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Background: In Palestine, there is a lack of studies that examined self-care behaviors among patients with coronary artery disease in outpatient clinics.
Objective: This study purposed to evaluate self-care behaviors, examine the relationship between self-care behaviors and selected sociodemographic and psychosocial factors (e.g. depression, anxiety, stress, and social support), and self-efficacy, and determine predictors of self-care behaviors among patients with coronary artery disease in outpatient clinics in the West Bank/Palestine.
Design: A cross-sectional study was conducted.
Methods: A total of 430 Palestinian adult patients suffering from coronary artery disease attended outpatient clinics were recruited. A self-reported questionnaire consisting of the following tools: Depression, Anxiety, Stress Scale 21, Sullivian's Self-efficacy scale, and Multidimensional Social Support Scale was used to collect data during the period from the beginning of April to the beginning of July 2022. Descriptive and inferential statistics (Pearson's and Point-biserial correlation tests and multiple linear regression) were used for analyzing data.
Results: The patients reported low self-care behaviors levels and high self-efficacy levels. The psychosocial reactions endorsed by the patients were 86.3% for depression, 76.3% for anxiety, 43.3% for stress, and 98.6% had moderate and normal social support. A positive correlation was found between self-care behaviors and age ($r = 0.160$, $p < 0.01$), duration of disease ($r = 0.095$, $p < 0.05$), self-efficacy ($r = 0.443$, $p < 0.01$), and social support ($r = 0.266$, $p < 0.01$). Self-efficacy (B = 0.401, $p < 0.01$), social support (B = 0.160, $p < 0.01$), and age (B = 0.109, $p < 0.05$) were significant predictors of self-care behaviors in those patients.
Conclusion: Low self-care behaviors were a significant issue among patients with coronary artery disease in outpatient clinics. This study may help healthcare professionals develop health promotion programs for patients with coronary artery disease to improve self-care behaviors.

Keywords: anxiety; depression; self-care behaviors; self-efficacy; stress; social support

Impact statement

Healthcare professionals should develop health promotion programs that enhance self-care behaviors such as health education, self-care monitoring, maintaining a healthy diet, practicing

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regular physical activity, and adherence to prescribed treatment. Such programs should be directed to younger and newly diagnosed patients and consider social support and self-efficacy.

Plain language summary

This study aimed to assess self-care behaviors among adult patients with coronary artery disease and factors associated with it, in addition to significant predictors. There are many published studies about this problem among patients with cardiovascular diseases especially heart failure and hypertension, while there is a lack of studies in Palestine investigating this issue among adults with coronary artery disease. The current study could help healthcare professionals plan strategies to improve self-care behaviors among this cohort group. Four hundred and thirty adult patients with coronary artery disease in outpatient cardiac clinics responded to this study. A cross-sectional design was adopted and a convenience sample method was used to recruit participants. Data were collected using self-reported questionnaires that were distributed to the participants in the clinics. These findings can be discussed with healthcare professionals to enhance their awareness of this problem and help them suggest interventions to improve self-care behaviors among those patients.

Introduction

Cardiovascular diseases (CVDs) are one of the most serious health problems on a global level. The World Health Organization (WHO) reported 17.9 million annual deaths due to CVDs worldwide, which formed 32% of the total deaths (World Health Organization [WHO], 2021). Coronary artery disease (CAD) is one of these CVDs and is considered a major cause of mortality worldwide (Malakar et al., 2019). CAD refers to the lowering of blood supply to the heart due to plaque (cholesterol deposits and other elements in the arteries), which causes narrowing in the heart arteries and produces a partial or total blockage of the blood flow (Malakar et al., 2019). In Palestine, overall deaths among adults and older people are related to CVDs, especially Ischemic Heart Diseases (32.4% of all deaths) (Global Health Metrics, 2020).

