

Article

Variations in the Five Facets of Mindfulness in Italian Oncology Nurses according to Sex, Work Experience in Oncology, and Shift Work

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Citation: Vitale, E.; Avino, K.; Mea, R.; Comes, M.C.; Bove, S.; Conte, L.; Lupo, R.; Rubbi, I.; Carvello, M.; Botti, S.; et al. Variations in the Five Facets of Mindfulness in Italian Oncology Nurses according to Sex, Work Experience in Oncology, and Shift Work. *Healthcare* **2024**, *12*, 1535. <https://doi.org/10.3390/healthcare12151535>

Academic Editor: Manoj Sharma

Received: 12 June 2024

Revised: 25 July 2024

Accepted: 30 July 2024

Published: 2 August 2024



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Abstract: Background: Oncology nurses support cancer patients in meeting their self-care needs, often neglecting their own emotions and self-care needs. This study aims to investigate the variations in the five facets of holistic mindfulness among Italian oncology nurses based on gender, work experience in oncology, and shift work. Method: A cross-sectional study was carried out in 2023 amongst all registered nurses who were employed in an oncology setting and working in Italy. Results: There were no significant differences in all five facets of holistic mindfulness ($p \geq 0.05$) according to gender, work experience in the oncology field, and shift work. Conclusion: Could holistic mindfulness be defined as an intrinsic individual characteristic? Surely, more insights will be necessary to better define the holistic trend in oncology nursing.

Keywords: holistic; mindfulness; oncology nursing; gender; shift work; work experience

1. Introduction

Nurses ensure high levels of practice that improve standards of care in healthcare organizations [1]. The demanding requests for quality in nursing practice may involve providing emotional support during times of extreme distress while providing therapeutic communication with patients and families, as well as successful relationships with colleagues [1,2]. In particular, the oncology field represents a stressful environment for nurses who should provide relationship-centered care in a setting where there is high exposure to death, heavy workloads, and conflictual relationship with co-workers due to the ambiguity in emotional and spiritual conditions, which increases the stress circumstances for nurses [2]. Oncology nurses help cancer patients to meet their self-care needs, often by neglecting themselves and their emotions and self-care needs [3].

According to the National Health Care Retention and RN Staffing Report, the national shifting incidence for nurses has risen to 17.2%, with a cost-related increases also

detected [2]. Thus, programs have been improved to ameliorate resilience and compassion satisfaction, decreasing stress, compassion, fatigue, and burnout.

For this reason, worldwide, national, and international organizations have developed guidelines, policies, media, and education curricula to promote nurses' well-being in relation to their self-compassion and self-care [4,5]. Several nursing organizations have suggested promoting standard levels of health and well-being in nurses by introducing interventions and strategies [6–8]. In this regard, an attitude that seems to be very popular thanks to its positive research is mindfulness, which embraces a holistic meditation practice associated with attention on and awareness of all dimensions of life.

The literature has suggested that nursing practices characterized by loving and kindness meditation may be more effective at ensuring satisfaction and empathy, as well as at reducing compassion fatigue and burnout, improving working environments [9,10]. Recent studies [10,11] have assessed the effectiveness of pre-shift mindfulness-based interventions at recording important decreases in stress [11], compassion fatigue, and burnout conditions.

1.1. Holistic Nursing

Holistic nursing is recognized as the integration of “all nursing practice that manages the total individual as its outcome” [12]. Holistic nursing has been identified as a specialty practice that focuses on reflective practices, such as meditation, and uses holistic philosophies and theories to guide practice. Holistic nurses use integrative skills to guide nurses to support people in recognizing human patterns and responses to promote wholeness. Holistic nursing deals with the protection, promotion, and optimization of health and well-being, central to healing, decreasing disease symptoms and trauma, and moderating suffering. This helps people to reach peace, well-being, agreement, and equilibrium through the treatment of human reactions to ameliorate the biopsychosocial totality of people [13].

Therefore, holistic nursing connects the body, mind, and spirit, as well as encouraging the improvement of a healthy work environment. According to the American Holistic Nurses Association [14], holistic nurses are knowledgeable in the key elements that are common with mindfulness. Thus, holistic nurses could adopt and use therapies, such as mindfulness, as an expression of the work-related stress that they might feel [15]. Holistic nursing skills could be considered to be a practice concept model related to nurses' professional philosophies, competencies, and individual capabilities in a clinical environment [16,17]. A proactive clinical nursing perspective includes educating nurses on holistic competencies to improve work engagement or job satisfaction [18]. Education in complementary strategies and interventions used in nursing practice such as mindfulness is essential [19].

1.2. Mindfulness

“Mindfulness, originating from the Buddhist tradition, can be identified as a system to live one's existence with awareness and attentiveness to the present moment with particular importance to curiosity, openness, and acceptance of all experiences without judgment” [20].

Evidence suggests that greater levels of mindfulness are linked to lower levels of depression, anxiety, and stress [21,22] and can promote well-being in nurses [23,24], with nurses ultimately experiencing a situation more coherently and reacting more effectively [25,26]. In a clinical setting, patients value healthcare professionals with greater mindfulness attitudes, resulting in better patient–clinician communication and better-quality care [27]. At the same time, mindfulness has been considered a helpful approach to improving the health and well-being of patients [27]. White [28] suggested a conceptual analysis to explain how the use of mindfulness could provide conceptual transparency to recognize its importance and adaptation in nursing. Specifically, five sub-dimensions were identified to better describe mindfulness in nursing, define as a “translational system in which the individual develops the attitude to live the present with acceptance, attention, and awareness” [29]. This particular approach may be the basic concept with practical

applications needed for ensuring the well-being of nurses, as it improves therapeutic nursing actions in presence, empathy, patience for self and others, and holistic health promotion [29,30]. The result will be a positive return for the healthcare systems in the form of reduced errors and better care delivery [31,32]. However, interventions to address mindfulness in the clinical setting are still limited today [33–35], despite mindfulness interventions being an effective and inexpensive approach to decreasing symptoms of stress and burnout, improving quality of life satisfaction, and, consequently, ensuring better patient care [36–38].

1.3. Theoretical Framework

Nurses are considered part of the physical environment for the healing of their patients [39]. This highlights the responsibility to adopt self-care as a component of a nurse's accountability to support holistic patient care, and this should not be considered only an individualized practice. Mariano et al. [38] highlighted the physical environment as needing the foremost holistic management of the elements suggested by Florence Nightingale, such as cleanliness, fresh air, order, nutrition, light and sunlight, warmth, writing letters for patients, being present, and attending to patient needs. Holistic nursing emphasizes self-reflection and self-care for both the nurse and the patient [40].

