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# Protocol in somatic psychology for mental health care in the context of crises and emergencies during COVID-19 pandemic

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## **Protocol in somatic psychology for mental health care in the context of crises and emergencies during COVID-19 pandemic**

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### **Abstract:**

The COVID-19 pandemic intensified the psychological suffering of healthcare professionals, especially those working on the front lines, highlighting the urgency of mental health interventions. This study aimed to describe the implementation and evaluate, in a pre–post design, a free online psychological protocol based on the somatic approach of the Bodydynamic® System. This descriptive report concerns a service embedded within longitudinal research, with assessments conducted before (T0) and after (T1) six sessions using the DASS-21. A total of 242 healthcare workers accessed the service. For the research phase, 31 participants who completed the protocol were included in the analysis . The results indicated a statistically significant reduction in depression, anxiety, and stress scores from T0 to T1, with moderate effect sizes (paired  $d \approx 0.62$ – $0.75$ ). Evidence of clinical relevance was also observed, reflected in improvements in symptom severity classifications. These findings suggest that the Bodydynamic® protocol was a viable strategy associated with symptom reduction among participating healthcare professionals, suggesting potential efficacy for delivering psychological care during a prolonged public health crisis such as the COVID-19 pandemic.

### **Keywords:**

Somatic Psychology; Bodydynamic® System; Treatment Protocol; Crises and Emergencies; COVID -19; Healthcare Workers; Healthcare Network.

## **Protocolo em psicologia somática para atendimento à saúde mental no contexto de crises e emergências durante a pandemia de COVID-19**

### **Resumo**

A pandemia de COVID-19 intensificou o sofrimento psíquico de profissionais de saúde, especialmente aqueles atuantes na linha de frente, evidenciando a urgência de intervenções em saúde mental. Este estudo objetivou descrever a implementação e avaliar, em delineamento pré-pós, um protocolo psicológico on-line gratuito baseado na abordagem somática do Sistema Bodydynamic®. Trata-se de um estudo descritivo do serviço integrado à pesquisa longitudinal com avaliações antes (T0) e após (T1) seis sessões, utilizando a DASS-21. Um total de 242 trabalhadores de saúde acessaram o serviço. Para a fase de pesquisa, 31 participantes que completaram o protocolo foram incluídos na análise. Os resultados indicaram redução estatisticamente significativa nos escores de depressão, ansiedade e estresse, do T0 para o T1, com tamanhos de efeito moderados ( $d$  emparelhado  $\approx 0,62-0,75$ ). Identificaram-se ainda indícios de relevância clínica, com melhora na classificação da gravidade dos sintomas. Conclui-se que o protocolo Bodydynamic® mostrou-se uma estratégia viável, associada à redução de sintomas nos profissionais de saúde participantes da pesquisa, sugerindo potencial eficácia no cuidado psicológico em um contexto de ameaça à vida e crise prolongada como a pandemia de COVID-19.

### **Palavras-chaves:**

Psicologia Somática; Sistema Bodydynamic®; Protocolo de Atendimento; Crises e Emergências; COVID-19; Trabalhadores da Saúde; Rede de Atenção à Saúde.

## **Protocolo en psicología somática para la atención en salud mental en el contexto de crisis y emergencias durante la pandemia de COVID-19.**

### **Resumen:**

La pandemia de COVID-19 intensificó el sufrimiento psicológico de los profesionales de la salud, especialmente de aquellos que trabajan en primera línea, destacando la urgencia por intervenciones de salud mental. Este estudio tuvo como objetivo describir la implementación y evaluar, en un diseño pre-post, un protocolo psicológico en línea y gratuito basado en el enfoque somático del Sistema Bodydynamic®. Se trata de un estudio descriptivo del servicio integrado en una investigación longitudinal con evaluaciones antes (T0) y después (T1) de seis sesiones, utilizando la DASS-21. Un total de 242 trabajadores de la salud accedieron al servicio. Para la fase de investigación, 31 participantes que completaron el protocolo fueron incluidos en el análisis. Los resultados indicaron una reducción estadísticamente significativa en las puntuaciones de depresión, ansiedad y estrés de T0 a T1, con tamaños de efecto moderados ( $d$  pareada  $\approx 0,62-0,75$ ). También se identificó evidencia de relevancia clínica, con una mejora en la clasificación de la gravedad de los síntomas. Se concluye que el protocolo Bodydynamic® demostró ser una estrategia viable, asociada a una reducción de síntomas en los profesionales de la salud participantes en la investigación, sugiriendo una potencial efectividad en la atención psicológica en un contexto de crisis potencialmente mortal y prolongada como la pandemia de COVID-19.

### **Palabras clave:**

Psicología Somática; Sistema Bodydynamic®; Protocolo de Atención; Crisis y Emergencias; COVID-19; Profesionales de la Salud; Red de Atención Sanitaria.

## INTRODUCTION

From its beginning, the COVID-19 pandemic has mobilized research centers and scholars to address the need for attention to psychological distress and the potential risks to the mental health of the general population, particularly healthcare professionals (UN, 2020; RAONY et al., 2020). It has also become evident that these concerns risk being relegated to a secondary level in the face of the numerous other challenges to be addressed (MOREIRA, SOUSA, & NOBREGA, 2020). In this context, the importance of treating mental health with the same priority as primary healthcare has been reinforced (FARO et al., 2020).

These concerns are grounded in research reporting the effects of quarantines on the health of the general population (BROOKS et al., 2020; RAONY et al., 2020; ZAKA et al., 2020). Studies on quarantines implemented during the outbreaks of SARS-CoV-1, MERS-CoV, H1N1, and Ebola, which involved relatively small groups and relatively short periods, ranging from 10 to 21 days, report the presence of symptoms such as irritability, insomnia, depressed mood, fear, and anger. In the long term, up to three years later, an increased propensity for alcohol abuse was observed, in addition to the development of symptoms of depression and post-traumatic stress (AFONSO, 2020). Studies focusing specifically on quarantines related to SARS and MERS have also identified symptoms of depression, anxiety, stress, fear, and Post-Traumatic Stress Disorder (PTSD) (BROOKS et al., 2020; RAONY et al., 2020; ZAKA et al., 2020).

In Canada, the prevalence of PTSD observed after the SARS pandemic was similar to that found in situations involving natural disasters or terrorism (SPRANG; SILMAN, 2013). These studies also show that individual and collective psychosocial consequences may have impacts that are ultimately more severe and widespread than the epidemics themselves (ORNELL et al., 2020).

With regard specifically to frontline healthcare professionals, the experience of previous epidemics, such as SARS in 2003 and Ebola in 2014, has demonstrated the occurrence of post-traumatic stress disorder (PTSD), anxiety, depression, frustration, and fear of new infectious disease outbreaks (ZAKA et al., 2020). ORNELL et al. (2020) report that between 18% and 57% of healthcare professionals experienced severe emotional problems and psychiatric symptoms during and after the SARS outbreak. Among healthcare workers who were placed in quarantine, there were reports of acute stress disorder (ASD), reluctance to return to work, higher levels of

exhaustion, difficulty approaching febrile patients, irritability, insomnia, difficulties in decision-making, decreased work performance, and consideration of resignation. Furthermore, among these workers, a higher prevalence of alcohol abuse and dependence was observed three years later (BROOKS et al., 2020).

