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A qualitative study of treatment adherence from the perspective of nurses and patients following acute coronary syndrome

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A qualitative study of treatment adherence from the perspective of nurses and patients following acute coronary syndrome

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Abstract

Aim To gain an understanding of potential aspects influencing treatment adherence for patients with acute coronary syndrome.

Design A qualitative deductive approach.

Methods Patient and nurse participants were recruited from a single hospital in Australia, who participated in a semi-structured interview. Data were analysed using a deductive thematic analysis.

Results Fifteen patients with acute coronary syndrome and 13 registered nurses participated in the study. Potential aspects influencing treatment adherence included perceived risk, perceived benefits, perceived barriers, self-efficacy, and cues to action.

Conclusion This study provides insights into the limited evidence into understanding the aspects that influence treatment adherence for acute coronary syndrome from both the patient and the nurse perspective. This is important given the continuing low rate of treatment adherence among patients with acute coronary syndrome. Future studies are recommended to consider patients' perceived benefits, barriers, and cues to action that target increased treatment adherence for this population.

Clinical trial number Not applicable.

Keywords Patients, Qualitative study, Treatment adherence, Health beliefs model, Nurses, Acute coronary syndrome

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Background

Treatment adherence for cardiovascular disease is directly linked to mortality, morbidity and quality of life [1]. Adherence to a treatment plan is defined as "*the extent to which a person's behaviour taking, medications, following a recommended diet and/or executing lifestyle changes, corresponds with the agreed recommendations of a healthcare provider*" [2, p.3]].This definition acknowledges the multiple dimensions of adherence in an individual's life and the need to focus on changing behaviour, regardless of the disease and diagnosis. Adherence to treatment for acute coronary syndrome (ACS) is often suboptimal and non-adherence has been linked to increased risk of further cardiac complications, readmissions and death [3, 4]. ACS is defined as a rapid reduction in blood supply to the heart, ranging from unstable angina to myocardial infraction with or without ST-segment elevation [5]. ACS is the leading cause of death globally, approximately half of worldwide burden of the disease [6], leading not only in early death but also in risen expenditures to the health care system [7]. The rate of adherence to a long-term treatment plan for ACS is estimated at 50% in developed countries [8].

Treatment adherence means not only matching patient's behaviour to the prescriber's advice but also the opportunity for clinicians to assess treatment effectiveness and improve health related quality of life [9, 10]. Globally, adherence to pharmacological and non-pharmacological treatment is reported to be poor among populations with chronic illness, particularly among patients with ACS [11] leading to mortality and morbidity, low quality of life and then consequent economic burden on health care systems [12].

Recent data indicate that medication adherence for ACS in developed and developing countries ranged from 37.5 to 64.3% [11]. Adherence to non-pharmacological treatment is also lower [13]. Only two studies have focused on after myocardial infarction events, which reported poor adherence, A European quantitative study reported that only 10% of myocardial infarction patients adhere to recommended treatment plans [14]. A recent qualitative study presented insights into post myocardial infarction patients' perceptions of adherence behaviour [8] and found that adherence is a multifaceted phenomenon, which influenced by internal and external motivators and interrelationship between these motivators could increase adherence to treatment [8].

Theoretical models are considered to be as the potential tools to support explanation and identification of aspects influencing treatment adherence [15]. The Health Belief Model (HBM) has been widely used to explore individuals' perception and beliefs about health behavioural changes in communication research [16], for example where a well-targeted message was helpful to reduce barriers improve confidence and change individual perceptions of risk and benefits of medication adherence. A recent study used HBM to examine the effect of patient education on preventing readmission behaviours in patients with ACS, finding that the model was effective in encouraging readmission preventive behaviours [17]. One study also examined the effect of education on dietary behaviour using HBM among patients who experienced a myocardial infarction [18], indicated that this model improved clinical outcome and maintained healthy diet by reducing in total cholesterol, and fasting blood sugar. A possible explanation for low rates of treatment adherence could be related to a lack of understanding of the health beliefs underpinning aspects associated with adherence. The continued experience of the burden of ACS indicates that more information about how to optimise treatment according to the HBM is also needed.