1.4. Purpose

As shown in the Figure 1, the present study aims to focus on self-reflection on the basic sampling characteristics of Italian oncology nurses. Specifically, the research aims to investigate how the five facets of holistic mindfulness vary in Italian oncology nurses according to gender, work experience in oncology, and shift work without any interventions.

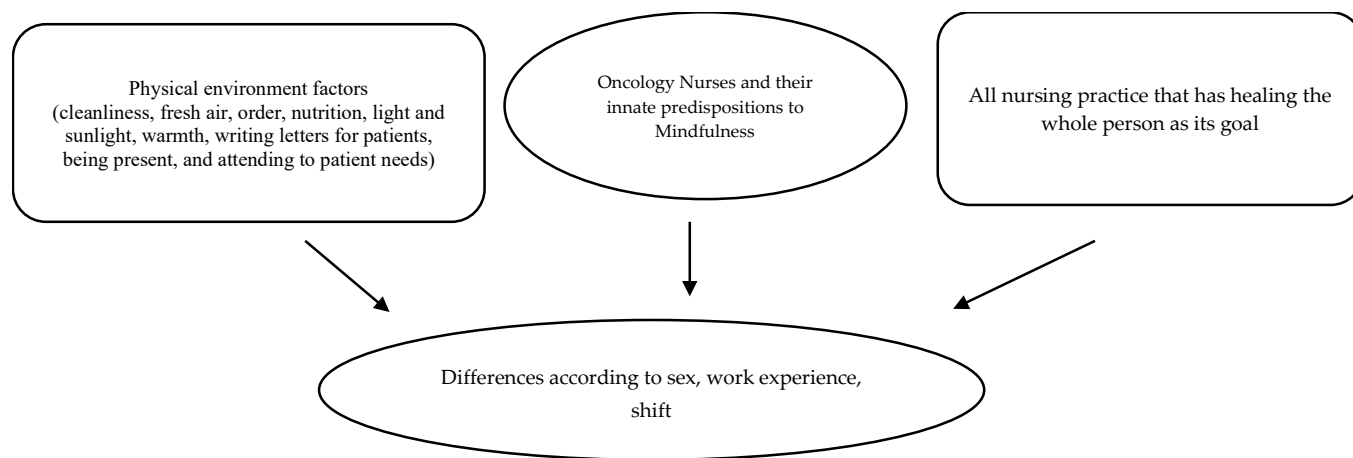


Figure 1. Differences in mindfulness attitudes in oncology nurses according to the physical environment and holistic nursing framework.

The study tested the following hypotheses:

- There is a difference in nurses' mindfulness attitudes according to gender;
- There is a difference in the mindfulness attitudes of nurses according to work experience in oncology settings;
- There is a difference in nurses' mindfulness attitudes according to their shift patterns.

2. Materials and Methods

2.1. Study Design

This cross-sectional survey study was carried out in 2023 among all registered nurses employed in an oncology setting in Italy.

2.2. Study Size

In 2022, approximately 395,000 nurses were employed in the Italian Healthcare System. Of these, 277,171 nurses were employed in the National Healthcare Service. However, the exact number of nurses employed in an oncology setting is unknown. Therefore, it was not possible to precisely assess the sample size.

In 2021, the Italian Ministry of Health stated that about 59.2% of Italian healthcare professionals ($n = 617,246$) [41] were employed as nurses. Considering the Miller and Brewer formula [42] and fixing the confidence interval at 95%, the representative sample size assessed was 400 nurses including all the nursing disciplines. Taking into consideration the fact that in the Italian Healthcare System, there are nearly 70 clinical specialties [43], we could also assume as representative a sample size reaching at least half the sample size calculated.

2.3. Questionnaire Administration

A Google Moduli questionnaire was performed and disseminated via the “Nurseall-face” social media page by inviting nurses employed in the oncology field to complete the questionnaire. All visitors could access the presentation letter of the study, but only those who gave their consent to participate and declared themselves to be an oncology nurse could proceed further with the questionnaire.

2.4. Questionnaire Items

The questionnaire contained some demographic questions, such as the following:

- Gender: female, male, or not answered;
- Age: under 30 years, 31–40 years, 41–50 years, and over 51 years,
- Years of work experience as a nurse: under 5 years, 6–10 years, 11–15 years, 16–20 years, 21–30 years, and 31–40 years;
- Years of work experience in the oncology field: under 5 years, 6–10 years, 11–15 years, 16–20 years, 21–30 years, and 31–40 years;
- Shift work: one shift per day (morning), two shifts per day (morning and afternoon), and three shifts per day (morning, afternoon, and night).

The Five Facet Mindfulness Questionnaire (FFMQ) [44,45] assesses mindfulness as a whole psychological frame with the following five essential sub-dimensions:

- “Observe” is the ability to monitor stimuli coming from your own body;
- “Describe” is the attitude to verbally identify those stimuli;
- “Acting with Awareness” or “Acta-ware” is the ability to pay attention to activities performed in the present moment without mechanically performing them;
- “Non-judging” is the ability to not express judgment;
- “Non-reacting” is the ability to not proceed automatically without thinking.

The FFMQ was validated in terms of its content validity to provide stable sub-dimensions of mindfulness thanks to several psychometric networks [46]. The FFMQ contains 39 self-reported items associated with a Likert scale, ranging from 1, defined as “totally disagree” to 5, defined as “totally agree” [46]. Item numbers 3, 5, 8, 10, 12, 13, 14, 16, 17, 18, 22, 23, 25, 28, 30, 34, 35, 38, and 39 were considered to be reversed in their scoring. By summing the scores for each sub-dimension, a number was obtained, which indicated a higher tendency in the specific sub-dimension. The FFMQ was also validated in Italian [47], reporting α -Cronbach = 0.83, representing an expression of good internal consistency [46,47]. Additionally, all items contributed to the level of homogeneity of the scale since no exclusion leads to higher alpha values.

