

A Study of Health and Wellness and its Knowledge among Non-Teaching Staffs of College of Applied Medical Sciences, AlMajmaah, Kingdom of Saudi Arabia

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Abstract

The aim of this study was to find the health and wellness and its knowledge among non-teaching faculty working at college of applied medical sciences in kingdom of Saudi Arabia. A cross sectional study was conducted among 60 individuals whoever working as non-teaching staffs in college of applied medical sciences without any age restriction. In this present study health risk factors high among both genders was BMI, Cholesterol, Exercise, Nutrition and cancer risk comparatively with other health risk factors like Diabetes, Blood pressure, Smoking, Alcohol and Stress. The mean age of male is 33.7 and female is 35.1 years. This study reveals that health risk factors among the participants 25 (43%) of the individuals were in low risk with a mean score between 81-100, 19 (32%) were in intermediate risk with scores between 61-80 and 16 (25%) of the individuals were < 61 were under high risk. The knowledge of health and wellness among the participants was 38 (63%) scored less than 49%, 13 (22%) scored in the range between 50 to 74%, 9 (15%) scored above 75%. This study reveals a need to initiate life style modification to reduce the health risk factors and also need necessary health awareness programme at college level to reduce the prevalence and incident towards health-related problems.

Keywords: Health and Wellness, Health Risk, Knowledge, Physical Health, Well-Being.

1. Introduction

Wellness is defined as “the sense that one is living in a manner that permits the experience of consistent, balanced growth in the physical, spiritual, emotional, intellectual, social, and psychological dimensions of human existence”¹. As established by the World Health Organization (WHO) in the 1940s, health is referred to as, “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”². According to the National

Wellness Institute, wellness is considered, “an active process through which people become aware of, and make choices toward, a more successful existence”³. There will be an economic burden if the working adults are unhealthy due to severe loss of production⁴. Thus, to progress in productivity and improve health many workshops are conducted at workplace⁵. The major risk factors for the long term medical illnesses such as hypertension, diabetes mellitus, dyslipidemia, and obesity are closely associated with unhealthy life style⁶.

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Due to the lack of awareness of health and wellness most of the people across the globe is facing the major public health challenge of fitness related disorders which are classified as noncommunicable disorders. The major type of noncommunicable diseases includes chronic respiratory disorders, cardiovascular diseases, diabetes and cancer⁷. The primary cause of mortality across worldwide are cardiovascular diseases and the cardiovascular diseases accounts for 31% of overall death rates (WHO)⁸. Increased urbanization in the developing countries account for 80% of Cardiovascular (CV) deaths globally⁹. The risks of NCDs are increased due to metabolic factors like elevated blood sugar levels, high blood pressure, overweight/obesity, and raised levels of lipids¹⁰.

Nutrition has also played a very adverse role in increasing NCDs. This happens due to irregular food habits, unbalanced diet. This also leads to alteration in Basal Metabolic Rate (BMR). And due to this alteration, the people tend to accumulate fat leading to obesity. Cultural habits, lack of motivation and sedentary life style also leads to obesity. Due to extreme climate either too hot or too cold, majority of the population prefer to stay home leading to marked decrease in physical activity. As the world is moving towards transformation and more use of technology the population is finding it difficult to cope with the pace and get stressed because of work pressure. To have the optimum cardiovascular health it becomes essential to have the appropriate knowledge of risk factors and alteration in lifestyle¹¹.

In this present study aimed to determine status of health and wellness and its knowledge among non-teaching members of both genders in college of applied medical science in kingdom of Saudi Arabia. No studies and information available related to health and wellness and knowledge have been done among non-teaching faculty of college in kingdom of Saudi Arabia. Hence the findings of this study help to reduce prevalence among non-teaching faculty and give awareness to maintain the health and wellness. Also, the study aimed to identify high risk health factors to consider lifestyle modification and increase knowledge in regard to health and wellness and also it forms a base for future research.

2. Materials and Methods

A cross-sectional study was conducted among non-teaching staffs of male and female sections in college of

applied medical science, Majmaah University, AlMajmaah. A total of 660 non-teaching staffs were participated in the study by using convenient sampling. The target sample size was based on the assumption of knowledge about health and wellness to be 50%, 95% confidence interval and relative precision of 20%¹². The Ethical clearance of this study was obtained by college of applied medical sciences, Majmaah University; the approval number is MUREC-Mar.08/C OM-2017/13. Non-teaching staffs of both male and female were included and the faculties who are not willing to participate in the study were excluded from the study. All the 60 non-teaching staffs were willing to participate in the study were explained about the study objectives and written informed consent was taken from all the study participants before starting the data collection. A valid, reliable, pretested self-administrated questionnaire was used to gather details regarding personal characteristics, Health risk and knowledge of health and wellness. The researchers were available to explain and to clear doubts regarding the items of the questionnaires. The questionnaires originally was in English was translated to Arabic.

