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Research Article

My Colleague and I: Contribution of Coworker Support and Self-compassion to Stress Among Health Workers During Health Crises

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Abstract.
The devastating Covid-19 pandemic forced health workers to adapt quickly to uncertain circumstances, increasing moral burden, excessive workload, and limited rest time. Many adversities in the hospital setting may increase stress levels due to prolonged and uncertain pandemics. Coworker support and self-compassion are two protective factors that may help health workers to manage stress during the pandemic. This study examined the contribution of coworker support and self-compassion to stress among health workers during the pandemic. A quantitative correlational study using simple random sampling to select samples from a list of referral hospitals for Covid-19 in the Malang area. One hundred seventeen health workers from six randomly selected referral hospitals for Covid-19 completed three instruments: the stress subscale of Depression, Anxiety, Stress Scale 21 (DASS-21), Coworker Support Scale, and Self-Compassion Scale (SWD) adapted to the Indonesian population. The linear regression showed that only self-compassion predicted stress levels among health workers. In contrast, coworker support and self-compassion did not contribute simultaneously to the stress levels of health workers during the pandemic. Therefore, maintaining self-compassion is vital to coping with stress while providing adequate health care during health crises.

Keywords: coworker support, health worker, self-compassion, stress

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1. BACKGROUND

The Covid-19 pandemic has caused a critical health emergency in various countries, including Indonesia. Health workers are one of the vital parts in overcoming the world-wide public health crisis. Based on data from Laporcovid.org, on November 2021, 2,066 casualties of health workers related to Covid-19 in Indonesia. Health workers were continuously under challenging situations, such as inadequate personal protective equipment (PPE), discomfort in prolonged use of PPE, virus infection, reduced frequency of meeting with family due to self-isolation, and negative assumptions as being virus spreaders [1]. Furthermore, news of death and grief due to Covid-19 is constantly reported and is expected in the community. Health workers also often deal

with emotional tasks stemming from making life-death decisions under time constraints when dealing with critical patients [2] without compromising health measures to protect themselves and their loved ones from virus infection [3]. Stigmatization of virus carriers from the community to health workers worsens the health crisis and may negatively disturb their psychological conditions [4].

Despite the devastatingly stressful situation, health workers are very dutiful to care for patients with Covid-19. Responsibility is the main factor encouraging health workers to continue doing their jobs professionally [5], especially during health crises which is one of the 'risks' to be prepared for their professional job [6]. Consequently, health workers may receive high psychological pressure and potentially heightened stress levels. Stress is the individual's inability to overcome physical, mental, emotional, or spiritual threats related to human perception of a situation or condition in their environment [7]. Findings examined general stress among volunteers at STIKES Muhammadiyah Gombong and Dr Soedirman Kebumen Hospital reported 95.83% mild stress, mild anxiety, and mild depression [8], a similar trend with 65.8% anxiety, 55% stress, and 23.5% depression among health workers in the referral hospitals for Covid-19 in eight provinces across Indonesia [9].

High-stress levels can result from biological, psychological, and social problems that may cause harmful effects on individuals [10]. During the process of dealing with stressful situations that cause stress, social factors are essential to help manage the mental burden. Coworker support may help provide social support to determine an individual's stress levels [11]. In the pandemic, the limited activities for interacting with family and long working hours will increase the chance for health workers to interact more with their coworkers. Social support from the working set is essential for providing additional resources to empower staff to cope with work stress [12]. Coworker support occurs when staff feel help, mentoring, friendliness, and positive interactions are available from colleagues at all organizational levels [13]. Coworker support provides physical and psychological calm and comfort obtained through the belief that the individual is cared for, valued and loved by his coworkers and recognized as a member of a group based on shared interests [14] since low levels of social support correspond to more susceptibility to stress and high levels of social support protective to stress-related effects [15].

Stress can also trigger compassion fatigue for health workers, where individuals experience excessive physical and emotional fatigue and may worsen stress levels. Self-compassion is a potential personal factor in coping against depressing psychological

dynamics for health professionals [16], and it is related to low levels of anxiety, depression, and stress and improving mental health conditions in the general population [17]. Individuals with high self-compassion tend to comfort themselves to feel positive even in stressful situations [18]. The essence of self-compassion is providing care, kindness, and compassion to oneself and others experiencing difficulties or problems [19]. Through self-compassion, a health worker can be more appreciative and accepting amid the heavy workload during the Covid-19 pandemic. People with good self-compassion tend to see adverse events as a life process and do not easily give up on unfortunate circumstances [18].

The uncertain emergencies required health workers to have effective coping strategies by utilizing available personal and social factors to maintain good psychological and physical outcomes [20]. Therefore, this study aims to investigate the contributions of coworker support and self-compassion on the stress level of health workers during the COVID-19 pandemic. We tested the hypothesis of a significant contribution of coworker support and self-compassion towards stress levels among health workers during the Covid-19 pandemic.