2.5. Data Analysis

Data were collected in an Excel data sheet and then processed. All demographic characteristics such as gender, work experience in the oncology field, and shift work were considered as categorical variables, and the FFM questionnaire and its related sub-

dimensions were considered continuous ones. ANOVA tests were performed to highlight differences between the five sub-dimensions of the FFM questionnaire according to gender, work experience in the oncology field, and shift work. All p -values less than 0.05 were considered statistically significant.

2.6. Ethical Considerations

According to the Committee on Publication Ethics (COPE), the questionnaire was anonymous. At the beginning of the questionnaire, a clear explanation of this study and its purpose was provided. It was emphasized that participation was voluntary and that the participant could withdraw from this study at any time. Immediately after the study submission letter was drafted, a mandatory clause on consent to participate in this study was introduced. If the participant gave the own consent to participate, the entire questionnaire appeared, and the participant could read it and decide whether or not to give the answers and submit them. No data or alpha-numerical codes were posted to guarantee the anonymity of the participants. Concerning the competencies and functions of the Italian Ethical Committee (EC) [48], the EC expresses opinions on the following types of studies: the protocols of clinical drug trials, observational clinical trials, and clinical trials with medical devices; the protocols for the therapeutic use of investigational drugs outside clinical trials or for biomedical, psycho-educational, social, or other research involving human subjects; epidemiological, evaluative, and medico-social research projects that require the collection of personal data with environmental ethics implications; patient information sheets and informed consent forms; ethical–scientific, methodological, and economic aspects of experimental research protocols or amendments; and the qualification of investigators to conduct the proposed research, as well as the ethical and scientific aspects of the same research. Since the present study explored mindfulness attitudes among Italian oncology nurses according to gender, work experience in the oncology field, and shift work, without investigating the above-mentioned fields of research, the EC's approval was not needed. At the beginning of the questionnaire, a clear explanation of this study and the purpose of it was clearly provided. Participants who gave their written consent to participate in this study were allowed to move on to later questions, and their data were collected. Conversely, participants who did not give their consent were unable to continue to answer the questionnaire.

3. Results

Nurses' Demographic Characteristics

A total of 306 Italian oncology nurses agreed to participate in the present study. Of these, 194 were females and 112 were males. In total, 90 nurses aged less than 30 years, 85 less between 31 and 40 years, 68 nurses aged between 41 and 50 years, and 63 nurses aged over 51 years participated. Globally, considering the total number of years of work experience, 97 nurses worked less than 5 years, 50 nurses were employed for between 6 and 10 years, 34 nurses worked between 11 and 15 years, 32 nurses were employed for between 16 and 20 years, 60 nurses worked between 21 and 30 years, and 33 nurses were employed for between 31 and 40 years. Most of the enrolled nurses were also employed during the night shift ($n = 178$), and the others were equally divided into the only morning shift and the afternoon shift (Figure 2).

Differences in the five facets of mindfulness according to gender, oncology work experience, and shift work were studied.

Considering the gender characteristic, there were no significant differences in all five facets of mindfulness ($p \geq 0.05$), as shown in the Table 1.

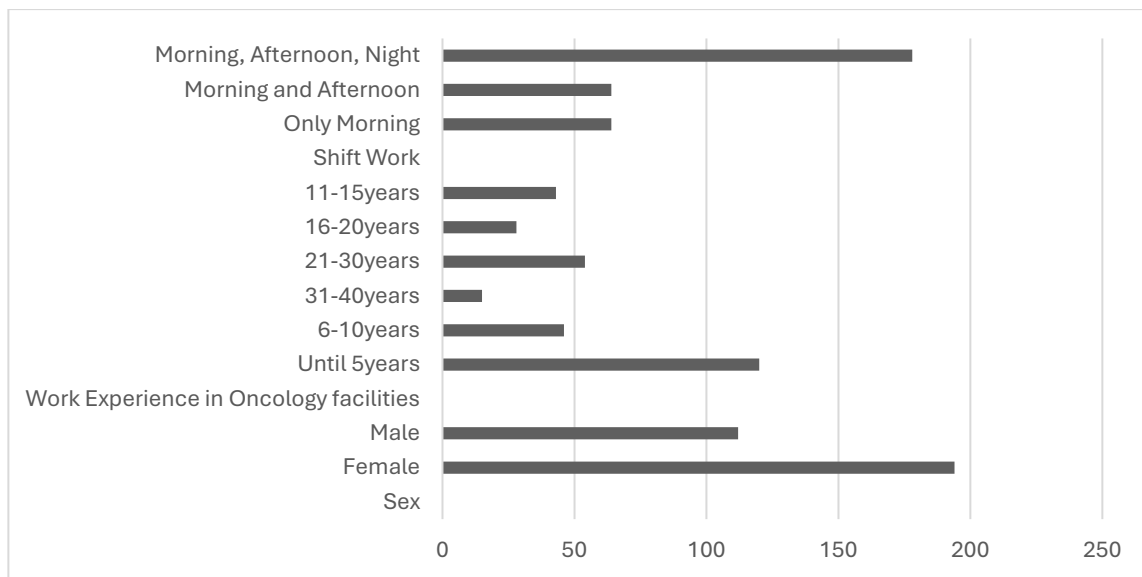


Figure 2. Sampling characteristics among oncology nurses.

Table 1. Differences in the five facets of mindfulness according to gender.

| The Five Facets of Mindfulness | | Mean | Standard Deviation | C.I. 95% | | F | p |
|--------------------------------|--------|---------|--------------------|----------|---------|-------|-------|
| | | | | Min. | Max | | |
| Observing | Female | 29.2371 | 5.25174 | 28.4934 | 29.9808 | 0.026 | 0.872 |
| | Male | 29.3393 | 5.52399 | 28.3050 | 30.3736 | | |
| | Total | 29.2745 | 5.34420 | 28.6733 | 29.8757 | | |
| Describing | Female | 24.7732 | 6.68616 | 23.8264 | 25.7200 | 1.316 | 0.252 |
| | Male | 25.5893 | 4.54914 | 24.7375 | 26.4411 | | |
| | Total | 25.0719 | 5.99793 | 24.3972 | 25.7466 | | |
| Acting | Female | 29.4794 | 6.57299 | 28.5486 | 30.4102 | 0.402 | 0.526 |
| | Male | 29.0268 | 4.88878 | 28.1114 | 29.9422 | | |
| | Total | 29.3137 | 6.00707 | 28.6380 | 29.9895 | | |
| Non-judging | Female | 25.2268 | 4.06681 | 24.6509 | 25.8027 | 1.045 | 0.307 |
| | Male | 24.7589 | 3.45954 | 24.1112 | 25.4067 | | |
| | Total | 25.0556 | 3.85646 | 24.6217 | 25.4894 | | |
| Non-reactivity | Female | 19.2165 | 4.44244 | 18.5874 | 19.8456 | 1.609 | 0.206 |
| | Male | 18.5446 | 4.49802 | 17.7024 | 19.3869 | | |
| | Total | 18.9706 | 4.46727 | 18.4681 | 19.4731 | | |

C.I.: Confidence interval; $p \leq 0.05$ is statistically significant.

