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The Impact of a Psychoeducational Intervention on Illness Perceptions and Self-Care Behaviors in Patients with Atrial Fibrillation

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Quantitative Study

Abstract

Background: Atrial fibrillation (AF), a frequently occurring heart rhythm disorder, is linked to a higher likelihood of mortality, heart failure, and stroke. Patients with AF often have poor illness perceptions and suboptimal self-care behaviors, leading to adverse health outcomes. This research has aimed to evaluate the impact of a psychoeducational intervention on illness perceptions and self-care behaviors in patients with AF.

Methods: A randomized controlled trial (RCT) was conducted between March 2023 and March 2024 at three tertiary care hospitals in Baghdad, Iraq. Participants were recruited using purposive sampling from March 2023 to June 2023. The 6-week psychoeducational intervention was delivered from July 2023 to August 2023. Illness perceptions were assessed employing the Brief Illness Perception Questionnaire (B-IPQ; Broadbent et al., 2006), and self-care behaviors were measured using the European Heart Rhythm Association (EHRA) Self-Care Questionnaire (Hendriks et al., 2014). SPSS software (version 26.0) was employed to analyze the data, using mixed-design analysis of variance (ANOVA) and analysis of covariance (ANCOVA). Statistical significance was set at $P < 0.05$.

Results: The mixed-design ANOVA revealed a significant interaction effect between time and group for illness perceptions ($F(3, 456) = 29.7$, $P < 0.001$, partial $\eta^2 = 0.163$) and self-care behaviors ($F(3, 456) = 41.2$, $P < 0.001$, partial $\eta^2 = 0.213$). The intervention group showed a 31.1% improvement in illness perception scores and a 40.5% improvement in self-care behavior scores from baseline to post-intervention ($P < 0.001$). These improvements were sustained at the 3- and 6-month follow-ups ($P < 0.001$).

Conclusion: The psychoeducational intervention significantly improved illness perceptions and self-care behaviors among patients with AF in Iraq. These improvements were sustained at the 3- and 6-month follow-ups. Healthcare providers should consider incorporating psychoeducational interventions into standard AF management to promote better patient outcomes. Policymakers should support the implementation of similar interventions to reduce the burden of this chronic condition.

Keywords: Atrial fibrillation; Psychoeducation; Illness perceptions; Self-care; Randomized controlled trial

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Introduction

Affecting millions globally, atrial fibrillation (AF) is the most prevalent sustained cardiac arrhythmia (Kornej et al., 2020; Lippi et al., 2021). The global prevalence of AF is estimated to be 37.6 million cases and is projected to increase to 50 million by 2030 (Chugh et al., 2022). In Iraq, the prevalence of AF is estimated to be around 1.2% of the adult population, with a higher incidence among older individuals and those with comorbidities such as hypertension, diabetes, and heart failure (Al-Hamdi & Ali, 2021; Mohammad & Nerway, 2021). AF is connected with an increased risk of stroke, heart failure, and mortality, making it a significant public health concern (Bencivenga et al., 2020; Lippi et al., 2021; Weber et al., 2021). The economic burden of AF is substantial, with annual costs estimated at €3,286 per patient in Europe and $8,705 per patient in the United States (Deshmukh et al., 2022; Reinhardt et al., 2021).

Despite the availability of effective treatments, managing AF remains challenging. One of the critical factors influencing the success of AF management is patients' understanding of their condition and adherence to recommended self-care behaviors (McCabe et al., 2020). Patients with AF often have poor illness perceptions, which can lead to suboptimal self-care behaviors and adverse health outcomes (Magon et al., 2024).

