

# PERSONALITY HARDINESS AND OCCUPATIONAL COPING STRATEGIES OF HOSPITAL MANAGERS DURING THE COVID-19 PANDEMIC

*Personalidade hardiness e estratégias de coping ocupacional de  
gestores hospitalares na pandemia de COVID-19*

*Personalidad de resistencia y estrategias de afrontamiento ocupacional  
de gestores hospitalarios en la pandemia de COVID-19*

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## SUMMARY

This descriptive and quantitative study assessed *Hardiness* personality and occupational *coping* strategies in 40 managers of public health institutions in northern Paraná during the 2021 COVID-19 pandemic. Data were collected using sociodemographic questionnaires, the *Hardiness* Scale, and the Occupational *Coping* Scale. There was a predominance of female participants (90%), mean age of 45 years, and a high level of education, with 47.5% of participants holding a postgraduate degree. In the *Hardiness* construct, the “challenge” domain was the most prominent, highlighting the ability to perceive changes as opportunities for growth. Regarding *coping* strategies, the “control” factor was the most frequently used, indicating active *coping* with adversity, while avoidance strategies were less frequent. The results demonstrate psychological resilience and adequate adaptation among managers, reinforcing the importance of institutional interventions aimed at strengthening resilience and effective *coping* strategies in crisis contexts.

**Keywords:** Health Management. Psychological Resilience. *Coping* Skills.

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## RESUMO

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Este estudo descritivo e quantitativo mensurou a personalidade *Hardiness* e as estratégias de *coping* ocupacional em 40 gestores de instituições públicas de saúde do norte do Paraná, durante a pandemia de COVID-19 em 2021. A coleta de dados ocorreu por meio de questionários sociodemográficos, da Escala *Hardiness* e da Escala de *Coping* Ocupacional. Houve predominância do sexo feminino (90%), média etária de 45 anos e elevada escolaridade, com 47,5% dos participantes com pós-graduação. No constructo *Hardiness*, o domínio “desafio” apresentou maior destaque, evidenciando a capacidade de perceber mudanças como oportunidades de crescimento. Quanto às estratégias de *coping*, o fator “controle” foi o mais utilizado, indicando enfrentamento ativo das adversidades, enquanto estratégias de esquiva foram menos frequentes. Os resultados demonstram resistência psicológica e adequada adaptação dos gestores, reforçando a importância de intervenções institucionais voltadas ao fortalecimento da resiliência e de estratégias eficazes de enfrentamento em contextos de crise.

**Palavras-chave:** Gestão em Saúde. Resiliência Psicológica. Capacidades de Enfrentamento.

## RESUMEN

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Este estudio descriptivo y cuantitativo midió la personalidad resistente y las estrategias de afrontamiento ocupacional en 40 gerentes de instituciones de salud pública del norte de Paraná, durante la pandemia de COVID-19 en 2021. La recopilación de datos se realizó mediante cuestionarios sociodemográficos, la Escala de Resistencia y la Escala de Afrontamiento Ocupacional. Se observó un predominio del sexo femenino (90%), con una edad promedio de 45 años y altos niveles de educación, y el 47,5% de los participantes poseían títulos de posgrado. En el constructo de Resistencia, el dominio "desafío" fue el más destacado, destacando la capacidad de percibir los cambios como oportunidades de crecimiento. En cuanto a las estrategias de afrontamiento, el factor "control" fue el más utilizado, indicando una confrontación activa de la adversidad, mientras que las estrategias de evitación fueron menos frecuentes. Los resultados demuestran resiliencia psicológica y una adecuada adaptación entre los gerentes, lo que refuerza la importancia de las intervenciones institucionales dirigidas a fortalecer la resiliencia y las estrategias de afrontamiento efectivas en contextos de crisis.

**Palabras clave:** Gestión de la salud. Resiliencia psicológica. Habilidades de afrontamiento.

## INTRODUCTION

The pandemic caused by *Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)* triggered one of the greatest health crises ever experienced by humanity. The high potential for spread and community transmission of Coronavirus Disease 2019 (COVID-19) in a short period of time affected several countries. In Brazil, the Unified Health System (SUS) was on the verge of collapse due to the high morbidity and mortality rates from the disease, which led to an overwhelming demand on health managers in the hospital setting regarding the management of human, physical, and material resources in healthcare institutions to address the pandemic crisis<sup>1</sup>.

In this context, managing health services during the pandemic, amid a tense organizational environment, resource shortages, fear and uncertainty surrounding the still poorly understood disease, and the emotional and psychological distress caused by the high number of deaths, exposed these professionals to risk factors for physical and psychological illness, particularly occupational stress<sup>2</sup>.

