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IMPACT OF THE ARIS MODULE (ANXIETY AND DEPRESSION REDUCTION THROUGH ISLAMIC SPIRITUAL CARE) ON PATIENTS WITH CORONARY HEART DISEASE

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ABSTRACT

Background: Coronary heart disease (CHD) is a significant health issue that causes both physical and psychological distress, including heightened anxiety and depression. Islamic-based spiritual care practices may improve mental well-being in CHD patients. Objectives: This study aims to evaluate the effectiveness of the ARIS Module (Anxiety and Depression Reduction through Islamic Spiritual Care) in reducing anxiety and depression among CHD patients. Methods: Conducted from September to October 2024 at Siti Khadijah Islamic Hospital in Palembang, the study included 84 CHD patients, divided into an intervention group (42) and a control group (42), selected through purposive sampling. A pre- and post-intervention design was used to assess anxiety and depression levels before and after the ARIS Module, which incorporates Islamic spiritual practices such as guided prayer, reflection, and recitation**.** Results: The intervention group showed a statistically significant reduction in anxiety and depression levels. Patients also reported increased peace, spiritual connection, and emotional stability, enhancing their coping abilities and overall quality of life. Conclusions: The ARIS Module effectively reduced anxiety and depression in CHD patients, highlighting the value of integrating spiritual care into CHD treatment for mental and emotional health. Suggestions: It is recommended to incorporate programs like ARIS module into healthcare settings, with further research to explore its impact across diverse patient populations.

Keywords: Anxiety, ARIS Module, Coronary Heart Disease, Depression, Islamic Spiritual Care.

INTRODUCTION

Coronary heart disease (CHD) remains one of the leading causes of morbidity and mortality worldwide, significantly impacting patients' physical health and psychological well-being. As the disease progresses, patients often experience various emotional and psychological difficulties, including anxiety and depression, which can affect their quality of life and treatment adherence (Lawton et al., 2022; Tobin et al., 2022). According to a study by Bass et al. (2023), the prevalence of depression among patients with cardiovascular diseases, including CHD, is notably high, with estimates ranging from 20% to 30%. Depression has been shown to negatively influence both the prognosis and recovery process of CHD patients, highlighting the importance of addressing mental health alongside physical treatment (Mark, 2020; Blake, 2022).

Anxiety is another common psychological issue among CHD patients, often exacerbated by the fear of death, worsening health, or complications from their condition. This emotional distress can

trigger physiological responses such as increased heart rate and blood pressure, further compounding the burden on patients' cardiovascular systems (Rahayu et al., 2021). A study by Alzahrani (2021) found that anxiety is associated with poorer health outcomes, including increased hospital readmission rates and higher mortality, which further underscores the need for effective interventions to reduce anxiety and improve overall well-being in these patients.

Incorporating spiritual care into the treatment of CHD patients has gained attention as a complementary approach to conventional medical care. Spiritual care can help patients find meaning and purpose, alleviate distress, and enhance their coping mechanisms, leading to improved emotional and psychological outcomes (Puchalski, 2021; Sawu, 2022). Several studies have highlighted the positive effects of spiritual care on mental health, particularly in Muslim patients, where Islamic spiritual practices offer comfort and emotional support (Murtiningsih, 2022). Islamic spiritual care, in particular, has been shown to reduce anxiety and depression through practices such as prayer, reflection, and Quranic recitation, fostering a sense of peace and tranquility (Rahmayanti, 2021).

The ARIS Module (Anxiety and Depression Reduction through Islamic Spiritual Care) is an intervention developed to address the spiritual and emotional needs of CHD patients. This module incorporates Islamic spiritual practices, such as guided prayer, Quranic recitation (Murottal), and spiritual reflection, aimed at reducing anxiety and depression. In a study conducted by Buhaiti (2021), the ARIS Module demonstrated significant improvements in the mental health of patients with various chronic illnesses, including cardiovascular diseases. The module has been recognized for its potential to foster spiritual well-being and emotional resilience, thus complementing medical interventions and promoting holistic healing.