Psychoeducational interventions have emerged as a promising approach to address the challenges associated with illness perceptions and self-care behaviors in chronic conditions, including AF (Brown et al., 2022; Liu et al., 2024; Sánchez-Gutiérrez et al., 2022; Zeng et al., 2024). These interventions combine educational and psychological strategies to promote patients' understanding of their condition, develop coping skills, and enhance self-management capabilities (Gegenava et al., 2020). Previous studies have investigated the effectiveness of educational interventions in improving patient outcomes in AF (Clarkesmith et al., 2017; Gallagher et al., 2017). However, these studies primarily focused on educational components and did not incorporate psychological strategies. A systematic review by Dhippayom et al. (2022) found that educational interventions improved patients' knowledge about AF and anticoagulation therapy. However, the effects on self-care behaviors and clinical outcomes were inconsistent. Furthermore, the evidence on the effectiveness of psychoeducational interventions specifically targeting illness perceptions and self-care behaviors in AF patients is limited, particularly in non-Western contexts such as Iraq.

To address these gaps in the literature, this study aimed to evaluate the impact of a psychoeducational intervention on illness perceptions and self-care behaviors in patients with AF in Iraq. We hypothesized that patients receiving the psychoeducational intervention would demonstrate significant improvements in illness perceptions and self-care behaviors compared to those receiving usual care. The findings of this study are expected to inform the development and implementation of effective interventions to improve AF management and patient outcomes in Iraq and other similar healthcare settings.

Methods

Design study and participant: This study employed a randomized controlled trial (RCT) design to assess the impact of a psychoeducational intervention on illness perceptions and self-care behaviors in patients with AF. The RCT design is widely considered the gold standard for evaluating the efficacy of interventions, as it minimizes bias and allows for causal inferences (Hariton & Locascio, 2018).

The data collection for this study, conducted between March 2023 and March 2024, was strategically planned. This time frame was chosen to ensure an adequate sample size and to allow for the completion of the 6-week psychoeducational intervention and follow-up assessments, thereby providing a comprehensive understanding of the intervention's impact over a significant period.

The study was conducted at three tertiary care hospitals in Baghdad, Iraq: Baghdad Teaching Hospital, Al-Kindy Teaching Hospital, and Ibn Al-Nafees Hospital. These hospitals were selected due to their high patient volume, availability of specialized cardiology services, and geographic accessibility.

Inclusion and exclusion criteria: Participants were eligible for inclusion if they met the following criteria: (1) aged 18 years or older, (2) had a confirmed diagnosis of AF, (3) were able to provide informed consent, and (4) were able to attend the intervention sessions. Exclusion criteria included (1) severe cognitive impairment that would hinder participation in the intervention or completion of the questionnaires, (2) unstable medical conditions that would limit participation, and (3) concurrent participation in other interventional studies.

Sample size: The sample size was determined using G*Power software (version 3.1.9.7). For a mixed-design ANOVA with a medium effect size (f = 0.25), an alpha level of 0.05, and a power of 0.80, a total sample size of 128 participants (64 per group) was required. An additional 20% was added to account for potential attrition, resulting in a final sample size of 154 participants (77 per group). This sample size was adequate to detect significant differences between the intervention and control groups.

Participants were recruited using a purposive sampling method. Patients who met the inclusion criteria were approached during their routine cardiology visits at the participating hospitals and invited to participate in the study.

Instruments: The psychoeducational intervention and data collection was conducted in dedicated research rooms within the cardiology departments of the participating hospitals. These rooms provided a quiet, private environment for the intervention sessions and assessments.

Illness perceptions were assessed using the Brief Illness Perception Questionnaire (B-IPQ) (Broadbent et al., 2006). The 9-item B-IPQ questionnaire evaluates emotional and cognitive portrayals of illness. It has demonstrated good validity and reliability in various chronic conditions, including AF (Shan et al., 2022). The Arabic version of the B-IPQ, validated in previous studies (Al-Ghamdi et al., 2022), was used in this study. The validation process involved forward and backward translation, expert review, and pilot testing to ensure cultural and linguistic equivalence.

Self-care behaviors were measured using the European Heart Rhythm Association (EHRA) Self-Care Questionnaire (Lane et al., 2015). This 12-item questionnaire assesses self-care aspects in AF patients, including medication adherence, symptom monitoring, and lifestyle modifications. The EHRA Self-Care Questionnaire has shown reasonable validity and reliability in AF populations (Song et al., 2024). The questionnaire was translated into Arabic and validated through forward and backward translation, expert review, and pilot testing (Jassam & Hassan, 2021).

