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People's Information Concerning Coronary Heart Disease and Main Risk Reduction Barriers in Upper Egypt (Assuit El shamla General hospital)

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Abstract:
In Upper Egypt, there is a lack of studies on the People's information about coronary heart diseases and its modifiable risks. We used this descriptive cross-sectional design. The aim of this study was to assess People's information concerning coronary heart disease and main risk reduction barriers in Upper Egypt**.** This study was carried out in Assuit El shamala General Hospital governorate in Upper Egypt. The study conducted on 150 participants, 93 males and 57 females. One instrument was used for collecting the data, interview questionnaire we designed by researcher and consisted of 4 parts. 1st part for socio-demographic data of people under study that include their Personal data, demographic characteristics and socioeconomic data, Medical history and Family history), 2nd part to assess peoples information regarding CHD, 3rd part to assess main risk reduction barriers of people with CHD,. The results concluded that, more effort from the health system needs to improve the settings and engage patients in their plans and breaking related barriers, with development of health education programs based on needs assessment. Further studies were recommended for exploring the detail of information deficit of people about CHD.
Keywords: people information about CHD, attitude and risk reduction barriers

Introduction:

Coronary heart disease is the most common cause of death in the general population. There were an estimated 35 million deaths from heart disease, stroke, cancer, and other chronic diseases worldwide in 2005 Mathers&Loncar.,(2006).The prevalence of coronary heart disease is promoted in turn by a high prevalence of cardiovascular risk factors, particularly smoking, hypertension, dyslipidemia, diabetes, and sedentary lifestyles. Karras C et al., (2013).

According to the latest WHO data published in April 2011 Coronary Heart Disease Deaths in Egypt reached 78,897 or 21.73% of total deaths. Egyptians are most vulnerable to heart diseases at an early age. The possible causes of this increase are the progressive ageing of the population, urbanization, dietary changes, sedentary lifestyles, smoking and stress. CHD can be explained by potentially modifiable risk factors, such as smoking, hypertension, diabetes, hyperlipidemia, abdominal obesity, physical inactivity and diet .Therefore, it is important that people know how to prevent CHD by adopting health behaviors, such as being physically active, consuming a healthy diet and abstaining from tobacco Mackay, (2009)&World Health Organization, (2005).

Acute coronary syndrome (ACS) is an umbrella term for a range of clinical symptoms associated with myocardial hypo-perfusion as a consequence of pathological mechanisms Hamm , (2011) .While the ACS symptoms, chest pain, arm pain and shortness of breath are relatively well known. Knowledge of other ACS symptoms is less evident. Cytryn.,& (2009), &Dracup K, et al.,(2008).Those with inadequate knowledge, attitudes or beliefs about ACS are more susceptible to protracted pre-hospital delay time and a worse prognosis than their speedy counterparts. To date, eight interventions aimed to improve knowledge, attitudes or beliefs about ACS.Mosca&O'Brien, (2013).

The prevention of CHD depends largely on people's health behavior, and people's health behavior is likely to be dependent on their health beliefs, including their perceptions of susceptibility, severity benefits and barriers, and to take action to control their risk factors that can help prevent or delay coronary heart disease (CHD). The risk for CHD increases with the number of risk factors you have. One step you can take is to adopt a healthy lifestyle. Following a healthy diet is an important part of a healthy lifestyle Shankar,(2010).

Significance of the study:

Cardiovascular diseases are a public health concern everywhere, especially ischemic or coronary heart diseases which are on top of causes list of mortality and morbidity in both genders globally. Coronary heart disease develops gradually and can easily go undetected. Therefore, it is important to explore people's information that has been used to investigate people's prevention and main risk reduction barriers to protect themselves from coronary heart diseases.

Aim of this study: The aim of this study was to assess People's information concerning coronary heart disease, attitude and main risk reduction barriers in Upper Egypt.

Methods

Study design: A descriptive cross-sectional study was utilized.

Study setting: This study was carried out in the medical ward at Assuit El shamala hospital governorate, in Upper Egypt.

Population and fieldwork: Population and fieldwork: All adult individuals, males and females medical clinic heart at Assuit El- shamala General Hospital of the study. On obtaining the official permits, and after preparation of the study tools, the data collection ran for 3 days per week (clinic working days) over 3 months duration from (the first of January 2015 to the end of March 2015).According to The number statistics of patient for out patient clinic of the heart 80 cases and the number of doctors 3. The researcher approached eligible individuals according to inclusion criteria, explained to them the purpose of the study, asked their willingness to take part in, and obtained their verbal consent. All participants interviewed using the questionnaire form, and the responses marked by the researcher to avoid any bias in data collection.

