

Pattern of Musculoskeletal Disorder and Associated Factors among Garo Ethnic Community

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Abstract

Musculoskeletal symptoms are the most frequent self-reported health problems in the population and constitute a large proportion of limiting long-standing illness. However, the health needs of ethnic minorities suffering from back pain and musculoskeletal disorders are a neglected area. This cross sectional survey based study was conducted to assess pattern of musculoskeletal problem affecting Garo ethnic community in Bangladesh. Total 200 samples were taken conveniently visiting door to door by Physiotherapist. Musculoskeletal problem was determined by medical records as well as physical examination by Physiotherapist. Mean age of the respondents was 53.00±14.07 years. Half of the study subjects were housewife. Two third (64%) respondents came from low income family. More than half of the respondents (54%) reported musculoskeletal problem. Low back pain, knee pain, neck pain and frozen shoulder were 26%, 22%, 2% and 4% respectively. Prevalence of musculoskeletal problem was more in 55-65 years age group and statistically significant. Illiterate suffered more in musculoskeletal problem which was significant statistically. It is concluded that musculoskeletal problem was high among Garo ethnic people.

Keywords: Musculoskeletal disorder; Garo ethnic community.

Introduction

Musculoskeletal pain is one of the most common reasons for morbidity and consultation to general practice [1]. If increased consultation rates observed in ethnic minority groups of South Asian origin generally reflect genuine differences in morbidity. However, one study of an urban group general practice reported that Asian patients had significantly higher patient consultation ratios for back pain compared with native British and Southern Irish patients [2]. The prevalence and characteristics of musculoskeletal pain in different ethnic groups may vary because of genetic [3], environmental [4], or cultural [5] differences in addition to the known influences of age [6], sex [6], socioeconomic status [6], and body mass index [7]. There is good evidence of variation in musculoskeletal disease epidemiology among ethnic groups outside the UK [8-9]. The Garos have a different socio-cultural tradition in comparison with that of mainstream society of Bangladesh. Their family pattern, marriage, inheritance laws, norms and values, food habits, dressing, housing structure, language, cultural and religious festivals etc are different from any other tribal community, and of course not consistent with

the tradition of mainstream Bangladeshi common people [10]. Bangladesh has a diverse ethnic group and majority of them live in hilly and riverine area but lack of information we did not know much of them. Diverse life style and traditional belief of medicine is a common practice among them. It is clear that more research is required in this area to establish whether the prevalence of musculoskeletal pain is greater in ethnic minority groups.

Methodology

This was a cross-sectional survey conducted among conveniently selected 200 Garo ethnic people by door to door visit. First of all we took permission from local community leader by making him understand about objective of the study and then he guided us to search garo people because they lived scattered way. After introducing we collected socioeconomic information by face to face interview. Garo people talked each other in their own language but they know Bangla well. Musculoskeletal problem was determined by medical records as well as physical examination by Physiotherapist. Weight was recorded in kilograms by using standard weighting machine. During measuring weight, each subject was asked to bare footed

Table 1: Socio-demographic characteristics.

Variables	Number	Percentage
Age (in years)		
33-43	60	30
44-54	52	26
55-65	44	22
66-76	40	20
≥77	4	2
Mean±SD	53.00±14.07	
Sex		
Male	96	48
Female	104	52
Education		
Illiterate	76	38
Primary	68	34
SSC	40	20
HSC	8	4
Graduate	8	4
Occupation		
Housewife	100	50
Day labor	36	18
Farmer	28	14
Business	16	8
Service	20	10
Monthly Income (BDT)		
Low	128	64
Middle	52	26
High	20	10

and to remove heavy cloth. For measurement of height, subjects were positioned to stand on the platform, bare footed with their head upright, looking straight forward by using standard height measurement scale. Height was measured to the nearest 0.1 cm. Nutritional status was determined by BMI cut off value for Asian population. Questionnaires were checked each day after interviewing and again these were carefully checked after completion of all data collection and coded before entering into the computer. To minimize the errors, after entering the data set into the computer, these are checked and resolved by correction. This was a self-funding study and no external fund was provided to carry out this study.

Results

Mean ± SD age of the respondents was 53.00±14.07 years. Male and female distribution was nearly same. Illiterate, primary education and Secondary School Certificate (SSC) were 38%, 34% and 20% respectively. Half of the study subjects were housewife followed by day labor (18%), farmer (14%), business (8%) and service (10%). Two third (64%) respondents came from low income family followed by middle income (26%) and high income (10%) (Table 1).

Among male underweight, normal, overweight and obese was 18%, 24%, 4% and 2% as well whereas among female it was 12%, 22%, 12% and 6% respectively (Table 2).

More than half of the respondents (54%) reported musculoskeletal problem and 46% did not have (Figure 1).

