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Psychological distress and coping strategies among Indonesian psychologists during the COVID-19 pandemic: a two-wave cross-lagged study

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ABSTRACT

Background: Psychologists play a crucial role in providing essential psychological aid to individuals navigating the challenges posed by the COVID-19 pandemic. However, studies focusing on the mental health of psychologists during the COVID-19 pandemic remain scarce. This study investigates the interaction between coping strategies and psychological distress among a group of Indonesian psychologists.

Methods: This longitudinal study was conducted over two-time points in 2021, with data collected from April 29 to June 23 and again from September 1 to October 23. A total of ninety-seven psychologists, predominantly female (91 out of 97), participated. The data was collected through an online survey, where participants completed the Indonesian version of the Depression, Anxiety, and Stress Scale-21 (DASS-21) and the Brief COPE questionnaire. Multiple regression analysis was used to perform cross-lag analyses on the data.

Results: The findings revealed that adaptive coping strategies were strong predictors of continued use of adaptive coping strategies six months later, while existing psychological distress strongly predicted future distress. Notably, maladaptive coping strategies demonstrated a similar pattern, predicting the continued use of maladaptive coping techniques over time, but they were also consistently associated with psychological distress across both time points, though they did not significantly predict future psychological distress.

Discussion: These findings shed light on the dynamic nature of coping strategies and psychological distress among psychologists, presenting significant implications for their support systems and

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mental health during the challenges posed by the pandemic. Future studies should focus on how psychologists can reduce maladaptive coping strategies to be better equipped to handle very stressful situations such as a pandemic. Additionally, researchers should explore effective interventions and programs that can be implemented to enhance adaptive coping mechanisms, ultimately improving overall psychological resilience and well-being during crises.

Introduction

The COVID-19 pandemic has had a significant global impact, causing many fatalities and leading to various consequences in personal lives and society. Low and middle-income countries, including Indonesia, have faced severe repercussions, both in terms of health and socioeconomic aspects. The Government of the Republic of Indonesia implemented a 'stay at home' policy from April 17, 2020, to December 21, 2020, to curb the transmission of the COVID-19 virus. The rapid and dangerous spread of the COVID-19 virus, coupled with the profound uncertainty surrounding the pandemic and the consequential alterations in daily life (e.g. activities, locations, schedules), can serve as stressors that harm individuals' mental well-being (Ching et al., 2021; Kaligis et al., 2020; Necho et al., 2021; Teixeira da Silva, 2021; Wang et al., 2020). Recognizing the crucial role of mental health in effectively addressing the challenges posed by the COVID-19 virus, the World Health Organization (WHO) has emphasized the significance of prioritizing mental health concerns.

Psychologists play a crucial role in providing psychological support and first aid to individuals struggling to cope with the pandemic's stressors, aiming to enhance their quality of life and overall well-being (Karekla et al., 2021). Given the challenges posed by COVID-19, psychologists are responsible for supporting other healthcare professionals and frontline workers through various individual, structural, and organizational interventions (Dyer et al., 2022). However, with a limited number of psychologists available and an increasing workload, they risk experiencing emotional burnout and distress (Tandon, 2020). Previous studies have shown that mental health professionals, including psychologists, psychiatrists, and nurses, face heightened anxiety, stress, sadness, restlessness, and other mental health issues while working in a COVID-19 environment (Gruber et al., 2021).

Research among Australian mental healthcare workers during the COVID-19 pandemic reveals that the crisis has negatively impacted various aspects of their lives, especially workplace culture and social activities. Northwood et al. (2021) reports that during the early stages of the pandemic, mental healthcare workers faced high levels of anxiety, depression, and professional burnout. Similarly, a study by Kane et al. (2022) of psychiatric and mental health services in ten European countries in 2021 found that the majority of workers felt their workload had increased due to the diversification of tasks and the added complexity of providing care. Nearly half reported greater difficulty in achieving a work-life balance, and many felt their health had been adversely affected by the crisis.

Adopting diverse coping strategies reduces anxiety and minimizes potential stress (Astari et al., 2022). Coping strategies can be categorized into two distinct types: adaptive

and maladaptive. Adaptive coping strategies have traditionally been found to positively influence individuals who employ them (Folayan et al., 2016), including increase in psychological resilience and self-reported satisfaction with life. Examples of adaptive coping strategies include religious or spiritual practices like prayer and scripture reading (Cairney et al., 2014), physical activities, meditation, music appreciation, and social interaction with friends and family (Feld & Shusterman, 2015). On the contrary, maladaptive coping refers to methods that often result in adverse consequences. Examples of maladaptive coping include drug use, excessive eating (Feld & Shusterman, 2015), and engagement in other detrimental behaviors. Historically, these coping strategies have been associated with negative effects on one's life, including the risk of addiction (Furnari et al., 2015). The number of adaptive coping strategies endorsed by respondents had a significant negative relationship with depression (Meyer et al., 2022). The use of maladaptive coping strategies was a unique predictor of both burden and psychological distress (Coomber & King, 2012).

Previous studies have documented the trajectory of psychological distress and found that serious distress experienced by adults becomes a strong predictor of serious distress after 15 months (Breslau et al., 2021). Regarding coping strategies, a study among people with traumatically acquired spinal cord injuries showed that coping strategies remained relatively stable over time (Pollard & Kennedy, 2007)

Research on the mental health of healthcare professionals during the COVID-19 pandemic has been abundant (e.g. Di Tella et al., 2020; Galbraith et al., 2021). However, limited attention has been given to the mental health of a specific group within psychologists. This gap is significant because psychologists play an essential role in mitigating the psychological impacts of the pandemic. Understanding their coping mechanisms and psychological distress levels is crucial, as their well-being directly influences their ability to support others effectively.

Addressing this gap, our study focuses on investigating the interrelated influence of coping strategies and psychological distress in a sample of Indonesian psychologists. We explore this dynamic relationship at two different time points through longitudinal research. The underlying theoretical basis of our study suggests that coping strategies and psychological distress mutually influence each other. For a detailed theoretical

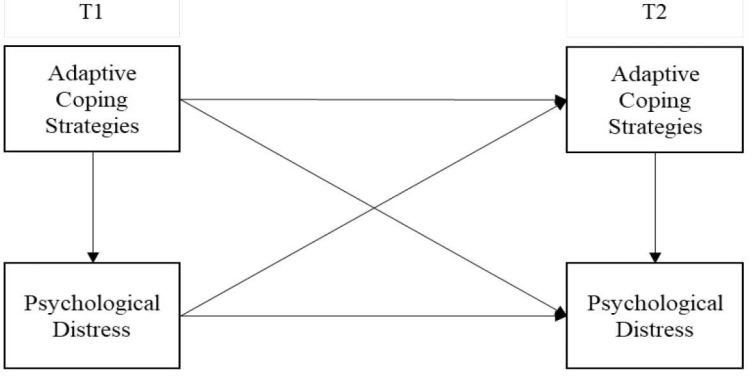

Figure 1. Conceptual framework of relationship between adaptive coping strategies and psychological distress.

