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EVALUATION OF WORK-LIFE BALANCE, DEPRESSION, AND JOB PERFORMANCE IN RESIDENT DOCTORS

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ABSTRACT

Introduction: Mental health and work performance of resident doctors are critical, given the high workload and challenges in balancing professional duties with personal life. This study evaluates the condition of work-life balance (WLB), depression, and job performance among resident doctors in one of teaching hospital in Indonesia. This study aims to evaluate the impact of a mindfulness training program on WLB, depression, and job performance of resident doctors and assess the changes in these variables before and after the program.
Methods: A total of 314 resident doctors were initially assessed, and 99 doctors with mild to severe depression were selected for the intervention. Of these, 70 doctors participated in a training program consisting of three sessions: effective communication, mindfulness, and patient safety. Pre-test and post-test assessments were conducted using the PHQ-9 for depression, IWPQ for job performance, and a work-life balance scale.
Results: Before the intervention, most doctors reported low WLB (51.4%) and mild depression (72.9%). Job performance was predominantly rated as moderate (81.4%). After the intervention, there was a significant reduction in depression levels, with 38.6% of doctors reporting normal depression levels, 42.9% reporting mild depression, and 8.6% reporting severe depression. The p-value for depression was 0.000, indicating a significant improvement in the mental health of the doctors. However, the results for WLB did not show significant improvement ($p = 0.303$), and job performance also did not show significant improvement ($p = 0.162$) after the intervention. Despite a slight increase in the number of doctors reporting high job performance after the intervention (from 7.1% pre-intervention to 11.4% post-intervention), the change was not statistically significant.
Discuss: The results of this study indicate that the training program significantly reduced depression among resident doctors, no significant improvements were observed in WLB or job performance. Despite the intervention's focus on improving mental health, the findings suggest that external factors, such as workload and organizational support, may play a more significant role in influencing WLB and job performance. These results underscore the complexity of improving job performance and WLB, highlighting the need for a more holistic approach that combines mental health interventions with systemic changes in the work environment. Future studies should explore longer, more comprehensive interventions and address the structural factors affecting healthcare professionals' WLB and job performance.
Conclusion: The mindfulness and communication training intervention was effective in significantly reducing depression among resident doctors but did not significantly affect WLB or job performance. Further studies with different interventions may be required to achieve broader improvements in WLB and job performance.

Keywords: *work-life balance, depression, job performance, mindfulness, resident doctors.*

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INTRODUCTION

Resident doctors are physicians pursuing education to obtain a specialist degree. They have two main roles, as students in the educational process and as medical professionals providing healthcare services in a teaching hospital. Although resident doctors are under the authority of the academic institution, they are also responsible to the hospital where they serve.[1] Resident doctors are at an age where they require intimacy and generativity in their roles within the work environment.[2] Work-life balance (WLB), or the balance between work responsibilities and family life, is also an important aspect for resident doctors. WLB is not just about managing work and family, but also about having time for oneself, such as for hobbies, exercise, or socializing.[3] Issues with WLB can lead to the emergence of various mental health problems.[4] Depression can be related to the emergence of job performance issues, it acts as a mediating variable between the learning environment

problems of resident doctors and their job performance. Psychological stressors, heavy workloads, and job insecurity are some of the aspects of the learning environment that contribute to depression, which in turn impacts the decline in job performance.[5]

The chosen solution is implementing communication and mental health training (particularly mindfulness) through regular meetings for resident doctors. This aligns with studies conducted on resident doctors in Africa and China, which show that strengthening mental health, including through training programs for resident doctors, can improve their job performance.[6,7] Mindfulness is an approach that can be used to enhance mental health quality. A study conducted in the Netherlands found that mindfulness training for resident doctors enhanced their ability to cope with various challenges related to both clinical tasks and educational duties in the hospital. The benefits experienced through mindfulness practice included increased awareness of thoughts, emotions, bodily sensations, and behaviors, enhanced self-reflection abilities, greater acceptance and non-judgmental attitudes in interactions with others, improved resilience to stress, and better interpersonal relationship skills.[8] Another empirical study in Brazil showed that a lack of social skills, which encompasses all aspects related to behavior and communication in interpersonal interactions, is linked to professionalism. When problematic, this can lead to depression in resident doctors. Therefore, efforts to improve the social skills of resident doctors are necessary as part of the strategies to address depression in resident doctors.[9]

METHOD

Study Design

This study employed a pre-test and post-test design to evaluate the effectiveness of a training intervention aimed at improving WLB, depression, and job performance among resident doctors. The initial assessment was conducted on a population of resident doctors, measuring their WLB, depression levels, and job performance.

