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Knowledge, Attitude and Practices towards Noncommunicable Disease Risk Factors among Medical Staff

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Abstract

Background: The Iraq suffers from a high burden of noncommunicable diseases (NCD). Iraqi people have a high prevalence of child obesity, adolescent and adult obesity, diabetes, heart disease and cancers among its adult population.Objective: To identify knowledge, attitude and practices relating to modifiable noncommunicable disease (NCD) risk factors regarding medical staff that includes doctors, dentists and pharmacists.Methods: the study conducted from January 2015 to December 2015, the study was carried out by using questionnaires. Data were analyzed using SPSS statistical software version 20.Overall 70.2

Index terms— knowledge, HIV/AIDS, floating population and bangladesh.

1 I. Introduction

nowledge is a set of understandings, having information, comes from experience or education (having knowledge means having extensive information or understanding).

Attitude is a way of being, a position. These are learning this is an Intermediate variable between the situation, and the response to this situation.

Practices this is something that deals with the concrete, with actions, practices or behaviors are the observable actions of an individual in response to a stimulus. This is something that deals with the concrete, with actions.

A KAP (knowledge, Attitude and Practice) survey is conducted to investigate human behavior related to a certain topic. It identifies what people know (Knowledge), how they feel (Attitude) and what they do (Practice).

2 II. Noncommunicable Disease

Chronic non communicable disease; in USA has defined chronic disease as comprising all impairments or deviations from normal, which have one or more of the fallowing characteristics: Non communicable diseases (NCDs) includes cardiovascular disease, renal, nervous and mental disease, musculoskeletal condition, respiratory disease, permanent result of accidents. Chronic noncommunicable disease are assuming increasing importance among the adult population in both developed and developing countries (1) Noncommunicable diseases (NCDs), also known as chronic diseases, are not passed from person to person. They are of long duration and generally slow progression. The four main types of noncommunicable diseases are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes **??**2) .

Today, noncommunicable diseases (NCDs), are responsible for more than 75% of deaths worldwide **??**3) The economic consequences of noncommunicable diseases are huge, because of the combined burden of health care costs and lost economic productivity due to illness and premature death. (4) In most countries, people who have a low socioeconomic status and those who live in poor or marginalized communities have a higher risk of dying from non-communicable diseases (NCDs) than do more advantaged groups and communities. Smoking rates, blood pressure, and several other NCD risk factors are often higher in groups with low socioeconomic status than in those with high socioeconomic status; the social gradient also depends on the country's stage of economic development, cultural factors, and social and health policies. (5) Noncommunicable disease "lifestyle" diseases because the majority of risk factors were preventable, illnesses from smoking, alcohol abuse, poor diets

and physical inactivity killed some 36 million people a year, mostly in low and middle-income countries where they disproportionately affected people under 60. (6)

3 a) Non-Communicable Disease Risk Factors

Risk factors such as a person's background; lifestyle and environment are known to increase the likelihood of certain non-communicable diseases. They include age, gender, genetics, exposure to air pollution, and behaviors such as smoking, unhealthy diet and physical inactivity which can lead to hypertension and obesity, in turn leading to increased risk of many NCDs. Most NCDs are considered preventable because they are caused by modifiable risk factors.

Most epidemiologists accept that sex key set of risk factors are of adult non-communicable disease morbidity and mortality these as fallow (1) Common, preventable risk factors underlie most noncommunicable diseases. Most noncommunicable diseases are the result of four particular behaviors (tobacco use, physical inactivity, unhealthy diet, and the harmful use of alcohol) that lead to four key metabolic/ physiological changes (raised blood pressure, overweight/obesity, raised blood glucose and raised cholesterol. (7) The hazardous effects of behavioral and dietary risk factors on noncommunicable diseases, and the metabolic and physiological conditions that mediate their effects.

There is less information on risk-factor trends, which makes it difficult to assess how they have affected population health in the past or how they may do so in the future. (8) Noncommunicable diseases (NCDs) are a major disease burden in the Region. Many of the risk factors are related to lifestyle and can be controlled. Physical inactivity, low fruit and vegetable intake, high fast food consumption and high cholesterol are predominant causes of cardiovascular disease and some cancers. Overweight and obesity can lead to metabolic changes and raise the risk of NCDs, including heart disease and type 2 diabetes.(**??**)

4 b) Tobacco

The hazardous effects of smoking on mortality from cancers and cardiovascular and respiratory diseases have been known for decades (8) Tobacco products are products made entirely or partly of leaf tobacco as raw material, which are intended to be smoked, sucked, chewed or snuffed. All contain the highly addictive psychoactive ingredient, nicotine.

