Evaluation of the National Guard Health Promotion Program for Chronic Diseases and Comorbid Conditions Among Military Personnel in Jeddah City, Saudi Arabia, 2016

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ABSTRACT Objective: Cardiovascular diseases (CVDs) are the leading cause of death worldwide. Preventive efforts mainly target the reduction of modifiable CVD risk factors through community-based promotion programs. One of these programs is the National Guard Health Promotion Program for Chronic Diseases and Comorbid Conditions among military personnel in Jeddah City, Saudi Arabia. Researchers have asserted that to improve every intervention program, especially those targeting public health issues, regular monitoring and evaluation are needed to determine the strength and weakness of the program. The objective of this study was to assess the effectiveness of National Guard Health Promotion Program for Chronic Diseases and Comorbid Conditions among military personnel in Jeddah City by estimating Framingham risk score, diabetes risk score, and satisfaction level for the participants covered by the program for at least 6 months. Methods: Through pre- and poststudy design, a systematic random sample of military personnel who fulfilled the inclusion criteria (n = 267) were enrolled in the study. To assess the program's effectiveness, participants were subjected to clinical and laboratory assessment based mainly on Framingham risk scores before and after involvement in the program; satisfaction was assessed concurrently using a self-administered questionnaire. The Wilcoxon signed rank test was used to compare changes in non-normally distributed quantitative variables. Multiple logistic regression analysis was used to identify independent predictors of risk of CVDs. Results: The subjects were all military men, with mean age of 35.8 ± 6.6 years; 6% officers with the remainder "non-officers" primarily working in the combat services. After at least 6 months of the preventive program, there were statistically significant decreases in body mass index (−0.4 ± 1.5 kg/m^2), waist circumference (−0.9 ± 6.2 cm), fasting blood glucose (−12.3 ± 29.6 mg/dL), and total cholesterol (−15.4 ± 40.2 mg/dL). Despite this observed improvement, the overall Framingham risk score showed a modest nonsignificant change (−0.1 ± 2.1 points). Similarly, although specific predictors scores of diabetes mellitus showed significant improvement (decreased blood glucose [−0.4 ± 1.8 points] and increased fruit and vegetable consumption [−0.2 ± 0.6 points]), there was no significant change in the overall diabetes risk score (−0.01 ± 2.5). The majority of the participants (96%) expressed that they were satisfied with the program. Conclusion: The National Guard Health Promotion Program is effective in improving specific risk factors such as body mass index, waist circumference, blood glucose, and intake of fruits and vegetables; in addition, it was perceived as being satisfactory. Nevertheless, it had no statistically significant impact on the overall total risk scores for CVDs and diabetes mellitus.

INTRODUCTION

Cardiovascular diseases (CVDs) are the most common noncommunicable diseases[1] and are responsible for about 30% of annual mortalities worldwide, or about 17.3 million deaths every year, with an expected rise to 23.3 million by 2030,[2,3] mostly in developing countries.[4] Saudi Arabia is considered one of the most rapidly developing countries and faces an increase in the burden of noncommunicable diseases. The annual mortality rate resulting from all noncommunicable diseases in Saudi Arabia was 753 deaths per 100,000 people in 2011, of which 314 deaths (42%) were the result of CVD.[2]

Most CVDs are related to modifiable risk factors, such as smoking, physical inactivity, unhealthy diet, diabetes mellitus (DM), obesity, high blood pressure, and elevated lipids associated with poor health; these factors are responsible for about 80% of CVDs.[1] In relation to the military field, studies have outlined the relatively high prevalence of various CVD risk factors in military personnel; for example smoking,[5,6] overweight, obesity,[7] hypertension,[8] DM,[9] and dyslipidemia.[10]

Previous studies in Saudi Arabia[11,12] revealed that the prevalence of CVD risk factors was almost the same between military personnel and the general population, with low prevalence of DM among the military population; however, the weighted Framingham scores were different. In addition, the prevalence of a more than 10% risk of having CVD in the next 10 years was lower among military personnel (9%) than in the general population (11%). Despite the observed relatively lower percentage among the military personnel, it was attributed to the peculiar characteristics of the job.

