Journal of Evidence-Based Psychotherapies,
Vol. 21, No. 2, September 2021, 81-100.

# GENDER GAP IN MINDFULNESS ASSESSMENT AMONG ITALIAN NURSES: A PILOT DESCRIPTIVE STUDY

*Elsa Vitale*[*1]

[1] Mental Health Center Modugno (Bari), Mental Health Department, Bari Health Company, Italy.

**Abstract**

*Purpose:* The present study aimed to explore gender differences in the mindfulness tendency, specifically in the awareness and attention dimensions and also in the observing, describing, acting with awareness and accepting without judgement in Italian nurses.

*Methods:* In June 2020 an on-line questionnaire was administered to nurses in order to analyze any differences both in the Mindfulness Attention Awareness Scale (MAAS) and the Kentucky Inventory of Mindfulness Skills (KIMS) according to gender variable.

*Findings:* 200 questionnaires were collected. Findings showed significant higher MAAS total score in males than females (p=.004). Additionally, by considering the four sub dimensions in the Mindfulness tendency, females reported significant higher levels in some items of "Observe" (p=.004) and "Act with awareness" (p=.001) than males, while males reported significant higher scores in the "Accept without judgement" than females (p<.001).

*Conclusions:* The present study was a pilot research on exploring gender differences in mindfulness in Italian nurses in order to hope that it will be only the beginning of empirical research on this topic and to better address future mindfulness training courses addressed to nurses by emphasizing certain aspects of mindfulness for females compared to males and vice versa.

**Keywords:** Gender; Mindfulness; Nursing Personnel.

## Introduction

### *Nursing as an "hard" profession*

The nursing profession was born as a helping profession and as such had inherent in itself the ability to alienate the worker. Current literature showed how

[*] Correspondence concerning this article should be addressed to Elsa Vitale, MSN, BSN, PhD, Centre of Mental Health, Modugno, Local Health Company Bari, Italy; via X marzo 43, Modugno, ASL Bari, Italy.
Email: vitaleelsa@libero.it

nurses belonging in several settings were routinely exposed to patient distress and trauma, unrealistic expectations and high workloads (Beck, 2011; Lim et al., 2010; McVicar, 2016). In fact, high turnover, the increased care needs and the type of work lead to an arising in stress and psycho-physical fatigue (Foureur et al., 2013), also psycho-physical exhaustion that might lead to burn out nurses (Vitale et al., 2020; Vitale et al., 2020; Amin et al., 2018; Cheung and Yip, 2015). Unfortunately, the vast heterogeneity of care settings, the different difficulties that the nurse might encounter on the own work could lead to an impoverishment of one's being.

Furthermore, several studies in the literature showed that a reduced nursing well-being condition necessarily entailed a qualitative reduction in professional performance, as well as an increase in absence from own work (Mealer et al., 2012). All this caused a reduction in the quality of nursing care provided to the patient (Serafis et al., 2016). Additionally, most literature explained that female nurses recorded higher levels in anxiety and depression levels than males (Vitale et al., 2021; Vitale and Casolaro, 2021; Chueh et al., 2021) and worse adapted to difficult working conditions, also registering high insomnia levels correlated to higher Body Mass Index values involving nurses in a framework of metabolic syndrome, characterized by a latent chronic inflammatory condition (Vitale et al., 2020).

In this regards several interventions were necessary to sustain nurses' caring approaches in order to offer both better nursing care quality for patients and nursing lifestyle conditions, too (Health Workforce Australia, 2012).

*Mindfulness as an "antidote" to nursing profession*

Mindlessness is defined as "the human propensity to be on self-guide, on self-own, or just not pay attention" (Mesmerr-Magnus et al., 2017; Langer, 2014). The theory of mindfulness originated from Eastern cultures, but it had now also entered Western cultures as a therapeutic approach to individual well-being with respect to the organization to which each individual belonged (Zvolensky et al., 2005). Mindfulness lifestyle has the capability to highlight on how being in the moment and influence workplace mechanism. Mindfulness alludes to the consciousness by concentrating on the present moment, paying attention to current internal and external stimuli and analyzing them without feedback or opinion (Brown & Ryan, 2003; Dane and Brummel, 2014; Kabat-Zinn, 1990; Keng et al., 2011; Ghawadra et al., 2019). Glomb et al. (2011) described mindfulness as "a recognition condition distinguished by interesting consideration to and consciousness of current circumstances and happenings, without appraisal, verdict and convictions". Recent meta-analytic research has revealed that interventions purposed at improving mindful conditions, as: mindfulness-based stress reduction, mindfulness-based cognitive therapy, increasing also physical and mental health by decreasing depression, anxiety, perceived stress, and contemplate thinking (Bohlmeijer et al., 2010; Chiesa & Serretti, 2011; Grossman et al., 2004; Piet & Hougaard, 2011; Sedlmeier et al., 2012; Virgili, 2015). Additionally, several studies supported that

the mindfulness conditions range from person to person (Glomb et al., 2011), by implicating the existence of a dispositional trend toward mindfulness—trait mindfulness which was inside in each individual. In the 1970s, Dr Jon Kabat-Zinn firstly pioneered mindfulness to behavioural medicine. It was introduced at the Medical Center in Massachusetts University a programme which included mindfulness to help people with pain and several conditions and life problems that are difficult to manage in hospitals (Kabat-Zinn, 1990). Literature supported that mindfulness practice and both its implementation increased positive influence in work-environments (Allen & Kiburz, 2012) and in workers' mental health (Vitale, 2020; Chaskalson, 2011; Glomb et al. 2011, Wolever et al., 2012; Hulsheger et al., 2013; Hanson & Richardson, 2014; Gregoire & Lachance, 2015; Virgili, 2015). In fact, several systematic reviews suggested the mindfulness implementation as a method to decrease anxiety (Bohlmeijer et al., 2010; Chen et al., 2012; Goyal et al., 2014; Orme-Johnson & Barnes, 2014), depression (Bohlmeijer et al., 2010; Fjorback et al., 2011; Goyal et al. 2014), pain (Chiesa & Serretti, 2011; Goyal et al., 2014) and stress (Smith, 2014; Bohlmeijer et al., 2010). Moreover, the awareness of one's own being and one's own experience was a topic of great interest and reflection among nursing professionals who acquired greater awareness in their professions and in work environments (Burton et al., 2017) by improving work satisfaction (Weiss & Cropanzano, 1996; Hulsheger et al., 2013), emotion regulation (Glomb et al., 2011; Allen & Kiburz, 2012), empathy and quality of relationships (Brown et al. 2007, Hanson & Richardson 2014), leadership development (Baron & Cayer, 2011), readiness for change (Gartner, 2013), work performance (Dane & Brummel, 2013; Pezzolesi et al., 2013; Reb et al., 2015), turnover intentions (12:Dane & Brummel 2013, Reb et al., 2015) and client satisfaction (Gregoire & Lachance, 2015).

