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Examining Factors Contributing Of The Prevalence Of Physical Activity Among Adult Patients Attending Primary Health Care Centers In Makah Almokarramah, Saudi Arabia 2023

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Abstract*:*

Background:
A large variety of studies have found that higher physical activity (PA) levels decrease the risk of many chronic diseases and increases longevity. On the other hand, physical activity has decreased over the last decade among the general population, while the time spent in sedentary behaviors has increased. In modern society, lower levels of physical activity and higher time spent in sedentary behaviors are public health concerns. Epidemiological data identify that 31.1% of adults do not meet the minimum criteria for physical activity, but most studies come from developed countries. Longitudinal data about physical activity in developing nations are extremely sparse and, when availab[1]le, inconsistent. Similarly, information about lower mortality due to physical activity is rare in developing countries. ***Aim of this study:*** *To examining Factors Contributing of the Prevalence of Physical Activity among Adult Patients attend primary health care centers in Makah city, Saudi Arabia 2023.* ***Methodology:*** *Cross sectional design has be adopted .The study has be conducted in Makah city, Saudi Arabia. The present study was conducted at primary health care in Makah city. Systematic random sampling was be adopted to select persons during the March to June, 2023.The sample (300).* ***Results****: Exercise milieu these study results showed that Positive Exercise milieu proportions (62.0%), and Negative Exercise milieu proportions (38.0%) while the Range (8-22) Mean +SD (13.254±3.215) while Time expenditure the most of them negative were(69.0%)but positive (31.0%)while the Range (6-13) Mean +SD (10.812±2.77)* ***Conclusion:*** *The findings in this study showed the importance of being active in different domains to reduce mortality risk, Physical inactivity among Arab adults and children/adolescents is high. Studies using harmonized approaches, rigorous analytic techniques and a deeper examination of context are needed to design appropriate interventions. Physical activity likely has a greater role in promoting health in disease populations than previously thought and may confer substantial reductions in disease burden Primary health care in Makah should be active and able to*

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provide health advice and behaviour to their patients. There will a strong intention to increase physical activity among physically inactive primary care physicians (PHCPs).

Keywords: *examining, factors, Prevalence, Physical, Activity, Adult, Patients, Primary Health Care Centers, Saudi Arabia.*

Introduction

Physical activity is defined as any bodily movement produced by the contraction of skeletal muscles that results in a substantial increase in caloric requirements over resting energy expenditure [1]. According to the World Health Organization (WHO), physical inactivity is considered the fourth leading risk factor for global mortality [2]and is estimated to account for 6% of the global mortality rate[3]. In Saudi Arabia, 58.5% of the Saudi adult population was considered physically inactive[4]. In Saudi Arabia, the WHO estimated that 57% of children and 71% of youths were physically inactive[5]. According to a national survey, 60% of the entire Saudi Arabian population is physically inactive[6]. Further-more, 90% sit consecutively for more than 2 h daily

World Health Organization (WHO) estimates the prevalence of physical inactivity among Saudi youngsters, youth and adults are measure 57%, 71% and 80%, severally. WHO stresses that promotion of physical activity ought to be a vital public health objective[7].

Given the benefits of physical activity counseling for public health, an increasing number of surveys have been conducted, mostly in high-income countries, to evaluate its prevalence and correlates in primary health care settings [8,9]. These studies showed that the prevalence of counseling ranged from 19% to 76% [10, 11,12]. Factors found to be consistently associated with physical activity counseling include feeling prepared to advice patients on physical activity, having sufficient time during consultation to provide counseling and the presence of physical inactivity related co-morbidities among patients [13,14]. In addition, a systematic review showed that the two main barriers to physical activity counseling perceived by primary care professionals were lack of time and limited knowledge [15].

Overweight and obesity are measure currently a world epidemic, with over one in 5 individuals qualifying as over weighty worldwide. These conditions are measure in the middle of excessive rates of non-communicable diseases (NCDs) associated with overweight, like type 2 diabetes mellitus, hypertension, and cardiovascular diseases.[16] Interventions targeting the environment are measure required so as to market larger health through healthy feeding selections and increased physical activity or exercise to avoid Overweight and obesity[17].

