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THE ROLE OF TRADITIONAL AND COMPLEMENTARY MEDICINE PRACTICES IN NURSING CARE: REFLEXOLOGY

Abdulsamed Kaya[1], Kamber Sümer[2]

INTRODUCTION

Traditional and Complementary Medicine (TCM) practices are utilized in the care and treatment of various diseases, including cancer, rheumatoid arthritis, multiple sclerosis, asthma, cystic fibrosis, liver diseases, inflammatory bowel diseases, allergic conditions, kidney failure, and hypertension (Altınbaş and Derya, 2019; Kalyoncuo and Ceyhan, 2023). In Turkey, regulations permit nurses to independently practice TCM methods such as massage, hypnosis, aromatherapy, therapeutic touch, and reflexology (Kaya et al., 2020; Atan, 2018).

Reflexology has been defined by the International Institute of Reflexology as "a technique that involves manual application to reflex points in the hands, feet, and ears associated with all glands, organs, and body parts, aiding in the normalization of bodily functions." Reflexology is increasingly recognized as a complementary therapy method in nursing practices. Various studies have demonstrated the positive effects of reflexology on different patient groups (Korkan and Uyar, 2014).

A study conducted on hemodialysis patients found that foot reflexology and back massage improved sleep quality and reduced fatigue (Unal and Akpinar, 2016). Similarly, reflexology has been observed to reduce fatigue and pain and improve sleep quality in lymphoma patients (Rambod et al., 2019). In patients with rheumatoid arthritis, foot reflexology

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has been shown to alleviate pain and enhance sleep quality (Bakir et al., 2018).

However, some studies have indicated that reflexology may be ineffective in certain cases. For instance, in patients undergoing cardiac surgery, foot reflexology massage was found to have no effect on delirium incidence or sleep quality, although it did reduce pain intensity (Fazlollah et al., 2021). Therefore, further research is needed to assess the efficacy of reflexology.

In conclusion, reflexology is considered a promising complementary therapy method in nursing care. It may effectively improve symptoms such as pain, fatigue, and sleep quality. However, it may not be suitable for all patient groups or conditions. It is essential for nurses to incorporate reflexology into evidence-based practices and evaluate it as part of individualized care plans.

WHAT IS TRADITIONAL AND COMPLEMENTARY MEDICINE (TCM)?

Traditional and Complementary Medicine refers to a variety of clinical therapies outside the scope of conventional medicine. TCM can be categorized into biological-based practices, mind-body medicine, manipulative and body-based practices, energy medicine, and holistic medical systems (Birdee and Yeh, 2010).

The relationship between TCM and conventional medicine is defined in different ways. The term "complementary" refers to therapies used alongside conventional medicine, while "alternative" denotes therapies used in place of conventional medicine. "Integrative medicine" represents a combination of conventional medicine, TCM, and evidence-based practices (Barrett et al., 2003; Birdee and Yeh, 2010).

The fundamental characteristics of Traditional and Complementary Medicine (TCM) include a holistic approach, patient empowerment, accessibility, and legitimacy (Barrett

et al., 2003). While TCM generally adopts a more intuitive and holistic approach, conventional medicine relies on a more deductive methodology. However, concerns about the scientific validity and safety of TCM persist (Birdee and Yeh, 2010; Kretchy et al., 2016). Therefore, more evidence and research are needed to integrate TCM into conventional medicine.

WHAT IS REFLEXOLOGY?

Historical documents suggest that reflexology was used as early as 5,000 years ago in Egypt. Practices similar to reflexology, which involves applying pressure to specific points on the body, are believed to have existed in China and India up to 500 years ago (Yüksel, 2020). Dr. William Fitzgerald divided the body into ten equal zones and stated, "Organs within each zone share energy flow and influence one another." Fitzgerald's zone theory later inspired Dr. Riley, who added horizontal divisions to these ten zones and mapped points on the soles of the feet corresponding to various organs (Yüksel, 2020; Gozuyesil and Baser, 2016).

Reflexology has been found to reduce anxiety and pain in surgical settings. A randomized controlled study demonstrated that intraoperative hand reflexology significantly reduced anxiety levels in patients undergoing minimally invasive varicose vein surgery under local anesthesia compared to the control group (Hudson et al., 2015).

Reflexology has shown positive effects in managing symptoms of chronic illnesses. For example, in patients with rheumatoid arthritis, reflexology was effective in reducing pain and fatigue, with improvements observed as early as the first week of treatment (Metin and Özdemir, 2016). Similarly, reflexology helped reduce the severity of restless legs syndrome in hemodialysis patients (Shahgholian et al., 2016).

However, evidence is not always consistent. A study on patients with multiple sclerosis found that reflexology did not have significantly different effects on incontinence compared

to Kegel exercises or the control group. Nevertheless, it improved the quality of life related to incontinence (Özdelikara et al., 2024).

THEORETICAL FOUNDATIONS OF REFLEXOLOGY

Although the exact mechanism of reflexology is not fully understood, several theories have been proposed. Reflexology is based on the idea that specific points on the hands, feet, and behind the ears correspond to different organs and systems in the body. Applying pressure to these points is believed to promote healing and balance. The core principle suggests that energy pathways or zones connect different parts of the body, and stimulating reflex areas can influence the functioning of related organs or structures (Embong et al., 2015; Şimşekoğlu and Şendir, 2020; Haspolat and Ertuğrul, 2023).

While reflexology is widely practiced and recognized as a complementary therapy, scientific evidence supporting its specific effects remains limited. Systematic reviews have failed to provide conclusive evidence for its effectiveness in treating various conditions (Embong et al., 2015). However, some studies report positive outcomes. For example, a study on patients after CABG surgery found that foot reflexology reduced anxiety and stabilized certain physiological parameters (Abbaszadeh et al., 2018). Another study on children with cerebral palsy demonstrated that combining reflexology with neurodevelopmental therapy had positive effects on constipation (Elbasan and Bezgin, 2017). Despite the lack of definitive scientific evidence, reflexology remains a popular non-invasive complementary therapy, supported by anecdotal reports of benefits in various health conditions. Rigorous research is still needed to fully understand its mechanisms and effectiveness (Embong et al., 2015).

USES OF REFLEXOLOGY IN HEALTHCARE

Pain Management

Pain is a subjective sensation, and the threshold for perceiving pain varies from person to person. Since pain is an afferent input transmitted to the central nervous system, numerous factors influence its perception (Doğan, 2014; Özdelikara et al., 2014).

Reflexology is a complementary therapy method used for pain management in various health conditions. Early pain relief following bipolar radiofrequency treatment was observed in patients with chronic tendinosis (Takahashi et al., 2007). Reflexology has been found to reduce pain and improve sleep quality in patients with rheumatoid arthritis (Bakir et al., 2018). It has also been shown to decrease pain intensity in patients after cardiac surgery (Fazlollah et al., 2021) and effectively reduce acute pain following vaccination injections in infants (Koç and Gözen, 2015).

However, conflicting results have been reported regarding the efficacy of reflexology. For instance, it showed no significant impact on delirium and sleep quality after cardiac surgery (Fazlollah et al., 2021). Similarly, it provided no substantial improvement in anxiety, pain, or distress symptoms among palliative care patients (Marcolin et al., 2023).

Reflexology appears to be a promising method for pain management across various patient groups, though its mechanisms remain unclear. Functional MRI studies have begun to reveal its effects on brain connectivity (Descamps et al., 2023). Future research is necessary to better understand reflexology's role in pain management.

Stress and Anxiety Reduction

Reflexology massage helps alleviate muscle tension through energy theories, lactic acid theory, endorphin theory, nerve receptor detection theory, and nerve stimulation theory. This relaxation fosters energy flow within the body, relieving stress,

tension, and anxiety (Khan et al., 2006). A study conducted on healthy individuals found that reflexology significantly reduced 'state' anxiety and cardiovascular activity (Vicar et al., 2007). Similarly, foot reflexology and back massage improved sleep quality and reduced fatigue in hemodialysis patients (Unal and Akpinar, 2016).

The effectiveness of reflexology has also been observed in different patient groups. For instance, in patients undergoing coronary artery bypass graft surgery, foot reflexology massage significantly reduced anxiety levels (Bagheri-Nesami et al., 2013). Additionally, in a study on palliative care patients, reflexology showed a mild improvement in sleep quality and exhibited a trend toward alleviating anxiety, pain, and distress symptoms (Marcolin et al., 2023).

Reflexology appears to be a safe and effective method for reducing stress and anxiety in various patient groups. However, long-term studies with larger sample sizes are required. Healthcare professionals should aim to provide comprehensive care that addresses individuals' physical, psychosocial, and spiritual needs, offering guidance on complementary therapies (Erci, 2007).

Sleep Regulation and Contributions to Mental Health

Reflexology is used as a complementary treatment method for various health issues, with notable positive effects on sleep quality and mental health. A study on patients with rheumatoid arthritis found that six weeks of foot reflexology reduced pain and improved sleep quality (Bakir et al., 2018). Similarly, foot reflexology massage applied for four consecutive days significantly reduced anxiety in patients undergoing coronary artery bypass graft (CABG) surgery (Bagheri-Nesami et al., 2013). Another study involving menopausal women demonstrated that foot reflexology alleviated vasomotor symptoms and improved quality of life (Gozuyesil and Baser, 2016).

The positive effects of reflexology on sleep and mental health are often supported by other complementary approaches, such as traditional Chinese exercises. These exercises have been found to improve sleep quality, anxiety, and depression across different groups (Dong et al., 2023). Moreover, neuromodulation techniques like trigeminal nerve stimulation have also been shown to enhance sleep quality and mood (Boasso et al., 2016).

Reflexology in Managing Chronic Diseases

Reflexology is widely used as a complementary therapy for managing various health issues. Studies on its effects in managing chronic diseases have shown promising results in certain areas.

For example, reflexology was effective in reducing vasomotor symptoms and improving quality of life in menopausal women (Gozuyesil and Baser, 2016). Similarly, it significantly reduced anxiety in patients undergoing CABG surgery (Bagheri-Nesami et al., 2013). However, a meta-analysis on hypertensive patients concluded that foot reflexology was not effective in lowering blood pressure (Venugopal et al., 2023).

Self-care plays a crucial role in managing chronic diseases, and complementary therapies like reflexology can contribute to patients' self-care processes and improve their quality of life (Kralik et al., 2010; Lindsay et al., 2011). Healthcare professionals should adopt a holistic approach, addressing patients' physical, psychosocial, and spiritual needs, while providing guidance on various complementary therapies (Erci, 2007). While reflexology shows potential as a complementary therapy for managing chronic diseases, further research is necessary to develop evidence-based practices.

REFLEXOLOGY APPLICATIONS IN NURSING

The Role of Nurses in TCM Practices

Reflexology is an increasingly utilized complementary therapy in nursing practices. Various studies have highlighted its positive effects across different patient groups. For instance, in lymphoma patients, foot reflexology was shown to reduce fatigue and pain while improving sleep quality (Rambod et al., 2019). Similarly, foot reflexology significantly enhanced sleep quality in postpartum women (Li et al., 2009). However, not all studies have demonstrated consistent effectiveness. A meta-analysis on hypertensive patients revealed that foot reflexology did not significantly lower blood pressure (Venugopal et al., 2023). Thus, more research is needed to evaluate its effectiveness in various contexts.

Reflexology holds promise as a complementary therapy in nursing practices. Nurses can be trained to use reflexology to improve patients' tolerance and quality of life during painful and anxiety-inducing procedures (Blackburn et al., 2021). However, adequate time, resources, and training are essential for nurses to effectively implement such practices. Reflexology has demonstrated positive outcomes across various patient groups and is increasingly recognized as a complementary therapy in nursing.

In hemodialysis patients, a study revealed that foot reflexology and back massage improved sleep quality and reduced fatigue, with foot reflexology showing greater effectiveness (Unal and Akpinar, 2016). Similarly, in lymphoma patients, foot reflexology reduced fatigue and pain while improving sleep quality (Rambod et al., 2019). Patients with rheumatoid arthritis also experienced reduced pain and enhanced sleep quality following foot reflexology (Bakir et al., 2018). However, conflicting results have been reported regarding reflexology's efficacy. For example, in patients undergoing cardiac surgery, foot reflexology massage did not significantly affect delirium incidence or sleep quality but did

reduce pain intensity (Fazlollah et al., 2021). A meta-analysis on hypertensive patients concluded that foot reflexology was not effective in lowering blood pressure (Venugopal et al., 2023).

Reflexology has shown promise in improving symptoms such as pain, anxiety, fatigue, and sleep quality in several studies (Unal and Akpinar, 2016; Öztürk et al., 2017; Bakir et al., 2018; Rambod et al., 2019). Positive outcomes have been particularly noted in hemodialysis patients, post-abdominal hysterectomy patients, and those undergoing coronary artery bypass graft surgery (Unal and Akpinar, 2016; Öztürk et al., 2017; Göktuna et al., 2023).

Nurses' Training and Competencies in Reflexology

There is limited specific information on the competencies and training of nurses in reflexology. However, many studies have indicated that reflexology is often performed by nurses. For instance, one study described reflexology as an "effective nursing intervention" (Öztürk et al., 2017).

THE FUTURE OF REFLEXOLOGY IN NURSING PRACTICE

Reflexology is gaining traction as an effective complementary therapy for various health issues in nursing practices. Research has highlighted its benefits in areas such as pain management, sleep quality, and anxiety reduction. For instance, reflexology has been shown to reduce the severity of restless legs syndrome in hemodialysis patients (Shahgholian et al., 2016), alleviate chemotherapy-induced peripheral neuropathy symptoms (Noh and Park, 2019), and decrease intraoperative anxiety during varicose vein surgeries (Hudson et al., 2015). However, some studies present contradictory findings. For example, while one study suggested that reflexology reduced beta-endorphin levels (Mccullough et al., 2018), others reported positive effects on pain management (Bakir et al., 2018; Rambod et al., 2019). These inconsistencies underscore the need for a deeper understanding of reflexology's mechanisms of action.

Future research should focus on larger, controlled studies to establish the effectiveness of reflexology, explore its applicability across diverse patient groups, and integrate it into nursing education curricula. Additionally, examining the use of reflexology in conjunction with other complementary therapies and evaluating its cost-effectiveness are essential steps to advancing its application in healthcare.

CLINICAL EFFICACY OF REFLEXOLOGY: AN EVIDENCE-BASED APPROACH

Reflexology has emerged as an effective complementary therapy in various clinical scenarios. In patients with multiple sclerosis, foot reflexology significantly reduced constipation severity, though it did not have a meaningful impact on quality of life (Sajadi et al., 2019). Similarly, it has been shown to alleviate chemotherapy-induced peripheral neuropathy, anxiety, and depression symptoms in patients with gynecological cancers (Noh and Park, 2019).

However, conflicting results regarding the efficacy of reflexology have also been reported. For example, in cardiac surgery patients, reflexology was not effective in improving delirium incidence or sleep quality but did reduce pain intensity (Fazlollah et al., 2021). Additionally, an fMRI study in healthy participants found no significant differences in brain connectivity between reflexology and sham massage (Descamps et al., 2023).

Despite these discrepancies, reflexology demonstrates promising outcomes in specific clinical settings. A study on advanced-stage breast cancer patients revealed that reflexology was safe and beneficial in reducing dyspnea and improving functional status (Wyatt et al., 2012). However, methodological limitations and a lack of standardization necessitate further randomized controlled trials before reflexology can be widely integrated into clinical practice.

EVIDENCE-BASED OUTCOMES IN SPECIFIC POPULATIONS

- **Menopausal Women**: Reflexology reduced vasomotor symptoms and improved quality of life (Gozuyesil and Baser, 2016).
- **Rheumatoid Arthritis Patients**: Reflexology decreased pain and improved sleep quality (Bakir et al., 2018).
- **Multiple Sclerosis Patients**: Reflexology alleviated constipation but did not significantly affect quality of life (Sajadi et al., 2019).
- **Gynecological Cancer Patients**: Reflexology mitigated chemotherapy-induced peripheral neuropathy, anxiety, and depression (Noh and Park, 2019).

While these findings highlight the potential benefits of reflexology, conflicting evidence exists. For instance, a systematic review found limited evidence for reflexology's effectiveness in premenstrual syndrome due to methodological constraints (Stevinson and Ernst, 2001). Similarly, while reflexology showed promising effects on motor and non-motor symptoms in Parkinson's disease, further research is required due to methodological concerns (Angelopoulou et al., 2020).

CHALLENGES AND FUTURE DIRECTIONS

Although reflexology offers promising outcomes, its full clinical efficacy remains uncertain. Larger, high-quality studies are essential to validate its effectiveness, particularly in managing anxiety and physiological parameters (Abbaszadeh et al., 2018; Chandrababu et al., 2018). Given current methodological limitations and inconsistent findings, incorporating reflexology into routine clinical practice may be premature.

Reflexology, as a non-invasive complementary therapy within the scope of traditional and alternative medicine, has gained popularity in recent years. However, debates regarding its clinical efficacy persist within the context of evidence-

based medicine (Cai et al., 2022). For example, a systematic review of reflexology for premenstrual syndrome found that methodological limitations rendered the results inconclusive (Stevinson and Ernst, 2001).