Self-care refers to a decision-making process in selecting the behaviors of prevention and management of chronic illnesses and it includes three main elements: self-care maintenance, management, and monitoring (Riegel et al., 2017). Healthy behaviors are significant factors in reducing potential risks or complications of any illness and in assisting any effective treatments (Budreviciute et al., 2020). Self-care behaviors (SCBs) are due to therapeutic behaviors that should be performed by patients with CVDs. These behaviors include selecting a healthy diet, managing weight, taking prescribed medication, maintaining physician's appointments, demonstrating the recommended exercise, and monitoring symptoms (Tawalbeh et al., 2018). The CAD requires complex management involving specific medication and healthy SCBs.

Many studies have evaluated the SCBs among patients with CVDs and revealed different results, for example, Nemer (2022) found that Jordanian patients with CAD reported high levels of SCBs. While Asadi et al. (2019) revealed that Iranian patients with heart failure (HF) had a moderate level of SCBs. Peyman and colleagues (2018) found that Iranian patients with HF reported low SCBs level. Also, Tawalbeh et al. (2018) demonstrated that the levels of SCBs among Jordanian patients with HF were low.

Many factors are correlated with low levels of SCBs, including sociodemographic characteristics such as younger age (Ma, 2018; Mazar et al., 2020; Nemer, 2022; Peyman et al., 2018; Tawalbeh et al., 2018; Xie et al., 2020), gender as being male (Asadi et al., 2019), low educational levels (Asadi et al., 2019; Lee & Park, 2017; Tawalbeh et al., 2018), low income (Tawalbeh et al., 2018), and marital status as being single (Asadi et al., 2019; Nemer, 2022), as well as

short duration of the disease (Nemer, 2022; Tawalbeh et al., 2018). Additionally, psychological problems such as anxiety, stress, and depression could be negatively correlated with self-care behaviors (Bahari et al., 2019; Celano et al., 2016; Chen et al., 2020; Kim et al., 2020; Lee & Park, 2017; Nemer, 2022). Additionally, social support and self-efficacy are protective factors for adopting healthy SCBs (Bahari et al., 2019; Chen et al., 2020; Kim et al., 2020; Lee & Park, 2017; Ma, 2018; Nemer, 2022; Peyman et al., 2020).

Despite many published studies have been conducted on medication adherence among patients with chronic diseases (Al-Qerem et al., 2021; Al-Ramahi, 2015; Alsolami et al., 2015; Awad et al., 2017; Basheti et al., 2016) and among patients with CVDs, especially hypertension, and HF (Al-daken & Eshah, 2017; Alhaddad et al., 2016; Malak et al., 2021), few studies have been examined SCBs among patients with CAD at Arab countries scale (Nemer, 2022).

In Palestine, despite increasing the number of patients with CVDs, there is a lack of healthcare services provided for this target group such as self-care counseling and monitoring, in addition to the unavailability of cardiac rehabilitation programs in Palestinian healthcare settings like outpatient clinics (Al-Aqtam et al., 2023). Furthermore, there has been a scarcity of research on the relationship between SCBs and patients with CAD. To address this gap, a national study was conducted to assess the health-promoting behaviors (HPBs) among patients with CAD in primary healthcare clinics. The results showed that over half of the participants either reported moderate (50.6%) or excellent (2.8%) HPBs. The overall lifestyle score of the participants was 123.7 (SD = 21.8), indicating a moderate lifestyle level, with the highest score in the nutrition subscale ($M = 24.3$, SD = 4.8) and the lowest score in the physical activity subscale ($M = 15.2$, SD = 4.4).

Thus, our study is considered one of the first studies in the West Bank/Palestine that discussed this problem and can help healthcare professionals (HCPs) develop strategies to enhance SCBs among patients with CAD. Therefore, this current study aimed to evaluate SCBs including levels, correlating factors, and predictors (e.g. sociodemographic, self-efficacy, and psychosocial (depression, anxiety, stress, and social support)) among patients with CAD in the West Bank/ Palestine. Furthermore, these questions guided the study:

(1) What are the prevalence levels of SCBs, self-efficacy, and psychosocial factors (depression, anxiety, stress, and social support) among adult patients with CAD in Palestine?
(2) What is the association between selected sociodemographic variables (e.g. age, gender, educational level, marital status, income/month, and duration of disease) and the variables of self-efficacy, and psychosocial factors (such as depression, anxiety, stress, and social support) in adult patients with CAD in Palestine?
(3) What are the significant predictors of SCBs among adult patients with CAD in the West Bank/Palestine?