This puts the population at risk for redoubled rates of NCD mortality. competitor cultures is part responsible, because the combination of continuous ancient Saudi cultural practices, fashionable cultural changes, and economic prosperity and inactivity and absent of the physical activity has created an obesogenic setting that promotes unhealthy , inactive lifestyles, and weight gain.[18]

1.2 Literature Review

According to the WHO's 2016 diabetes country profile, 58.5% of the adult Saudi population were found to be physically inactive (52.1%of men and 67.7% of women) [19]. In another study, the prevalence of physical inactivity was found to be 66.6% for the overall Saudi Arabia population (60.1% for men and 72.9% for women) [20]. However, it was found that 16.8% of the population engaged in a moderate level of PA and 16.6% engaged in a high level of PA [21]. The estimated population-attributable fractions (PAF) in Saudi Arabia were calculated using adjusted relative risks and were reported to be 11.4% for coronary heart disease, 14.1% for type 2 diabetes, 19.9% for breast cancer, 20.4% for colon cancer, and18.4% for all-cause

mortality associated with physical inactivity[22]. The estimated gains in life expectancy by eliminating physical inactivity are 1.51 years [23]
Haskell et al reported that American Heart Association (AHA) recommends "at least one hundred fifty minutes per week of moderate intensity aerobic activity or seventy five minutes of vigorous activity for optimum health. Clinical observe tips establish a considerable therapeutic role for physical activity in coronary cardiovascular disease, peripheral vascular un wellness, hypertension, obesity, elevated cholesterol, osteoporosis, pulmonary disease, claudication, chronic obstructive, and osteoarthritis[24] .

Al-Zalabani and colleagues (2015) applied a cross-sectional national survey to determine the degree of physical activity and its socio-demographic correlates within the Saudi population. The Global Physical Activity form (GPAQ) version of 2.0 was utilized for knowledge assortment. The prevalence of physical inactivity was 66.6%. It absolutely was higher in females than males (72.9% versus 60.1%). The prevalence of time off physical inactivity was 87.9%. Also, it absolutely was higher in females than males (90.2% versus 85.6%). The central and northern regions reportable the very best prevalence of no physical activity at work, leisure and transportation.[19]

Nikniaz etal carried out a study to spot the socio-demographic and style determinants for physical activity among urban and residential area adults. The Persian type of International Physical Activity form utilized for evaluating physical activity level. The results of the study disclosed that 28.47% of the respondents were inactive, 27.96% were minimally active, and 43.55% had health-enhancing physical activity. Residents of residential area areas and normal-weight adults ($P < 0.001$) were considerably a lot of doubtless to participate in an exceedingly high intense physical activity. Compared with girls, men had considerably higher odds of being physically active. As compared with residents of sub urban areas, residents of urban areas were considerably had lower odds of being physically active.[25]

1.3Rationale

Sedentary life style and consequent obesity prevail in both developed and developing nations; gender- and age-independently. Physical inactivity in a population in a life style transition–like Saudi Arabia–causes metabolic syndrome with its immediate and long-term complications . Healthcare workers are in a better position for role modeling and counseling of appropriate health behaviors. Personal physical activity and body built among physicians influences to some degree their exercise counseling. Despite this public health importance of physical activity, there are few studies investigating its profile among general population, particularly in Makkah.

Aim of the study:

To examining Factors Contributing of the Prevalence of Physical Activity among Adult Patients attend primary health care centers in Makah city, Saudi Arabia 2023

Objectives

1. To examining Factors Contributing of the Prevalence of Physical Activity among Adult Patients attend primary health care centers in Makah city, Saudi Arabia 2023

Methodology

Study design:

Cross sectional design has be adopted.

Study area:

The study will be conducted in Makah city, Saudi Arabia. It is a holy city located in Western Region of the Kingdom of Saudi Arabia with an estimated population of more than two million. In Makah city, there are 82 primary health care centers, belonging to Ministry of Health (MOH) distributed over 7 sectors; three are inside Makah and four outside Makah. The study has be carried out in the two sectors inside Makah city.

Study population:
The study population has be consist of adult patients aged18 years and above who will attend primary health care (PHC) centers in Makah city throughout the period of the study and accept to participate in the study by signing an informed consent.

Inclusion criteria:
•Adults (18years and above) who attend PHC centers in Makah city
•Both genders.
•All nationalities.

