely, a randomized clinical trial involving children undergoing surgery found no significant post-intervention differences in state or trait anxiety between the mandala-coloring and routine-care groups (Moghimian Shahrbabaki et al., 2025).

The broader evidence base also remains heterogeneous. A systematic review of 11 studies involving 405 participants used a broad conceptualization of psychological well-being that encompassed anxiety, depression, stress, pain, hope, and other psychological outcomes, and concluded that the therapeutic benefits of mandala art for psychological well-being remained uncertain because of

limitations in the quality and generalizability of the evidence (M.-Q. Zhang et al., 2024). In the present review, these symptom-based and related psychosocial outcomes are not treated as interchangeable measures of psychological well-being. A subsequent cancer-specific scoping review identified 11 studies and described generally favorable findings for negative emotions and quality of life, but also reported nonstandardized intervention protocols, a lack of large-sample randomized controlled trials, and no formal quality appraisal of the included studies (Chen et al., 2025).

Taken together, mandala-based activities have shown inconsistent findings for anxiety, whereas psychological well-being has been assessed less frequently (Emanuela et al., 2021; Gürcan & Atay Turan, 2021; M.-Q. Zhang et al., 2024).

Implications For Nursing And Healthcare Practice

Nursing and healthcare practice should recognize adolescent siblings as individuals with their own psychosocial needs rather than considering them only in relation to the child receiving care. A meta-ethnography of siblings of children with complex care needs described emotional turmoil, interruptions in family life, efforts to maintain a sense of self, and struggles with coping (Nygård et al., 2024). In a national Norwegian survey of 487 public health nurses and nursing leaders, 67% of leaders reported that their services had no system for identifying siblings or providing routine care, while 26% of public health nurses reported that siblings routinely received support (Bergvoll et al., 2023). These findings support more systematic attention to adolescent siblings' emotional experiences, coping, and perceived support within routine nursing care (Bergvoll et al., 2023; Nygård et al., 2024).

Family-centered care provides a relevant framework because it emphasizes partnerships among healthcare professionals, patients, and families (Mestre et al., 2024). However, a family-oriented approach should also preserve the adolescent sibling's individual perspective. In a cross-sectional study involving 212 families and 131 siblings of children with cerebral palsy, sibling quality of life was lower than that of typically developing peers and was associated with caregiver- and family-related factors (Dias et al., 2024). In a small qualitative evaluation of the Sibling Talks intervention involving six siblings and 10 parents, nurse-led conversations were experienced as respectful and caring and facilitated communication between siblings and parents; the qualitative design supports positive experiences with the intervention rather than causal conclusions about mental health effectiveness (Bergvoll et al., 2025). These findings suggest that nurses can provide structured opportunities for adolescent siblings to express their perspectives and communicate support needs within family-oriented care.

In busy clinical settings, implementation could be kept brief and integrated into the existing care pathway. For example, while the child with a disability is undergoing assessment or treatment, an adolescent sibling could be offered an optional 10–15-min mandala drawing or coloring activity in a designated waiting or family area. A nurse could provide standardized materials and brief instructions, remain available if support is requested, and invite the adolescent to comment on the experience afterward without requiring disclosure. The activity should be framed as a supportive health-promoting option rather than art therapy, and any indication of significant distress should prompt appropriate psychosocial assessment or referral.

WHO and UNICEF guidance emphasizes that mental health services for children and young people should be accessible, family-oriented, participatory, people-centred, appropriate, and integrated, with clear referral and transfer pathways across services. Accordingly, when an adolescent's psychosocial or mental health needs extend beyond the scope of health-promoting nursing support, nurses should facilitate appropriate assessment, referral, and coordination of care (WHO & UNICEF, 2024).

Research Gaps And Future Directions

Future research should recruit adolescent-specific samples aged 10–19 years or report age-stratified analyses and clearly define the sibling population. Adequately powered randomized controlled trials should prespecify anxiety and psychological well-being as separate primary outcomes and assess each using validated, age-appropriate measures. Stress, self-esteem, quality of life, coping, and related psychosocial outcomes should be reported as distinct secondary outcomes rather than as substitutes for psychological well-being (Levante et al., 2025; Yang et al., 2026).

Interventions should be clearly classified as art therapy, a mandala-based activity, or a

multicomponent art-based intervention. Reports should specify the setting, format, frequency, session duration, materials, facilitator qualifications, adherence, comparison condition, and follow-up to support replication and comparison across studies (Chen et al., 2025; Yang et al., 2026). Where feasible, a non-mandala art comparison condition should be included to determine whether observed effects are specific to mandala-based activities or reflect artistic engagement more broadly. These design features would allow direct evaluation of meaningful and sustained changes in anxiety and psychological well-being among adolescents who have a sibling with a disability.

CONCLUSION

Art-based and mandala-based activities may serve as optional adjunctive means of expression and support for adolescents who have a sibling with a disability. However, current evidence is insufficient to establish their effects on anxiety or psychological well-being in this population. In nursing practice, these activities may be offered voluntarily within family-centered care when appropriate, but they should not replace psychosocial assessment, supportive communication, or referral. Adolescent-specific randomized studies are needed before routine clinical use can be recommended.

Researchers' Contrıbutıon Statement

Both authors contributed to the conception of the review, evaluation and synthesis of the literature, drafting and critical revision of the manuscript, and approval of the final version.

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Conflict Statement

The authors declare that there is no conflict of interest.

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