Nurse educator training: The nurse educators facilitating the psychoeducational intervention received a 2-day training workshop before the start of the study. The training covered the content of the intervention, facilitation skills, and strategies for engaging participants. The nurse educators also received ongoing supervision and support throughout the intervention period to ensure fidelity and consistency in the

delivery of the intervention.

Procedure: Participants were randomly assigned to either the intervention group (IG) or the control group (CG) using a computer-generated randomization sequence with a 1:1 allocation ratio. The randomization sequence was generated by an independent statistician and concealed in sealed, opaque envelopes. The research team and participants were blinded to the allocation until after the baseline assessments were completed.

The psychoeducational intervention consisted of six weekly group sessions, each lasting approximately 90 minutes. The sessions were held in dedicated research rooms within the cardiology departments of the participating hospitals. The intervention was delivered by trained nurse educators and covered the following topics:

1) Understanding AF: pathophysiology, symptoms, and treatment options
2) Medication management: importance of adherence, typical side effects, and strategies for remembering to take medications
3) Lifestyle modifications: physical activity, diet, stress management, and smoking cessation
4) Symptom monitoring and management: recognizing and responding to AF symptoms, when to seek medical attention
5) Coping with AF: managing anxiety and depression, building social support networks
6) Long-term self-management: goal setting, problem-solving, and maintaining behavior changes

The intervention employed various teaching methods, including lectures, group discussions, role-playing, and problem-solving exercises. Participants received written materials and resources to support their learning and self-management efforts. The control group received usual care, which included routine cardiology follow-up and access to standard patient education materials.

Baseline data were collected from all participants before randomization. Post-intervention data were collected immediately following the completion of the 6-week intervention. Follow-up data were collected at 3 and 6 months post-intervention to assess the long-term effects of the intervention.

Data analysis: SPSS software (version 26.0) was used to analyze the data. Descriptive statistics were used to condense the demographic and clinical attributes of the participants.

A mixed-design analysis of variance (ANOVA) was used to evaluate the impact of the psychoeducational intervention on illness perceptions and self-care behaviors. The mixed-design ANOVA was chosen as it allows for the examination of between-group (intervention vs. control) and within-group (time: baseline, post-intervention, 3-month follow-up, and 6-month follow-up) differences, as well as the interaction between group and time. This approach is appropriate when there are multiple measurements of the dependent variable over time and when participants are randomly assigned to different groups (Liu et al., 2024).

To adjust for potential confounding variables, such as age, gender, and AF type, an analysis of covariance (ANCOVA) was used. ANCOVA is an extension of ANOVA that allows for the control of extraneous variables that may influence the dependent variable (Magon et al., 2024). By including these variables as covariates in the analysis, ANCOVA increases the precision of the treatment effect estimate and reduces bias.

Statistical significance was set at $p < 0.05$ for all analyses. Effect sizes were reported using partial eta-squared (partial η^2), with values of 0.01, 0.06, and 0.14

considered small, medium, and large effects, respectively (Holmlund et al., 2024).

Ethics: The participating hospitals' Institutional Review Boards (IRBs) and Iraq's Ministry of Health granted ethical clearance for this research. Written informed consent was provided by all participants preceding enrollment in the research. Study participants were made aware of their prerogative to discontinue involvement at any juncture without ramifications.

Results

A total of 154 participants with atrial fibrillation (AF) were recruited for the study, with 77 participants randomized to the intervention group (IG) and 77 to the control group (CG). The mean age of the participants was 61.8 ± 10.1 years in the IG and 63.0 ± 10.5 years in the CG. Male participants constituted 54.5% of the IG and 51.9% of the CG. Most participants had paroxysmal AF (70.1% in the IG and 67.5% in the CG), while the remaining had persistent AF. The most common comorbidities were hypertension (72.7% in the IG and 70.1% in the CG), diabetes (37.7% in the IG and 41.6% in the CG), and heart failure (22.1% in the IG and 27.3% in the CG). Table 1 demonstrates that the intervention and control groups were well-matched regarding demographic and clinical characteristics at baseline, with no significant differences observed.

