JOURNAL OF GAZI UNIVERSITY HEALTH SCIENCES INSTITUTE

https://guhes.gazi.edu.tr/

https://dergipark.org.tr/tr/pub/guhes

VOL: 5

NO: 2

YEAR: 2023

August 2023, Volume:5 No:2 e-ISSN: 2687-6353
Periodical published three times per year

Journal of Gazi University Health Sciences Institute (GUHES)

Contact:
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GUHES 2023; 5(2): 59-67
DOI: 10.59124/guhes.1261592

Review

Journal of Gazi University Health Sciences Institute

journal homepage*:* https://dergipark.org.tr/tr/pub/guhes

Sexuality and Counseling in Postpartum Women

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Article info:

Received: 07.03.2023

Accepted: 12.05.2023

Keywords:

counseling, nursing, postpartum, sexuality

Abstract

The World Health Organization describes sexuality as a developmental process like pregnancy and postpartum period and the complete well-being of the individual in physical, emotional, mental and social harmony, noting that it is affected by many factors such as culture, society, family, hormones and daily activities. In other words, a woman's sexuality in the postpartum period is affected by the type of birth, interventions performed at birth, breastfeeding, a woman's body image, postpartum depression, and fear of becoming pregnant again. In addition, factors such as dyspareunia, decreased sexual desire, fatigue, and insomnia that occur in postpartum women lead to a decrease in the frequency of sexual intercourse. However, qualified sexual health education and counseling by nurses during this sensitive period can be effective in eliminating women's concerns, correcting misinformation and misconceptions, and preventing sexual problems. Therefore, this review discusses the factors affecting sexuality of women's sexuality in the postpartum period and the importance of nursing services in line with the current literature.

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Citation: Eryılmaz, N. & Şentürk Erenel, A. (2023). Sexuality and counseling in postpartum women. *Journal of Gazi University Health Sciences Institute*, 5(2), 59-67. https://doi.org/10.59124/guhes.1261592

1. Introduction

The World Health Organization (WHO, 2006) defines sexuality as a state that encompasses sexual identity, eroticism, pleasure, intimacy, and reproduction throughout a person's life, including thoughts, fantasies, relationships, desires, beliefs, attitudes, and experiences, and that is influenced by biological, social, psychological, economic, political, cultural, and religious phenomena. Moreover, sexuality in women is a multifaceted phenomenon that can be influenced by contextual factors such as stress or relationship factors (Hipp et al., 2012). In addition, there are some gender-specific life stages and situations that can affect women's sexuality. These include pregnancy, postpartum, breastfeeding, and menopause (Akpınar, 2016). The postpartum period brings about some biological, psychological, and social changes in women. During this period, there is an increased incidence of sexual dysfunction, which is affected by many factors, such as breastfeeding and hormonal changes, type of delivery, perineal trauma and episiotomy, stress, fatigue, insomnia and postpartum depression, body image, and pregnancy anxiety (Abd Aziz et al., 2021; Abdelhakm et al., 2018; Caruso & Monaco, 2019; Gutzeit et al., 2020; Handelzalts et al., 2018; Koç & Oskay, 2016; Zamani et al., 2019). Women's self-perception deteriorates due to the changes that occur in women with childbirth, and these changes can cause insomnia, tension, and sexual problems (Gutzeit et al., 2020). In a study conducted in Poland, it was found that 45.3% of women experienced sexual dysfunction in the postpartum period (Zgliczynska et al., 2021). Khajehei et al. (2015) found that the most common problem was low sexual desire, followed by inability to orgasm and difficulty with arousal. In addition, problems such as dyspareunia, sexual reluctance, fatigue, and insomnia experienced by postpartum women lead to a decrease in sexual activity. Sexual health, which is one of the components of health, is affected by factors in the postpartum period and causes sexual dysfunction in women. Therefore, this review discusses female sexuality in the postpartum period, the factors that affect it, and the importance of care services in accordance with the current literature.

2. Impact of Breastfeeding

Breastfeeding is extremely important for building a secure relationship between mother and newborn. In addition to the psychological aspects, the significant decrease in the hormones estrogen and progesterone, which increase during breastfeeding, and the increase in the hormone level prolactin cause vaginal dryness in the postpartum period and increased vaginal dryness during this period leads to a decrease in sexual desire (Abdelhakm et al., 2018; Johnson, 2011). For this reason, vaginal dryness causes more pain and discomfort during intercourse in breastfeeding women, which may lead them to avoid intercourse (Barbara et al., 2016). In an experimental study, it was found that 50.55% of women in the group of mothers who gave only breast milk to their baby had sexual dysfunction (Szöllosi & Szabo, 2021). Rezai et al. (2017) shows that breastfeeding mothers were about 2.5 times more likely to experience sexual dysfunction than non-breastfeeding mothers. Studies show that breastfeeding has negative effects on sexual intercourse, such as delayed sexual initiation, lower frequency of sexual activity, lower sexual interest, decreased pleasure, decreased desire, and dyspareunia (Bokaie et al., 2019; Gutzeit et al., 2020; Johnson, 2011; Matthies et al., 2019; Rezai et al., 2017; Serati

et al., 2010). In addition, the changes in the breasts during this period and the milk leaking from the breasts with sexual arousal during intercourse and the tenderness of the breasts cause women to avoid sexuality (Akyüz, 2009; Johnson, 2011; Korğalı, 2016; Leeman & Rogers 2012). However, in the postpartum period, women perceive the breasts as a nutritional tool that plays a role in feeding their baby. Similarly, another study found that women do not find themselves attractive due to increasing breast size and consider their breasts as an organ that belongs to their babies because they breastfeed and cannot associate this with sexuality (Bender et al., 2018). On the other hand, there are also studies that show that some women who breastfeed in the postpartum period feel more attractive, that breast growth increases their sexual desire and causes an increase in eroticism, that women experience direct stimulation through breastfeeding, that breastfeeding moistens female sexuality more, increases sexual satisfaction, and facilitates orgasm (Aliakbari Dehkordi, 2010; Anbaran et al., 2015). The results of the above studies show that breastfeeding has a positive impact on sexual life in the postpartum period.

3. The Effect of the Mode of Delivery and Birth Interventions

Perineal trauma refers to damage caused by a tear, laceration, or episiotomy resulting from the birth event (Acavut & Güvenç, 2020). Postpartum bleeding and pain due to procedures such as episiotomy in vaginal deliveries cause women to avoid sexual activity (Selimoğlu & Beydağ, 2020). It is generally recommended that women wait six weeks to both heal the wound site and stop lochia, as perineal wound healing takes an average of four to six weeks before beginning vaginal intercourse during the postpartum period (American College of Obstetricians and Gynecologists [ACOG], 2016; Taşkın & Akan, 2020). Perineal trauma due to childbirth causes perineal pain in women, which leads to difficulties in breastfeeding, self-care, caring for the newborn, and performing daily activities, and subsequently to problems such as insomnia, fatigue, stress, and anxiety (Kohler et al., 2018). Numerous studies in the literature show that perineal injuries cause sexual dysfunction in women (Başkaya et al., 2018; Fan et al., 2017; Gutzeit et al., 2020; Leal et al., 2014; Quoc Huy et al., 2019). Perineal pain caused by perineal trauma should be counted among the possibilities that may affect sexual intercourse in the postpartum period (Öztürk & Özerdoğan, 2020). Women who gave birth vaginally, without a tear and/or episiotomy, or who had a cesarean section started having sexual intercourse in shorter periods of time than women who had a vaginal tear and/or episiotomy (Jawed-Wessel & Sevick, 2017). However, the rate of postpartum sexual dysfunction increases in women with vaginal tears (Gutzeit et al., 2020). Aydın, (2022) found that primiparous women who delivered with episiotomy had higher sexual dysfunction than women who delivered without episiotomy. Barbara et al. (2016) found that women who delivered via episiotomy experienced less arousal, orgasm, sexual function, and lubrication compared to women who delivered via cesarean section. Manresa et al. (2019) stated that episiotomy was found to be the main cause of dyspareunia and cesarean section decreased the likelihood of dyspareunia compared to spontaneous delivery. Quoc Huy et al. (2019) stated the incidence of sexual dysfunction 3 months after episiotomy was found to be 40.7%, and the most common problems were sexual desire (68.9%) and inability to orgasm

(67.4%) and dyspareunia (58.5%) (Research shows that the type of delivery and/or intervention during delivery can affect a woman's ability to resume sexual activity.

4. The Impact of Low Body Image

Body image may also be one of the reasons why women experience sexual dysfunction in the postpartum period (Kargar et al., 2021). Some studies show that there is a significant association between poor body image and sexual dysfunction in women (Hockey et al., 2022; Levy et al., 2020). Women are unhappy about gaining too much weight with pregnancy and do not feel particularly sexy (Bender et al., 2018). Olsson et al. (2005) reported that some women perceived their vaginas as "big and loose" after childbirth, even if their partners did not have this perception, felt less attractive, and had little or no desire for sexual activity after childbirth, resulting in a discrepancy between their sexual desires and their partners' perceived sexual desires. Awoman with a low "body mass index" were more satisfied with their appearance. Hockey et al. (2022) concluded that the partners of women who are satisfied with their appearance find them attractive and therefore both they and their partners are more satisfied with sexual intercourse.

5. The Effect of Fatigue and Lack of Sleep

Sleep quality is affected by many biological-psychological factors, such as daily lifestyle, environmental factors, work life, social life, economic status, general well-being, and stress. In the postpartum period, a woman's daily life also changes due to the disruption of sleep patterns (Erçel & Süt, 2020). Öztaş and Sohbet (2023) found that 67.7% of women had decreased sleep duration in the postpartum period. The physical fatigue and pain experienced by the woman during labor, the high frequency of feeding the baby during the first months of the postpartum period, and the care she has to give the baby can cause insomnia and make the woman feel tired during the day (Aktaş & Karaçam, 2017; Öztaş & Sohbet, 2023). In the postpartum period, depression symptoms such as lack of attention, loss of motivation, and lack of enjoyment of life occur due to insomnia and fatigue (Uludağ et al., 2022). These conditions may result in the couple having very little time for sexual intercourse and a decrease in the frequency of sexual intercourse (Leeman & Rogers, 2012; Koç & Oskay, 2016).