Design, setting, population, and study sample

A cross-sectional, descriptive correlational design was used to carry out this study. This study was conducted at cardiac outpatient clinics located in West Bank Palestinian hospitals in two health sectors involving public and private hospitals in West Bank. In 2021, there were 15 public and nine private hospitals containing cardiac outpatient clinics (Palestinian Ministry of Health [MOH], 2021). The public clinics run under the responsibility of the Ministry of Health and private clinics run under the responsibility of each private hospital. These clinics provide follow-up services and treatment for patients with CVDs, where the patients have

monthly appointments for monitoring their physiological measures and carrying out medical tests, in addition to obtaining prescribed medications. All patients with CAD should be followed up in these clinics.

The target population of this study was all adult patients with CAD attending the cardiac out-patient clinics in the hospitals. A cluster and stratified sampling methods were used to select nine outpatient cardiac clinics (6 public and three private), whereas the West Bank was divided into three zones: north, south, and middle. Then, a simple random method was used to select two public and one private outpatient cardiac clinic from each zone. A convenience sampling method was adopted to recruit the study sample. The G*power 3.1 software program (Heinrich Heine University, Dusseldorf, Germany) was utilized to calculate sample size with an alpha of 0.05, a small effect size of 0.05, and a power of 0.90 with ten predictors. According to regression, a total sample of 420 participants was needed to perform this study; the sample was increased to 462 to avoid incomplete questionnaires.

The eligible participants involved adult patients who were: (1) 20 years to less than 60 years old (because the physiological and psychological aspects and lifestyle patterns differ between adults and older adults according to the aging process), (2) experiencing CAD for at least six months, (3) having the ability to read and write, (4) not suffering from severe mental or cognitive disorders according to their medical file records to avoid the likelihood of worse CVD outcomes in these groups, and (5) willing to participate in this study. However, those patients who were admitted as inpatients were excluded from participation.

Study measurements

A structured self-reporting questionnaire was utilized to conduct this study. This questionnaire consists of the following measurements in addition to sociodemographic data (age, gender, educational level, marital status, monthly income, and duration of disease).

Self-care of Coronary Heart Disease Inventory (SC-CHDI) Version 3 was developed by Riegel and Dickson (2020) and consists of 23 items divided into three sub-scales, including self-care maintenance (9 items), management (8 items), and confidence (6 items). These items were rated on a five-point Likert scale ranging from 1 (never/rarely/not likely) to 5 (always/daily/ likely). The mean score for the total scale was used for determining an individual's level of self-care, with scores lower than the mean reflecting low self-care and scores equal to or greater than the mean indicating high self-care. This scale is valid and reliable, the original version of the scale, developed by Riegel and Dickson (2020), was found to have excellent internal reliability, with a Cronbach's alpha coefficient of 0.91. A subsequent study by Nemer (2022) adapted the scale to the Arabic language and also found it to be a valid and reliable measure, with a Cronbach's alpha of 0.824. These findings demonstrated the robustness of the self-care assessment tools chosen and their ability to accurately measure an individual's level of self-care.

Sullivan's cardiac self-efficacy scale (SCSES) was created by Sullivan et al. (1998) and composed of 13 items. These items were rated from 0 (not at all confident) to 4 (completely confident). This scale had two domains: control symptoms (eight questions) and maintenance functioning (five questions). The median for the total scale was used for identifying the patient's level of self-efficacy, with scores lower than the median (<26) indicating low self-efficacy and scores equal to or greater than the median (≥26) indicating high self-efficacy (Barham et al., 2019). This scale is valid and reliable, the original version of the scale, developed by Sullivan et al. (1998) demonstrated excellent internal reliability, with a Cronbach's alpha for control symptoms and maintenance functioning domains being 0.90 and 0.87, respectively. A later study by Barham et al. (2019) adapted the scale to the

Arabic language and also demonstrated it to be a valid and reliable measure, with a Cronbach's alpha of 0.848.

