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The prevalence and barriers to physical activity among Al-Rayan College staff in Al-Medinah

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ABSTRACT

Background: Physical activity (PA) is playing an obvious role in reducing noncommunicable diseases and enhancing overall health. Despite awareness of its benefits, many individuals exhibit sedentary behavior due to various barriers, including lack of time and facilities. **Objective:** To explore the prevalence and barriers towards physical activities among staff at Al-Rayan Colleges in order to promote effective interventions to encourage physical activity. **Methods:** It was a prospective descriptive study based on statistical analysis of survey distributed among faculty members. **Results:** 77.1% were non-Saudi, majority aged 30-39 years, predominantly female (56.3%), and married (85.4%). Positive attitude towards PA was noted, as 83.3% think it aids in controlling eating behaviors and all participants recognizing PA health benefits. Barriers to physical activity included time constraints (27.1%), lack of energy (18.8%), and family obligations (22.9%). Gender and marital status were correlated with these barriers. **Conclusion:** Barriers such as inadequate facilities and family obligations significantly hinder physical activity. Thus, initiatives for addressing these barriers will be a practical support for adopting healthier behaviors.

1. INTRODUCTION

Physical activity (PA) is frequently defined as prolonged body movement produced by skeletal muscles and requiring energy consumption [1,2]. It plays a significant role in both increasing and decreasing noncommunicable disease epidemics. The relationship between physical exercise and all types of cancer is extensively known [3]. Physical activity is also defined as a multidimensional behaviour that "involves human movement, resulting in physiological attributes such as increased energy expenditure and improved physical fitness [4,5]. The WHO 2022 recommends that all adults engage in 150–300 minutes of moderate-intensity or 75–150 minutes of vigorous-intensity physical activity, or a suitable combination of both, each week [6].

Furthermore, physical activity benefits general bodily health, reducing the risk of obesity, cardiovascular disease, and type 2 diabetes mellitus. It also enhances mental health [7,8].

Adel Bashatah et al., 2023, did a study in Riyadh, Saudi Arabia, and found that Saudi individuals continue to engage in highly sedentary behavior and physical inactivity despite being aware of the negative consequences of inactivity. Thus, teaching folks about the value of physical activity is warranted [9].

Several studies were conducted to highlight the barriers and facilitators to PA, better understand people's actions, and develop successful behavior change interventions. For example, a systematic review of the barriers to physical activity in Saudi Arabia discovered that a lack of time, inappropriate walking places, a lack of facilities and resources, particularly for females, urbanization, traffic, hot weather, and a lack of social support are some of the factors that limit the Saudi population's PA levels [10, 11, 12].

Thus, this study aimed to determine the prevalence and barriers to physical activity among AL-Rayan Private Collages employees in AL-Medinah AL-Munawarah, Saudi Arabia.

2. MATERIALS AND METHODS

2.1 Study design and setting:

This prospective descriptive study was conducted from August to October 2024 among employees at AL-Rayan Private Colleges in AL-Madinah, AL-Munawarah. The campus, located 30 kilometers south of the city of Al-Madinah Al-Munawarah, is a unique blend of academic and recreational facilities. It houses two institutions: AL-Rayan Private College of Medicine and AL-Rayan Private College of Health Sciences and Nursing, along with the principal administrative building, academic facilities, two gender-specific sports clubs, dormitory structures, a mosque, a conference center, and expansive open areas for various activities.

2.2. Materials

A questionnaire was created to evaluate the prevalence and obstacles to physical activity among the staff of AL-Rayan Private Colleges.

2.3. Data analysis:

The findings of this study were meticulously organized and rigorously analyzed using the powerful Statistical Package for the Social Sciences (SPSS) software version 22. This allowed us to ascertain descriptive statistics and any associations with a high degree of accuracy and reliability.

The analysis and interpretation of data from 48 samples were conducted using SPSS statistical software version 22 to evaluate the prevalence and obstacles to physical activity among Al-Rayan College faculty in Al-Madinah Al-Munawarah.

2.4. Ethical consideration:

The ethical integrity of this study was of paramount importance. All participants were over 18, and their consent was secured for participation in the questionnaire and publication of its results. Participants' privacy was maintained, and no personally identifiable information will be published. This study activity was conducted with the approval of the Al-Rayaan Study Ethics Committee, reference number HA-03-M-122-080.

