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COMPASSION-ORIENTED MINDFULNESS-BASED PROGRAM AND HEALTH PROFESSIONALS

A Single-Centered Pilot Study on Burnout**

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This pre-post, single-centered study evaluates the effects of a compassion-oriented mindfulness-based intervention on health professionals' quality of life. The intervention was conducted in an Italian general hospital in the province of Milan. Between 2014 and 2015, thirty-four health professionals operating in the territorial psychiatric services followed an 18-week Compassion-Oriented Mindfulness-based Program. The program involved the practice of mindfulness meditation combined with a psycho-educational training. This pilot study analysed the impact of the intervention on mood, quality of life, and burnout-related characteristics. Outcome measures included the State-Trait Anxiety Inventory, the Beck Depression Inventory, the Maslach Burnout Inventory, the Five Facets of Mindfulness Questionnaire, and the Professional Quality of Life Scale. After the intervention, participants showed significantly decreased levels of depression, state anxiety, and emotional exhaustion. We found that an overall beneficial effect of the Compassion-Oriented Mindfulness-based Program existed in preventing burnout symptomatology. Non-evaluative and mindful attention was shown to improve stress resilience and coping strategies while simultaneously reducing worry and rumination. These results suggest that a compassion-oriented mindfulness program could prevent the development of anxiety and depression traits.

Keywords: Health care professionals, mindfulness, compassion, burnout syndrome, prevention, coping strategies

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1. Introduction

Health professionals often face high stress situations, experiencing the consequences of attentive performances and intervention efficacy (Chesak et al. 2015; Skosnik et al. 2000): this may bring to work dissatisfaction and to the development of the Burnout Syndrome (Blegen 1993; Rosenberg & Pace 2006). Many studies show how burnout syndrome, together with high stress levels and discomfort, are widespread traits among both helping and health professions: as recently reported, more than 60% of medical employees in general (McCray et al. 2008) and 40% of nurses (Vahey et al. 2004) present burnout experiences. The B.S. is consequent to a prolonged work-related distress and is characterized by a significant loss of energy, a sense of uselessness, inadequacy and dissatisfaction, which may involve a condition of total apathy. Maslach, Jackson and Leiter define B.S. as made up of three principal dimensions: exhaustion, cynicism, and inefficacy (Maslach et al. 1997). Exhaustion is the sense of inability to offer more and more of oneself at work; cynicism involves detachment from tasks, colleagues, and recipients of services; inefficacy refers to the feeling of not being competent and not accomplishing tasks adequately (Montero-Marin et al. 2015; 2016).

The Burnout Syndrome is a significant threat to a physician's well-being and is often associated with numerous psycho-physiological symptoms such as fatigue, insomnia, hypertension, diabetes, obesity, cardiac complications, anxiety and depression symptoms (Fortney et al. 2013; Spickard et al. 2002), which could affect the practitioners but also all the recipients of care and services. In fact, an increased level of burnout among health professionals has been related to inadequate patient care, and decreased patient rating of care quality, as well as reduced adherence to treatment plans (Asuero et al. 2014; Luken & Sammons 2016). Furthermore, burnout is linked to an increased risk of error, decreased productivity, early retirement, and higher rates of turnover, which have profound financial impacts (Schroeder et al. 2018). In literature, many interventions that focused on burnout reduction have been considered as helpful to health professionals coping with their remarkable stress: among these interventions, mindfulness training has been recently assessed as effective for the prevention and reduction of burnout (Fortney et al. 2013; Shapiro et al. 2005).

Mindfulness could be described as a quality of consciousness involving present-centered attention that is accepting and non-judgmental (Irving et al. 2014; Van Dam et al. 2011). Kabat-Zinn, the developer of the Mindfulness-Based Stress Reduction program (MBSR), defined mindfulness as 'the awareness that emerges through paying attention, on purpose, and non-judgmentally, to the unfolding of experience moment by moment' (2003, 145; Ludwig & Kabat-Zinn 2008). The effectiveness of mindfulness-based interventions has been corroborated by plenty of studies in contemporary scientific literature (Burrai et al. 2007; Chiesa & Serretti 2014). Evidence stands for an extensive role of mindfulness in reducing stress and, in particular, its role in preventing burnout and turnover in healthcare professionals (Beckman et al. 2012; Irving et al. 2009). Accordingly, training in mindfulness has been proposed

as a means of decreasing healthcare provider burnout and mood disturbance, thus improving empathy, satisfaction, and the overall quality of patient care (Asuero et al. 2014; Beach et al. 2013).