Tobacco use is one of the main risk factors for a number of chronic diseases, including cancer, lung diseases, and cardiovascular diseases. (10) The tobacco epidemic is one of the biggest public health threats the world has ever faced, killing around 6 million people a year. More than 5 million of those deaths are the result of direct tobacco use while more than 600 000 are the result of non-smokers being exposed to second-hand smoke. **??**2) The majority of the more than 1 billion smokers worldwide now live in low-and middle-income countries. (8) On the basis of current smoking patterns, with a global average of about 50% of young men and 10% of young women becoming smokers and relatively few stopping, annual tobacco-attributable deaths will rise from about 5 million in 2010 to more than 10 million a few decades.

Tobacco is the biggest external cause of noncommunicable disease and is responsible for even more deaths than adiposity both in high-income countries such as the United States and globally. The risks in middle age are much greater for smokers who started in early adulthood than for those who started later. This means that the ratio of mortality among smokers to that among persons who have never smoked is much more extreme now. (11)

5 c) Physical Activity

WHO defines physical activity as any bodily movement produced by skeletal muscles that require energy expenditure -including activities undertaken while working, playing, carrying out household chores, travelling, and engaging in recreational pursuits?

The term "physical activity" should not be confused with "exercise", which is a subcategory of physical activity that is planned, structured, repetitive, and aims to improve or maintain one or more components of physical fitness. Both, moderate and vigorous intensity physical activity brings health benefit. (12) Studies of the beneficial health effects of physical activity date back to the 1950s and have been replicated in large cohorts. Physical activity at work, walking, and, in some populations, bicycling used to be major contributors to total energy expenditure but have declined dramatically in industrial and urban societies. Paralleling this shift, more recent epidemiologic studies in high-income countries have focused on leisure-time activity, with less emphasis on work and methods of local transportation, which are important in developing countries. Only recently has attention been given to population-based measurement of physical activity in countries at all stages of urbanization and economic development. The limited available global data nonetheless show low levels of activity and long periods in sedentary conditions in high-income and urbanized countries and higher activity levels in rural populations that engage in agricultural activity and walk or bicycle long distances for daily activities. (8)

6 Physical activity recommendations for specific age groups

The "Global Recommendations on Physical Activity for Health" address three age groups: 5-17 years old, 18-64 years old and 65 years old and above. These age groups were selected taking into consideration the nature and

availability of the scientific evidence relevant to the prevention of noncommunicable diseases through physical activity.

7 Physical activity recommended amount about Children and adolescents aged 5-17 years

? Should do at least 60 minutes of moderate to vigorous-intensity physical activity daily. ? Physical activity of amounts greater than 60 minutes daily will provide additional health benefits. ? Should include activities that strengthen muscle and bone.

8 Adults aged 18-64 years

? Should do at least 150 minutes of moderateintensity physical activity throughout the week, or do at least 75 minutes of vigorous-intensity physical activity throughout the week, or an equivalent combination of moderate- and vigorous-intensity activity. (12) Regular physical activity is one of the most important things you can do for your health. It can help: Control your weight, Reduce your risk of cardiovascular disease, Reduce your risk for type 2 diabetes and metabolic syndrome, Reduce your risk of some cancers, Strengthen your bones and muscles, Improve your mental health and mood, Improve your ability to do daily activities and prevent falls, if you're an older adult, Increase your chances of living longer. (13) Physical inactivity is an important behavioral risk factor that is associated with many negative health consequences. The health benefit of regular physical activity relates to an improved quality of life and reduces the risk of a variety of disorders. (14) Physical inactivity is a modifiable risk factor for cardiovascular disease and a widening variety of other chronic diseases, including diabetes mellitus, cancer (colon and breast), obesity, hypertension, bone and joint diseases. (15) Meeting the 2008 Physical Activity Guidelines for Americans minimum by either moderate-or vigorousintensity activities was associated with nearly the maximum longevity benefit. We observed a benefit threshold at approximately 3 to 5 times the recommended leisure time physical activity minimum and no excess risk at 10 or more times the minimum. (16) Higher cardio-respiratory fitness (CRF) and physical activity (PA) in old age are associated with greater brain structural and functional integrity, and higher cognitive functioning. (17) Aerobic activity or "cardio" gets you breathing harder and your heart beating faster. From pushing a lawn mower, to taking a dance class, to biking to the store -all types of activities count. As long as you're doing them at a moderate or vigorous intensity for at least 10 minutes at a time.

Intensity is how hard your body is working during aerobic activity.

How do you know if you're doing light, moderate, or vigorous intensity aerobic activities?

For most people, light daily activities such as shopping, cooking, or doing the laundry doesn't count toward the guidelines. Why? Your body isn't working hard enough to get your heart rate up.

