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SOCIAL SUPPORT WITH POST-TRAUMATIC GROWTH AMONG TRAUMA SURVIVORS: A SYSTEMATIC REVIEW

Muhammad Ferly Aditya*, Mustikasari, Yudi Ariesta Chandra, Yossie Susanti Eka Puteri
Faculty of Nursing, Universitas Indonesia, Jl. Prof. DR. Sudjono D. Pusponegoro, Pondok Cina, Beji, Depok, Jawa Barat 16424, Indonesia
*muhammad.ferly@ui.ac.id

ABSTRACT

Natural and non-natural disasters can cause long-term psychological impacts on affected individuals, including the emergence of post-traumatic stress disorder. However, some victims actually experience positive changes known as post-traumatic growth (PTG), which is psychological growth that occurs after facing a traumatic event. PTG does not form automatically, but is influenced by various factors, one of which is social support. Effective social support can strengthen resilience, provide a sense of security, and facilitate the reinterpretation of the trauma experienced. Objective to identify and synthesize scientific evidence regarding the relationship between social support and PTG in disaster victims.Method: This study used a systematic review design, with article searches conducted through three main databases: PubMed, CINAHL, and Scopus. The keywords used were: "post-traumatic growth" OR "PTG" AND "social support" AND "disaster" OR "natural disaster" OR "earthquake" OR "flood" OR "tsunami". Inclusion criteria included original research articles published in English between 2015–2025 and explicitly discussing the relationship between social support and PTG in disaster victim populations. Data were extracted manually using a table that included the author, purpose, design, sample, location, instrument, and results of the study. Data analysis was conducted descriptively qualitatively with a thematic analysis approach. A total of 10 articles that met the inclusion criteria were successfully identified and analyzed. The results of the study showed that social support consistently plays a role in encouraging the occurrence of PTG through various mechanisms: as a direct predictor, a mediator between psychological factors (such as resilience and survivor guilt), and as a moderator of the relationship between psychopathological symptoms and PTG. Six main themes were found in the thematic analysis: the direct role of social support, psychological mediation, moderating function on depression and anxiety, strengthening resilience, diversity of support sources, and vicarious PTG experiences. PTG does not solely depend on individual characteristics, but is also influenced by the extent to which they are connected to a supportive social environment. Therefore, nursing practice needs to integrate aspects of social support in disaster victim care, either through family, community, or professional service approaches.

Keywords: disaster victims; nursing; post-traumatic growth; social support

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INTRODUCTION

The increasing frequency and intensity of natural and non-natural disasters has become a global issue that has received increasing attention in the last decade (Weeks, 2020). Events such as earthquakes, major floods, forest fires, pandemics, and social conflicts have caused major disruptions to the lives of millions of individuals around the world. These disasters not only result in physical damage and loss of life, but also have complex and multidimensional long-term consequences (Marin et al., 2020). The social, economic, and psychological aspects of the lives of affected communities often experience significant disruption, such as loss of housing, sources of livelihood, social relations, and emotional stability (Rodriguez-Arrastia et al., 2022). The complexity of these impacts shows that post-disaster recovery cannot only focus on physical reconstruction, but must include a comprehensive approach, including the

restoration of psychosocial aspects as an important part of individual and community resilience (Yodsuban & Nuntaboot, 2021).

Various studies show that the experience of facing a disaster often triggers significant psychological burdens for affected individuals (Guilaran et al., 2018; Paquin et al., 2021). Disaster survivors are at high risk of experiencing mental health disorders such as acute stress, excessive anxiety, depression, and post-traumatic stress disorder (PTSD). These symptoms can last long term and impact a person's social, cognitive, and emotional functioning. Children, the elderly, women, and individuals with certain social vulnerabilities are known to be at greater risk of post-disaster psychological impacts (Rodriguez-Arrastia et al., 2022). When psychological conditions are not adequately addressed, this not only hinders the individual's recovery process but can also impact the social dynamics within the affected community more broadly (Doherty et al., 2021; Hikmat et al., 2024).