With this aim, mindfulness courses are widely introduced in medical schools; they show relevant benefits to compassion fatigue and burnout prevention (Dobkin & Hutchinson 2013; Van Dijk et al. 2015). In particular, the development of self-awareness has been shown to be associated with a greater engagement in self-care activities and an improved management of stress in both nurses (Cohen-Katz et al. 2005) and physicians (Krasner et al. 2009).

Beyond mindfulness training, there has been a growing confirmation of the potential role of compassion and self-compassion practices in healthcare. Compassion is a complex construct which involves cognitive, affective, and behavioral characteristics. In particular, two complementary aspects related with compassion can be distinguished: compassion for others and self-compassion (Montero-Marin et al. 2016). Neff distinguished three principal aspects involved in building compassion: self-kindness, common humanity, and mindfulness (2003). According to Neff, mindfulness is that facet of compassion allowing one to hold painful thoughts and feelings in balanced awareness rather than identifying with them. In fact, as discussed by Neff and Germer (2013), self-compassion implies being touched by one's suffering, eliciting the desire to alleviate it while treating oneself with concerns and worries.

A recent cross-sectional study shows how compassion for others and self-compassion were not significantly related, while self-compassion was more strongly related to negative and positive indicators of affect than compassion for others (López et al. 2018). At the same time, the research literature suggests that self-compassion is associated with indices of positive psychological characteristics such as happiness, optimism, personal initiative, emotional intelligence, and social connectedness (MacBeth & Gumley 2012; Neely et al. 2009). At the same time, psychological symptoms such as rumination, avoidance, suppression of unwanted thoughts and emotions, are abated (Neff 2003). Therefore, self-compassion could be promoted through mindfulness training, helping participants to better accept others' suffering without reacting, avoiding, or neglecting it (Dobkin 2015; Dobkin & Hassed 2016).

With this aim, in the present study, the Compassion-Oriented Mindfulness-based Program (COMP) was implemented. The COMP is a mindfulness-based experiential training, closely integrated with Compassion, for health carers (Jha et al. 2010; Weng et al. 2013), and it represents a key aspect in preventing burnout syndrome and compassion-fatigue. The aim is to help participants gain familiarity with compassion and mindfulness within the group and then in the workplace with individual, couple, and small group exercises. The core intention of the COMP is chiefly to improve self-awareness, self-compassion, and empathy, in order to promote personal strategies of coping with stressful conditions within the framework of team cooperation. In each session, we require the reporting of field observations regarding relationships with patients and difficult situations, to analyze whether, and how, the practices worked. Finally, we require reporting eventual reductions in levels of daily distress.

COMP is slightly different from already existing compassion-based interventions as it attempts to integrate different aspects of them and also because it lasts only 18 weeks. Moreover, it has no therapeutic purposes (as for example Hayes' A.C.T.; Hayes et al. 2004) and keeps a link with the Buddhist compassion as developed through the principle of loving kindness (Metta; eg, Hofmann et al. 2011). In particular, the COMP training emerges via the integration of the constructs of Paul Gilbert (2009; 2010), Paul MacLean (1990), Kristin Neff (2003), and Daniel Siegel (2007; 2009). We instruct them to adapt these practices in daily life, during work activities, and in particular during stressful interactions or situations.

In order to analyse the impact of a COMP on mood, quality of life, and B.S. prevention, in the present pilot study, anxious worry, depressive rumination, burnout symptoms, and quality of life, were assessed before and after the training.