Therefore, a more conscious attitude might contribute to the nurses' ability to make health care decisions more confidently based on their skills and on the action of the present moment, even to deal with complex situations such as the latest Covid-19 pandemic (Vitale, 2021). In this regard, literature suggested how nurses might practice meditation by acquiring awareness of one's being to better deal with stress, attachment and dependence on internal and external contents and therefore, the importance of subjective observation of thoughts, emotions, physical aspects and sensations (Kabat-Zinn, 2003; Gilmartin et al., 2017). All this conscious framework might be a facilitator in own well-being and adaptation nursing contexts (Catalano et al., 2019; Di Giuseppe et al., 2019a, 2020a, c).

*Mindfulness improvement in the nursing profession*

Literature showed how awareness interventions were more effective in decreasing psychological symptoms, especially in chronic conditions (Bonadonna, 2003; Poli et al., 2017; Poli et al., 2019; Conversano & Marchi, 2018; Marchini et al., 2018; Di Giuseppe et al., 2019b; Di Giuseppe et al., 2020b; Merlo, 2019; Conversano et al., 2020a; Lenzo et al., 2020; Poli et al., 2020), by increasing

awareness levels, coping strategies in stressful situations and emotions managing and therefore, in reducing perceived stress levels (Smith et al., 2014; Bohlmerijer et al., 2010), anxiety (Bohlmerijer et al., 2010; Chen et al., 2012; Vitale, 2021) and depressive symptoms (Brown & Ryan, 2003; Chiesa & Serretti 2011; Fjorback et al., 2011; Goyal et al., 2014; Vitale, 2021). For example, the study by Tang et al. (2018) underlined how awareness primarily acted on three specific systems, as: attention control, emotional regulation and self-awareness, and how mindfulness practice might increase both density and volume of gray matter in prefrontal regions, cingulate cortex anterior, medial prefrontal cortex, striatum, amygdala, isola, posterior cingulate cortex and precuneus (Brewer et al., 2011; Hölzel et al., 2013; McEwen & Morrison, 2013; Creswell & Lindsay, 2014; Fox et al., 2014 ; Luders et al., 2015). Furthermore, the positive effect on stress, together with greater brain neuro plasticity, might favor a better response of the immune system, as well as a better balance between mind and body, slowing down brain aging (Giannandrea et al., 2019). Specifically, an increased acquisition of awareness seemed to increase the attention level (Killingsworth & Gilbert, 2010; Smallwood & Schooler, 2015), especially in control selective attention (Wadlinger & Isaacowitz, 2011) with less expenditure in cognitive resources (Cahn & Polich, 2006). Moreover, greater awareness increased the individual's ability to judge situations in a more objective way while giving them a positive meaning. So, mindfulness was widely argued elsewhere (Baer, 2003), by identifying many of the therapeutic approaches aimed to reduce individual stress (KabatZinn, 1982), or based on the cognitive therapy (Segal et al., 2002). On the other hand, some approaches included mindfulness techniques as an important part in therapeutic programs, as dialectical behavior therapy (Linehan, 1993), relapse prevention for substance abuse (Marlatt & Kristeller, 1999) and acceptance and commitment treatment (Hayes et al., 1999). Literature reported very encouraging findings on the mindfulness efficacy but (Baer, 2003) methods to assess mindfulness few still remained. In this regard, several efficacy studies in mindfulness-related approaches showed that lot of psychological and somatic signs decreased in post-assessment than before testing, but they did not perform if the subject increased mindfulness skills. As regards the attentional aspect, mindfulness was described as "receptive attention to and awareness of present events and experience" that ranged both within and between subjects, as in the personality characteristic (Brown, & Ryan, 2003). Also in the Buddhist culture, mindfulness was also identified as "bare" attention and "pure" awareness (Kirmayer, 2015). Moreover, literature suggested that higher levels of dispositional mindfulness would be associated to lower distress levels and vice versa (Brown & Ryan, 2003; Baer & Smith, 2006) by hypnotizing a bi-directional relationship between mindfulness and distress (Slonim et al., 2015). Also males reported significantly higher scores in mindfulness than females, who more focused their attention on negative stimuli than males (Nolen-Hoeksema et al., 1999; Tamres & Helgeson, 2002).

## The conceptual perspective and the aim

Starting from the assumptions dictated by literature and, therefore: nursing understood as an intense helping profession gripped by external and internal stressful stimuli linked to the heavy nature of the profession, in which the female sex seemed to be more affected by stress, anxiety, depression and, at the same time, by considering numerous evidences promoting mindfulness as an effective intervention to solve these problems, the present study aimed to assess any differences in mindfulness predisposition and which sub dimensions were more differentiated between female and male nurses.

## Materials and Methods

*Instruments*

The Mindfulness Attention Awareness Scale (MAAS) (Brown & Ryan, 2003) and the Kentucky Inventory of Mindfulness Skills (KIMS) (Baer et al., 2004) were assessed among participants.

The MAAS purposed to indirectly quantify mindfulness by answering queries about the opposite of mindful attention and awareness. The MAAS included 15-items performing a core property of mindfulness tendency, as responsive or favorable recognition and attention to what was happening in the present. It was predictive and also associated to well-being frames. Interviewers were asked to assess how frequently they experienced by using a 6-point Likert scale from "1", as almost always, to "6", as hardly ever. Total scores referred a more mindful presence.

Additionally, the KIMS considered mindfulness as a multidimensional approach which involved different skills or facets that needed to be identified and then assessed. In this regard, literature reported four different mindfulness skills, as: the ability to observe, to describe, to act with awareness, and to accept without judgment. Baer et al. (2004) suggested that the assessment of these different facets of mindfulness might be helpful to teach mindfulness by underling strengths and weaknesses in their teachings. This implied that, depending on the starting characteristics of each individual, certain aspects of mindfulness might be implemented with respect to others, all complementary to each other by also performed mindfulness understanding and the different aspects' correlated with other psychological explanations. The Kentucky Inventory of Mindfulness Skills (KIMS) included 39 items. Each item was associated to a 5-point Likert scale ranging from "1", as never or very rarely true to "5", as almost always or always true. Some items contained clear explanations of the Mindfulness component, while others included the absence of that element and were reverse scored. All the 39 items were grouped into four skill categories (Kirmayer, 2015; Linehan, 1993; Segal et al., 2002; Kabat-Zinn, 2003; Segal et al., 2002), as:

- "Observe" (item no. 1, 5, 9, 13, 17, 21, 25, 29, 30, 33, 37, 39) or paying attention to a variety of internal and external stimuli, including bodily sensations, cognitions, emotions, sights, sounds, and smells;
- "Describe" (item no. 2, 6, 10, 14, 18, 22, 26, 34) or indicating an observation without labeling items all referred to a tendency or ability to put sensations, perceptions, thoughts, feelings, emotions, or experiences into words;
- "Act with Awareness" (item no. 3, 7, 11, 15, 19, 23, 27, 31, 35) concerning undivided attention on the current activity or avoiding automatic pilot;
- "Accept without Judgment" (item no. 4, 8, 12, 16, 20, 24, 28, 32, 36), involving both the act of making judgments or assessment without prejudice or self-criticism about one's happenings.