Although disasters are often associated with psychological distress and dysfunction, some individuals demonstrate constructive adaptive responses, known in the psychology literature as post-traumatic growth (PTG). PTG refers to the process of positive transformation that individuals experience after experiencing a traumatic event or major life crisis (Park et al., 2022). This concept was introduced by Tedeschi and Calhoun, who identified that trauma can be a catalyst for psychological growth, rather than simply a source of damage. PTG is characterized by five main dimensions, namely: improved quality of interpersonal relationships, strengthening of personal strengths, the emergence of a deeper appreciation of life, spiritual growth, and the opening of new possibilities in life (Pratt et al., 2017). This growth does not eliminate suffering, but reflects the individual's capacity to find new meaning, hope, and direction after experiencing extreme experiences (Hikichi et al., 2024).

Social support is one of the most consistently protective factors associated with the occurrence of post-traumatic growth (PTG) in individuals who experience traumatic events, including disasters (Matos et al., 2021). Social support includes several main dimensions, namely emotional support (such as empathy and concern), instrumental (concrete or material assistance), informational (provision of relevant information), and appreciative (strengthening self-esteem and positive validation from others) (Sperandio et al., 2021). Social support can reduce the negative impact of stress by strengthening an individual's capacity to interpret and respond to traumatic events more adaptively (Başcıllar et al., 2023). The existence of a strong support system from family, peers, community, and professionals contributes to an increased sense of security, validation of emotional experiences, and the formation of new meanings for traumatic experiences (Emerson et al., 2017; Yosep et al., 2024).

Sources of social support for disaster victims can come from a variety of entities, both personal and institutional. Family and close friends are often the primary support network that provides emotional comfort, practical assistance, and a space to safely express emotions (Zeng et al., 2024). On the other hand, local communities and the wider community play a role in creating a sense of togetherness, social solidarity, and interpersonal connections that strengthen collective identity after a disaster. Professionals such as health workers, psychologists, and counselors also contribute through science-based interventions that support more structured emotional and psychological recovery (Kearney et al., 2014). In addition, humanitarian organizations and non-governmental organizations play an important role in providing emergency assistance, crisis counseling, and long-term recovery programs that are oriented towards empowering victims. Collaboration from various sources of support not only increases individual resilience, but also creates a social ecosystem that is conducive to the emergence of post-traumatic growth (Zhou et al., 2014).

Several previous studies have examined the relationship between social support and post-traumatic growth (PTG) in populations experiencing traumatic events, and most have shown that social support plays a significant role in promoting PTG. Consistent findings indicate that individuals who receive adequate social support tend to show improvements in PTG dimensions such as meaning in life, personal strengths, and interpersonal relationships (Mo et al., 2021). However, there are also study results that show weak or insignificant relationships, especially when examined in different populations or contexts, such as technological disasters, social conflicts, or in cultural settings that emphasize collectivism versus individualism (Başcıllar et al., 2023). Currently, there is no systematic and comprehensive mapping that specifically examines the relationship between social support and PTG in disaster victim populations, both in the context of natural and non-natural disasters. Therefore, this study aims to identify and synthesize scientific evidence on the relationship between social support and PTG in disaster victims.

METHOD

Study Design

This study used a systematic review design, which is a scientific approach that aims to identify, critically evaluate, and synthesize evidence from various relevant studies related to the relationship between social support and post-traumatic growth (PTG) in disaster victims. This design was chosen because it is able to provide a comprehensive picture of existing findings, identify knowledge gaps, and develop a strong conceptual basis for the development of evidence-based interventions. The systematic review process was carried out through several stages in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, namely: (1) identification of research questions, (2) literature search, (3) selection of studies based on inclusion and exclusion criteria, (4) data extraction, (5) assessment of the methodological quality of the included studies, and (6) synthesis and reporting of results. Each stage is carried out systematically and transparently to ensure replication and accountability in the review process.