Exclusion criteria:
•Those aged below 18.
•Those refuse to sign the informed consent
•Those who attend to primary health care belong to outside Makah sectors

Sample size:
The study population scheduled for research 2 health centers and the average number of undecided during the last three months is 32000 Person and therefore was used the equation of Steven K. Thompson with type one error (significant level) 5% and confidence level 95% and power of test 90% we found the smallest sample size we can depend on 300 person. We select 300 people sufficient to detect the prevalence of physical activity.

Sampling technique
Simple random technique has be applied on the two main sectors inside Makah city. From each sector, one PHC center will be chosen by a simple random technique. Thus, two centers have been selected. The sample size has be distributed over the two centers proportional to the total number of population in each sector. Then, this sample has be equally distributed between male and females in each center. Systematic random sampling has be adopted to select persons (sampling interval will be changed according to the total number of persons attend each center).

Data collection tool:
Self-administered questionnaire has be used for data collection. It consisted of three parts: The first part contains questions about socio-demographic characteristics of the participants (age, gender, marital status, educational level, job, smoking history, history of chronic diseases). The weight and height measurements will be collected by trained nurses. The second part inquired about participants` physical activity. The short form of the International Physical Activity Questionnaire (IPAQ) that provide common instrument to estimate the level of physical activity has been utilized in this regard.[23] The IPAQ short version estimates how much health enhancing physical activity, including daily life activities and exercise, the person has undertaken over the previous 7 days. The questionnaires were distributed to all participants. The reliability and validity of the questionnaire were tested across 12 countries (14 sites) in 2000[26] The findings suggest that it has acceptable tool for use in many settings and in different languages, and is suitable for use in regional, national and international monitoring

and surveillance system and for use in research projects and public health program planning and evaluation.[27]
The IPAQ included questions about physical activity of 3 intensities (vigorous physical activity, moderate physical activity, and walking). The physicians had to estimate how many days (frequency) he/she was physically active and the average time (duration) that he/she spent being physically active on these days .IPAQ classify the subjects to three categorical (ordinal) level based on intensity, duration and the frequency of the physical activity.[28]
Category 1 is the lowest level of physical activity. Those individuals who not meet criteria for categories 2 or 3 are considered low/inactive, category 2 is Moderate if any one of the following 3 criteria:
3 or more days of vigorous activity of at least 20 minutes per day
5 or more days of moderate-intensity activity or walking of at least 30 minutes per day
5 or more days of any combination of walking, moderate-intensity or vigorous intensity activities achieving a minimum of at least 600 MET-min/week.
Category 3 is high if any one of the following 2 criteria:
Vigorous-intensity activity on at least 3 days and accumulating at least 1500 MET-minutes/week
7 or more days of any combination of walking, moderate-intensity or vigorous
The third part of the questionnaire inquires about barriers for being physically active (12 items) as well as reasons for being physically active (7 items). Respondents who had low physical activity were asked to mention the barriers for being physically active while those who had moderate or high physical activity were asked to mention the reasons for that.
Body mass index (BMI) has be calculated and classified according to WHO criteria into:
Underweight (BMI <15.8 kg/m^2)
Normal (BMI 18.5–24.9 kg/ m^2)
Overweight (BMI 25–29.9 kg/m^2)
Obesity (BMI ≥ 30 kg/m^2)

Data collection technique:
The researcher has been distribute the self-administered questionnaire to the target population in waiting area during working hours. Care was taken to not disturb the work in the primary health care center. The researcher has be assisted by medical interns in male side and a trained nurse in female side to distribute and collecting the questionnaires soon after encounter. The data has be verified by hand then coded and entered to a personal computer.

Data entry and analysis:
The statistical Package for Social Sciences (SPSS) software version 24.0 has be used for data entry and analysis. Descriptive statistics (e.g. frequency, percentage, mean, range, standard deviation) and analytic statistics using appropriate statistical tests, according to the collected data has be applied. P-values <0.05 has be considered as statistically significant.

Pilot study
The questionnaire has be first tested in a pilot study group of 40 participants (about 10%), selected from one primary health care center of the selected four, whose results has be excluded from the final research. The aim of the pilot study will be to test for the comprehensibility of the questionnaire as well as to estimate the time needed to fill in the questionnaire and feasibility of the methods.