*Validity and Reliability*

The MAAS reported enough validity and reliability from previous studies (Mackillop & Anderson, 2007) and also it was validated and translated to several other languages, such as: German (Michalak, et al., 2008), Chinese (Deng et al., 2008), Swedish (Hansen et al., 2009), French (Jermann et al., 2009) and Spanish (Araya-Vargas et al., 2009; Johnson et al., 2013; Soler et al., 2012). The KIMS registered content validity of the items, internal consistency, factor structure, and test-retest reliability (Bear et al., 2004).

*Data analysis*

All the data were collected in an Excel data sheet and processed thanks to the Statistical Package for the Social Sciences (SPSS) version 20. Both the MAAS total score and the KIMS sub dimensions' scores, were performed as continuous variables and evaluated as means ± standard deviations and α-Cronbach coefficients were also evaluated. MANOVA test were also assessed according to gender. All p-values <.05 were considered as statistically significant.

*Participants*

200 Italian nurses were enrolled during June 2020 through the online questionnaire thanks to the Google Forms function. 135 (65%) were females and 65 (35%) were males.

*Ethical considerations*

The study was conducted according to the Declaration of Helsinki. It was approved by the Community Review Board (CRB) of General Hospital, Policlinic of Bari, Italy, with id number 6161/2020. All participants were first asked for their consents to participate in the study. The questionnaire was anonymous to guarantee total respect of the participants' privacy.

## Results

As findings reporting (Table 1), males registered significantly (p=.004) higher MAAS total score (66.71±10.13) than females (62.28±10.39). On the other hand, females recorded significantly higher total score in the KIMS scale, specifically in the "Observe" (p=.004) and in the "Act with awareness" (p=.001) sub dimensions, respectively. Finally, males reported significantly higher score (p<.001) than females in the "Accept without judgement" sub dimension.

**Table 1.** Mindfulness total scores according to gender in Italian nurses (n=200)

| Scale/Sub dimensions according to gender<br>Female (n; %)<br>Male (n; %)<br>Total (n;%) | μ±s.d. | F | C.I. 95% | p | α-Chronbach |
|---|---|---|---|---|---|
| **MAAS total** | | | | | |
| Female (135;65%) | 62.28±10.39 | 8.449 | 60.496-64.058 | .004* | .842 |
| Male (65;35%) | 66.71±10.13 | | 64.287-69.141 | | |
| Total (200;100%) | 63.83±10.49 | | 62.990-66.001 | | |
| **Observe** | | | | | |
| Female (135;65%) | 37.50±5.34 | 8.682 | 36.504-38.496 | .004* | .647 |
| Male (65;35%) | 34.98±6.45 | | 33.629-36.342 | | |
| Total (200;100%) | 36.62±5.87 | | 35.402-37.084 | | |
| **Describe** | | | | | |
| Female (135;65%) | 24.78±2.34 | 2.410 | 24.335-35.235 | .122 | .452 |
| Male (65;35%) | 24.18±3.02 | | 23.572-24.799 | | |
| Total (200;100%) | 24.57±2.61 | | 24.105-24.866 | | |
| **Act with Awareness** | | | | | |
| Female (135;65%) | 29.57±3.25 | 11.179 | 29.017-30.122 | .001* | .601 |
| Male (65;35%) | 27.98±3.09 | | 27.233-28.739 | | |
| Total (200;100%) | 29.01±3.27 | | 28.310-29.244 | | |
| **Accept Without Judgement** | | | | | |
| Female (135;65%) | 24.77±4.11 | 16.428 | 24.037-25.502 | >.001* | .469 |
| Male (65;35%) | 27.31±4.45 | | 26.316-28.313 | | |
| Total (200;100%) | 25.66±4.40 | | 25.423-26.661 | | |

*p<.05 is statistically significant.

## Discussion

The present study purposed to explore gender differences in the mindfulness skills, both in the awareness and attention dimensions and also in the observing, describing, acting with awareness and accepting without judgement in Italian nurses.

In this regard, current literature showed very few evidence on gender differences in the mindfulness assessment and even less among nurses, so the present study could be considered as pilot for its purpose and method. In fact, several studies assessed mindfulness according to age, as older people recorded higher Mindfulness levels than younger subjects (McCracken et al., 2007; Shapiro et al., 2007). However, there was also very little research suggesting that males and females recorded similar or different levels of Mindfulness, in fact, in most of the existing researches gender differences in Mindfulness were not reported (Brown & Ryan, 2003; Catak, 2012; De Petrillo et al., 2009; Feldmanet al., 2007; MacKillop & Anderson, 2007; Malcoun, 2008). Also, more literature explained the benefits included in the mindfulness training both between nurses and their nursing students (Suleiman-Martos et al., 2019; Guillaumie et al., 2016; Ghawadra et al., 2019; Mesmer-Magnus et al., 2017; van der Riet et al., 2018). However, very few studies dealt with gender differences between females and males in nursing profession.

The present findings showed higher MAAS total score in males than in females, also in the "Accept without judgement" sub dimension. These results were in disagreement to the Mackillop study (2007) in which data seemed to not be different according to gender as both males and females did not differ in Mindfulness values (MacKillop & Anderson, 2007). Moreover, the Mackillop (2007) study demonstrated that the MAAS structure did not confirmed in men, suggesting that the MAAS was less valid in males than in females. However, this appeared to be connected to the sample size of the subsample of males (n=233), which had lower statistical power than the female subsample (n=377). Also in the present study male group was less numerous (n=70) than female one (n=130), so data might be influenced in the MAAS scoring by the same reason.

Additionally, these results are in agreement with the Alspahic et al. study (2017), which reported that Mindfulness assessments recorded in the Bosnian general population showed small but statistically significant gender difference in "Observe" subscale, as females scored higher than males, and "Act with awareness", as males reported higher scores than their counterparts. On the other hand, the present results were in agreement as regards the "Describe" sub dimension, but not for the "Act with awareness" subsection, as females showed higher levels than males. Literature also explained gender differences in Mindfulness thanks to different cognitive functioning between females and males, as females were much better in observing details than males, and also in multitasking – doing several things at the same time, while males in general having a tendency to focus on one task at the time, and be more aware while doing it (Sturgess, 2012; Stoet et al., 2013).

Moreover, according to the present findings, literature evidenced that males recorded higher levels in dispositional Mindfulness than females. This gender-related difference could be explained by the gender-based mechanism in emotion regulation which was also explained by the neuroimaging research that reported as males less activated brain region involved in emotional regulation (McRae et al., 2008; Koch et al., 2007). Moreover, literature reported gender-related differences in

response to psychological distress mechanisms, as males tended to externalize their distress more than females who tended to internalize their distress by directing action inward (Broderick et al., 1998; Li et al., 2006). Indeed, Broderick et al. (1998) and Li et al. (2006) highlighted a gender difference in the externalization of emotions, as males externalized more than females who instead tended to internalize their own emotions. Finally, the literature showed how self-criticism tended to be more common among females than males (Calvete Cardenoso, 2005; Nolen-Hoeksema & Girgus, 1994) and this could explain higher values in the "accept without judgement" sub dimension in males than in females.