Search Strategy and Eligibility Criteria

The literature search strategy was conducted comprehensively on three major electronic databases: Scopus, PubMed, and CINAHL. These three databases were selected because they provide access to reputable international scientific publications in the fields of health, nursing, and psychosocial sciences. Keywords were developed based on Medical Subject Headings (MeSH) and combined with Boolean operators (AND/OR), including: (“post-traumatic growth” OR “PTG”) AND (“social support”) AND (“disaster” OR “natural disaster” OR “pandemic” OR “earthquake” OR “flood” OR “tsunami”). The search strategy was adjusted for each database by entering MeSH terms in PubMed, Subject Headings in CINAHL, and relevant terms in Scopus. The process of searching, selecting, and excluding articles was reported using a PRISMA flow diagram to illustrate the number of articles identified, selected, and included in the final synthesis (Figure 1). The research question asked was: “What is the relationship between social support and post-traumatic growth in disaster victims?”

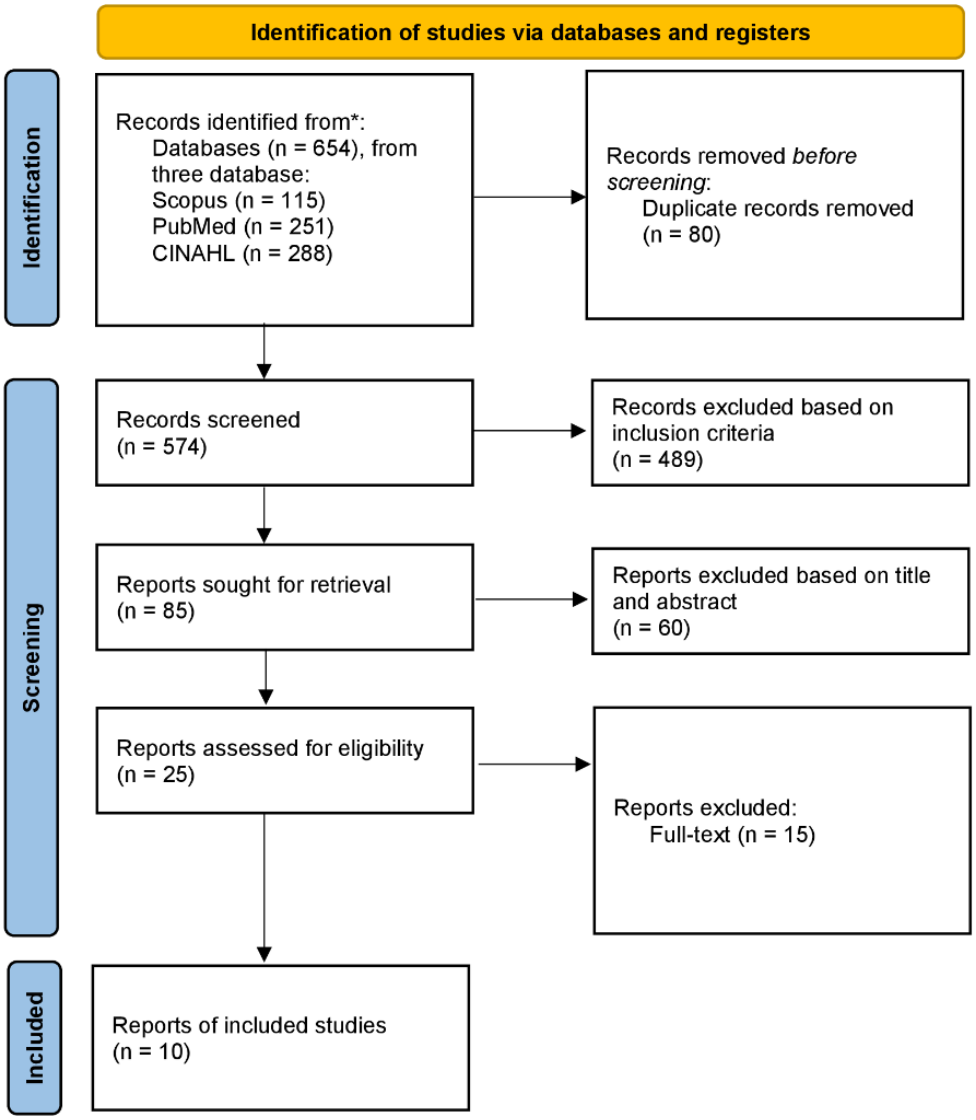

Figure 1. PRISMA Flow Diagram

Inclusion and Exclusion Criteria

Article selection was based on the PICO principle, namely Population (disaster victims), Intervention (social support), Comparison (no or other forms of support), and Outcome (PTG). Inclusion criteria included: (1) original research articles, (2) written in English, (3) published in the last 10 years (2015–2025), and (4) explicitly discussing the relationship between social support and PTG in disaster victims. Exclusion criteria included: non-systematic review articles, case reports, commentaries, editorials, articles that were not fully accessible, and studies that did not clearly report social support or PTG variables. The selection of these inclusion criteria aimed to ensure that the included studies were relevant, up-to-date, and could provide strong empirical information for data analysis and synthesis in the context of disaster victim services and recovery.

Data Extraction

Data extraction was performed using a manual table containing important information from each article, including: author name and year of publication, research objectives, study design, sample characteristics, research location, instruments, and key findings related to PTG. The extraction process was carried out independently by two authors who were competent in the field of psychiatric nursing and evidence-based research. If there was a difference of opinion between the two authors in interpreting or classifying the data, a joint discussion was held to