Moderate-intensity aerobic activity means you're working hard enough to raise your heart rate and break a sweat. One way to tell is that you'll be able to talk, but not sing the words to your favorite song. Here are some examples of activities that require moderate effort: Walking fast, Doing water aerobics, Riding a bike on level ground or with few hills, Playing doubles tennis, Pushing a lawn mower.

Vigorous-intensity aerobic activity means you're breathing hard and fast, and your heart rate has gone up quite a bit. If you're working at this level, you won't be able to say more than a few words without pausing for a breath. Here are some examples of activities that require vigorous effort: Jogging or running, Swimming laps, Riding a bike fast or on hills, Playing singles tennis, Playing basketball. **??**18)

9 d) Unhealthy Diet

An unhealthy diet is one of the major risk factors for a range of chronic diseases, including cardiovascular diseases, cancer, diabetes and other conditions linked to obesity. Specific recommendations for a healthy diet include eating more fruit, vegetables, legumes, nuts and grains; cutting down on salt, sugar and fats. It is also advisable to choose unsaturated fats, instead of saturated fats and towards the elimination of trans-fatty acids.

Improving dietary habits is a societal, not just an individual problem. Therefore, it demands a populationbased, multispectral, multi-disciplinary, and culturally relevant approach. (19) A healthy diet helps protect against malnutrition in all its forms, as well as noncommunicable diseases (NCDs), including diabetes, heart disease, stroke and cancer. Unhealthy diet and lack of physical activity are leading global risks to health.

Healthy dietary practices start early in lifebreastfeeding fosters healthy growth and improves cognitive development, and may have longer-term health benefits, like reducing the risk of becoming overweight or obese and developing NCDs later in life. Energy intake (calories) should be in balance with energy expenditure. Evidence indicates that total fat should not exceed 30% of total energy intake to avoid unhealthy weight gain, with a shift in fat consumption away from saturated fats to unsaturated fats, and towards the elimination of industrial trans fats. Limiting intake of free sugars to less than 10% of total energy intake is part of a healthy diet.

A further reduction to less than 5% of total energy intake is suggested for additional health benefits .Keeping salt intake to less than 5 g per day helps prevent hypertension and reduces the risk of heart disease and stroke in the adult population. WHO Member States have agreed to reduce the global population's intake of salt by 30%

and halt the rise in diabetes and obesity in adults and adolescents as well as in childhood overweight by 2025. ??20) Consuming a healthy diet throughout the life course helps prevent malnutrition in all its forms as well as a range of noncommunicable diseases and conditions. However, the increased production of processed food, rapid urbanization and changing lifestyles have led to a shift in dietary patterns.

People are now consuming more foods high in energy, fats, free sugars or salt/sodium, and many do not eat enough fruit, vegetables and dietary fiber such as whole grains.

The exact make-up of a diversified, balanced and healthy diet will vary depending on individual needs (e.g. age, gender, lifestyle, degree of physical activity), cultural context, locally available foods and dietary customs. ??20) It appears conceivable that the risk of hypercholesterolemia can be reduced by changing the snack dietary pattern. (21)

10 e) Alcohol

Alcohol consumption is associated with numerous diseases and injuries. Moderate alcohol consumption has been inversely associated with the risk of cardiovascular diseases and diabetes, although the benefits may be greater for persons with existing cardiovascular risk factors than for those without such risk factors. Epidemiologic studies that have measured both the amount and patterns of alcohol consumption have shown that heavy episodic (or binge) drinking not only substantially raises the risk of injuries but can also increase the risk of or exacerbate cardiovascular disease and liver disease. (8) In many parts of the world, drinking alcoholic beverages is a common feature of social gatherings. Nevertheless, the consumption of alcohol carries a risk of adverse health and social consequences related to its intoxicating, toxic and dependence-producing properties. (22) Alcohol is a psychoactive substance with dependence-producing properties that has been widely used in many cultures for centuries. The harmful use of alcohol causes a large disease, social and economic burden in societies. Environmental factors such as economic development, culture, availability of alcohol and the level and effectiveness of alcohol policies are relevant factors in explaining differences and historical trends in alcohol consumption and related harm.