6. Effects of Postpartum Depression

The postpartum period not only brings hormonal and physical changes for women, but it is also a time when there is a lack of social support, low self-perception, and altered body image, and women must cope with the difficulties of caring for a baby and adjusting to this time (Brummelte & Galea, 2016; Tezel & Gözüm, 2005). The fatigue and insomnia that women experience during the postpartum period result in a lack of time for themselves and inadequate self-care. These negative situations cause depression in women and negatively affect the quality of sexual life, for example, in the form of decreased sexual desire (Lambermon et al., 2020; Leeman & Rogers, 2012). Alp Yılmaz et al. (2018) determined the prevalence of sexual dysfunction in Turkish women, which is 74.3% of postpartum women. In another study, more than half of women were found to have sexual dysfunction in the postpartum period and about one-third were at risk for depression (Dağlı et al., 2021).

7. Fear of Conception and The Effects of Contraceptive Use

One of the reasons why women are afraid and anxious about resuming sexual intercourse after childbirth is the fear of pregnancy. The fact that the woman does not feel sexually aroused during this period and the anxiety and fear of becoming pregnant again have a negative effect on women's sexual life (Beyazıt et al., 2018; Koç & Oskay, 2016; Olsson et al., 2005; Üstgörül, 2016). First sexual intercourse after birth is an important issue for couples (Amir Aliakbari et al., 2018). Although the timing of initiation of sexual intercourse by postpartum women varies according to psychosocial and cultural differences, the average timing of initiation falls in the sixth to seventh week after birth (Başkaya et al., 2018; Handelzalts et al., 2018). Turkey Population and Health Research (Türkiye Nüfus ve Sağlık Araştırması) indicated that most women (77%) began sexual intercourse after the sixth week postpartum (Hacettepe Üniversitesi Nüfus Etütler Enstitüsü, 2018). Adedokun et al. (2020) indicated that arelationship was found between women's family planning use and resumption of sexual intercourse. Also stated that some women delayed resumption of sexual intercourse due to fear and anxiety of pregnancy. A cross-sectional study showed that most postpartum women (53.9%) started sexual activity in the early postpartum period (within 6 weeks) (Gadisa et al., 2021). WHO (2013) recommends that all women should be assessed on when to resume sexual activity by incorporating it into postpartum care 2-6 weeks after delivery. Study of Eryılmaz and Ege (2016) stated that most women who gave birth did not think about pregnancy immediately and wanted to use "intrauterine device" as a birth control method. The postpartum period may be the most appropriate period for women to receive information about when to start sexual activity and family planning method counseling.

8. Sexual Counseling in the Postpartum Period and the Role of the Nurse

Sexual dysfunction is one of the health problems that make couples unhappy. Despite this, sexuality in our country is still a private issue that is not included in the routine nursing care of patients because of the lack of importance given to sexuality and for reasons that lie with both health professionals and patients (Tuğut & Gölbaşı 2014; Karaçam & Çalışır 2012). It is well known that women in the postpartum period are a special group suffering from sexual dysfunction. Many sexual health problems can be easily detected by taking sexual history from women in the postpartum period whom nurses follow up in primary health care services and evaluating the patient in this respect, and then this problem can be solved by providing information and short counseling. Sexual counseling can also improve sexual function by increasing awareness about genital anatomy-physiology and sexual response cycle, and by enabling people to establish intimacy, especially when solution suggestions for the underlying problem are offered, such as the use of lubricant, increasing the duration of foreplay, establishing sexual fantasies and sharing them with the partner (Darooneh et al., 2022). Written and visual materials can also be utilized during these trainings and information sessions. Alnuaimi and Almalik (2021) stated that women thought that giving the trainings given to women in the form of brochures and taking them home and sharing them with their spouses was more useful for women who were embarrassed to talk about sexuality-related issues or

women who had to go to and from the health institution very quickly. In addition, nurses should have the necessary knowledge and skills to evaluate the patient's sexuality, develop empathy, be impartial and unbiased, feel comfortable talking about sexual issues, have effective communication skills, and be competent in using existing nursing models in evaluating sexuality.

9. Conclusion

To prevent or minimize sexual dysfunctions in the postpartum period, the necessary education and counseling should be started during pregnancy and this service should be continued after birth. This may help prevent or early detection of problems that women may experience in the postpartum period related to sexuality. Women should be helped to lead a healthy sexual life and to eliminate the concerns that may arise in these critical periods, women during pregnancy should be evaluated in terms of risk, and especially in the postpartum period, a woman's application to a health institution for any reason should be turned into an opportunity by health professionals, needs analysis specific to each woman should be made, trainings should be personalized and within the framework of evidence-based practices, sexuality, sexual health education and counseling should be integrated into routine nursing care with a holistic perspective. However, it is obvious that more research is needed to understand the positive and negative effects of the factors affecting sexuality in the postpartum period on sexual life.

Conflicts of interest

The authors declare no conflicts of interest.

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GUHES 2023; 5(2): 68-76
DOI: 10.59124/guhes.1266109

Review

Journal of Gazi University Health Sciences Institute

journal homepage*:* https://dergipark.org.tr/tr/pub/guhes

An Overview of Outcome Measures in Healthcare

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Article info:

Received: 17.03.2023

Accepted: 17.05.2023

Keywords:

clinician-administered, outcome measures, self-reported, terminology

Abstract

Consideration of indicators of an individual's perceptions and attitudes is valuable to reflect the impact of physical findings on quality of life. In this regard, practical outcome measures assist in concluding. Self-Reported Outcome Measures (SROMs) corroborate medical findings and allow for easy profiling (eliciting information about the patient's condition). Even if their frequent usage in clinical and scientific studies, there is confusion over taxonomy, terminology, and definitions of outcome measures. Sometimes, clinicians face some obscurity of the complexity of the features and concepts those measurements represent. This leads to misnaming or misidentification of measurement tools. Users also have difficulty choosing the right tool because of this confusion. This study aims to describe and standardize the terminology of outcome measures and to clarify the classifications with examples. Thus, we aimed to increase the knowledge and awareness of health professionals about the measurement tools, make them interrogate their qualities and features, and encourage them to choose more appropriate ones.

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Citation: Özal, Ş., Kafa, N. & Atalay Güzel, N. (2023). An overview of outcome measures in healthcare. *Journal of Gazi University Health Sciences Institute*, 5(2), 68-76. https://doi.org/10.59124/guhes.1266109

1. Introduction

Clinicians try to get as much information about the patient as possible to solve the problem (Nelson et al., 2015). Clinical measurements are required for examination, diagnosis, making a clinical decision, choosing the best treatment method, checking the results, comparing the results with other patients, and determining the priority of the various treatment methods (Dawson et al., 2010; Francis et al., 2016; Grove et al., 2021; Nelson et al., 2015). Objective outcomes such as vital signs, laboratory tests, performance tests, and imaging methods maintain precious information about the patient (Fischbach & Dunning, 2009). However, a patient; may have subjective symptoms arising from their feelings, experiences, environment, and mood, independent of medical findings (Dawson et al., 2010; Francis et al., 2016; Guyatt & Schunemann, 2007). Objective outcomes do not reflect the patient's satisfaction with the treatment, perceptions, and feelings about the disease. After all, the impacts of these subjective signs on the healing process should not be underestimated. Understanding the patient's perception, experience, expectations, and feelings about the situation enhances interpreting all these measurements correctly (Guyatt & Schunemann, 2007; Snyder et al., 2007). In this regard, our best helpers are the disease, symptom, function, or population-specific scales, questionnaires, or indexes. In favor of these helper tools, we can imagine the situation of patients and empathize with them better (Dawson et al., 2010; Guyatt & Schunemann, 2007; Snyder et al., 2007).

Outcome measures are used in clinics to strengthen diagnosis, determine the severity of the pathology, and monitor status changes over time (Wyrwich & Wolinsky, 2000). They can be also used for screening population health in epidemiological studies (Basch et al., 2015). Outcome measures are significant criteria for individual or group analyses in quality improvement initiatives, clinical trials, or observational studies (Black, 2013; Dawson et al., 2010; Zheng et al., 2014).

Although the use of measurement and evaluation tools in healthcare settings began later than in fields such as education, sociology, and marketing, it has gained momentum due to its convenience. Even if its frequent usage in clinical and scientific studies, there is confusion over taxonomy, terminology, and definitions of outcome measures (Mokkink et al., 2010). There is a complexity in features and concepts that measurement represents. This situation causes them to be misnamed or faulty in descriptions. Also, users have difficulty choosing the right tool. This study aims to describe and standardize the terminology and definitions of outcome measures and to clarify the classifications with examples. Thus, we aimed to increase the knowledge and awareness of health professionals about the measurement tools, encourage them to choose more suitable ones, and make them interrogate their qualities and features. We also think this study will increase the use of existing tools, facilitate the identification of new tool needs, encourage the creation of new tools, and guide researchers in scale development studies.

2. Classification of Outcome Measures

We can classify subjective measurements in healthcare as Clinician-Administrated (CAOM), Self-Reported Outcome Measures (SROM), or Mixed-type (hybrid) scales (Michener, 2011; Mokkink et al.,

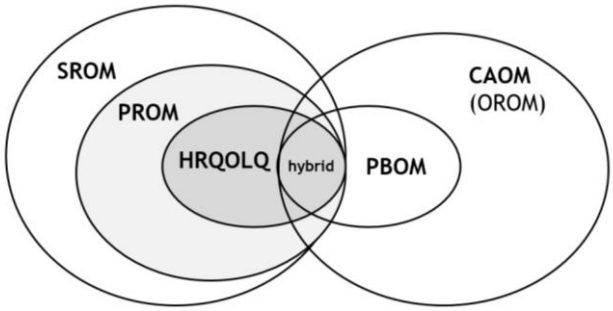
2010; Snyder et al., 2007). The classification scheme of outcome measures is given in Figure 1. Visual Analogue Scale, Numeric Ratio Scale, Verbal Descriptive Scale, and Facial Expression Scale are the prevalent response indication types. Likert-type interval scales are another preferred response type for these health assessment tools (Dawson et al., 2010). The response type should be proper for the target group and intended feature.