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On the basis of this concept, the National Guard Health Affairs represented by the Department of Community and Preventive Medicine launched the Health Promotion Program for Chronic Diseases and Comorbid Conditions in 2016. This program aimed to provide a comprehensive health promotion program of CVD and DM, followed by health outcome measures (body mass index [BMI], waist circumference, fasting blood glucose [FBG], blood pressure, and blood cholesterol) and health education specifically tailored to target each type of identified risk factor.

This program used the Framingham risk scoring as a tool to estimate the 10-year CVD risk, on the basis of nonmodifiable risk factors, such as age, and modifiable risk factors, such as smoking, high blood pressure, high-density lipoprotein (HDL), and total cholesterol (TC) levels. In addition, although DM is not an integral component of current Framingham risk factors, it was considered as an important risk factor that should be screened and estimated.[13] Accordingly, a well-defined checklist was structured and used as an assessment tool for guiding the interventions of the program.

Researchers have indicated that for every intervention program, especially those targeting public health issues, there is a basic need for regular monitoring and evaluation to determine the program's strengths and weaknesses.[14] A typical approach is to assess the program in terms of measurable outcome indicators reflecting improvement in the targeted diseases and the related risk factors.[15] For this purpose, the Framingham risk score has been used as a tool to assess programs targeting CVD[14,15]; this is because of its previously documented effectiveness in the precise detection of projected risk of CVD over the following 10 years.[14,16]

Another complementary approach is to assess the participants' satisfaction of the program and is considered an essential component of the evaluation of health care services and health care organizations.[17] Therefore, knowing patients' needs and expectations of health care services could help in health system planning.[18]

SUBJECTS AND METHODS

This study was carried out in Jeddah, which is the second largest city and the main seaport in Saudi Arabia. The National Guard Health Affairs in Jeddah, through the services provided by the Department of Preventive and Community Medicine, launched a health promotion program in 2016. This program aimed to reduce risk factors related to CVD and DM. A pre- and poststudy design was used to evaluate this program. The study included military personnel of different ranks in the National Guard who were serving in troops in Jeddah; all personnel had been subjected to the baseline checkup and received intervention through the health promotion program for at least 6 months. Exclusion criteria included those not exposed to the program or those who had undertaken the program for less than 6 months and those with known cardiac disease. In addition, for studies involving the diabetic risk score, those with known DM were excluded. King Abdullah International Medical Research Center Ethics and Scientific Committee officially approved this research (IRB: RJ14/015/J). Also, informed consent was obtained from each individual who participated in the study.

The sample size was calculated on the basis of the primary program objective to reduce CVD risk development by 15% from the baseline mean Framingham score using the PASS 13 software (NCSS, LLC, Kaysville, Utah).[19,20] A sample size of 267 from a population of 812 achieved 95% power to detect a difference of 0.3 between the null hypothesis mean of 1.5 and the alternative hypothesis mean of 1.2, with an estimated standard deviation of 1.5 and a significance level (alpha) of 0.05 using paired Student *t* test.

Using the database available in the health information unit of this program, a list of eligible participants meeting the study inclusion criteria was used as a matrix to determine the sample through systematic random sampling. According to the sample size and population of the study, every third eligible participant (267/812) was selected and invited to participate. Sampling continued until completing the required sample size.