In a systematic review of complementary and alternative interventions to improve sleep quality in intensive care unit patients, reflexology and other methods showed promising results. However, small sample sizes and limitations in sleep measurement techniques underscored the need for further research (Cooke et al., 2020). Furthermore, applying evidence-based approaches to traditional and complementary medicine poses unique challenges, as randomized controlled trials may not always be feasible in this context (Derkatch, 2008; Fung and Linn, 2015).

ETHICAL AND LEGAL ASPECTS

Ethical Principles in TCM Practices

Ethical principles play a vital role in the practice of Traditional and Complementary Medicine (TCM):

- **Patient Communication and Guidance**: Considering the widespread use and potential benefits of TCM, it is crucial for healthcare providers to communicate with patients about these therapies and provide guidance. Physicians should inform patients about possible interactions (e.g., drug-herb or radiation-antioxidant interactions) and product contamination risks, while discussing alternative treatments that may alleviate symptoms or enhance quality of life (Rosenthal and Dean-Clower, 2005).
- **Safety and Efficacy Concerns**: There are concerns regarding the safety and efficacy of TCM practices. Conventional healthcare providers often express apprehension about potential adverse effects of TCM (Kretchy et al., 2016). As such, ensuring the safety, regulation, and evidence-based application of TCM practices is essential.

- **Education and Integration**: Improving the knowledge of practitioners, providing training, and addressing safety and efficacy issues are necessary for integrating TCM into healthcare (Kretchy et al., 2016). Additionally, a patient-centered approach supported by leadership, stakeholder collaboration, interprofessional education, and effective communication is critical for delivering high-quality care (Chung et al., 2021).

Integrating TCM practices, including reflexology, in adherence to ethical principles can enhance patient safety and care quality.

Legal Framework of Reflexology in Nursing Practices

Reflexology is utilized as a complementary therapy within nursing practices, but its legal framework varies by country:

- **Legal Status**: The legal status of reflexology in nursing practices remains unclear. In the United States, complementary therapies like reflexology are subject to varying regulations across states, similar to telehealth practices (Garber et al., 2023). In the European Union, there are no specific regulations governing complementary therapies.
- **Efficacy and Safety**: Reflexology shows mixed results regarding efficacy and safety. For example, one study found that reflexology reduced dyspnea and improved functional status in advanced-stage breast cancer patients (Wyatt et al., 2012). However, a systematic review indicated that while reflexology has positive effects in children, it is premature to generalize the findings (Karatas and Dalgic, 2020).

Given the varying legal frameworks and the need for further evidence on efficacy and safety, nurses should adhere to local regulations and clinical guidelines when practicing reflexology. In the future, specific regulations may clarify the role of reflexology in nursing practices.

CONCLUSION

Reflexology is regarded as a valuable complementary therapy in nursing, particularly for managing symptoms like pain, fatigue, and sleep disturbances. However, its suitability varies by patient, and its mechanisms require better understanding. Nurses can enhance care quality by applying reflexology in appropriate cases, while remaining informed of legal and clinical guidelines.

Although reflexology shows promise in managing symptoms such as anxiety and pain, further high-quality research is necessary to establish its efficacy definitively. Its non-invasive nature makes it an attractive option for complementary therapy, but its effects can vary depending on the condition treated and the specific protocol applied.

Complementary approaches like reflexology also appear effective in improving sleep regulation and mental health. These methods can offer non-pharmaceutical options for common issues like stress, anxiety, and sleep disorders. However, larger-scale and long-term studies are required to explore these effects in greater detail. Reflexology stands out as a method with positive effects on pain, fatigue, and sleep quality in nursing practices. However, further research is required to better understand its effectiveness across different patient groups and symptoms. Nurses can evaluate and apply reflexology as a complementary therapy for suitable patient populations.

The significance of reflexology in nursing practices is evident, as it is an effective method for alleviating patients' symptoms. Nevertheless, more research is needed on the training and competencies of nurses in reflexology. Future studies could focus on the standardization of reflexology education for nurses and the assessment of their competencies.

Current evidence on the clinical efficacy of reflexology is limited and inconsistent. To achieve more reliable conclusions, methodologically robust, large-scale randomized controlled

trials are necessary. Additionally, further studies are needed to adapt evidence-based medicine principles to complementary and alternative medicine practices, ensuring their integration into healthcare systems with greater rigor and consistency.

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FACTORS CAUSING MORAL DISTRESS: AN EVALUATION FROM THE PERSPECTIVE OF NURSES

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INTRODUCTION

Moral distress among nurses is a complex phenomenon influenced by various factors. Several studies have identified key contributors to moral distress in nursing practice. Inadequate staffing and resources are consistently reported as major causes of moral distress (Elpern et al., 2005; Schaefer et al., 2016; Atashzadeh-Shoorideh et al., 2020). Nurses often face ethical dilemmas when they are unable to provide optimal care due to organizational constraints. Poor collaboration between nurses and physicians, lack of support from colleagues and organizations, and heavy workloads also contribute significantly to moral distress (Atashzadeh-Shoorideh et al., 2020; Hou et al., 2021).

The level of moral distress is not uniform across all nurses. Experience plays a role, with more experienced nurses reporting higher levels of moral distress (Elpern et al., 2005). This contradicts the assumption that experience might mitigate moral distress. Additionally, the ethical climate of the workplace and the nursing practice environment have been found to have a strong inverse correlation with moral distress levels (Pauly et al., 2009; Hou et al., 2021).

Moral distress in nursing is a multifaceted issue stemming from both organizational and individual factors. Addressing this problem requires a comprehensive approach, including improving staffing levels, enhancing interprofessional

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collaboration, and fostering a positive ethical climate in healthcare settings (Hiler et al., 2018). Future research should focus on developing and testing strategies to mitigate moral distress, particularly in critical care settings where the intensity of moral distress tends to be higher (Elpern et al., 2005; Hiler et al., 2018).

MORAL DISTRESS: CONCEPTUAL FRAMEWORK

Moral distress is a complex phenomenon in healthcare, particularly in nursing and palliative care. Several conceptual frameworks have been proposed to understand and address moral distress. One framework, applied to palliative care, considers four interrelated factors: empathy, perspective taking, memory, and moral sensitivity (Rushton et al., 2013). This framework aims to foster principled compassion instead of unregulated moral outrage when clinicians face moral dilemmas.

Another perspective uses virtue ethics to understand moral distress in nursing. This approach considers how identity, social context, beliefs, and tradition shape moral discomfort, uncertainty, and sensitivity, and how virtues inform moral judgments (Caram et al., 2021). Some researchers propose integrating moral distress with the concept of moral injury, suggesting a more holistic approach to understanding these moral challenges (Grimell and Nilsson, 2020).

There is ongoing debate about the definition and conceptualization of moral distress. Some argue for a revised definition that doesn't necessitate moral constraint and includes moral conflict as a potential cause (Fourie, 2013). Others propose a philosophical taxonomy of ethically significant moral distress, categorizing it into challenges, threats, and violations of professional and individual integrity (Thomas and Mccullough, 2014). The Moral Distress Model, developed through feminist empirical bioethics, identifies five compounding factors that exacerbate or mitigate moral distress experiences (Morley et al., 2021). These various frameworks

and models demonstrate the complexity of moral distress and the need for a nuanced, multidisciplinary approach to understanding and addressing this issue in healthcare settings.

Definition of Moral Distress

Moral distress is a complex psychological state experienced by healthcare professionals when they know the ethically correct course of action but are constrained from pursuing it due to institutional or other barriers (Repenshek, 2009; Mcandrew et al., 2016). It arises in situations involving ethical conflicts, particularly in high-intensity work environments like critical care units and neonatal intensive care units (Mcandrew et al., 2016; Thorne et al., 2018).

There is ongoing debate about the precise definition of moral distress. While Jameton's 1984 definition focusing on institutional constraints is widely cited, some researchers argue that this definition is too narrow and should be expanded to include moral conflicts as potential causes of distress (Fourie, 2013). Additionally, moral distress is distinct from ethical dilemmas, where the right course of action is unclear (Tiedje, 2000).

In summary, moral distress is a prevalent issue affecting various healthcare disciplines, including nursing, medicine, and pharmacy (Sporrong et al., 2006; Allen et al., 2013). It is characterized by emotional anguish resulting from the inability to act on one's moral convictions due to external constraints or conflicts. This psychological state can have significant impacts on healthcare professionals' well-being and patient care quality, highlighting the need for further research and interventions to address this issue (Austin, 2016; Mcandrew et al., 2016).

Moral Distress: The Role of Ethical Issues in Health Care

Moral distress is a significant issue in healthcare, arising when professionals are unable to act according to their ethical beliefs due to internal or external constraints. It is prevalent

across various healthcare settings and disciplines, including nursing, medicine, and veterinary care (Kälvemark et al., 2004; Arbe Montoya et al., 2019; Corradi-Perini et al., 2020). The consequences of moral distress can be severe, leading to problems such as avoidance of patients, increased staff turnover, and negative impacts on the quality of care provided (Hamric et al., 2012; Arbe Montoya et al., 2019; Corradi-Perini et al., 2020).

Moral distress is not limited to situations where healthcare providers are prevented from acting on their moral convictions. It can also occur when professionals follow their moral decisions but clash with legal regulations or organizational policies (Kälvemark et al., 2004). Additionally, the concept of moral distress extends beyond individual healthcare providers and their subjective moral convictions, emphasizing the importance of considering the broader context of ethical dilemmas in healthcare settings (Kälvemark et al., 2004; Rathert et al., 2016).

To address moral distress, healthcare organizations and leaders must implement comprehensive strategies. These may include providing ethics education and resources, offering interventions such as ethics debriefings, establishing ethics committees, and hiring bioethicists to develop ethics capacity (Bell and Breslin, 2008). Improving communication, empowering healthcare professionals, and creating supportive organizational environments are also crucial in reducing and preventing moral distress (Rathert et al., 2016; Corradi-Perini et al., 2020). By addressing moral distress, healthcare organizations can enhance job satisfaction, retain valuable professionals, and ultimately improve the quality of patient care (Hamric et al., 2012; Pergert et al., 2018).

MORAL DISTRESS IN THE NURSING PROFESSION

Moral distress is a significant issue in the nursing profession, affecting nurses across various specialties and experience levels. It arises from ethical conflicts in practice,

particularly in critical care settings, where technological advancements, high-intensity work environments, and end-of-life decisions contribute to its prevalence (Mcandrew et al., 2016). Nurses experiencing moral distress report moderate to high levels of intensity, which can lead to burnout, decreased job satisfaction, and intentions to leave their current positions or the profession altogether (Pauly et al., 2009; Hamaideh, 2013; Oh and Gastmans, 2013).

Research has revealed some contradictions and noteworthy findings. While some studies found correlations between moral distress and demographic factors such as age, income level, and years of experience (Hamaideh, 2013), others reported conflicting results regarding nurse demographics (Mcandrew et al., 2016). Additionally, a gender difference in moral distress scores was observed in one study, with females reporting significantly higher levels than males (O'Connell, 2014). This finding had not been previously reported in the literature and warrants further investigation.

Moral distress is a complex phenomenon with far-reaching consequences for nurses, patients, and healthcare organizations. It is influenced by various factors, including ethical climate, organizational constraints, and individual characteristics (Pauly et al., 2009; Atabay et al., 2014). Addressing moral distress requires a multifaceted approach, including improving the professional practice environment, enhancing communication during end-of-life decisions, and developing effective interventions to support nurses in coping with ethical dilemmas (Oh and Gastmans, 2013; Mcandrew et al., 2016). Further research is needed to examine patient and family outcomes related to nurse moral distress and to develop strategies for minimizing its impact on the nursing profession (Rice et al., 2008; Mcandrew et al., 2016).

Ethical Dilemmas Faced by Nurses

Nurses frequently encounter ethical dilemmas in their clinical practice, which can lead to moral distress and impact

the quality of patient care. Common ethical dilemmas faced by nurses include end-of-life issues, conflicts with physicians or families, patient privacy concerns, and organizational constraints (Rainer et al., 2018). Pain management, cost containment, and making decisions in the patient's best interest are also frequently cited ethical challenges (Raines, 2000). In oncology settings, nurses reported experiencing an average of 32 different types of ethical dilemmas within a year on a daily basis (Raines, 2000).

The frequency and intensity of ethical dilemmas can vary across different healthcare settings. Additionally, research nurses face unique ethical tensions between their obligations to research studies and patient care (Höglund et al., 2010). The COVID-19 pandemic has further exacerbated ethical challenges for nurses, particularly in intensive care and inpatient units (Caro-Alonso et al., 2023).

Ethical dilemmas are prevalent and diverse in nursing practice, spanning various specialties and settings. The most common themes include end-of-life care, patient autonomy, resource allocation, and conflicts between professional duties and personal values. Addressing these ethical challenges is crucial for maintaining high-quality patient care and preventing moral distress among nurses. Strategies such as promoting ethical competence, providing support systems, and fostering collaborative decision-making processes can help nurses navigate these complex situations more effectively (Barlow et al., 2017; Rainer et al., 2018; Caro-Alonso et al., 2023).

The Effect of Moral Distress on Nursing Practices

Moral distress has significant effects on nursing practices, impacting patient care quality, job satisfaction, and nurse retention. Studies have shown that nurses experiencing moral distress may provide compromised or inadequate care (Mcandrew et al., 2016; Deschenes and Kunyk, 2019). This can manifest as withdrawal from patients, decreased job satisfaction, and increased turnover rates (O'Connell, 2014).

The consequences of moral distress can be long-lasting, potentially affecting future patient care due to the "crescendo effect" where unresolved situations leave residue on the nurse (Arnold, 2020).

The impact of moral distress varies across different nursing specialties and demographics. Critical care and emergency nurses seem particularly vulnerable due to the high-intensity work environments and complex end-of-life decisions they face (Mcandrew et al., 2016; Arnold, 2020). Gender differences have also been observed, with female nurses reporting significantly higher moral distress scores than males (O'Connell, 2014). Additionally, nursing experience appears to exacerbate both the intensity and frequency of moral distress (Rice et al., 2008).

Moral distress is a pervasive issue in nursing that negatively affects patient care, nurse well-being, and healthcare organizations. It is influenced by factors such as ethical climate, nurse-physician collaboration, and institutional constraints (Atabay et al., 2014; Hou et al., 2021). Addressing moral distress requires a multifaceted approach, including improving the professional practice environment, enhancing communication during end-of-life decisions, and developing effective interventions to support nurses in managing ethical conflicts (Tiedje, 2000; Mcandrew et al., 2016). Further research is needed to fully understand the impact of moral distress on patient and family outcomes and to develop strategies for mitigating its effects across various nursing specialties and demographics (O'Connell, 2014; Mcandrew et al., 2016; Sasso et al., 2016).

FACTORS CAUSING MORAL DISTRESS IN NURSES

Moral distress in nurses is caused by various factors related to their work environment, professional relationships, and ethical challenges. Several studies have identified key contributors to moral distress:

Provision of aggressive care to patients not expected to benefit, lack of nursing staff, inadequate experience, poor organizational support, and heavy workload are significant factors (Elpern et al., 2005; Atashzadeh-Shoorideh et al., 2020). Futile care and deception-related situations also contribute to moral distress, with frequency increasing with years of nursing experience (Rice et al., 2008). Additionally, technological advancement, high-intensity work environments, and end-of-life decisions in critical care settings exacerbate moral distress (Mcandrew et al., 2016).

Moral sensitivity, often considered an advantage for nurses, can actually increase moral distress. Nurses with higher moral sensitivity may be more prone to experiencing moral distress as they can sense and identify moral problems but may struggle to resolve them (Ohnishi et al., 2018). This contradicts the assumption that moral sensitivity is always beneficial for nurses' well-being.

Moral distress in nurses is a complex phenomenon influenced by various organizational, relational, and individual factors. These include inadequate staffing, lack of support, ethical conflicts, and personal characteristics like moral sensitivity and experience. Addressing these factors is crucial for improving nurses' job satisfaction, retention, and overall well-being, as well as ensuring high-quality patient care (Elpern et al., 2005; Mcandrew et al., 2016; Hiler et al., 2018).

Institutional and Political Factors

Organizational constraints and lack of support are major contributors to moral distress in nurses. Studies have found that inadequate staffing, heavy workloads, and lack of organizational support are key factors (Rice et al., 2008; Atashzadeh-Shoorideh et al., 2020). Nurses often feel powerless at the organizational level to address ethical issues (Prompahakul et al., 2021). Perceptions of poor practice environments and patient safety concerns are also associated with increased moral distress (Hiler et al., 2018).

There are some contradictions in the findings. While Robaee et al. (2018) found no significant relationship between perceived organizational support and moral distress, other studies emphasized the importance of organizational factors. Burton et al. (2024) highlighted that organizational support and institutional betrayal were significant predictors of moral distress during the COVID-19 pandemic.

Institutional factors like inadequate staffing, lack of support, and poor practice environments are major causes of moral distress in nurses. Political and systemic issues such as healthcare disparities also contribute (Sasso et al., 2016). Addressing these organizational and institutional factors through supportive work environments, adequate staffing, and empowering nurses to address ethical issues could help mitigate moral distress (Hiler et al., 2018; Ohnishi et al., 2018). Further research is needed to fully understand the complex relationships between institutional factors and moral distress in different healthcare contexts.