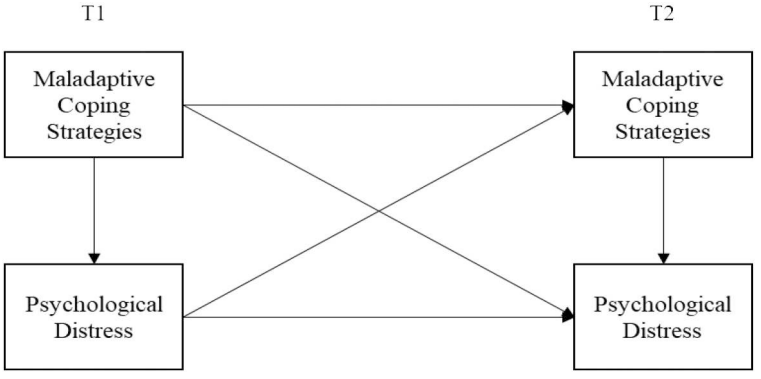

Figure 2. Conceptual framework of relationship between maladaptive coping strategies and psychological distress.

framework, please refer to Figure 1 (illustrating adaptive coping strategies) and Figure 2 (illustrating maladaptive coping strategies).

The necessity of this study is underscored by the lack of research on the mental health of psychologists during the pandemic. Addressing this gap can inform the development of targeted interventions to support this critical workforce. The practical purpose of the study is to identify effective coping strategies and potential areas for intervention to enhance the psychological resilience and well-being of psychologists during crises.

Methods

We preregistered our study on the Open Science Framework. The preregistration details can be accessed at https://osf.io/vzf7s.

Participants

The recruitment strategy for the first time point involved reaching out to a broad spectrum of Indonesian psychologists who offered online, offline, or mixed counseling services during the COVID-19 pandemic. We employed multiple channels for participant recruitment, including professional associations, online forums, social media, and email invitations. We provided comprehensive information about the study's objectives, procedures, and ethical considerations to enhance response rates and ensure sample representativeness. We emphasized the voluntary nature of participation, guaranteed confidentiality and anonymity, and directed interested psychologists to an online survey for consent and questionnaire completion. The first-wave recruitment yielded 172 participants.

For the second time point, we contacted participants who had completed the initial survey and expressed willingness to partake in the follow-up assessment. Personalized invitations underscored the importance of their continued involvement. We contacted them three times. To maintain respect for participants' voluntary decision-making, no further invitations were sent after the third follow-up.

The participants' ages ranged from 25 to 70 years old, with a mean age of 37.80 (SD = 9.83), and the majority were female (93.7%). Their working experience varied from 1 to 37 years, with an average of 7.60 years (SD = 7.14). A significant proportion of respondents (80.4%) reported having 1–10 years of professional experience. We compared the demographic characteristics of non-respondents (n = 65) to those of respondents. Non-respondents' ages ranged from 26 to 69 years, with a mean age of 37.38 (SD = 9.68). The gender distribution included 87.5% females. Their working experience ranged from 1 to 30 years, with a mean of 8 years (SD = 7.21), and 70.3% of non-responders reported having 1–10 years of professional experience. These similarities suggest that the dropout rate did not introduce significant biases into the sample.

Procedures

The Ethical Committee of Universitas Padjadjaran approved the research plan (Number 01/UN6.KEP/EC/2021). The longitudinal study was conducted over two-time points in 2021. The first time point takes place from April 29 to June 23, 2021, and the second from September 1 to October 23, 2021. During the first period, Indonesia experienced a surge in COVID-19 cases due to new variants, straining the healthcare system despite intensified measures. By the second period, cases and fatalities declined, reflecting the success of interventions and vaccination efforts. At each time point, participants were required to complete a set of online questionnaires, which typically took about 20 min to complete. To encourage participation and express our appreciation to the participants, we offered a token of gratitude in the form of a voucher valued at approximately $3. These vouchers were randomly awarded to 50 participants at each time point.

Measures

Psychological distress

Psychological distress was assessed using the Depression, Anxiety, and Stress Scale (DASS-21), which comprises three dimensions: depression, anxiety, and stress. Each dimension is evaluated through seven items, resulting in a total of 21 items. Participants were instructed to rate their agreement with each item using a 4-point Likert scale, ranging from '0' indicating no agreement or occurrence to '3' indicating complete agreement or frequent occurrence. The DASS-21 questionnaire has been validated in the Indonesian context. Confirmatory Factor Analysis (CFA) demonstrated that all DASS-21 items were valid, with the following fit indices: RMSEA = 0.076, CFI = 0.961, TLI = 0.955, and SRMR = 0.065. Additionally, the reliability results were satisfactory, ranging from 0.850–0.923 (Nada et al., 2022). Sample items from the questionnaire include 'I couldn't seem to experience any positive feeling at all' (Depression), 'I was aware of dryness of my mouth' (Anxiety), and 'I found it hard to wind down' (Stress). The internal consistency in the current samples was .91 in the first time point and .92 in the second time point. The total score on the DASS-21 represents the level of general psychological distress, where higher scores indicate greater psychological distress.

Coping strategies

The Brief COPE questionnaire consists of 28 items designed to assess two distinct aspects of coping strategies: Adaptive Coping and Maladaptive Coping. Adaptive Coping encompasses seven dimensions: Active Coping, Emotional Support, Use of Informational Support, Positive Reframing, Planning, Acceptance, and Religious Coping. In contrast, Maladaptive Coping comprises seven dimensions: Self-Distraction, Denial, Substance Use, Behavioral Disengagement, Venting, Self-blame, and Humor. Each dimension is represented by two items, resulting in a total of 14 dimensions. Participants were required to rate the frequency of their engagement in each coping strategy using a 4-point Likert scale, where '1' indicates 'I usually don't do this,' and '4' indicates 'I do this often.' The validation process for the Indonesian version of the questionnaire was completed by Huda et al. (2022) Confirmatory Factor Analysis (CFA) demonstrated that the construct met the criteria for a good fit, with indicators showing CFI = 0.952, NFI = 0.950, GFI = 0.953, RMR = 0.027, and RMSEA = 0.075. The internal consistency coefficients for the Adaptive Coping were found to be .89 in the first time point and .82 in the second time point. The internal consistency coefficients for the Maladaptive Coping aspect were found to be .64 in the first time point and .72 in the second time point. Scores for adaptive and maladaptive coping were calculated individually and then summed for each participant. Higher scores indicate a greater use of the respective coping style, whether adaptive or maladaptive.