The baseline assessment used an existing checkup questionnaire for the following reasons: first, it captures a wide set of health indicators and other variables, including lifestyle, that are needed for achieving the study's objectives; second, the questionnaire had been reviewed, validated, and approved for screening within the promotion program. An anonymous self-administered satisfaction questionnaire was designed for data collection; it included questions regarding demographic characteristics of the participants and 5-point Likert scale questions regarding satisfaction with services in four domains (ease of participation in preventive services, waiting time [time to be seen by health care provider], health provider [either physician or nurse], and facility). The last part of the questionnaire included simple questions about participants' opinions regarding the benefits of the program. To ensure the face and content validity, the questionnaire was revised by an expert panel of specialists in health quality, health informatics, community medicine, and health administration. It was translated into the Arabic language and tested for reliability by measuring its internal consistency. The Cronbach alpha coefficient was 0.861, indicating excellent reliability.

The team consisted of a physician and two nurses who were trained and oriented concerning the study's objectives. All team members were employees in the National Guard Health Affairs, and they were the same team in the baseline assessment, except the physician, who was replaced by the researcher. The team used the same tools and instruments that were used in the baseline assessment. The team was responsible for the following: (1) explaining the aim and objectives of the study to the participants (by the researcher); (2) obtaining informed consent from each individual (by the researcher); (3) measuring the weight, height, and waist circumference (by the nurse); (4) measuring blood pressure (by

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the nurse); (5) drawing the blood sample to measure FBG, TC, and HDL by using a small portable analyzer device (CardioCheck PA; PTS Diagnostics, Indianapolis, Indiana) (by the nurse); (6) filling the screening and risk assessment checklist forms (by the researcher); (7) calculating the risk of developing CVD and DM using the questionnaire (by the researcher); and (8) ensuring that each participant completed the satisfaction questionnaire by himself without listing his name. In addition, if the participants or patients needed further investigation or care, they were referred to the primary health care clinics or emergency services according to National Guard Health Affairs protocol.

Outcome Measures

With the subjects wearing light clothes and in the upright position with no shoes, weight and height were measured using the same calibrated scale as that used for the baseline checkup. Height was recorded in centimeters, and weight was recorded in kilograms.

BMI was defined as the weight in kilograms divided by the square of height in meters (kg/m^2). BMI provides a useful population-level measure of overweight and obesity, as it is the same for all ages of adults. According to the World Health Organization classification, a BMI more than or equal to 25 kg/m^2 is considered as overweight, and a BMI more than or equal to 30 kg/m^2 is considered as obese.[21]

Waist circumference was measured using a measuring tape at the top of the hip bone (usually at the level of the navel). A desired waist circumference for optimal health is considered less than 102 cm.[22] Waist circumference was used to identify abdominal (central) obesity, as an increased amount of fat in the abdominal region (≥88 cm for women and ≥102 cm for men) is a predictor of coronary heart disease and type 2 DM.[23]

The same auto manometer used for the baseline checkup was used to measure blood pressure, which was measured with the subject in a sitting position. The subject was considered hypertensive if he was on antihypertensive medications or had been diagnosed as hypertensive by a physician.

FBG, TC, and HDL were measured using the CardioCheck device system, a portable whole blood analyzer for rapid blood glucose and lipid measurement. This device is adequate for use in community-based screening programs for blood lipid disorders.[24] FBG results were interpreted according to the American Association of Diabetes criteria[25] as follows: normal (70–100 mg/dL), impaired glucose tolerance or prediabetes (101–126 mg/dL), and diagnosis of DM (126 mg/dL on two separate tests). In addition, the subject was considered to have DM if he was on antidiabetic medications or a physician had diagnosed him with DM.

TC results were scored according to the American Heart Association[26] as follows: low risk (<200 mg/dL), high risk (200–239 mg/dL), and more than twice the risk (≥ 240 mg/dL).

HDL results were interpreted according to the American Heart Association[26] as follow: low risk (≥ 60 mg/dL), reduce risk (40–59 mg/dL), and high risk (<40 mg/dL).