reach a consensus. If consensus was not reached, a third author with methodological expertise was invited to provide additional assessments in an effort to maintain the objectivity and accuracy of the extraction process.

Data analysis

Methodological quality assessment of articles was conducted using the Joanna Briggs Institute (JBI) critical appraisal tools, which were appropriate to each article's study design (quantitative, qualitative, or mixed). Two authors independently assessed the validity, reliability, and methodological relevance of the articles. If there were differences in the assessment results, a third author was involved to provide clarification and resolve the differences. Furthermore, the data were analyzed descriptively qualitatively using the thematic analysis approach. The stages of analysis included: (1) repeated reading of the extracted articles, (2) identification and coding of relevant data, (3) grouping codes into initial themes, (4) reviewing and refining themes, and (5) interpretation and writing of narrative synthesis. The analysis process was carried out independently by two expert authors and if there were discrepancies in the interpretation of the themes, additional analysis was carried out by the third author as a mediator to ensure the validity and depth of the findings.

RESULT

The initial research results from three databases (PubMed, CINAHl, Scopus) obtained 654 articles. The author eliminated based on article duplication, obtained 80 duplicate articles. Then, the author eliminated based on inclusion criteria, 489 articles were eliminated. After that, the author screened based on title and abstract, 60 articles were eliminated. Then, the author read the full text articles, obtained 10 articles discussing the relationship between social support and PTG in disaster survivors (Table 1).

Table 1.
Data Extraction

No	Author and Year	Objective	Sample	Research Location	Instrument	Variables	Key Findings
1	(Mesidor & Sly, 2019)	Analyzing the influence of coping strategies, social support, and religion on PTG and PTSD in earthquake victims.	256 victims	Haiti, post-earthquake	SPRINT, PTGI, social support scale, active coping scale	Religious coping, social support, PTSD, PTG	Positive religious coping, social support, and resilience support PTG, with PTSD symptoms related to coping strategies.
2	(Zhou et al., 2017)	Analyzing the relationship between social support and PTSD and PTG in adolescents after the Ya'an earthquake	315 teenagers	Ya'an, China, post-earthquake	PTSD Checklist, PTG Inventory, social support scale, emotion regulation	PTSD, PTG, social support, emotion regulation	Social support has a positive effect on PTG, but not PTSD; emotion regulation acts as a mediator