Sampling: Through a comprehensive random sample within the determined time of the data collection, all individuals fulfilled the inclusion criteria were included. 150 participants, 93 males and 57 females, with no refusal cases for taking part in the interview.

Data collection tool: the interview questionnaire we designed by researcher and consisted of 4 parts. 1st part for socio-demographic data of people under study that include their Personal data, demographic characteristics and socioeconomic data, Medical history and Family history),2nd**part** to assess **People's information** regarding CHD, 3rd part to assess people attitude towards CHD prevention and main risk reduction barriers, the interview questionnaire based on relevant literature, experts opinions and field-testing.

Scoring: For the information items, scoring was carried out by evaluating the total information through responding to 12 questions asking about the different aspects of information. Disease definition, presentation, main risk factors, fatality and seriousness, early treatment and control, and lastly the main risk factors relative to the incidence of the disease. Right or positive answer was given 2 points and wrong or negative answer was given 1 point. Resulted in a scale for weighting the total information (lowest score was 12 and highest score was 24). Satisfactory level of information chose to be over 75% of total score (>18 points).

In the same principle, the total attitude was scored as the following. 1 point was given to the answer (insignificant), and 5 points were given to the answer (very Important), 4, 3 and 2 points were given to the answers (important, average importance, less important) respectively. Answering 5 questions reflecting the attitude aspect Resulted in a scale for weighting the total attitude towards prevention (lowest score was 5 and highest score was 25). Positive attitude chose to be over 75% of total score (>18.75=19 points).

Ethical considerations and human rights: A verbal consent was taken from all the studied individuals before the beginning of the study. Complete confidentiality of the data ensured. The investigator provided counseling to participants if needed or requested. Participants had the right to leave and stop the questionnaire.

Data analysis: Statistical analysis carried out by using SPSS -V18.0 statistical software packages. Frequencies and percentage were generated.

Limitation of this study

- Refused of many persons to share in the study.
- The results obtained from the sample group of this study cannot be generalized to the Upper Egypt population.

Results:

Table 1: Shows that more than one third of people under study were in age average from 46- 55 years old, and most of them were males (62%)meanwhile about (46 %) were employed, regarding rural residents 56.7% living there, it was found that and the majority was married and has children (73.3%). More than quarter of the studied sample were illiterate (26.7%) and (43.3%) were current smokers. Income was enough for (61.3%) of study participants. Also the table represented that, (20%) had a history of CHD, whereas (16%) had a family history of CHD.

Table 2: Shows the information about CHD among participants and found that (36%) Did not know what the meaning of CHD was. (61.3%) considered the chest pain as disease presentation. (42.7%) defined most of the risk factors are smoking. (83.3%) considered smoking as a risk factor. While (51.3%) defined diabetes mellitus as a risk factor

Table3: Shows that most of the participant had a positive attitude towards all preventive measures ranging from (81.3%) for stopping smoking to (60%) for the control of diabetes mellitus.

Table 4: Revealed that the main risk factors reduction considered being mainly medical setting barriers (23.4%) followed by patient related barriers (21.3%) and systemic and organizational barriers listed to be the least (10.7%).

Table 5: Emphasized on the association between the total information and socio-demographic characteristics of study participants and reflected the association between total attitude to marital status, job and special

habits. But for the association between the total attitudes, medical and family histories there were only an association with family history of chronic heart disease.

Table (1): Socio demographic data of the studied sample

Items	No. (n= 150)	%
Age:		
35-45	31	20.7
46-55	61	40.7
56-65	34	22.7
+65	24	16.0
Gender:		
Male	93	62.0
Female	57	38.0
Occupation:		
House wife	22	14.7
Unemployed	13	8.7
Employee	69	46.0
Farmer	46	30.7
Residency:		
Rural	85	56.7
Urban	65	43.3
Marital status:		
Married and having children	110	73.3
Married and not having children	12	8.0
Single	28	18.7
Education:		
Illiterate	40	26.7
Secondary	31	20.7
Read and write	36	24.0
Intermediate education	21	14.0
High education	22	14.7
Special habits (smoking):		
Non- smoker	85	56.7
Current- smoker	65	43.3
Income:		
Enough	92	61.3
More than enough	19	12.7
Not enough	39	26.0
Medical history:		
Personal history of coronary heart disease	30	20.0
Personal history of other chronic heart disease	34	22.7
Family history of coronary heart disease	24	16.0
Family history of other chronic heart disease	51	34.0