Questionnaires were used to collect the data

Questionnaire was related to health and wellness which consisted of 3 sections- (i) Demographic data; related to personal characteristics- Age, Gender and Ethnicity (ii) Health risk profile; to assess various health and wellness (Exercise, Nutrition, Stress Management, tobacco use and alcohol use). (iii) Clinical Variable outline; for assessment of clinical measurements (weight, height, BMI, blood pressure, cholesterol, diabetes). The highest value was 100 and lowest value was 0. The scoring was divided as follows:

80–100 = Keep it up
60–79 = Consider lifestyle change
< 59 = Initiate lifestyle change

Questionnaire 2 was a knowledge assessment consisted of 3 sections - (i) Meaning of health and wellness (ii) Health and wellness risk factors (iii) Normal clinical parameters profile scoring section composed of MCQ questions: Allotted one score for each and every right answer. Not answered was considered as wrong answer. The highest score was 16 and lowest score was 0. The scoring was divided as follows:

- <8- Poor (i.e., < 50% right answer)
- 9-12- Good (i.e., 50-75% right answer)
- >13- Excellent (i.e., >75% right answer)

From the month of September 2017-October 2017 data was collected for the study. Weight and Height was measured using a digital machine (Detecto, model: apex, capacity: 0-300 kg x 0.1 kg). Using a digital machine (Upper Arm Blood Pressure Monitor, model no: GP-6621) blood pressure was measured.

The questionnaires were supervised by two of the researchers, who were trained to apply in field. All the 60 non-teaching faculty completed the questionnaire and the data was entered into the Microsoft excel sheet for analysis.

2.1 Definition of Health Risk Factors

2.1.1 Obesity

Deposition of the excessive fat in the body is termed as overweight or obesity. Adults are considered overweight if their body mass index (BMI, kg/m²) is 25 or greater, and obese if their BMI is 30 or greater. Obesity is further separated into 3 classes according to the increased health risks associated with increasing BMI levels: class I (BMI 30-34.9), class II (BMI 35-39.9) and class III (BMI ≥ 40)¹³.

2.1.2 Blood Pressure

The pressure that is exerted by the blood on the arterial walls in relation with the force and rate at which the heart beats. Normal is systolic 120 mmHg and diastolic is 80 mmHg¹⁴.

2.1.3 Cholesterol

Cholesterol is a waxy, type of fat (lipid) found in blood mainly produced in liver and having two types: High Density Lipoprotein (HDL) and Low Density Lipoprotein (LDL). Total cholesterol ≤ 200 mg/dl, HDL ≥ 40 mg/dl, LDL ≤ 100 mg/dl and Triglyceride ≤ 150 mg/dl¹⁵.

2.1.4 Diabetes

Diabetes is a condition in which there is increased level of blood glucose, which can be either due to insufficient production of insulin or incapability of body cells to consume insulin, were random blood glucose: < 200 mg/

dl, fasting blood glucose: 90-120 mg/dL and post prandial: 90-126 mg/dL¹⁶.

2.1.5 Exercise

The physical activity is regular exercise carried out for 5 days or < 5 days a week, the exercise is of moderate-intensity if carried out for minimum 30 min per day for 3 days or < 3 days a week and vigorous intensity if the activity is carried out for at least 20 min per session¹⁷.

2.1.6 Nutrition

Nutrition is the amount of food consumed in consideration with dietary needs of the body. The foundation of good health is the combination of physical activity along with ample, well balanced diet¹⁸.

2.1.7 Stress

According to Perceived Stress Scale, the score of 0-13 is judged as minimum stress, a score of 14-26 is judged as moderate stress and a score of 27-40 is judged as maximum stress¹⁹.

2.1.8 Tobacco Use

Intake of tobacco other than smoke, includes oral (tobacco chewed, pan masala, any other form, etc.) and inhaled forms (snuff)²⁰.

2.1.9 Alcohol Use

One regular drink is equal to intake of one bottle or 285 ml of regular beer or 120 ml of wine; or 30 ml of liquor (rum/vodka/gin/whiskey)²⁰.