Considering oncology work experience, there were no significant differences in all the five facets of mindfulness ($p \geq 0.05$), as shown in the Table 2.

Table 2. Differences in the five facets of mindfulness according to oncology work experience.

| The Five Facets of Mindfulness | Mean | Standard Deviation | C.I. 95% | | F | p | |
|--------------------------------|------------|--------------------|----------|---------|---------|-------|-------|
| | | | Min. | Max | | | |
| Observing | Until 5 y | 29.2167 | 5.56578 | 28.2106 | 30.2227 | 0.129 | 0.986 |
| | Until 10 y | 29.0652 | 5.67020 | 27.3814 | 30.7491 | | |
| | Until 15 y | 29.7442 | 4.90914 | 28.2334 | 31.2550 | | |
| | Until 20 y | 29.2857 | 4.64963 | 27.4828 | 31.0887 | | |
| | Until 30 y | 29.0556 | 5.61473 | 27.5230 | 30.5881 | | |
| | Until 40 y | 29.8000 | 4.57009 | 27.2692 | 32.3308 | | |
| | Total | 29.2745 | 5.34420 | 28.6733 | 29.8757 | | |
| Describing | Until 5 y | 25.2750 | 5.85822 | 24.2161 | 26.3339 | 0.927 | 0.464 |
| | Until 10 y | 25.0870 | 6.47328 | 23.1646 | 27.0093 | | |
| | Until 15 y | 24.3256 | 5.52794 | 22.6243 | 26.0268 | | |
| | Until 20 y | 23.7143 | 6.82510 | 21.0678 | 26.3608 | | |
| | Until 30 y | 26.2037 | 5.57074 | 24.6832 | 27.7242 | | |
| | Until 40 y | 24.0000 | 6.81385 | 20.2266 | 27.7734 | | |
| | Total | 25.0719 | 5.99793 | 24.3972 | 25.7466 | | |
| Acting | Until 5 y | 29.4167 | 5.55429 | 28.4127 | 30.4206 | 0.815 | 0.539 |
| | Until 10 y | 29.8913 | 9.04121 | 27.2064 | 32.5762 | | |
| | Until 15 y | 28.3488 | 4.89841 | 26.8413 | 29.8563 | | |
| | Until 20 y | 28.2500 | 5.04517 | 26.2937 | 30.2063 | | |
| | Until 30 y | 30.2037 | 5.12993 | 28.8035 | 31.6039 | | |
| | Until 40 y | 28.2667 | 5.47027 | 25.2373 | 31.2960 | | |
| | Total | 29.3137 | 6.00707 | 28.6380 | 29.9895 | | |
| Non-judging | Until 5 y | 24.9750 | 3.98413 | 24.2548 | 25.6952 | 0.686 | 0.634 |
| | Until 10 y | 25.3913 | 3.46717 | 24.3617 | 26.4209 | | |
| | Until 15 y | 24.4884 | 3.76938 | 23.3283 | 25.6484 | | |
| | Until 20 y | 24.6429 | 3.60262 | 23.2459 | 26.0398 | | |
| | Until 30 y | 25.2593 | 3.96297 | 24.1776 | 26.3409 | | |
| | Until 40 y | 26.3333 | 4.43471 | 23.8775 | 28.7892 | | |
| | Total | 25.0556 | 3.85646 | 24.6217 | 25.4894 | | |
| Non-reacting | Until 5 y | 18.7083 | 4.60251 | 17.8764 | 19.5403 | 0.981 | 0.429 |
| | Until 10 y | 19.3913 | 3.75635 | 18.2758 | 20.5068 | | |
| | Until 15 y | 19.7907 | 4.38373 | 18.4416 | 21.1398 | | |
| | Until 20 y | 19.6786 | 4.02817 | 18.1166 | 21.2405 | | |
| | Until 30 y | 18.1296 | 4.65426 | 16.8593 | 19.4000 | | |
| | Until 40 y | 19.1333 | 5.60442 | 16.0297 | 22.2370 | | |
| | Total | 18.9706 | 4.46727 | 18.4681 | 19.4731 | | |

C.I.: Confidence interval; $p \leq 0.05$ is statistical significant.

Considering shift work, there were no significant differences in all five facets of mindfulness ($p \geq 0.05$), as shown in the Table 3.

Table 3. Differences in the five facet of mindfulness according to shift work.

| The Five Facets of Mindfulness | | Mean | Standard Deviation | C.I. 95% | | F | p |
|--------------------------------|--------------|---------|--------------------|----------|---------|-------|-------|
| | | | | Min. | Max | | |
| Observing | One shift | 29.6719 | 5.14875 | 28.3858 | 30.9580 | 0.656 | 0.520 |
| | Two shifts | 29.7031 | 5.09179 | 28.4312 | 30.9750 | | |
| | Three shifts | 28.9775 | 5.50804 | 28.1628 | 29.7923 | | |
| | Total | 29.2745 | 5.34420 | 28.6733 | 29.8757 | | |
| Describing | One shift | 25.9531 | 5.96931 | 24.4620 | 27.4442 | 1.008 | 0.366 |
| | Two shifts | 25.1719 | 4.80923 | 23.9706 | 26.3732 | | |
| | Three shifts | 24.7191 | 6.37702 | 23.7758 | 25.6624 | | |
| | Total | 25.0719 | 5.99793 | 24.3972 | 25.7466 | | |
| Acting | One shift | 30.0156 | 5.05366 | 28.7533 | 31.2780 | 0.779 | 0.460 |
| | Two shifts | 29.5625 | 8.05512 | 27.5504 | 31.5746 | | |
| | Three shifts | 28.9719 | 5.44768 | 28.1661 | 29.7777 | | |
| | Total | 29.3137 | 6.00707 | 28.6380 | 29.9895 | | |
| Non-judging | One shift | 25.2813 | 3.94594 | 24.2956 | 26.2669 | 0.857 | 0.425 |
| | Two shifts | 24.5000 | 3.52767 | 23.6188 | 25.3812 | | |
| | Three shifts | 25.1742 | 3.93851 | 24.5916 | 25.7567 | | |
| | Total | 25.0556 | 3.85646 | 24.6217 | 25.4894 | | |
| Non-reacting | One shift | 18.7969 | 4.39039 | 17.7002 | 19.8936 | 0.079 | 0.924 |
| | Two shifts | 19.1094 | 3.93647 | 18.1261 | 20.0927 | | |
| | Three shifts | 18.9831 | 4.68978 | 18.2894 | 19.6768 | | |
| | Total | 18.9706 | 4.46727 | 18.4681 | 19.4731 | | |

C.I.: Confidence interval; $p \leq 0.05$ is statistical significant.

