

## Effects of Mindfulness practice on work stress: a study with professionals in Primary Health Care

Efeitos da prática de Mindfulness no estresse no trabalho: um estudo com profissionais da Atenção Primária à Saúde

Efectos de la práctica del Mindfulness sobre el estrés laboral: un estudio con profesionales de Atención Primaria de Salud

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### **Mariana Fernandes**

ORCID: <http://orcid.org/0000-0002-4551-7017>  
University of São Paulo, Brazil  
E-mail: [mari.fnds@gmail.com](mailto:mari.fnds@gmail.com)

### **João Paulo Souza**

ORCID: <http://orcid.org/0000-0002-2288-4244>  
University of São Paulo, Brazil  
E-mail: [jp.souza@usp.br](mailto:jp.souza@usp.br)

### **Edilaine Cristina da Silva Gherardi-Donato**

ORCID: <http://orcid.org/0000-0001-7475-6650>  
University of São Paulo, Brazil  
E-mail: [nane@erp.usp.br](mailto:nane@erp.usp.br)

### **Hayala Cristina Cavenague de Souza**

ORCID: <http://orcid.org/0000-0002-7970-5403>  
University of São Paulo, Brazil  
E-mail: [hayalacavenague@gmail.com](mailto:hayalacavenague@gmail.com)

### **Ana Carolina Arruda Franzon**

ORCID <http://orcid.org/0000-0003-4333-3326>  
University of São Paulo, Brazil  
E-mail: [anafranzon@yahoo.com.br](mailto:anafranzon@yahoo.com.br)

### **Lívia Oliveira-Ciabati**

ORCID <http://orcid.org/0000-0002-7163-9456>  
University of São Paulo, Brazil  
E-mail: [liviaciabati@gmail.com](mailto:liviaciabati@gmail.com)

### **Giordana Campos Braga**

ORCID <http://orcid.org/0000-0002-0719-056X>  
University of São Paulo, Brazil  
E-mail: [giordanacb@gmail.com](mailto:giordanacb@gmail.com)

### **Abstract**

The objective of this study is to evaluate the effect of a Mindfulness-based program on mindfulness levels and in the risk of illness associated with stress at work in primary health care (PHC) professionals in Ribeirão Preto, Brazil. This is a quasi-experimental study, with 26 PHC professionals, using quantitative methods and an analytical before and after approach of an 8-week Mindfulness Program. The intervention was evaluated applying the instruments: Five Facet Mindfulness Questionnaire and Job Stress Scale. There were significant differences in six Mindfulness facets after the intervention: Observe ( $p = 0.002$ ); Describe ( $p = 0.01$ ); Act with awareness - autopilot ( $p = 0.01$ ) and distraction ( $p = 0.05$ ); Non-reactivity to inner experience ( $p = 0.0005$ ); Non-judgement of inner experience ( $p = 0.01$ ); and in total Mindfulness scores ( $p = 0.0000018$ ). Regarding the stress levels at work, the reduction of the organizational mode in high job strain was observed (before: 35%, after: 19%). It is concluded that interventions based on Mindfulness applied to PHC professionals can improve the levels of mindfulness and modify the modes of organization at work, reducing the risk of illness associated with stress in these professionals.

**Keywords:** Mindfulness; Stress; Primary health care; Health professionals.

### **Resumo**

O objetivo do presente estudo é avaliar o efeito de um programa baseado em Mindfulness nos níveis de atenção plena e no risco de adoecimento associado ao estresse no trabalho em profissionais da Atenção Primária à Saúde (APS), na cidade de Ribeirão Preto, Brasil. Trata-se de estudo quasi-experimental, com 26 profissionais da APS, utilizando métodos quantitativos e abordagem analítica antes-e-depois de um Programa de Mindfulness com duração de 8 semanas. A

