

Explanation of Lifestyle Habits: Simple Evaluation of Smoking Habits and Physical Activity Pattern for Adults

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Abstract- Background: smoking and physical activities are types of lifestyle habits can affect directly the quality of life and may interfere with health states.

Objective: the explanation established based on questionnaire form questions to explain the scientific methods can help in evaluating smoking habits and physical activity for adults especially in clinical and health researches.

Methods: smoking habits evaluated based on Behavioral Risk Factor Surveillance System which established by Center for Disease Control and Prevention (CDC), smoking classified into four groups; smoker, past smoker, passive smoker, and never smoker. Physical activity measured based on the second Global Physical Activity Questionnaire that established by World Health Organization (WHO), and it categorized into three groups; high physical active, moderate, and low.

Conclusion: using of this explanation can help health researchers in all fields to evaluate the smoking habit and physical activity by standard and validated methods.

I. INTRODUCTION

The lifestyle factors affect strongly the quality of life; they differ from population to other depending on socio-demographic and economic factors. These factors affected directly by the nature and associated influences in developing and developed countries, also in rural and urban countries. The quality of life could be improved or disrupted, but the major of previous studies revealed worse facts [1].

Lifestyle factors may include dietary habits, smoking habits, alcohol intake, stress, and physical activity pattern. Evaluation of them is important in research about health,

particularly in the areas of nutrition and obesity; they can lead to important indications about diseases including cancer, coronary heart diseases and cardiovascular diseases [2]. Two important parameters usually assessed by researcher for a while, smoking habits and physical activity pattern, this explanation illustrates tools recently have used in clinical researches with summarized and simple clarification of analysis.

II. SMOKING HABITS

Different methods have used to identify subjects according to smoking habits, Center for Disease Control and Prevention (CDC) established The Behavioral Risk Factor Surveillance System (BRFSS) at (2011); the epidemiological determining process to identify the smoking habit through valid questionnaire, the questionnaire could be adopted efficiently for any population. The following adopted questions used to identify state of smoking.

Q1- At the present time, are you smoker? (Yes/No)

(If No pass to Q2).

Q2- Have you ever smoked? (Yes/No)

(If No pass to Q5).

Q3- How long have you been quit smoking?

(..... months).

Q4- How much did you smoke before stop smoking?

(..... Ciggartes).

Q5- Currently, are you exposed to smoke? (Yes/No).

The past questions can categorize the subject into one of four categories: (1) *smoker*, (2) *past smoker*, (3) *passive smoker*, and (4) *non-smoker* [3].

- 1- The subject considered as smoker if answering question 1 by Yes. Smoker included heavy or current smoker irrespective on the number of cigarette daily and duration of smoking.
- 2- The subject considered as a past smoker if answering the question 2 by yes. But this answer is provisional. The subject should meet one of the following criteria to be past smoker. By question 3, at least one year for stop of smoking, and by question 4, smoked more than 100 cigarettes in the past.
- 3- The subject considered as a passive smoker if persons are closely in contact with smokers for more than one hour weekly.
- 4- If the subject doesn't reach any of past criteria, the subject is non-smoker and also known as never smoked.

III. PHYSICAL ACTIVITY PATTERN

To assess and evaluate the intensity of physical activity (PA), many methods can be used, one of them the Global Physical Activity Questionnaire (GPAQ) which developed and approved by WHO at (2002) as the tool for physical activity surveillance. This process is very effective in determining PA as it is adaptable to incorporate cultural differences and modifications, researchers can easily adopt and modify the question according to any population specifications. Table 1 shows the questionnaire compositions to determine the physical activity pattern; the Version 2 of GPAQ should be used for adult group only [4].

GPAQ collects data in three main domains; activity at work, travel to and from places, and recreational activities. For analysis purposes these domains have broken down into five different "sub-domains". These "sub-domains" are: Work vigorous (codes P1-P3), Work moderate (codes P4-P6), Travel (codes P7-P9), Recreational vigorous (codes P10-P12), and Recreational moderate (codes P13-P15). The questionnaire divided into three parts and composed of 15 questions. Finally; GPAQ resulted in demonstrating the level of physical activity pattern by categorizing it into three parts: High, Moderate, and Low physical activity.