The subjects' baseline attributes were well-balanced between the intervention and control groups, indicating successful randomization. The mean age, gender distribution, AF type, and comorbidities were similar in both groups, minimizing the potential for confounding factors to influence the study results.

The B-IPQ scores at baseline, post-intervention, and follow-up assessments are presented in Table 2. An appreciable interaction effect between group and time was exposed by the mixed-design ANOVA ($F(3, 456) = 29.7$, $P < 0.001$, partial $\eta^2 = 0.163$), suggesting that, over time, the IG demonstrated a more substantial enhancement in illness perceptions than the CG.

Bonferroni post-hoc tests showed that the IG had significantly lower B-IPQ scores (indicating more positive illness perceptions) compared to the CG at post-intervention (40.2 ± 7.5 vs. 56.3 ± 8.1, $P < 0.001$), 3-month follow-up (38.7 ± 7.8 vs. 55.8 ± 8.4, $P < 0.001$), and 6-month follow-up (37.5 ± 8.1 vs. 56.1 ± 8.7, $P < 0.001$). Within the IG, there were significant improvements in B-IPQ scores from baseline (58.4 ± 8.2) to post-intervention ($P < 0.001$), which were maintained at 3-month ($P < 0.001$) and 6-month follow-ups ($P < 0.001$). In contrast, the CG showed no significant changes in B-IPQ scores.

The EHRA Self-Care Questionnaire scores at baseline, post-intervention, and follow-up assessments are presented in Table 3.

Table 1. Baseline clinical and demographic characteristics of the participants

Characteristic	Intervention group (n = 77)	Control group (n = 77)	P-value
Age, years (mean ± SD)	61.8 ± 10.1	63.0 ± 10.5	0.468
Male, n (%)	42 (54.5)	40 (51.9)	0.746
AF type, n (%)			0.669
Paroxysmal	54 (70.1)	52 (67.5)	
Persistent	23 (29.9)	25 (32.5)	
Comorbidities, n (%)			
Hypertension	56 (72.7)	54 (70.1)	0.718
Diabetes	29 (37.7)	32 (41.6)	0.616
Heart failure	17 (22.1)	21 (27.3)	0.447

Table 2. B-IPQ scores at baseline, post-intervention, and follow-up assessments

Time point	Intervention group (n = 77)	Control group (n = 77)	P-value
Baseline	58.4 ± 8.2	57.9 ± 8.6	0.712
Post-intervention	40.2 ± 7.5*	56.3 ± 8.1	<0.001
3-month follow-up	38.7 ± 7.8*	55.8 ± 8.4	<0.001
6-month follow-up	37.5 ± 8.1*	56.1 ± 8.7	<0.001

*P < 0.001 compared to baseline within the intervention group

A noteworthy interaction effect between group and time was uncovered by the mixed-design ANOVA ($F(3, 456) = 41.2$, $P < 0.001$, partial $\eta^2 = 0.213$), conveying that, as the study unfolded, the IG displayed a more pronounced positive change in illness perceptions compared to the CG.

Bonferroni post-hoc tests (Table 4) showed that the IG had significantly higher EHRA Self-Care Questionnaire scores (indicating better self-care behaviors) compared to the CG at post-intervention (45.9 ± 5.8 vs. 34.2 ± 6.3, $P < 0.001$), 3-month follow-up (47.2 ± 6.1 vs. 33.8 ± 6.6, $P < 0.001$), and 6-month follow-up (48.5 ± 5.9 vs. 33.5 ± 6.9, $P < 0.001$). Within the IG, there were significant improvements in self-care behaviors from baseline (32.6 ± 6.4) to post-intervention ($P < 0.001$), which were maintained at 3-month ($P < 0.001$) and 6-month follow-ups ($P < 0.001$). The CG showed no significant changes in self-care behaviors over time.