The volume of alcohol consumed, the pattern of drinking determines alcohol-related harm, and, on rare occasions, the quality of alcohol consumed. The harmful use of alcohol is a component cause of more than 200 disease and injury conditions in individuals, most notably alcohol dependence, liver cirrhosis, cancers and injuries. (23) Excessive alcohol use can lead to the development of chronic diseases and other serious problems including high blood pressure, heart disease, stroke, liver disease, and digestive problems. Cancer of the breast, mouth, throat, esophagus, liver, and colon., Learning and memory problems, including dementia and poor school performance., Mental health problems, including depression and anxiety., Social problems, including lost productivity, family problems, and unemployment. Alcohol dependence, or alcoholism. (24) f) Obesity

Overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health. A crude population measure of obesity is the body mass index (BMI), a person's weight (in kilograms) divided by the square of his or her height (in meters). A person with a BMI of 30 or more is generally Overweight and obesity are major risk factors for a number of chronic diseases, including diabetes, cardiovascular diseases and cancer. Once considered a problem only in high income countries, overweight and obesity are now dramatically on the rise in low-and middle-income countries, particularly in urban settings. (25) Owing to the increasing obesity trends, our findings suggest that in 20 years an increasing number of people will be living with an obesity-related chronic disease in almost every country in Europe. (26) g) Prevention i. Modifiable risk factors: smoking, alcohol, unhealthy diet, physical inactive, stress. (1) To lessen the impact of NCDs on individuals and society, a comprehensive approach is needed that requires all sectors, including health, finance, foreign affairs, education, agriculture, planning and others, to work together to reduce the risks associated with NCDs, as well as promote the interventions to prevent and control them.

An important way to reduce NCDs is to focus on lessening the risk factors associated with these diseases. Low-cost solutions exist to reduce the common modifiable risk factors (mainly tobacco use, unhealthy diet and physical inactivity, and the harmful use of alcohol) and map the epidemic of NCDs and their risk factors.

Other ways to reduce NCDs are high impact essential NCD interventions that can be delivered through a primary health-care approach to strengthen early detection and investments because, if applied to patients early, can reduce the need for more expensive treatment. These measures can be implemented in various resource levels. The greatest impact can be achieved by creating healthy public policies that promote NCD prevention and control and reorienting health systems to address the needs of people with such diseases.

Lower-income countries generally have lower capacity for the prevention and control of noncommunicable diseases.

High-income countries are nearly four times more likely to have NCD services covered by health insurance than low-income countries. Countries with inadequate health insurance coverage are unlikely to provide universal access to essential NCD interventions.

(2)

The behaviors of individuals are important factors in the patterns of risk factors for noncommunicable diseases, successful efforts to reduce smoking, alcohol consumption, and, more recently, trans-fat and salt consumption show that there is great scope for collective action through policy formulation and implementation successful policies, such as tobacco and alcohol taxes and restrictions, should be replicated in all populations. There is

also a need for bold and creative policies that address harmful alcohol consumption, improve diet, and increase physical activity. (8) With respect to reducing mortality, advances in cancer treatment have not been as effective as those for other chronic diseases; effective screening methods are available for only a few cancers. Primary prevention through lifestyle and environmental interventions remains the main way to reduce the burden of cancers.

Smoking, alcohol use, and low fruit and vegetable intake were the leading risk factors for death from cancer worldwide and in low-and-middle-income countries. In high-income countries, smoking, alcohol use, and overweight and obesity were the most important causes of cancer. ??27) The products of tobacco, alcohol and food industries are responsible for a significant and growing proportion of the global burden of disease. Smoking and alcohol combined account for 12.5% of global deaths and 19.5% in high-income countries, while six diet-related risk factors account for 13.6 and 17.5% of deaths, respectively.

Arguably, the greatest challenge and opportunity for public health lies in reducing the contributions of tobacco use, unhealthy diet and harmful alcohol consumption to the rising global burden of noncommunicable diseases. This demonstrates a pressing need to improve our understanding of how corporations contribute to this disease burden, both directly through the promotion of products damaging to health and indirectly through influence over public policy. The concept of an industrial epidemic-an epidemic emerging from the commercialization of potentially health-damaging products-lends itself to this purpose. Adapting traditional public health constructs, it identifies the role of the host (the consumer), agent (the product, e.g. cigarettes, alcohol), environment and, crucially, the disease vector (the corporation). ??28) Elevation of blood cholesterol concentrations has been recognized as a major risk factor for cardiovascular diseases. Control of the increase in blood cholesterol is one of the important strategies for the prevention of cardiovascular diseases. ??29) A healthy diet contains:

Fruits, vegetables, legumes (e.g. lentils, beans), nuts and whole grains (e.g. unprocessed maize, millet, Potatoes, sweet potatoes, cassava and other starchy roots are not classified as fruits or vegetables. Less than 10% of total energy intake from free sugars (which is equivalent to 50 g (or around 12 level teaspoons) for a person of healthy body weight consuming approximately 2000 calories per day, but ideally less than 5% of total energy intake for additional health benefits . Most free sugars are added to foods or drinks by the manufacturer, cook or consumer, and can also be found in sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates. Less than 30% of total energy intake from fats , Unsaturated fats (e.g. found in fish, avocado, nuts, sunflower, canola and olive oils) are preferable to saturated fats (e.g. found in fatty meat, butter, palm and coconut oil, cream, cheese, ghee and lard) . Industrial trans fats (found in processed food, fast food, snack food, fried food, frozen pizza, pies, cookies, margarines and spreads) are not part of a healthy diet. Less than 5 g of salt (equivalent to approximately 1 teaspoon) per day and use iodized salt. ??20)