Data analysis

Descriptive statistics, such as numbers and percentages, were utilized to describe the demographic data. The score of DASS-21 and the Brief COPE were analyzed using descriptive statistics, including mean and standard deviation. Pearson correlation analysis was performed to examine the relationships between the variables. The statistical analysis was conducted using SPSS Statistics version 24. To test the hypotheses, multiple regression analysis was employed Kenny (2014), and the path coefficients and *p*-values for the relevant cross-lag pairs generated using SPSS software.

This study examines four regression models to understand the relationship between coping strategies and psychological distress over time. In Model 1, adaptive coping at T2 is predicted by adaptive coping at T1 and DASS at T1. The assumptions for this model include linearity of the phenomenon measured (VIF = 1.08), constant variance of the error terms, normality of the error term distribution, and independence of the error terms (Durbin Watson = 1.76). Model 2 investigates DASS at T2, predicted by adaptive coping at T1 and DASS at T1, with assumptions of linearity (VIF = 1.08), constant variance of the error terms, normality of the error term distribution, and independence of the error terms (Durbin Watson = 1.85). Model 3 focuses on maladaptive coping at T2, predicted by maladaptive coping at T1 and DASS at T1. The assumptions for this model include linearity of the phenomenon measured (VIF = 1.12), constant variance of the error terms, normality of the error term distribution, and independence of the error terms (Durbin Watson = 1.90). Finally, Model 4 examines DASS at T2, predicted by maladaptive coping at T1 and DASS at T1, with assumptions of linearity (VIF = 1.12), constant variance of the error terms, normality of the error term distribution, and independence of the error terms (Durbin Watson = 1.85). Overall, the assumptions of

linearity, constant variance, normality, and independence of error terms are satisfactorily met for all models.

Result

The final sample comprised 97 Indonesian psychologists, resulting in a dropout rate of 43.60%.

Descriptive statistics and correlation between age, coping strategies and psychological distress overtime

Table 1 illustrates the descriptive statistics and intercorrelation between age, coping strategies and psychological distress overtime. There was a negative correlation between age and psychological distress, both in T1 ($r = -0.27$) and T2 ($r = -0.33$). There was a positive correlation between Adaptive Coping Strategies at T1 and T2 ($r = 0.80$). Maladaptive Coping Strategies at T1 were positively correlated with Maladaptive Coping Strategies at T2 ($r = 0.64$). Regarding psychological distress, psychological distress at T1 was positively correlated with psychological distress at T2 ($r = 0.72$).

Adaptive coping strategies at T1 had correlated negatively with psychological distress at T1 ($r = -0.27$) and with psychological distress at T2 ($r = -0.24$). Maladaptive coping strategies at T1 correlated positively with psychological distress at T1 ($r = .33$) and T2 ($r = .27$). Maladaptive coping strategies at T2 correlated positively with psychological distress at T1 ($r = 0.35$) and T2 ($r = 0.51$).

Cross-lagged analysis of adaptive and maladaptive coping strategies and psychological distress

Figure 3 illustrates the path analysis examining the relationships between adaptive coping mechanisms and psychological distress (measured by DASS) across two-time points (T1 and T2). At T1, a significant negative correlation ($r = -0.27^{*}$) indicates that higher adaptive coping is associated with lower psychological distress. Over time, adaptive coping mechanisms at T1 significantly predict adaptive coping at T2 ($\beta = 0.81^{*}$), and psychological distress at T1 significantly predicts distress at T2 ($\beta = 0.72^{*}$), suggesting strong stability within each variable. However, the cross-lagged paths between coping mechanisms and distress across time are not significant.

Table 1. Descriptive statistics and correlation between age, coping strategies and psychological distress overtime.

	M (SD)	1	2	3	4	5	6
1. Age	37.80 (9.83)	–	–	–	–	–	–
2. T1 Adaptive Coping Strategies	48.92 (5.74)	0.12	–	–	–	–	–
3. T1 Maladaptive Coping Strategies	28.21 (4.17)	−0.10	0.29**	–	–	–	–
4. T1 Psychological Distress	9.43 (8.32)	−0.27**	−0.27*	0.33**	–	–	–
5. T2 Adaptive Coping Strategies	47.30 (5.09)	0.01	0.80**	0.20*	−0.14	–	–
6. T2 Maladaptive Coping Strategies	26.72 (4.24)	−0.18	0.14	0.64**	0.35**	0.24*	–
7. T2 Psychological Distress	10.71 (9.21)	−0.33**	0.24	0.30**	0.72**	−0.13	0.53**

Note: T1 = Time Point 1, T2 = Time point 2; *$p < 0.05$; **$p < 0.01$

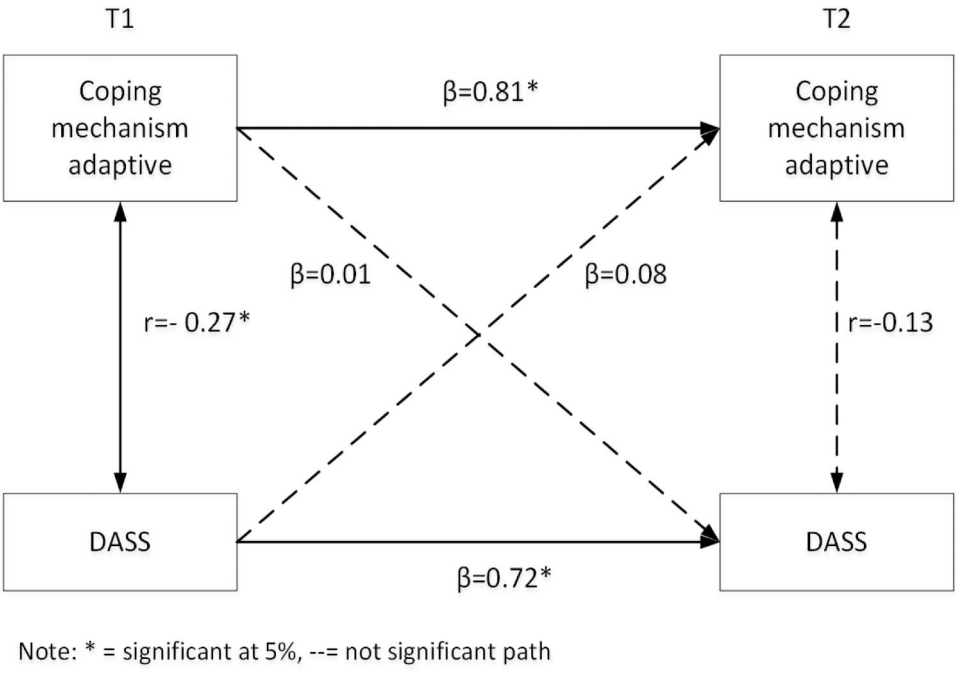

Figure 3. Cross-lagged analysis of adaptive coping strategies and psychological distress.