In the face of these stressful situations, which have deleterious consequences for health and negative repercussions on personal and work-related quality of life, the development of psychological resilience and *coping* strategies are mechanisms used to reduce or neutralize stress or psychological distress in individuals<sup>3</sup>.

A study in the field of cognitive-behavioral field points to psychological resilience, referred to in the international literature as “*hardiness*” or “*hardy personality*”— and *coping* strategies as solutions for overcoming various adverse stressful situations<sup>4</sup>.

*Hardiness* Personality refers to the presence of personality traits or individual characteristics that enable resilience in the face of negative events or stressful situations<sup>5</sup>. *Hardiness* Personality encompasses a range of characteristics defined across the dimensions of commitment, control, and challenge. In the commitment dimension, the individual's characteristic is based on involvement and appreciation for their own work, recognition of their own worth and abilities, and a sense of active participation and wholeness in what they set out to do, even in the face of adversity or stress<sup>5</sup>.

The control dimension, on the other hand, refers to the ability to seek answers regarding the origin of problems or the actions of others, allowing one to reflect on and reframe their own feelings in light of contextual analysis; it involves healthy self-control that prevents external actions or events beyond one's governance or control from influencing psychological and emotional stability<sup>5</sup>. Furthermore, the challenge dimension addresses the capacity for flexibility in the face of change. In this dimension, the individual views changes and new situations as opportunities for personal and professional growth and improvement, becoming tolerant of situations that generate conflict and stress<sup>5</sup>.

Occupational *coping* is the construct that refers to the set of individuals, intentional, cognitive, and behavioral measures used to confront or adapt to different stress-inducing circumstances. These reactions are linked to personal factors, contextual demands, and available resources<sup>6-7</sup>.

*Coping* strategies are subdivided into two categories: problem-focused *coping*, in which the individual addresses the source of the problem that caused the stress in an attempt to change it; and emotion-focused *coping*, which involves efforts to modulate stress-related feelings, thereby reducing the unpleasant physical sensations they generate<sup>6-7</sup>.

Given the challenges and adversity that the COVID-19 pandemic has brought to the Brazilian healthcare system and its professionals, it is believed that hospital administrators were subjected to conditions that triggered feelings of fear, uncertainty, and stress at work; therefore, it became necessary to conduct studies investigating the *coping* methods and psychological resilience utilized, and their repercussions on the health of these professionals.

Therefore, this study aims to answer the following research question: What levels of *Hardiness* and occupational *coping* did hospital managers exhibit during the COVID-19 pandemic? Its objective was to measure *Hardiness* and occupational *coping* strategies among hospital managers during the COVID-19 pandemic.

## METHOD

This was a descriptive epidemiological study<sup>8</sup> with a quantitative approach, cross-sectional design, and prospective nature, conducted in public health institutions providing secondary and tertiary hospital care in northern Paraná. It should be noted that this study was guided by the *Strengthening the Reporting of Observational Studies in Epidemiology* (STROBE) tool<sup>9</sup>.

Healthcare professionals who performed coordination functions in different sectors of the healthcare institutions were included as managers. These positions were identified according to the institutions' organizational structure, encompassing roles such as section heads, division heads, leaders, coordinators, directors, team leaders, and advisors.

A total of 74 health managers working in secondary and tertiary public hospital services in the municipality under study were identified; these institutions served as referral centers for the care of COVID-19 cases. All managers affiliated with these services were considered for participation in the study; however, only 40 met the eligibility criteria and were included in the study.

The eligibility criteria included holding coordination, supervision, management, or executive positions at health institutions for at least six months, having worked at institutions that implemented changes to

their care protocols to begin treating patients suspected or confirmed to have COVID-19, and not being on leave of any kind.

Data collection took place from April to September 2021, initially via an *online* questionnaire sent by *email* to the managers. The email contained an invitation to participate and a link to the questionnaire, which was preceded by the requirement to agree to participate in the study by signing the Informed Consent Form (ICF). To avoid *missing* data, all items were mandatory. The option to decline participation led to the end of the *online* page.

To collect data, three attempts were made to contact the managers via *email*, which were sent once a week. Due to the low participation rate in the study, data collection continued in person, in compliance with health guidelines for the prevention of COVID-19. Respondents received the questionnaires in printed form, and those who agreed to participate signed the informed consent form and completed the data collection instruments used in the study. Participants answered a questionnaire developed by the authors regarding sociodemographic and occupational characteristics, as well as the *Hardiness Scale* (HS) and the *Occupational Coping Scale* (OCS).