Depression Anxiety Stress Scales-21 (DASS-21). This scale was developed by Lovibond and Lovibond (1995) and revised by Antony et al. (1998) to assess psychological factors. It includes three subscales due to depression, anxiety, and stress, and each subscale consists of seven items. These items were rated on a 4-point Likert scale ranging from 0 (did not apply to me at all) to 3 (applied to me very much). The total score for each subscale ranged from 0 to 21, where higher scores indicated more likely to experience depression, anxiety, or stress. Earlier studies adapted the scale to the Arabic version and revealed its validity and reliability, with a Cronbach's alpha coefficient of 0.89 (Moussa et al., 2017).

Multidimensional Social Support Scale (MSPSS) was developed by Zimet et al. (1988) and consists of 12 statements to measure social support. The mean score for the total scale was used for determining the level of social support, where higher scores indicated high social support. This tool is valid and reliable, the original version of the scale, developed by Zimet et al. (1988) demonstrated excellent internal reliability, with a Cronbach's alpha of 0.88. A subsequent study by Alzayyat et al. (2015) adapted the scale to the Arabic language and demonstrated it to be a valid and reliable measure, with a Cronbach's alpha of 0.88.

Ethical considerations

The approval to perform this study was obtained from Institutional Review Board (IRB) at Arab American University at Palestine with reference No# 008/2022. Written informed consent, which was attached to each questionnaire, was obtained from eligible participants who were assured of confidentiality. It was made clear that participation was voluntary, where the participants can withdraw at any time during the study, and there would be no direct benefit or reward due to their participation.

Method of data collection

After obtaining approvals, the main researcher discussed the study's objectives with the head nurses of the cardiac outpatient clinics to facilitate data collection. Two researchers took the responsibility of distributing the questionnaires to eligible participants. The questionnaires were distributed to the patients attending these clinics and were collected at the same time during the period from the beginning of April to the beginning of July 2022. To ensure a high response rate, recurrent visits were arranged to the selected clinics on different days.

Data analysis

The "SPSS" statistical package system 25.0 was used to analyze the collected data. Data were assessed for normality, missing, and outliers, the results revealed that data were within normal and no outliers. Descriptive statistics including, mean, SD, and range were used to describe continuous variables (i.e. age, monthly income, duration of disease, SCBs, self-efficacy, depression, anxiety, stress, and social support), and frequencies and percentages were used to describe categorical variables (e.g. gender, educational level, and marital status). Pearson's correlation test was used to examine the relationship between continuous variables and the point-biserial test was used to assess the relationship between categorical and continuous variables. Multivariable linear regression was utilized to determine the predictors

(sociodemographic, psychosocial, and self-efficacy) of SCBs, in which the factors correlated with SCBs were entered into the regression analysis model. The level of significance was set at ≤0.05.

Results

A total of 462 patients who registered in outpatient cardiac clinics were invited to participate in this study. However, 440 questionnaires were returned with a response rate of 95.2%. Additionally, ten questionnaires were dropped out for missing data or incomplete questionnaires, thus, the final number of questionnaires that were entered for analysis was 430.

Table 1 showed that the participants' mean age was $M = 48.38$ (SD = 7.9) with a range of 21–59 years. The majority of the participants (66.2%) were males, 90.9% were married, and 50.9% completed secondary education and less. The mean monthly income was 750.5 \$ (SD = 290.43) with a range of 282–2539\$. The duration of the disease mean was 4.0 years (SD = 4.61) with a range of 1–25 years.