## Limitations

However, this research had several limitations. First of all, the small nursing sample collected referring to Italian nursing population. Also the self-report assessments of mindfulness collected through internet. Despite this, the abovementioned findings reported some important evidence in gender gap in mindfulness and its related sub dimensions, which will be considered in future researches to better implement the mindfulness in the nursing practice, taking into account the predisposition differences according to gender.

## Conclusion

The present study reported gender differences in mindfulness predisposition between female and male nurses. Additionally, literature reported that short forms of mindfulness-based interventions might reduce burnout and negative mood or anxiety symptoms in nurses by highlighting the priority to investigate which variables predict treatment outcome. Therefore, it became necessary to have special precautions on both sexes, especially in training courses by emphasizing certain aspects of mindfulness specifically for females and males.

In this regard, the present study was a pilot research on exploring gender differences in mindfulness in Italian nurses in order to hope that it will be only the beginning of empirical research on this topic. It would be essential to implement mindfulness training in nursing practice to allow nurses to better live their present, their profession so that they could feel more confident in making their clinical practice decisions in the least doubtful way possible.

## Conflict of Interest

The author declares no conflict of interest, financial or otherwise.

**Acknowledgement**

The author thanks all the Italian nurses who participated in the study.

**References**

Alispahic, S., & Hasanbegovic-Anic, E. (2017). Mindfulness: Age and Gender Differences on a Bosnian Sample. *Psychological Thought, 10*(1), 155-166. https://doi.org/10.5964/psyct.v10i1.224.

Allen T.D., & Kiburz K.M. (2012). Trait mindfulness and work– family balance among working parents: the mediating effects of vitality and sleep quality. *Journal of Vocational Behavior, 80*(2), 372–379. https://doi.org/10.1016/j.jvb.2011.09.002.

Amin, N., Quek, K. F., Oxley, J. A., Noah, R., & Nordin, R. (2018). Emotional distress as a predictor of work-related musculoskeletal disorders in Malaysian nursing professionals. *The International Journal of Occupational Environmental Medicine, 9*, 1169–1178.

Araya-Vargas, G., Gapper-Morrow, S., Moncada-Jiménez, J., & Buckworth, J. (2009). Translation and cross-cultural validation of the spanish version of the Mindful Awareness Attention Scale (MAAS): An exploratory analysis and potential applications to exercise psychology, sport and health. *International Journal of Applied Sports Sciences*, *21*(1), 94-114. https://doi.org/10.1017sjp. 2013.79.

Baron, C., & Cayer, M. (2011). Fostering post-conventional consciousness in leaders: why and how? *Journal of Management Development, 30*(4), 344–365. https://doi.org/10.1108/02621711111126828.

Baer, R.A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice*, *10*, 125–143. https://doi.org/10.1093/clipsy.bpg015.

Baer, R.A., Smith, G.T., & Allen, K.B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. *Assessment*, *11*, 191–206. http://dx.doi.org/10.1177/1073191104268029.

Baer, R.A., Smith, G.T., Hopkins, J., Krietemeyer, J. & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, *13*, 27-45. https://doi.org/10.1177/1073191105283504.

Beck, C. (2011). Secondary traumatic stress in nurses: a systematic review. Archives of Psychiatric Nursing, 25(1), 1–10. https://doi.org/10.1016/j. apnu.2010. 05005.

Bohlmeijer, E., Prenger, R., Taal, E., & Cuijpers, P. (2010). The effects of mindfulness-based stress reduction therapy on mental health of adults with a chronic disease: A meta-analysis. *Journal of Psychosomatic Research, 68*, 539–544. https://doi.org/10.1016/j.jpsychores.2009.10.005.

Bonadonna, R. (2003). Meditation's impact on chronic illness. *Holist. Nurs. Pract.* 17, 309–319.

Brewer, J. A., Worhunsky, P. D., Gray, J. R., Tang, Y.-Y., Weber, J., & Kober, H. (2011). Meditation experience is associated with differences in default mode network activity and connectivity. *Proc. Natl. Acad. Sci. U.S.A.* 108, 20254–20259. https://doi.org/10.1073/pnas.1112029108.

Broderick, P.C. (1998). Early adolescent gender differences in the use of ruminative and distracting coping strategies. *J. Early Adolesc.*, *18*, 173–191. https://doi.org/10.1177/0272431698018002003.

Brown, K.W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*, 822–848. https://doi.org/10.1037/0022-3514.84.4.822.

Burton, A., Burgess, C., Dean, S., Koutsopoulou, G. Z., & Hugh-Jones, S. (2017). How effective are mindfulness-based interventions for reducing stress among healthcare professionals? A systematic review and meta-analysis. *Stress Health,* 33, 3–13. https://doi.org/10.1002/smi.2673.

Cahn, B. R., & Polich, J. (2006). Meditation states and traits: EEG, ERP, and neuroimaging studies. *Psychological bulletin*, *132*(2), 180–211. https://doi.org/10.1037/0033-2909.132.2.180.

Calvete E, Cardeñoso, O. (2005). Gender differences in cognitive vulnerability to depression and behavior problems in adolescents. *Journal of Abnormal Child Psychology*, *33*(2), 179–192. https://doi.org/10.1007/s10802-005-1826-y.

Catak, P.D. (2012). The Turkish version of the Cognitive and Affective Mindfulness Scale-Revised. *Europe's Journal of Psychology*, *8*(4), 603-619. https://doi.org/10.5964/ejop.v8i4.436.

Catalano, A., Martino, G., Bellone, F., Papalia, M., Lasco, C., Basile, G., Sardella, A., Nicocia, G., Morabito, N., & Lasco, A. (2019). Neuropsychological Assessment in Elderly Men with Benign Prostatic Hyperplasia Treated with Dutasteride. *Clinical drug investigation*, *39*(1), 97–102. https://doi.org/10.1007/s40261-018-0720-7.

Chaskalson, M. (2011) The Mindful Workplace: Developing Resilient Individuals and Resonant Organizations with MBSR. John Wiley & Sons, Chichester.

Chen, K. W., Berger, C. C., Manheimer, E., Forde, D., Magidson, J., Dachman, L., & Lejuez, C. W. (2012). Meditative therapies for reducing anxiety: a systematic review and meta-analysis of randomized controlled trials. *Depression and anxiety*, *29*(7), 545–562. https://doi.org/10.1002/da.21964.