Ethical consideration:

The researcher will fulfill all the required official approvals prior to study conduction. Official approval from administration of public health, sector supervisor, and primary health care director will be conducted.
Verbal consent to participate in the study has be asked for each participant. All participants will have the right not to participate in the study or to withdraw from it prior to completion. The researcher will explain the purpose to all respondents. Confidentiality and privacy has be guaranteed for all participants throughout all steps of the research.

Budget:
This study has be carried out at the full expense of the researcher.

Result

Table (1) distribution of Socio-demographic data in study group regarding (Gender, age, amrita status, education, Occupation, Income)(n-300)

	N	**%**
Age		
<25	33	11
25-35	45	15
35-45	60	20
45-55	57	19
>55	105	35
Gender		
Male	216	72
Female	84	28
Marita status		
Married	198	66
Single	102	34
Education		
Illiterate	48	16
Primary certificate	60	20
Middle School certificate	54	18
Secondary certificate	48	16
diploma	33	11
BA	15	5
Postgraduate	42	14
Occupation		
Yes	195	65
No	105	35
Income		
Non	60	20
Less than 3000SR	36	12
3000-10000SR	99	33
More than 10000SR	105	35
BMI		
Underweight	75	25

Normal	78	26
Overweight	42	14
Obese	105	35
Chronic disease		
No	219	73
Yes	81	27
Smoking		
Non	198	66
Yes	102	34

Age: In our study, showed that the majority of participants (35.0%) were within the age group >55 and (40-45) years, while the age group (35-45) year was represented (20%) but the participants within the age group (45-55) were 19% of participants.

Gender: The majority of participants are male were (72.0%) while female's was (28.0%) of participants.

Marital status: The majority of participants are married were (66.00%) while single was (34.0%) of participants.

Level of education: The majority of our participants primary certificate were constitute (20%).

Occupation: In our study, work participants constituted (65%) of our study. While not work (35%) of our study .

Income level: In our study, income level range with more than 10000SR of participants constituted (35%) of our study. While income level range(3000-10000 SR) were (33%).

BMI: The majority of our participants were at overweight and obese (35.0%). Participants was normal weight (26.00%) while underweight was (25 %). Chronic disease: The majority of our participants no chronic disease were (73%) while were the answer yes they have chronic disease (27.0%)

Smoking: The majority of our participant's answers were non-smoker (66%) while smoker was (34.0 %.)

Table (2) distribution of Socio-demographic data and all the vigorous activities that you did in the last 7 days in study group .

	N	%
During the last 7 days, on how many days did you do vigorous physical activities like heavy lifting, digging, aerobics, or fast bicycling?		
No	144	48
one day	102	34
Two days	30	10
More than 2days	24	8
How much time did you usually spend doing vigorous physical activities on one of those days?		
Range (hours)	1.25-5	
Mean±SD (hours)	3.215±1.845	
During the last 7 days, on how many days did you do moderate physical Activities like carrying light loads, bicycling at a regular pace, or doubles tennis? Do not include walking.		
No	96	32
one day	60	20
Two days	45	15

More than 2days	99	33
How much time did you usually spend doing moderate physical activities on one of those days?		
Range (hours)	1-3.	
Mean±SD (hours)	1.88±0.888	
During the last 7 days, on how many days did you walk for at least 10 minutes?		
No	75	25
One day	48	16
Two days	96	32
More than 2days	81	27
How much time did you usually spend walking on one of those days?		
Range (hours)	0.5-2	
Mean±SD (hours)	0.511±0.321	
During the last 7 days, how much time did you spend sitting on a week day?		
Range (hours)	35-55	
Mean±SD (hours)	42.153±10.5547	

During the last 7 days, on how many days did you do vigorous physical activities like heavy lifting, digging, aerobics, or fast bicycling?. The majority of participants answer" No" not do vigorous physical activities was (48.0%) while one day do vigorous physical activities were (34.0%) and do vigorous physical activities two days were (10%) but the do vigorous physical activities more than 2dayswas (8%). How much time did you usually spend doing vigorous physical activities on one of those days: The participants answer you usually spend doing vigorous physical activities Range (hours) (1.25-5) while Mean± SD (hours) (3.215±1.845). During the last 7 days, on how many days did you do moderate physical Activities like carrying light loads, bicycling at a regular pace, or doubles tennis? Do not include walking.The majority of participants answer did you do moderate physical Activities was (33%) while NO did you do moderate physical Activities were (32%) and more than 2dayes were (15%)
How much time did you usually spend doing moderate physical activities on one of those days: The participants answer you usually spend doing moderate physical activities Range (hours) (1-3) while Mean± SD (hours) (1.88±0.888)