intervenção foi avaliada por meio da aplicação dos instrumentos: Questionário das Cinco Facetas de Mindfulness e Escala de Estresse no Trabalho. Foram observadas diferenças significativas em seis facetas de Mindfulness após a intervenção: Observar ( $p=0,002$ ); Descrever ( $p=0,01$ ); agir com consciência plena - piloto automático ( $p=0,01$ ) e distração ( $p=0,05$ ); Não reagir à experiência interna ( $p=0,0005$ ); Não julgar a experiência interna ( $p=0,01$ ); e nos escores totais de Mindfulness ( $p=0,0000018$ ). Quanto aos níveis de estresse no trabalho, notou-se a redução do modo de organização no trabalho de alta exigência (antes: 35%; depois: 19%). Conclui-se que intervenções baseadas em Mindfulness aplicadas a profissionais da APS podem melhorar os níveis de atenção plena e modificar os modos de organização no trabalho, reduzindo riscos de adoecimento associado ao estresse nestes profissionais.

**Palavras-chave:** Mindfulness; Estresse; Atenção primária à saúde; Profissionais de saúde.

### Resumen

El objetivo del presente estudio fue evaluar el efecto de un programa basado en Mindfulness sobre los niveles de atención plena y el riesgo de desarrollar una enfermedad asociada al estrés laboral, en profesionales de la Atención Primaria de Salud (APS), en la ciudad de Ribeirão Preto, Brasil. Se trata de un estudio cuasi-experimental, con la participación de 26 profesionales de la APS, usando métodos cuantitativos y abordaje analítico, antes y después de desarrollar un Programa de Mindfulness de 8 semanas. El efecto de la intervención fue evaluado por medio de los instrumentos: Cuestionario de las Cinco Facetas de Mindfulness y Escala de Estrés en el Trabajo. Se observaron diferencias significativas en seis facetas de Mindfulness después de la intervención: Observar ( $p = 0,002$ ); Describir ( $p = 0,01$ ); Actuar con conciencia plena: piloto automático ( $p = 0,01$ ) y distracción ( $p = 0,05$ ); No reacción a la experiencia interna ( $p = 0,0005$ ); No juzgar la experiencia interna ( $p = 0,01$ ); y en las puntuaciones totales de Mindfulness ( $p = 0,0000018$ ). En relación a los niveles de estrés en el trabajo, hubo una disminución en la forma de organizar el trabajo de alta exigencia (antes: 35%; después: 19%). Podemos concluir que las intervenciones basadas en Mindfulness aplicadas a los profesionales de la APS pueden mejorar los niveles de atención plena y modificar las formas de organización en el trabajo, reduciendo el riesgo de desarrollar una enfermedad asociada al estrés, en estos profesionales.

**Palabras clave:** Mindfulness; Estrés; Atención primaria de salud; Profesionales de la salud.

## 1. Introduction

Among many areas of people's lives, the work environment has a close relationship with stress events, which may represent a source of harmful stress indexes. Excessive workloads and pressure in relation to deadlines are strongly related to high stress values and can provide prolonged responses of emotional and interpersonal stress, which may culminate in professional exhaustion syndrome, known as burnout (Maslach, Schaufeli & Leiter, 2001). This syndrome involves an overwhelming exhaustion, feelings of cynicism, detachment from work, feeling of ineffectiveness and lack of accomplishment" (Maslach et al., 2001). Maslach says this syndrome remains a major career crisis in the 21st century (Maslach, Leiter & Bakker, 2014).

In 1979, Robert Karasek researched stress-generating sources and their consequences for workers' health when he proposed the "Two-dimensional Demand-Control Model" (DCM). According to this model, there are four modes of organization at work corresponding to demand and control (high job strain, low job strain, active and passive), which relate to the risk of illness. The demand corresponds to psychological requirements at work, such as concentration level, pressures in relation to working time and interruption of tasks. Control designates both the authority for decision making in the work process, as well as the use of skills, such as creativity, learning, and repeatability, among others (Karasek & Theorell, 1992). High job strain is understood as the most responsible for physical and psychological diseases. On the other hand, low job strain is considered the lowest health risk. While active and passive jobs represent intermediate losses (Kirchhof et al., 2009).