Participants

Initially, 314 resident doctors were assessed, and 99 of them were found to have mild to severe depression scores. After careful consideration of availability and feasibility, 70 resident doctors with depression scores ranging from mild to severe were selected to participate in the intervention program.

Intervention

The selected participants underwent a training program consisting of three sessions. The program focused on:

1. Effective communication: training aimed at enhancing interpersonal communication skills and improving relationships between doctors, patients, and colleagues.
2. Mindfulness: Techniques designed to improve mental well-being, focusing on self-awareness, stress reduction, and emotional regulation.
3. Patient safety: Sessions aimed at fostering an understanding of the importance of safety in medical practices and improving the quality of care in a hospital setting.

Each session was conducted weekly and lasted for approximately 2 to 3 hours. The sessions combined theoretical knowledge with practical exercises, including role-playing and mindfulness practice.

Assessment

Pre-test and post-test measurements of WLB, depression, and job performance were taken using standardized instruments, including the PHQ-9 for depression,[10] IWPQ for job performance,[11] and a work-life balance scale.[12] These measures were used to assess changes in the participants' mental health and job performance as a result of the training.

RESULT

Descriptive Analysis

Before the intervention, most resident doctors reported a low WLB, with 51.4% of participants in this category. The remaining 48.6% reported a high WLB. After the intervention, however, the percentage of doctors with low WLB increased to 60%, while those reporting high WLB decreased to 40%. This suggests that the intervention did not significantly improve the WLB of the participants.

Regarding depression, before the intervention, 72.9% of participants experienced mild depression, 14.3% experienced moderate depression, and 12.9% were classified as severely depressed. After the intervention, the majority of resident doctors showed improvement in their depression levels, with 38.6% reporting normal levels, 42.9% reporting mild depression, 10% reporting moderate depression, and 8.6% still reporting severe depression. These results indicate a clear reduction in depression severity among the participants after the intervention.

As for job performance, prior to the intervention, the majority (81.4%) of doctors rated their job performance as moderate, 11.4% rated it as low, and only 7.1% rated it as high. After the intervention, the percentage of doctors with high job performance increased slightly to 11.4%, while the proportion of doctors with low job performance decreased to 5.7%. Although there was a slight shift toward higher job performance, the overall improvement in job performance was minimal.

Wilcoxon Signed Ranks Test for WLB

A Wilcoxon Signed Ranks Test was conducted to determine whether there were significant differences in the WLB scores before and after the intervention. The results showed no significant difference in WLB scores, with a Z-value of -1.029 and a p-value of 0.303 (greater than 0.05). This indicates that the intervention did not have a statistically significant effect on improving the WLB of the resident doctors.

Wilcoxon Signed Ranks Test for Depression

The Wilcoxon Signed Ranks Test was also performed to assess changes in depression levels before and after the intervention. The results showed a significant reduction in depression levels, with a Z-value of -4.322 and a p-value of 0.000 (less than 0.05), indicating that the intervention had a significant effect on reducing depression among the participants.

Table 1. Statistical results of intervention on WLB, depression, and job performance

Variable	*Pre-intervention (%)*	*Post-intervention (%)*	*p-value*	*Significance*
Work-Life Balance (WLB)			0.303	Not significant
High WLB	48.6%	40.0%		
Low WLB	51.4%	60.0%		
Depression				
Normal	0%	38.6%	0.000	Significant
Mild Depression	72.9%	42.9%		
Moderate Depression	14.3%	10.0%		
Severe Depression	12.9%	8.6%		
Job Performance			0.162	Not significant
High Job Performance	7.1%	11.4%		
Moderate Job Performance	81.4%	82.9%		
Low Job Performance	11.4%	5.7%		

Pre-intervention (%) and post-intervention (%) refer to the percentage of participants in each category before and after the intervention, respectively. p-value indicates the statistical significance of the results. The significance column provides a qualitative assessment of whether the result is significant based on the p-value ($p < 0.05$).