During the last 7 days, on how many days did you walk for at least 10 minutes: The majority of participant's answer two days walk for at two days was (32%), while walk for at least 10 minutes one day were (16%) but NO walk for at least 10 minutes were (25 %). How much time did you usually spend walking on one of those days: The participants usually spend doing walking on one of those days Range (hours) (0.5-2) while Mean± SD (hours) (0.511±0.321). During the last 7 days, how much time did you spend sitting on a week day: The participants usually time did you spend sitting Range (hours) (35-55) while Mean± SD (hours) (42.153±10.5547).

Table (3) distribution of all the Perceived barrier to do physical activities (Exercise milieu sub-scale)

Items	**Mean**	**SD**	One sample T-test (test value=2.5)	
			t	**P-value**
Exercise milieu				

Places for me to exercise are too far away	2.650	1.571	1.653	0.099
I am too embarrassed to exercise	3.780	1.240	17.884	<0.001*
It costs too much money to exercise	2.167	1.371	-4.212	<0.001*
Exercise facilities do not have convenient schedules for me	1.697	0.970	-14.343	<0.001*
I think people in exercise clothes look funny	1.630	0.801	-18.808	<0.001*
There are too few places for me to exercise	1.673	1.041	-13.755	<0.001*
Time expenditure				
Exercising takes too much time	3.687	1.278	16.079	<0.001*
Exercise takes too much time family relations	3.753	1.210	17.941	<0.001*
Exercise takes too much time from my family responsibilities	3.703	1.520	13.714	<0.001*
Physical exertion				
Exercise tires me	3.547	1.758	10.311	<0.001*
I am fatigued by exercise	3.720	1.410	14.986	<0.001*
Exercise is hard work for me	3.987	1.191	21.625	<0.001*
Family discouragement sub-scale				
My spouse (or significant other) does not encourage exercising	4.310	1.293	24.239	<0.001*
My family members do not encourage me to exercising	4.447	0.929	36.287	<0.001*

The testing tool included 6 objective questions about the barrier of prevent you to do physical activities according to the (Exercise milieu sub-scale)the questions had answers were analyzed using the Mean ,SD, analysis and (P-value)

Places for me to exercise are too far away: In our study no statistically significant were P=<0.099 (20%) while T(1.653), Mean (2.650) while SD were (1.571).

I am too embarrassed to exercise: Show that is a significant relation between embarrassed to exercise and exercise milieu sub-scale where p-value <0.001 and T 17.884, Mean (3.780) while SD were (1.240).

It costs too much money to exercise: Show that is a significant relation between costs much money to exercise and Exercise milieu sub-scale where p-value <0.001 and T -4.212, Mean (2.167) while SD were (1.371).

Exercise facilities do not have convenient schedules for me: Show that is a significant relation between not have convenient schedules for me and Exercise milieu sub-scale where p-value <0.001 and T -14.343, Mean (1.697) while SD were (0.970).

I think people in exercise clothes look funny: Show that is a significant relation between exercise clothes look funny for me and Exercise milieu sub-scale where p-value <0.001 and T 18.808, Mean (1.630) while SD were (0.801).

There are too few places for me to exercise: Show that is a significant relation between few places for me to exercise and Exercise milieu sub-scale where p-value <0.001 and T -13.755, Mean (1.630) while SD were (1.041).

Distribution of the entire Perceived barrier to do physical activities (Time expenditure sub-scale) .

The testing tool included 3 objective questions about the barrier of prevent you to do physical activities according to the(Time expenditure sub-scale) questions were analyzed using the Mean. SD and (P-value).

Exercising takes too much time: Show that is a significant relation between exercising takes much time and Time expenditure sub-scale where p-value <0.001 while T(16.079), Mean (3.687) while SD were (1.271).