3. RESULTS:

When the staff's sociodemographic characteristics were assessed, it was found that the majority of samples were non-Saudi. 37 (77.1%), hence the most prevalent age was between the range of 30 and 39 years old 21 (43.8%), the majority of the gender was female 27 (56.3%), and married people constituted the majority of the sample 41 (85.4%), according to Table 1. When the staff's knowledge about physical activity were

examined, it was detected that the majority of participations 30 (62.5%) were disagreed when they were asked about 'people in different age groups require the same form of physical activity', 44 (91.7%) of them agreed with the 'physical activity prevents cancer, heart problems, and many other diseases', all the participants agreed with 'physical activity improves the mood', 'physical activity able to relieve the When the staff's attitudes toward physical activity were examined, it was found that (83.3%) of the staffs agree that physical activities can help to have more control over eating behaviors, (80%) of them consider that a person who frequently participates in physical activities is always active in thinking, all of them agree that physical activities can be used to manage illnesses like diabetes or obesity and increases the blood circulation, and (47.9%), (47.9%) of them

Table 5 shows the relationship between levels of knowledge, attitudes, and barriers to physical activity and demographic characteristics. N = 48.

The research shows that the demographic variables gender and married status have a significant correlation with obstacles at p-values (0.020) and (0.032), respectively. The demographic data had no significant relationship with the degree of knowledge and attitudes.

Table 1: Frequency and percentage distribution of demographic variables of the staff.

	Frequency	Percentage
Nationality		
Saudi	11	22.9%
Non - Saudi	37	77.1%
Gender		
Male	21	43.8%
Female	27	56.3%
Age		
20 – 29	3	6.3%
30 – 39	21	43.8%
40 – 49	16	33.3%
More than 49	8	16.7%
Marital status		
Married	41	85.4%
Never married	4	8.3%
Separate	2	4.2%
Divorced	1	2.1%

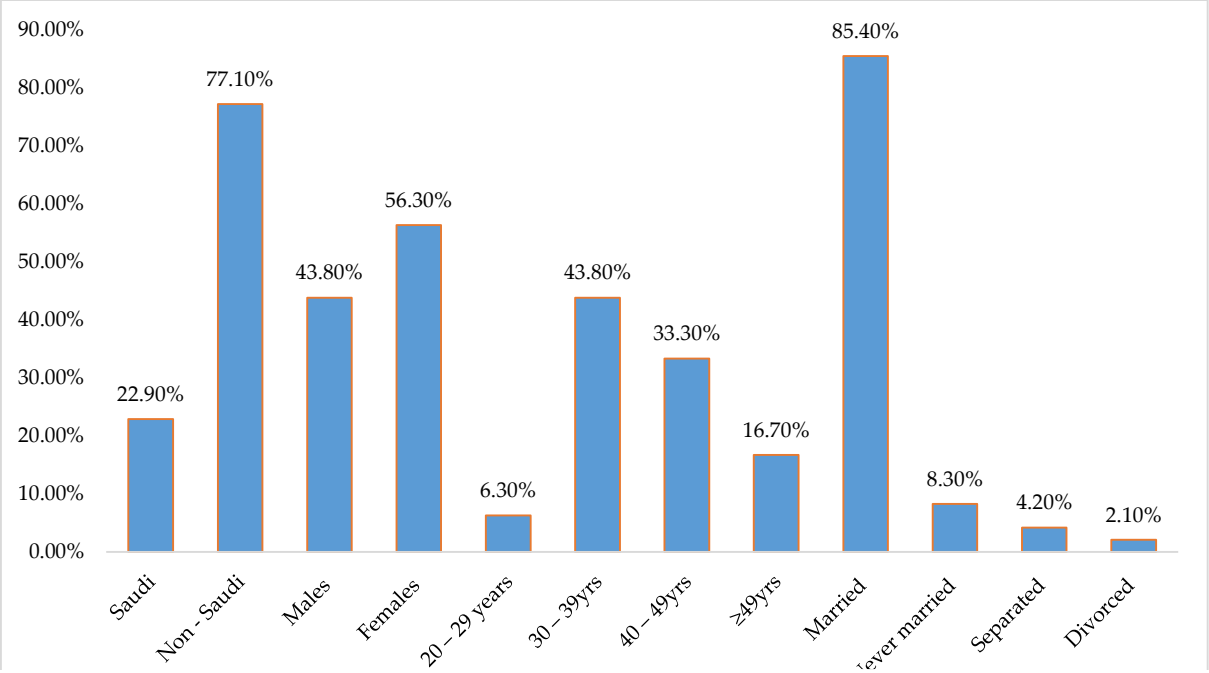

Figure 1. Description of the study population by nationality, sex, marital status, and age