Working Conditions and Resource Inadequacies

Moral distress in nurses is significantly influenced by various working conditions and resource inadequacies. Several studies have identified key factors contributing to this issue:

Lack of nursing staff, heavy workload, and inadequate experience among nurses are major contributors to moral distress (Atashzadeh-Shoorideh et al., 2020). These factors can lead to poor quality of care and ethical insensitivity. Additionally, insufficient support from organizations and colleagues, along with inadequate education and knowledge, exacerbate the problem (Atashzadeh-Shoorideh et al., 2020). The provision of aggressive care to patients not expected to benefit from it is also associated with high levels of moral distress (Elpern et al., 2005).

Some studies have found contradictory results regarding the relationship between moral distress and certain factors. For instance, while Rice et al. (2008) suggests that moral

distress increases with years of nursing experience, Hiler et al. (2018) indicates that 56% of nurses with less than 20 years of experience reported moral distress. Furthermore, Soleimani et al. (2016) found no significant correlation between spiritual well-being and moral distress, contrary to what might be expected.

Addressing moral distress in nurses requires a multifaceted approach. Improving nurse-physician collaboration (Hou et al., 2021), creating healthier work environments (Hiler et al., 2018), and providing adequate resources and support are crucial steps. Additionally, fostering ethical debates and involving nurses in end-of-life decisions may help mitigate moral distress (Piers et al., 2012). Recognizing the complex nature of this issue and its impact on job satisfaction, retention, and patient care is essential for developing effective strategies to support nurses in their challenging work environments.

Patient and Family Expectations

Moral distress in nurses can be significantly influenced by patient and family expectations, particularly in end-of-life care situations. Several studies have highlighted this as a key factor contributing to nurses' moral distress:

Unrealistic expectations from patients and families, especially regarding life support and futile care, are major sources of moral distress for nurses (Pavlish et al., 2011; Fernandez-Parsons et al., 2013). Nurses often find themselves caught between following family wishes to continue life support and their professional judgment about the futility of such care (Fernandez-Parsons et al., 2013). This conflict is particularly prevalent in critical care settings, where nurses frequently encounter situations related to end-of-life care for both children and adults (Pavlish et al., 2011).

Cultural and religious perspectives can also play a role in shaping patient and family expectations, potentially exacerbating moral distress. For instance, in Thailand, nurses' experiences of moral distress were influenced by patients'

and families' religious perspectives, highlighting the need to explore this aspect further in different cultural contexts (Prompahakul et al., 2021).

Colleagues and Multidisciplinary Team Dynamics

Moral distress in nurses is significantly influenced by colleagues and multidisciplinary team dynamics. Poor collaboration between physicians and nurses, ethical insensitivity, and lack of teamwork are identified as risk factors for moral distress (Atashzadeh-Shoorideh et al., 2020). The relationship with mentors can also negatively impact nursing care decisions and generate moral distress, especially for nursing students (Sasso et al., 2016).

Team dynamics play a crucial role in exacerbating or mitigating moral distress. Low satisfaction with consultation possibilities within the team and an instrumental leadership style are associated with higher levels of moral distress (De Veer et al., 2013). Poor communication, bullying, and lack of collegial collaboration are team-level factors contributing to moral distress (Vincent et al., 2020). Additionally, the ethical climate, particularly nurse-physician collaboration, is a statistically significant predictor of moral distress levels in emergency department nurses (Hou et al., 2021).

The quality of interprofessional relationships and team functioning are critical factors in the development of moral distress among nurses. Improving team communication, fostering a positive ethical climate, and enhancing collaboration between healthcare professionals may help mitigate moral distress. Future interventions should target organizational issues and focus on supporting teams to reduce moral distress levels (De Veer et al., 2013; Vincent et al., 2020).

MORAL DISTRESS FROM THE NURSES' PERSPECTIVE

Moral distress is a significant issue in nursing practice, affecting nurses across various healthcare settings and cultures. It arises when nurses face constraints in their ability to act

according to their moral judgments, often due to institutional, team, or resource-related factors (Deschenes and Kunyk, 2019; Caram et al., 2021). The experience of moral distress can have profound impacts on nurses' personal and professional lives, potentially leading to psychological and physical symptoms, reduced job satisfaction, and even inadequate patient care (Mccarthy and Gastmans, 2014; Deschenes and Kunyk, 2019).

While moral distress is widely recognized as a challenge in nursing, there are differing perspectives on its conceptualization and implications. Some argue that identifying nurses as marginalized voices might disempower them, while others view moral distress as indicative of deeper structural inequities in healthcare (Mccarthy and Gastmans, 2014). Additionally, cultural differences between Western and non-Western countries may influence the experience of moral distress, highlighting the need for diverse perspectives in research (Prompahakul and Epstein, 2019).

Addressing moral distress requires a multifaceted approach. Promoting psychological capital, fostering teamwork, and providing opportunities for ethical discussions and education have been identified as potential strategies to mitigate moral distress (Edwards et al., 2013; Grace et al., 2014; Xue et al., 2023). Furthermore, developing nurses' moral courage and resilience, as well as creating supportive environments that recognize the moral labor of nursing, are crucial steps in empowering nurses to navigate complex ethical situations and maintain high-quality patient care (Mccarthy and Gastmans, 2014; Gibson et al., 2020).

Experiences and Observations

Moral distress is a significant issue in nursing practice, affecting nurses across various healthcare settings. It arises when nurses face ethical challenges that conflict with their personal and professional values (Fourie, 2013; Caram et al., 2021). The experience of moral distress can be triggered by

multiple factors, including providing futile care, especially in end-of-life situations, poor collaboration and communication within healthcare teams, working with incompetent colleagues, and organizational constraints such as limited resources and excessive administrative work (Prompahakul and Epstein, 2019).

The concept of moral distress is not limited to situations of moral constraint, as previously thought. Recent research suggests that moral distress can also result from moral uncertainty, moral conflict, and moral dilemmas (Morley et al., 2019). This broader understanding of moral distress highlights the complexity of ethical decision-making in nursing practice and the need for a more comprehensive approach to addressing this issue.

Moral distress has significant implications for nurses' well-being, job satisfaction, and retention in the profession (Deschenes and Kunyk, 2019; Xue et al., 2023). To address this issue effectively, it is crucial to promote psychological capital among nurses, improve ethical climates in healthcare settings, and provide opportunities for open discussions and ethical education (Porter, 2012; Edwards et al., 2013).

Emotional and Psychological Effects

Moral distress is a significant issue for nurses, causing a range of emotional and psychological effects. Nurses experiencing moral distress may suffer from psychological and physical symptoms, reduced job satisfaction, and even provide inadequate or inappropriate care (Deschenes and Kunyk, 2019). The experience can lead to a "battle within," resulting in complex and long-lasting effects that potentially impact future patient care (Arnold, 2020).

Moral distress can have far-reaching consequences beyond the immediate work environment. Nurses report that moral distress adversely affects their job satisfaction, retention, psychological and physical well-being, self-image, and spirituality. It can even influence attitudes toward advance

directives and participation in blood and organ donation (Elpern et al., 2005). Furthermore, moral distress has been positively correlated with burnout, while psychological capital is negatively correlated with both moral distress and burnout (Xue et al., 2023).

Moral distress has profound emotional and psychological effects on nurses, impacting their personal and professional lives. It can lead to a crescendo effect, leaving residue on the nurse with potential outcomes such as moral numbing, conscious objection, and burnout (Arnold, 2020). Recognizing and addressing moral distress is crucial for maintaining nurses' well-being and ensuring optimal patient care. Strategies to mitigate moral distress, such as promoting psychological capital and improving the ethical climate in healthcare settings, should be developed and implemented to support nurses in their challenging roles (Hou et al., 2021; Xue et al., 2023).

METHODS TO REDUCE MORAL DISTRESS

Several interventions have been identified to help reduce moral distress among healthcare professionals:

Educational interventions have shown promise in managing moral distress among critical care nurses. Studies have found that educational workshops, moral empowerment programs, and ethics training can be effective in alleviating moral distress (Emami Zeydi et al., 2022). For medical students, incorporating geriatrics education and debriefing sessions into inpatient clerkships could help alleviate moral distress and burnout (Perni et al., 2020).

Organizational-level interventions are also important. Educating leadership about sources of moral distress was identified as a key countermeasure by radiologists (Dave et al., 2023). Implementing job creation and retention programs, as well as integrated income support systems, can help prevent economic distress that may contribute to moral distress (Voydanoff, 1984).

Some studies suggest that completely eliminating moral distress may not be desirable. In neonatal intensive care units, while interventions were desired to decrease negative impacts, moral distress was also viewed as an essential component of the caring profession that prompts robust discussion and acts as an impetus for medical decision-making (Prentice et al., 2017). This highlights the need for a nuanced approach to managing moral distress.

Institutional Support and Training Programmes

Institutional support and training programs play a crucial role in reducing moral distress among healthcare professionals. Several strategies have been identified to address this issue:

Educational interventions of varying lengths and breadths have shown promise in mitigating moral distress. These interventions can help healthcare workers better understand and cope with ethical challenges. Additionally, facilitated discussions ranging from 30 to 60 minutes, specialist consultation services, and multidisciplinary rounds have been implemented to address moral distress (Morley et al., 2021).

Critical care nurses are encouraged to take a leadership role in their units to address moral distress with their employing institutions and develop evidence-based strategies to lessen its impact (Huffman and Rittenmeyer, 2012). This approach emphasizes the importance of institutional involvement in combating moral distress.

Some specific methods to reduce moral distress include:

Listening attentively to colleagues' concerns, shifting focus from moral distress to moral agency, promoting ethically-attuned discussions and education, and providing personal support for healthcare professionals (Carnevale, 2020). These strategies aim to create a more supportive and ethically aware work environment.

A social worker-facilitated protocol called Reflective Debriefing has shown positive results in alleviating moral distress through regular debriefings with nursing staff in

an intensive care unit (Browning and Cruz, 2018). This intervention emphasizes the importance of interprofessional collaboration in combating moral distress.

A multifaceted approach involving educational interventions, facilitated discussions, institutional support, and interprofessional collaboration appears to be most effective in reducing moral distress among healthcare professionals. However, more rigorous research is needed to establish the efficacy of these interventions and develop evidence-based strategies for addressing moral distress in various healthcare settings (Morley et al., 2021).

Ethical Counselling and Support Mechanisms

Ethical counseling and support mechanisms have been identified as important methods to reduce moral distress among healthcare professionals:

Several studies highlight the need for organizational support and ethics education to help mitigate moral distress. Providing structured ethics training programs can help professionals develop competence in handling ethical dilemmas, though their direct impact on reducing moral distress may be limited (Sporrong et al., 2006). Developing forums for discussing ethically troubling situations and providing better support resources and structures within healthcare organizations are recommended to decrease moral distress (Kälvemark et al., 2004).

Some research suggests that increasing moral efficacy and organizational ethics support can help reduce moral distress indirectly by encouraging moral voice - the willingness to speak up about ethical issues (Rathert et al., 2016). This indicates that empowering healthcare workers to voice their ethical concerns may be an effective strategy. Additionally, workload management, mutual support among professionals, and techniques to cultivate open communication and reflection within multidisciplinary teams have been identified as helpful coping strategies (Santos et al., 2018). Developing

comprehensive, proactive frameworks focused on preventing ethical conflicts, as proposed in Pavlish et al. (2013), may also be beneficial.

Nurses' Own Strategies

Nurses employ various strategies to reduce moral distress in their professional practice:

Developing coping mechanisms is a crucial approach for nurses to manage moral distress. This includes seeking support from colleagues, engaging in self-care activities, and utilizing personal action plans (Allen and Butter, 2016). Some nurses adopt avoidance behaviors as a coping strategy, though this has a small positive correlation with moral distress levels (De Villers and Devon, 2012). Enhancing moral resilience is another effective method, as it can mediate the relationship between moral distress and job embeddedness (Li et al., 2023).

Different racial and gender groups may employ varied coping strategies to deal with moral distress (Delgado-Ron et al., 2024). This highlights the importance of considering intersectionality when developing interventions to support nurses. Additionally, some nurses focus on maintaining their commitment to providing optimal patient care despite experiencing moral distress (Huffman and Rittenmeyer, 2012).

Nurses use a range of personal strategies to combat moral distress, including developing coping mechanisms, enhancing moral resilience, and maintaining a strong commitment to patient care. However, it's important to note that while these individual strategies are helpful, they should be complemented by institutional support and systemic changes to create a more supportive ethical climate for nurses (Huffman and Rittenmeyer, 2012; Silverman et al., 2021).

CONCLUSION

Moral distress among nurses is caused by various factors, including ethical dilemmas, organizational constraints, and challenging work environments. Inequalities in healthcare, relationships with mentors, and individual characteristics

can negatively impact decision-making and care provision, generating moral distress. Organizational pressures, increased workload, and lack of support contribute to moral distress in nurse leaders. Moral distress is not limited to practicing nurses but also affects nursing students. Compromised best practices, disrespect for human dignity, perceived constraints, and navigating personal values are common themes in distressing clinical situations for students. In critical care settings, nurses experience moral distress due to ambivalence towards treatment, lack of ethical sensitivity, limited autonomy, conflicts with physicians, and institutional policies.

Patient and family expectations, particularly those related to end-of-life care and futile treatments, are significant contributors to moral distress in nurses. This underscores the importance of effective communication, education, and support systems to help nurses navigate these challenging situations and mitigate the impact of moral distress on their well-being and job satisfaction. By recognizing the multifaceted nature of moral distress and implementing targeted interventions, healthcare organizations can better support nurses in navigating ethical challenges and maintaining their moral integrity. A multi-faceted approach combining educational interventions, organizational support, ethical training, and opportunities for debriefing and discussion appears most promising for reducing moral distress among healthcare professionals. However, recognizing the potential positive aspects of moral distress in promoting advocacy and ethical decision-making is also important when developing interventions. A multi-faceted approach involving ethics education, organizational support mechanisms, forums for ethical discussions, and strategies to empower moral agency appears most promising for addressing moral distress. Further research is needed to evaluate the efficacy of different interventions in reducing moral distress among healthcare professionals.

In conclusion, moral distress is a significant issue affecting nurses across various specialties and career stages. It can lead to burnout, job dissatisfaction, and high turnover rates. To address this problem, healthcare organizations should prioritize strategies to prevent and manage moral distress. Recommendations include implementing nursing ethics huddles, fostering resilience and job satisfaction, and developing coping strategies. Additionally, creating a supportive ethical climate, improving communication, and addressing staffing issues are crucial steps in mitigating moral distress among nurses.

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A MULTIDIMENSIONAL CONCEPT ANALYSIS OF NURSING CARE

Aytap Dincer[1]

INTRODUCTION

Humans are beings with biological, psychological, sociocultural, and spiritual dimensions. Each of these dimensions has associated needs, and there is a continuous interaction among them. Moreover, humans are entities that move along the health-illness continuum and require the assistance and support of healthcare professionals for health promotion and recovery from illnesses. Care, as a fundamental part of human growth and development, is a lifelong necessity for every individual (Ay, 2021). Care is a way of being. The concept of care is multidimensional and has been defined differently by various nursing theorists. According to Watson, care is an interpersonal process that results in meeting human needs to promote health, restore health, and prevent illnesses. Watson (1985) states that caregiving is the essence of nursing, the central and unifying focus of nursing practice. Joyce Travelbee (1971) highlighted the importance of all dimensions of care by stating, "A nurse provides holistic care to the individual, not only from a physical perspective or to reduce physical pain" (Martsolf and Mickley, 1998).

The essence of nursing care involves taking direct measures to help individuals meet their basic biological needs, develop and sustain their essential capacities, and live as pain-free as possible to exist, develop, and function in society. Leininger (1984) emphasized the concept of caregiving for the parts of the whole by using the expressions "care for care" and "care for nourishment" (Cerit and Çoşkun, 2018). The primary

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goal of care is to identify individuals who communicate and interact based on mutual trust, determine their care needs, and thus effectively address their problems and requirements. Quality care is the essence of the spirit and is common to all people. Therefore, nurses must possess the knowledge and skills required for quality care, have a humanistic and ethical understanding of care, continuously develop their professional competencies, and provide services that align with professional ethics (Öner et al., 2011).

Although the concept of care has been defined for many years, it remains a topic of study and discussion from various perspectives. Historically, the term "nourish" has often been used in association with "doing." The word "nurse" is derived from the Latin term "nutrix," which comes from the word "nourishing," meaning to feed or nurture. The term "nourish," which denotes "to feed, enhance, sustain," refers to "a substance necessary for life" (İlhan and Öztaş, 2021).

According to the Turkish Language Association (TDK), the concept of "care" is defined as "the act of giving importance," "the act of making an effort to improve something," and "the act of meeting and addressing someone's needs." Another definition by TDK is "all the services performed to maintain the functioning of any system and, if possible, to ensure it operates with maximum efficiency." The English equivalent of the concept of "care" is "care." The word "care" is defined both as a noun and a verb. As a noun, it means "things necessary for the safety, welfare, care, and protection of someone or something," or "serious attention or diligence shown to act correctly and avoid danger/harm." As a verb, it means "to be concerned or involved with," "to care for someone," and "to meet someone's needs and attend to them." Another related concept of care is "nurse." The English word "nurse" as a noun refers to a person who takes special care of the patient and, as a verb, means "to care for, attend to, or provide nursing" (İlhan and Öztaş, 2021; Güleşen 2022).