In an editorial, *The Lancet* (2020) highlights the importance of caring for the physical and mental health of healthcare professionals, noting that while it is possible to rapidly expand hospital bed capacity, the same is not true for the training and qualification of new healthcare workers, nor is it feasible to have them perform at full capacity for prolonged periods.

In studies conducted during the COVID-19 pandemic, rates of 25% for depression were identified, along with an increased risk of suicide in a group that already presents a risk index 50% higher than that of the general population (EL-HAGE et al., 2020). Several factors have been widely recognized as contributing to emotional stress, psychological distress, and risks to the mental health of healthcare professionals, including the high transmissibility of the virus; direct exposure to high viral loads; lack of personal protective equipment (PPE); limited knowledge about the disease; wide variability in clinical presentations; the absence of a known effective treatment at the time; the difficult decision-making process regarding treatments and referrals; shortage of medications; the unprecedented restructuring of healthcare systems due to the need to limit transmission through distancing and containment measures, altering team organization and recruiting professionals for new roles, often without adequate training; fear of becoming infected and of infecting family members, accompanied by a persistent sense of threat with no clear resolution; distress from witnessing colleagues and friends becoming ill or dying; long working hours; lack of testing for frontline teams; and disruptions or even interruption of daily contact with family and friends (HORTON, 2020; EL-HAGE et al., 2020; MOREIRA; SOUSA; NOBREGA, 2020; CONVERSANO; MARCHI; MINIATI, 2020). These factors are considered by some authors to constitute a situation of unprecedented levels of stress and intense existential threat (ZAKA et al., 2020; TSAMAKIS et al., 2020; CONVERSANO; MARCHI; MINIATI, 2020; ORNELL et al., 2020).

Regarding personal protective equipment (PPE), it has been observed that it can cause physical discomfort and difficulty breathing (ORNELL et al., 2020), in addition to subjecting healthcare professionals to a constant need for concentration and vigilance - highly regulated processes - as well as restricting spontaneity,

autonomy, and physical contact (PETZOLD; PLAG; STRÖHLE, 2020). These authors also cite concerns about children being out of school as a stressor, and note that this high level of stress may also lead to marital conflict.

In Brazil, the health of these professionals was also affected by factors such as the lack of knowledge on how to deal with COVID-19. According to a study conducted by the Getúlio Vargas Foundation (FGV) (LOTTA et al., 2020a), with data collected between April 15 and May 1, 2020, two and a half months after the declaration of the Public Health Emergency of International Concern (PHEIC), the percentage of healthcare professionals who reported being prepared to deal with COVID-19 was very low: only 14.2%. Consistent with this situation, a high level of fear of contracting the disease was identified: 91.25% among community health workers (CHWs) and endemic disease control agents, 84.31% among nursing professionals, and 77.68% among physicians. Regarding personal protective equipment (PPE), only 32% of professionals reported having received it.

In the second phase of the aforementioned study, with data collected between June 15 and July 1, 2020, the situation did not show reassuring results: 52.7% of physicians and 80.1% of community health workers (CHWs) and endemic disease control agents still did not feel prepared to deal with COVID-19. Regarding the receipt of personal protective equipment (PPE), 69.7% of community health workers (CHWs) and endemic disease control agents continued to report not having received it, as did 36.2% of physicians and 35.3% of nursing professionals. Among these professionals, 78.2% stated that their mental health had been affected by the pandemic, while 85.5% reported feeling fear of the novel coronavirus. Beyond this specific fear, fear was reported as the predominant emotion during the course of the pandemic by 77% of professionals; anxiety and stress by 62%; and fatigue by 53%. In contrast, only 20% reported having received some type of support to care for their mental health (LOTTA et al., 2020b). Regarding the prevalence of fear, CONVERSANO, MARCHI, and MINIATI (2020) note that healthcare professionals are facing “new and unexpected fears.”

Considering the low percentage of healthcare professionals who reported having received some type of support to care for their mental health, it would be necessary to investigate whether this is related to the historically limited availability of such services (ORNELL et al., 2020); whether there were failures in communication regarding existing services, since TelePSI was made available by the Ministry of

Health during this period (BRASIL, 2020); whether it reflects a lack of habit of seeking mental health support services; or whether, as observed in China, healthcare professionals only become receptive to addressing their own emotional issues after attending to their physical health needs and the protection of their families (WANG et al., 2020; ZAKA et al., 2020).

Regarding the health situation, Special Epidemiological Bulletin No. 25 from the Ministry of Health, referring to epidemiological week 31 (July 26 to August 1), reports that by August 5, 2020, a total of 1,086,807 suspected cases of influenza-like illness (ILI) related to COVID-19 had been reported among healthcare professionals in the e-SUS Notifica system. Of these, 232,992 (21.4%) were confirmed as COVID-19.

For healthcare professionals, the following are protective factors for mental health: 1- perceiving that their physical health is preserved, which can be ensured through the provision of personal protective equipment (PPE) in sufficient quality and quantity; 2- rest, with reasonable work shifts and appropriate facilities for rest; 3- knowing that their family is receiving emotional support to cope with social distancing; 4- receiving organizational support, adequate working conditions, and appropriate training to treat patients (ZAKA et al., 2020); as well as 5- receiving support from immediate supervisors (ONU, 2020).

Providing mental health resources and protecting the psychological well-being of the healthcare community was considered urgent (ZAKA et al., 2020; ORNELL et al., 2020) for humanitarian reasons, as these professionals were on the front line, compelled to face a highly challenging situation in order to care for the health of others, as well as for reasons related to the protection of healthcare systems, since the risks of illness are real and may be long-lasting, potentially leading a significant proportion of professionals to require leave from work or to experience impaired performance (PETZOLD; PLAG; STRÖHLE, 2020).

These efforts undertaken by professionals in the field of mental health have demonstrated that it is imperative to invest resources to significantly promote the mental health of frontline healthcare workers in situations of public health emergencies, particularly those involving highly contagious diseases, both in terms of prevention and treatment (BROOKS et al., 2020; CONVERSANO; MARCHI; MINIATI, 2020; EL-HAGE et al., 2020; PETZOLD; PLAG; STRÖHLE, 2020; ZAKA et al., 2020), as well as in terms of research (ORNELL et al., 2020).

Among the measures recommended by ORNELL et al. (2020) are support for activities aimed at self-monitoring somatic symptoms, such as insomnia, sadness, fatigue, anhedonia, distress, fear, and anxiety, as well as the dissemination of self-administered instruments for monitoring mental health and the early identification of symptoms. EL-HAGE et al. (2020) suggest that, in addition to support services, processes for monitoring the mental health of professionals should be implemented during the pandemic and maintained in the post-pandemic period for 6 to 12 months, due to the possibility of the emergence of delayed symptoms of illness, which may initially be minimized or even prevented by the professionals themselves.

In Brazil, in response to mental health demands, different groups of professionals from public and private institutions, universities, and civil society organizations mobilized to provide free online services for healthcare professionals. Among these initiatives are TelePsi, from the Ministry of Health, mentioned previously; the Nursing Care Network (Rede Cuidar Enfermagem, 2020); the Solidarity Network of the Brazilian EMDR Association; and the Bodydynamic® Psychological Support Project for professionals within the Health Care Network who treated patients with COVID-19, which constitutes the focus of the present study.