Table 2: The distribution of the participation knowledge about the physical activity:

Questions	Responses	Frequency	Percentage
1. People in different age group require same form of Physical activity.	Agree	17	35.4%
	Disagree	30	62.5%
	I don't know	1	2.1%
2. Physical activity prevents the cancer, heart problems and many other diseases	Agree	44	91.7%
	Disagree	3	6.3%
	I don't know	1	2.1%
3. Physical activity improves the mood	Agree	48	100%
	Disagree	0	0
	I don't know	0	0
4. Physical activity able to relieve the stress	Agree	48	100%
	Disagree	0	0
	I don't know	0	0
5. Physical activity fit the body	Agree	45	93.8%
	Disagree	1	2.1%
	I don't know	2	4.2%

Table 3: The distribution of the attitudes of the staffs about the physical activity:

Statements	Responses	Frequency	Percentage
1. Physical activities help me to have more control over my eating behaviors	Agree	40	83.3%
	Disagree	5	10.4%
	Don't know	3	6.3%
2. A person who often participates in physical activities is always active in thinking.	Agree	37	77.1%
	Disagree	8	16.7%
	Don't know	3	6.3%
3. Physical activities can be used to manage illness like diabetes or obesity	Agree	48	100%
	Disagree	0	0
	Don't know	0	0
4. Participating in physical activities increases blood circulation.	Agree	47	97.9%
	Disagree	0	0
	Don't know	1	2.1%
5. PA takes too much time for my family responsibilities	Agree	23	47.9%
	Disagree	23	47.9%
	Don't know	2	4.2%

Table 4: The distribution of the barriers affected the practice of physical activity among the staff:

Statements	Responses	Frequency	Percentage
Do you practice any type of physical activity?	Yes	35	72.9%
	No	13	27.1%
Barriers of practicing physical activity:			
1. Lack of time because of Working - studying	Agree	13	27.1%
	Disagree	0	0
	Don't know	0	0
2. Lack of money	Agree	6	12.5%
	Disagree	6	12.5%
	Don't know	1	2.1%
3. Lack of time because of family responsibilities	Agree	11	22.9%
	Disagree	1	2.1%
	Don't know	1	2.1%
4. Lack of energy	Agree	9	18.8%
	Disagree	3	6.3%
	Don't know	1	2.1%
5. Feeling shame	Agree	1	2.1%
	Disagree	12	25%
	Don't know	0	0
6. Obesity	Agree	4	8.3%
	Disagree	7	14.2%
	Don't know	2	4.2%
7. Fear of injury	Agree	3	6.3%
	Disagree	8	16.7%
	Don't know	2	4.2%
8. Lake of support	Agree	5	10.4%
	Disagree	7	14.2%
	Don't know	1	2.1%
9. Depression	Agree	5	10.4%
	Disagree	6	12.5%
	Don't know	2	4.2%

Table 5: Correlation between knowledge, attitudes and barriers with different demographic variables among the staff.

	Knowledge	Attitude	Barriers
Age			
P-value	0.704	0.715	0.857
Gender			
P-value	0.762	0.609	0.020
Marital status			
P - value	0.246	0.520	0.032

*Chi squarer test * *. The correlation is significant at the 0.05 level*.

4. DISCUSSION:

Insufficient physical activity is a significant risk factor that contributes to numerous health issues, prompting public health authorities globally to concentrate on preventing epidemics of noncommunicable diseases [1]. No population cohort can afford to lack knowledge, practice, and attitude regarding physical activity from health promotion and disease prevention perspectives. This study examined the activity patterns and challenges encountered by the staff at Al-Rayan Colleges in Al-Madinah. This conversation delves into the analysed data, highlighting discoveries, comparing them to current research, and proposing targeted recommendations to enhance physical activity levels within this group. The findings indicate that 72.9% of the staff participate in various activities, with the majority engaging in exercise, such as walking, running, or cycling, albeit not consistently at recommended levels. Nevertheless, a significant 27.1% remain inactive, raising health concerns. The staff demonstrated an awareness of the advantages of physical activity, with 91.7% acknowledging its role in preventing chronic illnesses such as cancer and heart disease and all recognizing its beneficial effects on mood and stress reduction. This awareness level exceeds findings from studies in regions demonstrating effective health information dissemination within the community.