Nursing Care Concept

The term "care" is frequently used in daily life to name or define something without considering its conceptual content. For instance, the 10,000-kilometer maintenance of a car, the maintenance and repair of tools and equipment, skincare, intensive care, nursing homes, and so on. When we use the term "care" to name an object or phenomenon, the subject is the object, not the person. As a noun, "care" assigns a meaning to the object it addresses, distinguishing it from other objects. However, since it does not pertain to a specific person, its meaning remains devoid of relationality, emotion, and human value judgments, instead acquiring a materialistic and economic dimension aligned with modern production relations (Dinç, 2010).

The Turkish Language Association defines the concept of care as "an act of maintaining the well-being of something, meeting needs such as nourishment and clothing" (TDK, 2020). The English equivalents of the word "care" include related, attentive, compassionate, protective, preventive, cautious, considerate, respectful, willing, and caring.

The foundation of nursing is based on the concept of "care." Today, the nursing profession is viewed as both a "science" and an "art." For nursing to be considered a science, it must generate its own knowledge. Nursing should establish its own scientific foundation based on research outcomes that focus on the care of healthy and ill individuals. To maintain its existence among other healthcare disciplines, nursing must inevitably create its own knowledge (Ay, 2021). Three key factors enable nursing to be recognized as its own discipline: a definable philosophy, a conceptual framework, and acceptable methodological approaches that facilitate the development of knowledge. However, it is observed that, especially in Turkey, nursing-specific knowledge accumulation is insufficient, and there are challenges in utilizing research findings in practice. Nursing must continue to exist as an applied, social, and

experimental science. Nursing-specific knowledge forms the foundation of nursing science (Dinç, 2010).

The idea of nursing as an art belongs to Florence Nightingale. Although the artistic aspect of nursing has been explained by many nursing theorists, it has not yet been fully understood. Gadamer advocated that medical practice is not only a science but also an art connected to hermeneutics. Hermeneutics emerged as the understanding and interpretation of all human phenomena and opposed the idea of using natural sciences for human sciences, particularly in the 19th century (Babadağ, 2010). The International Council of Nurses (ICN, 1973), in line with Virginia Henderson's (1966) approach, defined nursing as follows: "The unique function of the nurse is to assist the individual, sick or well, in the performance of activities contributing to health or recovery (or to peaceful death) that he would perform unaided if he had the necessary strength, will, or knowledge." In 2002, ICN revised its definition of nursing, stating: "Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups, and communities, sick or well, and in all settings" (ICN, 2018).

Nursing involves the promotion of health, prevention of illness, and care of the sick, disabled, and dying. Advocacy, the promotion of a safe environment, research, participation in shaping health policy, and health systems management are essential nursing skills.

In 2003, ANA listed the core functions of professional nursing as follows:

- Providing a compassionate relationship that promotes health and healing.
- Recognizing the diversity of human responses and experiences related to health and illness in physical and social environments.
- Integrating the meanings and knowledge derived from patients' or groups' subjective experiences with objective data.

- Applying scientific knowledge related to diagnostic and therapeutic processes through logical reasoning and critical thinking.
- Advancing professional nursing knowledge through scientific research.
- Influencing social and public policies that promote social justice (ANA, 2003).

In line with these characteristics, ANA redefined nursing in 2004 as "the protection, promotion, and optimization of health and abilities, prevention of illness and injury, diagnosis and treatment of diseases, alleviation of suffering, and advocacy in the care of individuals, families, communities, and populations" (ANA, 2003).

Hockey (1973) described nursing as "the art of applying science." Nursing science is unique because it is a blend of various sciences (Goodman, 2004). Nursing science should form its distinctive knowledge content by combining biological sciences, behavioral sciences, social sciences, and other disciplines (nutrition, physics, chemistry). Care providers must be competent and professional in their fields. These professionals should appropriately assess, plan, and implement care (Kaya et al. 2019). The nursing profession considers the care process a professional obligation and applies this professional care.

Nursing care is a specialized skill that aims to improve and maintain health, treat illnesses, help individuals feel valued, adhere to treatment, restore health, improve quality of life, and increase patient satisfaction. Nursing care practices utilize scientific methods. Nurses contribute to the treatment process by identifying the care needs of individuals, families, and communities, making nursing diagnoses, and planning, implementing, and evaluating evidence-based care. Data collected during this process forms scientific evidence. Care quality standards are ensured, providing scientifically

grounded responses to patients' needs (Göçmen Baykara, 2014).

Missed Nursing Care

The term "missed nursing care" is defined as any aspect of nursing care that is partially or completely neglected. It was first conceptualized by Kalisch (2006) in a qualitative study that identified that nurses often overlooked elements of patient care, such as hygiene, documentation of inputs and outputs, patient education, ambulation, feeding, and turning patients (Kalisch, 2006). Missed nursing care is frequently reported in healthcare settings such as elderly care, pediatric and neonatal care, and emergency services (Aytur Özen and Kantek, 2024). Additionally, studies on missed nursing care during the COVID-19 pandemic have been conducted (Alfuqaha et al., 2023; Baraty et al., 2023; Duhalde et al., 2023; Lund et el., 2023).

Research indicates that neglected care tasks, such as failure to administer medications on time, lack of hand hygiene, not repositioning patients, or not assisting with ambulation, can lead to adverse patient outcomes, including medication errors, pressure ulcers, and hospitalizations due to infections (Sworn and Booth, 2020). Zhang et al. (2024), in their meta-analysis, found a positive correlation between high rates of missed care statistics and adverse patient outcomes.

Missed nursing care has been associated with the following negative outcomes for patients and staff:

- Increased risk of infections,
- Medication errors,
- Falls,
- Dissatisfaction among nursing staff concerning inpatient mortality rates (Zhang et al., 2024).

Imam et al. (2023) reported that the prevalence of missed care in developed countries ranges between 15.2% and 86.0%. In contrast, in middle- and low-income countries,

the prevalence may be higher due to limited caregivers and resources (Imam et al., 2023).

Nursing Care Approaches

Giving and receiving care are processes requiring a series of thoughts and actions. Nursing encompasses beliefs, attitudes, behaviors/actions, and values within the general “helping” function aimed at preserving and promoting individual health, creating a whole, and restoring health in cases of deviations (Babadağ, 2010).

Nursing involves providing services to healthy and ill individuals, meeting their care needs, or assisting in addressing those needs. Nurses apply their knowledge and skills to solve individuals’ problems during this process.

The concept of care, which has two dimensions—caregiving and care receiving—includes nursing activities such as preserving, maintaining, improving, alleviating, and educating about health. Care should aim for individualized care centered on the person. The recipient of care can be active or passive/dependent or independent in this process. Individuals should understand the purpose of care, be aware of the content of care that meets their needs according to their dependency/independence levels, and participate in care to the extent possible (Göçmen Baykara, 2014).

Atraumatic Care

Despite significant advancements in modern technology, some treatment methods and procedures cause individuals pain and suffering, potentially leading to negative perceptions of the treatment process. Therefore, providing care to children and families to eliminate or reduce psychological and physical trauma has become increasingly important. Atraumatic care is defined as healthcare services provided during traumatic situations, such as invasive procedures, injections, and vaccinations, to minimize or eliminate psychological and physical distress in children or their families.

The concept of atraumatic care was first developed by Donna Wong and is based on the philosophy of therapeutic care and the principle of nonmaleficence. Wong outlined three main principles of atraumatic care:

Preventing or minimizing separation of children from their families, promoting a sense of control, and minimizing or preventing physical injury and pain to ensure the child's well-being (Furdon et al., 1998; İlhan and Öztaş, 2021; Hockenberry, 2022).

Atraumatic care holds a significant place, particularly in neonatal and pediatric healthcare services. Early recognition of traumatic situations and timely intervention are only possible through a well-planned care process. Caregivers must ensure that stress levels are minimized or eliminated and analyze potential risk behaviors, reducing the child's perception of pain and discomfort.

In atraumatic care practices, regional analgesic applications during invasive procedures, baby massage, play activities, and reading stories are frequently used. These practices minimize pain while also providing enjoyment. Providing information and necessary explanations to both the child and family before the process is crucial for psychological preparation.

The primary goal of atraumatic care is to support the child and family while preventing psychological and physiological damage caused by treatment and interventions. Nurses play a vital role in protecting children and families from the adverse effects of illness and ensuring the best possible experience during the process (İlhan and Öztaş, 2021).

Home Care

In recent years, the rapid advancement of technology has brought significant innovations in the field of healthcare, contributing to the development of diagnostic and treatment methods. Consequently, life expectancy has increased, and with this rise, the proportion of the elderly population has also grown. This demographic shift has been accompanied by an

increase in chronic diseases, further emphasizing the importance of home care. While home care has existed throughout human history, it has become a more debated topic in recent years due to its cost-effectiveness and scientific foundations (Ardahan, 2017). Beginning with home care services at birth, this type of healthcare has persisted through eras such as the Middle Ages, the Industrial Revolution, and the Modern Age, and continues to this day. Home care encompasses health and social services provided in an individual's living environment. These services are delivered by healthcare professionals such as doctors, nurses, physiotherapists, and speech-language therapists.

The Canadian Home Care Association (2008) defines home care as a service that includes "health promotion and health education, treatment, palliative care, rehabilitation services, social integration, restorative interventions, support and care, support for family caregivers, and bringing together family members in homes, workplaces, schools, and other community settings" (Sezer et al., 2015; İlhan and Öztaş, 2021).

Home Care Nursing

Home care nursing involves providing care services in individuals' own living spaces to effectively support and rehabilitate their health conditions. Globally, home care outcomes have demonstrated the significance of these services, which have been in practice for many years. The origins of home care date back to the 1800s when Florence Nightingale, considered the first visiting nurse, visited the homes of sick and impoverished individuals to provide care (Rice, 2006a). Nightingale recommended specialized training for women who would assume patient care responsibilities and proposed plans for women to work as "special nurses" conducting home visits. These proposals led to the establishment of the first nursing school dedicated to home patient care in Liverpool in 1862, offering a 1.5-year training program. Graduates of this program earned the title of "public health nurse" (Rice, 2006b; Lundy et al., 2009).

Personalized Care

Personalized care is designed to meet the specific needs of a particular patient at a particular time. Van Servellen (1988), in reviewing the literature on personalized care, noted that this term emerged in the early 1960s. When providing personalized care, nurses primarily view the patient as an individual and strive to tailor nursing interventions to the patient's unique desires, needs, and abilities. Nurses must respect the individuality and autonomy of the patients they care for (Radwin and Alster, 2002).

Benefits of Personalized Care

The advantages of personalized care, as cited in various sources, include:

- Ensuring the patient is evaluated holistically.
- Positively influencing patient care outcomes.
- Increasing patient satisfaction with care.
- Enhancing the quality of life for patients.
- Improving the quality and safety of healthcare services.
- Reducing mortality rates, medical errors, and infections (Karayurt et al., 2018; Demirel and Turan, 2021).

Personalized care represents a critical approach in nursing, fostering individualized attention and outcomes that align with the specific needs and preferences of each patient. This approach not only enhances patient satisfaction but also contributes significantly to the overall quality and effectiveness of healthcare.

Holistic Care

Holistic care is centered on helping individuals maintain, sustain, and achieve wholeness across all dimensions of their being. Nurses must be willing to care for all these aspects to promote the individual's overall well-being. The holistic care approach emphasizes that every dimension of a person is unique and interconnected. It focuses on the individuality of

the person and recognizes the close relationship between the body, mind, and spirit.

The term “holism” has been a part of the healthcare system since Florence Nightingale, who believed that this concept encompassed unity, health, human relationships, events, and the environment. Hippocrates taught doctors to observe patients’ lives and emotional states, adopting a holistic approach. Socrates declared that the healing of the soul should be the “first” priority.

The term “holism” originates from the English word “heal,” meaning “to restore.” It is derived from the South African “halos” and the Anglo-Saxon “healan,” both meaning “to be whole.” The English word “whole” also signifies “to be complete,” and “holy” stems from this concept. Healing involves addressing individuals’ physical, mental, emotional, and spiritual dimensions as a whole. The human organism continuously interacts with its natural and social environment. In terms of health and potential conditions, the relationship between the soul and body is interdependent.

Holistic care evaluates the individual’s physiological, social, and mental states and solutions as an integrated whole (İlhan and Öztaş, 2021).

Principles of Holistic Care:

- Each individual has the ability to develop and change themselves and their surroundings.
- The balance of the human body must be maintained for good health, and individuals are responsible for their well-being and self-care during the recovery process.
- Every individual owns their existence, which includes their rights and the developments they experience.
- The focus of healing efforts should be the individual, not solely their health condition or symptoms.
- Relationships between healthcare providers and individuals should be based on mutual collaboration.

Healthcare professionals intervene only to the extent necessary when requested or required by the individual's health condition.

- This approach shifts the focus from solely physical health to addressing the individual as a whole, promoting healing processes in a more comprehensive manner (Papathanasiou et al., 2013).

Palliative Care

Chronic diseases are increasingly prevalent in today's world, often leading to end-of-life situations. While curing the illness may not always be possible, it is still feasible to ease the challenges faced by patients and their families. This need has driven the development of palliative care and enabled healthcare professionals to provide quality care for such patients.

The World Health Organization (WHO) defines palliative care as "an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial, and spiritual" (WHO, 2007).

Principles of Palliative Care:

- Provides relief from pain and other distressing symptoms.
- Regards dying as a normal process and neither hastens nor postpones death.
- Integrates psychological and spiritual aspects of patient care.
- Offers a support system to help patients live as actively as possible until death.
- Provides a support system to help families cope during the patient's illness and in their bereavement.

- Utilizes a variety of approaches, including bereavement counseling, to address the needs of patients and their families.
- Permits the use of therapies, such as chemotherapy or radiation, to improve quality of life and positively influence the course of illness.
- Conducts necessary research to better understand and manage challenging clinical complications (WHO, 2007).

Palliative care emphasizes a holistic approach to end-of-life care, focusing not only on symptom management but also on addressing the emotional, psychological, and spiritual needs of patients and their families. It aims to provide dignity, comfort, and support throughout the process.

Ethics in Nursing Care

When examining definitions and perspectives on care, it becomes evident that care is conceptualized with its moral and affective dimensions. For example, Watson defined caring as "the transformation of a value or attitude into a desire, intention, or commitment, which manifests through concrete actions" (Watson, 1999). According to Baines et al., nursing involves protecting and caring for others, responding to their needs, and providing mental, emotional, and physical support (Watson, 1999). Care, which is both a tradition and an art in nursing, is regarded as a moral ideal aiming to preserve human dignity, a virtue encompassing sensitive awareness, motivation, and rational judgment. Roach identified five essential attributes of professional nursing: compassion, competence, confidence, commitment, and conscience (Dinç, 2010; Roach, 2013).

Nursing care combines moral awareness and sensitivity with scientific knowledge and specialized psychomotor systems. The unique elements of nursing care include the nurse's accurate knowledge, practical reasoning, ethical principles, and professional values, along with the integration of specialized techniques and societal awareness into a

comprehensive approach. Merely relying on goodwill, intuition, or treatment-focused care may be insufficient and carries the risk of harming the recipient. Errors resulting from insufficient knowledge, negligence, or carelessness can lead to serious consequences, such as administering incorrect blood transfusions, injecting medication into an artery instead of a vein, or overdosing insulin to a diabetic patient, all of which could result in fatal outcomes (Dinç, 2010).

The concept of care, as fundamental to human survival and development, requires action. Leininger defined care as "assisting individuals or groups with existing or potential needs to sustain or improve their lives or face death in accordance with human values" (Leininger, 2006). The relationship between nurses and patients is built on the concept of care, which is a core value in nursing. This connection should be deep and strong, facilitated by effective patient-nurse communication and the reinforcement of ethical dimensions in care (Dinç, 2009).

Ethical Focus in Nursing

The nurse-patient relationship, a fundamental aspect of nursing ethics, characterizes nursing care. The ethical dimension in nursing was highlighted by philosopher Carol Gilligan's work, emphasizing empathy, compassion, and commitment as the most important elements of nursing ethics. Ethical principles are secondary in this framework; instead, actions and decisions are based on contextual details, interpersonal relationships, nursing roles, and responsibilities. This approach ensures that decisions are guided by individual contexts rather than universal principles. When ethics and nursing synergize, desired nursing outcomes are achieved, addressing the needs of all members of society (Dinç, 2009).

Psychosocial Care

There is an interaction between the biological, psychosocial, and spiritual needs of individuals. Health is defined as a state of well-being encompassing all these dimensions. Illness

is a crisis that challenges individuals to meet their basic needs, bringing uncertainty and leading to emotions such as fear, restlessness, anger, hopelessness, powerlessness, and loneliness. It disrupts the individual's life and priorities, creating a struggle for identity and existence (İnan, 2021).