3. Clinician - Administrated Outcome Measures

In CAOMs, the patient is evaluated by a healthcare professional. The clinician scores the patient's condition by interpreting the results of self-observation and assessment. Therefore, they reflect the physical capability findings rather than the patient's perception. Scoring is dependent on the clinician's knowledge and experience. Accurate detection of the changes over time also depends on the practitioner. Inter-rater Consistency may be lower in such scales than in SROMs (Edwards et al., 2002). If it is based on the measurement result of performance without interpretation, it is called a Performance-based outcome measure. CAOMs may also be referred to as Observer-Rated Outcomes Measures (OROM). However, since it is preferred that the evaluator be a healthcare professional, the term Clinician-Administered is more appropriate. If the eventual point is based on performance without interpretation, it could be called a Performance-Based Outcome Measure (PBOM) (Figure 1).

4. Self-Reported Outcome Measures

These scales are measurement tools based on descriptions, declarations, expressions, or statements directly reported by the individual, without interpretation by a clinician, evaluator, or another person (Dawson et al., 2010). General health conditions, wellness, symptoms, life expectations, thoughts, or decisions are questioned. The person evaluates the self-situation and tries to find the closest expression. These tools are called as Self-report Outcome Measures (SROMs), Patient-reported Outcome Measures (PROMs), or Health-Related Quality of Life Questionnaires (HRQOLQ). Although they mean close to each other, they have nuances (Francis et al., 2016). The Quality-of-Life Questionnaires are inclusive scales that investigate disease-related impacts. They ascertain various symptoms and reveal how much a person's quality of life is affected. Evaluation of a single indication will not be sufficient to make this inference. Thus, when a scale with a single or limited focus, such as symptom, function, or emotion, we prefer to call as PROMs. The focus of health research may not always be patients. Sometimes research is on healthy individuals or specific healthy groups such as athletes, women, pregnants, children, and the elderly. It would be more appropriate to call the scales developed for use in these populations SROM (Feeny et al., 2013; Francis et al., 2016) (Figure 1).



SROM Self-Reported Outcome Measure
PROM Patient-Reported Outcome Measure
HRQOLQ Health Related Quality of Life Questionnaire
CAOM Clinician Administered Outcome Measure
OROM Observer-Rated Outcome Measure
PBOM Patient-Based Outcome Measure

Figure 1. Classification scheme of outcome measures

5. Prevalent Response Types in Health Outcome Measures

Times Since health-related purports and symptoms are based on individual experience, it is hard to measure and be perceived by another individual who has not experienced the same situation (Albrecht, 1996).

For example, it is not possible to exact define and detect even pain, which is a common symptom of many health problems, and experienced by almost everyone. Because it has such diverse components as that type, region, duration, and severity, and it depends on individual experience, perception, structural features, and environmental, social, and religious characteristics (Loeser & Melzack, 1999). Still, getting subjective information about pain and similar symptoms to determine the condition, prognosis, and treatment results is essential (Albrecht, 1996; Melzack & Raja, 2005). So far, various methods have been tried, and rating systems have been created to measure these symptoms. Visual Analog Scale (VAS), Numeric Ratio Scale (NRS), Verbal Descriptive Scale (VDS), and Facial Expression Scale (FES) are Prevalent Response Types in healthcare (Figure 2). Studies have shown that all these response types are valid and reliable. A study comparing their validity for response types concluded that NRS, VAS, VDS, and FES in terms of sensitivity, respectively (Ferreira-Valenteet al., 2011). However, it should be chosen considering the situation and the target audience. For example, although the sensitivity is lower, the FES method may give more accurate results than NOS or VAS in illiterate elderly or children (Garra et al., 2010). In addition to these types, Likert-type interval measurement tools adapted to various expressions are widely used in questioning attitudes, preferences, perceptions, and behavioral characteristics (Vagias, 2006).

Outcome measures in health care have been designed in various types according to focal points. The purposes of measurement tools vary widely from specific to generic. The specified scales are generally more sensitive to longitudinal changes than generic ones, but they may not capture the impacts of comorbidities. Some generic scales have situation-specific adaptations (Feeny et al., 2013). The principal scale types are compiled below and exemplified in Table 1.

a. **Symptom Scales** investigate the presence and level of some symptoms (Garra et al., 2010; Melzack & Raja, 2005).
b. **Symptom Indexes** allow us to make inferences about the disease it is associated with by questioning the existence and levels of various symptoms. The evaluation criteria of the sub-units of such tools are different from each other (Najafov et al., 2020).

c. **Disease-Specific Scales** that question one or more of the parameters associated with any disease, such as symptoms, function, and mood (Özal et al., 2021).

d. **Region-Specific Scales** explore the situation in the body area affected by the problem in terms of function, symptoms, and physical characteristics (Roach et al., 1991; van de Water et al,, 2016).

e. **Organ/System-Specific Scales** that examine organs or structures belonging to a particular system in the body (Hutchings et al., 2015).

f. **Generic Scales** examine the general health level or quality of life regarding physical, mental, and psychosocial health (Hunt et al., 1981).

g. **Health-Related Quality-of-Life Scales** investigate the consequences of specific pathology findings on the patient's quality of life (Mollaoğlu et al., 2015).

h. **Emotional Scales** reveal a person's unconscious feelings or states, such as well-being, social isolation, or self-efficacy (Beck et al., 1987; Blanchard et al., 1995; Bradley, 1994).

i. **Population-Specific Scales** assess the skill, performance, or wellness of a group of people with common characteristics (age, gender, disability, occupation, sport, or art branches) (Curtis et al., 1995; Washburn et al., 1993).

j. **Attitude and Behavioral Scales** determine individuals' perspectives and perceptions toward any disease, phenomenon, condition, or object (Jaarsma et al., 2009; Merluzzi & Martinez Sanchez, 1997).

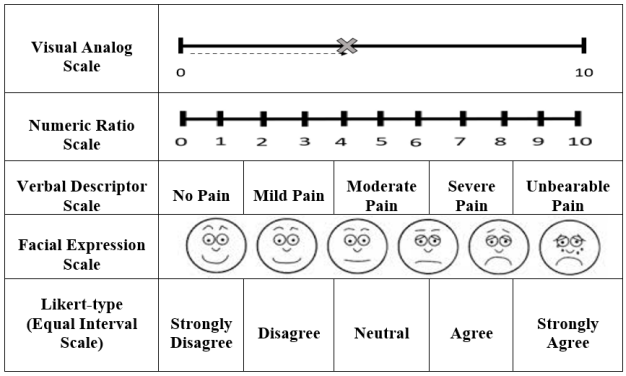


Figure 2. Prevalent Response Types in Health Outcome Measures

6. Conclusion

As in most fields, measurement has great importance in healthcare. Since it relates to clinical decision-making and checking outcomes, it is essential to evaluate patients from various dimensions to strengthen the evidence. In this regard, practical outcome measures assist in concluding. It is valuable to consider the indices of the individual's perceptions and attitudes to reflect the impacts of physical findings on the person's quality of life (Dawson et al., 2010). In other words, adding the scale results based on the person's expressions to the objective data provides the opportunity to evaluate the individual from a larger perspective and helps clinical decision-making. The symbolic, nominal, or numerical outputs obtained from these scales are also used to reveal the temporal changes in the medical condition or compare the differences between individuals or groups (Francis et al., 2016). Both CAOMs and SROMs enhance detailed information about the patient in a short time. They are cheap, easy to understand and apply. The SROMs improve patient-physician communication. Above all, they reflect sincere reports, real sensations, and feelings. Therefore, using these tools in clinical and academic studies is very advantageous. CROMs

are more appropriate than PROMS when patients cannot identify and assess their symptoms or report their health status due to mental or physical disabilities or age (e.g., newborns, elderly with dementia). However, PROMs are more valuable for findings that the clinician cannot detect externally (e.g., pain level). According to the situation, the appropriate one should be selected among the available tools. If possible, CAOMs and PROMs should be used simultaneously to strengthen the findings (Feeny et al., 2013; Powers III et al., 2017).

Despite the numerous advantages of SROMs, they have some disadvantages related to tool suitability or implementation errors. For example, comprehensibility and interpretation of questions or instructions may vary individually, rating methods may not be appropriate for assessment or sample-response matching may be incorrect (Lilienfeld & Fowler, 2006; Paulhus & Vazire, 2007).

Some subjects may not be able to accurately assess themselves or give more socially acceptable answers than true ones (Devaux & Sassi, 2016; McDonald, 2008). Precautions should be taken by taking these disadvantages into account. The most appropriate outcome measure should be selected for the problem, the injured area, and the condition. The person should be encouraged to give correct answers, and the findings should be compared with available more objective measurement parameters.

This article aims to raise awareness and knowledge about outcome measures among practitioners to minimize the disadvantages and maximize the accuracy of SROMs. Thus, clinicians may choose or develop more appropriate tools in this direction.