Specifically, adaptive coping at T1 does not significantly predict distress at T2 (β = 0.08), and distress at T1 does not significantly predict coping mechanisms at T2 (β = 0.01). Additionally, the correlation between adaptive coping and distress at T2 is also not significant (r = −0.13). In summary, while adaptive coping strategies are stable over time and associated with lower distress concurrently, their long-term predictive impact on reducing psychological distress is limited.

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Figure 4 illustrates the path analysis examining the relationships between maladaptive coping mechanisms and psychological distress (measured by DASS) across two-time points (T1 and T2). At T1, there is a significant positive correlation (r = 0.33*), indicating that higher maladaptive coping is associated with higher psychological distress. Over time, maladaptive coping mechanisms at T1 significantly predict maladaptive coping at T2 (β = 0.57*), and psychological distress at T1 significantly predicts distress at T2 (β = 0.64*), suggesting strong temporal stability within both variables. However, the cross-lagged paths are not significant. Specifically, maladaptive coping at T1 does not significantly predict distress at T2 (β = 0.16), and distress at T1 does not significantly predict maladaptive coping mechanisms at T2 (β = 0.04). At T2, there remains a significant positive correlation (r = 0.53*), indicating a continued association between higher maladaptive coping and higher psychological distress. In summary, while adaptive coping is concurrently associated with lower distress, maladaptive coping consistently shows a link with higher distress over time. Nevertheless, like adaptive coping, maladaptive strategies exhibit

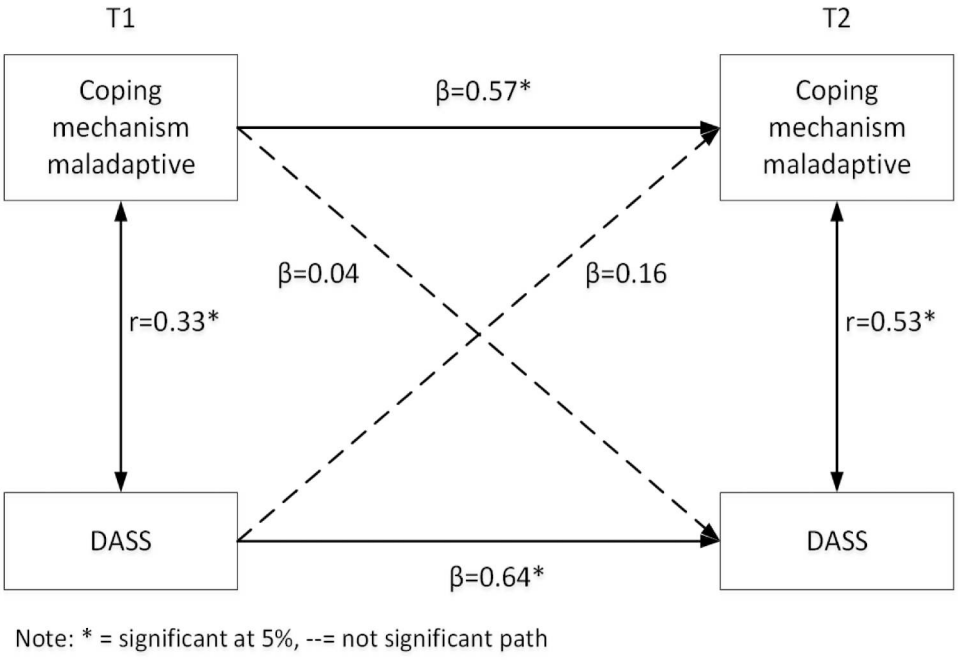

Figure 4. Cross-lagged analysis of maladaptive coping strategies and psychological distress.

limited predictive power for future distress levels. Thus, although maladaptive coping patterns remain stable over time, their impact on distress is unlikely to diminish.

Discussion

The present study aims to investigate the interrelated influence relationship between coping strategies and psychological distress in a sample of Indonesian psychologists. The findings reveal that adaptive coping strategies predict future adaptive coping strategies six months later, while psychological distress consistently predicts subsequent psychological distress. However, a distinct pattern emerges with maladaptive coping. In addition to predicting future maladaptive coping strategies, maladaptive coping shows a strong association with psychological distress at both time points, although it does not significantly predict future psychological distress.

The results corroborate the notion that both adaptive and maladaptive coping strategies can predict future coping behaviors. These findings are consistent with research by Nielsen and Knardahl (2014) conducted outside the context of COVID-19, which revealed a high degree of stability in coping strategies over a two-year period. Our study supports the idea that coping strategies exhibit some trait-like characteristics, as suggested by Nielsen and Knardahl (2014), although they may be less stable over time compared to personality traits, as noted by Carver and Connor-Smith (2010). This suggests individuals can develop and enhance their coping mechanisms to deal with stressors and challenges more effectively.

Psychological distress has been recognized as a predictor of subsequent psychological distress. This correlation is supported by a longitudinal study by Baykiz et al. (2023)

involving COVID-19 patients, where it was observed that the relative DASS-21 scores tended to maintain similar levels of severity over time. This finding is consistent with the conclusions of Lovibond (1998), indicating enduring stability in depression, anxiety, and stress syndromes over a period spanning from 2 to 8 years.

An interesting finding from our study is the stability of maladaptive coping over time. Maladaptive coping remains consistently associated with psychological distress across both time points, indicating its persistence in contributing to distress. In contrast, adaptive coping shows a weaker and less stable pattern, with a significant correlation with psychological distress only in the first wave, but not in the later wave. This highlights the enduring impact of maladaptive coping on distress, while adaptive coping's influence appears more limited and short-lived. This finding aligns with Smida et al. (2021), who reported that among medical residents, maladaptive coping was correlated with all indices of increased psychological distress-depression, anxiety, and stress-while adaptive coping showed no such correlation. Beyond the context of COVID-19, our results are also consistent with prior research by Aldao et al. (2010) and (Aldao & Nolen-Hoeksema, 2010, 2012), which found a stronger association between maladaptive coping strategies and psychopathology compared to the weaker relationship observed between adaptive strategies and psychopathology. Maladaptive strategies (e.g. rumination, suppression, avoidance) also appear to be more rigid and stable over time (Aldao et al., 2010). It is plausible that, in both everyday life and during extreme events like a pandemic, individuals may possess adaptive coping mechanisms but struggle to effectively utilize them under high levels of stress, thereby reducing their ability to mitigate psychological distress.