2.1.10 Cancer Risk

The most suspected risk factors for cancer are: Age, Alcohol, Cancer-Causing Substances, Chronic Inflammation, Diet, Hormones, Immunosuppressant, Infectious Agents, Obesity, Radiation, Sunlight and Tobacco²¹.

2.2 Statistical Analysis

Descriptive statistics was produced for demographic data and the distribution of responses to the items related to health risk factors and knowledge level was presented by percentage of all the study population.

3. Results

3.1 Personal Characteristics

A total of 60 non-teaching staffs of college of applied medical sciences among them 29 males and 31 females were involved in the study. Demographic details of the participants were mentioned in the Table 1. There was a nearly equal representation of both genders. Table 1 shows the Demographic features of study participants like ethnicity, mean age average and age interval of both genders.

Table 1. Demographic features of study participants

Characteristics	Male n (%)	Female n (%)	No of Subjects n (%)
Age (Years)			
20-24	1(3)	1(3)	2(3)
25-29	6(21)	5(16)	11(18)
30-34	9(31)	10(32)	19(32)
35-39	7(24)	8(26)	15(25)
40-44	5(17)	6(19)	11(18)
45-49	1(3)	0(0)	1(2)
50-55	0(0)	1(3)	1(2)
Gender	29	31	60
Mean Age	33.7	35.1	34.4
Ethnicity	Kingdom of Saudi Arabia (KSA)		

Figure 1 shows the Interpretation percentage of health risk factors among the participants 43% of the individuals were in low risk with a mean score between 81-100, 32% were in intermediate risk with scores between 61-80 and 25% of the individuals were < 61 were under high risk.

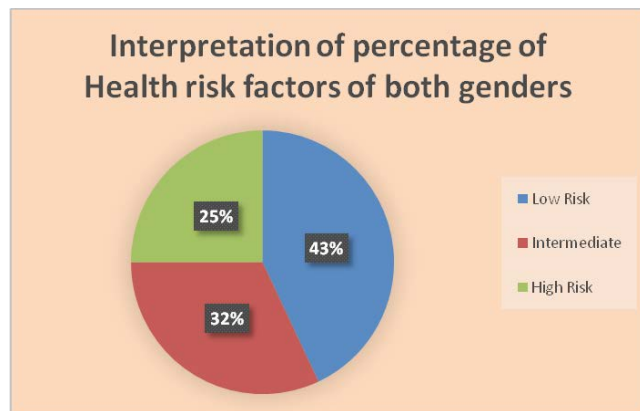


Figure 1. Interpretation of Percentage of health Risk factors.

Figure 2 shows out of 60 individuals 16 were under high risk, 19 with intermediate risk and 25 individuals were under low health risk.

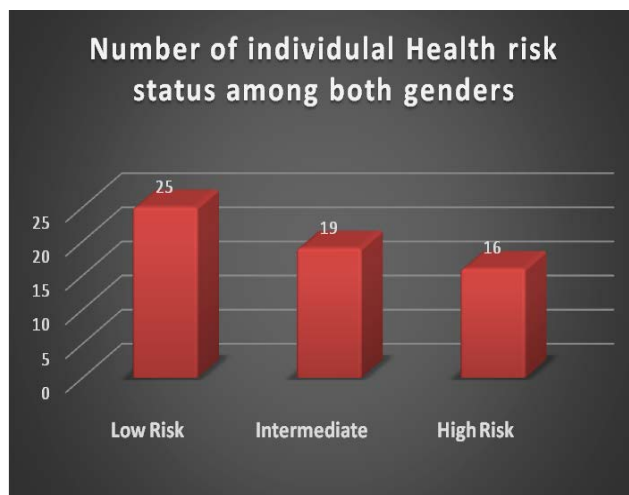


Figure 2. Comparison of health risk factor scores.

Figure 3 shows the Comparison of total health score of the total no of participations of both gender in percentage, among 60 participants 3 individuals were having a score between 40% to 49%, 13 individuals with a score between 50% to 59%, 11 individuals scored between 60% to 69%, 8 individuals between 70% to 79%, 15 individuals scored between 80% to 89% and 10 between 90% to 100%.