Bodydynamic® is a system of psychology and somatic analysis, developed from the 1970s onward in Denmark by Lisbeth Marcher and a large team of collaborators, based on the analysis of 15,000 records of therapeutic sessions. Marcher complemented her own observations and findings with influences drawn, at that time, from Lev Vygotsky; Erik Erikson; ethologists, particularly Konrad Lorenz; and various anthropologists (MARCHER; FICH, 2010). It was also influenced by

Trygve Braatøy, a Norwegian neurophysiologist, psychiatrist, and psychoanalyst, whose principal work, *De Nervøse Sinn (The Nervous Minds, 1974)*, already described a long list of parallels between psychological and neuromuscular–neurophysiological conditions and processes. (MARCHER; FICH, 2010, p. XV)

The Bodydynamic Psychological Support Project was designed to develop and/or strengthen cognitive, psychological, bodily, and psychosocial resources recommended by Bodydynamic for working with situations related to stress, crisis, shock trauma, and Post-Traumatic Stress Disorder (PTSD). The themes, concepts, and practices addressed in the intervention protocol were used and are described in accordance with their conceptualization within the Bodydynamic framework.

The organization of the protocol aimed to strengthen the “Body Ego,” the “Observing Ego,” and the “Role Ego,” as well as to promote the recognition and strengthening of the resources of “Safe Place” and “Supportive People,” in addition to working with five Ego Functions: 1- “Centering,” related to the ability to connect with oneself, including self-esteem, self-worth, and individuality (MARCHER; FICH, 2010); 2- “Grounding and Reality Testing,” whose functions involve maintaining contact with external reality while remaining connected to the ground and to oneself (MARCHER; FICH, 2010); 3- “Boundaries,” referring to the ability to differentiate oneself from others and from the surrounding environment (MARCHER; FICH, 2010); 4- “Energy Management,” related to the ability to contain and regulate high levels of stress and the energy inherent in emotions according to the situation (MARCHER; FICH, 2010); and 5- “Connection,” which relates to the ability to feel, maintain, and regulate contact with others.

The use of these resources and Ego Functions in structuring the protocol was based on the work of Ditte Marcher, consolidated over more than 30 years of practice in crisis and war zones, including the training program “Overcoming Shock Trauma and PTSD,” developed in Ukraine since 2015 with war veterans (NOVAK; HUKOVSKYY, 2017).

Considering that evaluating the outcomes of these services is as important as providing them, so that investments can be made in their improvement, expansion, or reformulation, ensuring that the care provided effectively promotes health protection rather than, inadvertently, producing effects different from those intended (SOARES; LIMA, 2003), a Research Project was incorporated into the Service. In this way, as suggested by EL-HAGE et al. (2020), within the context of the health crisis caused by COVID-19, it becomes possible to better understand the vulnerabilities of caregivers to psychological distress, thereby enabling the strengthening of primary prevention strategies and training in psychological care related to the management of health crises.

Thus, the aim of this article is to present the Bodydynamic Psychological Support Project for professionals within the Health Care Network in its two phases: the service component, involving the development of a six-session protocol, and the empirical research component, which evaluated the impact of the intervention using this protocol on the mental health of the professionals who received care during this phase.

Specifically, this article aims to describe the development of the Psychological Support Service protocol using Bodydynamic resources, offered online and free of charge; the resources employed to enhance and ensure the quality of these interventions; and a sociodemographic profile of the professionals who received care. Based on this, it also seeks to evaluate the impact of this protocol on the mental health of the professionals treated during the research phase, which also included a monitoring service.

The Monitoring Service was designed to support and encourage the practice of self-care and self-monitoring among healthcare professionals, as well as to serve as a control group for evaluating the outcomes of the interventions.

## **METHODOLOGY**

### **Type of Method**

This article proposes two methodological strategies. The first is a descriptive study presenting the online and free Psychological Support Service using Bodydynamic resources for professionals working in COVID-19 Health Units. The second is the empirical research study entitled “Evaluation of a Psychological Support Protocol for Professionals within the Health Care Network Treating Patients with COVID-19: A Longitudinal Study.”

### **Ethical Considerations**

The Research Project was approved by the Research Ethics Committee (CEP) of the State University of Bahia on September 29, 2020, and is registered on Plataforma Brasil under CAAE number 38284920.5.0000.0057.

At the time of enrollment in the Support Project, during the research phase, participants were given access to the Informed Consent Form (ICF) and to the options indicating whether or not they agreed to participate in the study. In cases of agreement, a link was provided so that participants could access their copy of the ICF. At the time of enrollment, participants also completed a sociodemographic questionnaire and the PCL-5 and DASS-21 scales.

As an ethical precaution and responsibility, professionals enrolled in the Monitoring Service whose self-assessment on the DASS-21 indicated severe or extremely severe symptoms on one or more of the subscales were invited to

participate in a supportive session with a psychologist, during which they were encouraged to seek mental health support services.

## **Participants**

The Psychological Support Service and the empirical research study targeted professionals over 18 years of age who worked in healthcare units providing care for patients with COVID-19.

## **Recruitment Strategies and Enrollment Procedures**

The Psychological Support Service was initially promoted through Bodynamic social media platforms, the social media accounts of the psychotherapists involved, and WhatsApp groups of healthcare professionals. The promotional materials included a registration link, and enrollment was completed through an online form.

The enrollment form included a sociodemographic questionnaire and the PCL-5 and DASS-21 scales, which, during Phase 1 of the project, were used to encourage self-monitoring and to provide psychotherapists with information regarding the health status of the professionals. These instruments are described below.

Following the order of enrollment, professionals were assigned to the support sessions according to the compatibility between the days and times they indicated as available and those offered by the psychotherapists.

During Phase 2 of the Support Project, when the research study was conducted, the same recruitment strategies used in Phase 1 were maintained.

The Support and Monitoring Services were promoted simultaneously, and healthcare professionals enrolled in the service they considered most appropriate to their needs or availability. Considering the period during which the study was conducted, a greater concentration of enrollments was observed during periods coinciding with peaks in reported COVID-19 cases and mortality in Brazil.

## **Assessment Instruments and Data Collection Procedures**

In order to evaluate the impact of the interventions on the mental health of the professionals who received care, self-report assessments using the DASS-21 and PCL-5 scales were planned.

The DASS-21 is the short version of the self-report scale developed by Lovibond and Lovibond (1995), designed to measure the negative emotional states of depression, anxiety, and stress. Each subscale has different scoring ranges for classifying symptoms as normal, mild, moderate, severe, or extremely severe. These classifications were used in the present study and followed the following cutoff points: 1- for depression, scores from 0 to 9 were considered normal; 10 to 13 mild; 14 to 20 moderate; 21 to 27 severe; and scores equal to or greater than 28 extremely severe; 2- for anxiety, scores from 0 to 7 were considered normal; 8 to 9 mild; 10 to 14 moderate; 15 to 19 severe; and scores equal to or greater than 20 extremely severe; and 3- for stress, scores from 0 to 14 were considered normal; 15 to 18 mild; 19 to 25 moderate; 26 to 33 severe; and 34 to 42 extremely severe.

The original version of the DASS consists of 42 items, whereas the short version contains 21 items. The cross-cultural adaptation into Brazilian Portuguese was carried out by Vignola and Tucci (2014).

The PCL-5 is the Post-Traumatic Stress Disorder Checklist and is widely used as a self-report measure for screening PTSD symptoms. The psychometric properties of the Brazilian version were evaluated by Pereira-Lima et al. (2019).