Although the importance of the nurses' role in promoting adherence to treatment plans is well recognised [19], little is known about how nurses' perceive the aspects influencing ACS treatment adherence. Also, patients' own perspectives of what shapes their treatment adherence are under researched. Therefore, a qualitative method was chosen, as the purpose of this study was to gain an in-depth understanding of potential aspects influencing treatment adherence using the HBM. An in-depth exploration of the patients and nurses' perceptions may help to identify potential aspects that can be used to promote adherence behaviour by capturing the individual perceptions of the phenomena.

The study

Aim

To gain an in-depth understanding of potential aspects influencing treatment adherence for patients with acute coronary syndrome.

Methods

Research design

This study used a qualitative deductive approach [20] along with HBM as the theoretical lens to support data collection and data analysis. HBM used to assess how risk perceptions and preventive behaviour influenced medication adherence [21]. HBM is one of the most common frameworks that is widely used to predict how patients take actions to control illness and disease by perceiving the susceptibility to given illness or its severity and at the same time they assess the expected benefits and barriers coupled with judgment of own capabilities to perform a given action required to obtain certain results [22]. Although the HBM is considered an effective model for treatment adherence for chronic conditions, it has not been used to examine or assess adherence to pharmacological and non-pharmacological treatment in

the context of ACS. This method allowed for the exploration of how patients and nurses' perceptions of susceptibility, severity, benefits, and barriers influenced adherence behaviours, which specifically aligned with the study aim of understanding of potential aspects influencing treatment adherence for patients with acute coronary syndrome.

This approach coupled with the HBM helped us to analyse the findings within an appropriate framework, which enhanced the analytical depth of the data. The HBM is effective in describing and understanding health behaviours [23] and used widely within health to understand changes in, and the maintenance of health-related behaviour, including preventative actions [24, 25]. The study followed the Consolidated Criteria for Reporting Qualitative Research (COREQ) reporting guidelines, which is a 32-item checklist for reporting qualitative study [26].

Study setting

The study took place at university-affiliated major tertiary hospital in Western Australia and nurses and patients were recruited from the coronary care unit of this hospital.

Sampling. Inclusion and/or exclusion criteria

Purposive sampling was used in this study, to gain a deep perception of participants and to obtain a maximum variation and diversity among participants with ACS and caring for ACS patients. The inclusion criteria for patients was aged 18 and over, first or repeated admission to the coronary care unit due to ACS including unstable angina and Myocardial Infarction (MI), admitted to hospital for 2–7 days and discharged home post admission. Patients with the history of mental health conditions and unable to speak English were excluded. The inclusion criteria for nurses were registered nurses with 3–5 years' experience with patients with ACS and follow-up consultations. Sample size was guided by data saturation [27] and a sample size of 15 patients and 13 nurses were included. In the last two interviews of patients and nurses, no new data were generated.

Recruitment

For nurses, potential participants were notified about the study through their professional network at the selected hospital (one hospital). After expressing their interest, they were subsequently sent an email containing the study protocol and participant information. Then, an arrangement was made for the interview. For patients, letters of invitation to participate were given to potential participants prior to discharge from the hospital by the Clinical Nurse Specialist or the Nurse Unit Manager and consent to be contacted about the study was obtained before discharge. One-week later, participants were contacted by telephone to ask whether they were interested in the study and if so, following discussion, an interview was arranged.

Data collection

All data were collected through semi-structured interviews, which is an appropriate method to gain a better understanding of individuals' perceptions and beliefs [28]. The interviews were conducted by two members of the research team: one member (SR) conducted 15 interviews with patients, and the second member (AC) conducted 13 interviews with nurses. Interviews lasted between 30 and 45 min. Interviews were conducted face-to-face ($n = 13$) by telephone($n = 4$), or via Microsoft Teams ($n = 12$). The variety of interview modes was used to meet patients and nurses' availability and preferred option. Face to face interviews took place in an undisturbed area at the café outside of the hospital, on dates and times convenient to the participants.