The result that maladaptive coping consistently predicts psychological distress underscores the need for interventions aimed at reducing maladaptive coping strategies. Proven examples in the literature include dialectical behavior therapy (DBT) and the Optimal Health Program (OHP). DBT has been effective in helping patients with borderline personality disorder reduce maladaptive coping and enhance adaptive coping (Southward et al., 2023). The OHP successfully improved adaptive coping behaviors and decreased maladaptive coping behaviors among stroke patients within 12 months (Sheth et al., 2023).

If we compare the psychological distress scores in our sample with those of other populations from relatively similar periods—such as healthcare workers in India (Sreenivasan et al., 2024), working women in Pakistan (Akbar & Ghazal, 2023), and secondary school students in North Macedonia (Naumova, 2022)—we find that our population has lower scores. Although a comparison between our sample and these samples should be taken carefully, this difference can be understood from two perspectives: First, as a collectivist society (Triandis, 1995), Indonesia aligns with Siu and Chang's (2011) findings that family support is a key factor in reducing depressive symptoms, a prominent indicator of psychological distress. In collectivist cultures, close-knit family ties often provide emotional and social support, helping individuals manage stress and anxiety more effectively. Second, religious coping mechanisms might play a significant role in Indonesia. In Indonesian society, religious practices are deeply embedded in daily life and provide a source of emotional resilience. As highlighted by Rochmawati et al. (2018), activities such as prayer, singing or playing religious music, reading sacred texts, attending religious lectures, and donating to those in need (Marchira et al., 2016; Permana, 2018) are common coping strategies. During the COVID-19 pandemic, Hakim (2020) found

that the general population in Indonesia widely used religious practices12314. to maintain emotional stability.

In terms of demographic background, our analysis reveals a negative correlation between age and psychological distress, which is evident in both the initial and subsequent waves of our study. The mean age of participants closely reflects the demographic profile of most psychologists, who primarily fall within the 21–40 age range (https://data.ipkindonesia.or.id/). Younger age emerges as a significant factor influencing levels of depression, anxiety, and stress during a pandemic. This finding contrasts with Sheikhbardsiri et al. (2021), which found no correlation between age and these psychological distress indices. Nonetheless, our results align with existing research indicating that younger individuals experience higher levels of depression, anxiety, and stress during such crises (Hudan et al., 2022; Mautong et al., 2021; Seco Ferreira et al., 2020; Tee et al., 2020). This aligns with previous findings indicating an inverse relationship between age and the severity of depression, anxiety, and stress symptoms. One plausible explanation for this pattern is that younger individuals may be more susceptible to the economic and employment repercussions of the pandemic (Caqueo-Urízar et al., 2020; Wang et al., 2020). Furthermore, exposure to predominantly negative news coverage of COVID-19, particularly prevalent on social media platforms, could exacerbate mental health challenges among the younger demographic (Cao et al., 2020). Interestingly, despite older individuals being often classified as a high-risk population, advanced age emerges as a protective factor against psychological distress. This protective effect may be attributed to accumulated life experience (Ardelt et al., 2013) and a potentially reduced fear of illness and mortality (e.g. Fortner et al., 2000).

Our study presents several significant strengths. Firstly, employing a longitudinal approach allows us to establish a causal relationship between coping strategies and psychological distress. Secondly, while numerous studies have explored various populations, research specifically focusing on psychologists as essential mental health professionals during the COVID-19 pandemic remains scarce. Therefore, our study represents a pioneering effort in this regard, particularly within the Asian context.

However, it is important to acknowledge certain limitations. Firstly, attrition in our study cohort highlights a challenge, emphasizing the importance of addressing this issue in future research. While the dropout rate is relatively high, it falls within an acceptable range for longitudinal studies, especially given the ongoing challenges posed by the COVID-19 pandemic during the data collection period (e.g. Jarden et al., 2023). Importantly, we compared demographic characteristics between respondents and non-respondents and found no significant differences in age, gender, or professional experience, suggesting that attrition did not introduce substantial bias into our findings. To mitigate attrition, we suggest clear communication and informed consent, regular updates, flexible scheduling, incentives, rapport-building, and streamlined procedures with reminders. Thus, in-person procedures are recommended for future studies. Secondly, it is essential to consider the impact of the pandemic on symptoms reflected in the DASS. The prevailing uncertainty during this period suggests a likelihood of heightened levels of anxiety and stress. Additionally, the generalizability of the results to other populations or settings may be limited. The specific context of Indonesian psychologists, as well as the unique stressors presented by the COVID-19 pandemic, may not be directly applicable to other groups or different cultural settings. Future research should aim to

replicate these findings in diverse populations and contexts to enhance the external validity of the results.

In conclusion, the findings suggest that coping mechanisms, both adaptive and maladaptive, exhibit stability over time, with individuals tending to maintain their established coping patterns. While adaptive coping strategies were predictive of their future use, psychological distress remained a significant predictor of their own persistence. Interestingly, maladaptive coping strategies, though associated with psychological distress at both time points, did not predict future psychological distress, indicating a complex relationship between coping styles and mental health outcomes. Younger individuals experienced higher levels of distress, likely due to the economic and social impacts of the pandemic, making them the most vulnerable group.

Future research should focus on mitigating maladaptive coping mechanisms and enhancing adaptive coping mechanisms among practicing psychologists. A key focus could be to study the effect of family-based support interventions, which aim to improve family members (or friends') emotional understanding and support, helping psychologists manage stress more effectively. Additionally, community-driven programs, such as peer support groups or outreach activities, may prove valuable in reducing stress and preventing burnout. Specifically for the Indonesian context, integrating religious coping mechanisms into these interventions could further strengthen emotional resilience during crises, offering a holistic approach to supporting psychologists in high-stress environments. Effective interventions should be structured, evidence-based, and specifically tailored to address psychologists' unique challenges in these settings. Workshops and training sessions can be pivotal in increasing awareness of maladaptive coping patterns while equipping participants with practical strategies for identifying and addressing these behaviors effectively. Moreover, regular mental health assessments—whether mandatory or voluntary—can aid in the early detection of stress and maladaptive coping mechanisms, enabling timely and targeted intervention. Aligning these interventions with culturally relevant practices, such as prayer, communal support, and spiritual reflection, can foster greater acceptance, active participation, and long-term effectiveness. This culturally sensitive approach not only mitigates immediate stressors but also strengthens connections to meaningful and locally resonant coping strategies. To advance this field, future studies should explore integrated interventions combining adaptive coping mechanisms with family- and community-based support systems to address psychological distress comprehensively. Furthermore, investigating the mediating role of organizational support in reducing maladaptive coping strategies among psychologists could yield valuable insights, paving the way for systemic and sustainable improvements in psychologists' well-being.