The completion of the DASS-21 and PCL-5 scales was planned and carried out at six time points:

T0 – at the time of enrollment, before the beginning of the intervention;

T1 – after the fifth session and before the sixth and final session of the six-session intervention protocol, approximately 40 days after the beginning of the intervention;

T2 – before the first follow-up session, which took place one month after the final intervention session;

T3 – before the second follow-up session, which took place three months after the final intervention session;

T4 – before the third follow-up session, which took place six months after the final intervention session;

T5 – before the fourth follow-up session, which took place one year after the final intervention session.

The follow-up of the professionals who received care for up to one year after completion of the protocol was planned as a strategy to encourage self-care and self-monitoring, as well as to evaluate the possible medium- and long-term impacts of the

intervention on the prevention of PTSD and on the mental health of the professionals who received care.

The self-report scales related to the results presented here were completed at the time of enrollment (T0) and before the sixth session (T1), after completion of all series of exercises included in the protocol.

After the fifth session, and following completion of the corresponding weekly exercises, the professionals receiving care completed the DASS-21 and PCL-5 scales again (T1). These were then forwarded to their respective therapists, and the results were shared, discussed, and addressed during the sixth session.

Given that the COVID-19 crisis persisted throughout the entire period of data collection and development of the study, the present article did not analyze the PCL-5 scale, considering the potential impact of a continuous, large-scale collective stressor on the measurement of post-traumatic stress symptoms. The results of the follow-up assessments conducted over the one-year period will be the subject of a future article.

### **Data Analysis Procedures**

Quantitative analyses were conducted based on the data obtained through the assessment instruments. Initially, descriptive statistics (means and standard deviations) were calculated to characterize depression, anxiety, and stress scores. Statistical analyses were performed using SPSS. In order to examine changes between baseline (T0) and the end of the first stage of the six-session intervention protocol (T1), Student's paired-samples *t* test was applied, as it is appropriate for evaluating mean differences in repeated measures. P-values, 95% confidence intervals, and effect sizes (Cohen's *d*) were considered in order to estimate the magnitude of the observed differences. The significance level adopted was 5% ( $\alpha = 0.05$ ).

## **RESULTS AND DISCUSSION**

This section is presented in two parts. The first addresses the Psychological Support Service during the stage preceding the research study, and the second presents the data from the research phase.

The online and free psychological support service using Bodydynamic tools received a total of 242 enrollments: 126 during the first phase, prior to the research

project, and 116 during the research phase. Of the latter, 90 were for the support service and 26 for the monitoring and follow-up service.

During the project, 327 intervention sessions lasting 50 to 60 minutes were conducted. Of this total, 78 professionals completed the six-session protocol, with 39 participants in each phase.

Initially, it is essential to characterize the Psychological Support Service, online and free of charge, using Bodydynamic resources for professionals working in COVID-19 Health Units. Next, the general data will be presented in order to illustrate the scope and progression of the process.

### **Phase 1 of the Interventions: Period Prior to the Research Study**

The Psychological Support Service was an initiative developed by the educational institution Bodydynamic International® Brasil, with the participation of a group of experienced and qualified professionals trained in the Bodydynamic approach. The service provided online and free interventions following a protocol of six individual weekly sessions lasting 50 minutes each, in addition to four follow-up sessions conducted one month, three months, six months, and one year after the sixth session.

The six-session protocol is organized as follows:

- 1) An initial supportive and strengthening session, during which the resources of “Safe People” and “Safe Place” are explored and recognized;
- 2) Four sessions, each addressing one of the following “Ego Functions,” which may also be described as psychological skills:
  - A. Centering
  - B. Grounding and Reality Testing
  - C. Boundaries
  - D. Energy Management
- 3) Sixth and final session: reflection on the entire process; feedback on the results of the DASS-21 questionnaire; verification of integrated resources; and assessment of the need or desire to reinforce one or more of the resources addressed during the sessions. The scheduling of the one-month follow-up session was also carried out at this stage.

Throughout all sessions, “Connection” is continuously addressed through the therapist–participant relationship.

The sessions were organized in a specific sequence, and each “Ego Function” was addressed following a series of exercises recommended by Bodydynamic, with the aim of activating different psychological skills through the stimulation of the muscles associated with each function. This process also sought to direct the participant’s attention to the corresponding activated bodily areas, as well as to the themes associated with each skill.

During the exercises, participants were invited to observe and connect with their bodily sensations, with the aim of strengthening the Body Ego and the Observing Ego, both of which are considered by Bodydynamic to be fundamental in navigating a crisis, so that, through the Role Ego, each participant would be able to perform their professional role in each work shift within the service.

The order of the Ego Functions to be addressed could be adjusted by the psychotherapist according to the participant’s needs. Participants were instructed to practice the exercises learned, preferably on a daily basis throughout the week until the next session. The aim of this practice was to strengthen the skills addressed, as well as to promote autonomy in their maintenance.

The interventions were conducted by 37 psychotherapists divided into two groups. The first group consisted of 15 psychotherapists who had completed the Bodydynamic Practitioner Training, a 600-hour training program for the certification of body psychotherapy professionals offered by Bodydynamic International® (BODYDYNAMIC INTERNATIONAL, 2025). This group held biweekly intervision meetings for mutual support, sharing of experiences, and improvement of the interventions and the protocol. The second group, composed of 22 psychotherapists currently undergoing Practitioner Training, received supervision from two instructors from Bodydynamic International Brasil throughout the entire duration of the project.

The psychotherapists had access to an online session monitoring form, in which they could record aspects such as reported complaints and symptoms, completion of the proposed exercises, progression of complaints and symptoms, and, on a scale from zero to ten, the level of well-being perceived by the healthcare professional at the end of each session.

In the intervision and supervision meetings, the psychotherapists shared reports of improvements in well-being described by the healthcare professionals receiving care, as well as a reduction in complaints and symptoms, which was also observed through the records in the Session Monitoring Forms.

In this phase, 126 registrations were received between April 19 and September 20, 2020. Most participants were nursing technicians (46.8%) and nurses (20.6%). Physicians (9.5%), psychologists (4.8%), and physiotherapists (4%) also enrolled, as well as community health workers, social workers, and other professional categories, in smaller proportions.

Based on the data recorded in the session monitoring form, it was found that, out of the 126 enrolled professionals, 75 attended the first session and 39 completed the six-session protocol, as shown in Table 1.

**Table 1 – Number of Enrolled Participants and Sessions Attended per Session**

Enrolled	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	Sessions attended
126	75	63	53	43	41	39	314
Retention rate (%)							
100%	59.52	50.00	42.06	34.13	32.54	30.95	

**Source:** Prepared by the authors (2026)

The records and observations, together with broader insights derived from the literature, motivated the development of a research project to evaluate the impact of this protocol on the mental health of healthcare professionals working on the COVID-19 frontline, as well as the inclusion of a Monitoring and Follow-up Service within the Psychological Support Service. Researchers in the field of mental health recommend investment in the provision of psychological support services, self-care practices, and self-monitoring strategies (EL-HAGE et al., 2020; ORNELL et al., 2020), as well as further research on services offered to frontline healthcare professionals in emergency contexts (SOARES; LIMA, 2003).