Table 1. Examples of Outcome Measures

Focal Type	Example Outcome Measure		Measurement Type	Response Type	Sub-sections
	Abbreviation	**Full Name**			
Symptom Scales	**MPQ**	McGill Pain Questionnaire	SROM	VDS	-
	WBS	Wong–Baker Faces Pain Rating Scale	SROM	FES	-
Symptom Indexes	**LHB score**	Long Head of Biceps Score	Mixed	NRS Numbered interval Ratio Scale	Pain/Cramps (SR & CA) Cosmesis (SR & CA) Elbow flexion strength (CA)
Disease-Specific Scales	**WOOS**	Western Ontario Osteoarthritis of Shoulder Index	SROM	VAS	Physical Symptoms, Sports/Recreation/Work Lifestyle Emotions
Region-Specific scales	**SFINX**	Shoulder Function Index	CA	Likert type	-
	SPADI	Shoulder Pain and Disability Index	SROM	VAS / NRS	Pain Disability
Organ/System-Specific Scales	**GSRQ**	Gastrointestinal Symptom Rating Questionnaire	SROM	Likert type Ordinal type Nominal type	-
Generic Scales	**NHP**	Nottingham Health Profile	SROM	Nominal type	Pain Emotional Reactions Energy Level Physical Mobility Social Isolation Sleep
Health-Related Quality-of-Life Scales	**QOLIE-31**	Quality of Life in Epilepsy-31 Inventory	SROM	Likert type	Seizure Worry Emotional Well-Being Energy/Fatigue Social Function Cognitive Function Medication Effects Overall Quality of Life
Emotional Scales	**BDI**	Beck Depression Inventory	SROM	Likert type	-
	WBQ	The Well-being Questionnaire	SROM	Likert type	Depression Anxiety Energy Positive wellbeing
	PTSDS	Post-Traumatic Stress Disorder Scale	SROM/CA	Likert type	-
Population-Specific Scales	**PASE**	Physical Activity Scale for the Elderly	SROM	Likert type Nominal type	Leisure Time Activity Household Activity
	WUSPI	Wheelchair Users' Shoulder Pain Index	SROM	VAS	-
Attitude and Behavioral Scales	**CBI**	Cancer Behavior Inventory	SROM	Likert type	Maintaining Independence Participating in Medical Care Coping and Stress Management Managing Affect
	EHFScB scale	European Heart Failure Self-care Behaviour Scale	SROM	Likert type	-

SROM Self-Reported Outcome Measure, **CAOM** Clinician Administered Outcome Measure, **VAS** Visual Analog Scale, **NRS** Numeric Ratio Scale, **VDS** Verbal Descriptive Scale, **FES** Facial Expression Scale

Conflicts of interest

The authors declare no conflicts of interest.

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GUHES 2023; 5(2): 77-82
DOI: 10.59124/guhes.1276584

Review

Journal of Gazi University Health Sciences Institute

journal homepage: https://dergipark.org.tr/tr/pub/guhes

Mindfulness-Based Cognitive Therapy: A Review

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Article info:

Received: 04.04.2023

Accepted: 12.05.2023

Keywords:

mindfulness,
mbct,
nursing students,
psychosocial ıntervention

Abstract

Mindfulness, an ancient Buddhist practice, is not just recognizing and living in the present moment. It is a way of welcoming things by recognizing them right now. Mindfulness is an approach about gently bringing attention, which tends to go to the past and future, back to the present and accepting what is perceived. It includes intentional and nonjudgmental attention in the present moment. Before thought, which is always one step ahead or behind the present moment, there is awareness in the present moment. In fact, mentally healthy individuals who are able to distinguish between the real and the unreal think about the question of "Is this the case or am I perceiving it this way?". For this reason, how the person perceives is more important than events/situation. The most important determinant on the way to awareness is the way of welcoming individually perceived events/situations. Attitudes as a form of welcoming events and situations are staying in the moment, compassion, noticing judgments, acceptance, beginner's mind, patience, letting things go. Many factors may cause students stress in nursing education. Academic and clinical stressors are experienced by many nursing students enrolled in a nursing education program. When these stressors are not managed well, mental problems such as depression and anxiety disorder may ocur. This review aimed to analyze the mindfulness-based cognitive therapy program.

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Citation: Karakaş İnce, D. & Demir, S. (2023). Mindfulness-based cognitive therapy: A review. *Journal of Gazi University Health Sciences Institute*, 5(2), 77-82. https://doi.org/10.59124/guhes.1276584

1. Introduction

It is important to consciously and non-judgmentally direct attention to living in the moment, not the moment. Every moment is a new beginning, and every experience is different and full of richness. Being able to see this richness is associated with being in the moment. Embarking on the path of mindfulness by listening to bodies and minds and experiencing the skills on this path in a disciplined manner ensure staying in the mode of existence. At this stage, it is important to understand and experience the three steps of mindfulness, which are *attention*, *intention*, and *attitudes*. With selective attention, we can look at events/situations from a broader perspective and determine the way we confront events/situations with the attitudes that exist in relation to our intention, without any judgment. The attitudes of the person during the practices of paying attention and being in the moment affect the way he/she confronts situations. These attitudes are non-judgment, patience, beginner's mind, trust, non-striving, acceptance and letting go (Kabat-Zinn, 2021). Mindfulness-based cognitive therapy is an eight-week structured process with formal and informal practices (meditations). A certain amount of time during the day is set aside for formal meditation. Regular meditation is mind training. In informal meditation, a certain time is not allocated. Daily routines such as cooking, cleaning, and driving are carried out by focusing on the activity, and a mental state for meditation is achieved (Alidina, 2020). Techniques used in mindfulness-based cognitive therapy are raisin meditation, body and breathing awareness meditation, body scan, sitting meditation, mindful hearing, and mindful movement meditation.

Many factors cause students experience stress in nursing education. Academic and clinical stressors are experienced by many nursing students enrolled in a nursing education program. These stressors are exam preparation, course load, paying tuition fees, unsatisfied personal needs, heavy workload, patient care, criticism by instructors or experts, caring for dying patients, fear of making mistakes in the clinic, and exposure to bullying and discrimination. When these stressors are not managed well, mental problems such as depression and anxiety disorder may occur (Anderson-Johnson, & McPherson, 2016; Bahadır Yılmaz, 2016; Brown, Aliafsari-Mamahhani et al., 2018; Labrague et al., 2018).

2. Definition of Mindfulness

Mindfulness originated from the Buddhist insight meditation practices implemented in the East. The character used to express mindfulness in Japanese includes the combination of the words "mind" and "heart", and it is defined not just as awareness but as awareness from heart (Alidina, 2020). Mindfulness involves paying attention to what is happening in the present moment, recognizing the quality of this attention, and accepting all that is noticed without haste and judgment. It is defined as perceiving and accepting what is perceived. The mind always tends to go to the past or the future. It is possible to focus on the present moment without going to the past and the future through mindfulness (Atalay, 2020).

Mindfulness, a translation of the ancient Indian word sati, suggests making discoveries about living in harmony in life. It means attention and remembering and allows to be conscious of lived experiences.

Attention means focused awareness. Mindfulness improves the ability to direct and maintain attention as desired. Remembering, on the other hand, involves remembering to pay attention to the experience at every moment as being aware can easily be forgotten (Alidina, 2020). Kabat-Zinn (2021) who was the first to apply mindfulness in the therapeutic setting, stated that mindfulness can be developed by directing attention in a specific way, in the present moment, and as non-reactively, non-judgmentally, and openly as possible. When we analyze this statement thoroughly, we see the concepts of attention, in the present moment, being non-reactive, non-judgmental and open. Attention refers to directing attention to whatever is of interest. The present moment is the reality of being here now and the awareness of the present state of the existing things. As far as being non-reactive is concerned, it can be stated that when a situation is experienced, a reaction is generally given according to past conditioning. The response is automatic and does not give the person a choice. Mindfulness, on the other hand, argues that responding is a conscious act and ensures a response to the experience rather than reacting to the lived situation/events. As for being non-judgmental, it can be said that in mindfulness, eliminating judgments allows everything to appear as it is, rather than through the filter of personal judgments shaped by past conditioning. As far as being open is concerned, it can be stated that mindfulness is not only related to the mind but also to heart. Being open-hearted adds kindness, compassion, warmth and sincerity to experiences (Alidina, 2020). Mindfulness allows consciously observing the body and mind, and being aware of moment-to-moment experiences. Every moment is a new beginning. Mindfulness focuses on living in the moment, not on every new moment (Kabat-Zinn, 2021).

3. Mindfulness Attitudes

Times The mind must be open and receptive in order to develop the healing power of mindfulness and in order for learning, seeing and change to take place. It is necessary to include the whole existence in the mindfulness process, and attitudes are vital during the practice of paying attention and being in the moment. Attitudes are fundamental to calming the mind, relaxing the body, focusing and gaining the ability to see more clearly. Developing calmness and relaxation is difficult when commitment to practices and energy are low. When energy and commitment are very strong, the person may push himself/herself to realize something and then to relax; however, when the desired objective cannot be achieved, negative thoughts may emerge. Acquiring attitudes determines what will happen on the path to mindfulness in the long run. These attitudes can be gained and developed through mindfulness practices. Non-judgment, patience, beginner's mind, trust, non-striving, acceptance and letting go are the basic attitudes. These attitudes are not independent of each other, and the focus on one of these attitudes also affects the acquisition of other attitudes (Kabat-Zinn, 2021).

Non-judgment: The mind naturally tends to classify. It categorizes perceived situations. While this facilitates the recognition of perceived events, it clarifies the viewpoint. It is important to be aware of the automatic responses that result from the habit of judging. Being non-judgmental does not mean not having an opinion or not criticizing, but noticing the lens of judgments and our reactions in situations that we like and do not like. The important thing here is

that one does not have to stop making a judgment immediately when he or she realizes that a judgment is being made because stopping making a judgment means judging the judgment and it strengthens judgments rather than eliminating judgments (Atalay, 2020).

Patience: Kabat-Zinn (2021) argues that a child can help a butterfly come out of its cocoon by breaking it. However, butterflies generally do not take advantage of this. Every adult knows that butterflies come out of their cocoon at the right time, and there should be no rush. This statement emphasizes the attitude of patience, that everything has its time, and it is important to accept and understand this. People are generally impatient as they want their dreams or wishes to come true as soon as possible. In mindfulness practices, the attitude of patience is focused on. Meditation includes patience, waiting, tolerating the emptiness, and showing patience that development and change are not easy and quick (Atalay, 2020). In this process, people learn to be patient with their mind and body. Those who practice mindfulness should approach themselves like butterflies and live and enjoy their experiences. Being patient, in its simplest form, means being open to every moment, accepting the moments with their fullness and richness, giving oneself enough time (Kabat-Zinn, 2021).