The sociodemographic and occupational variables were: gender, age, marital status, number of children, religion, regular physical activity, educational level, academic background, length of time working in the field, length of time and job role at the institution, weekly work hours, and work hours after the pandemic.

The *Hardiness Scale* (EH) is designed to assess the extent to which individuals exhibit *hardy* attitudes, that is, resilience or psychological resistance, when *coping* with stressful situations. It has been adapted for Brazilian Portuguese and demonstrates satisfactory internal consistency and construct validity, with a *Cronbach's alpha* of 0.73. It is a self-administered *Likert-type* scale with 30 items, with responses ranging from zero (0) "not at all true" to three (3) "completely true"<sup>10</sup>.

This scale is subdivided into three domains: Commitment: items 1, 6, 7, 11, 16, 17, 22, 27, 28, and 30; Control: items 2, 3, 8, 9, 12, 15, 18, 20, 25, and 29; and Challenge: items 4, 5, 10, 13, 14, 19, 21, 23, 24, and 26. To analyze the data from this instrument, the mean is calculated by domain, which is the sum of the scores assigned to each item within the same domain divided by the total number of items in that domain. Each domain has 10 items, 5 of which are reverse-scored. The domains are classified as "high" or "low" based on the mean score. An individual is considered "*hardy*" if they achieve high means<sup>10</sup> in all three domains.

The *Occupational Coping Scale* (ECO) has been translated and validated for the Brazilian context and exhibits internal reliability coefficients ranging from 0.77 to 0.81. It is also a *Likert-type* scale, consisting of 29 items with scores ranging from one (1) "I never do this" to five (5) "I always do this"<sup>11</sup>. The instrument is subdivided into three categories of stress *coping*: the control factor, consisting of 11 items (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11); avoidance factor: consisting of nine items (12, 13, 14, 15, 16, 17, 18, 19, 20); and symptom management factor: consisting of nine items (21, 22, 23, 24, 25, 26, 27, 28, 29). The results are derived from the scores of each ECO classification factor, calculated as the mean of the items comprising them. Thus, the factor with the highest mean will be considered the predominant one for each professional evaluated.

The data were analyzed using *IBM Statistical Package for Social Sciences* (SPSS) version 22.0. Sociodemographic and occupational characteristics were assessed using descriptive statistics, including measures of central tendency and dispersion for quantitative variables, and absolute and relative frequencies for categorical variables. To verify the normality of the data distribution, the *Kolmogorov-Smirnov* test was performed.

This study is part of the project titled "Healthcare Workers Facing the COVID-19 Pandemic". The participating institutions authorized the conduct of the research, and the development of this study followed research ethics principles, including approval by the Research Ethics Committee, under opinion no. 4.276.640 and CAAE: 35260620.0.0000.5231.

## RESULTS

Of the managers invited to participate in the study, 40 responded to the questionnaire, with 13 choosing to respond via the online platform and 27 responding to the printed questionnaire. One manager was on medical leave and one refused to participate in the study.

The sample was predominantly female (90%, N=36), married (70%, N=28), with children (80%, N=32), with a mean age of 45 years, and holding a post 's degree (47.5%, N=19).

Regarding the occupational characteristics of the managers, in terms of employment status, there was a predominance of civil servants (public office) at 90% (n=36), followed by positions of trust and fixed-term contracts, both at 5% (n=2). Another occupational characteristic of the participants was their length of service at the institution, with 37.5% (n=15) reporting more than 20 years, followed by 30% (n=12) with 11 to 20 years of service, 10% (n=25) for up to five years, and 7.5% (n=3) for 6 to 10 years.

The average number of hours worked by managers before the pandemic was 40 hours and 25 minutes, while after the pandemic, the average was 43 hours and 43 minutes.

The results regarding the *Hardiness* personality scale showed high averages in the challenge domain, as presented in Table 1.

**Table 1** - Descriptive statistics by domains of the *Hardiness* Scale, Londrina, 2026.

DOMAIN	MEAN	SD*	MINIMUM	MAXIMUM
COMMITMENT	12.8	2.5	8	19
CONTROL	14.2	2.6	9	21
CHALLENGE	15.2	3.2	9	23

**Source:** Author's own work, 2026.

Table 2 presents the descriptive statistics for each factor of the Occupational *Coping* Scale (OCS). Analyzing the mean of the three factors, it is evident that the control factor was the *coping* strategy most frequently used by hospital managers during the COVID-19 pandemic.