Patients may experience not only physical health or mental well-being loss but also losses related to their environment, habits, financial stability, roles, and sense of security. This highlights the necessity of understanding care as a holistic approach addressing the biological, psychological, social, and spiritual dimensions of individuals. Psychosocial care is an integral part of the biopsychosocial approach, aiming to enhance overall well-being, support psychosocial adaptation, and help individuals find meaning in their illness experience, ultimately improving hope and quality of life (Yıldırım and Gürkan, 2010).

Goals and Implementation of Psychosocial Care: Psychosocial care involves providing education, counseling, and psychological interventions to improve the psychosocial well-being of individuals. It requires understanding patients' psychological responses to illness, identifying their psychological and social needs, and fostering therapeutic collaboration.

Key components of effective psychosocial care include:

- Observing and understanding patients' emotional states.
- Employing effective communication skills and purposeful interviews.
- Focusing on the individual within a respectful and holistic human-to-human relationship.
- Being accessible, empathetic, and sensitive to patients' and families' needs, values, and priorities.
- By adopting this approach, nurses assist individuals in finding meaning and empowerment in their life experiences, ultimately fostering their overall well-

being and coping abilities (Aydemir and Çetin, 2019; İnan, 2021).

CONCLUSION

In nursing care, addressing individuals holistically and applying ethical principles enhance the quality and impact of care. The concept of care is not merely a professional duty but also a moral responsibility and an ideal for preserving human dignity. Nurses should adopt an approach to care grounded in scientific knowledge and professional skills, supported by empathy and compassion, while considering individuals' physical, psychological, social, and spiritual dimensions.

In this context, ethical and psychosocial approaches in nursing enable individuals to derive meaning from their health-related experiences, improve their quality of life, and ensure a dignified care process. Particularly, approaches such as home care, palliative care, personalized care, and atraumatic care emphasize the importance of trust, support, and collaboration in nursing practices for patients and their families.

In conclusion, the moral, scientific, and holistic foundations of nursing care play a critical role in improving not only individuals' health but also the overall health level of society. Therefore, it is essential for nurses to be aware of their ethical responsibilities, continuously enhance their professional competencies by following scientific advancements, and adopt a human-centered perspective in providing high-quality and effective healthcare services.

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INFERTILITY AND ACUPUNCTURE

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INTRODUCTION

Infertility, a significant public health issue affecting individuals of reproductive age, is recognized as a disease by the World Health Organization (WHO). It is generally defined as the failure to achieve pregnancy after one year of regular, unprotected sexual intercourse (WHO, 2024). Primary infertility refers to the inability to conceive despite engaging in regular, unprotected sexual intercourse for at least 12 months. Secondary infertility, on the other hand, occurs when a couple is unable to conceive again despite having achieved at least one prior pregnancy. Unexplained infertility describes cases where no abnormalities are detected through infertility evaluations and diagnostic tests, yet couples remain unable to conceive (Hotun Şahin and Aslan Demirtaş, 2023). Today, infertility affects approximately 10-15% of couples worldwide, leading to significant psychosocial and economic consequences at both individual and societal levels (Mascarenhas et al., 2012).

The etiology of infertility may result from factors related to the woman, the man, or a combination of both. In women, common causes include ovulation disorders, tubal blockages, or endometriosis, while in men, reduced sperm count and motility are the primary factors. Additionally, unexplained infertility, where no specific cause can be identified, remains a prevalent issue (Aker and Özdemir, 2023).

In recent years, significant advancements have been made in infertility treatment. Assisted reproductive technologies, such as in vitro fertilization (IVF) and intrauterine insemination

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(IUI), have provided hope for many couples. However, the high costs, side effects, and sometimes low success rates of these treatments have increased interest in alternative and complementary medical approaches (Van Voorhis, 2006).

Acupuncture, a traditional Chinese medicine method practiced for thousands of years, has gained increasing attention in infertility treatment. It is believed to regulate the body's energy flow, support homeostasis, and have positive effects on neurological, hormonal, and circulatory systems. Furthermore, acupuncture's stress-reducing effects may improve the psychological well-being of individuals undergoing infertility treatment (Stener-Victorin et al., 1996; Mikołajczyk et al., 2013; Calhaz-Jorge et al., 2017; Cohlen et al., 2018).

This section will explore the role of acupuncture in infertility treatment, emphasizing its potential benefits as a complement to conventional therapies in light of scientific evidence. Additionally, the clinical application of acupuncture, the role of nurses, and current research in this field will be addressed.

CAUSES OF INFERTILITY

The likelihood of conception for a fertile couple in each menstrual cycle is approximately 20%. Infertility cases are attributed to female factors in 40-50% of instances, male factors in 30-40%, and interactions between both sexes in 20-25%. Additionally, about 15% of couples experience unexplained infertility, where no identifiable cause is determined (Abalı Çetin and Arslan Özkan, 2019; Carson and Kallen, 2021).

Causes of Infertility in Women

The causes of infertility in women are more diverse and complex compared to men. Female infertility factors are classified into issues related to the ovaries, fallopian tubes, and peritoneal factors, as well as conditions affecting the uterus, cervix, and vagina (Demirci and Coşkuner Potur, 2017).

Among the causes of infertility related to the ovaries are ovulation disorders (especially anovulation), luteal phase deficiency, polycystic ovary syndrome, ovarian tumors, diminished ovarian reserve, hormonal imbalances, premature menopause, and the effects of radiation (Hotun Şahin and Aslan Demirtaş, 2023).

Tubal and peritoneal factors include structural abnormalities of the fallopian tubes, damage to the tubes, absence of fimbriae, tubal infections, pelvic adhesions, and tubal blockages (Demirci and Coşkuner Potur, 2017; Abalı Çetin and Arslan Özkan, 2019).

Factors related to the uterus stem from structural anomalies, intrauterine polyps, fibroids, endometriosis, endometrial and myometrial tumors, pelvic inflammatory diseases, and uterine scar tissue (Demirci and Coşkuner Potur, 2017).

Cervical factors encompass abnormalities in cervical mucus (e.g., issues with quality and quantity, infections, immunological problems), cervical rigidity, and cervical polyps (Demirci and Coşkuner Potur, 2017; Aker and Özdemir, 2023).

Causes of infertility associated with the vulva and vagina include imperforate hymen, vaginal agenesis, the presence of vaginal septa, dyspareunia, pain during intercourse, vaginismus, decreased libido, and sexual aversion (Demirci and Coşkuner Potur, 2017).

Causes of Infertility in Men

Factors leading to male infertility are typically related to semen parameters and primarily arise from issues in sperm production or sperm transport. Anomalies in sperm production result from anatomical, genetic, or endocrinological factors. These anomalies can affect sperm quantity, count, viability, motility, and semen pH (Kara and Nazik, 2021).

Conditions such as testicular atrophy, hypoplastic testes, cryptorchidism, varicocele, hypospadias, Y chromosome

defects, congenital or developmental testicular damage, low testosterone levels, orchitis-related testicular damage, gonadotropic insufficiency, chronic diseases, hypopituitarism, sudden weight loss, and trauma can adversely affect sperm production (Demirci and Coşkuner Potur, 2017). Sperm transport disorders arise from congenital or acquired genital/urogenital anomalies, infections, endocrinological problems, genetic disorders, erectile dysfunction, and ejaculatory dysfunction (Kara and Nazik, 2021).

INFERTILITY TREATMENT METHODS

Infertility treatment methods include a variety of options, such as natural methods, medical treatments, surgical interventions, and assisted reproductive technologies. These approaches aim to help individuals manage infertility and increase their chances of conception (Aykanat, 2022).

Natural Methods

Natural methods include lifestyle changes such as dietary modifications and exercise, which are essential for maintaining a healthy lifestyle and optimizing body weight. Additionally, reducing habits like smoking and alcohol consumption plays a significant role. Furthermore, some herbal supplements and traditional medical practices that may enhance fertility can also be considered during this process. These are generally evaluated as part of an overall healthy lifestyle (Tokat et al., 2022; Karadeniz et al., 2023).

Medical Treatments

Medical treatments aim to address medical conditions affecting infertility, such as correcting hormonal imbalances, optimizing the ovulation process, or ensuring the patency of fallopian tubes. These treatments include medications, hormone replacement therapy, surgical interventions, and other medical approaches. These diverse treatment methods are designed to support individuals dealing with infertility and increase their chances of conceiving. Specifically, correcting hormonal imbalances helps women regulate their ovulation

cycles and achieve a healthier ovulation process (Akan Çelik, 2020; Eroğlu and Temiz, 2020).

Surgical Interventions

Surgical interventions are used to address physical issues affecting infertility. For example, procedures such as unblocking fallopian tubes, surgically treating endometriosis, or removing ovarian cysts can provide solutions to infertility problems through surgical approaches (Yılmaz and Şahin, 2020).

Assisted Reproductive Technologies

Assisted reproductive technologies involve technological and medical methods used to address infertility. These include techniques such as intrauterine insemination (IUI), in vitro fertilization (IVF), microinjection techniques, and ovarian tissue or egg freezing (Aker and Özdemir, 2023; Hotun Şahin and Aslan Demirtaş, 2023).

Assisted Reproductive Technologies in Detail

Intrauterine Insemination (IUI)

Intrauterine insemination (IUI) is a treatment option among assisted reproductive methods used for infertile couples. In this method, sperm is injected into the woman's uterus using a specialized technique, thereby increasing the chances of fertilization. IUI is typically preferred when the woman has a good ovarian reserve and there are no ovulation issues. This method can be an effective treatment option for couples unable to conceive naturally, yielding successful results (Abalı Çetin and Arslan Özkan, 2019; Hotun Şahin and Aslan Demirtaş, 2023).

In Vitro Fertilization (IVF)

In vitro fertilization (IVF) is a treatment method where an egg is fertilized by sperm in a laboratory setting, and the resulting embryo is transferred to the woman's uterus. This process involves retrieving eggs from the woman's ovaries, fertilizing them in a lab, and implanting the embryo into the

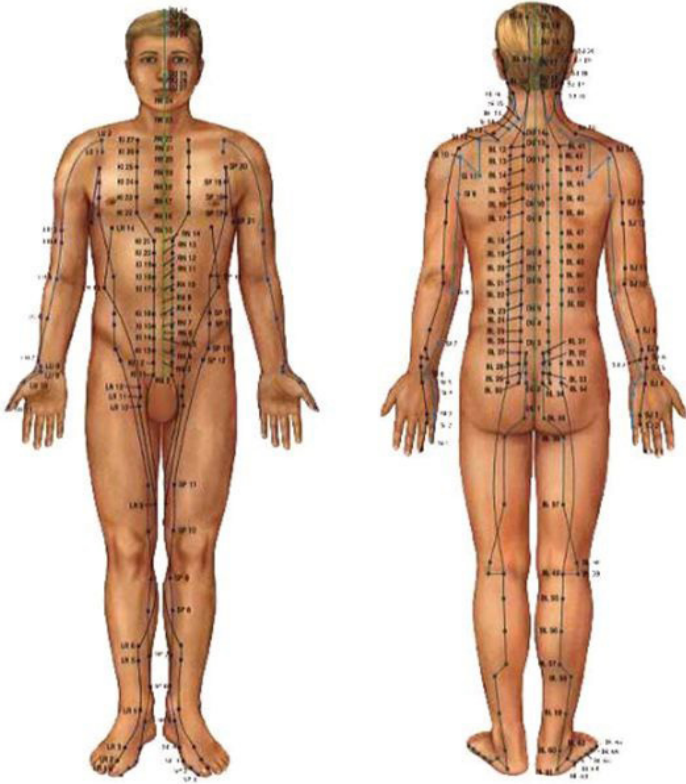
uterus. IVF can be effective in cases such as blocked fallopian tubes, endometriosis, and male factor infertility, offering a high chance of successful pregnancy (Abalı Çetin and Arslan Özkan, 2019; Aker and Özdemir, 2023).

Microinjection Techniques

Microinjection is an advanced technique developed from IVF and is often used in cases of male factor infertility. In this method, a single sperm cell is directly injected into an egg using a specialized injector. This approach enables fertilization and embryo formation. Microinjection techniques are an effective treatment option for cases involving low sperm count, reduced motility, or other sperm morphology problems (Aker and Özdemir, 2023; Hotun Şahin and Aslan Demirtaş, 2023).

ACUPUNCTURE AND APPLICATION METHODS

The history of acupuncture dates back 2,000 years to ancient China, and its principles are rooted in traditional Chinese medicine. Acupuncture is a treatment method involving the use of fine needles applied to specific points on the body's meridians to regulate the flow of "qi," the vital energy, and to maintain the balance between yin and yang. The core principles of acupuncture include restoring the body's energy balance, reducing pain, strengthening the immune system, and activating the body's self-healing mechanisms. These fundamental principles are critical for understanding acupuncture's effects on infertility (Kavaklı, 2010; Kaya and Yılmaz, 2020).



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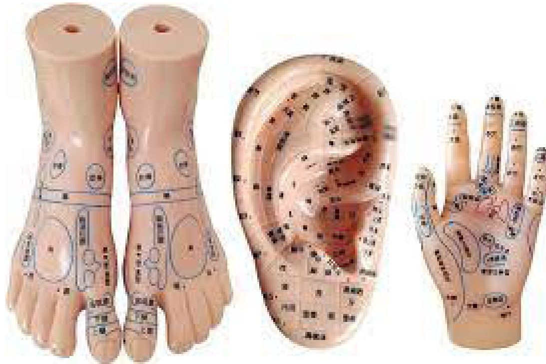

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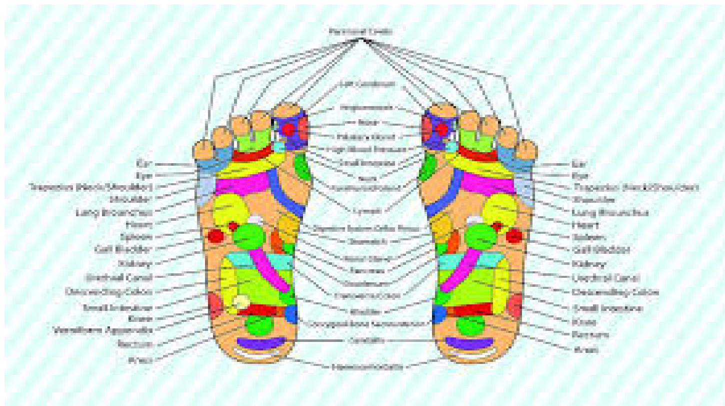

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The History of Acupuncture

The origins of acupuncture date back thousands of years and form a cornerstone of Chinese medicine. With a history tracing as far back as 1000 BC, it was utilized by physicians and shamans in ancient China. Traditional Chinese medicine (TCM) aims to treat illnesses by regulating the flow of energy within the body. Acupuncture, which involves stimulating specific points to balance and unblock this energy flow, has gained worldwide popularity over time and has been embraced in modern medicine as well (Öztürk et al., 2020).

Fundamental Principles of Acupuncture

The fundamental principles of acupuncture focus on balancing the flow of energy within the body, which plays a crucial role in maintaining health. According to traditional Chinese medicine, energy, or “qi,” flows through specific pathways in the body. By stimulating designated points along these pathways with needles, the flow of energy is regulated and balanced. Another core principle of acupuncture is rooted in the concepts of yin and yang. Maintaining the balance of yin and yang is vital for sustaining the body’s equilibrium. Acupuncture helps restore this balance and reestablish the body’s energy harmony, improving overall health.

Additionally, acupuncture activates the body's self-healing mechanisms, contributing to the resolution of health issues and the treatment of diseases. These foundational principles help explain how acupuncture can be effective in infertility treatment, showcasing its benefits in this domain. As such, acupuncture emerges as a method that supports both physical and mental well-being (Yıldırım and Şahin, 2021; Çayır and Tanrıverdi, 2022; Yeşildağ and Gölbaşı, 2024).

THE RELATIONSHIP BETWEEN INFERTILITY AND ACUPUNCTURE

The relationship between infertility and acupuncture explores how acupuncture can be effectively utilized in infertility treatment and the potential positive effects of this alternative therapy. Various scientific studies and clinical practices provide strong evidence of the beneficial impacts acupuncture can have on infertility. When examining the physiological mechanisms aligned with acupuncture's fundamental principles, its ability to balance the body's energy flow and positively influence the reproductive system becomes evident (Etli, 2020).

Therefore, the use of acupuncture as a potential alternative treatment method for infertility highlights the importance of rigorously compiling and analyzing scientific evidence in this field. The recognition of acupuncture as a supportive treatment can contribute to patients' overall treatment processes and help reduce potential side effects. Ultimately, this can significantly enhance the quality of life for individuals dealing with infertility, making them psychologically more resilient. Moreover, the role of acupuncture in infertility treatment is not limited to physical benefits; it is also believed to positively impact individuals' emotional well-being (Etli, 2020).

The Role of Acupuncture in Infertility Treatment

The role of acupuncture in infertility treatment holds significant importance as a traditional medical practice. Acupuncture has gained considerable attention as an

alternative treatment method for infertility, attracting interest from various physicians and specialists. Numerous scientific studies clearly indicate that acupuncture may have positive effects on increasing pregnancy rates among individuals experiencing infertility. Moreover, findings suggest that integrating acupuncture with other infertility treatment methods can enhance success rates (Temür, 2020; Çelik et al., 2022; Karadeniz et al., 2023).

