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Original Article

Socio-Demographic Characteristics of Acute Myocardial Infarction Patients in Bangladesh.

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Abstract

Background: The impacts of socio-demographic characteristics on acute myocardial infarction (AMI) are not well understood and have not yet been studied much more in our country. Acute myocardial infarction is the most common form of coronary heart disease and the single most important cause of premature death worldwide.

Objective: The aim of this study was to assess the impacts of the socio-demographic characteristics on AMI patients and to investigate the association between socioeconomic status and its various indicators and the risk of acute myocardial infarction (AMI). This study will help in awareness building in reducing AMI by early detection of socio-demographic variables.

Patients and methods: This was a prospective observational study consisted of 325 persons of AMI patients who were aged >20 years. Patients with first time AMI arriving in Coronary Care Unit (CCU) of Rajshahi medical college during the period of 2012-2014, were included. Data were collected through interview.

Results: Among the AMI patients, male were more sufferer than female (68.3% vs. 31.7%) and male and female ratio was 2.15:1.0. Highest percentage of education was up to primary level (53.85%). Most of studied subjects (92.0%) monthly income were ≤15000. More than half (59.38%) of the studied population were from rural area, mostly they were Muslim (94.46%) and smokers (50.15%). The mean±SD age of the acute Myocardial infarction patients was 53.75±11.64 years. Mean age of the female patients were a little bit higher than the male patients (female 54.28±11.78 vs. male 53.51±11.63). Highest percentage was in the age group 51-60 years (32%) followed by 41-50 (26.8%) and then age group >60 (23.7%). Among the male patients highest percentage was in the age group 51-60 years (31.1%) followed by 41-50 years (27%) and then age group >60 (24.3%). However, among the female patients, highest percentage were in the age group 51-60 years (34%) followed by 41-50 years (26.2%), and then age group >60 (22.3%). Acute Myocardial infarction patients was more in age group >40 years of age. Interestingly after 60 years of age occurrence of AMI was low in both sexes.

Conclusion: Both sex and age influenced AMI. An association was also found among educational level, monthly income, residence area, religion, smoking habit and AMI.

Key words: acute myocardial infarction, Socio-demographic variables,

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Introduction

Socioeconomic status (SES) can greatly affect the cardiovascular disease like acute myocardial infarction. Cardiovascular disease is the main cause of death worldwide, 30% of all causes of death.[1]. Socioeconomic inequality in health, especially in the cardiovascular field, continues to pose a challenge to survival from AMI. Several studies have shown that a lower socioeconomic status (SES) is consistently associated with cardiovascular risk factors and cardiac disorders[2]. The most frequently used indicators in the assessment of SES are education, income, and occupation. Although the relationship between socioeconomic status (SES) and cardiovascular risk is well established for healthy individuals[3,4,5] . Death due to cardiovascular problems is still the leading cause of mortality not only in industrialized[6] but also in many low- and middle-income countries. Some studies have reported important socioeconomic gradients[7,8,9,10,11] . Different studies have shown that there is an inverse gradient between socioeconomic position (SEP) and total and cardiovascular morbidity and mortality.[12-18]

Results:

The Socio-demographic statues of the respondents have been presented in Table 1. Among the studied subjects, male were more than female (68.3% vs. 31.7%) and male and female ratio was 2.15:1.0. Highest percentage of education was up to primary level (53.85%) in total studied subjects. More than half (53.8%) of AMI patients were up to primary level. Most of studied subjects (92.0%) monthly income were ≤15000. More than half (59.38%) of the studied population were from rural area, mostly they were Muslim (94.46%) and smokers (50.15%).