Subjects who were currently smoking any tobacco product regularly or not regularly or had quit less than 1 year previously were classified as smokers. Nonsmokers were classified as those who had never smoked or who had quit more than 1 year previously.[27,28]

On the basis of the average amount of physical activity used as a diabetic risk score variable, subjects were asked, “Do you do at least 2.5 hours of physical activity per week?”[29]

For use as a diabetic risk score variable, good dietary habits were defined as daily consumption of vegetables or fruits.[29] Medical history was checked for the presence of DM and hypertension and whether or not the hypertension was controlled.

Each participant’s 10-year CVD risk was estimated using the Framingham risk score on the basis of nonmodifiable risk factors, such as age, and modifiable risk factors, such as smoking, high blood pressure, HDL, and TC. Other crucial risk factors, such as BMI > 40 kg/m^2 and the presence of type 2 DM, were not included in the prediction analysis currently used for Framingham risk score.[30,31]

The Australian Type 2 Diabetes Risk Assessment score has been validated and approved as an effective tool, with a short list of eight questions. It is used to estimate the risk of developing type 2 DM over the next 5 years.[32,33] It has also been reviewed, validated, and approved for usage in this promotion program by Preventive and Community Medicine Centre of Primary Health Care of National Guard Health Affairs.

Statistical Analysis

SPSS 20.0 statistical software package (IBM Corporation, Somers, New York) was used. Quality control was done at the stages of coding and data entry. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables and means and standard deviations, medians, and interquartile ranges for quantitative variables. Normality was tested using Kolmogorov–Smirnoff and Shapiro–Wilks tests. Quantitative numeric pre–post dependent data were compared using the Wilcoxon signed rank test; independent data were compared using the median test. Multiple logistic regression analysis was used to identify independent predictors of CVD. Statistical significance was considered at $p < 0.05$.

RESULTS

According to the study design, 267 military personnel were included in the study; their mean age was 35.8 ± 6.6 years, with a range from 20 to 50 years, the great majority (94%) had low military ranks (nonofficer) and were mostly involved in combat services (79%) rather than combat support (21%). Slightly more than one-half of the participants had a secondary school-level education (55%), and only 18% had a university degree (Table I). From the medical history, it was found that only 5% of the participants had

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TABLE I. Demographic Characteristics of the Participants (n = 267)

Demographic Characteristics	Frequency	Percent
Age (Years)		
<30	54	20
30–39	133	49
≥ 40	80	30
Range	20–50	
Mean ± SD	35.8 ± 6.6	
Median (First to Third Quartiles)	36 (32–41)	
Military Rank		
Non Officer	251	94
Officer	16	6
Educational Level		
Basic/Intermediate	70	26
Secondary	148	55
University	49	18
Type of Work		
Combat Support	56	21
Combat Services	211	79

SD, standard deviation.

diabetes, and 6% had hypertension. Meanwhile, 61% had a positive family history of DM. Regarding smoking history, slightly more than one-third of the participants were smokers (35%); these mostly smoked cigarettes (90%), almost one pack (0.9 ± 0.3) daily for an average of 11.0 ± 6.1 years, resulting in a pack-year value of 11.0 ± 6.6.

As shown in Figure 1, there was a statistically significant postintervention decrease in relevant anthropometric measurements, namely BMI (–0.4 ± 1.5 kg/m^2) and waist circumference (–0.9 ± 6.2 cm). Meanwhile, there were statistically significant reductions in FBG (−12.3 ± 29.7 mg/dL) and TC (−15.4 ± 40.2 mg/dL). Nevertheless, there was also a significant reduction in HDL (good cholesterol; –3.8 ± 13.9 mg/dL). In addition, there were also reductions in both systolic and diastolic blood pressure ($p > 0.05$).

Notably, there was a statistically nonsignificant reduction in the overall cardiovascular risk score (–0.03 ± 2.8 points). In addition, on the basis of the Framingham risk prediction for CVDs over the next 10 years, there was a mild increase in all low-risk categories (<10%), except for 5% to <10% risk category that shows mild decrease with no change in the high-risk category (≥10%) (Fig. 2).