Additionally, research highlights that regular acupuncture sessions and the continuous integration of this practice into treatment processes can reduce patients' stress levels while contributing to their overall health. Therefore, the need for further research and clinical studies to explore the effects of acupuncture and its optimal usage in infertility treatment is strongly emphasized. Clinical applications and experiences are crucial for deepening knowledge in this area and providing patients with opportunities to benefit from the potential advantages of acupuncture (Temür, 2020; Çelik et al., 2022; Karadeniz et al., 2023).

THE EFFECTS OF ACUPUNCTURE ON INFERTILITY

The effects of acupuncture on infertility have been supported by findings from various studies that examine its physiological mechanisms in detail. Acupuncture is believed to assist in infertility treatment through several significant physiological effects. These include regulating hormonal balance, improving circulation, reducing stress, and enhancing endometrial quality.

Research underscores the potential role of acupuncture in infertility treatment, emphasizing the need for additional clinical studies. Collecting and analyzing existing evidence is vital to gaining a deeper understanding of acupuncture's role in infertility treatment and developing more effective therapeutic approaches for patients.

When combined with conventional medical methods, acupuncture can yield more effective results as a complementary and alternative approach in infertility treatment. This holistic support can enhance the treatment process for patients (Chang et al., 2002; Huang et al., 2011; Temür, 2020).

SCIENTIFIC STUDIES AND EVIDENCE

Scientific studies on infertility and acupuncture have shown a significant increase, fueled by growing interest in understanding acupuncture's effects on infertility and its role in the treatment process. Researchers have meticulously conducted studies to explore acupuncture's impact on infertility, assess its effectiveness, and provide robust scientific evidence.

Many of these studies conclude that acupuncture can be used in infertility treatment and has the potential to positively influence fertility. Furthermore, comprehensive research examining acupuncture's effects on endometrial quality, ovarian reserve, ovulation, and hormonal balance has provided valuable insights. The results of these studies support the beneficial effects of acupuncture on infertility and emphasize the need for further exploration in this field.

Acupuncture, while rooted in traditional practices, is increasingly supported by modern scientific research, making it a noteworthy alternative approach in healthcare. Historically significant in many cultures, particularly in Eastern medicine, acupuncture is now gaining acceptance in Western medicine as well. This makes it an appealing option for patients seeking natural and side-effect-free treatments.

The role of acupuncture in infertility treatment is regarded as a promising alternative by many, and ongoing research is directed toward enhancing treatment processes through its integration. Therefore, closely examining the cumulative effects and outcomes of acupuncture through various scientific studies and clinical trials is of utmost importance.

Studies on Infertility and Acupuncture

In recent years, numerous studies have been conducted on the use of acupuncture among individuals experiencing infertility. These studies primarily aim to explore the effectiveness of acupuncture in infertility treatment. Some research presents findings that acupuncture enhances fertility functions in patients with infertility, providing significant data to support its benefits. However, other studies argue that this effect is not evident, leading to differing opinions about the definitive impacts of acupuncture.

The results of these studies play a critical role in better understanding the effects of acupuncture on infertility and supporting its application in clinical practices. These studies are not only scientifically valuable but also contribute to increased interest in alternative treatment methods within society. Moreover, acupuncture is believed to positively influence psychological well-being in addition to physical health.

This potential creates new hope for individuals seeking infertility treatment, paving the way for advancements in uncovering the benefits of acupuncture. The multifaceted nature of acupuncture has made it a compelling topic of discussion in both traditional and modern medicine. Additionally, the capacity of acupuncture to reduce stress levels may enhance its potential to improve fertility outcomes, making it a viable complementary therapy for many.

The various aspects of acupuncture underscore the necessity for more research and highlight the need to evaluate this treatment from broader perspectives. Focusing on the benefits of acupuncture can aid in the advancement and scientific validation of such practices (Gerhard and Postneek, 1992; Chang et al., 2002; Huang et al., 2011; Feng et al., 2022; Quan et al., 2022).

CLINICAL APPLICATIONS AND OUTCOMES

Acupuncture in infertility treatment stands out as a viable option that should be considered alongside various clinical applications. Today, many hospitals and private clinics offer acupuncture sessions in the field of infertility treatment. These sessions are typically conducted by specialized acupuncturists and have yielded positive outcomes in numerous scientific studies aimed at understanding the effects of acupuncture on infertility.

The outcomes of clinical applications demonstrate that acupuncture can be an effective method in specific infertility scenarios. However, it is essential to remember that each patient has unique characteristics and individual needs, necessitating the careful evaluation of clinical results for each case. For this reason, when considering acupuncture treatment, individual needs and the patient's medical history must be taken into account.

Incorporating other factors such as diet, stress management, and lifestyle changes alongside acupuncture applications plays a crucial role in enhancing the success of the treatment process. Beyond its potential benefits for infertility, acupuncture contributes to patients' overall health and well-being, helping them feel better physically and emotionally (Huang et al., 2011, Akan Çelik, 2020; Eroğlu and Temiz, 2020; Etli, 2020).

The Role of Acupuncture in Clinical Settings

The importance of acupuncture in clinical applications is gaining increased recognition as an alternative approach to infertility treatment. Acupuncture is effectively utilized either as a complementary treatment to conventional medical methods or, in some cases, as a primary treatment option.

Clinical studies have shown that acupuncture significantly improves success rates in infertility treatment. Comprehensive research on the supportive effects of acupuncture in patients undergoing assisted reproductive techniques, such as in vitro

fertilization (IVF) and intrauterine insemination (IUI), has yielded positive and promising results.

As a result, the clinical role of acupuncture in infertility treatment continues to gain traction in both research and application, garnering interest among healthcare professionals and patients alike (De Lacey and Smith, 2013; Temür, 2020).

THE IMPORTANCE OF NURSING CARE IN INFERTILITY TREATMENT

Nursing care plays a crucial role in infertility treatment. Nurses provide essential support to meet the emotional and physical needs of patients. During infertility treatment, nurses help patients understand medical procedures, manage side effects, and offer medical guidance. Additionally, they assist patients in coping with stress by providing education and counseling services, thus enhancing treatment adherence. Nursing care is vital for improving the quality of life for patients undergoing infertility treatment and increasing the likelihood of successful outcomes (Çelik et al., 2022; Dorukoğlu and Daşıkan, 2024).

In acupuncture applications, nursing care is equally important for ensuring that the patient feels comfortable and secure. Before the acupuncture session, nurses thoroughly evaluate the patient's medical history and current condition. During the procedure, they maintain constant communication with the patient and promptly address any discomfort or issues. Nurses are also responsible for adhering strictly to hygiene protocols and ensuring a sterile environment. Additionally, tasks such as scheduling patient appointments, conducting necessary medical tests, and coordinating with other healthcare professionals are among the key roles nurses undertake in acupuncture applications (Bayıroğlu et al., 2023).

CONCLUSION

The relationship between infertility and acupuncture has been clearly demonstrated through scientific studies and clinical applications. Numerous studies have proven the significant

role of acupuncture in infertility treatment, highlighting its positive effects on natural reproductive functions. In this context, the findings indicate that acupuncture plays a vital role in combating infertility and enhances the success of treatment.

In conclusion, the positive effects of acupuncture on infertility and its clinical significance, as explored in this academic review, provide an important resource for researchers and healthcare professionals interested in the subject.

Moreover, the support and care provided by nursing in infertility treatment significantly enhance patients' physical and emotional well-being. As part of the recommendations, it is suggested that combining acupuncture applications with nursing care for patients undergoing infertility treatment could be highly beneficial. By doing so, the role of nurses becomes even more critical, contributing to better treatment outcomes for patients.

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INTEGRATION OF NURSING WITH TRADITIONAL AND COMPLEMENTARY MEDICINE PRACTICES: REIKI

İbrahim Nas[1], Kamber Sümer[2]

INTRODUCTION

Reiki, as a complementary and alternative therapy (CAM), has gained increasing attention in recent years as part of a holistic approach to healthcare. Rapid advancements in medical diagnosis, treatment, and patient care have empowered individuals to seek greater control over their health and well-being. However, dissatisfaction with existing medical treatments, high healthcare costs, and the desire for non-invasive and symptom-relieving methods have led to a growing interest in CAM practices worldwide (Altun and Özden, 2004; Araz et al., 2007).

The National Center for Complementary and Alternative Medicine (NCCAM), established in 1991 under the National Institutes of Health (NIH) in the United States, has played a critical role in investigating the efficacy and safety of CAM practices (Bodeker and Kronenberg, 2002). NCCAM defines CAM as therapies and practices not currently considered part of conventional medicine. Among these therapies, Reiki, which translates as "universal life energy," focuses on balancing the body's energy fields to promote healing and well-being (Lübeck et al., 2003; Bossi et al., 2008).

Reiki, originating in Japan and rediscovered by Dr. Mikao Usui in the 19th century, has become a widely recognized energy healing practice across the globe. It emphasizes the flow of life energy, or "Ki," through energy centers called chakras

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to remove blockages, relieve stress, and restore balance to the mind, body, and spirit (Beckett, 2007; Uğurlu, 2011). While its use has flourished in Western countries, studies have indicated limited awareness and implementation in Eastern countries, including Turkey (Araz et al., 2007).

In modern nursing practice, Reiki is increasingly embraced as a non-pharmacological intervention, particularly in the fields of oncology, palliative care, and mental health. Nursing pioneers such as Martha Rogers introduced the concept of human energy fields decades ago, emphasizing that individuals are dynamic beings in constant interaction with their environment (Wardell and Weymouth, 2004; Vitale, 2007). Reiki aligns with this philosophy, allowing nurses to address not only patients' physical health but also their emotional and spiritual needs through a holistic care approach.

Studies have shown promising results regarding Reiki's effectiveness in reducing pain, stress, anxiety, and depression, thereby improving patients' overall quality of life (Birocco et al., 2011; Bremner et al., 2016). Moreover, Reiki offers benefits to healthcare professionals, such as reducing job stress and preventing burnout, making it a valuable tool for self-care among nurses (Cuneo et al., 2010; Deible et al., 2015). Despite its potential, conflicting evidence regarding Reiki's physiological effects underscores the need for further rigorous research to validate its clinical outcomes (Mcmanus, 2017; Bat, 2021).

This study explores the role of Reiki in nursing practice, its integration into patient care, and its impact on physical, emotional, and spiritual well-being. By examining existing literature and evidence, the study highlights Reiki as an emerging complementary therapy that aligns with the holistic principles of modern nursing.

In recent years, rapid advancements in the diagnosis, treatment, and patient care of diseases have led patients to seek greater control and responsibility in their own treatments.

The high costs of these treatments, patients' efforts to access alternative interventions that alleviate symptoms, their desire for spiritual well-being, and dissatisfaction with conventional treatment methods have increased interest in complementary and alternative therapies (CAM) (Altun and Özden, 2004; Araz et al., 2007).

To investigate the safety and scientific efficacy of CAM practices and to ensure their integration with modern medical treatments, the National Center for Complementary and Alternative Medicine (NCCAM) was established in 1991 in the United States. NCCAM defines CAM as products, practices, and healthcare systems that are not considered part of conventional medicine (Bodeker and Kronenberg, 2002).

One of the CAM therapies defined by NCCAM is Reiki, an energy therapy that focuses on the electromagnetic fields outside the body and energy fields within the body (Bossi et al., 2008; Moquin et al., 2009). According to a study conducted in 2007, 1.2 million adults and 161,000 children in the United States have received Reiki or other forms of energy therapy (Barnes et al., 2007). Barnes et al. (2002) reported that the use of Reiki among elderly individuals in the U.S. was 1.1%.

In Turkey, a study found that the rate of individuals regularly using Reiki was quite low, at 0.4% (Araz et al., 2007). Due to the increasing interest in CAM, there has been a significant rise in studies conducted by nurses on complementary therapies in recent years (Turan et al., 2010; Sağkal and Eşer, 2011).

REIKI

The term "Reiki" was first mentioned in writing by Mencius in 300 BC. According to Mencius, Ki refers to "the highest and greatest power, the essence that forms the foundation of nature" (Uğurlu, 2011). Dr. Usui rediscovered Reiki, one of the healing methods, in the 19th century in Sanskrit texts and made it accessible for modern use (Erdoğan and Çınar, 2011).

Reiki is a concept derived from the Kanji Japanese words "Rei," meaning "universe," and "Ki," meaning "spirit" or

"life force energy." It is generally translated as "universal life energy" (Lübeck et al., 2003; Musal, 2005).

The term Rei conveys meanings such as hidden or mystical power. Ki, on the other hand, circulates within the human body in seven forms: Kekki, Shioke, Mizuke, Kuki, Denki, Jiki, and Reiki. Reiki is the energy that organizes and directs Ki energy (Lübeck et al., 2003). Although Reiki spread to many countries, it nearly fell into obscurity in Japan until the 1990s, when Western Reiki was reintroduced to the Japanese by foreigners (Beckett, 2007; Uğurlu, 2011).

The Chinese character for "rice," one of China's essential foods, contains elements symbolizing "the most fundamental energy for life." The concept of Ki as life energy is widely accepted across various cultures, albeit under different names. For example, the Chinese refer to it as Chi, the Indians as Prana, the Kuhunas as Mana, and the Kabbalists as Jesodu. In Turkish, Ki is expressed as "spirit," "essence," or "soul." In Islamic culture, some researchers suggest that Ki refers to the energy derived from the breath that Allah (God) breathed into humans (Musal, 2005; Uğurlu, 2011).

Dr. Usui described Reiki as "a path to achieving personal perfection" (Beckett, 2007; Uğurlu, 2011). The Five Principles of Reiki, which Usui emphasized and encouraged for daily practice, form the spiritual foundation of the Reiki system. According to Usui Reiki, these principles should be repeated daily and integrated into life:

- " Just for today, do not be angry (Kyo dake wa, okuru-na)...
- Just for today, do not worry (Kyo dake wa, shinpai suna)
- Just for today, be grateful (Kyo dake wa, kansha shite)
- Just for today, work hard (Kyo dake wa, goo hage me)
- Just for today, be kind to others (Kyo dake wa, hito ni shinsetsu ni) " (Beckett, 2007; Uğurlu, 2011).

Reiki System and Its Three Fundamental Pillars. The Reiki system, as taught by Dr. Usui, is based on three fundamental pillars. These are:

- Gassho (Bringing both hands together)
- Reiji-Ho (Intending for Reiki energy to flow into the body)
- Chiryo (Treatment) (Uğurlu, 2011).

Reiki Training

Reiki training consists of three levels (Uğurlu, 2011), explained as follows:

First Level Reiki Training: This level, called Sho Den in Japan, forms the foundation of Reiki education. It is conducted over two days, divided into four three-hour sessions. At this stage, students learn to transfer energy to themselves, others, animals, and plants. The training covers Reiki's definition, history, ethical principles, and hand positions used in treatments (Erdoğan and Çınar, 2011; Uğurlu, 2011). Those who complete this stage gain a lifelong skill that they can apply throughout their lives (Horan, 2007).

Second Level Reiki Training: The second level is accessed after practicing first-level Reiki for at least three months. At this stage, ancient healing symbols are introduced. These symbols allow energy transfer using the mind, sending Reiki over a distance, amplifying the energy's power, and focusing on healing. The three symbols taught include:

- The Power Symbol
- The Mental Symbol
- The Distance Symbol

Drawing or visualizing these symbols strengthens the connection to energy (Gallop, 2003; Whelan and Wishnia, 2003; Karahan, 2005; Musal, 2008; Pocotte and Salvador, 2008; Erdoğan and Çınar, 2011; Uğurlu, 2011).

Third Level Reiki Training (Mastery): The third level of Reiki training is Mastery. At this level, individuals are taught the Master Symbol, enabling them to access higher levels of energy and channel it effectively. Becoming a Reiki Master requires extensive training and practice. A Reiki Master (teacher) must gain experience at all levels and integrate Reiki as a way of life (Gallop, 2003; Whelan and Wishnia, 2003; Karahan, 2005; Musal, 2008; Pocotte and Salvador, 2008; Erdoğan and Çınar, 2011).

Reiki Practice

A Reiki session begins with the practitioner engaging in a brief meditation, a practice known as "Gassho," which translates to "bringing the hands together." During this process, the practitioner connects with Reiki energy and sets an intention for the recipient's health, healing, or general well-being. Reiki is applied to specific energy centers in the body known as chakras. There are seven main chakra regions in the human body: crown, third eye, throat, heart, solar plexus, sacral, and root chakras (Demir and Mutlu 2022).

While there is no strict rule regarding the duration of the application, the practitioner typically holds their hands over each chakra region for 2 to 5 minutes. The session concludes with grounding, which is performed by focusing energy on the recipient's feet. If a problematic area is identified, the practitioner may extend the duration of the session in that region to 10 to 30 minutes. A typical Reiki session lasts approximately 30 to 90 minutes for adults and 20 to 30 minutes for children (Whelan ve Wishnia, 2003; Brathovde, 2006; Pocotte ve Salvador, 2008; Demir ve Can, 2011; Erdoğan ve Çınar, 2011; Toms, 2011; Demir and Mutlu 2022).