4. Discussion

The present study aimed to focus on self-reflection on the basic sampling characteristics of Italian oncology nurses. Specifically, the research aimed to investigate how the five facets of holistic mindfulness varied in Italian oncology nurses according to gender, work experience in oncology, and shift work without any interventions.

Our findings showed no significant differences in all the five facets of mindfulness ($p \geq 0.05$) in all the sampling characteristics considered.

4.1. Benefits for Nurses in Mindfulness Attitudes

Previous studies have explained that mindfulness moderated the progression of anxiety, depression, and stress in oncology healthcare professionals [49,50], and it also reduced negative thoughts [51] and emotional exhaustion and fatigue [52], had a positive effect on psychological well-being in nurses [53–56], and led to improvements in attention [57] and problem-solving ability [58]. Therefore, mindfulness may be considered a positive and proactive element in oncology nurses, whose tasks include the management of complex diseases with poor prognosis, severe pain, and distress. The deaths witnessed and difficulties in handling patient and family situations negatively impacted on job satisfaction, stress, and burnout [59–61], resulting in oncology nursing being the field most influenced by the nursing shortage [62,63]. In this regard, nurses who recorded higher scores of mindfulness could be more attentive to patient requirements and helpful in their related problems [64] and experience less stress due to having a favorable awareness of the present moment [65]. Therefore, nurses who recorded innately higher levels of mindfulness attitudes compared to nurses who did not more actively participated in the patient care

process [66]. Mindfulness also supported the influence of nurses in creating a healing physical environment [50], highlighting the importance of self-care as a holistic mode to promote the health and well-being of the patient. Mindfulness-based interventions were the most frequent and validated interventions implemented in healthcare organizations to better address stress in several healthcare contexts associated with emotion, adaptation, and regulation [67]. According to our findings, another study showed that in older and younger nurses, mindfulness scores were not significantly different [68]. It may be possible that this attitude overlapped with the nurses' sense of emotional equilibrium, which misunderstood the expected psychosocial care needs [68]. Additionally, in the oncology environment, the complexity of psychosocial care required nurses to handle different typologies of emotions among patients and their families, which, in turn, had a negative impact on the reactions and emotions of nurses [69].

4.2. Mindfulness and Emotion Regulation

Nurses who recorded mindfulness characteristics, such as non-judgmental awareness and acceptance of the present moment's experience, were less inclined to suppress their emotions [69]. In 2012 [70], a study highlighted a correlation between mindfulness and emotion regulation improvement. Additionally, ref. [71] reported that mindfulness-trained individuals better managed their emotions in their working environments. In this regard, a healthy work environment among nurses appeared to be important for patient goals, staff gratification, and improved quality of care, since numerous nurses believed that they were more accomplished in using their understanding of a patient's decision-making to improve end-of-life care, with mindfulness supplying training on alternatives to care. Oncology nurses could benefit from adopting mindfulness approaches to better understand their emotions and ideas, share their personal circumstances, and improve support systems to provide holistic care without implicating their ethics [72].

4.3. Strengths and Limitations

This study had some limitations since it was a cross-sectional study and the questionnaire was administered online. Additionally, the sample size of participants was a convenience sample since it included only nurses who voluntarily decided to participate. Therefore, findings were attributed to causal interpretations of the relationships obtained. Additionally, the questionnaire was a self-reported tool without any possibilities for recalling the bias in and social desirability of responding. Future research could explore the associations between mindfulness and emotional suppression associated with nurses' characteristics, as well as investigate all possible associations between mindfulness, emotional regulation, and other aspects, such as the coping style of nurses, supportive relationships with mindful awareness, and non-judgmental acceptance.

5. Conclusions

Our findings showed no significant differences in all five facets of mindfulness ($p \geq 0.05$) in all the sampling characteristics considered. Thus, future longitudinal studies that further explore the impact of mindfulness on nurse well-being and patient care outcomes will be addressed to better highlight all the abovementioned aspects. This may have implications for the use of mindfulness practice, with a focus on emotion regulation and having self-compassion for others (loving kindness meditation), supported by implementation intentions or planning for meditation. Reducing fatigue in oncology nurses has benefits for a nurse's emotional well-being and for the safety of and compassionate care provided to patients.

The initial aim of our study was to investigate whether the five subdimensions of mindfulness varied among oncology nurses regarding their characteristics, such as gender, years of work experience, and shift work. This study's results showed acceptable levels of mindfulness in all five sub-dimensions investigated. However, these dimensions did not vary according to the aforementioned characteristics. Therefore, we could conclude

that mindfulness may be an intrinsic individual characteristic. Surely, more insights will be necessary to better define this trend in oncology nursing, since the literature suggests that mindfulness is a helpful approach to improve functional emotional regulation based on environmental conditions, such as non-willing patients and communication with the families of patients and nursing managers and physicians, especially in the field of oncology, with pain and emotions being associated with shift work [73].

Author Contributions: Conceptualization: E.V. and K.A.; Methodology: E.V., L.C., M.C.C. and S.B. (Samantha Bove); Investigation: R.M. (Rocco Mea), L.C., R.L., I.R. and M.C.; Formal Analysis L.C.; Resources: E.V., S.B. (Stefano Botti), G.D.N. and R.M. (Raffaella Massafra); Data curation: E.V.; Writing—original draft preparation: E.V.; Writing—review and editing: E.V. and K.A.; Visualization and Supervision: E.V. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the Italian Ministry of Health, Ricerca Corrente 2024.