### **Phase 2 of the Interventions and Monitoring Service – Research Phase**

In the research phase, 116 valid registrations were received, 26 for the Monitoring Service and 90 for the Psychological Support Service. Registrations for the Monitoring Service took place between November 5, 2020, and March 7, 2022.

The predominant occupation among participants enrolled in the Monitoring Service was nursing technicians, with 8 participants (30.8%), followed by nurses with 6 (23.1%) and physicians with 5 (19.2%). Health unit managers, community health workers, and physiotherapists also participated, representing smaller proportions.

The predominant age group was 31 to 40 years, with 9 participants (34.6%), followed by 41 to 50 years, with 6 (23.1%). The least represented age group was 51 to 60 years, with 2 participants (7.7%), while the 61 to 65 age group had no participants. Regarding self-reported race/ethnicity, 13 participants identified as White (50%), 7 as pardo (mixed-race) (26.9%), and 6 as Black (23.1%).

Regarding workplaces, 18 participants worked in hospitals (69.2%), 2 in emergency care units (7.7%), and 2 in health centers (7.7%). The remaining workplaces included Family Health Units, Medical Boards, Psychiatric Emergency Services, and the Mobile Emergency Care Service (SAMU), with 1 professional (3.8%) in each setting. The levels of depression, anxiety, and stress reported by these professionals at the time of enrollment (T0) are presented in Table 2.

**Table 2 – Levels of Depression, Anxiety, and Stress Among Professionals Enrolled in the Monitoring Service at the Time of Enrollment**

Category	Depression (n/%)	Anxiety (n/%)	Stress (n/%)
Normal	8 (30.8)	7 (26.9)	7 (26.9)
Mild	1 (3.8)	4 (15.4)	3 (11.5)
Moderate	8 (30.8)	6 (23.1)	7 (26.9)
Severe	4 (15.4)	2 (7.7)	5 (19.2)
Extremely severe	5 (19.2)	7 (26.9)	4 (15.4)

Source: Prepared by the authors (2026)

Of the 26 professionals enrolled in the monitoring service, only five completed the self-report scales again. Given the small number of respondents at T1, no comparison was made with the results of professionals in the support service.

For participants enrolled in the Monitoring Service who presented levels of depression, anxiety, and stress classified as normal, mild, or moderate, an email was sent containing information on the importance of self-care, suggestions for maintaining well-being, and guidance on available free psychological support services for healthcare professionals, such as TelePsi, offered by the Ministry of Health. The text included minor variations depending on the participants' scores.

Participants whose assessments indicated severe or extremely severe levels in any of the evaluated dimensions were contacted and invited to a supportive and guidance session with a project psychologist.

The supportive and guidance sessions offered to these professionals were well received, and most of those invited attended the session. During the session, participants identified actions they could take to improve their health and also received guidance to seek professional help for additional support. Subsequently, an email was also sent to them with information on the importance of self-care.

In the emails sent to all professionals, regardless of their assessment results, participants were encouraged not to hesitate in seeking psychological support if they felt overwhelmed, as well as provided with information on freely available services. TelePsi was recommended to all professionals, and nursing professionals were additionally informed about the Cuidar Enfermagem Network. These actions are part of the ethical care provided to participants and are consistent with recommendations from researchers in the field who encourage the development of a culture of care, even if still incipient, supporting the dissemination and practice of self-monitoring and awareness of signs of psychological distress.

In the Support Service, registrations took place between October 25 and November 29, 2021, at a point when one year and eight months had already elapsed since the beginning of the pandemic. Of the 90 enrolled professionals, 64 attended the first session and 39 continued the process through to the sixth session, completing the six-session intervention protocol. According to the session registration and monitoring form, attendance was 64 professionals in the first session and 39 in the sixth, corresponding to a total of 290 recorded sessions (Table 3).

**Table 3 – Attendance Records by Intervention Session**

Enrolled	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	Total recorded sessions
90	64	54	49	44	40	39	290

Source: Prepared by the authors (2026)

Of the 39 professionals who attended the sixth session, 31 completed the DASS-21 scale corresponding to the second assessment (T1). The characterization

of professional activities and workplaces will be presented in Table 4, considering all 90 enrolled participants, as well as the data from the 31 professionals who completed the first phase of the protocol - the initial six sessions - and responded to the corresponding assessment.

**Table 4 – Occupational Characteristics of the Sample**

	Total enrolled (n=90)		Respondents at T0 and T1 (n=31)	
	N	%	N	%
<b>Occupation</b>				
Nursing technicians	25	27.8	9	29
Nurses	14	15.6	5	16.1
Physiotherapists	11	12.2	3	9.7
Community health workers	10	11.1	4	12.9
Physicians	8	8.9	4	12.9
Psychologists	6	6.7	2	6.5
Social workers	3	3.3	-	-
Others (1)	13	14.4	4	13
<b>Workplaces</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Hospitals (municipal, state, federal, or private)	50	55.6	14	45.2
Family Health Units (USF)	13	14.4	7	22.6
Primary Health Units (UBS)	12	13.3	6	19.4
Emergency Care Units / Emergency Departments (UPA/UPS)	9	10	3	9.6
Mobile Emergency Care Service (SAMU)	2	2.2	-	-
Emergency Care Service (SPA)	1	1.1	-	-
Others	3	3.3	1	3.2

Source: Prepared by the authors (2026)

Note: 1- Healthcare workers in administrative roles; oral health agent; attendant; pharmacy assistant; dentist; pharmacist; speech therapist in COVID-19 ICU; nutritionist; radiology technician; occupational therapist; health unit manager; laboratory sample collector; blood component transfusion technician.

Regarding the number of workplaces, among the 90 enrolled professionals, 68 (75.6%) reported a single workplace and 22 (24.4%) reported two workplaces. These proportions remained largely similar when considering the 31 professionals who completed T1: 23 (74.2%) reported a single workplace and 8 (25.8%) reported two workplaces.

The sociodemographic characteristics of the professionals are presented in Table 5. The profile of participants indicates a predominance of white and pardo individuals, aged between 31 and 40 years, coming from 38 cities, with most participants originating from the Southeast and Northeast regions.

**Table 5 – Sociodemographic Information of Participants**

	Total enrolled (n=90)		Respondents at T0 and T1 (n=31)	
	N	%	N	%
<b>Self-reported race/ethnicity</b>				
White	38	42.2	11	36.5
Black	17	18.9	9	19.4
Asian	2	2.2	0	0
Pardo (Mixed-race)	30	33.3	11	36.5
Indigenous	2	2.2	2	6.5
Other	1	1.1	1	3.2
<b>Age group</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
18 to 25	8	8.9	2	6.5
26 to 30	9	10	3	9.6
31 to 40	39	43.3	14	45.2
41 to 50	21	23.3	7	22.6
51 to 55	6	6.7	2	6.5
55 to 60	6	6.7	3	9.6
61 to 65	1	1.1	-	-
<b>Gender identity</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Female	86	95.6	31	100
Male	4	4.4	-	-
<b>Region of residence</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Southeast	39	43.4	10	32.3
Northeast	32	35.5	15	48.4
South	11	12.3	5	16.1
North	4	4.4	1	3.2
Central-West	4	4.4	-	-

Source: Prepared by the authors (2026)