Harmful stress levels are also present in Primary Health Care (PHC) workers. The context in which these professionals are inserted negatively affects their quality of life, since they live with the inadequacy of resources for the performance of their functions, high demand, insufficient remuneration and lack of support from managers (Schrader et al., 2012).

Considering the impact of stress on the health of these professionals, it is evidenced the need to outline effective health promotion strategies, reducing the harmful effects of stress. Mindfulness-based interventions can be a beneficial measure for reducing burnout levels, mood disorders, stress, anxiety, depression, as well as improving levels of empathy, compassion and

resilience (Verweij et al., 2016; Asuero et al., 2014; Fortney, Luchterhand, Zakletskaia, Zgierska & Rakel, 2013; Asuero, Blanco, Pujol-Ribera, Berenguer & Queraltó, 2013; Auserón et al., 2018). Mindfulness is the consciousness cultivated through the focus of prolonged and specific attention, focused on the present moment (Kabat-Zinn, 2017). Mindfulness practices, inserted in a secular context, are analogous to the meditative techniques of the Buddhist tradition and aims to observe the experiences as they present themselves, without modifying them (Bishop, 2002).

In 1979, Jon Kabat-Zinn and other researchers at the University of Massachusetts developed training to care for people with stress, chronic pain and other diseases, and who were not satisfied with the assistance received. The Mindfulness-Based Stress Reduction Program was then born (Mindfulness-based Stress Reduction - MBSR). Currently disseminated in many countries, the MBSR program proposes an invitation to the perception of what people can do for themselves (Kabat-Zinn, 2017). In the program the participants are encouraged to relate differently with their thoughts, feelings and body sensations, developing the cultivation of non-judgmental and non-reactive positioning in the face of experiences, with awareness focused on the "here and now" (Shapiro, Astin, Bishop & Cordova, 2005).

There are a few studies in Brazil on Mindfulness and its health effects of PHC professionals. One of them is a cross-sectional study with 450 PHC professionals that showed low levels of Mindfulness and high levels of perceived stress in this population, as well as correlations between Mindfulness, stress perception and subjective well-being in different types of professionals (Antanes et al., 2015). Recently, a study with similar characteristics to the present study, with 26 PHC professionals, indicated that there is a high demand for stress reduction interventions for PHC professionals in Brazilian national health system and excellent acceptability by PHC professionals and managers (Santiago, Valle Serra E Meira & Colussi, 2019). Thus, the aim of this study was to evaluate the effect of a Mindfulness-based intervention program on mindfulness levels and risk of illness associated with stress at work in PHC professionals.

## 2. Methods

This is a quasi-experimental study using an analytical approach to a before-and-after (Dutra & Reis, 2016) essay performed in seven PHC units located in Ribeirão Preto, state of Sao Paulo, Brazil, from September to December 2015. Six facilities operate according to the model of the Brazilian Family Health Strategy, in which each team has general practitioners and nurses, nursing assistants and community health care workers. And one facility operates according to the traditional PHC model in Brazil, whose team has medical specialists from pediatrics, internal medicine and gynecology/obstetrics and does not include community health workers. Professionals over 18 years of age and with an interest in participating in a Mindfulness-based intervention program were included. Professionals who self-reported being in the acute phase of any clinical condition or had a history of untreated psychopathological alterations were excluded. This study was approved by the Ethics Committee (CAAE: 48630415.8.0000.5414) and all participants signed an informed consent form.

The recruitment of the participants took place through posters and meetings in the health care facilities. After signing the consent form, interested parties participated in telephone interviews to collect sociodemographic and personal information and availability of schedules for participation in the intervention. By e-mail, participants answered the evaluation instruments before and after the intervention: a) Five Facet Mindfulness Questionnaire (FFMQ-BR) and b) Job Stress Scale (JSS).