2. Method

2.1. Participants and Procedures

The overall sample consists of 34 psychiatric health professionals recruited from the G. Salvini Hospital, Garbagnate Milanese (Milan). Participants were split in two groups for the program, which took place on two different days of the week. The overall sample average age was 50 (SD±6.5): all participants signed the informed consent. Inclusion criteria were: age of consent (≥18 years), at least three years of employment in the mental health department, and the ability to comprehend the study requests (confirmed with employment eligibility). Exclusion criteria were: secondary severe comorbidity and the concurrence of psychological support.

The study, conducted in 2015, consists of a quantitative, pre-post, single-centered pilot study. Psychological assessment occurred before (T0) and after (T1) the training, which consisted of nine fortnightly meetings of three hours each.

The intervention, which lasted for 18 weeks, included three-hour fortnightly classes. Sessions were administered by a psychotherapist, with a ten-year-background in Compassion-Oriented mindfulness-based approaches such as the Spiritual Care Programme (Birnie et al. 2010), the Cultivating Emotional Balance program (Kemeny et al. 2012), and the Compassion Focused Therapy (Gilbert 2010). Therefore, the program implied experiential training of mindfulness meditation with a strong focus on the practice of the open-acceptance principle combined with some compassion-based practices (Gilbert 2009; Kabat-Zinn & Nhat-Hanh 2013). Participants were asked, with the support of recorded instructions, to practice one of these techniques for 15 to 25 minutes every day. For this purpose, we provided audio CDs for guidance at home. Each class was followed by discussions about the implications of bringing mindfulness in daily life as well as at work, in order to enable the integration of experiences, give the possibility to share difficulties, and to evaluate new solutions in facing complex patient cases or obstacles in the work-team cooperation.

Each class focused both on a specific mindfulness-based exercise, followed by a group discussion about the implications of bringing mindfulness to work, and on a specific acceptance-compassion practice (see *Table 1*). The first class of the program provided psycho-educational procedures, like MacLean's (1990) 'triune brain model' (referring to the brainstem, the limbic area, and the cortex regions) and Siegel's (2007) hand model of the brain, which were administered in order to provide participants with a basic understanding of the brain.

Table 1
Exercises and practices provided for each class of the COMP intervention

Meeting n°.	*Exercises & practices*
1	Open monitoring awareness exercise Psychoeducational instructions: MacLean's triune brain model and description of Gilbert's three systems Elements of non-evaluative communication and active listening
2	Mindfulness of the breath Discussing field observations & reports Neff's meditation of Self-Compassion and its three levels
3	Mindful eating: raisin meditation Discussing field observations & reports Neff's affectionate breathing meditation
4	Walking meditation Discussing field observations & reports Neff's compassionate body-scan exercise
5	Focusing attention on an object Discussing field observations & reports Gilbert's calming the breath exercise Metta meditation: exercise of loving kindness towards one's self
6	Alternating open monitoring & focused attention meditation Discussing field observations & reports Gilbert's Compassionate safe place imagery exercise Metta meditation: exercise of loving kindness towards somebody beloved
7	Full body awareness exercise Discussing field observations & reports Gilbert's Compassionate scene imagery exercise Metta meditation: exercise of loving kindness towards somebody neutral
8	Alternating open monitoring & focused attention meditation Discussing field observations & reports Gilbert's Compassionate color imagery exercise Metta meditation: exercise of loving kindness towards a person we have difficulties dealing with
9	Alternating open monitoring & focused attention meditation Discussing how to adapt these practices in daily life, during work activities, and in stressful interactions Metta meditation: exercise of loving kindness towards all sentient beings

From the second class forward, the intervention considered more experiential practices. Taken from Neff's work, in the second class we provided the meditation of Self-Compassion composed of three awareness levels (mindfulness of suffering, common humanity, loving kindness, and compassion for oneself), while the third class included affectionate breathing meditation and the fourth one focused on compassionate body-scan.

We finally employed Gilbert's analysis of the three motivational systems and their integration into the awareness of mental and physical experiences during working relationships. In particular, we used his formulation of development of the compassionate self through several exercises. In the fifth class, participants were instructed to do calm breathing, while from the sixth to the eight class, they were guided during compassionate imageries of, respectively, safe place, scene, and color.