11 III. Methods

Study conducted from January 2015 to December 2015 by using questionnaire, 524 participants (includes doctors, dentists and pharmacists) were randomly selected. The questions were created with consideration to some of the main NCD risk factors, physical inactivity, obesity and poor diet, smoking, alcohol consumption& because these risk factors are common to diabetes mellitus, some cancers and cardiovascular diseases (CVDs), all of which constitute the NCD health burden in Iraq. Traditions and cultural practices were also considered when formulating the questions.

A cross-sectional survey was created with both quantitative and qualitative questions.

A majority of the questions focused on physical activity: the type of physical activity practiced in the work environment and in leisure time; socio-cultural factors that influenced, also question about diet (vegetable and fruit intake), alcohol consumption, stress of life and questionnaire included personal data (age, gender, education, kind of work). The survey was tested with measured body mass index, overweight and obesity were often measured using the BMI (Body Mass Index) and according to body mass index scale. BMI: is a simple index commonly used to classify overweight and obesity in schoolchildren and adults; is calculated as a person's weight (in kg) divided by his or her height (in m2); Underweight: $<$ 18. Normal weight: 18.5 -24.9 Overweight: 25 -29.9

Obese: ? 30and does not distinguish weight associated with muscle from weight associated with fat and therefore provides only a crude measure of fatness

12 a) Data Analysis

The data was entered and analyzed using Statistical Package for the Social Science (SPSS) Version 20 statistical analysis program, Chi-square test was used to determine the significance of association between the variables

13 IV. Results

14 a) Demographic Characteristics

We About half of participant have idea about non communicable disease. only 122 (23.3) was taken lecture, workshop about it, frequency distribution are listed in the table (??) &(6). Prevalence of participant's knowledge about noncommunicable disease risk factors 464(88.5) have knowledge about these, the distribution are listed in the table (7).

Physical inactivity is a modifiable risk factor for cardiovascular disease and a widening variety of other chronic diseases, including diabetes mellitus, cancer (colon and breast), obesity, hypertension, bone and joint diseases (osteoporosis and osteoarthritis), and depression. The prevalence of physical inactivity among participant 368.2(70.2%).

Overall 70.2% of the participants reported no physical exercise, high proportions of both males and females no practiced of physical activity, especially physical activity in their leisure time. However, the percentages of daily vigorous physical activity, a component of total daily physical activity, were low for both males and females, distributions in the table (**??**), (**??**), (**??**0), (**??**1), (**??**2), (13). Low proportion of females and males participated in physical activity in their leisure time. The low prevalence of leisure time physical activity is apparent throughout all age groups and no gender differences are found at the 0.05 level of significance (Table **??**4).). males reported higher percentages of daily Prevention of noncommunicable disease, most of participants trying to lose weight ,doing physical activity and eating healthy diet 391(74.6%) have know important normal weight present in the table (20), (21) The distribution of the risk factors (tobacco. alcohol intake in the study are listed in the table (**??**6) & (17).

High percent trying to change weight 56.1% trying lose weight are listed in the table (22) Table (22) Overweight and obesity are often measured using the BMI (Body Mass Index) scale. BMI: is a simple index commonly used to classify overweight and obesity in adults; in the study In the study calculate body mass index for all participant found 182 (34.7%) normal weight, 225(42.9%) over weight and 113 (21.6%) obese. significant gender differences founded in the study, overweight more in female, but obesity more in the male are listed in the table (26). This research study attempted to provide information on medical staff aged from less than 30 years to more than 50 years and their knowledge and practices of noncommunicable disease risk factors.

In a survey conducted sampling during 2015, a total of 524 female and male and their knowledge and practices towards types of physical activity, vigorous, moderate(in the leisure time, in work, also -reported the number of days of doing physical exercise per week .

Other questions about consumed fruit and vegetables (Frequencies, prevalence) and chi-square tests were conducted to detect significant or insignificant results, cross-sectional dataset on these NCD risk factor questions to answer the primary research question.

15 ?

We obtained data from 524 participants, 200 male (38.2%) & 324 female (61.8%) -

16 ?

The age distribution of participant under 30 years 161(30.7%), 31to 40 years 154(29.4%), 41 to 50 years 121(23.1%) and over 50 years 88(16.8%).

17 ?

From the total sample of 524, 106 dentists (20.2%), 81 pharmacists (15.5%), 185 general practitioners (35.3%) and 152 specialist (29%). ? About half of participant have idea about non communicable disease. Only 122 (23.3) was taken lecture, workshop about it.