Cheung, T., & Yip, P. (2015). Depression, anxiety and symptoms of stress among Hong Kong nurses: A cross-sectional study. *International Journal of Environmental Research and Public Health, 12*, 11072–11100. https://doi.org/10.3390/ijerph120911072.

Chiesa, A., & Serretti, A. (2011). Mindfulness based cognitive therapy for psychiatric disorders: a systematic review and meta-analysis. *Psychiatr. Res., 187*, 441–453. https://doi.org/10.1016/j.psychres.2010.08.011.

Chueh, K.-H., Chen, K.-R., & Lin, Y.-H. (2021). Psychological Distress and Sleep Disturbance Among Female Nurses: Anxiety or Depression? *Journal of Transcultural Nursing, 32*(1), 14–20. https://doi.org/10.1177/1043659619881491.

Conversano, C., & Marchi, L. (2018). *Vivere con la Fibromialgia: Strategie Psicologiche per Affrontare Il Dolore Cronico*. Trento: Centro Studi Erickson.

Conversano C. (2019). Common Psychological Factors in Chronic Diseases. *Frontiers in psychology*, *10*, 2727. https://doi.org/10.3389/fpsyg.2019.02727.

Conversano, C., Di Giuseppe, M., Miccoli, M., Ciacchini, R., Gemignani, A., & Orrù, G. (2020a). Mindfulness, age and gender as protective factors against psychological distress during the COVID-19 pandemic. *Front. Psychol.* https://doi.org/10.3389/fpsyg.2020.01900.

Creswell, J. D., & Lindsay, E. K. (2014). How Does Mindfulness Training Affect Health? A Mindfulness Stress Buffering Account. *Current Directions in Psychological Science, 23*(6), 401–407. https://doi.org/10.1177/0963721414547415.

Dane, E., & Brummel, B. J. (2014). Examining workplace mindfulness and its relations to job performance and turnover intention. *Human Relations, 67*(1), 105–128. https://doi.org/10.1177/0018726713487753

Deng, Y.-Q., Li, S., Tang, Y.-Y., Zhu, L.-H., Ryan, R., & Brown, K. (2011). Psychometric properties of the chinese translation of the Mindful Attention Awareness Scale (MAAS). *Mindfulness*, available via: http://dx.doi.org/10.1007/s12671.011.0074-1.

De Petrillo, L. A., Kaufman, K. A., Glass, C. R., & Arnkoff, D. B. (2009). Mindfulness for long-distance runners: An open trial using Mindful Sport Performance Enhancement (MSPE). *Journal of Clinical Sport Psychology*, *3*(4), 357-376. https://doi.org/10.1123/jcsp.3.4.357.

Di Giuseppe, M., Ciacchini, R., Piarulli, A., Nepa, G., & Conversano, C. (2019a). Mindfulness dispositions and defense style as positive responses to psychological distress in oncology professionals. *Eur. J. Oncol. Nurs., 40*, 104–110. https://doi.org/10.1016/j.ejon.2019.04.003.

Di Giuseppe, M., Di Silvestre, A., Lo Sterzo, R., Hitchcott, P., Gemignani, A., & Conversano, C. (2019b). Qualitative and quantitative analysis of the defense profile in Breast Cancer women: a pilot study. *Health Psychol Open* 6:2055102919854667. https://doi.org/10.1177/2055102919854667.

Di Giuseppe, M., Gemignani, A., & Conversano, C. (2020a). Psychological resources against the traumatic experience of COVID-19. *Clin. Neuropsychiatry* 17, 85–87. https://doi.org/10.36131/CN20200210.

Di Giuseppe, M., Miniati, M., Miccoli, M., Ciacchini, R., Orrù, G., Lo Sterzo, R., & et al. (2020b). Defensive responses to stressful life events associated with cancer diagnosis. *Mediterr. J. Clin. Psychol., 8*, 1–22. https://doi.org/10.6092/2282-1619/mjcp-2384.

Duarte, J., & Pinto-Gouveia, J. (2016). Effectiveness of a mindfulness-based intervention on oncology nurses' burnout and compassion fatigue symptoms: a non-randomized study. *International Journal of Nursing Studies*, *64*, 98-107. https://doi.org/10.1016/j.ijnurstu.2016.10.002.

Feldman, G., Hayes, A., Kumar, S., Greeson, J., & Laurenceau, J.P. (2007). Mindfulness and emotion regulation: The development and initial validation of the Cognitive and Affective Mindfulness Scale-Revised (CAMS-R). *Journal of Psychopathology and Behavioral Assessment*, *29*, 177-190. https://doi.org/10.1007/s10862-006-9035-8.

Fjorback, L., Arendt, M., Ørnbøl, E., Fink, P., & Walach H. (2011). Mindfulness-Based Stress Reduction and Mindfulness-Based Cognitive Therapy–a systematic review of randomized controlled trials. *Acta Psychiatrica Scandinavica, 124*(2), 102–119. https://doi.org/10.1111/j.1600-0447.2011.01704.x.

Foureur, M., Besley, K., Burton, G., Yu, N., & Crisp, J. (2013). Enhancing the resilience of nurses and midwives: Pilot of a mindfulness-based program for increased health, sense of coherence and decreased depression, anxiety and stress. *Contemporary Nurse, 45*, 114–125. https://doi.org/10.5172/conu.2013.45.1.114.

Fox, K. C., Nijeboer, S., Dixon, M. L., Floman, J. L., Ellamil, M., Rumak, S. P., Sedlmeier, P., & Christoff, K. (2014). Is meditation associated with altered brain structure? A systematic review and meta-analysis of morphometric neuroimaging in meditation practitioners. *Neuroscience and biobehavioral reviews*, *43*, 48–73. https://doi.org/10.1016/j.neubiorev.2014.03.016.

Friedman, E., & Berger, B.G. (1991) Influence of gender, masculinity, and femininity on the effectiveness of three stress reduction techniques: Jogging, relaxation response, and group interaction, *Journal of Applied Sport Psychology*, *3*,1, 61-86. https://doi.org/10.1080/10413209108406435.

Garland, E.L., Gaylord, S.A., & Fredrickson, B.L. (2011). Positive reappraisal mediates the stress-reductive effects of mindfulness: an upward spiral process. *Mindfulness*, *2*(1), 59–67. https://doi.org/10.1007/s12671-011-0043-8.

Gärtner, C. (2013). Enhancing Readiness for Change by Enhancing Mindfulness. *Journal of Change Management, 13*(1), 52-68, https://doi.org/10.1080/14697017.2013.768433.

Ghawadra, S. F., Abdullah, K. L., Choo, W. Y., & Phang, C. K. (2019). Mindfulness-based stress reduction for psychological distress among nurses: A systematic review. *Journal of clinical nursing*, *28*(21-22), 3747–3758. https://doi.org/10.1111/jocn.14987.

Giannandrea, A., Simione, L., Pescatori, B., Ferrell, K., Belardinelli, M.O., Hickman, S.D.,& Raffone, A. (2019). Effects of the mindfulness-based stress reduction program on mind wandering and dispositional mindfulness facets. *Mindfulness* 10, 185–195. https://doi.org/10.1007/s12671-018-1070-5.