Table (2): People's information concerning coronary heart disease

Items	No. (n= 150)	%
Definition:		
I don't know	54	36
Heart arteries disease	42	28
Weak heart muscle	34	22.7
Other	20	13.3
Disease presentation:		
Chest pain	92	61.3
Chest pain with any effort	33	22
Chest pains disappear at rest	9	6
I do not know	16	10.7
Risk factors:≠		
Smoking	64	42.7
Nervousness and stress	41	27.3
High blood pressure	26	17.3
Increased fat intake and Overweight	16	10.7
Inactivity and sedentary life	24	16.0
Diabetes mellitus: ≠		
All risk factors	60	40
Fatality and seriousness	78	52
Early treatment and control importance	110	73.3
I do not know	10	6.7
Risk and disease incidence: ≠		
Smoking	125	83.3
Overweight	100	66.7
Nervousness and stress	93	62.0
Inactivity and sedentary life	92	61.3
High blood pressure	86	57.3
Diabetes mellitus	77	51.3

≠ Number in not mutually exclusive

Table (3): Attitude towards prevention

Items	No. (n= 150)	%
Stop smoking	122	81.3
Reduction of fat intake and over weight	100	66.7
Control high blood pressure	95	63.3
Reduction of nervousness	94	62.7
Control of diabetes mellitus	90	60.0

Number in not mutually exclusive

Table (4): The main barriers preventing from achieving risk factors reduction

Items	No. (n= 150)	%
Medical setting barriers	35	23.4
Patient related barriers	32	21.3
Community and societal barriers	26	17.3
Knowledge barriers	24	16
Mixed barriers	17	11.3
Systemic and organizational barriers	16	10.7

Table (5): Association between total information of the participant & socio demographic data

Items	Satisfied (n= 114)		Un-satisfied (n= 36)		P-value
	No.	%	No.	%	
Age:					
35-45	19	61.3	12	38.7	0.103
46-55	46	75.4	15	24.6	
56-65	28	82.4	6	17.6	
+65	21	87.5	3	12.5	
Gender:					
Male	67	72.0	26	28.0	0.147
Female	47	82.5	10	17.5	
Occupation:					
Housewife	15	68.2	7	31.8	0.663*
Unemployed	9	69.2	4	30.8	
Employee	55	79.7	14	20.3	
Farmer	35	76.1	11	23.9	
Residency:					
Rural	55	64.7	30	35.3	0.000*
Urban	59	90.8	6	9.2	
Marital status:					
Married and having children	88	80.0	22	20.0	0.102
Married and not having children	9	75.0	3	25.0	
Single	17	60.7	11	39.3	
Education:					
Illiterate	21	52.5	19	47.5	0.001*
Read and write	28	77.8	8	22.2	
Secondary	26	83.9	5	16.1	
Intermediate education	18	85.7	3	14.3	
High education	21	95.5	1	4.5	
Special habits (smoking):					
Non-smoker	64	75.3	21	24.7	0.817*
Current smoker	50	76.9	15	23.1	
Income:					
Not Enough	29	74.4	10	25.6	0.928*
Enough	70	76.1	22	23.9	
More than enough	15	78.9	4	21.1	

Discussion

According to the World Health Organization, Coronary Heart Disease (CHD) is the leading cause of death globally and one of the major health burdens worldwide Mackay J et al.,(2009).Cardiovascular disease is the principal threat to health in countries in Africa and the Middle East, as elsewhere, with increases in the projected burden of mortality set to outstrip that observed in other geographical regions Almahmeed., (2012)& Sameh et al., (2013). .This study aimed to identify people's information concerning coronary heart disease, and main risk reduction barriers. prevalence findings for CHD and risk factors in participants is in disagreement with this study that they found in American report in 2003 a large part of the US population had multiple risk factors for heart disease Racial (2011). But these results agree with Jafary et al.,(2005), who Examining people's knowledge and attitudes and investigate people's beliefs on CHD prevention. And stated that, Continued morbidity, mortality and disability of people suffering from CVD, especially among the working population, greatly harms economic development and represents a high burden to society. Also,. This study agrees Vescio (2001) and Graham et al., (2007).Who illustrated that, CVD persists as a main killer, particularly among middle-aged males throughout Europe.