Institutional Review Board Statement: The Ethics Committee of IRCCS Istituto Tumori reviewed and deemed this study as an exemption case. This study does not meet the definition of human subject-based research, according to regulations.

Informed Consent Statement: Written informed consent was obtained from the participants to publish this paper.

Data Availability Statement: Data are available from the corresponding author upon reasonable request.

Conflicts of Interest: The authors affiliated to the IRCCS Istituto Tumori “Giovanni Paolo II”, Bari are responsible for the views expressed in this article, which do not necessarily represent the Institute. The authors declare no conflicts of interest.

References

- Vitale, E. Work Conditions of Italian Nurses and Their Related Risk Factors: A Cohort Investigatory Study. *Diseases* **2022**, *10*, 50. [CrossRef] [PubMed]
- Vitale, E. A Chronic Inflammatory Inductive Condition in the Nursing Profession: A Scoping Review. *Endocr. Metab. Immune Disord. Drug Targets* **2022**, *22*, 1235–1244. [CrossRef] [PubMed]
- Kuglin Jones, A. Oncology nurse retreat. *Clin. J. Oncol. Nurs.* **2017**, *21*, 259–262. [CrossRef] [PubMed]
- Mills, J.; Wand, T.; Fraser, J.A. On self-compassion and self-care in nursing: Selfish or essential for compassionate care? *Int. J. Nurs. Stud.* **2015**, *52*, 791–793. [CrossRef] [PubMed]
- Andrews, H.; Tierney, S.; Seers, K. Needing permission: The experience of self-care and self-compassion in nursing: A constructivist grounded theory study. *Int. J. Nurs. Stud.* **2020**, *101*, 103436. [CrossRef] [PubMed]
- International Council of Nursing (ICN). *ICN Framework of Competencies for the Nurse Specialist*; Series, ICN Regulation; International Council of Nurses: Geneva, Switzerland, 2009.
- American Nurses Association (ANA). *Healthy Nurse, Healthy Nation. Maryland: ANA*. 2017. Available online: <https://www.healthynursehealthynation.org/> (accessed on 21 December 2023).
- Oncology Nursing Society (ONS). *Nurse Well-Being Learning Library*. 2021. Available online: <https://www.ons.org/learning-libraries/well-being-nurses> (accessed on 21 December 2023).
- Boellinghaus, I.; Jones, F.W.; Hutton, J. The role of mindfulness and loving-kindness meditation in cultivating self-compassion and other focused concern in health care professionals. *Mindfulness* **2014**, *5*, 129–138. [CrossRef]
- Seppala, E.M.; Hutcherson, C.A.; Nguyen, D.T.; Doty, J.R.; Gross, J.J. Lovingkindness meditation: A tool to improve healthcare provider compassion, resilience, and patient care. *J. Compassionate Health Care* **2014**, *1*, 5. [CrossRef]
- Gauthier, T.; Meyer, R.M.L.; Grefe, D.; Gold, J.I. An on-the-job mindfulness based intervention for pediatric ICU nurses: A pilot. *J. Pediatr. Nurs.* **2015**, *30*, 402–409. [CrossRef] [PubMed]
- Thornton, L. A Brief History and Overview of Holistic Nursing. *Integr. Med.* **2019**, *18*, 32–33.
- Cowling, W.R., 3rd. Where Is Holistic Nursing? *J. Holist. Nurs.* **2018**, *36*, 4–5. [CrossRef]
- American Holistic Nurses Association. *What We Do*. 2023. Available online: <https://www.ahna.org/About-Us/What-is-Holistic-Nursing> (accessed on 14 February 2024).
- Sos, T.; Melton, B. Comparison of Mindfulness Practices for Effectiveness of Stress and Burnout Reduction in Healthcare Staff. *J. Holist. Nurs.* **2023**, *18*, 8980101231219304. [CrossRef] [PubMed]
- Takase, M.; Teraoka, S. Development of the Holistic Nursing Competence Scale. *Nurs. Health Sci.* **2011**, *13*, 396–403. [CrossRef] [PubMed]
- Aydin, A.; Kaya, Y.; Erbaş, A. The Effect of Holistic Nursing Competence on Work Engagement, Self-Reflection and Insight in Nurses. *J. Holist. Nurs.* **2023**, *41*, 310–317. [CrossRef] [PubMed]