ANCOVA was used to adjust for potential confounding variables, including age, gender, and AF type when assessing the effect of the intervention on illness perceptions and self-care behaviors (Table 5). After adjusting for these variables, the IG still demonstrated significantly more significant improvements in B-IPQ scores ($F(1, 149) = 87.4$, $P < 0.001$, partial $\eta^2 = 0.370$) and EHRA Self-Care Questionnaire scores ($F(1, 149) = 112.6$, $P < 0.001$, partial $\eta^2 = 0.430$) compared to the CG at post-intervention.

The results regarding participant retention and adherence to the intervention are presented in Table 6. Of the 154 participants enrolled in the study, 148 (96.1%) completed the post-intervention assessment, with 75 (97.4%) in the IG and 73 (94.8%) in the CG. At the 3-month follow-up, 145 (94.2%) participants were retained, with 73 (94.8%) in the IG and 72 (93.5%) in the CG. At the 6-month follow-up, 143 (92.9%) participants completed the assessment, with 72 (93.5%) in the IG and 71 (92.2%) in the CG. There were no significant differences in attrition rates between the intervention and control groups at any time ($P > 0.05$). The mean attendance rate for the IG was 5.4 ± 0.8 out of the six scheduled sessions, indicating high adherence to the psychoeducational intervention.

Subgroup analyses were performed to explore potential differences in intervention outcomes based on age and gender (Table 7). For age, participants were categorized into two groups: those aged <65 years and those aged ≥65 years. The mixed-design ANOVA revealed a significant interaction effect between time, group, and age category for illness perceptions ($F(3, 450) = 3.61$, $P = 0.013$, partial $\eta^2 = 0.024$) and self-care behaviors ($F(3, 450) = 4.12$, $P = 0.007$, partial $\eta^2 = 0.027$).

Table 3. Mixed-design ANOVA results for illness perceptions and self-care behaviors

Outcome	Effect	F-statistic	Degrees of freedom	p-value	Partial η^2
Illness Perceptions	Group	187.6	(1, 152)	< 0.001	0.552
	Time	102.4	(3, 456)	< 0.001	0.402
	Group × Time	29.7	(3, 456)	< 0.001	0.163
Self-Care Behaviors	Group	205.9	(1, 152)	< 0.001	0.575
	Time	118.7	(3, 456)	< 0.001	0.438
	Group × Time	41.2	(3, 456)	< 0.001	0.213

Table 4. EHRA Self-Care Questionnaire scores at baseline, post-intervention, and follow-up assessments

Time point	Intervention group (n = 77)	Control group (n = 77)	p-value
Baseline	32.6 ± 6.4	33.1 ± 6.7	0.634
Post-intervention	45.9 ± 5.8*	34.2 ± 6.3	<0.001
3-month follow-up	47.2 ± 6.1*	33.8 ± 6.6	<0.001
6-month follow-up	48.5 ± 5.9*	33.5 ± 6.9	<0.001

*P < 0.001 compared to baseline within the intervention group

Post-hoc tests showed that participants aged <65 years in the intervention group had more significant improvements in illness perceptions (P = 0.021) and self-care behaviors (P = 0.009) compared to those aged ≥65 years.

For gender, the mixed-design ANOVA did not reveal a significant interaction effect between time, group, and gender for illness perceptions ($F(3, 450) = 1.47$, $P = 0.223$, partial $\eta^2 = 0.010$) or self-care behaviors ($F(3, 450) = 1.92$, $P = 0.125$, partial $\eta^2 = 0.013$). These findings suggest that the intervention's effectiveness did not differ significantly between male and female participants.

These subgroup analyses provide additional insights into the potential influence of age and gender on the intervention's effectiveness. The findings suggest that younger participants (<65 years) may benefit more from the psychoeducational intervention in terms of improvements in illness perceptions and self-care behaviors compared to older participants (≥65 years). However, the intervention's effectiveness did not differ significantly between male and female participants.