Wilcoxon Signed Ranks Test for Job Performance

Lastly, the Wilcoxon Signed Ranks Test was used to assess changes in job performance before and after the intervention. The results showed a Z-value of -1.400 and a p-value of 0.162 (greater than 0.05), indicating that there was no statistically significant improvement in job performance after the intervention. While there was a slight increase in the number of doctors reporting high job performance, the change was not significant enough to be considered statistically meaningful.

DISCUSS

This study aimed to assess the impact of a mindfulness and communication training intervention on WLB, depression, and job performance among resident doctors in teaching hospital. While the intervention resulted in significant reductions in depression, no significant improvements were observed in WLB or job performance. These findings align with several prior studies but also raise important considerations about the complexity of mental health and performance outcomes in healthcare professionals.

Work-life balance

Despite the intervention targeting improvements in WLB, the results did not show a statistically significant change ($p = 0.303$). Prior to the intervention, 51.4% of doctors reported low WLB, which aligns with the demanding nature of their roles in the residency. After the intervention, 60% reported low WLB, which actually increased, while only 40% reported high WLB, a decrease compared to 48.6% at baseline. These results suggest that while mindfulness and communication interventions have proven benefits for mental health, they may not be sufficient to significantly improve WLB on their own.

A systematic review of doctors aged 24-35 years showed varying WLB across different countries. In developed countries, the work-life balance was better than in developing countries, although, overall, the WLB of doctors worldwide is considered low.[13] WLB may have limited impact on resident doctors' performance due to several factors. They often have long clinical rotations and are responsible for complex patients, leading to extended working hours that reduce time for rest and leisure. The pressure to provide high-quality care and the intense dedication required for specialist training may cause them to sacrifice personal time for academic or clinical duties. As a result, resident doctors tend to experience more work-to-family conflicts than the reverse, with work-related issues affecting family life more than family-related issues impacting work.[14] Although it is important to maintain a balance between work and personal life for the overall well-being of resident doctors, factors such as high work pressure and professional commitments often lead to placing higher priority on work than on personal life.[15] This can result in an insignificant relationship between the intervention and WLB, as improved mental health may drive doctors to strive for better performance, which ultimately lowers their WLB scores in the post-test.

Depression

The intervention in this study successfully reduced depression among resident doctors, as reflected by the significant decrease in depression levels ($p = 0.000$). This finding aligns with a growing body of research supporting the effectiveness of mindfulness in alleviating depressive symptoms. The reduction in depression levels among the participants suggests that mindfulness and communication training programs can effectively address the mental health challenges faced by healthcare professionals, particularly those undergoing the intense demands of specialized education.

Factors related to the educational process that can influence the emergence of depression include workplace stress or the pressure experienced while providing services as a resident doctor. The presence of ongoing or unresolved stress is highly risky for the development of depression.[16,17] Another influencing factor is working hours and relationships with fellow resident doctors (peer support). The longer the working hours and the lower the peer support, the higher the likelihood of depression.[18] The intervention provided materials on mindfulness and communication tailored to the specific needs and conditions of the resident doctors. Mindfulness has been shown to be effective in managing stress, thereby preventing it from evolving into persistent or recurrent pressure, which is a significant contributor to mental health issues. The communication training focused on enhancing interpersonal relationships, particularly within the resident peer group, which is crucial in reducing the risk of interpersonal conflicts and fostering a more supportive peer network. These factors likely explain why the mindfulness and communication

intervention significantly influenced the reduction in depression levels among the resident doctors.

Job performance

In this study, although there was a slight increase in the number of resident doctors reporting high job performance post-intervention (from 7.1% to 11.4%), this change was not statistically significant ($p = 0.162$). These results suggest that while the mindfulness and communication training intervention had some effect on job performance, the impact was not substantial enough to be considered statistically significant.