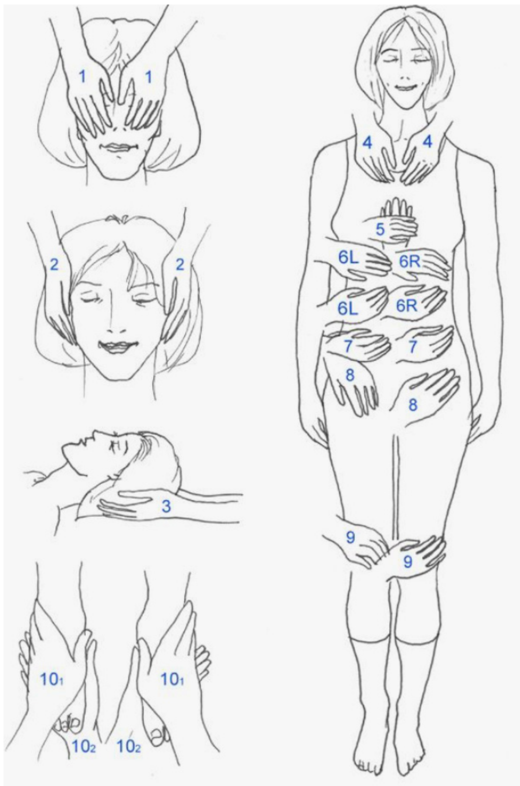

Figure 1. Places for Reiki Practice (https://tr.pinterest.com/reikisevilla/)

During the session, the recipient may either sit comfortably or lie down. Clothing does not interfere with the flow of Reiki energy, so there is no need for special garments, nor is it necessary to remove existing clothing. However, it is recommended that both the practitioner and the recipient remove any metal accessories to ensure uninterrupted energy flow (Usui and Grimm 2000; Demir and Mutlu 2022).

The practitioner channels Reiki energy through their hands (either with or without physical contact) to the recipient's energy centers. This flow of energy is believed to clear blockages, restore balance, and enhance the healing process (Misra et al. 2014, Demir and Mutlu 2022). During the session,

recipients often report feeling a gentle warmth in or near the areas where the practitioner's hands are placed.

There is no specific guideline in the literature regarding the frequency of Reiki sessions. However, expert opinions indicate that Reiki can be practiced daily without any adverse effects (Sahler et al. 2016). The most essential aspect of a Reiki session is the recipient's consent for the practitioner to proceed. The effectiveness of Reiki does not require the recipient to believe in it; simply allowing the flow of energy is sufficient to facilitate healing (Ott et al. 2010; Demir and Mutlu 2022).

The only rule in Reiki practice is that the individual must give permission to the practitioner to facilitate the flow of energy. It is not necessary for the recipient to believe in Reiki during the session, as Reiki is considered a universal life energy that exists within everyone (Brathovde, 2006; Ocak, 2008; Toms, 2011). Individuals can perform Reiki not only on others but also on themselves. Moreover, Reiki is believed to be effective not only for humans but also for animals, plants, and even malfunctioning objects (Uğurlu, 2011).

Table 1. The Seven Main Chakras in the Human Body and Their Effects

Chakras	Effects
1st Chakra (Root Chakra)	Affected by thoughts related to **security** and **insecurity**. Associated organs: **spine**, **bones**, **blood composition**, **cell regeneration**, teeth, adrenal glands, anus, and legs.
2nd Chakra (Sacral Chakra)	Positive functioning is influenced when the individual avoids mental limitations and prejudices. Associated organs: **urogenital system, kidneys, small intestines, skin, arms, body fluids**, and the absorption of nutrients and vital substances in metabolism.
3rd Chakra (Solar Plexus Chakra)	Significantly influenced by how we use our will **power** and the **methods** we employ to achieve **our goals**. Associated organs: **digestive system** and **liv**er.
4th Chakra (Heart Chakra)	Strongly affected by our **understanding of love** and our **emotional exchanges** with others. Associated organs: **heart**, **lungs**, **pancreas**, and **blood circulation**.

5th Chakra (Throat Chakra)	Affected by the **truthfulness** of our thoughts and communication. Associated organs: **vocal cords**, **respiratory organs**, **larynx**, and **thyroid gland**.
6th Chakra (Third Eye Chakra)	The center of **intuition** and the source of our **higher self connection**. Associated organs: **eyes**, **nose**, **cerebellum**, **pituitary gland**, and **memory**.
7th Chakra (Crown Chakra)	The point through which **universal energy** is received and connected to maintaining **life balance**. Associated organs: **brain** and **pineal gland**.

(Baginski and Sharamon, 2003; Müller and Günther, 2006; Vitale and Connor, 2006; Demir and Can, 2007; Sağkal and Eşer, 2011).

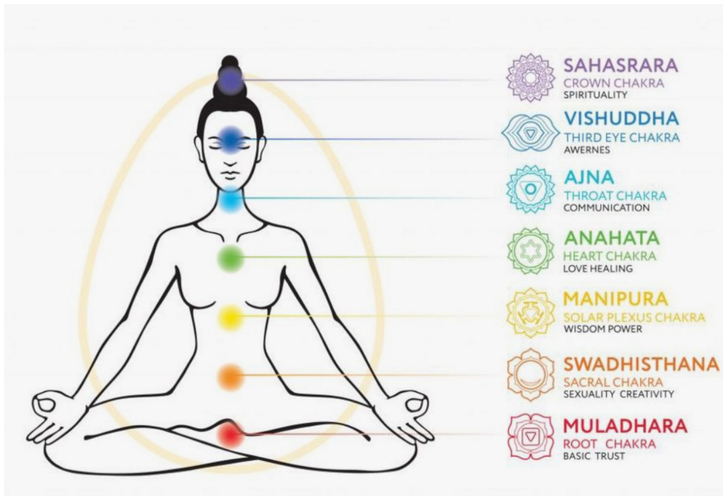

Figure 2. Major Chakras in Our Body (https://tr.pinterest.com/search/pins/?q=7chakra&rs=typed)

Reiki and Nursing

Energy therapies have been integrated into nursing care for a long time. Martha Rogers, one of the pioneers of nursing, introduced this concept to nursing more than 60 years ago. According to Rogers' theory, all matter is energy, and energy pathways are interconnected. Rogers brought quantum reality into nursing, suggesting that the human body, constantly interacting with its environment, possesses energy and must be approached as a whole with its surroundings (Vitale, 2007; Pocotte and Salvador, 2008; Erdoğan and Çınar, 2011).

In the 1970s, Dr. Dolores Krieger taught Reiki to thousands of nurses, making her a pioneer in integrating Reiki into nursing. This Reiki technique began to be used in hospitals in many countries worldwide (Wardell and Engebretson, 2001; Vitale, 2007; Erdoğan and Çınar, 2011; Sağkal and Eşer, 2011). In modern medicine, Reiki as a touch therapy has become one of the independent functions of nurses and an essential part of nursing care (Wardell and Engebretson, 2001; Wardell and Weymouth, 2004; Vitale, 2006; Vitale, 2007; Bossi et al., 2008; Sağkal and Eşer, 2011).

Today, nurses incorporate holistic approaches that include physical, emotional, mental, and spiritual well-being into their care by using traditional energy therapies such as Reiki and therapeutic touch. This approach acknowledges that humans interact energetically with their surroundings (Vitale, 2007; Schnepper, 2010; Erdoğan and Çınar, 2011). In recent years, Reiki has been increasingly used by nurses and other healthcare professionals in hospitals, hospice care, emergency units, psychiatric wards, nursing homes, operating rooms, obstetric and gynecology units, neonatal care units, and many other areas to manage disease symptoms (Erdoğan and Çınar, 2011; Sağkal and Eşer, 2011).

Reiki's Applications in Nursing

Reiki is used in various areas of nursing practice. In oncology nursing, Reiki has been shown to support patients' coping skills, overall health, and recovery. Reiki reduces pain, provides relaxation, and supports nurses' self-care (Bossi et al., 2008). Additionally, studies have found that Reiki decreases work-related burnout and increases nurses' job retention rates (Cuneo et al., 2010).

However, some contradictory results have been obtained in studies investigating the effects of Reiki. For example, one study found no significant impact of Reiki on heart rate, blood pressure, or body temperature (Bat, 2021). In contrast,

another study demonstrated that Reiki was more effective than a placebo (McManus, 2017).

Reiki is increasingly being incorporated into nursing practice, particularly in oncology, palliative care, and mental health settings. Reiki has been shown to effectively reduce stress, anxiety, pain, and symptoms of depression (Birocco et al., 2011; Bremner et al., 2016). However, further research is needed to better understand the physiological effects of Reiki and to validate its clinical effectiveness (Burden et al., 2005; Vitale, 2007).

The Effects of Reiki on Patient Care

Reiki is considered a complementary energy therapy with positive effects in patient care. Various studies have shown that Reiki reduces symptoms such as stress, pain, depression, and anxiety while improving overall quality of life (Kirshbaum et al., 2016; Bat, 2021). In a study conducted on cancer patients, Reiki was found to reduce emotional tension, provide inner peace and relaxation, alleviate pain, and improve sleep quality (Kirshbaum et al., 2016).

There are conflicting results regarding the physiological effects of Reiki. While some studies have shown significant reductions in heart rate and blood pressure (Mackay et al., 2004), others have not found statistically significant differences (Bat, 2021). In a study involving individuals living with HIV, Reiki was found effective in reducing pain and stress (Bremner et al., 2016).

Current research suggests that Reiki can be a beneficial complementary therapy in patient care. Promising results have been obtained, particularly in stress management, pain control, and improving quality of life (Vitale, 2007; McManus, 2017). However, further research is needed to better understand the mechanisms of Reiki and its role in clinical practice (Burden et al., 2005).

Nurses as Reiki Practitioners

There is evidence suggesting that Reiki can be a beneficial skill for nurses:

- Practicing Reiki can lead to positive outcomes for both nurses' health and patient care. One study found that nurses who received Reiki Level I training experienced reduced work-related stress (Cuneo et al., 2010). Additionally, Reiki has been shown to reduce burnout and enhance resilience among nurses (Tarantino et al., 2013; Deible et al., 2015).
- Reiki not only improves nurses' personal health but also serves as an effective complementary therapy in patient care. For example, it has been demonstrated to reduce pain and anxiety in cancer patients (Birocco et al., 2011; Fleisher et al., 2013).
- Integrating Reiki into nursing practice can enhance both the personal well-being of nurses and the quality of patient care. However, more research is needed to better understand the effectiveness of Reiki in nursing and its long-term benefits (Vitale, 2007).

Reiki and Cultural Approaches

Reiki is increasingly recognized as a bioenergy therapy across different cultures and healthcare systems. Several studies have shown that Reiki has positive effects on pain, anxiety, depression, and quality of life (Birocco et al., 2011; Billot et al., 2019). It has been noted that Reiki can meet patients' physical and emotional needs, particularly in hospital settings (Birocco et al., 2011). There are also conflicting findings regarding the effectiveness of Reiki. For example, one study reported similar outcomes between Reiki and sham Reiki applications, highlighting the importance of the nurse's direct support (Catlin and Taylor-Ford, 2011). Conversely, another study provided strong evidence that Reiki is more effective than a placebo (McManus, 2017).

The use of Reiki is increasing across various cultural contexts and healthcare systems. Its positive effects on stress management, pain control, and overall well-being are noteworthy. However, more research is needed to understand the mechanisms of Reiki and its optimal application methods (McManus, 2017; Billot et al., 2019). Studies examining the impact of cultural differences on Reiki practices and outcomes can help extend this therapy to broader audiences and integrate it into different healthcare systems.

The Future Role of Reiki

The future role of Reiki appears promising based on current research findings and trends in clinical practice. Various studies have demonstrated that Reiki has positive effects on pain, anxiety, depression, and quality of life (Birocco et al., 2011; McManus, 2017; Billot et al., 2019). It shows particular potential as a complementary therapy for cancer patients and those receiving palliative care (Birocco et al., 2011; Bremner et al., 2016; Billot et al., 2019). However, some studies have reported conflicting results regarding the efficacy of Reiki. For instance, a pilot study found that Reiki did not have statistically significant effects on physiological measurements (Bat, 2021). Furthermore, some research has questioned the role of the placebo effect in Reiki's outcomes (Catlin and Taylor-Ford, 2011). Therefore, further studies are required to better understand the mechanisms of Reiki and its clinical implications.

Reiki's future role could gain increasing importance in the field of complementary medicine. It shows promise in managing chronic health conditions and supporting post-operative recovery (McManus, 2017). Additionally, Reiki may help reduce burnout among healthcare professionals (Rosada et al., 2015). However, further research is needed to optimize its effectiveness and ensure broader acceptance in clinical practice.

CONCLUSION

Reiki, as part of traditional and complementary medicine practices, plays a significant supportive role in nursing care. Reiki practices, which aim to balance energy fields, have been found effective, particularly in managing symptoms such as stress, pain, anxiety, and depression. Existing literature demonstrates that Reiki can provide positive effects for cancer patients, individuals requiring palliative care, and those dealing with chronic illnesses.

Nursing is a profession that approaches an individual's physical, mental, emotional, and spiritual health holistically. In this context, Reiki serves as a complementary method that can be utilized within the independent functions of nurses, improving the quality of patient care and supporting the overall quality of life. Furthermore, Reiki has the potential to reduce burnout levels among nurses and increase job satisfaction.

However, to validate the effects of Reiki and strengthen its position in clinical practice, further randomized controlled trials are required. Integrating Reiki into nursing education can promote evidence-based complementary practices, ensuring it becomes an effective adjunct tool alongside modern medicine.

In conclusion, Reiki is a beneficial practice for both nurses and patients, holding the potential to support the integration of traditional and complementary medicine within healthcare systems.

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THE IMPORTANCE OF CRITICAL THINKING IN NURSING

Aytap Dincer[1]

INTRODUCTION

In the globalizing world, science and technology are rapidly developing and changing. In parallel with this process, societal dynamics, health policies, and healthcare services are also transforming. Nursing has become a modern profession that continuously renews itself to adapt to these changes. One of the essential skills necessary to adapt to these changes and maintain sustainable development is critical thinking (Çıtak and Uysal, 2012). Critical thinking is an effective process that uses research, intuition, and logical reasoning based on experience to analyze details and present universally valuable expressions. It is supported by a systematic and efficient process that enables observing and making sense of problems in real time, developing integrated problem-solving, and decision-making skills (Dikmen and Usta, 2013). This process systematically reveals the The motives, realities, and justifications behind a thought or decision. It fosters curiosity-driven interaction and formulates questions to understand what is happening, why it is happening, and to grasp more information (Alfaro-Lefevre, 2016).

Radical and rapid changes in healthcare services today, technological advancements, and the increase in research aimed at improving the health and well-being of individuals highlight the need for healthcare professionals to understand contemporary knowledge and principles of practice. They must adopt lifelong learning principles and apply newly acquired knowledge and skills in the healthcare services provided to individuals, families, and communities. In this A period marked by swift advancements in scientific, technological, and medical

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fields, healthcare professionals must make fast, accurate, and rational decisions (Yıldırım, 2011). The complexity of services provided in various fields, the increase in evidence-based practices, and multidimensional care involving technological knowledge and applications require healthcare professionals to be flexible and think critically. Therefore, critical thinking is crucial for healthcare professionals who must often evaluate multiple options simultaneously and make swift decisions (Worrell et al., 2007).

An examination of the literature highlights research on the critical thinking habits and learning approaches of nursing and midwifery students suggest the necessity of developing students' critical thinking skills and using educational methods appropriate to their learning styles (Oktay et al., 2019). Another study on the awareness, attitudes, and critical thinking skills of final-year nursing students regarding research and developments in the nursing field indicates that while students' attitudes toward research and development are positive, their critical thinking skills are low (Karadağ et al., 2018). Similarly, other studies in the literature report low critical thinking scores among nursing students (Kaya et al., 2018; Ulger, 2018; Uyar and Güven, 2019; Çalışkan et al., 2020; Aydın and Kurudirek, 2021). Furthermore, similar results are observed among nurses, who also display low critical thinking scores (Baran and Balcı, 2017; Afşar et al., 2018; Kobya Bulup and Bulut, 2020; Sarıtaş and Yıldırım, 2020). In the study conducted by Taşçı and her colleagues, which examined the factors influencing the critical thinking tendencies of nursing students, it was found that the critical thinking tendencies of nursing students were at a moderate level (Taşçı et al. 2022). Since nursing is an applied science, clinical mentors must especially be familiar with the cognitive processes, serve as role models, and enable students to think critically in clinical settings. Once critical thinking is acquired, it is essential to reflect and evaluate how these skills should be implemented. The importance of critical thinking

in nursing education needs to be re-evaluated in light of these findings.