Discussion

The present RCT aimed to evaluate the impact of a 6-week psychoeducational intervention on illness perceptions and self-care behaviors in individuals with AF. The main findings of the research revealed that the IG experienced significant improvements in illness perceptions and self-care behaviors compared to the CG. These improvements were sustained at 3- and 6-month follow-ups, highlighting the long-term effectiveness of the intervention. The findings remained significant after adjusting for confounding variables like age, gender, and AF type.

The effectiveness of the psychoeducational intervention can be attributed to several factors. First, the intervention was grounded in the Common-Sense Model of Self-Regulation (CSM; Leventhal et al., 2016), which posits that individuals' perceptions of their illness influence their coping strategies and health behaviors. The intervention likely promoted adaptive coping and self-care behaviors by targeting illness perceptions through education and cognitive-behavioral techniques. Second, the intervention employed a patient-centered approach, addressing individual concerns and barriers to self-management.

Table 5. ANCOVA results for illness perceptions and self-care behaviors at post-intervention, adjusted for age, gender, and AF type

Outcome	Effect	F-statistic	Degrees of freedom	p-value	Partial η^2
Illness Perceptions	Age	1.32	(1, 149)	0.253	0.009
	Gender	0.87	(1, 149)	0.352	0.006
	AF type	2.41	(1, 149)	0.123	0.016
	Group	87.40	(1, 149)	<0.001	0.370
Self-Care Behaviors	Age	0.95	(1, 149)	0.332	0.006
	Gender	1.56	(1, 149)	0.214	0.010
	AF type	1.89	(1, 149)	0.171	0.013
	Group	112.60	(1, 149)	<0.001	0.430

Table 6. Participant retention and intervention adherence

Outcome	Intervention group (n = 77)	Control group (n = 77)	Total (N = 154)	p-value
Completed Post-intervention Assessment	75 (97.4%)	73 (94.8%)	148 (96.1%)	0.681
Completed 3-month Follow-up	73 (94.8%)	72 (93.5%)	145 (94.2%)	0.731
Completed 6-month Follow-up	72 (93.5%)	71 (92.2%)	143 (92.9%)	0.754
Intervention Adherence	5.4 ± 0.8	N/A	N/A	N/A

This personalized approach may have enhanced participants' engagement and adherence to the intervention. Third, the group format of the intervention provided opportunities for social support and vicarious learning, which have been shown to facilitate behavior change (Kupper et al., 2024).

The results of this study are consistent with previous research that has demonstrated the effectiveness of psychoeducational interventions in improving illness perceptions and self-care behaviors in various chronic conditions. For instance, a systematic review by Ghorbani et al. (2023) found that interventions targeting illness perceptions significantly improved health outcomes and self-management behaviors in patients with chronic illnesses, including cardiovascular diseases. Similarly, a meta-analysis by Chupradit et al. (2022) reported that educational interventions significantly improved self-care behaviors in patients with heart failure, a condition closely related to AF.

However, the majority of previous studies on psychoeducational interventions in AF have been conducted in Western countries, and their findings may be outside the Iraqi context. The present study addresses this gap by providing evidence for the effectiveness of a culturally adapted psychoeducational intervention in improving illness perceptions and self-care behaviors among Iraqi AF patients. The cultural adaptation of the intervention, which included using Arabic language materials and considering local healthcare practices and beliefs, likely contributed to its effectiveness and acceptability among participants.

The findings of this study have important implications for clinical practice and healthcare policy in Iraq. The results suggest incorporating psychoeducational interventions into standard AF management can significantly improve patients' understanding of their condition and engagement in self-care behaviors.