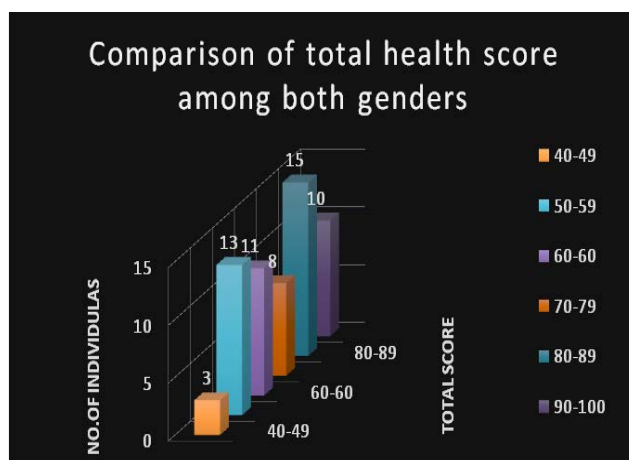


Figure 3. Comparison of total health score.

Table 2 gives the distribution regarding the individual health risk factors as numbers and percentage of both genders.

Table 2. Distribution of various health risk factors based on gender

Health Risk	Genders	Low n (%)		Intermediate n (%)		High n (%)	
BMI	Male	4(14)	17(28)	13(45)	27(45)	12(41)	16(27)
	Female	13(42)		14(45)		4(13)	
BP	Male	15(52)	35(58)	10(34)	21(35)	4(14)	4(7)
	Female	20(65)		11(35)		0(0)	
Cholesterol	Male	9(31)	25(42)	12(41)	24(40)	8(28)	11(18)
	Female	16(52)		12(39)		3(9)	
Diabetes	Male	18(62)	39(65)	9(31)	17(28)	2(7)	4(7)
	Female	21(68)		8(26)		2(6)	
Exercise	Male	5(17)	7(12)	13(45)	24(40)	11(38)	29(48)
	Female	2(6)		11(35)		18(58)	
Nutrition	Male	6(10)	13(22)	13(45)	29(48)	10(34)	18(30)
	Female	7(23)		16(52)		8(25)	
Stress	Male	6(10)	12(20)	16(55)	38(63)	7(24)	10(17)
	Female	6(19)		22(71)		3(10)	
Smoking	Male	8(28)	39(65)	12(41)	12(20)	9(31)	9(15)
	Female	31(100)		0(0)		0(0)	
Alcohol	Male	29(100)	60(100)	0(0)	0(0)	0(0)	0(0)
	Female	31(100)		0(0)		0(0)	
Cancer risk	Male	4(14)	6(10)	0(0)	0(0)	25(86)	54(90)
	Female	2(6)		0(0)		29(94)	

Figure 4 shows the prevalence of Health risk factors in percentage as well as number of individuals of various health risk factors like BMI, BP, Cholesterol, Diabetes, Exercise, Nutrition, Stress, Smoking, Alcohol and Cancer Risk of both genders.

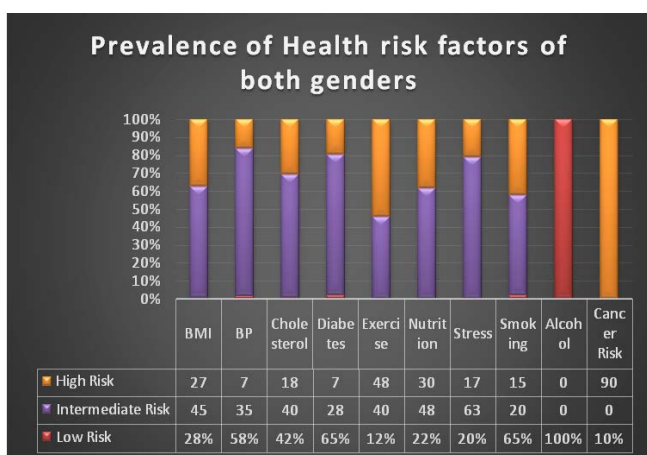


Figure 4. Comparison of Mean score of Health risk factors of both genders.

Table 3 shows the score obtained by the participant's knowledge of health and wellness. Majority of the participants 38 (63%) scored less than 49%, 13 (22%) scored in the range between 50 to 74%, 9 (15%) scored above 75%.

Table 3. Knowledge of Health and wellness of both genders

Score	Genders	(n)%	(n)%
Less than 49%	Male	20(69)	38(63)
	Female	18(58)	
50 – 74%	Male	5(17)	13(22)
	Female	8(25)	
Above 75%	Male	4(13)	9(15)
	Female	5(16)	

Table 4 explains the knowledge level of various health risk factors of both genders. Health risk factors like BMI, BP, Cholesterol, Diabetes and smoking having more than 50% of knowledge comparing with other health risk factors like Exercise, Nutrition, Stress, Alcohol and Cancer Risk.