The results of this study align with previous research, indicating that mindfulness-based interventions can improve mental well-being and job performance in doctors. However, the improvement in job performance was not statistically significant, despite a reduction in depression. This could be due to the intervention's short duration and focus on mental health rather than addressing external factors like workload or organizational support, which also influence job performance. Therefore, while mindfulness interventions are beneficial for mental health, broader systemic changes may be needed for significant improvements in job performance.[19]

The results of this study suggest that while mental health improvements were observed in resident doctors, job performance did not show significant improvement post-intervention. This may be explained by the fact that, as highlighted in past study, effective job performance is closely linked to a learning environment that values the skills of resident doctors. Factors such as decision-making autonomy and recognition of their efforts are essential for fostering higher performance.[5] In this study, the intervention focused primarily on improving mental health through mindfulness and communication training, but it may not have directly addressed the broader environmental factors, such as autonomy and recognition, which are critical for job performance.

Additionally, a study pointed out that workload and mental health conditions, including stress, burnout, and depression, have a significant impact on job performance.[6] Although the intervention reduced depression among the participants, it did not specifically address issues such as workload or burnout, which may have contributed to the lack of significant improvement in job performance. The high demands and pressure in the training and clinical environment likely continue to influence job performance despite improvements in mental health.

Therefore, while mindfulness and communication training can positively impact mental health, for significant improvements in job performance, a more holistic approach that incorporates changes in the work environment—such as autonomy in decision-making, recognition, and workload management—may be necessary. These environmental factors, combined with improved mental health, are more likely to lead to measurable improvements in job performance among resident doctors.

Implications of the findings

The results of this study emphasize the importance of mindfulness and communication training in improving mental health, particularly reducing depression, among healthcare professionals such as resident doctors. A recommendation to be made is that educational hospitals should plan and implement programs that support WLB and mental health as this is crucial in ensuring that resident doctors perform well in both patient care and education.[13,20]

However, the lack of significant changes in WLB and job performance indicates that these aspects may require a more comprehensive and systemic approach. Factors such as workload, organizational support, and work environment are integral to job performance and WLB. While mental health interventions like mindfulness are beneficial, their impact on job performance and work-life balance may be limited if organizational and structural issues are not simultaneously addressed.[21] Therefore, it is essential for hospitals to consider both individual and systemic changes to foster a more supportive work environment that can help doctors balance their professional and personal lives more effectively.[20]

Various psychosocial supports facilitated by hospitals and educational institutions can help resident doctors feel supported and valued. For example, programs that integrate mindfulness and self-awareness strategies to enhance the resilience of resident doctors[22] and provide platforms for sharing experiences and collectively addressing challenges. Organizations that focus on the mental health of trainees and assess a supportive learning environment can improve the satisfaction of resident doctors during their education in hospitals.[23]

Limitations of the study

While this study provides valuable insights, several limitations need to be considered. Firstly, the sample size of 70 doctors may limit the generalizability of the results. A larger sample size would allow for a more comprehensive understanding of the intervention's impact across different healthcare settings. Another limitation is the duration of the intervention. With only three sessions, the effects on WLB and job performance may not have had enough time to fully manifest. Longitudinal studies with extended follow-up periods are necessary to assess the lasting impact of such interventions.

Suggestion

Future studies should explore the long-term effects of mindfulness and communication training, especially regarding job performance and WLB. Incorporating structural changes in the work environment, such as reducing workload or enhancing peer support systems, could provide a more holistic approach to improving overall well-being for resilience and performance.[24] Additionally, control groups and randomized designs could strengthen the reliability of findings and allow for comparisons with other types of interventions.[25] Finally, qualitative research could provide deeper insights into how doctors experience the intervention, focusing on their personal reflections and perceptions of the changes in their work and personal life.[26]

CONCLUSION

In the study, the results underscore the significant role of mindfulness and communication training in improving mental health, particularly in reducing depression among resident doctors. Despite the positive impact on mental health, the intervention did not yield significant improvements in work-life balance or job performance. These findings suggest that while mental health interventions can be effective in

addressing depression, WLB and job performance may require additional systemic interventions, such as organizational support and workload management.

The reduction in depression levels emphasizes the need for healthcare institutions to prioritize mental health support, integrating programs like mindfulness to enhance doctors' well-being. However, for sustained improvements in job performance and WLB, a more holistic approach addressing both individual coping strategies and structural challenges in the work environment is needed. Future research should explore the combined effects of psychological interventions with organizational reforms to provide a more comprehensive framework for supporting resident doctors in their professional development and well-being.

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