2. RESEARCH METHODS

2.1. Variables studied

Three variables investigated in this study were coworker support and self-compassion as predictor variables and stress as an outcome variable. The operationalization of coworker support is behaviors received from health worker's colleagues who show concern by providing support, listening to complaints, giving advice or positive feedback, and practical help. Self-compassion is operationalized as an attitude of pity and kindness when health workers experience devastating life problems and accept problems with a more open heart. Finally, stress is a state of tension that creates physical and psychological imbalances affecting the emotional, cognitive, and condition of health workers.

2.2. Sampling Method

This study utilized a simple random sampling to select samples from a list of referral hospitals for Covid-19 in the Malang area. Six referral hospitals for Covid-19 were randomly selected and voluntarily agreed to participate in this study.

2.3. Research subject

All health workers in the hospital are the research subject in this study, including doctors, nurses, midwives, and pharmacists. One hundred seventeen health workers from six hospitals participated in this study.

TABLE 1: Participants' Demography.

Demography	Frequency	Percentage
Gender Male Female	16 101	14% 86%
Profession Midwives Pharmacist Doctor Nurse	3 4 3 107	4% 3.5% 2.5% 90%
Age 23 − 30 31 − 38 39 − 47 48 − 56	54 27 27 9	46% 23% 23% 8%
Marital Status Single Married Divorced Widowed	25 89 2 1	21% 76% 2% 1%

Table 1 showed most participants are female (86%), nurse (90%) and married (76%). Only 2.5% of participants are doctor, 2% are divorced, and 1% is widowed. 46% of participants were aged 23-30, and only 8% were aged 48-56.

2.4. Research Instruments

There are three instruments used in this study. Firstly, the Depression, Anxiety, Stress Scale 21 (DASS-21), which was first developed in English [21] and adapted into the Indonesian version [22] with Cronbach's Alpha is 0.91. Secondly, the coworker support scale measured emotional and instrumental support [23], with Cronbach's Alpha of 0.92 and 0.88, respectively. Thirdly, the self-compassion scale adapted to the Indonesian population [24] with Cronbach's Alpha for the overall scale is 0.872 and range between 0.60 − 0.78 for the subscales.

2.5. Research design

A correlational quantitative design was used in this study. Due to the limitations of the pandemic situation, this design allowed us to continue collecting data online without compromising the research quality. The information session, data collection and most stages in this study were done online, conforming to the health measures requested by hospitals participating.

2.6. Data Collection

This study was a sub-study from a research project investigating personal and social determinants of mental health outcomes among health workers during the Covid-19 pandemic. Conforming to the Helsinki Declaration, we took a few steps to ensure compliance to ethical conduct for non-experimental study. We provided information sessions for hospital representatives before they voluntarily consent to participate in this study. Online written consent was obtained from the Department of Human Resources and Training as a representative from selected hospitals, and personal online written consent from each health worker who participated in this study. Data collection was done online with no treatment and using only self-report consisting of demographic data, coworker support, self-compassion and general stress, thus very least physical and mental risk for the participants. We provide the link to the questionnaires to either hospital representatives or head nurses to distribute to the health workers as requested by the participating hospitals. Also, a small token of appreciation was offered to randomly selected participants.

2.7. Data analysis technique

The data analysis used SPSS for Windows version 22. We performed assumption tests (e.g., normality, linearity, and multicollinearity tests). Then we proceeded with the hypothesis testing using multiple linear regression tests examining the role of coworker support and self-compassion towards stress levels.

3. RESULT

One hundred seventeen health workers from six selected hospitals participated in this study. The following tables present the research findings.

TABLE 2: Description of Variables.

Variable	Category	Frequency	Percentage (%)
Stress	Normal Low Moderate High Very High	98 5 9 2 3	83.8% 4.3% 7.7% 1.7% 2.5%
Coworker Support	Low Moderate High	1 23 93	1% 20% 79%
Self Compassion	Low Moderate High	1 77 39	1% 66% 33%

Table 2 shows most participants were in moderate stress levels (83.8%), only 1.7% in high stress and 2.5% in the very high-stress category. 79% of participants reported

high coworker support and 66% moderate self-compassion. Meanwhile, only 1% of participants reported low coworker support and self-compassion.

The assumption test for linear regression analysis showed normal distribution for all variables ($p > 0.05$) and linearity identified between coworker support ($p > 0.05$), self-compassion ($p > 0.05$) and stress. The variance inflation factor (VIF) counted less than 5 (VIF =1.049) corresponds to no multicollinearity between predictor variables in the model.

TABLE 3: Simple Linear Regression of Coworker Support, Self-Compassion, and Stress.

Model	R^2	t	F	p
Coworker Support x Stress	0.001	0.254	0.064	0.800
Self Compassion x Stress	0.217	-5.651	31.928	0.000

Table 3 shows the results of simple linear regression, examining the independent contribution of coworker support and self-compassion towards stress levels. A significant negative contribution was found between self-compassion and stress (t = -5.651, F = 31.928, $p < 0.001$), indicating that higher self-compassion corresponds to lower stress levels. Moreover, a 21.7% variance in stress levels contributed by self-compassion. No significant contribution was found between coworker support and stress.