18 ?

Physical inactivity is a modifiable risk factor for cardiovascular disease and a widening variety of other chronic diseases, including diabetes mellitus, cancer (colon and breast), obesity, hypertension, bone and joint diseases (osteoporosis and osteoarthritis), and depression. The prevalence of physical inactivity among participant 368.2(70.2%).

Overall70.2% of the participants reported no physical exercise, high proportions of both males and females no practiced of physical activity, especially physical activity in their leisure time. However, the percentages of daily vigorous physical activity, a component of total daily.

Low proportion of females and males participated in physical activity in their leisure time. The low prevalence of leisure time physical activity is apparent throughout all age groups and no gender differences were found at the 0.05 level of significance, males reported higher percentages of daily physical activity 33% of male compared 27% in female.

Although no significant age differences were found in terms of physical activity participation showed in the table. Higher prevalence of tobacco use and alcohol intake and a lower dietary consumption of fruits and vegetables, but physical inactivity were less frequent. Urban residence was associated with higher education, and physical inactivity. **??**31) The prevalence of overweight (men -23.9%, women -37.5%), results showed a high burden of NCD risk factors in Kerala -India. In terms behavioral risk factors, a fifth of the sample used tobacco products, and a tenth consumed alcohol, and two-fifths consumed diet low in fruit and vegetable content (relative to some dietary guidelines), but physical inactivity was uncommon. The prevalence of smoking in men (42%) was double that observed in the United States (21%) 21, whereas that in women was quite low, consistent with cultural differences. The prevalence of a diet low in fruits and vegetables (40%) and physical inactivity, (7%) were considerably lower than in the United States where the prevalence of these behavioral habits are-70

per cent and 11-23 per cent, respectively (range of estimates for different ethnicities)(31) Physical exercise in southern Germany Overall, 38.9% of the participants reported nonphysical exercise. Men reported a higher level of physical exercise than did women. Less exercise was reported by subjects with diabetes, high body mass index and waist-to-hip ratio and by those who were underweight. Alcohol consumption, smoker status and higher educational level showed a positive association with physical exercise.

A negative trend with respect to moderate physical exercise was observed for those with metabolic syndrome, diabetes, hypertension and hepatic statuses, but this was statistically significant only for subjects with diabetes. In both men and women, their relationship between self assessed 'good' PF and high physical exercise. (14)

19 ?

The products of tobacco, alcohol and food industries are responsible for a significant and growing proportion of the global burden of disease. Smoking and alcohol combined account for 12.5% of global deaths and 19.5% in high income countries, while six diet-related risk factors account for 13.6 and 17.5% of deaths, respectively. (32).

Except in Eastern Europe and parts of Africa, mortality among adults has declined in most countries for decades.

Lower rates of death frominfectious diseases were the early driver of this improvement, but there havebeen subsequent declines in mortality from cardiovascular disease and some cancers. 2, There have also been important trends in various cancers2for example, the rise and subsequent decline in lungcancer incidence and mortality among men in many high-income countries, a decline in stomach-cancer incidence and mortality as economies develop, and the worldwide increase in breast-cancer incidence. (8) the Mongolian population aged 15-64 years old has an insufficient knowledge on the risk factors of NCDs and is not informed about benefits and options for healthy behaviors and early detection methods. In particular, knowledge about risky behaviors and health promoting and preventive behaviors is missing or insufficient as well as knowledge about self control measures, particularly in the male an young populations.

Information on CVDs, diabetes, cervical cancer, and breast cancer, and ways to prevent these diseases also showed some gaps among the population. The population lacks knowledge regarding the self control of these diseases and is not aware that by changing their own lifestyles they can influence and reduce risk factors and potentially prevent NCDs. **??**33)

20 c) Limitations

A limitation of this study is the inability to infer causality due to the cross-sectional nature of the survey.

An attempt was made to capture obesity prevalence by asking for self-reported weight and height measurements. These measurements, participantreported age and sex, would have been used to calculate the Body Mass Index for each individual in order to assess obesity prevalence.

Despite instructions and additional clarification, recall bias may exist in the results relating to the food question on fruit and vegetable intake, and the questions regarding physical activity knowledge and practices.

21 d) Conclusions

Despite these limitations, this study does provide results regarding knowledge and practices towards physical inactivity and nutritional intake regarding fruits and vegetables,

22 ?

The first conclusion from this study is that participants need to improve their vigorous, Volume XVI Issue III Version I Year 2016 ( ) F moderate activity levels to meet recommendations by the World Health Organization. Adults aged 18-64 years Should do at least 150 minutes of moderateintensity physical activity throughout the week, or do at least 75 minutes of vigorous-intensity physical activity throughout the week, or an equivalent combination of moderate-and vigorous-intensity activity. (12)

23 ?