The data were collected between February and April 2019 and again in February 2023. This extended period was due to the impact of COVID-19, which significantly interrupted the data collection. All interviews were recorded and transcribed verbatim. HBM includes four constructs, including perceived susceptibility, perceived severity, perceived benefits, and perceived barriers, which they were used to develop interview questions. HBM was selected to guide interview questions, due to providing a thorough framework, which focuses on the key perceptions that influence health behaviours and explores patients and nurses' health beliefs in more depth. The semi-structured interviews were guided by an interview schedule informed by the Health Belief Model. This schedule ensured consistent coverage of relevant constructs while allowing for in-depth exploration of individual perspectives [29]. The full interview guide is provided as supplementary material in the Appendix 1 to support transparency, replicability, and critical appraisal of the study design.

Data analysis

The qualitative data collected were managed using ©QSR NVivo 12 software. Audio recordings of the interviews were transcribed by the first author, which also accompanied by field notes. Listening to the recordings and transcribing allowed the first author to expand her insight to the interviews and helped her to be conscious and critical about her preunderstanding and assumptions as a nurse. The process of analysis followed a deductive thematic analysis method, which as described by Braun and Clarke [20], including five stages: immersion and familiarisation, generating coding, arranging the subthemes into overarching theme, and defining and naming themes.

The first author undertook the initial data analysis and coding, with reference to the constructs of the HBM to support a deductive approach. Then, coding and themes were discussed with co-researchers until agreement was reached.

Rigor and reflexivity

Attention was paid to developing the credibility, dependability, confirmability, and transferability of the study. To ensure the credibility, the team had demonstrated experience of undertaking qualitative research study, including conducting interviews and thematic analysis. The interviews were conducted by one of the members of the research team, who had no previous contact with participants until the time of interview. The consistency and dependability of data analysis was captured optimized by the first author who independently coded interview transcripts and managed the coding using Nvivo. Any disagreements in coding were resolved through discussion with the second author. The themes were identified by first and second authors and these were assessed, confirmed and corrected by all members of the research team. Also, the findings are presented with quotations to establish the accuracy of the performed analysis. Confirmability was achieved through an audit trail, a clear description of the research process from the beginning of the project to the development and reporting of the findings. Reflexivity was established through conversation between research team members and other researchers to discuss our understanding. The authors provided a detailed description of the methods including participants, and data collection process and particularly the presenting findings with quotations to establish the accuracy of the performed analysis, which captures the suggestion on the transferability of the results to another context.

Ethical considerations

Ethical approval was granted by the University Human Research Ethics Committee (reference number 19507) and Hospital Health Service Research Ethics Committee (reference number RGS0000000779). Participants were informed about the aim of the study verbally and in writing, their right to withdraw at any time, and they provided written consent to participate in this study. All identifying information was removed and a code number assigned to each participant. All paper records were placed in a secured filing cabinet in the primary researcher's office space. All electronic data were stored on a password protected computer without identifiers and only accessible by the researchers.

Findings

Characteristics of participants

The sample comprised primarily older male patients who experienced a myocardial infarction and mid-career female nurses with substantial clinical experience. The patient group displayed a moderate to high level of educational attainment, and over half were retired. The nurse participants were all degree-qualified and predominantly in full-time employment. This demographic composition may influence the interpretive lens through which treatment adherence is perceived and discussed. As such, while the sample provides valuable insights into ACS adherence within a tertiary care setting, the findings may be most transferable to similar socio-demographic and professional healthcare contexts.