The FFMQ - BR, validated for Portuguese (Barros, Kozasa, Souza & Ronzani, 2014), evaluates the levels of mindfulness in a multifactorial way. This is a self-administered questionnaire containing 39 questions scored on a Likert scale, ranging from 1 (Never or rarely true) to 4 (Almost always or always true). Mindfulness levels are divided into five facets from seven aspects: 1) "Observe": notice internal and external experiences such as sensations, emotions and thoughts; 2) "Describe": label the experiences in words (subdivision: positive formulation – ease to describe internal experiences through words; and

negative formulation – difficulty in describing internal experiences through words); 3) “Act with mindfulness”: be focused moment by moment on the activity, instead of acting mechanically (subdivision: autopilot – act automatically, without becoming aware, however focusing on activity; and distraction – act distractedly, without becoming aware, using vigilant attention, with no specific focus on activity); 4) “Non-reactivity to inner experience”: allow free flow of thoughts and emotions without being captured by them or without rejecting them; 5) “Non-judgement of inner experience”: adopt a non-evaluative stance towards thoughts and emotions. The maximum and minimum scores for Mindfulness evaluation are: a) Observe: (Max. 35 and Min. 7); b) Describe: positive formulation (Max. 25 and Min. 5) and negative formulation (Max. 15 and Min. 3); c) Act with mindfulness: Autopilot (Max. 25 and Min. 5) and Distraction (Max. 15 and Min. 3); d) Do not react (Max. 40 and Min. 8); e) Do not judge (Max. 40 and Min. 8). The maximum score in the total score is 195 points and a minimum of 39, calculated by summing the facet scores. The higher the score, the higher the level of mindfulness. The authors of the validation recommend that the analysis of the score be performed from the facet scores separately.

The JSS questionnaire, validated for Portuguese (Alves, Chor, Faerstein, Lopes & Werneck, 2004), was used to characterize the way of organization at work and the risk of illness associated with stress at work. On this scale, aspects related to three dimensions are found: demand, control and social support. It consists of 17 questions with Likert type answer options, ranging from 1 (Often) to 4 (Never or Almost Never) for questions regarding demand and control, and from 1 (Totally Agree) to 4 (Totally Disagree) for questions related to social support. The scores determine a characterization for: high demand (combines high demand and low control), low demand (combines low demand and high control), active (combines high demand and high control) and passive (combines low demand and low control). The dimension of demand encompasses pressures of a psychological nature, such as time, speed to perform the function or contradictory demands at work. Control corresponds to the authority for making decisions at work and using intellectual skills. While social support designates social interaction in the workplace. Data analysis occurs from the average of the sample values, being considered high demand, values above average, and low demand, below the sample average. The same happens for social control and support, as suggested by the validation article.

The intervention performed was an adaptation of the Mindfulness-based Stress Reduction (MBSR) protocol, performed over eight weeks, with a weekly two-hour meeting, by a mindfulness instructor qualified to teach practices.

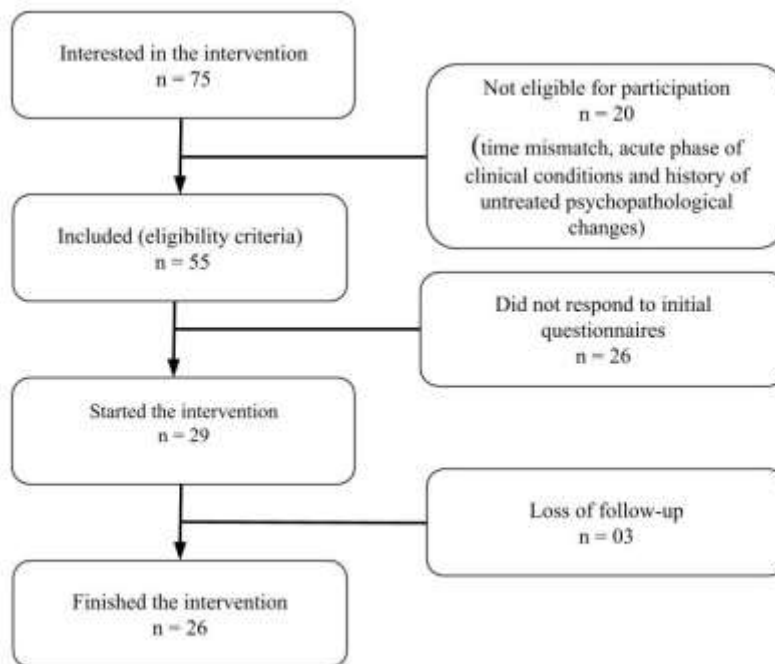
Formal Mindfulness practices were performed during the meetings (“body scanning”, meditative walk, mindfulness in breathing, mindfulness in body movements and practice of compassion), which were oriented to be performed daily, along with the suggestion of informal practices (exercising mindfulness when performing daily activities), lasting from 5 to 45 minutes each week. The meetings for the teaching of practices were held in the meeting rooms of the three health facilities (morning and afternoon classes) and in a room of the cultural center of extension of the university that subsidizes the present research (night time class). No infrastructure modifications were required for the implementation of the program. Participants received audio containing guided practices for extra class use.