The second conclusion is that a large majority of participants are not receiving recommended daily intakes of fruits and vegetables [1] [2]

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[2] Knowledge, Attitude and Practices towards Noncommunicable Disease Risk Factors among Medical Staff

Figure 1: ?

	Frequency	Percent	Cumulative Percent
Bachelor s degree	295	56.3	56.3
Specialized/Professional Graduate or post graduate	212	40.5	96.8
other	17	3.2	100.0
Total	524	100.0	

Figure 2: ??

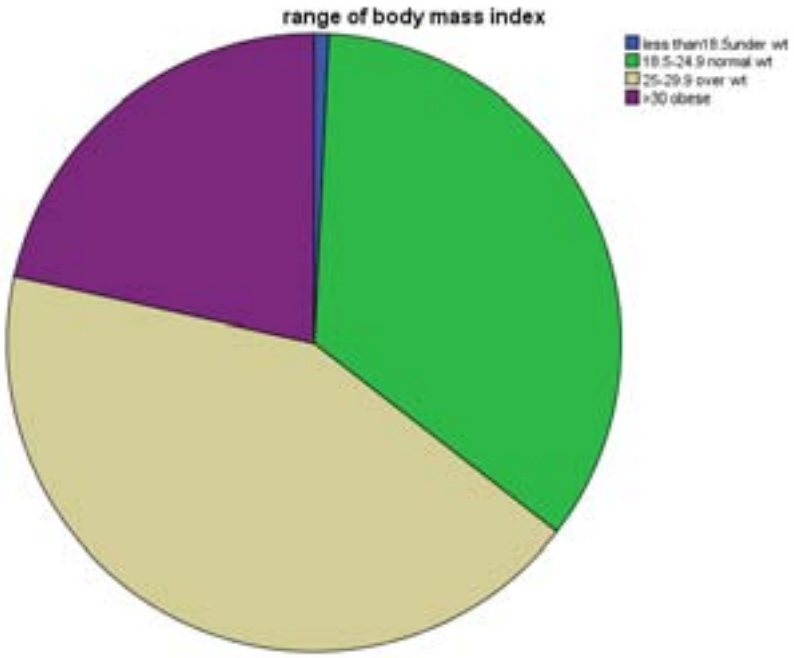

Figure 3:

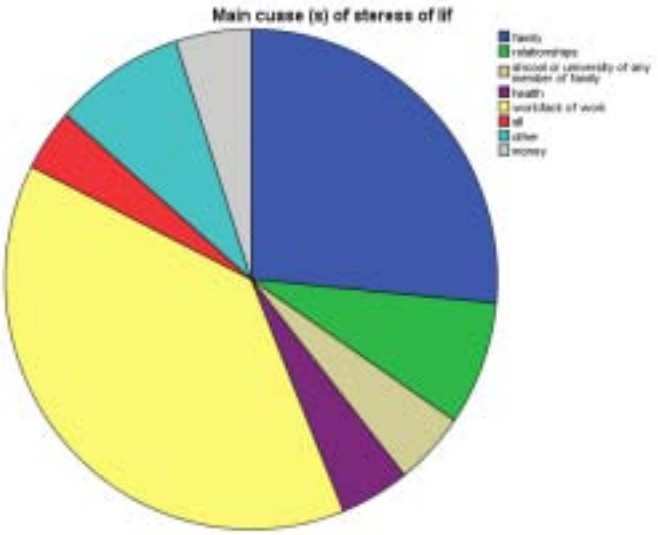

Figure 4:

Stressful factors	Frequency	Percent	Cumulative Percent
family	139	26.5	26.5
relationships	42	8.0	34.5
school or university of any member of family	25	4.8	39.3
health	24	4.6	43.9
work/lack of work	202	38.5	82.4
all	21	4.0	86.5
other	45	8.6	95.0
money	26	5.0	100.0
Total	524	100.0	

Figure 5: F

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Table (6) : In the past 12 months have lecture or workshop & so on

	Frequency	Percent	Cumulative Percent
V a l i d	YES	122	23.3 23.3
	NO	402	76.7 100.0
	Total	524	100.0

	Frequency	Percent	Cumulative Percent
yes	264	50.4	50.4
no	260	49.6	100.0
Total	524	100.0	

behavioral risk factors of NCD; tobacco use, diet, physical activity, alcohol use, sedentary life.