In a comparison of the smoking status at the evaluation time, there was no change in the smoker number of the participants (n = 94). In addition, there was no significant change in the number of packs of smoking per day ($p < 0.05$).

In regard to the postintervention changes in the risk factors for DM, there was a reduction in percentage of participants who had blood glucose >100 mg/dL from 11% before intervention to 2% after intervention. In addition, 45% of participants consumed daily fruits and vegetables before the intervention, which increased to 73% after the intervention.

In multivariate analysis (Table II), the factors predicting the risk of heart disease at the end of the intervention included the participants' military rank and education level. The model indicates that the education level factor was statistically significant independent predictors of the CVD risk. Although there was a positive correlation between rank and CVD risk, once rank was placed in the multivariate model, it was no longer significant (p = 0.059). However, those with a basic/intermediate level of education have a three-fold increased risk, and those with secondary education had a one-and-a-half-fold increased risk of CVDs compared with those having a university education.

Table III summarizes participants' total satisfaction with various areas of the intervention program. It indicates that the highest satisfaction was with the employees and workers (95%) followed by the ease of participation in the preventive services (95%). On the other hand, the lowest satisfaction (89%) was with the waiting time (time to be seen by health care provider). In total, 96% of the participants expressed their satisfaction with the intervention program, with a median score of 4.9, which approaches the maximum score of the scale.

According to the participants (Table IV), the most beneficial areas of the program were those of the preventive services that will improve the health of the military (98%) and improve their health status (97%). On the other hand, the

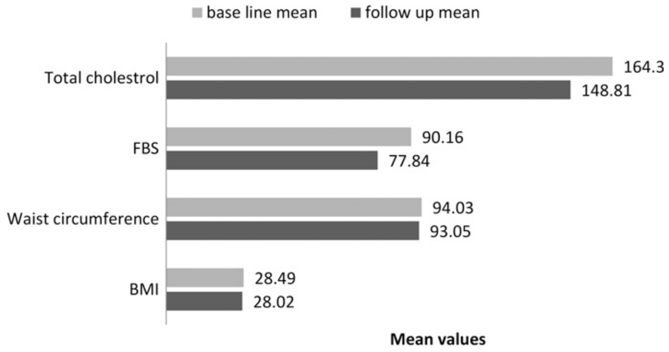

FIGURE 1. Risk factors that showed significant change after the intervention. FBS, fasting blood sugar; BMI, body mass index.

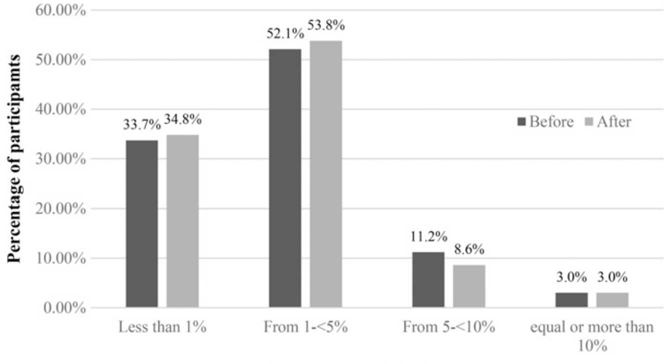

FIGURE 2. Percentages of participants in different categories of Framingham risk score before and after the intervention.

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TABLE II. Best Fitting Multiple Logistic Regression Models for the Risk of Heart Disease

	B	SE	Wald	Df	*p* Value	OR	95 % CI for OR	
							Upper	Lower
Constant	0.061	0.246	0.061	1	0.806	1.063		
Officer Rank	0.878	0.464	3.578	1	0.059	2.405	0.969	5.971
Education (Reference: High)			15.771	2	<0.001			
Basic/Intermediate	1.197	0.320	14.028	1	<0.001	3.309	1.769	6.190
Secondary	0.450	0.274	2.700	1	0.100	1.569	0.917	2.684

CI, confidence interval; Df, degree of freedom; OR, odds ratio. Nagelkerke $R^2 = 0.05$. Hosmer and Lemeshow test: $p = 0.551$. Omnibus Tests of Model Coefficients: $p < 0.001$.

least mentioned benefit was that of getting new knowledge about diseases in general (89%).