From the fifth to the ninth session, a non-conventional practice of Metta meditation was introduced, which invited participants to direct loving kindness towards themselves, somebody they love, somebody neutral, somebody they have difficulties with and, finally, towards all sentient beings. At the end of the exercise, participants were asked to metaphorically hold the following phrase in their heart, as holding something fragile and precious in their hand: 'May I be happy', then 'May you be happy' and finally 'May all beings be happy'.

Finally, the ninth and last session also consisted in a further occasion to report field observations, and discuss possible ways to integrate these practices in one's own daily life, during work, and stressful interactions.

2.2. Recruitment and Randomized Allocation

Recruitment was open to all health professionals (educators, social workers, health care assistants, nurses) working at the Mental Health Department G. Salvini. All participants had been informed in detail about the activities proposed during the training (attendance, homework, body exercises, meditative and relational practices, the collection of data through a self-report questionnaire battery and its privacy policy observance). Candidates were then randomly split into two groups of 18 subjects each. While the whole first group completed the training, in the second group, there were two drop-outs.

2.3. Measures

State-Trait Anxiety Inventory (STAI)

STAI (Spielberg et al. 1983) is a 40-item self-report questionnaire composed of a Likert scale that measures, through two subscales, levels of anxiety state – STAI Y1 (mood state related to a particular situation or event) and anxiety trait – STAI Y2 (personal features). Scores are organized on a scale from a minimum of 20 to a maximum of 80 (Ghisi et al. 2006). The Italian validation has been translated by Pedrabissi and Santinello (1989) and it is a questionnaire with excellent levels of reliability and

validity. The T-Anxiety scale of the STAI showed a poor capacity in discriminating between anxiety and measures of depression, as compared to other measures of anxiety, including the S-Anxiety scale (Julian 2011). Therefore, in the current study, we assessed only the STAI Y1 to reduce the number of tests implied.

Beck Depression Inventory (BDI-II)

BDI is the most popular instrument measuring indicators of depression presence and severity for both normal and psychiatric populations (Beck et al. 1961). It's a 21-item self-report questionnaire that investigates depressive symptomatology according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Scores are organized on a scale from 0 (absence of depression symptoms) to 39 (severe depression symptoms). The test-retest reliability, the internal consistency, and the convergent validity have been shown to be appropriate (Storch et al. 2004).

Five Facets of Mindfulness Questionnaire (FFMQ)

FFMQ is a 39-item self-reporting questionnaire, which is designed to assess facets of mindfulness. It is split into five dimensions (Baer et al. 2006): 1) *Observing*: the ability to note and control feelings and thoughts; 2) *Describing*: the ability to describe and give meaning to one's own mental states; 3) *Acting with awareness*: the ability to be aware of the present experience, of one's own thoughts, feelings, and motivations; 4) *Nonjudging of Inner Experience*: the ability to use an uncritical attitude towards one's own emotions, being able to accept things as they happen; 5) *Nonreactivity of Inner Experience*: someone's ability to not react immediately to his own internal experiences. In this study, the Italian version validated by Didonna and Bosio (2012) was used: it highlighted the questionnaire's optimal psychometric properties.

Professional Quality of Life Scale (ProQOL)

ProQOL tool was assessed to evaluate eventual correlation of the training with professional quality of life. It is composed of three scales with ten items each. The *Compassion Fatigue* construct describes deep participation and comprehension feelings towards someone afflicted by sufferance, followed by a strong desire of relief (Stamm 2005). The *Compassion Satisfaction* scale describes the positive effects that can be obtained by working with suffering people. Finally, the *Burnout* scale corresponds to the operator's gradual and progressive consuming; i.e. the feeling of being overwhelmed by his own job and the inability to promote positive changes. Recent studies have highlighted the satisfying psychometric properties of this instrument (Palestini et al. 2009).