Exercise takes

Too much time family relations: Show that is a significant relation between exercising takes much time family relations and Time expenditure sub-scale where p-value <0.001 while T(17.941), Mean (3.753) while SD were (1.210).

Exercise takes too much time from my family responsibilities: Show that is a significant relation between exercising takes much time family responsibilities and Time expenditure sub-scale where p-value <0.001 while T(13.714), Mean (3.703) while SD were (1.5201).

Distribution of the entire Perceived barrier to do physical activities (Physical exertion sub-scale)

The testing tool included 3 objective questions about the barrier of prevent you to do physical activities according to the(Physical exertion sub-scale) the questions, were analyzed using Mean, SD , analysis and (P-value)

Exercise tires me: Show that is a significant relation between exercising tires me and Physical exertion sub-scale where p-value <0.001 and while T(10.311), Mean (3.547) while SD were (1.758).

I am fatigued by exercise: Show that is a significant relation between I am fatigued by exercise and Physical exertion sub-scale where p-value <0.001 and while T(14.986), Mean (3.720) while SD were (1.410).

Exercise is hard work for me: Show that is a significant relation between exercising is hard work for me and Physical exertion sub-scale where p-value <0.001 while T(21.625), Mean (3.987) while SD were (1.191).

Distribution of the entire Perceived barrier to do physical activities (Family discouragement sub-scale)

The testing tool included 2 objective questions about the barrier of prevent you to do physical activities according to the (Family discouragement sub-scale analysis (P-value), Mean, SD.

My spouse (or significant other) does not encourage exercising: Show that is a significant relation between does not encourage exercising and Family discouragement sub-scale where p-value <0.001 T 24.239, Mean (4.310) while SD were (1.293).

My family members do not encourage me to exercising: Show that is a significant relation between family members do not encourage me to exercising and Family discouragement sub-scale where p-value <0.001 and T 36.287, Mean (4.447) while SD were (0.929).

Table (4) Distribution of the items of Perceived barrier to do physical activities in study (Exercise milieu. Time expenditure . Physical exertion. Family discouragement) in our study

	Negative		**Positive**		**Score**	
	N	**%**	**N**	**%**	**Range**	**Mean±SD**

Exercise milieu	114	38	186	62	8-22.	13.254±3.215
Time expenditure	207	69	93	31	6-13.	10.812±2.77
Physical exertion	228	76	72	24	10-14.	9.882±2.088
Family discouragement	243	81	57	19	2-10.	8.154±1.087

Regarding Exercise milieu these study results showed that Positive Exercise milieu proportions (62.0%), and Negative Exercise milieu proportions (38.0%) while the Range (8-22) Mean +SD (13.254±3.215) while Time expenditure the most of them negative were(69.0%)but positive (31.0%)while the Range (6-13) Mean +SD (10.812±2.77) regarding the Physical exertion the most of them negative were(76.0%)but positive (24.0%)while the Range (10-14) Mean +SD (9.882±2.088) regarding the Family discouragement most of them negative were(81.0%)but positive (57.0%)while the Range (2-10) Mean +SD (8.154±1.087)

Figure (1) distribution of the items of Perceived barrier to do physical activities (Exercise milieu. Time expenditure . Physical exertion . Family discouragement) in our study