18. Mariano, C. Holistic nursing as a specialty: Holistic nursing—Scope and standards of practice. *Nurs. Clin. N. Am.* **2007**, *42*, 165–188. [CrossRef] [PubMed]
19. Kabat-Zinn, J. *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*; Delta Trade Paperback/Bantam Dell: New York, NY, USA, 2005.
20. Jimenez, S.; Niles, B.L.; Park, C. A mindfulness model of affect regulation and depressive symptoms: Positive emotions, mood regulation expectancies, and self-acceptance as regulatory mechanisms. *Personal. Individ. Differ.* **2010**, *49*, 645–650. [CrossRef]
21. Masuda, A.; Tully, E.C. The role of mindfulness and psychological flexibility in somatization, depression, anxiety, and general psychological distress in a nonclinical college sample. *J. Evid. Based Complement. Altern. Med.* **2012**, *17*, 66–71. [CrossRef]
22. Baer, R.A.; Smith, G.T.; Hopkins, J.; Krietemeyer, J.; Toney, L. Using self-report assessment methods to explore facets of mindfulness. *Assessment* **2006**, *13*, 27–45. [CrossRef] [PubMed]
23. Weinstein, N.; Brown, K.W.; Ryan, R.M. A multi-method examination of the effects of mindfulness on stress attribution, coping, and emotional well-being. *J. Res. Personal.* **2009**, *43*, 374–385. [CrossRef]
24. Brown, K.W.; Ryan, R.M. The benefits of being present: Mindfulness and its role in psychological well-being. *J. Pers. Soc. Psychol.* **2003**, *84*, 822–848. [CrossRef]
25. Beach, M.C.; Roter, D.; Korhuis, P.T.; Epstein, R.M.; Sharp, V.; Ratanawongsa, N.; Cohn, J.; Eggly, S.; Sankar, A.; Moore, R.D.; et al. A multicenter study of physician mindfulness and health care quality. *Ann. Fam. Med.* **2013**, *11*, 421–428. [CrossRef]
26. Vitale, E. The Mindfulness and the Emotional Regulation Skills in Italian Nurses during the COVID-19 Pan-demic: A Descriptive Survey-Correlational Study. *J. Holist. Nurs. Off. J. Am. Holist. Nurses' Assoc.* **2021**, *39*, 345–355. [CrossRef]
27. Kabat-Zinn, J. *Coming to Our Senses: Healing Ourselves and the World through Mindfulness*; Hachette UK: London, UK, 2005.
28. White, L. Mindfulness in nursing: An evolutionary concept analysis. *J. Adv. Nurs.* **2014**, *70*, 282–294. [CrossRef]
29. Carr, E. Self-Care Environment. *Clin. J. Oncol. Nurs.* **2019**, *23*, 349. [CrossRef] [PubMed]
30. Vitale, E. Gender gap in mindfulness assessment among Italian nurses: A pilot descriptive study. *J. Evid. Based Psychother.* **2021**, *21*, 81–100. [CrossRef]
31. McElligott, D.; Capitulo, K.L.; Morris, D.L.; Click, E.R. The effect of a holistic program on health-promoting behaviors in hospital registered nurses. *J. Holist. Nurs.* **2010**, *28*, 175–183, quiz 185. [CrossRef]
32. Beddoe, A.E.; Murphy, S.O. Does mindfulness decrease stress and foster empathy among nursing students? *J. Nurs. Educ.* **2004**, *43*, 305–312. [CrossRef] [PubMed]
33. Richardson, K.M.; Rothstein, H.R. Effects of occupational stress management intervention programs: A meta-analysis. *J. Occup. Health Psychol.* **2008**, *13*, 69–93. [CrossRef]
34. Pipe, T.B.; Bortz, J.J.; Dueck, A.; Pendergast, D.; Buchda, V.; Summers, J. Nurse leader mindfulness meditation program for stress management: A randomized controlled trial. *J. Nurs. Adm.* **2009**, *9*, 130–137. [CrossRef]
35. Bazarko, D.; Cate, R.A.; Azocar, F.; Kreitzer, M.J. The Impact of an Innovative Mindfulness-Based Stress Reduction Program on the Health and Well-Being of Nurses Employed in a Corporate Setting. *J. Workplace Behav. Health* **2013**, *28*, 107–133. [CrossRef]
36. Goodman, M.J.; Schorling, J.B. A mindfulness course decreases burnout and improves well-being among healthcare providers. *Int. J. Psychiatry Med.* **2012**, *43*, 119–128. [CrossRef]
37. Smith, S.A. Mindfulness-based stress reduction: An intervention to enhance the effectiveness of nurses' coping with work-related stress. *Int. J. Nurs. Knowl.* **2014**, *25*, 119–130. [CrossRef] [PubMed]
38. Mariano, C. NURSING EMERGING. ANA Nursing: Scope and Standards of Practice, 2015, 3rd Edition. *Beginnings* **2016**, *36*, 32–34. [PubMed]
39. Hilcove, K.; Marceau, C.; Thekdi, P.; Larkey, L.; Brewer, M.A.; Jones, K. Holistic Nursing in Practice: Mindfulness-Based Yoga as an Intervention to Manage Stress and Burnout. *J. Holist. Nurs.* **2021**, *39*, 29–42, Erratum in *J. Holist. Nurs.* **2022**, *40*, NP1–NP5. [CrossRef] [PubMed]
40. Baer, R.A.; Smith, G.T.; Lykins, E.; Button, D.; Krietemeyer, J.; Sauer, S.; Walsh, E.; Duggan, D.; Williams, J.M. Construct validity of the five facet mindfulness questionnaire in meditating and nonmeditating samples. *Assessment* **2008**, *15*, 329–342. [CrossRef]
41. Ministero della Salute Direzione Generale della Digitalizzazione, del Sistema Informativo Sanitario e delle Statistica Ufficio di Statistica. 2021. Available online: https://www.salute.gov.it/imgs/C_17_pubblicazioni_3244_allegato.pdf (accessed on 15 February 2024).
42. Miller, R.L.; Brewer, J.D. *The A-Z of Social Research—A Dictionary of Key Social Science Research Concepts*; Sage: London, UK, 2003.
43. Ministry of Health. Codici delle Specialità Cliniche e delle Discipline Ospedaliere. Available online: https://www.salute.gov.it/portale/temi/p2_6.jsp?lingua=italiano&id=4302&area=statisticheSSN&menu=definizioni (accessed on 15 February 2024).
44. Lecuona, O.; García-Rubio, C.; de Rivas, S.; Moreno-Jiménez, J.E.; Meda-Lara, R.M.; Rodríguez-Carvajal, R. A network analysis of the Five Facets Mindfulness Questionnaire (FFMQ). *Mindfulness* **2021**, *12*, 2281–2294. [CrossRef]
45. Lecuona, O.; García-Garzón, E.; García-Rubio, C.; Rodríguez-Carvajal, R. A Psychometric Review and Conceptual Replication Study of the Five Facets Mindfulness Questionnaire Latent Structure. *Assessment* **2020**, *27*, 859–872. [CrossRef] [PubMed]
46. Giovannini, C.; Giromini, L.; Bonalume, L.; Colombarolli, M.S.; Brusadelli, E.; Zennaro, A. The Italian Five Facet Mindfulness Questionnaire: A Contribution to its Validity and Reliability. *J. Psychopathol. Behav. Assess.* **2014**, *36*, 415–423. [CrossRef]
47. Didonna, F.; Bosio, V. Misurare le Abilità di Mindfulness: Uno Studio di Validazione della Versione Italiana del Five Facet Mindfulness Questionnaire [Assessing Mindfulness Skills: A Validation Study of the Italian Version of the Five Facet Mindfulness Questionnaire]. *Psicoter. Cogn. Comport.* **2012**, *18*, 261–284.