Table 1. Socio-demographic characteristics of the studied patients (N =325)

Variables	Acute myocardial infarction (N=325) N (%)
Sex	325
Male	222 (68.30%)
Female	103(31.70%)
Educational status	325
up to primary	175(53.85%)
Secondary	117(36.0%)
Above higher secondary	33(10.15)
Monthly family income(Tk.)	325
≤15000	299(92.0%)
>15000	26(8.0%)
Residence	325
Urban	132(40.62%)
Rural	193(59.38)
Smoking habit	325
Non smoker	162(49.85%)
smoker	163(50.15%)
Religion	325
Muslim	307(94.46%)
Non-Muslim	18(5.54%)

As shown in Table 2, the mean±SD age of the acute Myocardial infarction patients was 53.75±11.64 years. The mean±SD age of the male was 53.51±11.63 years and the female patients was 54.28±11.78 years indicating the mean age of the female patients were a little bit higher than the male patients. Among cases (n=325) highest percentage was in the age group 51-60 years (32%) followed by 41-50 (26.8%) and then age group >60 (23.7%). Among the male patients highest percentage was in the age group 51-60 years (31.1%) followed by 41-50 years (27%) and then age group >60 (24.3%). However, among the female patients, highest percentage were in the age group 51-60 years (34%) followed by 40-49 years (26.2%), and then age group >60 (22.3%). Table showed that acute Myocardial infarction patients was more in age group >40 years of age. After 60 years of age occurrence of AMI was low in both sexes.

Table 2. Age and sex distribution of Acute myocardial infarction patients (cases=325)

Age in years	**Sex**		**Total**(n=325) N (%)
	Male(n=222) N (%)	Female (n=103) N (%)	
Up to 30 years	6 (60.0) (2.7)	4 (40.0) (3.9)	10 (100.0) (3.1)
31-40 years	33(70.2) (14.9)	14 (29.8) (13.6)	47 (100.0) (14.5)
41-50 years	60 (69.0) (27.0)	27 (31.0) (26.2)	87 (100.0) (26.8)
51-60 years	69 (66.3) (31.1)	35 (33.7) (34.0)	104 (100.0) (32.0)
>60 years	54 (70.1) (24.3)	23 (29.9) (22.3)	77 (100.0) (23.7)
Total	222 (68.3) (100.0)	103 (31.7) (100.0)	325 (100.0) (100.0)
Mean ± SD	53.51±11.63	54.28±11.78	53.75±11.64

Discussion:

Total studied subjects of acute myocardial infarction patients were 325. Among acute myocardial infarction patients (n=325) majority (n=104, 32.0%) were in the group of 51-60 years, next were 41-50 years (n=87, 20.8%) and then >60 years (n=77, 23.7%). Here above 50 were 55.7%. The mean±SD age of the cases (acute MI patients) was 53.75±11.64 years. The mean±SD age of the male of AMI was 53.51±11.63 years and the female patients was 54.28±11.78 years indicating the mean age of the female patients were a little bit higher than the male patients which is the same as the study[19] conducted by Prashant Joshi *et al.* 2010. Among the male patients highest percentage was in the age group 51-60 years (31.1%) followed by 41-50 years (27.0%) and then age group >60 (24.3%). However, among the female

patients, highest percentage were in the age group 51-60 years (34.0%) followed by 40-49 years (26.2%), and then age group >60 (22.3%). These data showed that acute Myocardial infarction patients was more in age group >40 years of age for both sexes. After 60 years of age occurrence of AMI was low in both sexes.

Among the studied subjects, male were more than female (68.3% vs. 31.7%) and male and female ratio was 2.15:1.0. Highest percentage of education was up to primary level (53.85%) in total studied subjects. More than half (53.85%) of AMI patients were up to primary level. Most of studied subjects (92.0%) monthly income were ≤15000. More than half (59.38%) of the studied population were from rural area, mostly they were Muslim (94.46%) and smokers (50.15%).

Conclusion:

Here above 50 years of age suffering from AMI were 55.7%. Ages of the female patients were a little bit higher than the male patients. After 60 years of age occurrence of AMI was low in both sexes. More than half (53.85%) of AMI patients were up to primary level. Most of studied subjects (92.0%) monthly income were ≤15000. More than half (59.38%) of the studied population were from rural area, mostly they were Muslim (94.46%) and smokers (50.15%).

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