The variables resulting from the FFMQ-BR instrument were presented by average and standard deviation, and evaluated at baseline and after eight weeks by paired T test and paired Wilcoxon test, using the software R x64 3.3.2, with significance level of 5%. The variables from the JSS instrument were presented by the average of the sample values evaluated at baseline and after eight weeks. Spearman's correlation coefficient was calculated to compare the results of the FFMQ-BR and JSS instruments. Shapiro-Wilk test was used to assess normality.

### 3. Results

Of the 75 people who expressed interest in participating in the intervention, 55 met the inclusion criteria. Twenty volunteers did not meet the eligibility criteria (time mismatch, acute phase of clinical conditions and history of untreated psychopathological changes). Twenty-nine volunteers started the study, while 26 were excluded because they did not answer the questionnaires in the initial phase. Three volunteers lost follow-up, resulting in 26 participants who finished the study and had their data analysed (Figure 1). Four groups were set up to carry out the intervention. Participants had an average age of  $37.9 \pm 12.5$  years, 84.6% were female, 76.9% white, 46.2% were single and 46.2% married, 80.8% had 14 or more years of schooling. Most participants (92.3%) reported having religion, 30.8% reported participating in religious, psychotherapeutic, artistic or musical groups and 69.2% reported having some kind of hobbies; 30.8% had comorbidities and 15.4% used psychotropic drugs (Table 1). Nine participants were from the multidisciplinary team (four psychologists, two dentists, two physiotherapists and one nutritionist), five were nurses, five physicians and seven community health workers, 69.2% of which had a workload of 40 hours per week and 30.8% worked 60 hours a week (Table 2).

**Figure 1** - Study Flow Diagram.



Source: Authors.

**Table 1** – Distribution of Primary Health Care professionals according to socio demographic variables. Ribeirão Preto, 2019.

<b>Age [Average(dp)]</b>	37.9(12.5)
<b>Gender [n(%)]</b>	
Female	22(84.6)
Male	4(15.4)
<b>Ethnicity [n(%)]</b>	
White	20(76.9)
Brown/Black	6(23.1)
<b>Marital State [n(%)]</b>	
Single	12(46.2)
Married	12(46.2)
Divorced	2(7.6)
<b>Schooling [n(%)]</b>	
Elementary School I and II	1(3.8)
High school	4(15.4)
Complete higher education	21(80.8)
<b>Religion [n(%)]</b>	
Yes	24(92.3)
No	2(7.7)
<b>Presence of comorbidities [n(%)]</b>	
Yes	8(30.8)
No	18(69.2)
<b>Use of psychotropic drugs [n(%)]</b>	
Yes	4(15.4)
No	22(84.6)
<b>Participation in religious, psychotherapeutic, musical or artistic groups [n(%)]</b>	
Yes	8(30.8)
No	18(69.2)
<b>Performing hobbies [n(%)]</b>	
Yes	18(69.2)
No	8(30.8)

Source: Authors.

**Table 2** - Distribution of Primary Health Care professionals according to work-related variables.  
Ribeirão Preto, 2019.