The staff at Al-Rayan Colleges generally exhibit a positive attitude towards physical activity. A notable majority (83.3%) believe that participation in activities aids in habit regulation, which aligns with research indicating that those who are active typically sustain healthier dietary habits. This positive outlook is encouraging and suggests a readiness for change and improvement.

Moreover, a significant portion of the population (77.1%) believes that participating in activities enhances mental agility, consistent with current studies highlighting the cognitive benefits of exercise. The unanimous agreement on the role of activity in managing conditions such as diabetes and obesity highlights a broad recognition of its health advantages. The mixed responses regarding the impact of activity on family commitments, with 47.9% in agreement and 47.9% in disagreement, underscore the challenges many individuals face in balancing personal well-being with familial responsibilities.

The study underlines the barriers to participating in physical activity. The most frequently reported impediment is time constraints due to work or educational duties (27.1%). This issue is common in research when career and academic responsibilities limit participants' time to devote to activities. Lack of energy (18.8%) and family obligations (22.9%) were also cited as barriers to being active. These findings are consistent with previous research indicating that weariness and home activities create barriers to sustaining an active lifestyle.

Barriers mentioned include financial constraints (12.5%) and a lack of support (10.4%). Notably, psychological and social barriers such as emotions of shame (2.1%) and fear of damage (6.3%) were less prevalent, showing that logistical difficulties outnumber others.

Understanding the barriers to physical activity is critical for developing effective solutions. This knowledge enlightens about the complexities of the issue and helps devise strategies that address the root causes, rather than just treating the symptoms.

An analysis reveals relationships among factors and barriers to physical activity. Gender and marital status were associated with the identified obstacles, with p-values of 0.020 and 0.032, respectively. These p-values indicate that the relationships found are statistically significant, suggesting that women and married individuals

may face difficulties engaging in activities. Women encounter norms, societal constraints, and safety concerns that limit their opportunities for exercise. Married individuals frequently handle responsibilities such as caregiving and household tasks, which may restrict their available time for other activities.

No relationship was identified between demographic factors and levels of knowledge or attitudes toward physical activity. This indicates that while awareness and attitudes tend to be positive across various demographics, the capacity to convert this understanding into action is differentially affected by gender and marital status.

In comparison to literature, the findings of this study are consistent with the current literature regarding obstacles to engagement in comparable contexts. A comprehensive review by Al Hazzaa et al. (2025) identified time constraints, inadequate facilities, and family obligations as barriers to physical activity in Saudi Arabia [12].

The comprehensive understanding of the benefits of remaining consistent corresponds with findings from studies in other domains, highlighting effective health education initiatives but revealing a deficiency in practical support for adopting healthier behaviours.

5. CONCLUSIONS

From this study we concluded that barriers such as inadequate facilities and family obligations significantly hinder physical activity among Al-Rayan College staff in Saudi Arabia. It was emphasized the need for effective health education initiatives while highlighting a lack of practical support for adopting healthier behaviours. In this context we are recommending for flexible scheduling and workplace wellness initiatives to address time limitations, alongside providing on-site fitness facilities or partnerships with local gyms to improve access to exercise.

6. RECOMMENDATIONS

In the following, five recommendations and possible actions are presented for consideration to tackle the identified obstacles and encourage physical activity among Al-Rayan College staff, several focused interventions are suggested:

1. Flexible scheduling and workplace wellness initiatives: Adopting flexible work hours and incorporating physical activity into daily routines through wellness programs can effectively address time limitations. Offering on-site fitness facilities or collaborating with local gyms can enhance access to exercise.
2. A nurturing atmosphere and social connections: Establishing a nurturing atmosphere through social connections and peer support groups can boost motivation and accountability. Promoting group activities and social events focused on physical activity can cultivate a community culture of health.
3. Addressing Gender-Specific Barriers: Implementing tailored interventions for women that consider cultural and safety concerns is essential. These interventions could include creating secure, women-exclusive fitness environments, providing childcare during workout sessions, and offering exercise classes that cater to women's specific needs and preferences. Such interventions can effectively address these challenges.
4. Educational Campaigns and Family Involvement: Ongoing educational campaigns that highlight the significance of physical activity for overall well-being and engaging family members in these efforts can assist in harmonizing family responsibilities with health objectives.
5. Research and Monitoring: Continuous research is essential to assess the effectiveness of these interventions and adjust strategies according to feedback and evolving needs. Longitudinal studies that monitor changes in physical activity levels and health outcomes over time can offer significant insights.

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The authors declare no conflicts of interest.

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