Figure 6: Table (5

(

Table(10) : Days of Vigorous Activity in the leisure time

days	Frequency	Percent	Cumulative Percent
.00	496	94.7	94.7
1.00	8	1.5	96.2
2.00	15	2.9	99.0
3.00	2	.4	99.4
4.00	2	.4	99.8
5.00	1	.2	100.0
Total	524	100.0	

Table (11) : In the work have Vigorous Activity

Yes No	Frequency	Percent	Cumulative Percent
11	2.1	2.1	513 97.9
Total	524	100.0	11

Table (7) : Risk Factors of NCD Frequency Percent Cumulative Percent 18 3.4 3.4 3 .6 4.0 2 .4 4.4 10 1.9 6.

all of	464	88.5	95.4	D D D D) F
non	24	4.6	100.0	
Total	524	100.0		Medical Re- search

have physical activity 8) : Have physical activity Frequency Percent

no physical activity	368	70.2	100.0
Total	524	100.0	

Table (9) : Vigorous Activity in the leisure time

	Frequency	Percent	Cumulative Percent
Yes	28	5.3	5.3
No	496	94.7	100.0
Total	524	100.0	

[Note: © 2016 Global Journals Inc. (US) Knowledge, Attitude and Practices towards Noncommunicable Disease Risk Factors among Medical StaffTable (4) : Education]

Figure 7: Table (

(

Table(15) : Crosstab between age & physical activity

		have physical activity	have pl
		activity	
	Under 30 years	51	
Age	31-40 years 41-50 years	44 36	
	Over 50 years	25	
Total		156	

Chi-square 0.463 DF-3 p-value 0.937

Year 2016

smoking Table (16) : Tobacco Smoking Fre

never smoke 435

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13) : Days of moderate avtivity Frequency Percent Cumulative Percent 370 70.6 70.6 31 5.

(D D D D) F

4.00 14 19 Table(18) : How many fruits& vegetables 2.7
5.00

7.00 VEGETABLE-FRUITS 11 2.1 Frequency Percent

Total equal to 1 serving fruits -vegetables	524	255	100.0
more than one serving fruits -vegetables		159	physical activ- ity33% of male com- pared 27% in female in ta- ble(14).
			30.3
			79.0
only fruits		66	12.6
only vegetables not eat fruits or vegetables		29	15 found in terms of physical activity partic- ipation are listed
			5.5
			97.1 in the ta-

(

Table (20)

prevention	Frequency	Percent	Cumulative Percent
lose weight, healthy diet, try to doing physical activity	391	74.6	74.6
no t trying	133	25.4	100.0
Total	524	100.0	

Table (21) : How important have normal weight

	prevention	Frequency	Percent	Valid Percent	Cumulative Percent	
	not important	22	4.2	4.2	4.2	
	important	185	35.3	35.3	39.5	
Year Valid	moderately important	68	13.0	47.5	13.0 47.5	52.5
2016	very important Total	249 524	47.5 100.0		100.0	100.0

Range of body mass inde

(	BMI less than18.5under wt	Frequency 4	Percent	Cumul
D			.8	Per-
D				cent
D				.8
D				
)				
F				
	18.5-24.9 normal wt	182	34.7	35.5
	25-29.9 over wt	225	42.9	78.4
	>30 obese	113	21.6	100.0
	Total	524	100.0	

[Note: © 2016 Global Journals Inc. (US)]

Figure 9: Table (23

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no time	383	73.1	73.1
sports & fitness clubs are too expensive	21	4.0	77.1
do not know how	14	2.7	79.8
thinking not need	18	3.4	83.2
other	88	16.8	100.0
Total	524	100.0	

Figure 10: Table (25

Table (26) : Crosstab

Count						
		range of body mass index				Total
		less than 18.5 under wt	18.5-24.9 normal wt	25-29.9 over wt	>30 obese	
Gender	male	1 3	44 139	94 130	61 52	200
	female					324
Total		4	183	224	113	524

Chi square=29.106 DF=3 p-value 0.00

Figure 11:

Table (24) : Main (s) of stress of life

Table(28) : Crosstab

	Count				
			range of body mass index		
	PHYSICAL ACTIVITY		less than 18.5	18.5-24.9 normal	25-29.9 over wt
			under wt	wt	
Year 2016	Yes No Chi-square=1.058 DF-3 P-value 0.787 2 Moderate 2 Total 4			54 129 183	67 157 224

V. Discussion, Conclusions and Recommendations

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a) Discussion

Table (27) : Crosstab

	Count				
			range of body mass index		
			less than 18.5	18.5-24.9 normal	25-29.9 over wt
			under wt	wt	
	Age	Under 30 years	3	104	39
		31-40 years	1 0	43 18	70 67
		41-50 years			
		Over 50 years	0	18	48
	Total		4	183	224
	Chi-square 103.52 DF-9 p-value 0.000				

Figure 12:

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Year 2016
D D D D)
F
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Figure 13: ?

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