<b>Workplace [n(%)]</b>	
Multiprofessional team	9(34.7)
Nursing team	5(19.2)
Medical team	5(19.2)
Team of community health agents	7(26.9)
<b>Workload [n(%)]</b>	
Up to 40 hours / week	18(69.2)
Up to 60 hours / week	8(30.8)

Source: Authors.

When evaluating the levels of mindfulness, significant differences were observed in six facets of Mindfulness after the intervention: Observe (Before: 26.4±6.1; After: 29.8±5.3, p=0.002); Describe - positive formulation (Before: 16.3±4.7; After: 17.8±4.4, p=0.01); Act with awareness - autopilot (Before: 16.8±2.7; After: 18.0±1.7, p=0.01) and distraction (Before: 10.7±3.0; After: 11.7±2.3, p=0.05); Non-reactivity to inner experience (Before: 19.0±4.9; After: 22.6±4.3, p=0.0005) and Non-judgement of inner experience (Before: 23.8±6.2; After: 27.5±6.9, p=0.01). There was a difference in the total Mindfulness scores before and after the intervention (Before: 123.8±17.5; After: 139.2±15.9, p=0.000018). It is important to highlight that only the facet Describe - negative formulation - did not obtain a significant difference. (Table 3).

**Table 3** – Distribution of Mindfulness levels in Primary Health Care professionals before and after  
Mindfulness-based intervention. Ribeirão Preto, 2019.

Facets of Mindfulness	Basal Average (dp)	8 weeks Average (dp)
Non-judgement of inner experience	23.8 (6.2)**	27.5 (6.9)**
Act with awareness (autopilot)	16.8 (2.7)*	18.0 (1.7)*
Observe internal and external experiences	26.4 (6.1)**	29.8 (5.3)**
Describe (positive formulation)	16.3 (4.7)**	17.8 (4.4)**
Describe (negative formulation)	11.0 (3.4)	11.7 (2.7)
Non-reactivity to inner experience	19.0 (4.9)**	22.6 (4.3)**
Act with awareness (distraction)	10.7 (3.0)**	11.7 (2.3)**
Total Levels of Mindfulness	123.8 (17.5)**	139.2 (15.9)**

\* Paired Wilcoxon test. p<0,05.

\*\* Paired T test. p<0,05.

Source: Authors.

Regarding stress levels at work, a reduction in the presentation frequency of the organization mode in high demand was observed, from 35% before the intervention to 19% after the intervention. There was also an increase in the presenting frequencies of the active mode (before: 19%; after: 27%); passive mode (before: 27%; after: 31%); and low demand mode (before: 19%; after: 23%).

Before the intervention, it is important to emphasize a positive correlation was observed between the facet "Do not react" and the dimension "Demand" (Table 4). After the intervention, a positive correlation was observed between the facet "Autopilot" and "Social Support" (Table 5).



**Table 4** – Spearman correlation coefficient between Mindfulness levels according to FFMQ facets and JSS dimensions before intervention. Ribeirão Preto, 2019.

		TOTAL JSS - CONTROL	TOTAL JSS - DEMAND	TOTAL JSS - SOCIAL SUPPORT
TOTAL FFMQ	Coefficient	-0.04	0.07	-0.31
Observe	p	0.86	0.73	0.12
TOTAL FFMQ	Coefficient	0.01	0.32	-0.01
Describe - positive formulation	p	0.96	0.11	0.95
TOTAL FFMQ	Coefficient	-0.28	-0.06	0.04
Describe - negative formulation	p	0.16	0.77	0.83
TOTAL FFMQ	Coefficient	-0.09	-0.04	0.35
Autopilot	p	0.66	0.83	0.08
TOTAL FFMQ	Coefficient	0.28	-0.09	-0.03
Distraction	p	0.16	0.67	0.87
TOTAL FFMQ	Coefficient	-0.03	0.42	-0.20
Do not react	p	0.89	<b>0.03</b>	0.32
TOTAL FFMQ	Coefficient	0.03	0.26	0.14
Do not judge	p	0.87	0.20	0.49

Source: Authors.