Maslach Burnout Inventory (MBI)

The MBI tool was assessed to evaluate possible correlations of the training with burnout levels. It is a 22-item questionnaire, each one with a Likert scale, in which the subjects have to evaluate the frequency and the intensity of their symptoms,

effects, and mood states linked to their job (Maslach & Jackson 1986). In particular, this test has been created to evaluate the presence of three personal feelings: emotional exhaustion, depersonalization, and personal realization. *Emotional exhaustion* represents the answer to a work situation that induces an excessive emotional involvement, an emotional overloading, a sentimental resource impoverishment. *Depersonalization* is exemplified by a detached attitude, often undoubtedly negative and hostile, towards others. A reduced *Personal realisation* exhibits itself in draining feelings of inadequacy in creating an effective helpful relationship with others and implicates self-esteem loss and decrease in success fulfillment. The Italian version showed good reliability and validity (Sirigatti & Stefanile 1993).

Ruminative Response Scale (RRS)

RRS tool was assessed to evaluate possible correlations among CFTM and rumination levels. It is a 22 item subscale of the Response Style Questionnaire composed of Likert scales that measure the answer style (Nolen-Hoeksema & Morrow 1991). These items allow subjects to focus their attention on themselves, on their own symptoms and on the possible causes and consequences of a depressed mood. RRS is very common; it has a good internal consistency, a medium–high test–retest reliability and it is considered valid in predicting depression. In its last version, two components have been defined: reflectivity and brooding. *Reflectivity* indicates a turn towards someone's inner self to concentrate on a cognitive problem solving that helps people alleviate their depression symptoms. *Brooding* consists of a passive comparison with the current situation, in particular with what is not going well in someone's life (Treynor et al. 2003).

3. Data Analysis

Analyses were performed using the SPSS-21. Statistical tests for data analysis are the Wilcoxon T Test (in relation with variables distributions, i.e. pre-post confrontations), used to conduct pre-post score comparisons, and Pearson/Spearman correlation coefficients (in relation with variables distributions) aimed at verifying correlations between mindfulness and other features considered. The correlation coefficient is included between –1 and 1, while > 0.30 or < –0.30 show a significant correlation. The p-value is considered significant under 0.05 (alpha = 0.05). Then, two possibly confusing intervening variables were considered: profession and number of children.

4. Results

The results show a significant reduction on the anxiety scale (STAI, $p = 0.006$), depression scale (BDI, $p = 0.044$), emotional exhaustion (MBI, $p = 0.035$) and a significant increment in the Observing ($p = 0.020$) and Nonreactivity of Inner Experience FFMQ subscales ($p = 0.024$). Then, all the Professional Quality of Life subscales were enhanced without being significant (PROQOL Compassion subscale $p = 0.169$; PRO-

QOL Burnout subscale p = 0.489; PROQOL Secondary Traumatic Stress p = 0.398) while a non-significant reduction in the Ruminative Response subscales emerged (RRS depression p = 0.055; RSS Brooding p = 0.276).

Furthermore, even if no pre-intervention correlations produced a statistically significant result, we found significant post-treatment correlations between the subscales. The PROQOL Compassion Satisfaction subscale correlated with the Describing (r = 0.36; p = 0.042) and Non-judging (r = 0.46; p = 0.007) FFMQ subscales, this last one in turn correlated with the PROQOL Burnout subscale (r = –0.44; p = 0.009) and with MBI-Personal Realization (r = 0.46; p = 0.007).

5. Discussion

5.1. Summary of Study Findings: Post-treatment Changes within the Scales

After the mindfulness intervention, the subsequent improvements emerged within the following scales: both STAI–Y1, BDI and MBI-Emotional significantly decreased, while the RRS Depression subscale was at the limit of statistical significance.

The change in the most significant scale, the STAI–Y1, suggested a short-term efficacy on the state anxiety as well as an important association between anxiety and the intervention. The effectiveness on state anxiety may suggest a reduction of worry, defined as an anticipatory and fixed way of thinking about events perceived as threatening and unrestrained (Freeman et al. 2012).