For psychologists in training, embedding coping strategy education into academic curricula can better prepare future professionals to proactively identify and address maladaptive patterns. Interactive methods, such as role-playing exercises and case studies, offer trainees valuable opportunities to cultivate self-awareness and practice adaptive coping skills in a safe and controlled setting. Reflective practices, including journaling and guided supervision sessions, further encourage trainees to examine their emotional responses and coping mechanisms over time critically.

Replicating this study on a global scale is essential to validate and generalize the findings across diverse cultural, social, and professional contexts. Expanding the scope of these studies to include other mental health professionals, such as psychiatrists,

counselors, and social workers, can provide a broader understanding of stress and coping dynamics within the mental health workforce. This comparative approach can uncover profession-specific stressors and tailor interventions accordingly. Furthermore, future research should explore the applicability of these findings beyond Indonesian psychologists, specifically investigating whether the observed patterns hold true in non-Indonesian and non-psychologist populations.

Informed consent

Informed consent was obtained from all subjects involved in the study.

Author's contribution

FAA, AGP, and JKT designed the longitudinal study; ESK conducted the initial and follow-up data collection; EF performed the data analysis; FAA and AGP contributed to the interpretation of the results; FAA and JKT drafted and revised the manuscript. All authors have read and agreed to the published version of the manuscript.

Institutional review board statement

The study was conducted in accordance with the Declaration of Helsinki and was approved by an Institutional Review Board/Ethics Committee. See details under Methods.

Declaration of generative AI in scientific writing

During the preparation of this work, the authors used ChatGPT 4.0 to improve the grammar of the manuscript, as English is not the authors' first language. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Disclosure statement

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Data availability

Data supporting the findings of this study are available at https://osf.io/phm8s.

References

Akbar, S., & Ghazal, P. (2023). The mental health of working women after the COVID-19 pandemic: An assessment of the effect of the rise in sexual harassment during the pandemic on

the mental health of Pakistani women using DASS-21. *Frontiers in Psychiatry*, *14*. https://doi.org/10.3389/fpsyt.2023.1119932

Aldao, A., & Nolen-Hoeksema, S. (2010). Specificity of cognitive emotion regulation strategies: A transdiagnostic examination. *Behaviour Research and Therapy*, *48*(10), 974–983. https://doi.org/10.1016/j.brat.2010.06.002

Aldao, A., & Nolen-Hoeksema, S. (2012). When are adaptive strategies most predictive of psychopathology? *Journal of Abnormal Psychology*, *121*(1), 276–281. https://doi.org/10.1037/a0023598

Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, *30*(2), 217–237. https://doi.org/10.1016/j.cpr.2009.11.004

Ardelt, M., Landes, S. D., Gerlach, K. R., & Fox, L. P. (2013). Rediscovering internal strengths of the aged: The beneficial impact of wisdom, mastery, purpose in life, and spirituality on aging well. In J. D. Sinnott (Ed.), *Positive psychology: Advances in understanding adult motivation* (pp. 97–119). Springer Science + Business Media. https://doi.org/10.1007/978-1-4614-7282-7_7

Astari, R. Y., Hijriani, H., & Natalia, L. (2022). Correlation between psychological distress and coping mechanism strategy among health workers with confirmed COVID-19. *Indonesian Nursing Journal of Education and Clinic (INJEC)*, *7*(1), 43. https://doi.org/10.24990/injec.v7i1.448

Baykiz, D., Polat, I., Govdeli, E. A., Ozer, P. K., Karaayvaz, E. B., Koroglu, S. B., Catma, Y., Medetalibeyoglu, A., Umman, B., Tukek, T., & Bugra, Z. (2023). Evaluation of depression, anxiety, and stress symptoms and their relationship with subclinical myocardial dysfunction by left ventricular global longitudinal strain in patients who recovered from COVID-19. *The American Journal of the Medical Sciences*, *365*(2), 130–144. https://doi.org/10.1016/j.amjms.2022.09.003

Breslau, J., Finucane, M. L., Locker, A. R., Baird, M. D., Roth, E. A., & Collins, R. L. (2021). A longitudinal study of psychological distress in the United States before and during the COVID-19 pandemic. *Preventive Medicine*, *143*, 106362. https://doi.org/10.1016/j.ypmed.2020.106362

Cairney, J., Kwan, M. Y., Veldhuizen, S., & Faulkner, G. E. (2014). Who uses exercise as a coping strategy for stress? Results from a national survey of Canadians. *Journal of Physical Activity and Health*, *11*(5), 908–916. https://doi.org/10.1123/jpah.2012-0107

Cao, Z., Zhang, Q., Lu, X., Pfeiffer, D., Jia, Z., Song, H., & Zeng, D. D. (2020). Estimating the effective reproduction number of the 2019-nCoV in China. *MedRxiv*. https://doi.org/10.1101/2020.01.27.20018952

Caqueo-Urízar, A., Urzúa, A., Aragón-Caqueo, D., Charles, C. H., El-Khatib, Z., Otu, A., & Yaya, S. (2020). Mental health and the COVID-19 pandemic in Chile. *Psychological Trauma: Theory, Research, Practice, and Policy*, *12*(5), 521–523. https://doi.org/10.1037/tra0000753

Carver, C. S., & Connor-Smith, J. (2010). Personality and coping. *Annual Review of Psychology*, *61*(1), 679–704. https://doi.org/10.1146/annurev.psych.093008.100352

Ching, S. M., Ng, K. Y., Lee, K. W., Yee, A., Lim, P. Y., Ranita, H., Devaraj, N. K., Ooi, P. B., & Cheong, A. T. (2021). Psychological distress among healthcare providers during COVID-19 in Asia: Systematic review and meta-analysis. *PLoS One*, *16*(10), e025798357983. https://doi.org/10.1371/journal.pone.0257983