3	(N. Sattler et al., 2018)	Investigating PTSD, depression, social support, and PTG in earthquake survivors in Indonesia	85 participants	Central Java, Indonesia	CES-D, PTSD Checklist, Social Support Index, PTGI	PTSD, depression, loss of resources, social support, PTG	PTG is related to loss of energy resources and social support, there is a significant relationship between PTSD and PTG
4	(Han et al., 2019)	Analyzing the moderation of social support on the relationship between PTSD and PTG in Sewol ferry disaster victims.	241 victims	South Korea	PTSD Checklist, PTGI, PHQ-9, GAD-7, social support scale	PTSD, PTG, social support, depression, anxiety	Social support moderates the relationship between PTSD and PTG, with differential effects between genders.
5	(Wang et al., 2018)	Analyzing the mediating role of gratitude and social support in the relationship between victim guilt and PTSD and PTG.	706 teenagers	Ya'an, China	Self-report questionnaire on guilt, gratitude, social support, PTSD, and PTG	Guilt, gratitude, PTSD, PTG, social support	Guilt influences PTSD and PTG through gratitude and social support
6	(Kang et al., 2018)	Analyzing VPTG, social support, and resilience in ambulance officers in China	227 ambulance officers	China	PTGI, SSRS, CD-RISC-10, VPTG measurement scales	VPTG, social support, resilience	Social support and resilience influence VPTG, with social support mediating the influence of resilience.
7	(Azizzadeh Forouzi et al., 2018)	Analyzing PTG related to religious coping and social support in Bam earthquake victims	230 participants	Bam, Iran	PTGI, RCOPE, MSPSS	Religious coping, social support, PTG	Religious coping and social support significantly increase PTG
8	(Zhou et al., 2018)	Analyzing the mediating role of self-esteem and	397 participants	Lushan, China, post-earthquake	Social Support Scale, Self-Esteem Scale, State Hope Scale, PTSD	Social Support, Self-Esteem, Hope, PTSD, PTG	Social support reduces PTSD through

		hope in the relationship between social support and PTSD and PTG.			Checklist, PTGI		increased self-esteem, and promotes PTG through hope.
9	(Yuan et al., 2018)	Investigating the mediating role of social support between resilience, PTSD symptoms, and PTG in post-tornado adolescents.	247 participants	Yancheng, China	CPSS (Child PTSD Symptom Scale), PTGI-R (Posttraumatic Growth Inventory), Resilience Scale, Social Support Scale	Resilience, Social Support, PTSD, PTG	Resilience is negatively related to PTSD and positively to PTG, social support mediates the relationship between the two.
10	(Jia et al., 2015)	Analyzing the relationship between extraversion, social support, PTSD, and PTG in adolescent victims of the Wenchuan earthquake.	631 teenagers	Wenchuan, China	Extraversion Scale, Social Support Scale, Childhood PTSD Symptom Scale, Posttraumatic Growth Inventory (PTGI)	Extraversion, Social Support, PTSD, PTG	Extraversion has a significant effect on PTG and PTSD through social support. Social support mediates the relationship between extraversion and PTSD and PTG.

Theme 1: Social Support as a Direct Predictor of Post-Traumatic Growth (PTG)

Social support has been shown to be a significant direct predictor of PTG in disaster victims. Individuals who feel supported by those closest to them, their community, or professionals tend to have a greater capacity to develop new meaning and hope after a traumatic experience. The results of the study reported that the higher the perception of social support, the higher the PTG score experienced by survivors (Azizzadeh Forouzi et al., 2018; Jia et al., 2015; Mesidor & Sly, 2019; Zhou et al., 2017, 2018). These findings suggest that social support is a fundamental aspect of post-disaster psychological recovery and needs to be a central pillar of interventions.

Theme 2: Social Support as a Mediator between Psychological Factors and PTG

Several studies have identified social support as a mediator in the relationship between psychological factors such as resilience, survivor guilt, and personality with PTG. Resilience does not directly increase PTG, but rather through the mediation of social support (Yuan et al., 2018). Survivor guilt influences PTG through gratitude and social support (Wang et al., 2018). The results of the study showed that the relationship between extraversion and PTG was significantly mediated by social support (Jia et al., 2015). These findings emphasize that social support is not merely a passive protector, but also an active psychological pathway that transforms personal strengths into adaptive growth.

Theme 3: Social Support as a Moderator in the Relationship between Psychopathology and PTG

Social support has a moderating role in the relationship between trauma-related psychopathologies (such as depression and anxiety) and PTG (Han et al., 2019). They found that the negative correlation between depression and PTG was only significant in the group with low social support, while in the group with high social support the relationship was not significant. This finding indicates that social support can neutralize the negative impact of psychopathology on individual growth capacity. This moderation effect is even more pronounced in female respondents, indicating a complex interaction between gender, social support, and psychological growth processes.