A significant improvement is observed also as regards depressive symptomatology measured with the BDI which, even if it was not clinical at the pre-intervention, showed a significant decrease in post-therapy. Moreover, increased scores from pre- to post-intervention in FFMQ (as regards Observing and Non-reacting subscales) and Emotional Exhaustion, suggested their consistency with the type of intervention. These outcomes could be connected to a change in the emotional regulation as well as a reduction of emotional responsiveness. A considerable variation in the score distribution suggested a significant variability among the individual patterns of emotional reactivity, together with subjective schemas and cognitive strategies.

Even if the Non-judgment and Description FFMQ subscales were in strong correlation with the two MBI subscales, together with the awareness subscale, they did not change significantly.

In addition, lower scores in the Emotional Exhaustion at post-intervention, compared to pre-intervention, supported the program's role in reducing distressing factors. These work stressors can be connected with leadership (Stordeur et al. 2001), extrinsic efforts in association with low extrinsic rewards (Bakker et al. 2000), as well as with the vicarious exposure to trauma and compassion fatigue (Adams et al. 2006). Therefore, the overall reduction of the Burnout Emotional Exhaustion subscale seems to strengthen the value of this type of intervention in the burnout prevention overview.

5.2. Summary of Study Findings: Post-treatment Correlations Between the Subscales

This single-centered study deals only with the training group; i.e. lacking a comparative control group, so none of the aforementioned changes in time within the scales provide evidence of a specific interaction with the COMP Indeed, in order to assess the training's impact within the experimental group, the presence of correlations between the FFMQ and the other scales was examined.

5.3. Study Implications

The subscales, even without showing meaningful changes in the course of the intervention, are meaningfully interrelated afterwards. (T1, see *Figure1*).

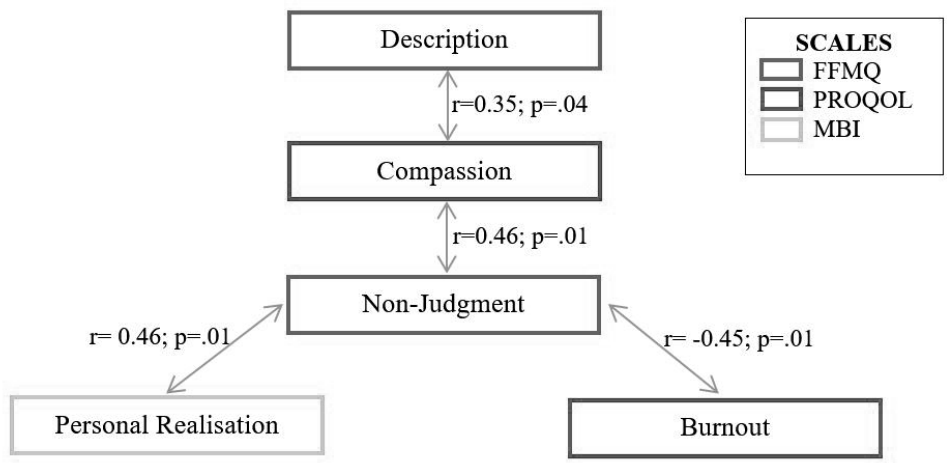

Figure 1
Overall post-treatment correlations between FFMQ, MBI and PROQOL subscales

Interestingly, the FFMQ-Describing subscale correlated with the Professional Quality of Life, specifically with the perception of a satisfying relationship with the patients (compassion satisfaction). At the same time, it correlated with the FFMQ-Nonjudging subscale. Finally, the Nonjudging FFMQ-subscale positively correlated with the MBI-Personal realisation perception, and negatively correlated with the PROQOL-Burnout level. These correlations suggested an important role of gratification in a relational attitude inspired by empathy and compassion, which are in a strong connection with a non-evaluative posture. On one hand, these subscales are in relation to associative attention (Lind et al. 2009; McKenzie & Tiberghien 2004), the awareness of the present, and the ability to describe it. On the other hand, they

are connected with the professional quality of life and, therefore, with the Burnout symptomatology. It is possible that self-acceptance and compassion trigger a more detailed Describing awareness, and that this process brings, together with other factors, a more complete sense of Personal Realization.