Gilmartin, H., Goyal, A., Hamati, M. C., Mann, J., Saint, S., & Chopra, V. (2017). Brief Mindfulness Practices for Healthcare Providers – A Systematic Literature Review. *The American journal of medicine*, *130*(10), 1219.e1–1219.e17. https://doi.org/10.1016/j.amjmed.2017.05.041.

Glomb, T. M., Duffy, M. K., Bono, J. E., & Yang, T. (2011). Mindfulness at work. In J. Martocchio, H. Liao, & Joshi, A. (Eds.). Research in personnel and human resource management (pp. 115–157). Bingley, UK: Emerald Group Publishing Limited.

Goyal, M., Singh, S., Sibinga, E.M., Gould, N.F., Rowland-Seymour, A., Sharma, R., Berger, Z., Sleicher, D., Maron, D.D. & Shihab H.M. (2014). Meditation programs for psychological stress and well-being: a systematic review and meta-analysis. *JAMA Internal Medicine, 174*(3), 357–368. https://doi.org/10.1001/jamainternmed.2013.13018.

Gregoire, S. & Lachance, L. (2015). Evaluation of a brief mindfulness-based intervention to reduce psychological distress in the workplace. *Mindfulness, 6*(4), 836–847. https://doi.org/10.1007/s12671-014-0328-9.

Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of Psychosomatic Research, 57*, 35–43. https://doi.org/10.1016/S0022-3999(03)00573-7.

Guillaumie, L., Boiral, O., & Champagne, J. (2017). A mixed-methods systematic review of the effects of mindfulness on nurses. *Journal of advanced nursing*, *73*(5), 1017–1034. https://doi.org/10.1111/jan.13176.

Hanson, J., & Richardson, Z. (2014). Mindfulness at work: a critical review. *Critical Perspectives on Business Management, 3*, 19–40.

Hulsheger U.R., Alberts H.J., Feinholdt A., & Lang J.W. (2013). Benefits of mindfulness at work: the role of mindfulness in emotion regulation, emotional exhaustion and job satisfaction. *Journal of Applied Psychology, 98*(2), 310–325. https://doi.org/10.1037/a0031313.

Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General Hospital Psychiatry*, *4*, 33–47. https://doi.org/10.1016/0163-8343(82)90026-3.

Kabat-Zinn, J. (1990). Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness. New York, NY: Dell Publishing.

Kabat-Zinn, J. (2003). Mindfulness-Based Interventions in Context: Past, Present, and Future. *Clinical Psychology: Science and Practice*, *10*, 144-156. https://doi.org/10.1093/clipsy/bpg016.

Kabat-Zinn, J. (2013). Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness. New York, NY: Bantam Dell.

Killingsworth, M. A., & Gilbert, D. T. (2010). A wandering mind is an unhappy mind. *Science (New York, N.Y.)*, *330*(6006), 932. https://doi.org/10.1126/science.1192439.

Kirmayer L. J. (2015). Mindfulness in cultural context. *Transcultural psychiatry*, *52*(4), 447–469.

Hansen, E., Lundh, L.G., Homman, A., & Wångby-Lundh, M. (2009). Measuring mindfulness: pilot studies with the Swedish versions of the Mindful Attention Awareness Scale and the Kentucky Inventory of Mindfulness Skills. *Cognitive Behaviour Therapy*, *38*(1), 2-15. https://doi.org/10.1080/16506070802383230.

Keng, S.-L., Phang, C. K., & Oei, T. P. S. (2015). Effects of a brief mind- fulness-based intervention program on psychological symptoms and well-being among medical students in Malaysia: A controlled study. *International Journal of Cognitive Therapy, 8*, 335–350. https://doi.org/10.1521/ijct.2015.8.4.335.

Koch, K., Pauly, K., Kellermann, T., Seiferth, N. Y., Reske, M., Backes, V., & et al. (2007). Gender differences in the cognitive control of emotion: an fMRI study. *Neuropsychologia, 45*, 2744–2754. https://doi.org/10.1016/j.neuropsychologia.2007.04.012.

Hayes, S. C., Strosahl, K., & Wilson, K. G. (1999). Acceptance and commitment therapy. New York: Guilford Press.

Hayes-Skelton, S. A., Calloway, A., Roemer, L., & Orsillo, S. M. (2015). Decentering as a potential common mechanism across two therapies for generalized anxiety disorder. *Journal of Consulting and Clinical Psychology*, *83*(2), 395–404. https://doi.org/10.1037/a0038305.

Health Workforce Australia (2012). Health workforce 2025 – Doctors, nurses and midwives – Volume 1. Retrieved from http:// submissions.education.gov.au/forms/archive/2015_16_sol/documents/Attachments/Australian%20Nursing%20and%20Midwifery%20Accreditation%20Council%20(ANMAC).pdf.

Hölzel, B. K., Hoge, E. A., Greve, D. N., Gard, T., Creswell, J. D., Brown, K. W., & et al. (2013). Neural mechanisms of symptom improvements in generalized anxiety disorder following mindfulness training. *Neuroimage Clin.* 2, 448–458. https://doi.org/10.1016/j.nicl.2013.03.011.

Hülsheger, U. R., Alberts, H. J., Feinholdt, A., & Lang, J. W. (2013). Benefits of mindfulness at work: the role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *The Journal of applied psychology*, *98*(2), 310–325. https://doi.org/10.1037/a0031313.

Jermann, F., Van der Linden, M., Gex-Fabry, M., Guarin, A., Kosel, M., Bertschy, G., Aubry, J.M., & Bondolfi, G. (2013). Cognitive functioning in patients remitted from recurrent depression: Comparison with acutely depressed patients and controls and follow-up of a Mindfulness-Based Cognitive Therapy trial. *Cognitive Therapy and Research*, 1-11, available via: http://dx.doi.org/10.1007/s10608.013.9544-1.

Johnson, C.J., Wiebe, J.S., & Morera, O.F. (2013). The Spanish version of the Mindful Attention Awareness Scale (MAAS): Measurement invariance and psychometric properties. *Mindfulness*, 1-14. https://doi.org/10.1007/s12671-013-0210-1.

Langer, E. J. (2014). Mindfulness in the age of complexity. *Harvard Business Review, 92*(3), 68–73.

Lenzo, V., Sardella, A., Martino, G., & Quattropani, M.C. (2020). A systematic review of metacognitive beliefs in chronic medical conditions. *Front. Psychol.* 10:2875. https://doi.org/10.3389/fpsyg.2021.623033.

Li, C.E., DiGiuseppe, R., & Froh, J. (2006). The roles of sex, gender, and coping in adolescent depression. *Adolescence*, *41*, 409-415.

Lim, J., Bogossian, F., & Ahern, K. (2010). Stress and coping in Australian nurses: a systematic review. International Nursing Review, 57, 22–31. https://doi.org/10.1111/j.1466-7657.2009.00765.x.