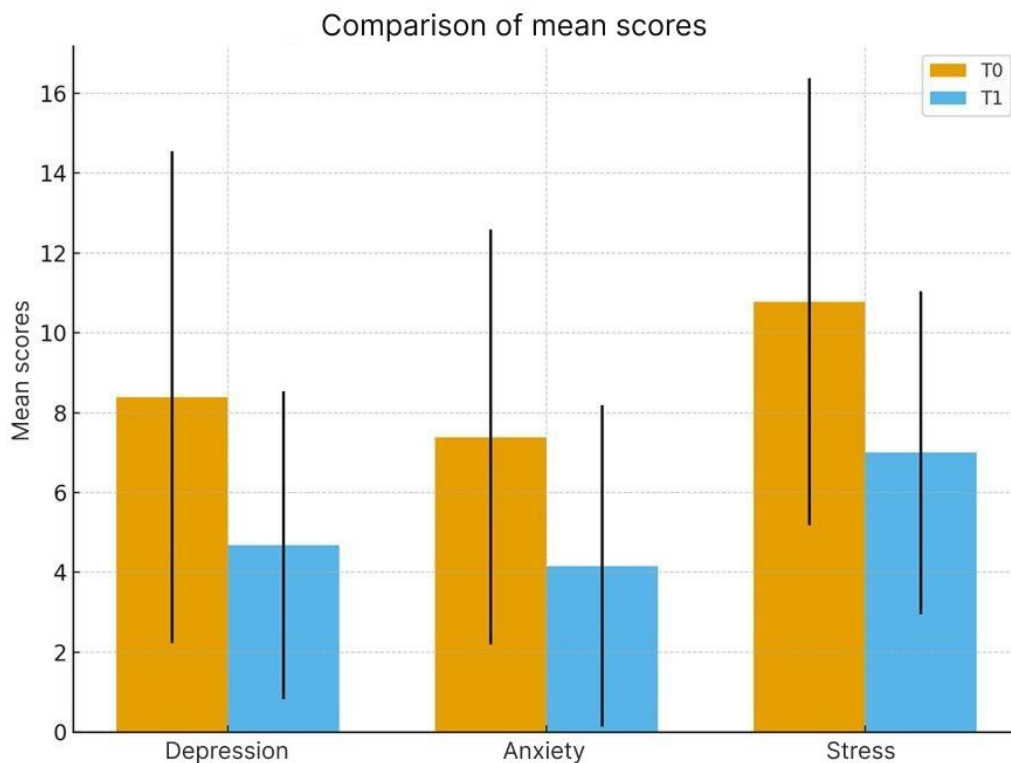
## EVALUATION RESULTS

Considering the 31 professionals who completed the intervention protocol and responded to the assessment forms, paired-samples Student's *t*-tests were conducted to compare depression, anxiety, and stress scores across two assessment time points (T0 and T1).

A significant reduction in depression levels was observed, with the mean score at T0 (M = 8.39; SD = 6.16) higher than at T1 (M = 4.68; SD = 3.86),  $t(30) = 3.53$ ,  $p =$

0.001, 95% CI [1.56, 5.86], with a moderate effect size (Cohen's  $d = 0.63$ ). Similarly, anxiety scores were higher at T0 ( $M = 7.39$ ;  $SD = 5.19$ ) than at T1 ( $M = 4.16$ ;  $SD = 4.03$ ),  $t(30) = 4.16$ ,  $p < 0.001$ , 95% CI [1.64, 4.81], also indicating a moderate effect size ( $d = 0.75$ ). Finally, a significant difference was found in stress levels, which decreased from T0 ( $M = 10.77$ ;  $SD = 5.60$ ) to T1 ( $M = 7.00$ ;  $SD = 4.04$ ),  $t(30) = 3.48$ ,  $p = 0.002$ , 95% CI [1.56, 5.99], with a moderate effect size ( $d = 0.62$ ). These results suggest that, over time, there was a significant reduction in symptoms of depression, anxiety, and stress, with moderate effect sizes across all comparisons, as illustrated in the scatter plot presented in Figure 1.

**Figure 1 – Comparison of Mean Scores**



Source: Prepared by the authors (2026)

Regarding symptom classification according to the criteria established by the DASS-21 scale (VIGNOLA; TUCCI, 2014), ranging from normal to extremely severe, the variation can be observed in Table 6. The comparative analysis between T0 and T1, considering the extreme classifications of the DASS-21 (normal versus extremely severe), demonstrates an overall improvement in levels of depression, anxiety, and stress, with a marked increase in normal classifications and a substantial reduction in the most severe levels.

**Table 6 – Percentage of Professionals According to DASS-21 Symptom Classification (n = 31)**

Variable	Moment	Normal (%)	Mild (%)	Moderate (%)	Severe (%)	Extremely severe (%)
Depression	T0	38.7	12.9	9.7	9.7	29
	T1	61.2	9.7	19.4	6.5	3.2
Anxiety	T0	22.6	9.7	32.2	6.5	29
	T1	54.8	9.7	16.1	9.7	9.7
Stress	T0	32.2	6.5	29	19.4	12.9
	T1	54.8	25.8	3.2	16.2	0

Source: Prepared by the authors (2026)

Considering the two extremes presented in Table 6 - from normal to extremely severe symptoms - in the depression subscale, an increase of 58.14% was observed in the proportion of participants classified within the normal range at T1, rising from 38.7% to 61.2%, along with a reduction of 88.9% in the extremely severe classification, decreasing from 29% to 3.2%.

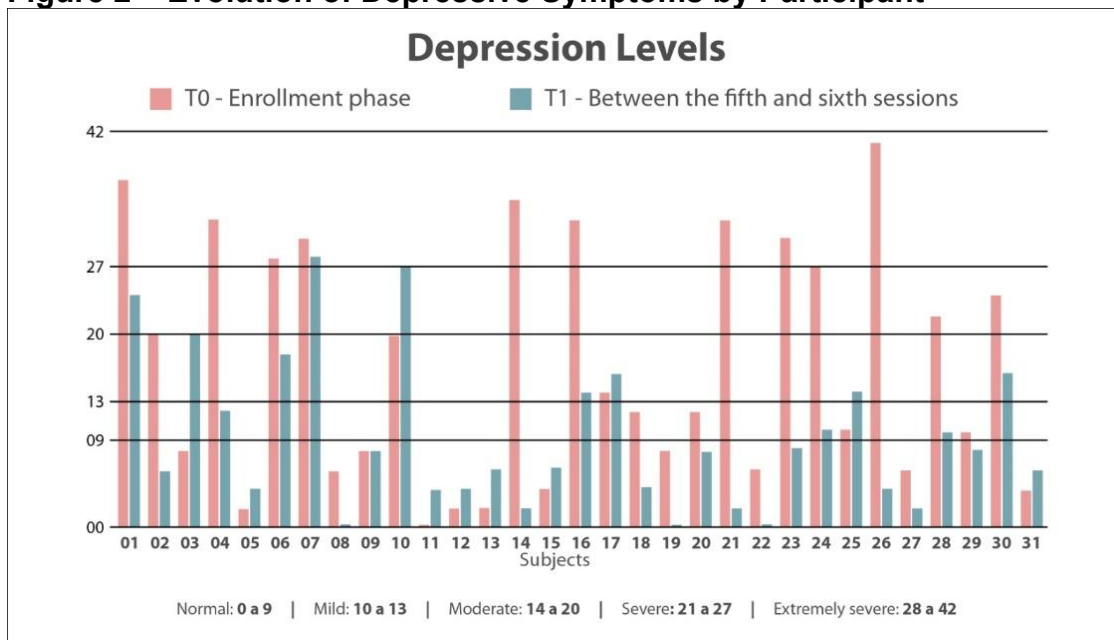
Regarding stress levels, considering the present sample, this was the dimension in which the protocol achieved the most significant results, with 80.6% of participants classified within the normal and mild ranges after the sessions, compared to 38.7% before the intervention. At the opposite extreme of symptom severity, classified as extremely severe, none of the participants remained at this level in T1, compared to 12.9% at T0.