Table 2 explained that the mean score of SCBs was 2.93 (SD = 0.47) and the median of self-efficacy was 37 [$IQR_{25-75} = 30.75–41.0$]. These findings indicated that the participants reported low SCBs and high self-efficacy levels. Additionally, 43.3% of the participants reported experiencing stress, with 18.8% reporting severe to extremely severe stress. Furthermore, 76.3% of participants endorsed anxiety, with 46.2% experiencing severe to extremely severe anxiety. Additionally, 86.3% of participants reported experiencing depressive symptoms, with 47.3% reporting severe to extremely severe depressive symptoms. Also, 98.6% of participants reported having moderate to normal social support.

The results from Table 3 showed a significant positive relationship between SCBs and age ($r = 0.160$, $p < 0.01$), duration of disease ($r = 0.095$, $p < 0.05$), self-efficacy ($r = 0.443$, $p < 0.01$), and social support ($r = 0.266$, $p < 0.01$).

Concerning predictors of SCBs, the full model, which included four predictors of SCBs (age, duration of disease, self-efficacy, and social support), was statistically significant ($F_{(4.425)} = 33.438$, $p < 0.001$, $R = 0.489$, $R^2 = 0.239$, adjusted $R^2 = 0.232$). This means that the model explained 23.9% of the variance in SCBs. Self-efficacy (B = 0.401, $p < 0.01$), social support

Table 1. Sociodemographic characteristics of the study sample ($N = 430$).

Characteristic	*n*	%	
Gender			
Male	284	66.0	
Female	146	34.0	
Educational level			
Secondary or less	219	50.9	
Higher than secondary	60	14.0	
Bachelor or higher	151	35.1	
Marital status			
Single	23	5.3	
Married	391	90.9	
Others (Divorce & widow)	16	3.7	
	M	SD	Range
Age	48.38 years	7.9	21–59 years
Income/month (\$)	750.5	290.43	282.0–2539.0
Duration of the disease	4.0 years	4.61	1–25 years

Note: *n*: number; %: percentage; *M*: Mean; SD: Standard Deviation.

Table 2. Levels of self-care behaviors, self-efficacy, and psychosocial factors among study participants ($N = 430$).

Variables	N (%)	M (SD)
Self-care behaviors		2.93 (0.47)
Sullivan's cardiac self-efficacy		
Median = 37 [IQR$_{25-75}$ = 30.75–41.0]		
Stress		7.39 (5.38)
Normal (0–7)	244 (56.7)	
Mild (8–9)	39 (9.1)	
Moderate (10–12)	66 (15.3)	
Severe (13–16)	52 (12.1)	
Extremely severe (17 and above)	29 (6.7)	
Anxiety		7.66 (4.93)
Normal (0–3)	102 (23.7)	
Mild (4–5)	77 (17.9)	
Moderate (6–7)	52 (12.1)	
Severe (8–9)	41 (9.5)	
Extremely severe (10 and above)	158 (36.7)	
Depression		10.10 (4.76)
Normal (0–4)	59 (13.7)	
Mild (5–6)	53 (12.3)	
Moderate (7–10)	115 (26.7)	
Severe (11–13)	97 (22.6)	
Extremely severe (14 and above)	106 (24.7)	
Social support		5.63 (0.93)
M = 1–2.9 (Low social support)	6 (1.4)	
M = 3–5 (Moderate social support)	98 (22.8)	
M = 5.1–7 (High social support)	326 (75.8)	

Note: n: number; %: percentage; M: mean; SD: standard deviation. IQR: Interquartile range.

Table 3. Factors correlating self-care behaviors among study participants ($N = 430$).

	Self-care behaviors	
Variables	r	p-value
Age	0.160	**0.001****
Income/month	−0.037	0.447
Duration of disease	0.095	**0.040***
Self-efficacy	0.443	**0.000****
Stress	−0.054	0.260
Anxiety	−0.076	0.118
Depression	−0.049	0.309
Social support	0.266	**0.000****
	p.b.r	p-value
Gender	−0.012	0.797
Educational level	0.047	0.335
Marital status	0.068	0.157

Note: p.b.r: point-biserial correlation.
*Correlation is significant at the ≤0.05 level (2-tailed).
**Correlation is significant at the ≤0.01 level (2-tailed).