Distribution of low back pain, knee pain, neck pain and frozen shoulder was 26%, 22%, 2% and 4% respectively (Figure 2).

Table shows more musculoskeletal problem was seen in 55-65 years age group and statistically significant. Illiterate suffered more in musculoskeletal problem than other educational level people which was significant statistically (Table 3).

Discussion

Garos were found living at the feet of Garohill in northern area of Bangladesh [11]. We have tried a little bit to explore of their socioeconomic profile along with musculoskeletal status. The present study found high prevalence of musculoskeletal problem such as low back pain, knee pain, neck pain and frozen shoulder among Garo people. Faulty food habit, traditional belief of health care, dependency on traditional healer as well as illiteracy may be probable factor behind this; needs to be depth and extensive research. Few studies of the prevalence of musculoskeletal symptoms among ethnic minority populations in the UK have been published. Comparison is possible with results from other countries, although methodology and case definitions differ and the focus of some studies has been radiological abnormality rather than symptoms. Bremner et al. [8] noted a similar prevalence of radiological osteoarthritis between a white British population and one from rural Jamaica, although they reported that symptoms and incapacity were lower among Jamaicans [8]. Gibson et al. [9] found similar levels of joint disease in Pakistan

Table 2: Nutritional status of respondents.

Sex	Nutritional status				Total
	Underweight	Normal	Overweight	Obese	
Male	36(18%)	48(24%)	8(4%)	4(2%)	96(48%)
Female	24(12%)	44(22%)	24(12%)	12(6%)	104(52%)

Table 3: Association between variable of interest and musculoskeletal problem.

Variables	Musculoskeletal problem		Total	χ ²	p value
	Yes	No			
	n(%)	n(%)			
Age group					
33-43	20(10)	40(20)	60(30)	41.011	0.001
44-54	24(12)	28(14)	52(26)		
55-65	40(20)	4(2)	44(22)		
66-76	24(12)	16(8)	40(20)		
≥77	0(0)	4(2)	4(2)		
Education				18.993	0.001
Illiterate	52(26)	24(12)	76(38)		
Primary	36(18)	32(16)	68(34)		
SSC	16(8)	24(12)	40(20)		
HSC	4(2)	4(2)	8(4)		
Graduate	0(0)	8(4)	8(4)		

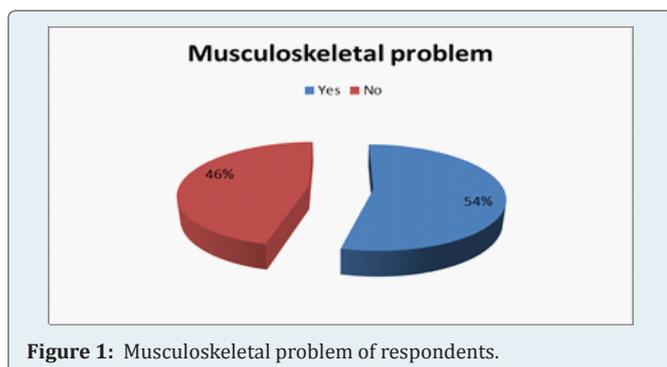


Figure 1: Musculoskeletal problem of respondents.

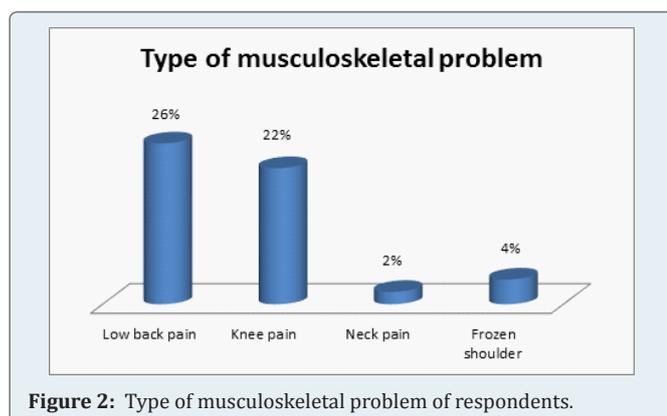


Figure 2: Type of musculoskeletal problem of respondents.

and in white European populations [9]. In the USA, levels of self-reported arthritis have been found to vary little by ethnicity [12], and musculoskeletal disability was similar in African-American and white populations [13]. Musculoskeletal symptoms were slightly more prevalent among people from ethnic minority groups than among the white population, pain in multiple sites was considerably more common among ethnic minorities [14]. Actually our study was survey based at community level where confirm diagnosis was not possible due to unavailability of radiology. We had to depend on physical examination as well as history of patient.

Conclusion

It is concluded from the study that more than half of the respondents were suffering from musculoskeletal problem. Illiteracy and age group (55-65) were important determinant and statistically significant.

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