DISCUSSION

The primary objective of this study was to assess the effectiveness of the health promotion program in reducing the Framingham risk score. The results indicate successful outcomes in certain risk factors, but not in others. Thus, there were significant decreases in participants' BMIs and waist circumferences after 6 months or more in the intervention program. These are important changes because these anthropometric measurements are closely related to the risk of CVDs. The success of the program in this area could be attributed to the military regimens that include daily physical exercises and activities, in addition to the types of meals served in the barracks to the participants of the program. In agreement with this, a previous study[34] showed the importance of weight maintenance in reducing cardiovascular risk. The current findings also demonstrated a significant reduction in TC and FBG, which are considered objective indicators of program success in reducing CVD risk. They go in hand with the observed changes in anthropometric measurements and they reflect a positive effect of the intervention on participants' lifestyle including dietary habits and physical activity. Similar findings were reported in interventions depending on lifestyle changes, including diet and physical activity.[35–37]

Although the high HDL levels correlate with better cardiovascular health,[38,39] a paradoxical finding of this study was the significant decrease in participants' levels of HDL ("good" cholesterol). The finding might be explained by the fact that the change of the level of HDL is much more difficult than change of the level of TC. Actually, the level of HDL is not dependent on dietary regimens but rather on physical activity and other factors, and may even need medications such as niacin and fenofibrate.[40]

The main indicators of this study were the total score of cardiac risk and the 10-year cardiac risk. The results showed some improvements in these two indicators after a 6-month or longer participation in the program. However, these improvements were not statistically significant. These findings are in line with the results of a systematic review of the interventions aimed at prevention of CVD, which showed just modest reductions in modifiable risk factors, particularly among individuals with a high baseline levels of these factors.[22]

The lack of significant improvement in cardiovascular risk in this study is probably because of the short follow-up period, which did not allow sufficient time for the change to be evident. This could be considered as one of the limitations of this study. In congruence with this, long-term risk reductions secondary to lifestyle changes after the end of an intervention program were shown after a 20-year follow-up.[41]

Concerning the predictors of the cardiovascular risk by the end of the 6-month period, the multivariate analysis in this study identified a lower education level as positive predictors increasing cardiovascular risk. This might be

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TABLE III. Participants' Total Satisfaction with the Program ($n = 267$)

Satisfaction with	Agree/Strongly Agree *n* (%)	Uncertain *n* (%)	Disagree/Strongly Disagree *n* (%)	Score (Max = 5) Mean	SD	Median	Quartiles First	Third
Ease of Participation in Preventive Services	255 (95)	4 (1)	8 (3)	4.68	0.67	5.0	4.5	5.0
Waiting Time	238 (89)	6 (2)	23 (8)	4.43	0.90	5.0	4.0	5.0
Employees and Workers	256 (95)	2 (0.7)	9 (3)	4.61	0.68	5.0	4.4	5.0
Facilities and Services	253 (94)	3 (1)	11 (4)	4.61	0.73	5.0	4.5	5.0
Total Satisfaction	258 (96)	1 (0.4)	8 (3)	4.58	0.65	4.93	4.3	5.0

SD, standard deviation.