Beginner's mind: Kabat-Zinn (2021) states that no memory is like any other. They are all unique and involve unique possibilities. The beginner's mind reminds us of this simple truth. Kabat-Zinn (2021) draws attention to the importance of turning off autopilot and being more connected with the present moment in mindful awareness. Knowing the lived experiences can actually prevent one from being aware of the richness of that experience. The most important motivation to discover the present moment is to be curious. Having a beginner's mind and understanding that every moment is a new moment increase discoveries and richness (Atalay, 2020). To see the richness of the present, it is necessary to have a "beginner's mind". By putting forth the beginner's mind, one can be free from past experiences and be open to new possibilities. Every moment is unique and includes special possibilities (Kabat-Zinn, 2021).

Trust: It is difficult to meditate in mindfulness without a certain level of trust. Trust in the notion that something does not exist or is "wrong" helps one continue to believe in the mindfulness process. It is realized that the experiences lived with trust are temporary (Alidina, 2020). It is important for one to trust his/her own feelings and intuitions at all stages of meditations. Rather than being guided, the individual continues his journey of mindfulness with his own feelings and focuses on being himself (Kabat-Zinn, 2021).

Non-striving: A certain amount of effort and energy is required for something to be done. In mindfulness practices, this can become a real barrier to awareness. There is no goal in mindfulness practices other than being oneself. When a non-striving attitude is adopted, one can gain a new perspective with very little effort (Kabat-Zinn, 2021).

Acceptance: Acceptance, one of the most beneficial attitudes within mindfulness, means perceiving the experience and approving it without judging it as good or bad. Accepting involves experiencing the moment, without surrendering or quitting (Alidina, 2020). It is a prerequisite for realizing life as it is. It adds sincerity

and compassion to mindfulness. Experiencing the lived experiences with an accepting attitude is the most important point in mindfulness practices. Accepting makes it easier to be equally open to pleasure and adversity, to face loss as well as to win, and to pause to evaluate before reacting. Acceptance ensures that the aspects that are constantly changing and that are hidden about personality are approved (Atalay, 2020).

Letting go: Letting go, which is the basis of mindfulness, involves thoughts, feelings, ideas, opinions, beliefs, and sensations, and the observation, discovery, and release of all these. In mindfulness practices, the person's efforts and struggles to fulfill his/her expectations create an obstacle to awareness. Instead of such an attitude, awareness is achieved through the attitude of letting things go (Alidina, 2020).

4. Techniques Used in Mindfulness-Based Cognitive Therapy and Nursing

Apart from the meditations used in Mindfulness-Based Cognitive Therapy, cognitive behavioral techniques are also used. Cognitive behavioral therapy includes approaches to evaluating thoughts and creating alternative thoughts, while mindfulness involves the relationship and awareness of individuals with their emotions and thoughts. In mindfulness-based cognitive therapy, which is an eight-week structured program, each session lasts approximately two and a half hours. The techniques used in mindfulness-based cognitive therapy are raisin meditation, body and breathing awareness meditation, body scan, sitting meditation, mindful hearing, and mindful movement meditation (Bogosian et al., 2017).

Many factors in nursing education cause stress to students. Academic and clinical stressors are experienced by most nursing students enrolled in a nursing education program. These stressors are exam preparation, course load, paying tuition fees, unsatisfied personal needs, heavy workload, patient care, criticisms by instructors or experts, caring for dying patients, fear of making mistakes in practice, and exposure to bullying and discrimination in clinical settings (Bahadır Yılmaz, 2016; Brown et al., 2016; Aliafsari-Mamahhani et al., 2018; Labrague et al., 2018). Deveci et al. (2013), Cam and Top (2018) reported the incidence of depression in nursing students in Turkey as 26.7% and 18.3%, respectively. Tekir et al. (2018) reported the rate of depression in nursing students as 17.1%. Yüksel and Bahadır Yılmaz (2019) found the depression rate in nursing students as 20.3%. Gümüş and Zengin (2018) reported the incidence of anxiety symptoms in nursing students as 30.2%. Studies have reported that mindfulness practices and cognitive therapy reduce the symptoms associated with stress, depression and anxiety in nursing students and improve their academic skills, well-being and quality of life (Kinsella et al., 2018). It has also been reported that thanks to mindfulness practices and cognitive therapy, the academic achievement levels of nursing students increased, their learning skills and mental health improved (Wiguna et al., 2018).

5. Conclusion

Nursing students may experience many problems during their education. The non-pharmacological mindfulness-based cognitive therapy can be used to cope with these problems. This therapy improves quality of life and academic achievement, ensures

physical relaxation, supports self-confidence, and reduces depressive symptoms. Considering these benefits, students should be encouraged to participate in mindfulness-based cognitive therapy.

In addition, it is recommended to conduct further studies on mindfulness-based cognitive therapy to gain a better insight into the practice, to increase the application of this program, and to evaluate its reflections in our culture.

Conflicts of interest

The authors declare no conflicts of interest.

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GUHES 2023; 5(2): 83-92
DOI:10.59124/guhes.1302391

Research Article

Journal of Gazi University Health Sciences Institute

journal homepage*:* https://dergipark.org.tr/tr/pub/guhes

Determination of the Relationship Between Clinical Practice Stress and Professional Self-Esteem in Nursing Students

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Article info:

Received: 25.05.2023

Accepted: 01.08.2023

Keywords:

clinical practice stress, nursing students, professional self-esteem

Abstract

This study aims to investigate the relationship between clinical practice stress and professional self-esteem in nursing students in terms of some variables. The study is of a descriptive-relationship-seeking type. The study population consisted of 806 2nd, 3rd, and 4th-year students studying at Gazi University, Faculty of Health Sciences, Department of Nursing in the fall semester of 2022-2023. It aimed to reach 261 students by calculating the sample of which the population of the study is known. The sample of the study was obtained by systematic sampling method. The data collection forms used were the Personal Information Questionnaire, the Clinical Stress Questionnaire, and the Professional Self-Esteem Scale. According to the research results, there is a statistically significant difference between the medians of the professional self-esteem scores related to department choice, satisfaction with the department, positive communication with instructors, and positive communication with medical staff ($p< 0.001$). As a result of our study, it was found that the older students, those who had voluntarily chosen the department, those who were satisfied with the department, those who had no difficulty meeting expectations, and those who were considering continuing in the profession had higher professional self-esteem. There was no relationship between clinical practice stress and professional self-esteem.

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Citation: Öz, F. B. & Bilgili, N. (2023). Determination of the relationship between clinical practice stress and professional self-esteem in nursing students. *Journal of Gazi University Health Sciences Institute*, 5(2), 83-92. https://doi.org/10.59124/guhes.1302391

1. Introduction

Nursing education consists of two parts: theoretical and clinical applications. Clinical practice is an indispensable part of nursing education and it often represents additional stress for nursing students, along with the stress of college education and life (Mankan et al., 2016). In studies conducted to determine the stress levels of nursing students, clinical practice has been found to increase students' stress levels (Taşdelen & Zaybak, 2013; Karagözoğlu et al., 2013; Arabacı Baysan et al., 2015; Hamadi et al, 2021). The stress experienced by students in the clinical setting can lead to difficulties in developing relationships with health care professionals, a decrease in the ability to cope with stress, slow and weak social relationships, professional inadequacy, failure to meet patient expectations, lack of compliance with the hospital, concern about harming patients, fear of giving false information, medical errors. Some studies say this causes anxiety about work (Ahmed & Mohammed, 2019; Rafati et al., 2020; Welch, 2023; Amsalu et al., 2020).

It is suggested that some experiences during clinical practice may have changed student nurses' professional self-esteem and negative effects on acquiring professional identity (Altıok & Üstün, 2013; Çivilidağ et al., 2018; Bulduk & Ardıç, 2015). Professional self-esteem is an important indicator of developing an individual's personality and professional identity (Dincer & Öztunç, 2009). Occupational self-esteem is an individual's acceptance of occupational responsibilities and personal value judgment about the occupation. An individual's ability to fulfill his responsibilities in his work relationships shapes his occupational self-esteem (Dimitriadou et al., 2014). The lack of professional self-concept development in nursing students negatively affects their clinical practice, job satisfaction and staying in the profession (Badiyepeymaiejahromi et al., 2020). Professional respect not gained during nursing education can also cause problems in business life (Bimray et al., 2019).

This study aimed to examine the relationship between clinical practice stress and the professional self-esteem of nursing students using some variables. The study sought answers to the following questions:

1. What are the stress levels of nursing students in clinical practice?
2. Does the stress levels of student nurses in clinical practice differ depending on demographic characteristics?
3. What is the level of professional self-esteem of student nurses?
4. Is there a difference between student nurses' professional self-esteem as a function of some demographic characteristics?
5. Is there a relationship between clinical practice stress and the professional self-esteem of student nurses?

2. Materials and Methods

2.1. Type of Research

This is a descriptive, relationship-seeking study.

2.2. Study Population and Sample

The study population consisted of 806 2nd, 3rd, and 4th-year students studying at Gazi University, Faculty of Health Sciences, Department of Nursing in the fall semester of 2022-2023. It aimed to reach 261 students

using the epi-info program for a sample calculation of the known population.

2.3. Sampling Method

Students were stratified according to their classes; the number of students in each class was divided by the number of units in the population, and a proportional selection was made, and the students who would participate in the study were determined by systematic random sampling. The study included 78 students from the 2nd, 84 from the 3rd and 99 from the fourth.

2.4. Inclusion and Exclusion Criteria

Students enrolled in the Department of Nursing and completing at least one semester of clinical practicum were included in the study. First-year students who were not completing a clinical practicum at the time of the study were excluded from the study.

2.5. Data Collection Tools

Personal Information Form: As a result of the literature review, the researchers prepared a thirteen question questionnaire that included ociodemographic information and their opinions on the topic (Altunkürek et al., 2017; Kahraman & Kılıç, 2021; Admi et al., 2018).