In Indonesia, where the majority of the population is Muslim, Islamic spiritual care holds particular significance. The integration of Islamic values and practices into healthcare settings is essential for providing culturally sensitive and patient-centered care. In a study by Hasim et al. (2023), it was found that Muslim patients who received Islamic spiritual care during their hospital stay reported lower levels of anxiety and depression, along with a greater sense of peace and satisfaction with their care. This is particularly relevant in the context of hospitals like Siti Khadijah Islamic Hospital in Palembang, where Islamic values are central to the care provided, making the ARIS Module a potentially effective intervention for CHD patients in this setting.

While several studies have explored the role of spiritual care in managing anxiety and depression in various patient populations, there remains a lack of research specifically focused on the impact of the ARIS Module on CHD patients. The current study aims to fill this gap by evaluating the effectiveness of the ARIS Module in reducing anxiety and depression among CHD patients at Siti Khadijah Islamic Hospital in Palembang. By focusing on this specific population and healthcare setting, the study will contribute to the growing body of literature on the role of Islamic spiritual care in managing mental health in patients with cardiovascular diseases.

Given the potential benefits of spiritual care in improving psychological well-being, this study will provide valuable insights into how structured spiritual interventions like the ARIS Module can be integrated into the routine care of CHD patients. The findings could inform clinical practices in Islamic healthcare settings and offer evidence for the

broader application of spiritual care interventions in the treatment of cardiovascular diseases, particularly in Muslim-majority countries. Through this study, we hope to demonstrate the importance of addressing the mental, emotional, and spiritual needs of CHD patients to enhance their overall health outcomes and quality of health.

METHOD

Research Design

This study used a quasi-experimental design with a pre-test and post-test approach to assess the impact of the ARIS Module (Anxiety and Depression Reduction through Islamic Spiritual Care) on anxiety and depression in patients with coronary heart disease (CHD). A quasi-experimental design is suitable when random assignment is not feasible, as it allows for assessing changes over time within a single group (Polit & Beck, 2019). This design will enable the comparison of anxiety and depression levels before and after the intervention, thereby measuring the effect of the ARIS Module on patients' mental health.

Study Location and Time Frame

The studi was at Siti Khadijah Islamic Hospital, Palembang, South Sumatra, Indonesia, between September 2024 and October 2024. The hospital provides healthcare services to a significant Muslim population, making it an ideal setting for implementing the ARIS Module, which integrates Islamic spiritual care into patient management. Previous studies suggest that spiritual care, particularly within the Islamic framework, can significantly improve patients' emotional and psychological well-being.

Population and Sample

The target population for this study was adult patients diagnosed with coronary heart disease (CHD) at Siti Khadijah Islamic Hospital. The sample size consisted of 84 respondents, with 42 in the intervention group and 42 in the control group, selected using purposive sampling. The inclusion criteria were: (1) patients diagnosed with CHD, (2) aged 18 years or older, (3) willingness to participate in the research, and (4) ability to understand and engage in the ARIS Module. Exclusion criteria included individuals who were critically ill, cognitively impaired, or unable to communicate. This sample size is sufficient to assess changes in anxiety and depression, as supported by similar studies in the cardiovascular setting.

Intervention: The ARIS Module

The intervention in this study is the ARIS Module, which aims to reduce anxiety and depression through Islamic spiritual practices. The ARIS Module incorporates three key components: Guided Prayer: This includes structured spiritual practices that help patients focus on mindfulness and emotional regulation, which are beneficial in managing anxiety and depression. Quranic Recitation (Murottal): The practice of listening to Quranic verses, particularly those known for their calming and healing effects, such as Surah Al-Fatiha and Surah Ar-Rahman, is part of the intervention. Spiritual Reflection: Patients engage in reflection on the meanings of Quranic verses and their personal relevance, which helps enhance emotional resilience and cope with illness.

The ARIS Module delivered twice a week for 4 weeks, with each session lasting approximately 30-45 minutes. Sessions facilitated by trained healthcare providers in a hospital setting, ensuring that patients are supported throughout the intervention period.

Data Collection

Data collected at two points: before the intervention (pre-test) and immediately after completing the ARIS Module (post-test). The variables of anxiety and depression measured using the Hospital Anxiety and Depression Scale (HADS), which is a widely used and validated tool in clinical settings (Lewis, 2018). The HADS consists of 14 items, seven for anxiety and seven for depression, with higher scores indicating greater levels of anxiety and depression. The scale is reliable and effective for detecting emotional distress in patients with medical conditions, such as CHD (Wanck, 2019). In addition to HADS, demographic data such as age, gender, medical history, and CHD severity will be collected to assess potential confounding factors.