TABLE IV. Participants' Opinions Regarding the Benefits of the Program (n = 267)

Participants' Opinions	Yes	
	n	%
Did you get new knowledge regarding health and different disease in general?	239	89
Did you get good knowledge regarding your personal health status?	247	92
Do you consider these preventive services will improve the health of the military?	262	98
Do you consider these preventive services will change your lifestyle?	256	95
Do you consider these preventive services will improve your health status?	260	97
Did you take any real action regarding changing your lifestyle?	246	92

explained by the fact that the participants having lower levels of education may be less aware of cardiovascular risk factors and may have less healthy lifestyle habits, which may increase their risk. On the other hand, there was a positive correlation between rank and CVD risk. This might be explained by the higher levels of stress associated with higher military ranks. This is consistent with those who consider job stress and strain as predictors of cardiovascular risk.[42]

Although almost 90% of the participants in this study expressed their satisfaction with the waiting time (time to be seen by health care provider) while obtaining the program services, it was the area with the lowest percentage of satisfaction. This finding reflects that the program administrators exerted tremendous efforts to solve this perpetual problem of a "long waiting time," which is often the aspect of health services that is associated with the highest dissatisfaction among patients. Nonetheless, the problem cannot be completely eliminated, so that 100% satisfaction can never be reached. In agreement with this, a previous study[43] stated that for the family physician to abide by all guidelines, he/she needs several hours with a patient, thus increasing the waiting time for others. Moreover, another study[44] underscored the role of time constraints as a major profession-related barrier affecting patient satisfaction.

The impact of any intervention program is often reflected by participants' opinions regarding its benefits. In this study, the participants' opinions regarding the benefits they got from the program indicate very high levels of agreement upon various types of benefits, particularly concerning its beneficial effects on the health of the military and their own health status, as well as the encouragement of the program to take actions to change to a healthier lifestyle. This has also been shown by a previous study[45] clarifying that involving the participants of intervention preventive programs in making decisions concerning their risk factors is of major importance in increasing the participants' satisfaction, which is positively reflected on program effectiveness.

On the other hand, the acquisition of new knowledge about diseases was the area of program benefits with the lowest level of participants' satisfaction. This is quite important because to be successful, the preventive interventions should not be primarily aimed at overwhelming participants with new knowledge, but rather should focus on applied knowledge that helps them change their attitudes and behaviors. This was followed in the planning and implementation of the current intervention program, and this may be considered as one of the important elements that led to its success. In this regard, a previous study[46] stressed the importance of tailoring the health education message to the needs and circumstances of the recipient. Moreover, another study[47] reported that the knowledge conveyed by the clinician to the patient sometimes fades, whereas only the emotions and behavioral aspects are sustained. Thus, emotions and risk perceptions may be more important than knowledge.[48]

Although the total risk score for DM in this study demonstrated some improvements, these improvements were not statistically significant after the intervention. This untoward result may have more than one explanation. The first explanation is that the change in diabetic risk score is very difficult given the high percentage of positive family history in the study sample. The second is the short time of follow-up during which the various risk factors could be fluctuating before settling down. The third is the seasonal variation such as official holidays, religious holidays, and the month of Ramadan, which intervened the follow-up period; during this month, the dietary habits may change quantitatively and qualitatively leading to difficulties in the control of DM. Nevertheless, the lack of significant improvement does not indicate a lack of success: the reasons underlying this result should be studied and corrected, rather than stopping the endeavor.[49] In addition, the calculated power for detecting a significant difference for this secondary objective is 90%, which may not be sufficient to detect significance.

Saudi Arabia military is only comprised of males. The male gender of the study sample is in itself an advantage for the study given that it is a known risk factor for CVDs. Hence, its role as a possible confounder is eliminated in this study given that the whole sample consisted of male participants.

There are some limitations of this study, one of these limitations is using a pre- and postevaluation design according to literature review a randomized controlled trial would be with better value. In addition to short duration from the original implementation of program that might not give enough time to some of the parameters to show significant change.

In conclusion, this community-based program for preventing CVDs revealed improvement in risk factors such as BMI, waist circumference, FBS, and TC, with a nonsignificant modest change in Framingham risk score. We recommended further assessment over a longer duration to assess its effectiveness for all parameters; this will ease its implementation across all sectors of National

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Guard military sectors and even among all other military sectors in Saudi Arabia.

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