Theme 4: Social Support as a Driver of Resilience in Building PTG

Several studies have shown that social support can increase individual resilience, which then contributes to the occurrence of PTG. Social support has both direct and indirect effects on vicarious PTG through increased resilience (Kang et al., 2018). Resilience becomes more effective in influencing PTG when mediated by social support (Yuan et al., 2018). This shows that social support not only functions as direct psychological support, but also as a foundation for the formation of long-term resilience that supports the reinterpretation of traumatic experiences (Zhou et al., 2017).

Theme 5: Diversity of Sources of Social Support and Cultural Context

Variations in sources of social support and cultural contexts also influence how PTG is formed after a disaster. Spiritual and local community-based support play a major role in facilitating PTG (Azizzadeh Forouzi et al., 2018; Mesidor & Sly, 2019). In many societies with collectivist values, support comes not only from interpersonal relationships but also from religious and cultural institutions that provide a framework of meaning for suffering (Jia et al., 2015). It is therefore important for psychosocial interventions to take into account this diversity of sources of support in order to make responses more contextual and sensitive to local needs.

Theme 6: PTG in Populations with Indirect Trauma Exposure

An important dimension of vicarious post-traumatic growth (VPTG), namely the form of PTG experienced by individuals who are not directly affected by trauma, but work in a traumatic context (Kang et al., 2018). Social support in this group was found to play a role in strengthening resilience which then resulted in VPTG (Zhou et al., 2018). These findings confirm that the effects of social support are not limited to direct disaster victims, but are also important for relief professionals who are vulnerable to the psychological impacts of repeated exposure to the suffering of others (N. Sattler et al., 2018).

DISCUSSION

Burn patients often experience significant levels of anxiety and pain, which can negatively impact their healing process and quality of life. Untreated anxiety can worsen pain perception, increase physical discomfort, and affect overall mental health (Burns-Nader et al., 2017). In addition, chronic and poorly managed pain can lead to additional complications, prolong recovery time, and increase psychological burden (Sveen et al., 2010). Therefore, anxiety and pain management are important components in the care of burn patients.Aromatherapy has long been used as a complementary method in the management of anxiety, especially in patients with chronic conditions such as burns. The use of essential oils such as lavender and chamomile, which are known to have a calming effect (Semerci & Uzun, 2023). Aromatherapy in the form of massage allows essential oils to not only be inhaled but also absorbed through the skin, providing a double calming effect. Studies show that aromatherapy, especially when combined with massage, significantly reduces anxiety levels

and improves sleep quality in patients (Burns et al., 2017). For example, a combination of lavender and chamomile aromatherapy massage for 20 minutes before bedtime has been shown to significantly reduce anxiety scores and improve sleep quality in burn patients. The consistency of these results is seen across studies, with patients receiving aromatherapy interventions showing greater reductions in anxiety compared to control groups. Aromatherapy contains the natural anxiolytic (anxiety-reducing) properties of the essential oils used, which work through the brain's limbic system, the center for regulating emotions. In addition, the relaxing effects of the massage itself contribute to reducing muscle tension and increasing circulation, which in turn helps to calm the patient's mind and body (Hosaka, 2019).

The Benson relaxation technique is an effective non-pharmacological approach to managing anxiety in burn patients. This technique involves deep breathing, repetition of calming words, and gradual muscle relaxation, which has been shown to significantly reduce anxiety, especially before painful medical procedures (Bagheri et al., 2021). The effectiveness of this technique increases when combined with other interventions such as aromatherapy, resulting in a stronger synergistic effect in reducing anxiety and improving the patient's quality of life. In addition, Benson's technique can be easily taught to patients, allowing them to apply it independently, thereby increasing independence and reducing dependence on more complex medical interventions (Ellis et al., 2017).Music therapy is used as an effective non-pharmacological tool in reducing anxiety and pain in burn patients. Listening to patient-selected music before, during, and after wound care procedures has been shown to significantly reduce anxiety levels, especially during the most stressful moments such as dressing changes (Damschroder et al., 2021). The effectiveness of music therapy was also seen in pain reduction, where patients receiving this intervention reported a greater reduction in pain intensity compared to the control group (Damschroder et al., 2021). By creating a more comfortable and calming environment through music, this therapy can play an important role in managing pain and anxiety, thereby helping to improve the quality of life of burn patients (Williams et al., 2020).