Table 7. Subgroup analysis: Mixed-design ANOVA results for illness perceptions and self-care behaviors by age category

Outcome	Effect	F-statistic	Degrees of freedom	p-value	Partial η^2
Illness Perceptions	Time	98.5	(3, 450)	<0.001	0.396
	Group	183.2	(1, 150)	<0.001	0.550
	Age Category	5.61	(1, 150)	0.019	0.036
	Time × Group	28.4	(3, 450)	<0.001	0.159
	Time × Age Category	2.17	(3, 450)	0.091	0.014
	Group × Age Category	4.89	(1, 150)	0.028	0.032
	Time × Group × Age Category	3.61	(3, 450)	0.013	0.024
Self-Care Behaviors	Time	114.9	(3, 450)	<0.001	0.434
	Group	200.7	(1, 150)	<0.001	0.572
	Age Category	7.34	(1, 150)	0.008	0.047
	Time × Group	39.5	(3, 450)	<0.001	0.209
	Time × Age Category	2.81	(3, 450)	0.039	0.018
	Group × Age Category	6.52	(1, 150)	0.012	0.042
	Time × Group × Age Category	4.12	(3, 450)	0.007	0.027

Healthcare providers should consider implementing similar interventions to promote better patient outcomes and reduce the burden of AF. Moreover, policymakers should support the integration of psychoeducational interventions into AF care pathways and allocate resources for training healthcare professionals in delivering these interventions.

Despite the strengths of the current research, several limitations should be acknowledged. First, the study was conducted in a single country, and the findings may need to be more generalizable to other populations or healthcare settings. Future research should replicate these findings in different cultural contexts and explore the potential for cross-cultural adaptations of psychoeducational interventions. Second, the study relied on self-reported measures of illness perceptions and self-care behaviors, which may be subject to social desirability bias. Future studies could employ objective measures, such as medication adherence monitoring devices or patient-reported outcomes, to corroborate the findings. Third, the study did not assess the cost-effectiveness of the intervention, which is an essential consideration for healthcare decision-making. Future research should include economic evaluations to determine the cost-benefit ratio of psychoeducational interventions in AF management.

Based on the findings and limitations of the present study, several areas for future research can be proposed. First, long-term follow-up studies are needed to assess the sustainability of the intervention's effects beyond six months and identify factors contributing to the maintenance of improved illness perceptions and self-care behaviors over time. Second, future studies should investigate the optimal duration, intensity, and delivery mode of psychoeducational interventions in AF to maximize their effectiveness and efficiency. Third, research should explore the potential for integrating psychoeducational interventions with other evidence-based approaches, such as telemonitoring or nurse-led care, to enhance AF management. Finally, future studies should examine the effectiveness of psychoeducational interventions in specific subgroups of AF patients, such as those with multiple comorbidities or limited health literacy, to tailor interventions to their unique needs and challenges.

Conclusion

This randomized controlled trial demonstrates the effectiveness of a 6-week psychoeducational intervention in significantly improving illness perceptions and self-care behaviors among patients with atrial fibrillation in Iraq. The intervention group experienced a 31.1% improvement in illness perception scores and a 40.5% improvement in self-care behavior scores from baseline to post-intervention, with these improvements being sustained at the 3- and 6-month follow-ups. The findings remained significant after adjusting for potential confounding variables, highlighting the robustness of the intervention's impact.

The results of this study have important practical implications for healthcare providers and policymakers in Iraq and similar healthcare settings. The findings suggest that incorporating psychoeducational interventions into standard atrial fibrillation management can significantly improve patients' understanding of their condition and engagement in self-care behaviors, ultimately promoting better health outcomes. Healthcare providers should consider implementing such interventions as part of routine care for atrial fibrillation patients, either through in-person group sessions or by adapting the intervention for delivery via telemedicine platforms to increase accessibility.

Policymakers should support the integration of psychoeducational interventions

into atrial fibrillation care pathways by allocating resources for training healthcare professionals to deliver these interventions and providing incentives for healthcare organizations to adopt these approaches. Implementing psychoeducational interventions at a health system level can reduce the overall burden of atrial fibrillation by improving patient self-management, reducing complications, and decreasing healthcare utilization and costs.

Conflict of Interests

Authors have no conflict of interests.

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