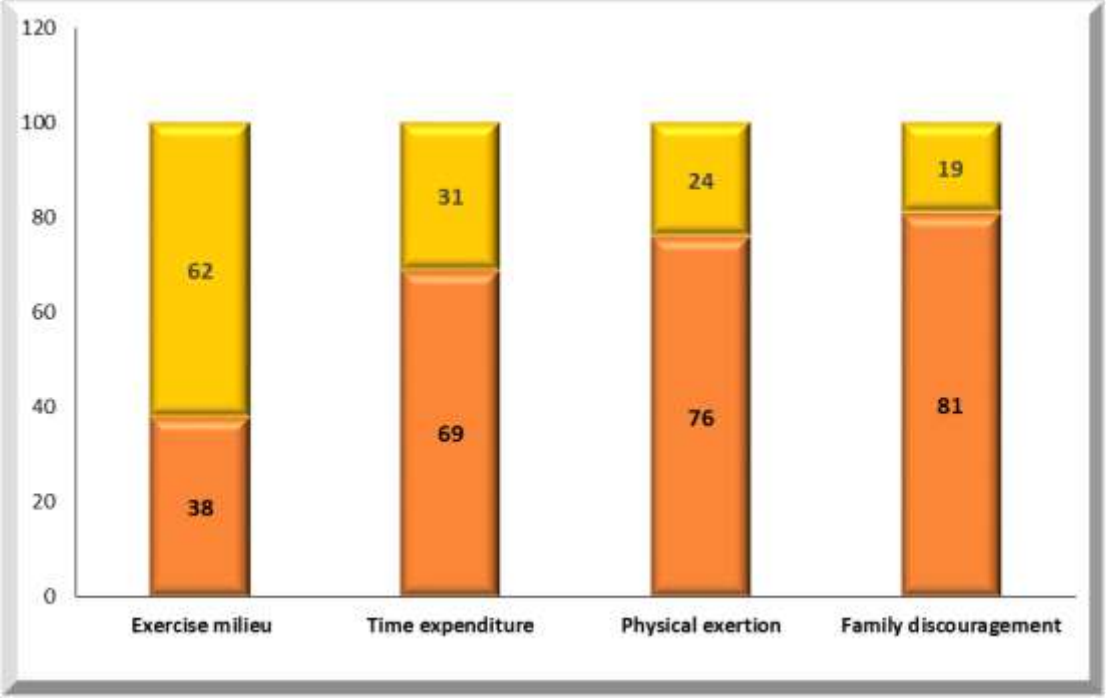

Table (5) distribution of correlation between the BMI and items of Perceived barrier to do physical activities in study

		BMI				**Total**	**Chi-square**	
		Under-weight	**Normal**	**Over-weight**	**Obese**		**X^2**	**P-value**
Exercise milieu	**Negative**	24	3	37	50	114	102.992	<0.001*
		21.05	2.63	32.46	43.86	38		
	Positive	51	75	5	55	186		

		27.42	40.32	2.69	29.57	62		
Time expenditure	**Negative**	66	17	37	87	207	107.759	<0.001*
		31.88	8.21	17.87	42.03	69		
	Positive	9	61	5	18	93		
		9.68	65.59	5.38	19.35	31		
Physical exertion	**Negative**	64	50	34	80	228	10.110	0.018*
		28.07	21.93	14.91	35.09	76		
	Positive	11	28	8	25	72		
		15.28	38.89	11.11	34.72	24		
Family discouragement	**Negative**	63	54	36	90	243	8.919	0.03*
		25.93	22.22	14.81	37.04	81		
	Positive	12	24	6	15	57		
		21.05	42.11	10.53	26.32	19		

Table 5 Show that is a significant relation between BMI and Exercise milieu were p-value <0.001 and Chi square (102.992) increased in positive in normal BMI were(40.32%) while increased in negative in obese were(43,86%), regarding the time expenditure a significant relation between BMI and the time expenditure were p-value <0.001 and Chi square (107.759) increased in positive in normal BMI were(65.59%) while increased in negative in obese were(42,03%), regarding the Physical exertion a significant relation between BMI and the Physical exertion were p-value <0.018 and Chi square (10.110) increased in positive in normal BMI were(38.89%) while increased in negative in obese were(35,09%), regarding the Family discouragement a significant relation between BMI and the Family discouragement were p-value <0.03 and Chi square (8.919) increased in positive in normal BMI were(42.11%) while increased in negative in obese were(37,04%).

Table (6) distribution of correlation between the chronic disease and items of Perceived barrier to do physical activities in study

		Chronic disease						**Chi-square**	
		No		**Yes**		**Total**			
		N	**%**	**N**	**%**	**N**	**%**	**X^2**	**P-value**
Exercise milieu	**Negative**	41	18.72	73	90.12	114	38.00	135.030	<0.001*
	Positive	178	81.28	8	9.88	186	62.00		
Time expenditure	**Negative**	162	73.97	45	55.56	207	69.00	9.048	0.003*
	Positive	57	26.03	36	44.44	93	31.00		
Physical exertion	**Negative**	171	78.08	57	70.37	228	76.00	1.872	0.171
	Positive	48	21.92	24	29.63	72	24.00		
Family discouragement	**Negative**	172	78.54	71	87.65	243	81.00	3.424	0.064
	Positive	47	21.46	10	12.35	57	19.00		