Conceptual Perspective of Critical Thinking

Socrates, one of the leading philosophical thinkers of antiquity, can be credited with the origins of the concept of critical thinking. The term "critical" derives from the Greek word "kritikos," meaning to discern, evaluate, judge, and select. Critical thinking is the ability to transfer knowledge gained from specific disciplines to other cognitive domains. It involves not only access to knowledge but also solid learning, a form of evaluative learning, and the effective use of information. Critical thinking is frequently defined in education, psychology, and philosophy as analytical skills, problem-solving abilities, cognitive skills, and logical thinking processes. Dewey (1934) defined critical thinking as "the active, persistent, and careful evaluation of a belief or form of knowledge in light of reasons and results" (Jiang, 2016). Paul and Elder (2006) describe critical thinking as the ability to think logically and systematically, solve problems, make decisions, and perform mental processes. Ennis (1962) and Facione (1990) defined critical thinking as the skills needed to evaluate ideas, think analytically, solve problems, critically assess, and effectively use information and thought processes. Within these definitions, critical thinking can be summarized as follows: "An individual possesses cognitive perception regarding the reliability of acquired information." "The use of a decision-making mechanism through a process." It consists of intellectually disciplined processes of active and skilful conceptualisation, analysis, synthesis, application, and/or evaluation through observation, reflection, reasoning, experience, or communication to guide beliefs, ideas, and actions. Critical thinking aims to engage in the highest quality independent, self-disciplined thinking. People who consistently think critically strive to live rationally, intelligently, and empathetically (Thinking, 2024).

In the literature, concepts such as problem solving, decision making, reasoning, informal logic, simple reasoning and creative thinking are claimed to be synonymous with critical thinking. Although these concepts are often used interchangeably with critical thinking, experts define them differently. While the mental processes inherent in all these concepts are related to thinking, attempts have been made to distinguish critical thinking from these concepts. Glaser (1942) defined critical thinking as a general process involving activities such as problem-solving, questioning, and inquiry, considering it a skill and attitude, addressing it in five dimensions: accepting the problem, collecting and selecting relevant information to solve a problem, recognizing structured and unstructured assumptions, selecting and formulating relevant and complex assumptions, deriving reasonable conclusions, and discussing the validity of the results. According to the American Philosophical Association (1990), which provides a consensus definition of critical thinking, "Critical thinking involves the interpretation, analysis, evaluation, and explanation of conceptual, methodological, causal, or contextual factors." It is "a focused, self-regulating judgment that leads to evidence-based decisions and conclusions."

Critical thinking requires persistent effort to examine any belief or knowledge and its evidence. It is a thinking skill, but not every mental act can be evaluated from the perspective of critical thinking. Random thinking is unacceptable in critical thinking. Through critical thinking awareness, individuals control their thought processes. Lipman summarized the differences between ordinary thinking and critical thinking (Lipman, 1989) (Table 1).

Table 1. Differences Between Critical Thinking and Ordinary Thinking

Critical Thinking	Ordinary Thinking
Decision-making	Predicting
Evaluation	Preference
Classification	Grouping
Assuming	Believing
Logical understanding	Understanding
Noting connections between other relationships	Conceptual association
Presentation of evidence-based ideas	Presentation of ideas without evidence
Evidence-based decision-making	Decision-making without criteria
Critical thinking	Normal thinking

Characteristics of Critical Thinking

Thinking, which involves mental and emotional responses, is a fundamental ability that distinguishes humans from other living beings and helps them overcome the challenges they face. Critical thinking is a teachable, observable and potentially assessable skill. In most cases, this process relies on inquiry and respect. Individuals with critical thinking skills not only understand what they read or examine but also possess the ability to develop this knowledge independently. Unlike the process of acquiring knowledge without questioning, critical thinking involves forming hypotheses and using them. In other words, it is testing by comparing with existing facts (Kaya and Şendir, 2021; Yeşilyurt, 2021; Johnsen, 2022).

In 1987, after reviewing the literature, Beyer proposed that critical thinking requires the following skills and approaches to be effective. According to Beyer (1987), thinking strategies encompass all cognitive processes, including critical thinking skills and micro-thinking skills. These strategies include problem-solving, decision-making, and conceptualization.

Examples of micro-thinking skills include recalling, interpreting, applying, synthesizing, evaluating, reasoning, and predicting. Beyer listed critical thinking skills as follows:

- Seek value statements containing verifiable facts.
- Differentiate between:

1. Relevant and irrelevant information, reasons, and claims.
2. Determine the factual accuracy of a claim.
3. Assessing the reliability of a source.
4. Identifying ambiguous statements or arguments.
5. Revealing unstated assumptions.
6. Recognizing bias.
7. Identifying logical fallacies.
8. Noticing logical inconsistencies.
9. How to determine the strength of an argument or a claim (Beyer, 1987).

In later years, Facione (1990) stated that critical thinkers also possess emotional tendencies that enable them to handle situations requiring critical thinking. Although an individual may have cognitive skills such as critical thinking, they are more effective thinkers when they exhibit certain emotional tendencies.

Facione identified these emotional tendencies as follows:

- Curiosity and interest in knowledge
- Confidence in your decisions
- Open-mindedness and flexibility to different perspectives
- Fairness in your evaluations
- Managing your own biases
- Consistency when making or changing decisions
- Perseverance in the face of challenges (Facione, 1990).

Critical Thinking in Nursing and Its importance

Rapid changes in healthcare services and technological advancements necessitate an approach in nursing that enables problem-solving and active participation in clinical decision-making. The nursing profession has shifted away from a biomedical care model and focuses on the interaction between healthcare providers and individuals. Increasing emphasis

on care for the individual. Furthermore, these changes in healthcare services broaden the scope of nursing practices and increase the demand for nurses' knowledge and skills. In this new system, nurses are expected to utilize critical thinking skills and work alongside other healthcare professionals to protect public health (Kobya Bulup and Bulut, 2020; Kaya and Şendir, 2021). Critical thinking is often associated with the problem-solving process in nursing and is considered one of the fundamental competencies of the profession. The ability to analyse complex and ever-changing situations encountered by nurses is defined as critical thinking. It is described as a competency that helps nurses understand and analyze information. Clinical nurses use essential skills to solve patient problems and frequently apply critical thinking skills in their daily practices. This skill stimulates curiosity and promotes the discovery of new information to solve a problem, thereby enhancing research skills. Consequently, critical thinking skills are also developed by improving research skills (Jiménez-Gómez et al., 2019; Falcó-Pegueroles et al., 2021).

The ability to think critically, which brings dynamism to the nursing profession, includes processes such as reasoning, synthesis, interpretation, and evaluation. The lack of this ability may limit the capability to provide effective care and increase the risk of failing to fully embrace and develop high-quality care, professional competence, independence, and the core values of the profession (Kaya and Şendir, 2021). Studies investigating how specific sociodemographic, professional, and institutional factors affect nurses' critical thinking skills have revealed significant findings. One study found that female participants were better at thinking critically than male participants (Basco-Prado et al., 2024). In a study conducted by Atasayar and İşeri (2023), students who received critical thinking training were evaluated for diagnostic skills before and after the training, and it was found that their success in making accurate diagnoses increased after the training. Surigel-Perez

and colleagues (2019) discovered that sociodemographic and professional variables such as age, work experience, and education level influenced nurses' critical thinking skills. A study by Afşar et al. (2018) demonstrated that engaging in scientific research enhanced critical thinking among nurses. Taşçı and Özer (2023) showed that nurses working in stressful environments required higher critical thinking skills and possessed these skills at a high level.

Healthcare services are among the primary fields where the frequent use and maintenance of critical thinking are increasingly necessary. Nurses, as an essential part of healthcare authorities, must investigate, inquire, think critically, and find solutions to provide safe, quality care to individuals, families, and communities. In the discipline of nursing, critical thinking is an important problem-solving process based on organizing, collecting, defining, detailing, and expanding outcomes derived from this information (Paul and Elder, 2006). It is crucial for nurses to develop critical thinking skills through evidence-based practices conducted under the guidance of professional ethics principles and modern nursing roles, contributing to the science and profession of nursing. Critical thinking plays a significant role in formulating nursing diagnoses, making clinical decisions, and creating nursing care plans, as it improves communication skills and enhances the intuitive ability to understand patients (Oktay et al., 2019; Kaşıkçı and Özcan, 2024).

Critical Thinking in Nursing Practice

Critical thinking is considered a fundamental element of nursing practice and a universal criterion for its application in national and international literature. Nurses must be individuals capable of critical thinking. By clearly identifying the problem, critically analyzing contributing factors, searching for evidence for specific approaches, developing solutions, and applying the methods most likely to achieve desired outcomes, nurses help solve the problems of the individuals they care for

through critical thinking. Critical thinking is defined here as a systematic process which helps both carers and clients to make more informed decisions (Kaşıkçı and Özcan, 2024).

Critical thinking in nursing is a process that combines the concepts of clinical reasoning, creativity, and clinical judgment. Clinical reasoning involves strategies and alternatives applied to solve the patient's or client's problems. Creativity, as the process of finding new or innovative approaches, can enhance the effectiveness of proposed solutions or interventions and focuses on the individualization of patient or client care (Lipman, 1989). Clinical judgment, resulting from critical thinking, is the process of evaluating alternatives and arriving at conclusions about the best approach. Critical thinking is a complex process that transforms thinking into action. A study conducted in nine countries with nurses from different specialties identified 10 emotional components and seven cognitive components of critical thinking in nursing as being internationally recognized. Emotional components predispose individuals to strong critical thinking. Among these emotional components that nurses must possess are contextual perspective, intellectual integrity, as well as self-confidence, creativity, flexibility, reflection, open-mindedness, persistence, intuition, and curiosity (Dikmen and Usta, 2013).

Nurses use critical thinking skills in various ways, including:

- Using knowledge from other disciplines: Nurses utilize critical thinking skills to evaluate information from interdisciplinary fields such as biophysics and behavioral sciences to provide holistic care. For example, a nurse may use knowledge from nutrition and physiology to support wound healing and prevent further pressure ulcers in a patient with an existing pressure ulcer.

- Managing changes in stressful environments: A patient's condition may change rapidly, and normal protocols may not suffice to respond to unexpected situations. When

contingencies arise, critical thinking enables the nurse to recognize significant cues, respond quickly with appropriate information, and adapt best-practice interventions to the patient's unique needs at the right time.

- Making important decisions: Nurses use critical thinking skills to collect, synthesize, and interpret the information required for clinical decisions and judgments. For example, nurses must make informed decisions about which member of the healthcare team to report to immediately and what to include in follow-up and outcome reports (Johnsen, 2022; Kaşıkçı and Özcan, 2024).

In clinical practice, nurses often operate without effectively utilizing critical thinking due to their reliance on attitudes. Therefore, higher critical thinking skills become necessary when new ideas emerge or decisions outside the norms are required. Healthcare is one of the most critical fields requiring the use of critical thinking. There are several reasons why nurses need to learn critical thinking skills. Firstly, Thought processes are a fundamental component of effective problem-solving and the lack of this ability can make nurses part of the problem. Moreover, nurses are required to make critical, independent decisions promptly in demanding situations. Critical thinking empowers them to recognize vital information and differentiate between life-threatening issues and less urgent concerns. Therefore, critical thinking skills lead nurses to reflect on their actions and consider the potential outcomes of every decision, enabling precise and accurate decision-making. The Australian Nursing and Midwifery Council (ANMC) (2005) stated that one of the four fundamental domains of nursing competency standards is "critical thinking and analysis," and "nursing students are assessed according to these standards."

Critical Thinking in Nursing Education

Considering the COVID-19 pandemic experienced worldwide and in our country, the importance of qualified

nurses and quality nursing care has become even more evident to policymakers and society at large. Highly competent medical personnel are the most critical resource for high-quality care. The competence of the nursing staff is dependent on the development of clinical skills and critical thinking during the nursing education and training. Therefore, the quality of nursing education serves as an indicator of the future quality of healthcare professionals and the care they provide. It can be said that qualified instructors and an appropriate instructor-to-student ratio are the primary prerequisites for achieving this goal (Raymond et al., 2018; Yürümezoğlu and Kocaman, 2024).

A primary goal of nursing education is to equip students to provide safe, skilled, and evidence-driven care for patients with increasingly complex needs. This involves developing skills in analysing evidence and making optimal nursing decisions in complex clinical situations, as well as transferring theoretical knowledge. However, research has shown that registered nurses often lack adequate critical thinking skills when they begin clinical practice. This deficiency leads to adverse outcomes, such as decreased patient satisfaction, medical errors, and the attrition of new nurses from the profession. Nursing critical thinking brings high intellectual integrity, creativity, contextual sensitivity and intuition to clinical practice (Chan, 2013; Bahmanpour et al., 2018). Rapidly evolving educational and teaching strategies must be integrated into nursing education. In addition, efforts should be made for the development of effective strategies for the improvement of critical thinking skills, which should be the subject of research. Educational approaches that rely solely on direct explanation have limited effectiveness and longevity. Recent years have seen the use of educational strategies such as mind mapping, problem-based learning, game-based learning, escape rooms, and simulation to develop critical thinking in nurses. These active learning strategies encourage students to develop higher-level critical thinking skills and support self-

directed learning (Bilik et al., 2020). Education that fosters critical thinking in nursing enables career candidates to improve their skills in questioning and evaluating information. The ability to analyze data on disease symptoms, treatment options, and patient conditions and to solve problems helps novice nurses leave a positive impression. This enhances the quality of care and increases professional satisfaction (Chen et al., 2020).

Strategies for Developing Critical Thinking in Nursing

In today's world, where healthcare issues are given increasing importance, nurses are taking on more social responsibility. In fact, nurses working in today's clinical practice settings must acquire the ability to correctly evaluate the characteristics of illnesses and address time-sensitive problems. Thus, critical thinking is an essential and fundamental skill in nursing. Critical thinking is particularly important for nurses to intelligently, objectively, and accurately evaluate, interpret, and analyze information to determine the need for diagnosis and appropriate decision-making. The process of critical Thought processes in nursing are deeply connected to utilizing cognitive, behavioral, and practical elements to improve patient care outcomes (Andreou et al., 2014). Promoting the development of critical thinking skills in nurses will lead to the acquisition of the knowledge and skills needed to become experts in critical thinking. Skills and building blocks related to critical thinking, when applied consistently, are critical for improving effective and safe patient care.

Recently, nursing education has investigated approaches like Taba teaching, problem-based learning, and simulation exercises to enhance students' critical thinking capabilities, reflective writing activities, six thinking hats technique, questioning, strategic thinking-based education, concept mapping, and digital voice recording technologies (Çıtak and Uysal, 2012).

Andreou et al (2014) conducted a systematic review to examine the relationship between the learning styles of nursing students and their critical thinking skills. They found that both the learning styles of the students and their critical thinking skills were related (Andreou et al., 2014). It is worth noting that factors such as culture, secondary education, the socioeconomic conditions of the period, past experiences, socialization processes, etiquette, and other subjective parameters influence these relationships in nuanced ways. Studies on effective teaching methods and critical thinking skills in the literature highlight the importance of various approaches. A meta-analysis aimed at determining the impact of unconventional educational methods on students' critical thinking skills found that diverse teaching and learning methods were more effective in developing intellectual tendencies compared to traditional approaches (Carter et al., 2016; Lee et al., 2016).

Problem-based learning, concept maps and similar methods were found to be effective in developing critical thinking skills in a systematic review of the effectiveness of educational methods used to improve critical thinking skills in nursing and midwifery students. However, it suggested further investigation into the impact of critical reading and writing courses, online learning methods, video sketches, web-based animated educational tools, knowledge-based communication technology access, reflective writing interventions, interactive video disk systems, and evidence-based nursing courses on critical thinking (Carvalho et al., 2017). Carvalho et al. (2017), in their systematic review, emphasized that the use of concept maps based on problem-based learning was the most effective method for developing critical thinking skills. They also noted the need to examine the effectiveness of simulation, specific study strategies, reflective writing, and nurse-patient interaction scenarios (Carvalho et al., 2017). Cui et al. (2018) concluded that evidence-based learning was the most effective approach for developing students' critical thinking skills. Yue

et al. (2017) demonstrated in their systematic meta-analysis and review that concept maps could influence both the emotional tendencies and cognitive abilities of critical thinking.

CONCLUSION

One of the most important skills in nursing is critical thinking. Professional nurses are encouraged to provide safe, effective, and holistic care. Nurses can understand and evaluate patients' health conditions and use critical thinking to determine the most appropriate care options. Critical thinking in nursing represents a process encompassing clinical reasoning, creativity, and clinical judgment. By employing critical thinking skills, nurses focus on solving patient problems, making clinical decisions, and creating effective care plans. Conversely, efforts to improve critical thinking skills in education help candidates become safer and more effective in clinical practice. Acquiring critical thinking skills can enhance patient safety and improve healthcare quality, enabling nurses and career candidates to excel in dynamic healthcare environments.

Critical thinking and cognitive development are two interrelated concepts in higher education. As the connection between critical thinking and academic success has been proven, promoting critical thinking in higher education should be a universal goal. Critical thinking plays a vital role in ensuring meaningful, safe, effective, and skill-based practices. Nursing education programs should embrace strategies that foster critical thinking through content and methods aimed at enhancing students' critical thinking abilities. Nursing educators use resources such as role models, questions, concept maps, simulation exercises, reflective writing, problem-based learning, and more to enhance students' critical thinking skills. Further research is needed to examine the use and application of different teaching methods. Additionally, the relationship between barriers and Elements that support critical thinking development in nurse educators. should be explored in greater depth.

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