Overall, the results indicate a consistent reduction in symptomatology across the three domains assessed, particularly stress, which showed the highest concentration of participants within the non-clinical ranges at the end of the intervention. Regarding anxiety, the proportion of participants classified within the normal and mild ranges also increased substantially, nearly doubling from 32.3% to 64.5%, representing an increase of 99.7%. Conversely, the clinical levels—moderate, severe, and extremely severe—decreased from 67.7% to 35.5%, corresponding to a reduction of 47.5%. With respect to depression, the severe and extremely severe levels showed a reduction of 77.52%, decreasing from 38.7% at T0 to 8.7% at T1. In the normal and mild ranges, the percentage increased from 51.6% to 70.9%, representing an increase of 37.4%. Only this subscale showed an increase in the moderate level, rising from 9.7% to 19.4%, corresponding to a 100% increase.

It is important to note that the severity levels of the DASS-21 subscales are based on different score intervals, as can be observed in the graphs below (Figures 2, 3, and 4). It can be seen that, although the statistical analysis indicated a slightly smaller effect size (Cohen's *d*) for stress compared to anxiety and depression, in terms of symptomatology this was the subscale in which the most pronounced improvement in symptoms was achieved, as evidenced by the marked change in the classification of severity levels.

Figure 2 presents the evolution of depressive symptomatology for each participant at T0 and T1. An overall pattern of reduction in symptom severity can be observed, and only one participant remained within the extremely severe range; however, the individual analysis still indicates a reduction from the beginning to the end of the intervention. In terms of worsening symptoms, only two participants shifted to moderate levels and one to the severe level of symptomatology. Such results are expected when considering both individual variability and the pandemic context itself.

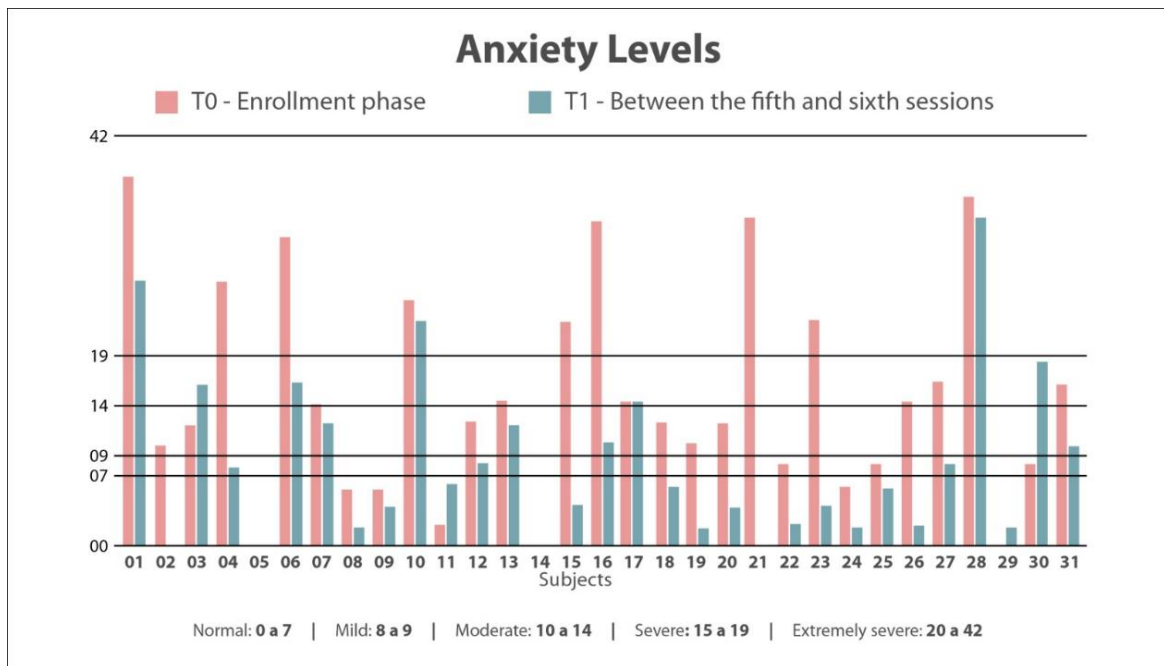
**Figure 2 – Evolution of Depressive Symptoms by Participant**



Source: Prepared by the authors (2026)

In Figure 3, the evolution of anxiety symptoms among participants demonstrates the reduction already indicated in the previous analyses, with only two participants showing worsening symptoms and three remaining within the same initial severity level, although with some improvement in symptoms.

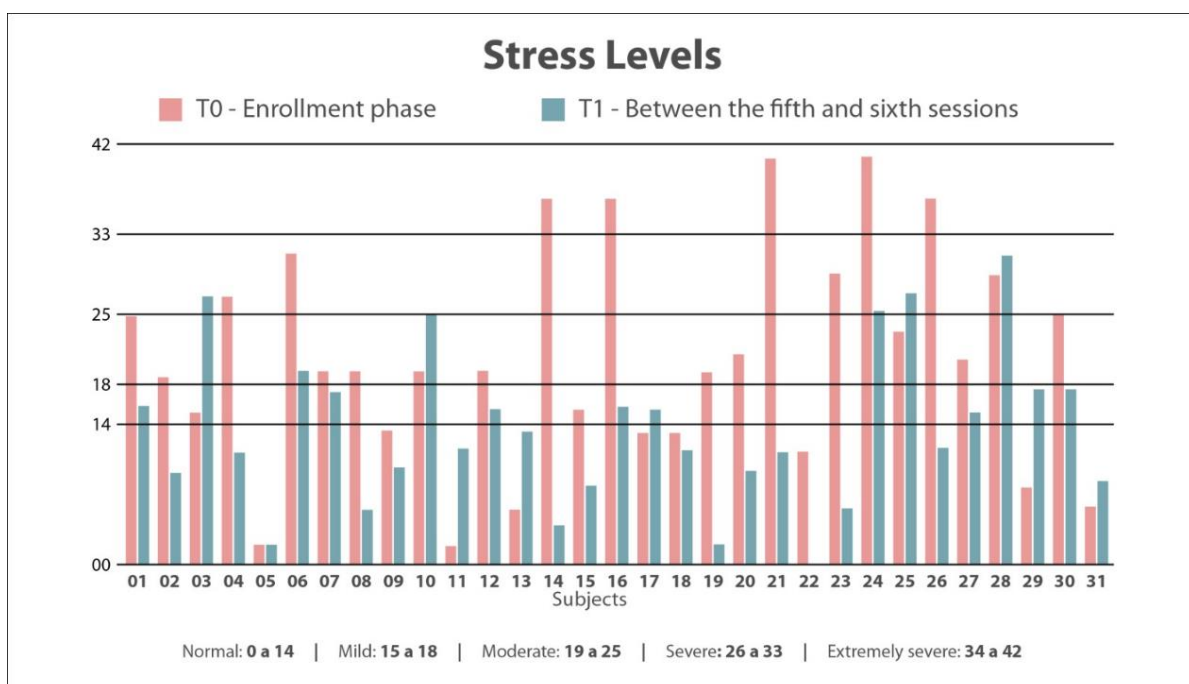
**Figure 3 – Evolution of Anxiety Symptoms by Participant**



Source: Prepared by the authors (2026)

Regarding the evolution of stress symptomatology, Figure 4 shows that only four participants presented worsening symptoms, one of whom shifted from the normal to the mild level, that is, still within the non-clinical range. Nevertheless, as already indicated in the previous analyses, this was the subscale in which the reductions in symptomatology were most pronounced.