Table 4. Knowledge about individual health risk factors of both genders

Health Risk	Genders	n (%)	
BMI	Male	18(62)	33(55)
	Female	15(48)	
BP	Male	19(65)	41(68)
	Female	22(71)	
Cholesterol	Male	15(52)	33(55)
	Female	18(58)	
Diabetes	Male	21(72)	40(66)
	Female	19(61)	
Exercise	Male	16(55)	29(48)
	Female	13(42)	
Nutrition	Male	5(17)	12(20)
	Female	7(22)	
Stress	Male	3(10)	8(13)
	Female	5(16)	
Smoking	Male	21(72)	33(55)
	Female	12(38)	
Alcohol	Male	11(38)	16(27)
	Female	5(16)	
Cancer risk	Male	9(31)	22(37)
	Female	13(42)	

4. Discussion

This study has focused to reveal the amount of health risk factors and its knowledge on health and wellness, such as BMI, BP, Cholesterol, Diabetes, Exercise, Nutrition, Stress, Smoking, Alcohol, and Cancer risk over the male and female non-teaching faculties of the Majmaah University. The study has revealed that 43% of the individuals were at low risk with a mean score range of 81-100, 32% were at intermediate risk with mean score range of 61-80 and 25% of the individuals were at high risk as the mean score was less than 61.

The prevalence percent of overall health score among male and female staffs includes 3 individual's falls between 40% to 49%, 13 individuals between 50% to 59%, 11 individuals between 60% to 69%, 8 individuals between 70% to 79%, 15 individuals between 80% to 89% and 10 between 90% to 100%. Present study clearly states that almost half the study population falls either in high risk or intermediate risk. Suchitra *et al.* have also emphasized that lack of awareness would be the precipitating factor

for conditions like hypertension²². This scenario indicates that the conduction of health education programs and awareness programs among the university non-teaching staffs is mandatory. According to the Gulf Cooperation Council, the reason for low level activity among the citizens of gulf is high dependency on automobiles, climatic conditions and high dependency on house hold activity helpers²³.

We also found in our study that the total health risk factor score among the study population includes 16 participants have scored less than 60% and they need to initiate their lifestyle modification, 19 participants have scored between 61% to 80% and they have to consider lifestyle modification, 25 participants have scored above 80% and they were at good health and wellness. Both male and female participants have displayed high knowledge over health risk factors like BMI, Cholesterol and Smoking among all other risk factors. The rationale behind this would be the widespread of awareness campaigns and moreover people are digitally connected with global population to learn about the healthy lifestyle and its advantages.

Comparing smoking and alcohol health risk factors with others, both genders falls majorly under low risk as the college employees are more aware of health hazards of smoking and alcohol. Secondly, it may due to the awareness about dangers of smoking and also because of cultural stigma.

Further in this study related to knowledge of health and wellness majority of the participants 38 (63%) scored less than 49%, 13 (22%) scored in the range between 50 to 74%, 9 (15%) scored above 75% among both genders and also study reveals that knowledge level between both genders is almost same.

Comparing with overall health risk factors, the study population have relatively low knowledge on Stress, Nutrition, Alcohol and Cancer risk i.e., 13%, 20%, 27% and 37% respectively as they are having sedentary life style, lack of exercise, fast and fried food consumption and high intake of processed foods, and this would affect health and wellness of an individual. Annapurna have concluded that there is a strong correlation between the physical activity, nutrition and prevention of cancer^{24,25}. On the contrary, this study also reveals that the participants have high knowledge of some health risk factors like BMI, BP, Cholesterol, Diabetes as they have greater awareness because of their exposure to social media and however the basic routine tests to rule out these risks are carried

out more frequently and exposure to health awareness programs plays an inevitable role.

5. Limitations of the Study

This study was limited to non-teaching faculties of only the college of applied sciences because of that sample size is very smaller. Similar studies should be conducted with a more sample size then only findings would be widely applicable. We could not find other proven health risk factors like waist circumference, family history, Cardio respiratory fitness and Body composition measurements.

6. Conclusion

This study confirms that health and wellness among non-teaching faculty were poor in their BMI, Cholesterol, Exercise, Nutrition and Cancer Risk and the Knowledge among health and wellness was also poor is associated with increase in prevalence health risk factors. By analyzing results of this study reveals a need to initiate life style modification to reduce the health risk factors and need necessary health awareness program at college level to reduce the prevalence and incident health related problems.

7. Conflict of Interest

All authors have none to declare.

8. Acknowledgments

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