TABLE 4: Multiple Linear Regression of Coworker Support, Self-Compassion, and Stress.

Model	t	p	R^2	p
Coworker Support	1.555	0.123	0.234	>0.001
Self Compassion	-5.887	<0.001		

Table 4 showed no significant contribution simultaneously of coworker support and self-compassion towards stress levels. Similar findings from simple and multiple linear regression showed that only self-compassion significantly contributes to lower stress among participants (t = -5.887, $p < 0.001$). The variance showed that 23% of stress levels were determined through self-compassion. Nonetheless, the main hypothesis is rejected.

4. DISCUSSION

Coworker support is considered a protective factor for health workers from stress, but this study found no significant contribution of coworker support to stress among health workers. Similar findings reported of reserve buffering effect of coworker support preventing high-stress levels in health workers in Ghana, West Africa, meaning that coworker support is expected to protect against stress but showed opposite results

[25]. The existence of a sense of over-reciprocation, which can develop guilt and indebtedness to colleagues who have provided support, may lead to feelings of being unable to provide adequate support, developing feelings of regret, guilt, and lack of respect that can cause even more stress [26]. In addition, during the pandemic, there was also an increase in working hours among health workers due to self-isolation, forcing colleagues to re-arrange and cover working longer hours [27]. The prolonged, complicated pandemic situations numb the ability of health workers to take time and give meaning to emotion while coping with the high uncertainty in a limited time. Health workers face higher pressure and workload during emergency health situations than in typical ordinary situations, so potential increased stress is unavoidable [28]. The pandemic in the past two years may improve health workers' resilience and confidence in responding to the COVID-19 pandemic. Stress due to the pressure they felt gradually resolved with better understanding, infection management, and treatment processed better into eustress to have a positive perception of being productive and achieving working targets regardless of pressure [29].

Meanwhile, self-compassion is identified to negatively contributes to stress levels in health workers. Analogous to previous findings of a study conducted on 150 Iranian nurses, self-compassion significantly reduces stress effects and the likelihood of burnout in nurses [30]. Furthermore, a study involving 1,700 subjects from health professionals and students reported a significant contribution between self-compassion and stress and burnout [31]. Health workers with high self-compassion tend to be more appreciative of themselves, acknowledge imperfections and limitations, not regret past events, and not worry much about the future. Therefore, they effectively manage stress during uncertain pandemic situations. The related concepts of self-kindness in stressful situations encourage individuals to accept unfortunate situations without rumination and shortcomings of themselves and others, which may lessen the stress in health crisis settings [32]. Such compassion and kind understanding towards themselves may help health workers to manage stress and negative emotions better and strengthen resilience to cope with difficult circumstances.

This study also indicates that protective personal or internal factors play a more significant role than external ones. A previous study investigated protective factors towards stress in the scope of work and found that individual factors play a vital role in determining effective coping towards stress in general [33], mainly self-compassion, which is a better predictor of stress than perceived social support [34]. External factors, such as medical skills and time management, may also significantly affect stress to balance work competencies and workload [35].

The limitation of this study is that a correlational research design hinders causality examination between variables. Moreover, the pandemic situations provide significant constraints in obtaining a hospital research permit, delaying the research schedule. The imbalance sample characteristics in gender and health professions may introduce imbalance class data, which affects minority samples overpowered by the majority samples for less accurate results. The DASS-21, coworker support and self-compassion scales are not adapted specifically targeting health workers, hence, they may not be the best measure of variables. Using self-report coupled with the limitation of pandemic situations significantly hampered communication and guidance of the research team during the online data collection, which may increase the possibility of social desirability.

5. CONCLUSION

To conclude, coworker support and self-compassion are not simultaneously contributed to the stress levels of health workers during the COVID-19 pandemic. Coworker support does not contribute to stress, while self-compassion significantly contributes to the stress level in health workers during the COVID-19 pandemic. Findings from this study indicate that internal factors are potentially more effective than external factors in coping with stress among health workers in health crisis settings.

Further studies may want to explore more internal factors that strengthen health workers' self-compassion and resilience. Psychoeducation or mental health services targeting health workers are encouraged to foster enthusiasm and awareness in health workers so that they can always be compassionate to themselves. Regardless findings from this study, developing communication skills, empathy and flexibility of thinking among health workers may help build more meaningful coworker support. Finally, a psychological scale specifically developed for health workers will provide a consequential academic contribution to the accuracy of measuring stress, coworker support, self-compassion, or other psychological variables in research.

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Ethics Policy

There is no obligation from the Faculty of Psychology, University of Muhammadiyah Malang during this study took place in 2020-2021. However, we refered to the Helsinki Declaration and took a few steps to ensure complying to ethical conduct, as a more detailed description is provided in the manuscript. All authors declare no conflict of interest.

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