The negative correlation between the FFMQ-Nonjudging and Burnout levels was an interesting result, as well. The non-judgmental attitude enhancement may be a result of meditation and could facilitate a better management of both relational and situational stressful events; it could also decrease the risk of developing a Burnout symptomatology.

Non-judgment could improve professionals' quality of life, strengthening mutuality and cooperation in the communication process, decentering and balancing the pattern of interaction in the work milieu, thus reducing all sorts of misunderstandings that foster the compassion-fatigue and the consequent burnout syndrome. The compassion-based approach results in a more accurate clinical practice and less impulsive team interactions, thus making the care more attentive and giving freshness to both colleagues' and patients' relationships, reducing distress and negative affective factors (Birnie et al. 2010).

Singer and Steinbeis (2009) show how compassion and empathy-based motivations enable a good cooperation quality also in others' defection circumstances: this study shows how the rational motivation that is based on fairness beliefs and on punishment to preserve justice, even if it reduces the voluntary error incidence, does not promote cooperation and well-being. Instead, the FFMQ-Nonreacting trait gives a limit to both the burnout risk and the error probability, making the automatic reaction more likely to emerge.

Self-awareness (as assessed by the FFMQ scale) stabilizes both automatic reactions, reflexivity, and empathy, dealing more adherence to patients' needs, enhancing team cooperation and professionals' qualities (limits, needs, talents). The re-synchronization of the attention (Lutz et al. 2004) on the ongoing process of care may weaken the anxious-worry and anger-rumination, making the team-interaction less aversive and more cooperative.

In summary, this kind of intervention may directly and indirectly influence burnout levels, through the interrelated changes in the aforementioned subscales. In particular, Mindfulness could prevent the first phases of burnout, by reducing anxiety (STAI), depression (BDI), and burnout (MBI), and thereby the perceived overload. At the same time, it could enhance mindfulness-related qualities (FFMQ) as well as professional satisfaction and realization (PROQOL). Other approaches, such as the resilience program described by Montero-Marin and colleagues (2015), seem to better treat burnout when the syndrome is in its advanced stages by rescuing positive affect and leading to balanced involvement, personal development, and engagement.

The results of this study support the notion that a COMP training could help enhance patient-provider relationships, reducing psychological distress and burnout in primary care nurses and physicians (Asuero et al. 2014). This is in line with the previous research, adding a specific focus on Compassion-Oriented approaches, such

as the one presented in this study. Openness and self-observation that result from mindfulness training improve well-being (Asuero et al. 2014; Papies et al. 2015). Furthermore, it is possible that the enhanced mindfulness derived from the intervention contributed to changes in attitudes regarding work and personal habits in most participants.

In conclusion, the COMP revealed its potentiality in reducing burnout and improving quality of life in health care professionals, as well as enhancing the relationship between the patients and the medical team. The present study suggests that, among mindfulness-based approaches, compassion should be adopted as a practical method and guiding principle of continuing professional education to reduce and prevent burnout, promote proactive attitudes among health professionals, while strengthening patient-provider relationships, and enhancing general well-being (Asuero et al. 2014).

5.4. Study Limitations and Perspectives

The main limit of the present study is the absence of a control group. Thus, we cannot say the program is better than other approaches for reducing stress and improving well-being, even if the participants did note a significant improvement in multiple dimensions following the classes. Moreover, we did not re-assess the effects during follow up, so we have no data regarding an extended duration over time. Finally, self-administered questionnaires only indicate the participants' own perceptions, without objectively measuring the effect of the intervention on the relationship between the patients and the health care team.

Future perspectives should evaluate the principal functions involved in burnout reduction and in the improvement of Quality of Life (FFMQ), along with different kinds of mindfulness meditation trainings. It would also be interesting to observe long-term effects on health professionals and to assess the influence of the mindfulness-based clinical practice on patients' well-being. Other progressions should be made on the neuro-functional (fMRI) and neuro-dynamical (EEG) correlates of the training, in addition to the changes in the role of neurohormones like oxytocin and cortisol.

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