Linehan, M.M. (1993). Cognitive-behavioral treatment of borderline personality disorder. New York: Guilford Press.

Luders, E., Thompson, P.M., & Kurth, F. (2015). Larger hippocampal dimensions in meditation practitioners: differential effects in women and men. *Front. Psychol., 6*, 186.

MacKillop, J., & Anderson, E.J. (2007). Further psychometric validation of the mindful attention awareness scale (MAAS). *J Psychopathol Behav Assess., 29*, 289-93. https://doi.org/10.1007/s10862-007-9045-1.

Malcoun, E. (2008). Unpacking mindfulness: Psychological processes underlying the health benefits of a mindfulness-based stress reduction program (Doctoral thesis, Bryn Mawr College, PA, USA). Available from http://search.proquest.com/docview/288102215.

Marchini, F., Caputo, A., Convertino, A., & Napoli, A. (2021). Psychodynamics in Diabetes: The Relevance of Deepening the Symbolic in Treatment Adherence. *Frontiers in psychology*, *12*, 661211. https://doi.org/10.3389/fpsyg.2021.661211.

Marlatt, G. A., & Kristeller, J. L. (1999). Mindfulness and meditation. In W. R. Miller (Ed.), *Integrating spirituality into treatment: Resources for practitioners* (pp. 67–84). American Psychological Association. https://doi.org/10.1037/10327-004.

McCracken, L.M., Gauntlett-Gilbert, J., & Vowles, K.E. (2007). The role of mindfulness in a contextual cognitive-behavioral analysis of chronic pain-related suffering and disability. *Pain*, *131*(1-2), 63-69. https://doi.org/10.1016/j.pain.2006.12.013.

McEwen, B. S., & Morrison, J. H. (2013). The brain on stress: vulnerability and plasticity of the prefrontal cortex over the life course. *Neuron, 79*, 16–29. https://doi.org/10.1016/j.neuron.2013.06.028.

McRae, K., Ochsner, K. N., Mauss, I. B., Gabrieli, J. J., & Gross, J. J. (2008). Gender differences in emotion regulation: an fMRI study of cognitive reappraisal. *Group Process. Intergroup Relat.*, *11*, 143-162.

McVicar, A. (2016). Scoping the common antecedents of job stress and job satisfaction for nurses (2000-2013) using the jobs-resources model of stress. *Journal of Nursing Management*, *24*(2), E112– E136. https://doi.org/10.1111/jonm.12326.

Mealer, M., Jones, J., Newman, J., McFann, K.K., Rothbaum, B., & Moss, M. (2012). The presence of resilience is associated with a healthier psychological profile in intensive care unit (ICU) nurses: results of a national study. *International Journal of Nursing Studies*, *49*, 292–299. https://doi.org/10.1016/j.ijnurstu.2011.09.015.

Merlo, E.M. (2019). Opinion article: the role of psychological features in chronic diseases, advancements and perspectives. *Mediterr. J. Clin. Psychol.* 7, 1–6. https://doi.org/10.6092/2282-1619/2019.7.2341.

Mesmer-Magnus, J., Manapragada, A., Viswesvaran, C., & Allen, J.W. (2017). Trait mindfulness at work: A meta-analysis of the personal and professional correlates

of trait mindfulness. *Human Performance, 30*(2-3), 79-98. https://doi.org/10.1080/08959285.2017.1307842.

Michalak, J., Heidenreich, T., Ströhle, G., & Nachtigall, C. (2008). Die deutsche version der mindful attention and awareness scale (MAAS). *Zeitschrift Fur Klinische Psychologie Und Psychotherapie*, *37*(3), 200-208. http://dx.doi.org/10.1026/1616-3443.37.3.200.

Nolen-Hoeksema, S., & Girgus, J.S. (1994). The emergence of gender differences in depression during adolescence. *Psychological Bulletin*, *115*(3). https://doi.org/10.1037/0033-2909.115.3.424.

Nolen-Hoeksema, S., Larson, J., & Grayson, C. (1999). Explaining the gender difference in depressive symptoms. *Journal of personality and social psychology*, *77*(5), 1061–1072. https://doi.org/10.1037//0022-3514.77.5.1061.

Orme-Johnson, D.W., & Barnes, V.A. (2014). Effects of the transcendental meditation technique on trait anxiety: a meta-analysis of randomized controlled trials. *Journal of Alternative and Complementary Medicine, (New York, N.Y.)*, *20*(5), 330–341. https://doi.org/10.1089/acm.2013.0204.

Peters, J. R., Smart, L. M., Eisenlohr-Moul, T. A., Geiger, P. J., Smith, G. T., & Baer, R. A. (2015). Anger rumination as a mediator of the relationship between mindfulness and aggression: the utility of a multidimensional mindfulness model. *Journal of clinical psychology*, *71*(9), 871–884. https://doi.org/10.1002/jclp.22189.

Pezzolesi, C., Ghaleb, M., Kostrzewski, A., & Dhillon, S. (2013). Is Mindful Reflective Practice the way forward to reduce medication errors?. *The International journal of pharmacy practice*, *21*(6), 413–416. https://doi.org/10.1111/ijpp.12031.

Piet, J., & Hougaard, E. (2011). The effect of mindfulness-based cognitive therapy for prevention of relapse in recurrent major depressive disorder: A systematic review and meta-analysis. Clinical Psychology Review, 31(6), 1032–1040. https://doi.org/10.1016/j.cpr.2011.05.002.

Poli, A., Melli, G., Ghisi, M., Bottesi, G., & Sica, C. (2017). Anxiety sensitivity and obsessive-compulsive symptom dimensions: Further evidence of specific relationships in a clinical sample. *Pers. Individ. Differ., 109*, 130–136.

Poli, A., Melli, G., & Radomsky, A. S. (2019). Different Disgust Domains Specifically Relate to Mental and Contact Contamination Fear in Obsessive-Compulsive Disorder: Evidence From a Path Analytic Model in an Italian Clinical Sample. *Behavior therapy*, *50*(2), 380–394. https://doi.org/10.1016/j.beth.2018.07.006.

Poli, A., Gemignani, A., & Conversano, C. (2020). The psychological impact of SARS-CoV-2 quarantine: observations through the lens of the polyvagal theory. *Clin. Neuropsychiatry*., *17*, 112–114.

Reb, J., Narayanan, J. & Ho, Z.W. (2015). Mindfulness at work: antecedents and consequences of employee awareness and absent-mindedness. *Mindfulness, 6*(1), 111–122. https://doi.org/10.1007/s12671-013-0236-4.

Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse. New York: Guilford Press.

Sarafis, P., Rousaki, E., Tsounis, A., Malliarou, M., Lahana, L., Bamidis, P., Niakas, D. & Papastavrou, E. (2016). The impact of occupational stress on nurses' caring behaviours and their health related quality of life. *BMC Nursing*, *15*, 56. https://doi.org/10.1186/s12912-016-0178-y.