(B = 0.160, *p* < 0.01), and age (B = 0.109, *p* < 0.05) were found to be significant predictors of SCBs in patients with CAD in outpatient clinics (as indicated in Table 4).

Discussion

This study purposed to assess SCBs levels, examine the factors correlating with SCBs, and predictors of SCBs among Palestinian adult patients with CAD in outpatient clinics. Our findings demonstrated that the participants had low SCBs, which is congruent with previous studies (Peyman et al., 2018; Peyman et al., 2020; Tawalbeh et al., 2018). However, it is inconsistent with a previous Jordanian study indicating higher levels of SCBs among adult patients with CAD (Nemer, 2022). This study's result might be related to a lack of healthcare services such as self-care counseling provided by HCPs and the unavailability of cardiovascular health promotion programs directed to improve SCBs among those patients in Palestinian outpatient clinics (Al-Aqtam et al., 2023). Financial issues could play a significant role in engaging in these behaviors (Cheng et al., 2015).

Our study found the majority of the participants endorsed high levels of depression, which is consistent with a previous Palestinian study (Allabadi et al., 2019). On the contrary, this study reported higher levels of depression among patients with CVDs compared with previous studies (Al-Abbudi et al., 2018; Bahall, 2019; Dhital et al., 2018; Ivanovs et al., 2018; Mbakwem et al., 2016; Umer et al., 2019; Yazew et al., 2019). This difference in results might be related to the characteristics of the study participants, most of our participants' mean age was around 48 years and completed secondary education or less. Besides, the majority of our participants reported a low income. These findings could have influenced their coping mechanisms with their diseases and highlighted the high levels of depression among those patients.

Our study showed that more than two-thirds of participants experienced anxiety. Our study's findings are incongruent with earlier studies indicating lower anxiety levels among patients with CVDs (Chen et al., 2019; Dhital et al., 2018; Ivanovs et al., 2018). The high anxiety levels among study participants might be associated with the determinants linked with CVDs including illnesses characteristics (Dhital et al., 2018), physiological alterations, unanticipated complications (Davies & Allgulander, 2013), required lifestyle changes (Celano et al., 2016), insufficient counseling resources (Dhital et al., 2018), and a lack of financial support (Dhital et al., 2018).

Also, more than one-third of the patients experienced stress, this percentage could be connected with high anxiety levels because both stress and anxiety affect one another. Thus, our findings promote implementing psychological management strategies for patients with CAD. Additionally, most of the participants endorsed moderate and normal social support, this expected study finding may be related to the collectivist culture in Palestinian society, where social support is critical and could play a role in enhancing SCBs.

Table 4. Predictors of self-care behaviors: Multivariable linear regression.

Predictor	*b*	*B*	*t*-test	*p*-value	95.0% CI Lower	95.0% CI Upper
Age	0.006	0.109	2.467	0.014	0.001	0.012
Duration of disease	0.002	0.019	0.426	0.671	−0.007	0.011
Social support	0.081	0.160	3.657	0.000	0.038	0.125
Self-efficacy	0.023	0.401	9.208	0.000	0.018	0.028

Note: b: Unstandardized beta; B: Standardized beta; CI: Confidence Interval.

Our finding revealed that participants reported high self-efficacy, which is higher than in previous studies among patients with CVDs (Barham et al., 2019; Ejadi et al., 2018; Lee & Park, 2017; Peyman et al., 2018). This high self-efficacy could be associated with many factors, including higher education (Khairy et al., 2021; Peyman et al., 2018), high social support (Chair et al., 2015), and the long duration of disease (Kang & Yang, 2013).