Demographic characteristics	Patients ($n=15$)	Percentage
Total	15	100
Sex		
Male	11	73
Female	4	27
Age		
40–45	1	7
50–59	6	40
60–69	4	27
70–79	4	27
Marital status		
Married or De facto	10	67
Divorced	3	20
Single	2	13
Empolyment status		
Full time	5	33
Part time	2	13
Retired	8	53
Highest education level		
Less than Year 12	1	13
Year 12 or equivalent	8	53
Undergraduate diploma	2	13
Bachelor's degree	4	27

Demographic characteristics	Nurse ($n=13$)	Percentage
Total	13	100
Sex		
Female	13	100
Age		
30–35	5	38
35–40	6	46
40–45	2	15
Working experience		
3 years	1	7
5 years	3	23
8 years	4	30
10 years	5	38
Empolyment status		

Demographic characteristics	Nurse (*n* = 13)	Percentage
Full time	11	84
Part time	2	16
Highest education level		
Bachelor degree	13	100
Undergraduate diploma	2	13
Bachelor degree	4	27

Interview results

Five themes were developed through the process of analysis and related to both nurses and patients' perceptions, these were (i) perceived risk/ susceptibility, (ii) perceived benefits, (iii) perceived barriers, self-efficacy, and cues to action.

Perceived risk/ susceptibility

The perception of a high level of perceived risk was associated by patients with the belief that they were at an increased risk of developing further damage to their heart muscle. Participants who had family members who were diagnosed with heart disease and who had lost a family member following a heart attack described feeling susceptible to life-threatening heart conditions:

> *My grand mum and my dad died due to heart attack, my dad's side have heart problem, so I am concerned, and this bothers me a lot that I am more susceptible to die from heart attack (patient No. 3)*

Nurses also highlighted their views on perceived risk of family history that could affect the likelihood of an individual's risk for developing some health conditions by sharing genetic factors. One nurse shared:

> *Thinking of the negative and serious consequences of heart attack, was more common for those patients who had positive family history, patients considered family genes and heredity made them more disposed to be at risk of same diseases because of having the same genes (Nurse No.6)*

Being aware of the risks of developing further complications reinforced more positive view on adhering treatment plan as well as the willingness to adhere treatment plan. Recognising such risk also provided an opportunity for patients to feel motivated for developing healthier lifestyle.

> *I know that I may be at risk getting more complications. So knowing this helps and motivates me to change my life style toward a healthy one and the only way I can do this is through following my treatment plan (patient No. 4)*

> *Recognising the reality condition that the risk is there can motivate any patients easily to adhere their regime and keen to change their habits such practising regular physical activity and watching diet (Nurse No.7)*

Perceived risk was seen by both patients and nurses as underpinning evaluation and also action.

Perceived benefits

Reducing the risk of developing further cardiac events, decreasing the fear of being afflicted again and improving quality of life that emerged as perceived benefits to treatment adherence. The majority of patients and nurses described experiences that related to perceived benefits:

> *I suppose to keep up with the treatment plan comes out of fear of becoming sick again. Importantly I don't want my current condition to get worse to the stage which becomes more complicated, overall become healthier, and have a better quality of life (Patient No.12)*

> *There's a tangible benefit to the patients, and they understand that adhering treatment plan makes them better, so consequently improves overall quality of life (Nurse No.6)*

Also, many patients and nurses referenced the benefits of adhering to treatment as the opportunity to maintain life purpose. They voiced that adhering to treatment allowed them to continue pursing family goals, living longer and extending their life expectancy.

> *Being alive and living longer to be with my daughter and look after my grandchildren are the main benefit of sticking to my treatment plan. Also, I am not too old, and I have plenty of time to live, why not? I can easily extend my life and change my lifestyle by having a good diet, exercise and take medication (Patient No.1)*

The theme of perceived benefits was important for both patients and nurses, it gave patients hope that change could demonstrably impact their life and their families and nurses were aware of the power of the perception of benefit to adhering to treatment for the long term.

Perceived barriers

Not having adequate knowledge to understand the importance of adhering to treatment plans was perceived by both patients and nurses as a barrier that led to low

adherence to treatment regimens. Often this continued until the recurrence of symptoms re-engagement.