**Figure 4 – Evolution of Stress Symptoms by Participant**



Source: Prepared by the authors (2026)

In summary, the combined analysis of the statistical results and the individual evolution of symptomatology, illustrated in Figures 2, 3, and 4, demonstrates an overall reduction in levels of depression, anxiety, and stress among participants throughout the protocol. Although individual differences and isolated cases of symptom maintenance or worsening were observed - which is expected given the diversity of the sample and the prolonged context of the pandemic - the predominant pattern was a reduction in symptom severity. These findings reinforce the consistency of the results presented and indicate a positive effect of the protocol on the emotional symptomatology of the professionals followed, possibly also exerting a protective effect against the adverse factors associated with the context.

## **FINAL CONSIDERATIONS**

The present study described, implemented, and evaluated a psychological intervention protocol based on the Bodydynamic approach, designed to support healthcare workers in the context of the COVID-19 emergency. The results obtained consistently indicate that the intervention contributed to a significant reduction in levels of depression, anxiety, and stress, as measured by the DASS-21 scale, with moderate effect sizes across the three domains assessed. These findings highlight the potential of the protocol as an effective mental health care strategy and underscore the relevance of structured somatic interventions in promoting self-regulation resources and well-being in crisis contexts.

These findings are in direct dialogue with the literature produced in the context of the pandemic, which points to high levels of psychological distress among healthcare professionals, characterized especially by fear, anxiety, stress, and exhaustion associated with work overload, continuous exposure to risk, and limited institutional support resources (LOTTA et al., 2020b; CONVERSANO; MARCHI; MINIATI, 2020). The pandemic has been described by many authors as an unprecedented intensive existential threat (ZAKA et al., 2020; TSAMAKIS et al., 2020; CONVERSANO; MARCHI; MINIATI, 2020; ORNELL et al., 2020). As highlighted in an editorial published in *The Lancet* (2020), although it is possible to expand physical infrastructure in emergency situations, the same does not apply to the training, qualification, and maintenance of professionals' mental health, which makes investment in psychological care strategies even more urgent.

In this sense, the Bodynamic approach proved particularly relevant to the context of a prolonged health crisis. By integrating body-oriented interventions focused on strengthening the Body Ego, the Observer Ego, and the Ego Functions—such as centering, grounding, boundaries, and energy management—the protocol fostered the development of internal resources for emotional and physiological self-regulation. Such resources are considered central within the Bodynamic approach for navigating critical situations, as they enhance the individual's capacity to sustain their professional role with lower psychological and bodily costs, even in adverse and prolonged scenarios marked by a persistent sense of threat.

It is important to highlight that the level of psychological distress observed in health emergencies is comparable to that identified in situations involving natural disasters or terrorist attacks (SPRANG; SILMAN, 2013), suggesting that the application of this protocol may also produce benefits in other contexts of crises and emergencies.

The results indicated not only statistically significant reductions in the mean scores of depression, anxiety, and stress, but also clinically relevant changes in symptom severity classification. A marked increase in normal classifications and a substantial reduction in severe and extremely severe levels were observed, especially in the stress subscale, in which no participant remained within the extremely severe range at the end of the intervention. These findings support the hypothesis that somatic interventions centered on conscious body activation and the strengthening of specific psychological skills may have a significant impact on reducing psychological distress in contexts of high emotional demand.

Although the statistical effect sizes were slightly smaller for stress compared to anxiety and depression, the analysis of symptomatology revealed that it was precisely in this domain that the most expressive changes in severity levels were observed. This finding reinforces the importance of considering not only overall statistical indicators, but also the clinical distribution of symptoms, especially in populations exposed to intense and continuous stressors, as occurred during the COVID-19 pandemic.

The qualitative data derived from clinical records, follow-up forms, and reports shared during supervision and peer consultation meetings also support the quantitative findings, indicating improvements in perceived well-being, reductions in psychosomatic complaints, and greater perception of internal resources among participants. Furthermore, the good adherence to the six-session protocol, both in the

phase preceding the research and during the research phase, suggests the feasibility and acceptability of the structured online intervention model, even within a context of professional overload and exhaustion.

With regard to the monitoring service, although the small number of respondents at the second assessment time point limited comparative analyses, the welcoming, guidance, and referral actions proved to be ethically relevant and aligned with recommendations in the literature, which emphasize the need to foster a culture of self-care, self-monitoring, and facilitated access to psychological support services (ORNELL et al., 2020; EL-HAGE et al., 2020). These initiatives are fundamental not only for the individual protection of professionals, but also for the sustainability of healthcare systems, considering the risks of prolonged psychological distress and work leave identified in previous studies (PETZOLD; PLAG; STRÖHLE, 2020).

Among the limitations of the study are the small sample size of participants who completed all stages of the assessment, the absence of a control group, and the inherent difficulties involved in conducting research in emergency contexts. Even so, the results obtained offer relevant contributions to Somatic Psychotherapies by highlighting the potential of Bodydynamic as an effective approach that is sensitive to the psychosocial demands of healthcare workers in crisis situations.

Finally, it is concluded that the protocol developed represents a promising mental health care strategy, applicable both in emergency contexts and in preventive and health promotion actions over the medium and long term. Investments in future research, using controlled designs and larger samples, may deepen the understanding of the mechanisms underlying somatic interventions and strengthen the empirical basis for their incorporation into public policies and institutional care programs for healthcare workers, as well as for other professionals working in crisis and emergency situations.

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## **Author contributions**

### **Zélia Maria de Oliveira Fajardini**

Conceptualization, Data Curation, Formal Analysis, Investigation, Methodology, Project Administration, Resources, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

### **Fernanda de Souza Brito**

Formal Analysis, Visualization, Writing – original draft (sections of the article), Writing – review & editing.

### **Andréa Maria de Carvalho Miranda**

Project Administration, Resources, Supervision, Writing – Original draft (partial contribution to a section of the manuscript).

## **Conflict of interest statement**

Zélia Maria de Oliveira Fajardini and Fernanda de Souza Brito declare no conflicts of interest.

Andréa Maria de Carvalho Miranda is Coordinator of Bodydynamic International Brasil and led the service that constituted the locus of this study. She did not participate in the management and validation of the data, the analysis of the results, or the preparation of the conclusions and final considerations of the research.

## **Data availability statement**

The dataset supporting the findings of this study is not publicly available.

## **AI use statement**

The artificial intelligence tool ChatGPT was used to review the standardization of references and verify the validity of links. The results of this verification were reviewed by a human.

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