Coomber, K., & King, R. M. (2012). Coping strategies and social support as predictors and mediators of eating disorder carer burden and psychological distress. *Social Psychiatry and Psychiatric Epidemiology*, *47*(5), 789–796. https://doi.org/10.1007/s00127-011-0384-6

Di Tella, M., Romeo, A., Benfante, A., & Castelli, L. (2020). Mental health of healthcare workers during the COVID-19 pandemic in Italy. *Journal of Evaluation in Clinical Practice*, *26*(6), 1583–1587. https://doi.org/10.1111/jep.13444

Dyer, K. F. W., Shannon, C., McCann, L., Mitchell, S., Kerrigan, K., McClements, R., Kelly, C., & Jordan, J.-A. (2022). Psychological support for healthcare workers during the COVID-19 pandemic: A mixed methods study involving support providers. *European Journal of Psychotraumatology*, *13*(2), 2151282. https://doi.org/10.1080/20008066.2022.2151282

Feld, L. D., & Shusterman, A. (2015). Into the pressure cooker: Student stress in college preparatory high schools. *Journal of Adolescence*, *41*(1), 31–42. https://doi.org/10.1016/j.adolescence.2015.02.003

Folayan, M. O., Harrison, A., Brown, B., Odetoyinbo, M., Stockman, J. K., Ajuwon, A. J., & Cáceres, C. F. (2016). Associations between forced sexual initiation, HIV status, sexual risk behavior, life stressors, and coping strategies among adolescents in Nigeria. *PLoS One*, *11*(5), e0155210. https://doi.org/10.1371/journal.pone.0155210

Fortner, B. V., Neimeyer, R. A., & Rybarczyk, B. (2000). Correlates of death anxiety in older adults: A comprehensive review. In A. Tomer (Ed.), *Death attitudes and the older adult: Theories, concepts, and applications* (pp. 95–108). Brunner-Routledge.

Furnari, M., Epstein, D. H., Phillips, K. A., Jobes, M. L., Kowalczyk, W. J., Vahabzadeh, M., Lin, J.-L., & Preston, K. L. (2015). Some of the people, some of the time: Field evidence for associations and dissociations between stress and drug use. *Psychopharmacology*, *232*(19), 3529–3537. https://doi.org/10.1007/s00213-015-3998-7

Galbraith, N., Boyda, D., McFeeters, D., & Hassan, T. (2021). The mental health of doctors during the COVID-19 pandemic. *BJPsych Bulletin*, *45*(2), 93–97. https://doi.org/10.1192/bjb.2020.44

Gruber, J., Prinstein, M. J., Clark, L. A., Rottenberg, J., Abramowitz, J. S., Albano, A. M., Aldao, A., Borelli, J. L., Chung, T., Davila, J., Forbes, E. E., Gee, D. G., Hall, G. C. N., Hallion, L. S., Hinshaw, S. P., Hofmann, S. G., Hollon, S. D., Joormann, J., Kazdin, A. E., … Weinstock, L. M. (2021). Mental health and clinical psychological science in the time of COVID-19: Challenges, opportunities, and a call to action. *American Psychologist*, *76*(3), 409–426. https://doi.org/10.1037/amp0000707

Hakim, M. A. (2020). Dampak psikologis wabah COVID-19 di Indonesia.

Huda, N., Lin, Y.-K., Shaw, M. K., Hsu, Y.-Y., & Chang, H.-J. (2022). Psychometric properties and cross-cultural adaptation of the Indonesian version of the brief COPE in a sample of advanced cancer patients. *PLoS One*, *17*(11), e0275083. https://doi.org/10.1371/journal.pone.0275083

Hudan, N. M., Ekiyanti, K., Sania, R. A., Athiyyah, A. F., Sari, D. R., & Rochmanti, M. (2022). Depression, anxiety, and stress among general population due to COVID-19 pandemic in several countries: A review article. *World Journal of Advanced Research and Reviews*, *13*(1), 391–397. https://doi.org/10.30574/wjarr.2022.13.1.0037

Jarden, R. J., Jarden, A. J., Weiland, T. J., Taylor, G., Brockenshire, N., Rutherford, M., … Gerdtz, M. (2023). Nurses' well-being during the coronavirus (2019) pandemic: A longitudinal mixed-methods study. *Nursing Open*, *10*(1), 24–35. https://doi.org/10.1002/nop2.1275

Kaligis, F., Indraswari, M. T., & Ismail, R. I. (2020). Stress during COVID-19 pandemic: Mental health condition in Indonesia. *Medical Journal of Indonesia*, *29*(4), 436–441. https://doi.org/10.13181/mji.bc.204640

Kane, H., Baumgart, J. G., Rusch, E., Deloyer, J., Fuenzalida, C., Kelemen, G., Krzystanek, M., Marazziti, D., Moraitou, M., Reunanen, M., Shyhrete, R., Thome, J., Verwaest, W., Fond-Harmant, L., & Denis, F. (2022). The impact of COVID-19 on psychiatric and mental health services in Europe: Suffering experienced by professionals. *BMC Health Services Research*, *22*(1), 1360. https://doi.org/10.1186/s12913-022-08776-8

Karekla, M., Höfer, S., Plantade-Gipch, A., Neto, D. D., Schjødt, B., David, D., Schütz, C., Eleftheriou, A., Pappová, P. K., Lowet, K., McCracken, L., Sargautytė, R., Scharnhorst, J., & Hart, J. (2021). The role of psychologists in healthcare during the COVID-19 pandemic. *European Journal of Psychology Open*, *80*(1–2), 5–17. https://doi.org/10.1024/2673-8627/a000003

Kenny, D. A. (2014). Cross-lagged panel design. In N. Balakrishnan, T. Colton, B. Everitt, W. Piegorsch, F. Rugerri, & J. L. Teugels (Eds.), *Wiley StatsRef: Statistics reference online* (pp. 450–451). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781118445112.stat06464.