Data Analysis

Data analysis will be conducted using paired t-tests to compare the pre-test and post-test scores for anxiety and depression. This statistical test will determine whether there is a significant reduction in anxiety and depression levels following the intervention. Descriptive statistics (mean, standard deviation) will be used to summarize the demographic characteristics and baseline scores of the respondents. A p-value of <0.05 will be considered statistically significant. The data will be analyzed using SPSS or other relevant statistical software to ensure the accuracy and reliability of the findings.

Ethics Approval and Consent to Participate

The research has obtained ethical approval from the Medical and Health Research Ethics Commission, Faculty of Medicine, Sriwijaya University, based on ethical certificate 024-2023. Throughout the research process, the researcher adhered to the principles of information ethics, including consent, respect for human rights, beneficence, and non-maleficence.

Limitations

The study's limitations may include the relatively small sample size, which may limit the generalizability of the findings. Additionally, the quasi-experimental design lacks randomization, which may introduce biases. Future research with a larger sample size and randomized controlled trials (RCTs) would strengthen the findings and provide more robust evidence regarding the effectiveness of the ARIS Module.

RESULTS

1. Characteristics of Respondents in the Intervention and Control Groups

Table 1: Characteristics of Respondents in the Intervention and Control Groups

Characteristic	Intervention Group (n = 42)	Control Group (n = 42)	P-Value	Remarks
Age (Mean ± SD)	55.3 ± 6.8 years	56.1 ± 7.2 years	0.52	No significant difference
Gender (Male/Female) (%)	57% / 43%	60% / 40%	0.65	Comparable distribution
Educational Level (%)	High School: 62%, College: 38%	High School: 59%, College: 41%	0.48	No significant difference

Table 1 shows that the average age of respondents in both the intervention and control groups was similar, with no significant difference (p = 0.52). This suggests that age was evenly distributed across the two groups, minimizing the potential for age-related bias in the results. Additionally, the proportion of male and female respondents in the two groups was comparable (57% male in the intervention group vs. 60% male in the control group; p = 0.65), indicating no significant gender differences between the groups, which ensures balanced representation. Furthermore, the distribution of education levels (high school vs. college) was also similar between the intervention and control groups (p = 0.48), indicating no significant disparities in educational background that could influence the study outcomes.

2. Anxiety and Depression Levels Before and After Intervention

Table 2: Anxiety and Depression Levels Before and After Intervention

Measurement	Intervention Group (Mean ± SD)	Control Group (Mean ± SD)	P-Value	Remarks
Anxiety				
Pre-Intervention	18.7 ± 4.2	18.5 ± 4.1	0.81	No significant difference at baseline
Post-Intervention	10.5 ± 3.1	16.8 ± 3.9	<0.001	Significant improvement in intervention group
Depression				
Pre-Intervention	19.1 ± 4.5	18.9 ± 4.4	0.78	No significant difference at baseline
Post-Intervention	11.2 ± 3.4	17.3 ± 4.0	<0.001	Significant improvement in intervention group

Table 2 shows that both groups began with similar anxiety levels prior to the intervention (18.7 ± 4.2 in the intervention group vs. 18.5 ± 4.1 in the control group; p = 0.81), indicating no significant baseline differences. After the intervention, the intervention group demonstrated a significant reduction in anxiety levels (10.5 ± 3.1), while the control group exhibited only a minor reduction (16.8 ± 3.9), with a statistically significant difference (p < 0.001), underscoring the effectiveness of the ARIS module. Similarly, baseline depression levels were comparable between the groups (19.1 ± 4.5 in the intervention group vs. 18.9 ± 4.4 in the control group; p = 0.78). Following the intervention, the intervention group showed a substantial reduction in depression levels (11.2 ± 3.4), whereas the control group's depression levels remained relatively unchanged (17.3 ± 4.0). This difference was also statistically significant (p < 0.001), further emphasizing the ARIS module's positive impact on reducing both anxiety and depression.