Arıcak Professional Self-Esteem Scale (APSC): It was developed by Arıcak (1999) and is a Likert-type measurement instrument used to measure the respect attitude of individuals aged 17 years and older towards their respective professions (Arıcak, 1999). The occupational self-esteem scale consists of 30 items. Of these 30 items, 14 are positive (2, 5, 7, 9, 11, 13, 14, 16, 18, 20, 24, 26, 28, and 30), and 16 are negative (1, 3, 4, 6, 8, 10, 12, 15, 17, 19, 21, 22, 23, 25, 27, and 29). Positive items were scored as "strongly agree" 5, "agree" 4, "undecided" 3, "disagree" 2, and "disagree at all" 1. Negative items are scored in the opposite direction. The points awarded for each item are summed to give the total score. The Cronbach's alpha coefficient of the scale was reported as 0.93 (Arıcak, 1999).

Clinical Stress Questionnaire (CQS): It is a five-item Likert-type questionnaire developed by Pagana in 1989. It consists of 20 items and allows nursing students to measure the initial stress level (which may include threats and struggles) they experience on the first day of clinical practice. The items in the questionnaire are divided into four dimensions: Threat, Struggle, Harm, and Benefit. The threat subdimension of the CQS includes the following emotions: "6" (I was sad, worried, overwhelmed, touched, intimidated/shy, scared), struggle subdimension "7" (warned, fired up, hoped, liked, excited, thrilled, happy), harm subdimension "5" (I was angry, sad, felt guilty, disgusted, disappointed), and benefit subdimension "2" (relaxed, trusting). Each item is scored with 5 marks, and you are asked to tick one of the options 0- "not at all", 1- "somewhat", 2- "moderately", 3- "a lot", 4- "very much".

The questionnaire can be answered with a minimum of "0" and a maximum of "80" points. The Turkish validity of the Clinical Stress Questionnaire was conducted by Şendir and Acaroğlu (2008). The internal consistency coefficient was reported to be 0.70, and factor analysis was reported to support the original structure (Şendir & Acaroğlu, 2015).

2.6. Data Collection

Data were completed face to face by reaching the students identified by systematic sampling in the list between November 2022 and January 2023.

2.7. Data Analysis

Data were analyzed using the statistical program IBM SPSS.21 Conformity to the normal distribution was assessed by Shapiro-Wilk and Kolmogorov-Smirnov tests. The Mann-Whitney U test was used to compare nonnormally distributed values by paired groups, and the Kruskal-Wallis test was used to compare nonnormally distributed data by groups of three or more. Multiple comparisons were examined using Dunn's test. Spearman's rho correlation coefficient was used to examine the relationship between nonnormally distributed scale scores. Analytical results were expressed as mean±sd and median (minimum-maximum) for quantitative data and frequency for categorical data. The significance level was taken as $p< 0.050$.

2.8. Limitations of the Study

This study was limited to the Faculty of Health Sciences of Gazi University, Department of Nursing students. Therefore, the results can only be generalized for this group of students.

2.9. Ethical Dimension of the Study

Written consent was obtained from the head of the nursing department of the college, "institutional approval", "ethics committee approval" from the ethics committee of the college and "voluntary informed consent" from the students participating in the study based on voluntariness.

2.10. Statistical analysis

Data were analyzed using the statistical program IBM SPSS.21 Conformity to the normal distribution was assessed by Shapiro-Wilk and Kolmogorov-Smirnov tests. The Mann-Whitney U test was used to compare nonnormally distributed values by paired groups, and the Kruskal-Wallis test was used to compare nonnormally distributed data by groups of three or more. Multiple comparisons were examined using Dunn's test. Spearman's rho correlation coefficient was used to examine the relationship between nonnormally distributed scale scores. Analytical results were expressed as mean±sd and median (minimum-maximum) for quantitative data and frequency for categorical data. The significance level was taken as $p< 0.050$.

3. Results

It was found that 57.1% of participants had a grade point average of 3.01 or higher, 70.9% were satisfied with their faculty, 61.7% had difficulty meeting the instructors' expectations, and 35.6% had difficulty meeting the expectations of the nurses in charge (Table 1).

Table 1. Descriptive statistics for demographic characteristics

	Frequency (n)	Percentage (%)
Gender		
Male	39	14,9
Woman	222	85,1
Classroom		
2nd grade	78	29,9
3rd grade	83	31,8
4th grade	100	38,3
Department selection status		
Willingly	109	41,8
Unintentionally	59	22,6
Undecided	93	35,6
Order of preference		
Top 3 places	101	38,7
4th and higher row	160	61,3
Reason for preference		
Ease of finding a job	213	81,6
Women's occupation	12	4,6
Willingness to help people	10	3,8
Other (Province where the university is located, helping people, suitability for personality, family desire, degree completion)	26	10
Grade point average		
2.50 and below	29	11,1
2.51-3.00	83	31,8
3.01 and above	149	57,1
Satisfaction with the department		
Yes	185	70,9
No	76	29,1
Difficulty in meeting the expectations of instructors		
Yes	161	61,7
No	100	38,3
Difficulty in meeting the expectations of charge nurses		
Yes	93	35,6
No	168	64,4
Communication with lecturers		
Positive	199	76,2
Negative	62	23,8
Communication with health personnel		
Positive	150	57,5
Negative	111	42,5
Don't think about dropping out of school		
Yes	131	50,2
No	130	49,8
Thinking about continuing in the profession		
Yes	222	85,1
No	39	14,9

The mean score of professional self-esteem was 108.15, the minimum score was 58.00, and the maximum score was 143.00. The mean score of clinical stress was 34.34, the minimum score was 14.00, and the maximum score was 60.00 (Table 2).

Table 2: Descriptive Statistics of professional self-esteem and clinical stress scores

	Mean±sd	**Median (min. - max.)**
Professional self-esteem score	108.15 ± 18.15	111.00 (58.00 - 143.00)
Clinical Stress Scores	**Mean±sd**	**Median (min. - max.)**
Struggle	12.90 ± 4.59	12.00 (1.00 - 25.00)
Threat	11.61 ± 4.89	11.00 (2.00 - 24.00)
Harm	6.66 ± 3.70	6.00 (1.00 - 17.00)
Benefit	3.17 ± 1.67	3.00 (0.00 - 8.00)
Total clinical stress score	34.34 ± 8.74	35.00 (14.00 - 60.00)

The median 2nd-grade occupational self-esteem score was 111.50, the median 3rd-grade occupational self-esteem score was 102.00, and the median 4th-grade occupational self-esteem score was 116.00. A statistically significant difference exists between median self-esteem scores by class ($p< 0.001$). This difference was due to the difference between the 3rd and other grades. No statistically significant difference existed between the medians of clinical stress scores by class ($p=0.614$) (Table 3).

There is a statistically significant difference between the medians of professional self-esteem scores by department choice, satisfaction with the department, positive communication with lecturers positive communication with the instructors, and having positive communication with the health personnel ($p< 0.001$) (Table 3).

A statistically significant positive and moderate association was found between the score of the occupational self-esteem scale and the scores of the struggle, benefit, and harm subscales ($r=0.480$; $p< 0.001$). No statistically significant correlation was found between occupational self-esteem and clinical stress scores ($p=0.496$) (Table 4).

4. Discussion

This study was conducted to determine the relationship between clinical practice stress and professional self-esteem in nursing students. High professional self-esteem in nursing students is important because it affects the quality of patient care, professionalism, and continuity of the profession (Iacobucci et al., 2013; Poorchangizi et al., 2019). In our study, students' professional self-esteem was found to be high. Lyu et al. (2022) found that the professional self-esteem scores of nursing students were at a moderate level (Lyu et al., 2022). Çöplü and Kartın (2019) found that the professional self-esteem scores of nursing students were at a moderate level. It was found that girls scored higher than boys (Çöplü & Kartın, 2019). In our study, the mean score of male students was higher than that of female students. This might be since the clinical stress scores of male students are relatively lower than female students. Looking at the characteristics of the students with high professional self-esteem in our study, it was found that the students who have positive communication with health care staff and faculty, who like to choose the department, who are satisfied with the department, who have high-grade point average, who do not plan to drop out and continue their education, have higher professional self-esteem.

Table 3. Scale values according to some variables

	Professional self-esteem score		**Total clinical stress score**	
	Mean ± sd	Median (min. - max.)	Mean ± sd	Median (min. - max.)
Gender				
Male	109.72 ± 22.60	112.00 (71.00 - 139.00)	33.77 ± 11.49	34.00 (14.00 - 50.00)
Woman	107.88 ± 17.29	111.00 (58.00 - 143.00)	34.44 ± 8.19	35.00 (14.00 - 60.00)
Test statistics	3966.500		4117.000	
p**	**0.404**		0.625	
Classroom				
2nd grade	108.21 ± 18.03	111.50 (58.00 - 143.00)b	34.56 ± 8.82	35.00 (14.00 - 50.00)
3rd grade	101.51 ± 18.24	102.00 (70.00 - 138.00)a	34.99 ± 8.22	35.00 (14.00 - 60.00)
4th grade	113.63 ± 16.41	116.00 (58.00 - 143.00)b	33.62 ± 9.13	34.00 (20.00 - 49.00)
Test statistics	19.954		0.975	
p*	**<0.001**		0.614	
Department selection status				
Willingly	113.24 ± 19.61	118.00 (70.00 - 143.00)a	35.36 ± 8.43	35.00 (14.00 - 60.00)
Unintentionally	103.81 ± 20.52	114.00 (58.00 - 134.00)b	33.27 ± 8.34	32.00 (19.00 - 50.00)
Undecided	104.95 ± 12.68	108.00 (72.00 - 138.00)b	33.82 ± 9.30	35.00 (19.00 - 51.00)
Test statistics	19.867		1.851	
p*	**<0.001**		0.396	
Grade point average				
2.50 and below	102.76 ± 21.16	100.00 (70.00 - 138.00)	30.38 ± 9.24	31.00 (14.00 - 60.00)a
2.51-3.00	107.82 ± 15.60	113.00 (72.00 - 134.00)	34.37 ± 9.04	35.00 (19.00 - 51.00)ab
3.01 and above	109.39 ± 18.75	111.00 (58.00 - 143.00)	35.09 ± 8.32	35.00 (20.00 - 50.00)b
Test statistics	3.762		7.893	
p*	0.152		**0.019**	
Satisfaction with the department				
Yes	114.36 ± 13.70	114.00 (77.00 - 143.00)	33.44 ± 8.94	33.00 (14.00 - 60.00)
No	93.05 ± 18.84	91.00 (58.00 - 122.00)	36.53 ± 7.88	35.50 (20.00 - 50.00)
Test statistics	2718.000		5579.000	
p**	**<0.001**		0.009	
Difficulty in meeting the expectations of instructors				
Yes	110.16 ± 17.65	113.00 (70.00 - 143.00)	37.12 ± 8.16	38.00 (14.00 - 60.00)
No	104.92 ± 18.55	110.00 (58.00 - 138.00)	29.85 ± 7.76	29.50 (19.00 - 45.00)
Test statistics				
P**				
Difficulty in meeting the expectations of charge nurses				
Yes	105.51 ± 19.72	106.00 (70.00 - 139.00)	35.73 ± 8.68	36.00 (14.00 - 51.00)
No	109.62 ± 17.10	113.00 (58.00 - 143.00)	33.57 ± 8.71	33.00 (19.00 - 60.00)
Test statistics	6442.000		6749.500	
P**	**0.019**		0.069	