> *After discharge form hospital I take medications and follow whatever doctor said things like eating healthy 30 min walk and so on, but only last for several weeks, after feeling better, I don't see any points to take them and follow my restricted diet and exercise (Patient No.3)*

> *The fact is that patient's understanding of the long-term adhering treatment is inadequate. They only see the time when they discharged form hospital for short term, then when they feel fine with no symptoms, they don't follow their regime anymore. (Nurse No.8)*

Another barrier is more specific to the cardiac rehabilitation program as part of the treatment plan. Prior work commitments including meetings, long and busy working days were reported by both patients and nurses as barriers to treatment adherence. Work obligations restricted patients' ability to adhere cardiac rehabilitation.

> *I observed that patients who are working and busy are those who are not compliant with their treatment regimen (Nurse No.12)*

> *Once I get back to work after being discharged form hospital and get busy with my job plus a busy schedule, I can't get time off to attend rehab program (patient 15)*

The barriers to adherence were multiple and included lack of knowledge, the issue of not experiencing direct feedback between treatment adherence and improved health and the impact of everyday demands that made the prioritisation of health behaviours challenging.

Self-efficacy

Half of the participants described the education they received as linked to improvements in their capacity to manage their health by implementing the recommended changes and integrating them into their lifestyle. This aligns with the concept of self-efficacy and examples included taking medications, undertaking regular exercise and dietary changes.

> *Becoming more educated enabled me to be more responsible about my health and helping me to adhere with prescribed treatment plan, medication regimens and lifestyle adjustment (patient No. 14)*

> *I think when patients' education and knowledge can foster patient's confidence, competence, and ability to perform required behaviour to follow prescribed treatment plan (Nurse No. 10)*

Also, achieving success in changing behaviour and obtaining positive results played an important role in gaining greater sense of control and higher self-efficacy.

> *Successfully performing specific behaviours or tasks is a powerful source of self-efficacy, which made patients to believe that these task or behaviours are accomplishable (patient No. 11)*

> *Being able to achieve specific goals or outcomes by performing self-care practices as well as engaging in self-care behaviours, giving more confident to keep my diseases stable (Nurse No. 13)*

Both patients and nurses acknowledged the value of knowledge in enhancing capacity to take action related to adherence to treatment.

Cues to action

Most participants voiced how peers could provide patients with information to adhere to treatment plans and preferred their peers to guide them. The sharing of health advice among peers who share the same interest in health behaviour, particularly sharing satisfaction about positive health outcome encouraged participants to engage in healthy practice.

> *Sharing advice and knowledge from peers who have been through the same journey, had more experiences and had a better result from following treatment than us, help me continue following my health instruction (patient No 3)*

> *Visiting peers, who experienced a similar journey can provide guidance to the patients to healthy behaviour and led them to develop habitual behaviour and practice healthy behaviours (nurse No. 8)*

Some participants suggested family members could provide cues to action. Family members were a great social influence; they can support an individual to feel ready to engage in certain behaviours:

> *I believe having a good family member can help anyone to stick with treatment regimen, I am lucky that I have a husband and children who care about me and make me aware that I went through heart attack, and I need to follow my treatment and stick with it, for example I go to every day walk with my husband (patient No. 13)*

Family members are a great social support, could provide valuable action in helping patients to engage in adhering treatment. They care about each other, undertaking regular exercise, having healthy diet together, even for medication they can remind their loved one (nurse No. 12)

Peer support and family support were described as the two main sources of support that underpinned the ability of patients to take action toward treatment adherence.