**Table 2** - Descriptive statistics by factor of the Occupational *Coping* Scale, Londrina, 2026.

FACTOR	MEAN	SD*	MIN	MAXIMUM
CONTROL	41.2	4.6	32	53
DODGE	19.3	5.1	9	29
MANAGEMENT	18.4	5.1	9	29

**Source:** Author's own work, 2026.

## DISCUSSION

The results of this study demonstrated a predominance of women among the participating hospital managers. This finding is consistent with the literature pointing to the feminization of the healthcare workforce, especially in nursing, a profession historically associated with care and predominantly composed of women.

The occupational environment exerts a significant influence on the mental health of healthcare workers, especially in contexts of health crises. During the COVID-19 pandemic, several studies identified a significant increase in symptoms of stress, anxiety, and burnout among healthcare professionals, associated with care overload, organizational changes, and the constant risk of infection. Furthermore, frontline professionals were exposed to high levels of emotional and physical stress during the pandemic period<sup>11</sup>.

In this context, understanding individual factors that contribute to adaptation and *coping* with these adversities becomes fundamental for promoting the mental health of healthcare professionals. Recent studies demonstrate that positive psychological characteristics, such as resilience, self-efficacy, and *coping* ability, act as protective factors against occupational stress in healthcare professionals<sup>12</sup>.

When analyzing *hardiness* among the managers participating in this study, it was found that the “challenge” domain had the highest mean score among the assessed components. This domain refers to the ability to perceive changes and adversities as opportunities for growth and learning, thereby facilitating adaptation in the face of adverse situations.

In the present study, *hardiness* scores were classified as low to moderate, a result similar to that found in recent studies with healthcare professionals during the COVID-19 pandemic, which indicated moderate levels of psychological resilience even in contexts of high occupational pressure<sup>13</sup>.

Regarding occupational *coping* strategies, it was observed that the control factor was the most frequently used among the evaluated hospital managers. This strategy is characterized by a focus on the problem and the active search for solutions to address the stressor.

Recent studies demonstrate that problem-solving-oriented *coping* strategies are frequently used by healthcare professionals in crisis situations and are associated with better psychological adaptation and a reduced impact of occupational stress<sup>14</sup>.

On the other hand, avoidance strategies are considered less effective in *coping* with occupational stress, as they involve distancing oneself from the problem or denying it without contributing to its resolution. Evidence suggests that avoidance strategies may be associated with greater psychological distress and poorer adaptation to work-related stress<sup>15</sup>. Strategies related to symptom management, in turn, may contribute to reducing physical and emotional manifestations of stress, especially when used in conjunction with problem-focused strategies.

During the COVID-19 pandemic, several factors contributed to increased occupational stress among healthcare professionals, including work overload, resource shortages, frequent changes in clinical protocols, and the ongoing risk of infection. In this context, institutional strategies aimed at strengthening mental health and supporting workers became essential for maintaining and strengthening the healthcare workforce<sup>16</sup>.

In the case of hospital managers, these challenges were exacerbated by the responsibility related to strategic decision-making, service organization, and team management in a scenario of high uncertainty. Thus, it is essential to expand discussions on *coping* strategies and interventions aimed at promoting the mental health of these professionals.

Among the study's limitations is the small sample size, which limits the generalizability of the results to the entire population of healthcare managers in Brazil, especially considering the regional and institutional variables that may influence the results. Another limitation was that the study was conducted during a specific period of the pandemic (2021), which may not reflect the managers' experiences in other phases of the pandemic or in future health crises. Therefore, further studies with broader samples and mixed methodologies are needed to deepen our understanding of how personal characteristics and *coping* strategies impact mental health and the management of health services in adverse contexts.

## CONCLUSIONS

The results indicated that, despite the intense adversities and stressful situations experienced by health managers during the COVID-19 pandemic, most managers demonstrated moderate levels of *Hardiness*, particularly in the “challenge” domain, suggesting that health managers possessed the psychological resilience

to view the pandemic as an opportunity for improvement, development, and innovation, whether on a personal or professional level.

Regarding *coping* strategies, the “control” factor stood out as the most frequently used, reflecting these professionals’ search for ways to actively manage stress and address the root cause of the problem to cope with the challenges imposed by the health crisis. The COVID-19 pandemic exposed hospital managers to extreme working conditions, and understanding their psychological and behavioral responses can provide important insights for developing interventions that promote the mental health and well-being of these professionals, not only in times of crisis but also in facing future challenges.

Given the relevance of *coping* strategies and the *hardy* personality to individuals’ emotional and psychological well-being, it is both challenging and necessary to implement institutional programs aimed at promoting the development of psychological resilience skills and characteristics, as well as stress *coping* strategies, so that management professionals can perform their work more effectively even in the face of crises, challenging, or stressful conditions.

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