Sedlmeier, P., Eberth, J., Schwarz, M., Zimmermann, D., Haarig, F., Jaeger, S., & Kunze, S. (2012). The psychological effects of meditation: A meta-analysis. *Psychological Bulletin, 138*(6), 1139–1171. https://doi.org/10.1037/a0028168.

Shapiro, S. L., Brown, K. W., & Biegel, G. M. (2007). Teaching self-care to caregivers: Effects of Mindfulness-Based Stress Reduction on the mental health of therapists in training. Training and *Education in Professional Psychology*, *1*(2), 105-115. https://doi.org/10.1037/1931-3918.1.2.105.

Slonim, J., Kienhuis, M., Di Benedetto M., & Reece, J. (2015). The relationships among self-care, dispositional mindfulness, and psychological distress in medical students. *Medical Education Online*, *20*, 1, 27924. https://doi.org/ 10.3402/meo.v20.27924.

Smallwood, J., & Schooler, J. W. (2015). The science of mind wandering: empirically navigating the stream of consciousness. *Annu. Rev. Psychol.* 66, 487–518. https://doi.org/10.1146/annurev-psych-010814-015331.

Smith, S.A. (2014). Mindfulness-based stress reduction: an intervention to enhance the effectiveness of nurses' coping with work-related stress. *International Journal of Nursing Knowledge, 25*(2), 119–130. https://doi.org/10.1111/2047-3095.12025.

Soler, J., Tejedor, R., Feliu-Soler, A., Pascual, J. C., Cebolla, A., Soriano, J., Álvarez, E., & Pérez, V. (2012). Psychometric proprieties of Spanish version of Mindful Attention Awareness Scale (MAAS). *Actas Españolas de Psiquiatría*, *40*(1), 19-26.

Stoet, G., O'Connor, D. B., Conner, M., & Laws, K. R. (2013). Are women better than men at multi-tasking? *BMC Psychology*, *1*, 18. https://doi.org/10.1186/ 2050-7283-1-18.

Sturgess, M. A. (2012). Psychometric validation and demographic differences in two recently developed trait mindfulness measures (Unpublished master's thesis, Victoria University of Wellington, Wellington, New Zealand).

Suleiman-Martos, N., Gomez-Urquiza, J. L., Aguayo-Estremera, R., Cañadas-De La Fuente, G. A., De La Fuente-Solana, E. I., & Albendín-García, L. (2020). The effect of mindfulness training on burnout syndrome in nursing: A systematic review and meta-analysis. *Journal of advanced nursing*, *76*(5), 1124–1140. https://doi.org/10.1111/jan.14318.

Tamres, L. K., & Helgeson, V. S. (2002). Sex differences in coping behavior: a meta-analytic review and an examination of relative coping. *Pers Soc Psychol Rev.*, *6*, 2-30. https://doi.org/10.1207/S15327957PSPR0601_1.

Tang, Y.-Y., Hölzel, B.K., & Posner, M.I. (2018). The neuroscience of mindfulness meditation. *Nature reviews. Neuroscience*, *16*(4), 213–225. https://doi.org/10.1038/nrn3916.

van der Riet, P.; Levett-Jones, T. & Aquino-Russell, C. (2018). The effectiveness of mindfulness meditation for nurses and nursing students: An integrated literature review. *Nurse Education Today., 65*, 201-211. https://doi.org/10.1016/j.nedt.2018.03.018.

Virgili, M. (2015). Mindfulness-based interventions reduce psychological distress in working adults: A meta-analysis. *Mindfulness, 6*, 326–337. https://doi.org/10.1007/s12671-013-0264-0.

Vitale, E., Cesano, E., Germini, F. Prevalence of Burnout among Italian Nurses: a descriptive study. *Acta Bio-medica: Atenei Parmensis., 91*(4), e2020117. https://doi.org/10.23750/abm.v91i4.9008.

Vitale, E., Galatola, V., Mea, R. (2020). Exploring within and between gender differences in burnout levels in Italian nurses engaged in the Covid-19 health emergency: a cohort observational study. *Minerva Psichiatrica, 61*(4):162-70. https://doi.org/10.23736/S0391-1772.20.02090-7.

Vitale, E., Mea, R., Di Dio, F., Canonico, A., Galatola, V. (2020). Anxiety, Insomnia and Body Mass Index Scores in Italian Nurses Engaged in the Care of COVID-19 Patients. *Endocrine, Metabolic & Immune Disorders – Drug Targets*, *20*(1). https://doi.org/10.2174/1871530320666201016150033.

Vitale, E. (2021). Anxiety, Depression and Insomnia conditions in Italian nurses during the first and the second waves of the covid-19 pandemic. *Journal of Evidence-Based Psychotherapies, 21*(1), 69-82.

Vitale, E., Casolaro, S. (2021). Anxiety, burnout and depression levels according to sex and years of work experience in Italian nurses engaged in the care of Covid-19 patients. *Journal of Evidence-Based Psychotherapies, 21*(1), 83-96. https://doi.org/10.24193/jebp.2021.1.6.

Vitale, E. The Mindfulness and the Emotional Regulation Skills in Italian Nurses During the COVID-19 Pandemic: A Descriptive Survey-Correlational Study. Journal of Holistic Nursing: Official Journal of the American Holistic Nurses' Association. 2021 May:8980101211015804. https://doi.org/10.1177/089801 01211015804.

Zhuang, K., Bi, M., Li, Y., Xia, Y., Guo, X., Chen, Q., Du, X., Wang, K., Wei, D., Yin, H., & Qiu, J. (2017). A distinction between two instruments measuring dispositional mindfulness and the correlations between those measurements and the neuroanatomical structure. *Scientific Reports*, *7*(1), 6252. https://doi.org/10.1038/s41598-017-06599-w.

Zvolensky, M. J., Feldner, M. T., Leen-Feldner, E. W., & Yartz, A. R. (2005). Exploring basic processes underlying acceptance and mindfulness. In S. M. Orsillo & L. Roemer (Eds.), Acceptance and mindfulness-based approaches to anxiety: Conceptualization and treatment (pp. 325–357). New York: Springer. https://doi.org/10.1007/0-387-25989-9_13.

Wadlinger, H. A., & Isaacowitz, D. M. (2011). Fixing our focus: training attention to regulate emotion. *Pers. Soc. Psychol. Rev., 15*, 75–102. https://doi.org/10.1177/1088868310365565.

Weiss, H.M. & Cropanzano, R. (1996). Affective events theory: a theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in Organizational Behavior, 18*, 1–74.

Wolever, R. Q., Bobinet, K. J., McCabe, K., Mackenzie, E. R., Fekete, E., Kusnick, C. A., & Baime, M. (2012). Effective and viable mind-body stress reduction in the workplace: a randomized controlled trial. *Journal of occupational health psychology*, *17*(2), 246–258. https://doi.org/10.1037/a0027278.