Lovibond, P. F. (1998). Long-term stability of depression, anxiety, and stress syndromes. *Journal of Abnormal Psychology*, *107*(3), 520–526. https://doi.org/10.1037/0021-843X.107.3.520

Marchira, C. R., Supriyanto, I., Subandi, Soewadi, & Good, B. J. (2016). The association between duration of untreated psychosis in first psychotic episode patients and help seeking behaviors in

Jogjakarta, Indonesia. *International Journal of Culture and Mental Health*, *9*(2), 120–126. https://doi.org/10.1080/17542863.2015.1103276

Mautong, H., Gallardo-Rumbea, J. A., Alvarado-Villa, G. E., Fernández-Cadena, J. C., Andrade-Molina, D., Orellana-Román, C. E., & Cherrez-Ojeda, I. (2021). Assessment of depression, anxiety and stress levels in the Ecuadorian general population during social isolation due to the COVID-19 outbreak: A cross-sectional study. *BMC Psychiatry*, *21*(1), 212. https://doi.org/10.1186/s12888-021-03214-1

Meyer, C., El-Haj-Mohamad, R., Stammel, N., Lotzin, A., Schäfer, I., Knaevelsrud, C., & Böttche, M. (2022). Associations of depressive symptoms, COVID-19-related stressors, and coping strategies. A comparison between cities and towns in Germany. *Frontiers in Psychiatry*, *12*, 791312. https://doi.org/10.3389/fpsyt.2021.791312

Nada, Q., Herdiana, I., & Andriani, F. (2022). Testing the validity and reliability of the depression anxiety stress scale (DASS)-21 instrument for individuals with psychodermatology. *Psikohumaniora: Jurnal Penelitian Psikologi*, *7*(2), 153–168. https://doi.org/10.21580/pjpp.v7i2.11802

Naumova, K. (2022). Dimensionality and reliability of the depression anxiety stress scales 21 among adolescents in north Macedonia. *Frontiers in Psychology*, *13*, 1007594. https://doi.org/10.3389/fpsyg.2022.1007594

Necho, M., Tsehay, M., Birkie, M., Biset, G., & Tadesse, E. (2021). Prevalence of anxiety, depression, and psychological distress among the general population during the COVID-19 pandemic: A systematic review and meta-analysis. *International Journal of Social Psychiatry*, *67*(7), 892–906. https://doi.org/10.1177/00207640211003121

Nielsen, M. B., & Knardahl, S. (2014). Coping strategies: A prospective study of patterns, stability, and relationships with psychological distress. *Scandinavian Journal of Psychology*, *55*(2), 142–150. https://doi.org/10.1111/sjop.12103

Northwood, K., Siskind, D., Suetani, S., & McArdle, P. (2021). An assessment of psychological distress and professional burnout in mental health professionals in Australia during the COVID-19 pandemic. *Australasian Psychiatry*, *29*(6), 628–634. https://doi.org/10.1177/10398562211038906

Permana, I. (2018). How religosity and/or spirituality might influence self-care in diabetes management: A structured review. *Bangladesh Journal of Medical Science*, *17*(2), 185–193. https://doi.org/10.3329/bjms.v17i2.35869

Pollard, C., & Kennedy, P. (2007). A longitudinal analysis of emotional impact, coping strategies and post-traumatic psychological growth following spinal cord injury: A 10-year review. *British Journal of Health Psychology*, *12*(3), 347–362. https://doi.org/10.1348/135910707X197046

Rochmawati, E., Wiechula, R., & Cameron, K. (2018). Centrality of spirituality/religion in the culture of palliative care service in Indonesia: An ethnographic study. *Nursing & Health Sciences*, *20*(2), 231–237. https://doi.org/10.1111/nhs.12407

Seco Ferreira, D. C., Lisboa Oliveira, W., Costa Delabrida, Z. N., Faro, A., & Cerqueira-Santos, E. (2020). Intolerance of uncertainty and mental health in Brazil during the COVID-19 pandemic. *Suma Psicológica*, *27*(1), 62–69. https://doi.org/10.14349/sumapsi.2020.v27.n1.8

Sheikhbardsiri, H., Doustmohammadi, M., Afshar, P., Heidarijamebozorgi, M., Khankeh, H., & Beyramijam, M. (2021). Anxiety, stress and depression levels among nurses of educational hospitals in Iran: Time of performing nursing care for suspected and confirmed COVID-19 patients. *Journal of Education and Health Promotion*, *10*(1), 447. https://doi.org/10.4103/jehp.jehp_1319_20

Sheth, M. S., Castle, D. J., Wang, W., Lee, A., Jenkins, Z. M., & Hawke, L. D. (2023). Changes to coping and its relationship to improved wellbeing in the optimal health program for chronic disease. *SSM - Mental Health*, *3*, 100190. https://doi.org/10.1016/j.ssmmh.2023.100190

Siu, A. F. Y., & Chang, J. F. (2011). Coping styles and psychological distress among Hong Kong university students: Validation of the collectivist coping style inventory. *International Journal for the Advancement of Counselling*, *33*(2), 88–100. https://doi.org/10.1007/s10447-011-9114-8

Smida, M., Khoodoruth, M. A. S., Al-Nuaimi, S. K., Al-Salihy, Z., Ghaffar, A., Khoodoruth, W. N. C., Mohammed, M. F. H., & Ouanes, S. (2021). Coping strategies, optimism, and resilience

factors associated with mental health outcomes among medical residents exposed to coronavirus disease 2019 in Qatar. *Brain and Behavior*, *11*(8), e2320. https://doi.org/10.1002/brb3.2320

Southward, M. W., Howard, K. P., & Cheavens, J. S. (2023). Less is more: Decreasing the frequency of maladaptive coping predicts improvements in DBT more consistently than increasing the frequency of adaptive coping. *Behaviour Research and Therapy*, *163*, 104288. https://doi.org/10.1016/j.brat.2023.104288

Sreenivasan, S., Agarwal, N., Parikh, S., Singh, P., Patir, R., Roychowdhury, S., & Gupta, G. (2024). Mental health status among corporate- and public sector health care workers in India during COVID-19 pandemic (second-wave): impact of awareness, work satisfaction, risky work-environment practices and social media usage on DASS-21 & IES-R scores. *MedNEXT Journal of Medical and Health Sciences*, *5*(2), 1–8. https://doi.org/10.54448/mdnt24208

Tandon, R. (2020). COVID-19 and mental health: Preserving humanity, maintaining sanity, and promoting health. *Asian Journal of Psychiatry*, *51*, 102256. https://doi.org/10.1016/j.ajp.2020.102256

Tee, M. L., Tee, C. A., Anlacan, J. P., Aligam, K. J. G., Reyes, P. W. C., Kuruchittham, V., & Ho, R. C. (2020). Psychological impact of COVID-19 pandemic in the Philippines. *Journal of Affective Disorders*, *277*, 379–391. https://doi.org/10.1016/j.jad.2020.08.043

Teixeira da Silva, J. A. (2021). Corona exhaustion (CORONEX): COVID-19-induced exhaustion grinding down humanity. *Current Research in Behavioral Sciences*, *2*, 100014. https://doi.org/10.1016/j.crbeha.2021.100014

Triandis, H. C. (1995). *Individualism and collectivism.* Boulder, Co.

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health*, *17*(5), 1729. https://doi.org/10.3390/ijerph17051729