Communication with lecturers				
Positive	111.45 ± 15.97	114.00 (72.00 - 143.00)	33.94 ± 8.80	35.00 (14.00 - 51.00)
Negative	97.56 ± 20.64	96.00 (58.00 - 133.00)	35.61 ± 8.51	35.00 (20.00 - 60.00)
Test statistics	3666.500		5651.000	
p**	**<0.001**		0.318	
Communication with health personnel				
Positive	113.36 ± 15.35	115.00 (77.00 - 143.00)	33.06 ± 8.94	31.50 (19.00 - 60.00)
Negative	101.12 ± 19.29	106.00 (58.00 - 131.00)	36.06 ± 8.20	37.00 (14.00 - 50.00)
Test statistics	5134.500		6566.000	
p**	**<0.001**		**0.003**	
Don't think about dropping out of school				
Yes	102.18 ± 20.44	108.00 (58.00 - 139.00)	36.92 ± 8.72	37.00 (19.00 - 60.00)
No	114.18 ± 13.04	115.00 (81.00 - 143.00)	31.73 ± 7.99	31.00 (14.00 - 51.00)
Test statistics	5370.000		5762.000	
p**	**<0.001**		**<0.001**	
Thinking about continuing in the profession				
Yes	222.00 ± 110.64	34.05 (16.17 - 8.79)	34.00 ± 72.00	14.00 (143.00 - 60.00)
No	39.00 ± 94.03	36.00 (22.15 - 8.36)	35.00 ± 58.00	20.00 (126.00 - 50.00)
Test statistics	2579.500		3816.500	
p**	**<0.001**		0.238	

In the study of Kahraman and Kılıç (2021) on the professional self-esteem of nursing students, high scale scores were found. Similar to our study, it was found that the professional self-esteem of male students who had chosen the field voluntarily and were satisfied with their school life was higher (Kahraman & Kılıç, 2021).

It is well known that clinical internships are important for students to develop their professional knowledge and skills (Urbina & Monks, 2022). In a systematic review study by Welch (2023), it was found that clinical practice stress decreased as the length of training and clinical experience of students increased (Welch, 2023). In the study by Mankan et al. (2016), the clinical stress scores of nursing students were found to be low. Patients, physicians, nurses, and last but not least, faculty members indicated the situations that caused them stress in the clinic (Mankan et al., 2016). In our study, the clinical stress score of the students were found to be low.

Table 4: The examination of the relationship between the score of the occupational self-esteem scale and the scores of the subscales, and the total scale of the Clinical Stress Questionnaire

	Occupational self-esteem scale scores	
	r	**p**
Struggle	0,480	**<0,001**
Threat	-0,212	**0,001**
Harm	-0,388	**<0,001**
Benefit	0,333	**<0,001**
Total clinical stress score	0,042	0,496

r: Spearman's rho correlation coefficient

In our study, the mean scores for clinical stress were higher in those who were dissatisfied with the department, had difficulty meeting the instructor's expectations, and indicated negative communication with the medical staff.

Clinical practices in nursing education are thought to impact students' professional self-development (Kılıç, 2018; Öz & Yıldız, 2019) positively. A systematic review study by Folkford and Risa (2023) of self-efficacy and learning factors in the clinical setting among midwifery students found that as students' self-efficacy increased, their stress in clinical practice decreased, their learning experiences increased, and their professionalism increased. The continuity of the instructor and establishment of a secure relationship with the student was found to have an impact on facilitating the student's professionalism and learning experience (Folkvord & Risa, 2023). Figen and Avcı (2020) found no relationship between educational stress and professional self-esteem in nursing students in their study. In the same way, our study found no relationship between students' clinical practice stress and professional self-esteem.

5. Conclusion

As a result of our study, it was found that the older students, those who chose the field voluntarily, those who are satisfied with the field, those who do not have difficulties in meeting the expectations, and those who are considering continuing the profession have higher professional self-esteem. There is no relationship between stress in clinical practice and professional self-esteem. It was found that clinical practice stress was higher among those who were not satisfied with the department, had difficulty meeting the instructor's expectations, and considered dropping out of their training. Therefore, it is recommended that qualitative studies be conducted to help better understand the causes of clinical practice stress on professional self-esteem, professional identity formation, and perceptions of the profession among nursing students in future studies.

Conflicts of interest

The authors declare no conflicts of interest.

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GUHES 2023; 5(2): 93-100
DOI: 10.59124/guhes.1287029

Review

Journal of Gazi University Health Sciences Institute

journal homepage*:* https://dergipark.org.tr/tr/pub/guhes

A Threat To Patient Safety: Medication Errors, Reporting Of Medication Errors And The Concerns With Regard To Nurses

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Article info:

Received: 24.04.2023

Accepted: 07.06.2023

Keywords:

medical error, medication error, medical error in nursing, patient safety

Abstract

The World Health Organization reports that approximately ten million people become permanently disabled or die each year due to medical errors. For this reason, WHO calls for a worldwide research on patient safety. Medication errors are among the most common incidents encountered in hospitals and pose a threat to patient safety. Nurses assume significant roles in preventing or reducing the errors experienced as they are the people who most frequently come into contact with the patients. Focusing on the underlying causes of medication errors, raising awareness about incident reporting and developing solutions for the root causes of errors are the main factors in ensuring patient safety. This review focuses on identifying the medication errors encountered in health care institutions, ensuring learning from mistakes by duly reporting incidents and thus improving patient safety.

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Citation: Sakallı, D. & Canbolat, Ö. (2023). A threat to patient safety: Medication errors, reporting of medication errors and the concerns with regard to nurses. *Journal of Gazi University Health Sciences Institute*, 5(2), 93-100. https://doi.org/10.59124/guhes.1287029

1. Introduction

Patient safety is defined as the precautionary measures and improvement efforts that can be taken to minimize all foreseeable hazards that may concern all relevant stakeholders during the provision of health care services (Sağlıkta Kalite Standartları Hastane, 2020).

Main purpose in patient safety is to prevent errors that may happen during the provision of health care services, to protect stakeholders from damages that may occur due to such errors and to ensure the establishment of a system that will eliminate the probability of such errors (Güneş & Güneş, 2018). 72nd World Health Assembly declared World Patient Safety Day in 2019 in order to raise awareness about patient safety, to ensure solidarity and to encourage action on this issue. Attention has been drawn to the significance of patient safety within the context of countries' progress towards universal health coverage and that patient safety should be a global health priority (Ghebreyesus, 2019; Ahsani-Estahbanati et al., 2022).

The Institute of Medicine has reported that medical errors and patient safety are major concerns within the scope of the provision of health care services. In collaboration with International Accreditation Organization, Turkish Republic Ministry of Health has set targets concerning patient safety and has been making improvements in this regard. These improvements, aiming to ensure patient safety, impose certain responsibilities on the management, nurses, physicians, other health care personnel, patients and patient relatives (Güneş & Güneş, 2018).

Medical errors pose a danger to patient safety and are classified as diagnostic errors, treatment errors and system errors. Medication errors, particularly considered as preventable, are classified among the most common medical errors. In 2017, World Health Organization launched a global initiative aiming to reduce medication errors by 50% within five years (Bonner, 2017). This review aimed to provide information about medication errors that pose a threat to patient safety, the concerns of medication errors with regard to nurses, reporting of medication errors, nursing dimension of reporting medication errors and strategies towards nurses to reduce medication errors.

2. Medication Errors within Medical Errors

The Institute of Medicine defined medical error as the failure to implement a planned intervention as intended or to resort to the wrong plan to achieve the goal (Donaldson et al., 2000). Medical errors reduce the quality, thus increase the cost of the health care system. Medical errors are most frequently observed in the intensive care units, emergency services and operating rooms of the hospitals. Prescription of improper medication, incorrect blood transfusion, surgical errors, inadequate or inappropriate treatment and medication applications, incorrect patient identification, misdiagnoses and patient's fall are the most common medical errors (Carver et al., 2021).

Any preventable acts that result in the patient's disability or death due to administration of improper medication during the treatment are defined as medication errors. Failure of one of the ten rights of drug administration, namely right patient, right drug, right dose, right route, right time and frequency, right training, right response, right history and assessment, right documentation and the right to refuse, leads to medication errors (Bennett, 2017).