**Table 5** – Spearman correlation coefficient between Mindfulness levels according to FFMQ facets and JSS dimensions after intervention. Ribeirão Preto, 2019.

		TOTAL JSS - CONTROL	TOTAL JSS - DEMAND	TOTAL JSS - SOCIAL SUPPORT
TOTAL FFMQ	Coefficient	-0.08	0.08	-0.38
Observe	p	0.71	0.70	0.06
TOTAL FFMQ	Coefficient	0.04	0.16	-0.02
Describe - positive formulation	p	0.85	0.44	0.92
TOTAL FFMQ	Coefficient	-0.01	-0.09	0.30
Describe - negative formulation	p	0.94	0.66	0.14
TOTAL FFMQ	Coefficient	-0.18	-0.28	0.53
Autopilot	p	0.37	0.16	<b>0.01</b>
TOTAL FFMQ	Coefficient	-0.32	-0.09	0.01
Distraction	p	0.11	0.66	0.97
TOTAL FFMQ	Coefficient	0.07	0.22	0.11
Do not react	p	0.74	0.29	0.58
TOTAL FFMQ	Coefficient	-0.38	-0.15	0.05
Do not judge	p	<b>0.05</b>	0.48	0.80

Source: Authors.

#### 4. Discussion

Our results suggest that Mindfulness practice is associated with improvement in levels of mindfulness and risk reduction of stress-related illness at work.

The scientific literature on Mindfulness based interventions has shown that the practice promotes resilience, self-compassion, self-reflection, improvement in early stages of burnout, depressive symptoms, psychiatric symptoms, negative affections, health related quality of life and quality of life at work (van Wietmarschen, Tjaden, van Vliet, Battjes-Fries & Jong, 2018; Montero-Marin et al., 2015; Pizutti et al., 2019; Cascales-Pérez, Ferrer-Cascales, Fernández-Alcántara & Cabañero-Martínez, 2020).

With positive results in the facets "Observe" and "Act with awareness ", it is possible to infer about the greater awareness of the participants in the face of labor demand (pressures in relation to time, attendance of large numbers of people and interpersonal conflicts) and the control it has on labor activity (material shortage, lack of human resources and plastering of the work process). The high risk of work-related illness, characterized by the highly demanding mode of organization found at the baseline moment in this study, reveals the high demand suffered by participants. Mindfulness based interventions with medical residents who presented high levels of exhaustion at baseline demonstrate modest improvements in personal accomplishment, worry, mindfulness skills, self-compassion and perspective-taking, after the intervention (Verweij, van Ravesteijn, van Hooff, Lagro-Janssen & Speckens, 2018). As found in the present study, the "Observe" facet improved, concomitantly with self-compassion, as shown previously in a quasi-experimental study with Primary Care professionals (Pizutti et al., 2019).

The management of attention and emotions are considered important mechanisms underlying Mindfulness (Hölzel et al., 2011; Martí, Garcia-Campayo & Demarzo, 2016). Although the literature still shows a fragile relationship between the practice of Mindfulness and safety, treatment and patient care (Braun, Kinser & Rybarczyk, 2019), it can be inferred that with the removal of the autopilot and distractions, and consequent increase of awareness about external experiences, the management of self-regulation of care is achieved, generating focus on the execution of activities, optimization of time and active listening during care. In addition, awareness of internal experiences is fostered, contributing to self-knowledge and efficient interpersonal communication.

At the same time, the increase in self-awareness about experiences and openness to naming them, without reacting to them or judging them, as seen in the results of the facets "Describe – positive formulation", "Do not react" and "Do not judge", contributes to the self-regulation of emotions, promoting self-knowledge, empathic and compassionate interpersonal relationships, greater acceptance in the face of adversities, such as lack of human and financial resources.

A study that evaluated the occurrence of stress in health care workers from five PHC facilities of Ribeirão Preto - SP, revealed that 62% had a stress situation, with predominance psychological symptoms (48%) and / or physical symptoms (39%) resistance and quasi-exhaustion phases (Camelo & Angerami, 2004). In the present study, harmful levels of stress to workers' health were also observed before the intervention, which is observed from the negative perception of the context in which these professionals are inserted. On the other hand, after the intervention, the reduction in the risk of illness associated with stress was observed, since the mode of organization went from high demand to working modes that offer intermediate risks (active and passive) to low demand.