48. World Medical Association General Assembly. *World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects*. *J. Int. Bioethique* **2004**, *15*, 124–129.
49. Guillaumie, L.; Boiral, O.; Champagne, J. A mixed-methods systematic review of the effects of mindfulness on nurses. *J. Adv. Nurs.* **2017**, *73*, 1017–1034. [[CrossRef](#)]
50. Said, Z.; Kheng, G.L. A review on mindfulness and nursing stress among nurses. *Anal. J. Magister Psikol. UMA* **2018**, *10*, 31–45.
51. Booth, R.Z. The nursing shortage: A worldwide problem. *Rev. Lat. Am. Enferm.* **2002**, *10*, 392–400. [[CrossRef](#)]
52. Wang, S.C.; Wang, L.Y.; Shih, S.M.; Chang, S.C.; Fan, S.Y.; Hu, W.Y. The effects of mindfulness-based stress reduction on hospital nursing staff. *Appl. Nurs. Res.* **2017**, *38*, 124–128. [[CrossRef](#)]
53. Green, J.P.; Black, K.N. Meditation-focused attention with the MBAS and solving anagrams. *Psychol. Conscious. Theory Res. Pract.* **2017**, *4*, 348. [[CrossRef](#)]
54. Barnard, D.; Street, A.; Love, A.W. Relationships between stressors, work supports, and burnout among cancer nurses. *Cancer Nurs.* **2006**, *29*, 338–345. [[CrossRef](#)] [[PubMed](#)]
55. Barrett, L.; Yates, P. Oncology/haematology nurses: A study of job satisfaction, burnout, and intention to leave the specialty. *Aust. Health Rev.* **2002**, *25*, 109–121. [[CrossRef](#)]
56. Potter, P.; Deshields, T.; Divanbeigi, J.; Berger, J.; Cipriano, D.; Norris, L.; Olsen, S. Compassion fatigue and burnout: Prevalence among oncology nurses. *Clin. J. Oncol. Nurs.* **2010**, *14*, E56–E62. [[CrossRef](#)] [[PubMed](#)]
57. Buerhaus, P.; Donelan, K.; DesRoches, C.; Lamkin, L.; Mallory, G. State of the oncology nursing workforce: Problems and implications for strengthening the future. *Nurs. Econ.* **2001**, *19*, 198.
58. Glaus, A. The Status of Cancer Nursing: A European Perspective. *Eur. J. Cancer Suppl.* **2003**, *1*, S363. [[CrossRef](#)]
59. Halter, M.; Boiko, O.; Pelone, F.; Beighton, C.; Harris, R.; Gale, J.; Gourlay, S.; Drennan, V. The determinants and consequences of adult nursing staff turnover: A systematic review of systematic reviews. *BMC Health Serv. Res.* **2017**, *17*, 824. [[CrossRef](#)]
60. Chambers, D.; Cantrell, A.; Preston, L.; Marincowitz, C.; Wright, L.; Conroy, S.; Lee Gordon, A. Reducing unplanned hospital admissions from care homes: A systematic review. *Health Soc. Care Deliv. Res.* **2023**, *11*, 1–130. [[CrossRef](#)] [[PubMed](#)]
61. Raingruber, B.; Robinson, C. The effectiveness of Tai Chi, yoga, meditation, and Reiki healing sessions in promoting health and enhancing problem solving abilities of registered nurses. *Issues Ment. Health Nurs.* **2007**, *28*, 1141–1155. [[CrossRef](#)] [[PubMed](#)]
62. Chiesa, A.; Serretti, A.; Jakobsen, J.C. Mindfulness: Top-down or bottom-up emotion regulation strategy? *Clin. Psychol. Rev.* **2013**, *33*, 82–96. [[CrossRef](#)] [[PubMed](#)]
63. Desbordes, G.; Negi, L.T.; Pace, T.W.; Wallace, B.A.; Raison, C.L.; Schwartz, E.L. Effects of mindful-attention and compassion meditation training on amygdala response to emotional stimuli in an ordinary, non-meditative state. *Front. Hum. Neurosci.* **2012**, *6*, 292. [[CrossRef](#)] [[PubMed](#)]
64. Angel, S.; Vatne, S. Vulnerability in patients and nurses and the mutual vulnerability in the patient-nurse relationship. *J. Clin. Nurs.* **2017**, *26*, 1428–1437. [[CrossRef](#)] [[PubMed](#)]
65. Banerjee, S.C.; Manna, R.; Coyle, N.; Shen, M.J.; Pehrson, C.; Zaider, T.; Hammonds, S.; Krueger, C.A.; Parker, P.A.; Bylund, C.L. Oncology nurses' communication challenges with patients and families: A qualitative study. *Nurse Educ. Pract.* **2016**, *16*, 193–201. [[CrossRef](#)] [[PubMed](#)]
66. Sheldon, L.K.; Barrett, R.; Ellington, L. Difficult communication in nursing. *J. Nurs. Scholarsh.* **2006**, *38*, 141–147. [[CrossRef](#)] [[PubMed](#)]
67. Qualls, B.W.; Payton, E.M.; Aikens, L.G.; Carey, M.G. Mindfulness for Outpatient Oncology Nurses: A Pilot Study. *Holist. Nurs. Pract.* **2022**, *36*, 28–36. [[CrossRef](#)] [[PubMed](#)]
68. Green, A.A.; Kinchen, E.V. The Effects of Mindfulness Meditation on Stress and Burnout in Nurses. *J. Holist. Nurs. Off. J. Am. Holist. Nurses' Assoc.* **2021**, *39*, 356–368. [[CrossRef](#)]
69. Heshmati, R.; Caltabiano, M.L. Pathway linking dispositional mindfulness to fatigue in oncology female nurses: Exploring the mediating role of emotional suppression. *Eur. J. Oncol. Nurs. Off. J. Eur. Oncol. Nurs. Soc.* **2020**, *48*, 101831. [[CrossRef](#)]
70. Hill, C.L.; Updegraff, J.A. Mindfulness and its relationship to emotional regulation. *Emotion* **2012**, *12*, 81–90. [[CrossRef](#)] [[PubMed](#)]
71. Tamagawa, R.; Giese-Davis, J.; Specia, M.; Doll, R.; Stephen, J.; Carlson, L.E. Trait mindfulness, repression, suppression, and self-reported mood and stress symptoms among women with breast cancer. *J. Clin. Psychol.* **2013**, *69*, 264–277. [[CrossRef](#)] [[PubMed](#)]
72. Vaclavik, E.A.; Staffileno, B.A.; Carlson, E. Moral Distress: Using Mindfulness-Based Stress Reduction Interventions to Decrease Nurse Perceptions of Distress. *Clin. J. Oncol. Nurs.* **2018**, *22*, 326–332. [[CrossRef](#)] [[PubMed](#)]
73. Resnicoff, M.; Julliard, K. Brief mindfulness meditation with night nursing unit staff. *Holist. Nurs. Pract.* **2018**, *32*, 307–315. [[CrossRef](#)] [[PubMed](#)]

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