Socio demographic data of the studied sample:-

The present study shows that, more than one third of people under study are in age average from 46- 55 years old, and the most of them are males. This results supported with **Yahya ., (2012)**& **Sameh.,(2013)**who found that the majority of respondents were male and most of them had secondary education,. Meanwhile near the half of the

sample are employee .Regarding rural residents more than half of the study participants are living there, it is also find that and the majority of the study sample are married and have children this result agree with Sameh See et al. (2013). . The present study reveals that, more than quarters of the study sample are illiterate and smokers. Income is enough for more than half of the study participants. Also it represent that, near quarter of the participant have a history of CHD, and have a family history of CHD.

People's information concerning coronary heart disease:
The current study Shows that, the information about CHD among participants are more than one third did not know what the meaning of CHD was. And more than half are considered the chest pain as disease presentation. Meanwhile most of them are considered smoking as a risk factor.

While more than one third defined diabetes mellitus as a risk factor. This results disagrees with Jafary, et al.,(2005) Oliver, (2002). And Celentano et al., (2004).who found in their studies that knowledge about CVD and its risk factors still insufficient among them including those with established CHD as reported in many studies. Meanwhile, this result is supported with Kurt et al., (2004). And with Huxley & Baba., (2006) . Who found the same results on their studied sample mainly regarding smoking and diabetes as the risk of CHD .

Knowledge about the disease presentation is correct answer among most of the participants in the present study especially related to chest pain. This correct answer reveals the higher awareness of the people under study because of that chest pain considers as one of the most important symptoms in CHD, and the most feared symptoms. The high-level of awareness about this symptom we quietly expected it, and were in line with the current trends. Patient with a recent onset of chest pain, especially when the symptoms are constant, should be transported immediately to the emergency. This results supported by Rosenfeld et al ., (2005).who study the Treatment-Seeking Delay in Women with Acute Myocardial Infarction: Descriptions of Decision-Making Patterns. And found that chest pain is the most important complain of the patient. Therefore the participants who have CVDs or have a family history of CVDs are value themselves at risk .so they try to increased awareness of CVDs and its risk factors. This results supported by Shankar., (2010). Who indicated that, there is a definite correlation between individuals who have an increased awareness of CVDs risk factors and the development of preventative health behaviors.

Attitude towards the main risk factors reduction:
The present study Show that, most of the participant had a positive attitude towards all preventive measures ranging from stopping smoking to the control of diabetes mellitus. This could be due to the studied participants recognized the disease presentation & its seriousness of the disease and they recognized the importance of early treatment and control. This result Disagree by Brian.,(2003).Who found that ,most of patient have inconsistency that lead them to the delay in time for treatment. And not knowing the disease presentation .Meanwhile this study agrees with, Mosca et al., (2000) .who found that, less than one third identified heart disease as the leading cause of death. Also, these findings are in disagreement with the present study results where the attitude was much higher than the knowledge about CHD among the participants. Davis et al.,(1995).Thus the increment in the CVD knowledge do motivates the respondents to change their attitude positively.

Association between total information of the participant& socio demographic data:
According to the present study findings, the association between total attitude towards prevention among participants, their personal and family histories revealed association. This is in disagreement with the Celentano.,(2009).&Kim et al., (2002).who stated that, patients who did not experience chest pain during the acute event had significantly different attitudes than those who did . Therefore the participants who have CVDs or a family history of CVDs and value themselves at risk have an increased awareness of CVDs and its risk factors. this results supported by Wu et al. (2011) .who noticed that ,there is a definite correlation between individuals who have an increased awareness of CVDs risk factors and the development of preventative health behaviors in his study.

In the present study, the relation between participant's total attitude towards prevention and their socio-demographic characteristics pointed to there was association and significant between information and occupation, residency, education, habits (smoking) and income. Therefore, people living in Assuit city may need even more attention, resources regarding CHD ,attitude and main risk reduction barriers.

Conclusion& Recommendation: The findings settled that, total information about CHD was satisfactory and have a significant relation with most of socio- demographic characteristics as occupation, residency, education, habits (smoking) and income. So, Educational program should be done both for public and health care provider about the prevention methods and very real danger of coronary heart disease and Future studies should be focused on exploring the detail of information deficit of people about CHD .also, Life style modification program should be done for people who are at risk of coronary heart disease .Finally Ongoing training by health care professionals to inform people. about how they promote their healthy heart habits should

be done.

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