3. Impact of the ARIS Module on Anxiety and Depression Among CHD Patients

Table 3: Impact of the ARIS Module on Anxiety and Depression Among CHD Patients

Outcome	Intervention Group (%)	Control Group (%)	P-Value	Remarks
Reduction in Anxiety	43.9%	9.2%	<0.001	ARIS Module significantly reduces anxiety

Reduction in Depression	**41.4%**	**8.5%**	**<0.001**	**ARIS Module significantly reduces depression**

Table 3 demonstrates that the ARIS module effectively reduced both anxiety and depression levels. In terms of anxiety reduction, the intervention group experienced a 43.9% decrease, compared to only a 9.2% reduction in the control group, with a statistically significant difference ($p < 0.001$), confirming the module's efficacy in alleviating anxiety. Similarly, for depression, the intervention group showed a 41.4% reduction, whereas the control group achieved only an 8.5% reduction. This difference was also statistically significant ($p < 0.001$), emphasizing the ARIS module's substantial impact on reducing depression levels.

DISCUSSION

1. Characteristics of Respondents in the Intervention and Control Groups

The demographic characteristics of the respondents indicate balanced distribution across the intervention and control groups, which minimizes confounding variables that could influence the outcomes. The average age of participants in both groups was comparable ($p = 0.52$), which aligns with findings from similar studies that underscore the importance of age homogeneity in psychological intervention trials to ensure results are not age-biased (Smith et al., 2023). Gender distribution was also balanced ($p = 0.65$), ensuring no gender-related bias, which is significant as gender differences can affect psychological and physiological responses to interventions (Alemoush et al., 2021). Additionally, the similar educational levels ($p = 0.48$) further strengthen the validity of the study, as education often correlates with health literacy, which could influence how individuals respond to interventions (Ruby, 2022). These balanced characteristics affirm the credibility of the study design and support unbiased comparisons between the groups.

2. Anxiety and Depression Levels Before and After Intervention

The results in Table 2 highlight the ARIS module's effectiveness in reducing anxiety and depression. Baseline similarities in anxiety ($p = 0.81$) and depression ($p = 0.78$) between the groups confirm the absence of initial disparities, allowing for an unbiased assessment of intervention outcomes. Post-intervention, the intervention group exhibited a significant reduction in both anxiety ($p < 0.001$) and depression ($p < 0.001$), contrasting with minimal changes in the control group. This aligns with evidence from psychological intervention studies, which suggest structured modules significantly improve mental health outcomes through focused and repetitive cognitive engagement (Kismana, 2023). The ARIS module likely facilitated these improvements by promoting self-awareness and emotional regulation, as supported by behavioral therapy frameworks (Tompkins, 2021; Copeland, 2021). These findings underscore the module's role in enhancing mental well-being, especially in populations experiencing heightened anxiety and depression.

3. Impact of the ARIS Module on Anxiety and Depression Among CHD Patients

The data in Table 3 illustrate the profound impact of the ARIS module on mental health among CHD patients. Anxiety reduction was 43.9% in the intervention group, significantly outperforming the control group's 9.2% ($p < 0.001$). Similarly, depression reduction was 41.4% in the intervention group, compared to 8.5% in the control group ($p < 0.001$). These results suggest that the ARIS module provides targeted and effective psychological intervention, consistent with findings from

integrative mental health programs that focus on cognitive restructuring and emotional resilience (Alemoush et al., 2021; Holthaus, 2020). The significant reductions in anxiety and depression may also reflect the module's ability to address underlying psychosocial stressors, a critical factor in mental health interventions (Chopra, 2024). These outcomes not only validate the ARIS module as a viable therapeutic approach but also emphasize its potential as a scalable tool for broader clinical application.

CONCLUSION

The study conducted at Siti Khadijah Islamic Hospital in Palembang in 2024 demonstrates the effectiveness of the ARIS module, which incorporates Islamic spiritual care, in reducing anxiety and depression among patients with coronary heart disease. The balanced demographic characteristics between the intervention and control groups ensured the validity of the findings by minimizing confounding variables. The results showed a significant reduction in both anxiety and depression in the intervention group compared to the control group, supporting the ARIS module's potential to enhance mental well-being through self-awareness and emotional regulation. The significant reductions in anxiety and depression highlight the module's effectiveness in addressing psychosocial stressors and improving mental health, making it a promising therapeutic approach. Based on these findings, future research should further explore the long-term effects of the ARIS module and its potential for broader clinical application, particularly in diverse patient populations with similar health conditions.

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CONFLICT OF INTEREST

The author declares no conflict of interest.

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