Table 6 Show that is a significant relation between chronic disease and Exercise milieu were p-value <0.001 and Chi square (135.030) increased positive in No were(81.28%) while increased in negative in Yes were(90,12%), regarding the time expenditure a significant relation between chronic disease and the time expenditure were p-value <0.003 and Chi square (9.048) increased in positive Yes were(44.44%) while increased in negative No were(73,97%), regarding the Physical exertion no significant relation between chronic disease and the Physical

exertion were p-value <0.0171 and Chi square (1.872) increased in positive in Yes were(29.63%) while increased in negative in No were(78,08%), regarding the Family discouragement no significant relation between chronic disease and the Family discouragement were p-value <0.064 and Chi square (3.424) increased in positive in No were(21.46%) while increased in negative in Yes were(87,65%).

Discussion

The current study confirmed the presence of low physical activity prevalence among the Saudi population. In several of the examined studies during this study, physical activity prevalence among Saudi adults was outlined as any movement of the body that needs energy. "At least 150 minutes per week of moderate intensity aerobic activity or 75 minutes of vigorous activity for optimum health.[29]

Studies have shown the benefits of regular physical activity in preventing diseases and promoting health. Benefits of physical activity include the prevention of hypertension, stroke, Heart disease, type II diabetes mellitus, hypercholesterolemia and obesity.[30]. Our participants with no chronic disease were (73%). In 1995 the Centers for Disease Control and Prevention (CDC) and the American College of Sports Medicine (ACSM) published a preventive recommendation that "Every US adult should accumulate 30 minutes or more of moderate-intensity physical activity on most, preferably all, days of the week"

in our study The majority of participants answer" No" not do vigorous physical activities, while one day do vigorous physical activities and do vigorous physical activities two days were but the do vigorous physical activities more than 2 days.

Among Saudi adults, the most important reason for being physically active was to maintain health or to lose weight, while time constraint and lack of space or facilities seem to be the major factors for not being physically active. The Perceived barrier to do physical activities, also, about too embarrassed exercise, about exercising takes much time family relations .

This systematic review is considered as comprehensive review in Makah at Saudi Arabia, covering Prevalence of Physical Activity among Adult Patients, reasons for based on the number of published papers in this systematic review, it is clearly apparent research in Saudi Arabia has grown substantially over the past decade. In western Saudi Arabia, students from the Health Colleges at King Khalid University indicated were time limitation, followed by lack of suitable sport places, lack of social support (from family and friends). In our study lack of motivation, and finally lack of sport skills. also Perceived barrier to do physical activities In addition, among patients attending primary care clinic, the major barriers in our study were said to be lack of resources, especially among low-income people and lack strong agree about I am fatigued by exercise also major barriers Family discouragement. But in our study show that is a significant relation between age, gender, Occupation, Income level, and Physical activities where p-value <0.001 also Show that is a significant relation between BMI, Chronic disease, Smoking and Physical activities. (see table 6)

Table 6 Show that is a significant relation between chronic disease and Exercise milieu were p-value <0.001 and Chi square (135.030) increased positive in No were(81.28%) while increased in negative in Yes were(90,12%), regarding the time expenditure a significant relation between chronic disease and the time expenditure were p-value <0.003 and Chi square (9.048) increased in positive Yes were(44.44%) while increased in negative No were(73,97%), regarding the Physical exertion no significant relation between chronic disease and the Physical exertion were p-value <0.0171 and Chi square (1.872) increased in positive in Yes were(29.63%) while increased in negative in No were(78,08%), regarding the Family discouragement no significant relation between chronic disease and the Family discouragement

were p-value <0.064 and Chi square (3.424) increased in positive in No were(21.46%) while increased in negative in Yes were(87,65%).

Conclusion

Technology-based interventions to promote physical activity are effective; using further methods to promote participant adherence is associated with greater benefit. Further research should look into strategies to enhance adherence and sustainability in order to increase the effectiveness of technology-based physical activity intervention care. It is recommended that a national policy encouraging active living and discouraging inactivity be established. Health-care providers have an important role in promoting and adopting healthy lifestyle habits among all Saudi people. Virtually all older adults should be physically active. In addition, a Saudi adult people with medical conditions should engage in physical activity in the manner that reduces risk of developing other chronic diseases.

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