Discussion

To our knowledge, this study is the first to use a qualitative method to apply constructs from the HBM to explore barriers, benefits, and recommended cues to action to increase adherence to treatment plans from the perspective of patients with ACS and nurses who provided care to ACS patients. According to the findings, the HBM appears useful for understanding adherence to the prescribed ACS regimen, as several of its components were found in the participants' interview transcripts. Overall, most patients and nurses identified the risks or susceptibility that affected treatment adherence. They highlighted the perceived risks of further cardiac events that would increase an individual's engagement in treatment adherence. In line with this study's findings, previous research indicated that the individual's risk of perception of disease sequelae can motivate patients to adhere to and maintain treatment [30]. An individual's perceived risk is also affected by experiencing family members 'death from cardiac related events. Having family members with cardiac problems was the predominant influence on individuals and their sense of perceiving themselves as being at increased risk of further complications [31].

Patients and nurses defined the perceived benefits of adhering to a treatment plan as believing in reducing fear and concerns about developing further cardiac events and improving quality of life. This finding emphasizes the importance of changing a behaviour to prevent or reduce the risk of developing further complication, enhancing quality of life and maintaining healthy lifestyle choices [32, 33] and reflects the constructs of the HBM. Also, they referenced that such benefits create more meaning to the individual's life by developing a strong purpose in life with having well-defined life goals and responsibilities.

A particularly novel finding from this study is the role of *purpose in life* as a motivator for treatment adherence. Participants described how long-term goals, family responsibilities, and a desire to maintain meaningful social roles acted as key drivers in sustaining engagement with prescribed treatment plans. The notion of existential purpose, as distinct from traditional health risk motivators, has been underexplored in the context of adherence to ACS treatment. However, evidence indicates that positive meaning-making on the value of purpose in life informs hope, shapes goals, creates meaning, imparts responsibility and encourage further motivation to adhere treatment as planned [34]. The prominence of this theme suggests that future interventions should consider not only clinical education and symptom management, but also patients' broader life values and aspirations to enhance sustained behaviour change.

Perceived barriers to adhering to a treatment plan included inadequate knowledge to understand the importance of adhering and long-term commitment. Poor knowledge of the prescribed treatment coupled with lack of medication-specific knowledge can lead to poor adherence and misunderstanding of the significance of adverse events. Lacking in knowledge regarding what treatment plan entails and what the value and benefit reflected on patient's adherence. However, comprehensive knowledge of treatment plan alone without considering the broader elements in patient's daily life, may fail to adherer treatment plan effectively [35]. Patients often struggle with other responsibilities such as work commitment which can significantly affect treatment adherence. Considering only on knowledge without acknowledging other elements may overlook other patients' commitments and hinder the optimal treatment adherence. For example, a study has been reported that participants who had full time were less likely to make commitment to cardiac rehabilitation program [36]. To fully overcome the barriers to treatment adherence, it is important to gain a better understanding of patient's conditions where treatment plan can be tailored to patient's needs.

Self-efficacy was identified by the participants as a crucial factor for behavioural change as well as treatment adherence. Self-efficacy reinforces personal strength and build confidence to implement the changes. A sense of self-efficacy with the ability to tailor behavioural changes according to personal beliefs, can reinforce self-control and boost confidence to maintain treatment adherence. Individual's self-efficacy can be beneficial to improve treatment adherence by dedicating more effort reinforcing greater tendency, increasing confidence to persist in individual's attempts to perform a target activity [37]. Self-efficacy helps individuals to build high performance and achieve positive health changes and subsequently achieve optimal outcomes [38].

Cues to act can vary regarding receiving information from peers or family members. Family members play an essential role in encouraging the patient to remain engaged in treatment, leading to high adherence to treatment plans. Family members are linked significantly through each stage of life, where social connection strengthens social influence on individuals during their

lives. Family members provide a safe and supported environment in the illness experience, regulate each other's behaviours, encourage to behave in healthier ways and adhere to the assigned treatment plan, thus promote better adherence [39, 40]. The presence of family creates a sense stability and reassurance that help patients to manage their treatment plan more effectively by reminding them to adhere the prescribed treatment regime as well as creating strategies to overcome any barriers or challenges, when the patients is struggling or experience any difficulties. In other words, family can also remind patients to view treatment adherence as an opportunity to feel better and reduce the future risk of complications. Peers have unique resources to offer by sharing the specific experiences of same health problem and emphasising the experiential knowledge. The importance of sharing experiences from peers was also highlighted by the others, who believed that such experiences coupled with sharing commonalities can be mobilised to encourage the persuasive changes and promote healthful behaviours [39]. Peers can also foster positive outcomes by delivering tailored health information, can help individual's to adopt treatment plan in daily life [41].