TABLE I. ADOPTED FROM GPAQ VERSION 2

(Part I) Questions	Response	Code
Activity at work		
Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like for at least 10 minutes continuously? Ex:[carrying heavy loads, digging or construction work]	Yes No (If No skip to P4)	P1
In a typical week, on how many days do you do vigorous intensity activities as part of your work?	No. of days:.....	P2
How much time do you spend doing vigorous-intensity activities at work on a typical day?	Hrs : Min:.....	P3
Does your work involve moderate-intensity activity that causes small increases in breathing	Yes No (If No skip to P7)	P4

or heart rate such as brisk walking [or carrying light loads] for at least 10 minutes continuously?		
In a typical week, on how many days do you do moderate intensity activities as part of your work?	No. of days:.....	P5
How much time do you spend doing moderate-intensity activities at work on a typical day?	Hrs : Min:.....	P6

(Part II) Question	Response	Code
Travel to and from places		
Do you walk or use a bicycle for at least 10 minutes continuously to get to and from places?	Yes No (If No skip to P10)	P7
In a typical week, on how many days do you walk or bicycle for at least 10 minutes continuously to get to and from places?	No. of days:.....	P8
How much time do you spend walking or bicycling for travel on a typical day?	Hrs : Min:.....	P9

(Part III) Question	Response	Code
Recreational activities		
Do you do any vigorous-intensity sports, fitness or recreational (<i>leisure</i>) activities that cause large increases in breathing or heart rate like [running or football,] for at least 10 minutes continuously?	Yes No (If No skip to P13)	P10
In a typical week, on how many days do you do vigorous intensity sports, fitness or recreational (<i>leisure</i>) activities?	No. of days:	P11
How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day?	Hrs : Min:.....	P12
Do you do any moderate-intensity sports, fitness or recreational (<i>leisure</i>) activities that cause a small increase in breathing or heart rate such as brisk walking, (cycling, swimming, and volleyball) for at least 10minutes continuously?	Yes No (If No Stop questions)	P13
In a typical week, on how many days do you do moderate-intensity sports, fitness or recreational (<i>leisure</i>) activities?	No. of days:.....	P14
How much time do you spend doing moderate-intensity sports, fitness or recreational (<i>leisure</i>) activities on a typical day?	Hrs : Min:.....	P15

Calculation of physical activity:

Metabolic Equivalents (METs) are commonly used to express the intensity of physical activities, and are also used for the analysis of GPAQ data. MET is the ratio of person's

metabolic rate relative to the resting metabolic rate. One MET is defined as the energy cost of sitting quietly.

- One MET is equivalent to a caloric consumption of 1kcal/kg/hour.
- Moderate MET value of work, recreation, cycling or walking equal 4.0.
- Vigorous MET value of work or recreation activities equal 8.0.

Total physical activity MET-minute/week = the sum of the total MET minutes of the activity computed for each setting. The following equation used to estimate total physical activity after changing time to minutes.

$$\text{* Total Physical Activity (TPA-MET) =} \\ [(P2*P3*8) + (P5*P6*4) + (P8*P9*4) + \\ (P11*P12*8) + (P14*P15*4)]$$

Categorizing physical activity into levels:

High:

- IF: $(P2+P11) \geq 3$ days & TPA-MET is ≥ 1500 .
- IF: $(P2+P5+P8+P14) \geq 7$ days & TPA-MET is ≥ 3000 .

Moderate:

- IF: physical activity doesn't reach the criteria for high level of physical activity.
- IF: $(P5+P8+P14) \geq 5$ days & $[(P5+P6) + (P8*P9) + (P14*P15)] \geq 150$ minutes.
- IF: $(P2+P5+P8+P11+P14) \geq 5$ days & TPA-MET ≥ 600 .

Low:

- IF: level of physical activity doesn't reach the criteria for either high or moderate level of physical activity.

IV. CONCLUSION

The descriptive explanation of smoking habits and physical activity can help researchers in public health, nutrition, and epidemiology to engage in their studies, and describe the lifestyle characteristics about included subjects. It is possible to understand and manipulate in any country. The modification regarding any factors depends on population's specification.

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