Self-reported Chronic Diseases and Occupational Health Risks Among Bank Employees of Southern Karnataka City, India

Sir,

A cross-sectional study was conducted during January 2008 on a representative sample of bank employees aged 20–59 years in Mangalore city situated in the coastal area of Karnataka state to find out the prevalence and associated factors of self-reported chronic diseases among bank employees. The sample size was estimated as 207, taking prevalence as 35%, precision of 20%, and nonresponse error of 10%. In the first step, six nationalized banks were selected randomly. The probability proportional to the size technique was used to select the subjects from each bank. Current daily smokers were defined as those who reported smoking at least one cigarette or *beedi* per day. The subjects with a minimum of 30 ml of 40–50% alcohol at least three times a week were considered as alcoholic. Stress was assessed with a perceived stress scale. We considered anyone with a BMI of 25 or higher to be overweight and with BMI of 30 and more as obese. Interviews were scheduled to collect the information on predesigned and pretested pro forma. Information regarding chronic morbid conditions diagnosed previously by registered medical practitioner and income were collected. The physical activity level was classified into very light (seated in front of a table or home with no real physical activity), light (walking in a flat surface at 1.5–3 miles per hour (mph)/golf/ housekeeping for more than 20 minutes and three times a week), and moderate (walking at 3–4 mph/cycling/ tennis/outdoor games/swimming for more than 20 minutes and more than three times a week). Data were analyzed using SPSS 11.0 for windows. Univariate analysis was performed to test the association between chronic diseases and variables.

A total of 200 subjects were analyzed. Out of these 106 (53%) subjects were males and 94 (47%) were females. Majority of the subjects were belonged to the 40–59 years age group (70%). The overall prevalence of chronic disease was found to be 67% (134). Around half (64) of them had single morbidity. Among those with chronic diseases, majority (42, 31.3%) had hypertension followed by diabetes (38, 28.4%), backache/joint pain (36, 26.9%), acidity (31, 23.1%), depression (25, 18.7%), and insomnia (18, 13.4%). Others included cardiac problems (3), chronic obstructive pulmonory diseases (3), fits (1), multiple sclerosis (1), and postresidual paralysis (1).

The prevalence of chronic diseases was high among the 50–59 years age group (90.2%). The present study showed that 51.5% (69) of the chronic diseased were males, 48.5% (65) were females. Around one-fourth (26%) of the subjects were overweight and obese, and those with smoking and stress had significantly higher prevalence comparing to those without these risk factors [Table 1]. With the exception of quality of the diet like low fiber (58.5%), high fat, and salt diet (30%), majority of the subjects were aware of the other risk factors for chronic diseases that includes smoking (97%), alcohol (97%), lack of physical activity (91%), stress (93.5%), family history (82%), and overweight and obesity (94%).

We have hypothesized to study self-reported chronic diseases and related risk factors among Bank employees and found that two-third (67%) of them were suffering from chronic diseases and prevalence was more among those with certain risk factors. The overall 21% self-reported prevalence of hypertension among bank

Table 1: Prevalence and associated factors of chronic diseases among the bank employees

Variables	Number of subjects (%)	Subjects with chronic diseases (prevalence in %)	χ^2, df, P
Age group			
20–29	16 (8)	4 (25.0)	43.7, 3,
30–39	45 (22.5)	18 (40.0)	<0.001*
40–49	78 (39)	57 (73.1)	
50–59	61 (30.5)	55 (90.2)	
Sex			
Male	106 (53)	69 (65.1)	0.37, 1,
Female	94 (47)	65 (69.1)	0.54
Per capita monthly income (rupees)			
<10,000	10 (5)	5 (50.0)	13.9, 2,
10,000-20,000	92 (46)	51 (55.4)	0.001*
>20,000	98 (49)	78 (79.6)	
Literacy			
11th to 12th Std	26 (13)	17 (65.4)	3.52, 2,
Graduate	142 (71)	91 (64.1)	0.17
Postgraduate	32 (16)	26 (81.3)	
Physical activity level			
Very light	66 (33)	50 (75.8)	16.6, 2,
Light	107 (53.5)	75 (70.1)	<0.001*
Moderate	27 (13.5)	9 (33.3)	
Diet			
Vegetarian	17 (8.5)	8 (47.1)	3.34, 1,
Mixed	183 (91.5)	116 (63.4)	0.07
Smoking			
Yes	31 (15.5)	27 (87.1)	6.7, 1,
No	169 (84.5)	107 (63.3)	0.01*
Alcohol			
Yes	20 (10)	15 (75.0)	0.64, 1,
No	180 (90)	119 (66.1)	0.42
Stress			
Yes	119 (59.5)	90 (75.6)	9.9, 1,
No	81 (40.5)	44 (54.3)	0.002*
Obesity			
<18.5	5 (2.5)	3 (60.0)	9.95, 1,
18.5–24.9	143 (71.5)	87 (60.8)	0.02*
25–29.9	36 (18)	30 (83.3)	
>30	16 (8)	14 (87.5)	

*P value less than 0.05 is considered as significant

employees found in this study indicates that the condition affects a large proportion of the bank employees in the Mangalore city. As the age and income increased, the prevalence of chronic diseases increased significantly. The high prevalence of current smoking among those with chronic diseases (87%) and its association with the smoking justify that it is an important risk factor for chronic diseases. A study found that the prevalence of smoking among bank employees as 29.5% which is double of our study (15.5%).[1] Similarly other studies showed higher prevalence of various risk factors among adults in the population.[2,3] The prevalence is more among those with less physical activity level, obese subjects, and those with excessive perceived stress levels which are in comparison to other studies.[4-6]

When comparing the prevalence of chronic disease and its risk factors from this study with those from other studies, one must consider that other factors might contribute to any observed differences, such as differences in the age of the study subjects, how the chronic diseases were defined, when the studies were conducted, urban versus rural characteristics of the population. Also, other types of tobacco consumption were not taken into consideration in this study. Further studies to find out the new and undiagnosed cases and deeper analysis with stratifying and adjusting in different age-groups, social groups, gender, and other relevant strata will be required. There is an urgent need for comprehensive and integrated interventions to reduce the prevalence of chronic diseases and its risk factors among bank employees in this area.

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References

1. Griep RH, Chor D, Camacho LA. Cigarette smoking among bank employees. Rev Saude Publica 1998;32:533-40.

2. Mehan MB, Kantharia NB, Surabhi S. Risk factor profile of noncommunicable diseases in an industrial productive (25-59 years) population of Baroda. Int J Diabetes Dev Ctries 2007;27:116-21.

3. Sugathan TN, Soman CR, Sankaranarayanan K. Behavioural risk factors for non communicable diseases among adults in Kerala, India. Indian J Med Res 2008; 127:555-63.

4. Dodani S, Mistry R, Khwaja A, Farooqi M, Qureshi R, Kazmi K. Prevalence and awareness of risk factors and behaviours of coronary heart disease in an urban population of Karachi; the largest city of Pakistan: A community survey. J Public Health (Oxf) 2004;26:245-9.

5. Minh HV, Huong DL, Giang KB. Self-reported chronic diseases and associated sociodemographic status and lifestyle risk factors among rural Vietnamese adults. Scand J Public Health 2008;36:629-34.

6. Tiwari RR, Deb PK, Debbarma A, Chaudhuri R, Chakraborti A, Lepcha M, et al. Risk factor analysis in self-reported diabetes in a rural Kerala population. Int J Diabetes Dev Ctries 2008;28:91-4.