Strengths and limitations

While the study's findings are limited in terms of population generalisability due to the single-site design and relatively homogenous sample, they offer strong theoretical generalisability. By grounding the analysis in the well-established HBM and identifying both confirming and divergent influences on adherence behaviour, the study contributes transferable insights. These can inform the design of theory-driven interventions and health policy improvements in similar sociocultural and clinical contexts. Studies from other public and private settings and other backgrounds are also recommended to add diverse perceptions.

Recommendations further research

This study explored perceptions of patients and nurses to gain a better understanding of aspects influencing treatment adherence. Future studies from the perspective of other health care professionals and support persons or family carers can provide a more comprehensive picture of how treatment adherence is perceived. Further studies could also map patients' perceived benefits, barriers, and cues to action to the HMB in order to design a theory-driven intervention that targets the maximisation of adherence. Given the significance of affect and belief among nurses, more fundamental research is needed explore the roles of nurses to better understand perceived factors across the ACS as well as coronary artery disease pathway. Particularly, a more comprehensive understanding of patient needs is required to provide person-centred and family-centred care to create a supportive environment where the right resources and guidance are available to both patients and their family members to help manage the barriers they may experience. Patient and family involvement in the treatment plan and decision making are important to ensure a "fit" is achieved between patients' preferences, needs and values.

Strengthening implications for practice

These findings highlight the need for more robust and structured interventions that incorporate behavioural theory into everyday practice. Specifically, nurse training programmes should include modules on behaviour change techniques, such as motivational interviewing, and education on the psychological dimensions of adherence. Moreover, the formal integration of peer support and family engagement into cardiac care pathways should be prioritised. Tailored adherence strategies that respond to individual beliefs, cultural values, and social roles may offer more sustainable outcomes. Alignment with existing policy frameworks, such as the WHO HEARTS package [42], NICE guidelines [43] on secondary prevention following myocardial infarction, and relevant national nursing standards, could further support the implementation of these practices within health systems.

Conclusion

This study contributes to new knowledge about adherence to the ACS treatment plan from the perspective of patients and nurses. Adherence to the prescribed regimen of ACS treatment is a multidimensional phenomenon that involves an interaction between modifying factors and patients' perceived susceptibility, benefits, barriers, self-efficacy, cues to action that can facilitate or hinder treatment attendance. These factors show a continued entanglement between perceived benefit and perceived barriers due to achieving positive health changes and developing a new learned behaviour. Patients in this study highlighted the positive influence of receiving information from peers and family members in a supportive manner, at the same time, expressed fear of experiencing further cardiac events, having a high sense of purpose in life can reinforce adherence to the treatment plan. Furthermore, better results may be achieved if more focus is given to developing further strategies to overcome barriers adherence treatment plan can be helpful in improving adherence.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12912-025-03469-z.

Supplementary Material 1

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Author contributions
First and second authors conceived the review and oversight for all stages of the review. The fourth and fifth author undertook data collection. The sixth, seventh and eighth authors assisted with patients recruitment and ethics, governance approval. Data analysis was undertaken by first and second author conducted data analysis separately and then all confirmed by all authors. First author wrote the first draft of the manuscript. All authors revised the manuscript and provided substantial contributions and all authors approved the final version of the manuscript.

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Data availability
The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate
Ethical approval was granted by the University Human Research Ethics Committee (reference number 19507) and Hospital Health Service Research Ethics Committee (reference number RGS0000000779), which was conducted in accordance with the Declaration of Helsinki. Written consent was obtained from all participants in this study. This study was performed in full accordance with relevant guidelines and regulations.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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