The application of Swedish and Shiatsu massage has been shown to be effective in reducing anxiety and increasing relaxation in burn patients. Both massage techniques focus on physical stimulation through specific movements that stimulate blood circulation and calm the nervous system. Studies have shown that both Swedish and Shiatsu massage significantly decreased anxiety levels and increased relaxation compared to the control group (Malhotra & Kaimal, 2022). When compared, despite differences in methods and techniques, both types of massage showed similar effectiveness in reducing tension and improving the psychological well-being of patients (Pfadenhauer et al., 2017). The implications of this massage application are not only limited to reducing anxiety, but also to improving sleep quality and a deeper feeling of relaxation, which overall contributes to improving the psychological well-being of patients (Saquib et al., 2021).Transcranial Direct Current Stimulation (tDCS) is a non-invasive neuromodulation method that involves applying a weak electrical current to specific areas of the brain to modulate neuronal activity. In the context of burn management, tDCS has been shown to be effective in reducing anxiety and pain by stimulating the sensory and prefrontal cortices (Chaudhary & Ahmad, 2021). Studies have shown that cathodal cortical stimulation using tDCS can significantly reduce pain and anxiety, thanks to its ability to alter the sensitivity and response of neurons to pain (Bayuo et al., 2021). The effectiveness of tDCS as an adjunct therapy in burn care lies in its ability to provide sustained pain relief and reduce anxiety without significant side effects (Holbert et al., 2021).

Recommendations for implementing interventions in nursing practice include the integration of non-pharmacological methods such as aromatherapy, Benson relaxation technique, music therapy, and tDCS into the burn patient care plan. Nurses should be trained in the application and teaching of these techniques to ensure that patients experience the full benefits of the interventions (Chaudhary et al., 2021). For example, nurses can guide patients in Benson's relaxation technique or facilitate a music therapy session, as well as explain the proper use of aromatherapy. Implementing these interventions can improve the quality of care by providing effective alternatives to reduce anxiety and pain, as well as increasing patient satisfaction through a more holistic and personalized approach (Bagheri et al., 2021). Through the integration of these techniques, nurses can provide more comprehensive support, focusing on the patient's physical and psychological well-being, which in turn can improve care outcomes and enhance the overall patient experience (Heidari et al., 2024).

CONCLUSION

This scoping review included nine articles examining a range of non-pharmacological interventions to reduce anxiety and pain in burn patients. The intervention themes identified included aromatherapy, Benson relaxation technique, music therapy, Swedish and Shiatsu massage, and transcranial direct current stimulation (tDCS). Studies have shown that aromatherapy and Benson relaxation technique are effective in reducing anxiety and improving sleep quality, while music therapy provides benefits in reducing anxiety and pain during and after wound care procedures. Swedish massage and Shiatsu have also been shown to reduce anxiety and increase relaxation, although their effectiveness varies. tDCS has been shown to be significant in reducing pain and anxiety by modulating brain activity. Overall, these interventions contribute to effective pain and anxiety management with mixed but promising results.Nurses are advised to integrate these non-pharmacological techniques into the care plan of burn patients. Nurses should be trained in the application of techniques such as aromatherapy, relaxation, music therapy, and tDCS to enhance the effectiveness of care. The implementation of these interventions can improve patient satisfaction and provide a holistic approach to pain and anxiety management, thereby supporting better recovery. Future studies should focus on randomized controlled trials with larger sample sizes to confirm these findings and compare the effectiveness of different intervention techniques directly. In addition, further research is needed to explore the mechanisms behind the effectiveness of each intervention and to determine the optimal duration and frequency to reduce anxiety in burn patients.

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