Drug administration errors are the most common cause of injuries and damages encountered in the health care system and refer to approximately 10% of the preventable damage to inpatients (Altowairq et al., 2023). WHO categorizes medication errors among the most common medical errors and as one of the undesirable incidents most frequently reported to the Joint Commission in 2018 (World Health Organization, 2012; Aslan, 2020). WHO reported that the annual cost of drug administration errors in the world is about 42 billion US dollars as of 2017 and this data corresponds to about 0.7% of the overall cost of health care. About 800.000 drug-related and preventable injury cases are estimated to occur every year in the United States alone (Petrova et al., 2010).

Medication errors are further classified in the literature as follows beginning with the prescription and covering the process of distribution, preparation, administration and follow-up (Yöntem, 2016). (Table 1)

3. Medication Errors and Nursing

Nurses are the first people in health care system to monitor the safety and dosage of prescribed medications. The responsibility of the nurses with regard to the medication errors is stated in the Turkish Nursing Regulation No. 27515 in force as “Nurses fulfill the medical demands prescribed by the physician, to be administered to the patient when necessary, in line with the health care, diagnosis and treatment protocols determined according to scientific principles” (Hemşirelik Yönetmeliği, 2010). A study argues that 38% of the source of medication errors is related to nursing practices (Al-Worafi, 2020). Medication errors due to nursing practices manifest as drug administration without a physician's prescription, miscalculation of the drug dose, ignoring the information available on the drugs, incorrect administration of drugs as a result of similar appearance and drug name and forgetting to administer the drug (Aygin & Cengiz, 2011). A systematic review investigation of nurse-induced drug administration errors performed within the scope of nursing practice reported that most frequently encountered medication errors are due to wrong dose which is followed by skipping the administration of medication dose (Kırşan et al., 2019).

Factors such as nurses’ health status, education, fatigue, inadequate communication, transfer of care responsibility, excessive workload and complexity of the work flow are reported to increase the occurrence of medication errors (Khan & Tidman, 2022). Fathallah Mostafa et al. (2023) reported excessive workload (93.33%) as the leading cause affecting the nurses to make mistakes in drug administration. This was followed by the neglect of the staff (91.6%) and the lowest cause was reported as not recognizing the drug (40%) (Fathallah Mostafa et al., 2023).

4. Incident Reporting in Medication Errors

Incident reports ensure realistic assessment of the causes leading to the negative situation along with the prevention or minimization of the negative consequences thereof (Melo Garcia et al., 2022). Effective use of incident reporting system is the way to learn from mistakes (Gong, 2011). Incident reporting is very significant in improving health care and ensuring patient safety (Hamed & Konstantinidis, 2022). Regulations with regard to the establishment of negative incident reporting systems in hospitals, reporting incidents, the analysis of the incident by the Quality Department in collaboration with the

committees, initiating corrective actions and remedial acts and evaluating their results have been implemented in our country within the framework of the Ministry of Health Quality Standards. Medication errors is also categorized in these standards among the incidents to be reported (Ekici, 2013; Sağlıkta Kalite Standartları Hastane, 2020).

Pursuant to the Health Safety Reporting System in our country, medication errors are ranked the third place among the most common medical errors (Bişkin & Cebeci, 2017). A total of 101.841 errors were reported in 2017 and 5.092 errors, i.e. 4.99%, were related to medication errors (Güvenlik Raporlama Sistemi 2017 Türkiye İstatistikleri, 2018). Considering the ratio of reported incidents to actual medication errors; a review published in UK revealed, in conflict with national error reporting data that, there are higher numbers of medication errors and that reported incidents constitute only 5% to 15% of actual events and higher numbers of errors are detected within the scope of studies conducted through direct observation (Sutherland et al., 2020). Similar to these findings, Karagözoğlu et al. (2019) found in their study that nurses are more likely to encounter medication errors compared to incident reports and that the number of reported incidents remain low although nurses have a positive opinion about reporting medication errors (Karagözoğlu et al., 2019). For the purpose of a review study examining the barriers to reporting medication errors, it was determined that there are institutional barriers such as inadequate in-house reporting systems, management's attitude towards errors, vague definitions with regard to medication errors and personal barriers such as fear and lack of information about errors (Afaya et al., 2021). Nurses were determined to avoid reporting medication errors due to not actively using error reporting systems, the duration of the reporting procedure, the risk of damaging the reputation of the reporting institution or persons and fear of being punished (İntepeler & Dursun, 2012).

5. The Event Notifications of Medication Errors with regard to Nurses

The International Council of Nurses reported that nurses also have responsibilities concerning patient safety and medical errors including reporting the incidents to the relevant authorities, assessing the quality of care provided to patients and determining the standards to minimize errors (Güneş & Güneş, 2018). In addition to the responsibility of reporting the incidents, nurses are expected to make significant contributions to the improvement of health care by getting involved in the quality circle within which the causes of certain incidents are analyzed. Particularly head nurses are expected to analyze the results of the quality indicators and receive the necessary support from their subordinates (Bıyık & Türe, 2020).

Article 9, paragraph 2, subparagraph b of the Turkish Nursing Regulation No. 27515 in force stipulates that "Nurses commissioned pursuant to the nursing services organization are responsible for working in accordance with the legislation and professional principles and for the effective and efficient provision of nursing services. Nurses are further required to take preventive measures for undesirable events and erroneous nursing practices and to ensure that negative incidents are duly recorded and reported", thus the head nurse (health care services manager etc.) is responsible for safe medication practices and incident reporting. Article 10., paragraph 3, subparagraph b of the same Regulation stipulates that

the chief nurse is responsible for ensuring the safe administration of drugs to patients by saying "Nurses ensure the proper application of the patients' treatment plans along with the safe administration and protection of the medicines sent to the clinic by the pharmacy" (Hemşirelik Yönetmeliği, 2010).

Table 2: Definition of Medication Errors

Medical Error	Definition
Prescription Errors	Errors experienced due to improper or unreadable physician requests
Incorrect Patient	Administration of the drug to another patient instead of the desired patient
Administration of Improper Medication	Administration of a drug other than the one requested
Improper Preparation	Preparation of the drug not in the desired way, but with the wrong solution
Administration of the Drug Through an Improper Technique	Using the improper technique when administering the drug
Administration of the Drug Through an Improper Route	Administration of the drug through a different route other than the desired one
Wrong Dose	Incomplete or excessive administration of the prescribed dose of medication
Wrong Time	Administration of the drug at the wrong time
Wrong Frequency	Administration of the drug with the wrong frequency
Wrong Ratio	Administering the drug too slowly or too quickly
Administration of Deteriorated Medication	Administering the drugs that have become deteriorated due to storage under inappropriate conditions or that have expired.
Follow-up Error	Failure to monitor the patient's condition after drug administration
Other Medication Errors	Errors other than the defined ones

It is observed that nurses avoid reporting medication errors due to reasons such as not attaching the necessary importance to incident reporting and refraining from the attitude of senior management. Some of the reasons argued in the literature on why the nurses avoid reporting medication errors are lack of knowledge on how to report errors, considering incident reporting as a workload and to avoid being punished (Gök & Yıldırım Sarı, 2016). In the systematic review by Hamed and Konstantinidis (2022), it was determined that incident reporting is essential in improving health care services and ensuring patient safety and errors were reported incompletely as nurses are concerned about negative consequences such as legal issues and being accused/sued. It was further revealed that reasons such as management's misconduct, inadequate reporting processes and lack of training on this subject

constitute an obstacle to reporting incidents (Hamed & Konstantinidis, 2022). A study examining the barriers to nurses' reporting medication errors revealed that 35% of the nurses do not consider drug administration errors important enough to be reported, 33% of the nurses forgot to report them and 40% stated that the incident reporting process takes too much time (Fathallah Mostafa et al., 2023).

Recent theories examining the causes of medication errors have shifted towards thinking that errors are the consequences of system failure rather than just blaming individuals (Khan & Tidman, 2022). For this reason, in order for incident reporting systems to be effective and functional,

- Those who will report the medication errors should not fear of being punished;
- The information of the person and institution reporting the incident should remain confidential;
- Incidents should be analyzed by experts in the relevant field in order to accurately determine the underlying causes of the incident to be reported;
- Time should not be lost before analyzing the reports and remedial actions should be initiated immediately, particularly in dangerous situations;
- Improvements should be system and process oriented rather than focusing on individuals (Keleş & Aloğlu, 2022).

6. Strategies Towards Nurses for to Reduce Medication Errors

Various interventions are suggested in the literature for to reduce or prevent drug administration errors. For the purpose of a systematic review and meta-analysis study, it was determined that improvement strategies such as training programs, providing detailed information on drugs, ensuring the participation of the pharmacist in the clinic, reducing the divisions during drug preparation and calculation and using infusion pumps in practice can be used to reduce drug errors. The meta-analysis result of the same study indicated that drug administration errors decreased by 64% after remedial interventions (Marufu et al., 2021). Factors that nurses should pay attention to in order to avoid drug administration errors can be summarized as follows:

- Charge nurses should organize frequent trainings in cooperation with the pharmacy in order to increase the level of knowledge about the department-specific drugs used;
- Drug prescriptions should be communicated electronically or in writing;
- The route of administration of the drug and additional explanations in drug prescriptions should not be indicated with abbreviations;
- Written procedures and checklists should be developed for IV drug administration and high-risk drug administration;
- Medication errors, if any, should be recorded, however no punitive approach should be applied;
- The patient should be informed about the drug administered, why the drug is prescribed and the route of administration along with the situations that may cause side effects;

Effective communication should be established with patients and team members (Aygin & Cengiz, 2011).

7. Conclusion

Drug safety is one of the essential issues in improving the quality of nursing services. Pharmaceutical safety is categorized among the main quality objectives of

international accreditation organizations and the Republic of Turkey Ministry of Health. Nurses and the managers of the health care institutions assume major responsibilities with regard to ensuring patient safety and preventing medication errors. Senior managers are required to make the necessary arrangements, ensure compliance with the determined standards, and control the execution of the regulations. They are advised to focus on the causes of errors in reported adverse events and make improvements in this regard rather than looking for the culprits to significantly impact safety, quality, and sustainability of healthcare provided.

Conflicts of interest

The authors declare no conflicts of interest.

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