In other countries, studies investigated stress, anxiety and Mindfulness levels in PHC professionals (Verweij et al., 2016; Asuero et al., 2014; Fortney et al., 2013; Asuero et al., 2013; Auserón et al., 2018), pointed out that, after the intervention, there was a reduction in levels of perception of stress, anxiety, tension and emotional burden at work.

They also reported significant differences for mindfulness facets, detected using the FFMQ questionnaire, similar to the findings of the present study.

Considering that the present study identified more frequently the modes of work organization at high demand at baseline, and passive after 8 weeks of intervention, the reduction of psychological demands and the stability of the control can be seen. It is possible to infer that the perception of demands may have suffered a positive influence at the end of the intervention, even if the control has not changed. In this sense, the approximation of Mindfulness-based practices and concepts may have promoted cognitive and emotional resources for participants to experience psychological demands (in a) more adaptable and healthful manner.

In view of the correlations between mindfulness facets and stress-related dimensions at work, we highlight the positive correlation between the facet "Autopilot" and "Social Support". With mindfulness practice, participants could have perception of greater awareness and attention about their interpersonal experiences in the work environment, leaving the autopilot, which contributes to active, empathic and compassionate listening. These reflect on the quality of interpersonal communication and social support. According to Alves et al. 2004, social support functions as a negative effect modifier in the case of workers with high demand. A cross-sectional study with workers in the technical-administrative category that investigated the association of depressive symptoms with sociodemographic variables, exposure and dimensions of occupational stress revealed that social support is considered as the most significant protective factor for depressive symptoms (Gavin, Reisdorfer, Gherardi-Donato, Reis & Zanetti, 2015).

The small sample and the absence of control are limitations of this study. It was not mandatory for participants to fill in the practice journals, so it was not possible to evaluate in a controlled way the development of each participant outside the face-to-face meetings. The application of e-mail evaluation instruments did not bring benefit in the recruitment period of part of the research volunteers, with a loss of 47.2% of the initial sample. However, participants benefited from the variety of hours offered and adhered to the intervention, with only 10% loss of follow-up found. The withdrawal of immersion day (retreat) in the adaptation of the protocol for this intervention does not seem to have impaired the results.

Mindfulness and Mindfulness-based Cognitive-Behavioral Therapy are indicated as effective interventions to reduce stress, anxiety and depression in doctors and nurses (Melnik et al., 2020). A map of scientific evidence on Mindfulness research indicates that in randomized clinical trials conducted in workplaces, they show promising results for health professionals, nurses and medical students on caregivers' workload (Hilton et al., 2019). The implementation of Mindfulness-based interventions has been studied to understand the resources and means for their effectiveness in the context of Primary Care. Interventions with a shorter duration (4 weeks), for example, have been tested in order to favor incorporation and acceptance by professionals (Pérula-de Torres, 2019), considering the low availability of time for professionals to engage in long interventions (Santiago, Valle Serra E Meira & Colussi, 2019). In addition, specific interventions have also been tested, such as those designed to increase resilience, which can respond to the specificities of Primary Health Care (Colgan et al., 2019).

The results achieved in this study show a strategy that does not require complex technologies, medications or changes in infrastructure. This Intervention Program covers latent human resources in each participant, legitimizing the potential of application and relevance of mindfulness-based interventions for the context studied.

## 5. Conclusion

The improvement in attention and risk reduction of illness associated with stress at work among PHC

professionals show that Mindfulness practices can promote health and well-being to workers and can be replicated in other Brazilian health care centers. Finally, we suggest that future studies assess which formats of interventions based on Mindfulness can be implemented in a sustainable way, recognizing the limitations of financial and human resources in Primary Health Care in Brazil.

### Conflict of interest

Authors have no conflicts of interest to declare.

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