This study demonstrated a positive correlation existed between SCBs and age, indicating patients with advanced age reported higher SCBs. This study finding agreed with Ma's (2018) study, which found that middle-aged patients reported greater SCBs than young adults. Our result could be clarified as the majority of study participants were middle-aged adults who can make decisions and take responsibility for adopting SCBs (Strough & Bruine de Bruin, 2020). Also, age was considered a protective factor for SCBs in this study.

Our study showed that SCBs and duration of disease had a significant positive correlation, which suggested that patients with a longer duration of disease endorsed high SCBs. This result is consistent with previous studies (Tawalbeh et al., 2017, 2018). Our finding could be interpreted as patients experiencing CAD for a long time may have more experience with the disease and treatment, which could lead to greater adoption of SCBs (Beker et al., 2014).

Our study demonstrated a positive relationship between SCBs and self-efficacy, which illustrated as high self-efficacy motivated patients to enhance SCBs. This finding is consistent with previous literature (Chen et al., 2020; Lee & Park, 2017; Ma, 2018; Peyman et al., 2020). Self-efficacy is a drive for encouraging and motivating the adoption of healthy SCBs among patients with CAD (Wantiyah et al., 2020).

This study found a positive relationship between SCBs and social support, indicating that patients with high social support had better SCBs, which is congruent with earlier studies (Bahari et al., 2019; Lee & Park, 2017). Patients with high social support were more likely to seek advice from HCPs about SCBs (Gallagher et al., 2011). Additionally, family and friends can make a significant difference in a patient's health orientation, which may result in higher SCBs (Hu et al., 2015). Our study showed that social support was a predictor for SCBs, which agreed with a previous study (Tawalbeh et al., 2017). The potential interpretation of this finding might be related to societal norms in Arab society, where families can assist their patients during their therapeutic management (Padela & Zaidi, 2018).

Although this study is one of the first studies assessed SCBs among patients with CAD in Palestine, it has the following limitations; a cross-sectional design was adopted, where the variables were only measured over a short time; the responses relied heavily on the participants' perceptions at the time of data collection, therefore, other designs such as longitudinal could be used in the future studies.

Furthermore, the data were collected via self-reported questionnaires, which may have influenced the participants' desirability and resulted in response bias. Despite this study involving both health sectors and different geographical areas in Palestine, however, a convenience sampling method was adopted, which may affect the generalization of the findings. Also, the current study excluded older adults, illiterate people, and those with severe mental disorders, thus future studies are recommended to include these groups.

Impact of the study

This study can provide baseline information about SCBs and correlating factors among patients with CAD in Palestine, which may be significant for HCPs in setting priorities for planning healthcare programs to enhance SCBs in this target group. This study encourages HCPs to develop health promotion programs such as maintaining a healthy diet, practicing routine physical activity, adhering to prescribed medications, keeping scheduled appointments with

healthcare professionals, and self-care monitoring for those patients to improve SCBs. Earlier studies explained that health intervention programs provided by healthcare professionals in clinics enhanced SCBs (Peyman et al., 2020; Tawalbeh et al., 2017).

Conclusion

Patients with CAD in Palestine reported low levels of SCBs. There was a significant relationship between SCBs and psychosocial factors such as depression, anxiety, stress, social support, and self-efficacy. Thus, conducting screening for these psychological factors and implementing psychological management strategies for patients with CAD could enhance SCBs. HCPs could also leverage the social supports that are prevalent in Palestine's collectivist culture to enhance SCBs among Palestinian patients with CAD. Moreover, HCPs should develop and implement health promotion and education training programs focused on evidence-based practice to improve SCBs among patients with CAD. Future qualitative studies describing the SCBs' experiences, facilitators, and barriers to adhering to the SCBs of those patients are recommended. Moreover, studies investigating the effects of such management strategies and health promotion programs among this cohort group should be conducted.

Consent to participate

Each participant provided informed consent before beginning the study.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Ethics approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee (Arab American University at Palestine) with reference No# 008/2022.

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