

Role of occupation as a risk factor for sexually transmitted disease: A case control study

Abstract

Sexually transmitted diseases (STDs) are a major public health problem.

The epidemiology of STDs is distinctive because of common behavioral and biological features. Occupation is one of the socio-demographic factors, which not only act as a risk factor for acquiring STDs but also as a factor for the spread of the acquired infection.

The information was collected about the nature of the occupation and it was categorized as unskilled, semi-skilled, skilled, professional and housewives. Most of the subjects belonged to sexually active group. Male to female ratio was found to be 10.9:1.

The majority of the cases of sexually transmitted diseases belonged to unskilled profession and most of these were unemployed. They also had twice higher risk of having STDs as compared to controls (OR=2; 95% CI= 1.01-3.95). The analysis of statistical parameters suggested that in this study 28% of the total cases of STD could be attributed to the unskilled profession and 50% to the job requiring frequent travel. Similarly, 15% of the total STD in population can be attributed to the unskilled profession; while only 5% can be attributed to the job requiring frequent travel.

It can be concluded that occupation can be considered as a significant risk factor for acquiring sexually transmitted diseases. The unskilled and unemployed on one hand and those employed in occupations, which require frequent travel outside the place of residence, constitute the high-risk groups.

Key Words: STD, Occupation, Travel, Unskilled, Risk behaviour

INTRODUCTION

Sexually transmitted diseases (STDs) are a major public health problem in both developed and developing countries, but prevalence rate is apparently higher in developing countries, where STD treatment is less accessible. The World Health Organization (WHO) estimates that between 150 and 300 million new cases of curable STDs occur annually worldwide.

The epidemiology of STDs is distinctive because of common

behavioral and biological features. STDs are primarily spread by a class of behaviour that is inherently resistant to change, because it is highly motivated, often clandestine and greatly varied in both within and between social and ethnic groups. Determinants of incidence of sexually transmitted diseases have been described both at the individual and the population level of analysis. At the individual level, in epidemiological studies various socio-demographic characteristics and sexual, health and substance abuse behaviour emerge as risk factors or risk markers for being infected with sexually transmitted pathogens.

Occupation is one of the socio-demographic factors, which not only act as a risk factor for acquiring STDs but also as a factor for the spread of the acquired infection. On one hand high rates of STDs are found in certain occupations such as long route truck-drivers and on the other hand certain occupations such as commercial sex workers act as source of such infections and facilitate the spread of such infections. Though in India many studies have been carried out among high-risk occupational groups, only few studies have considered occupation as a risk factor in comprehensive risk factor studies, particularly in central India. With this background, the present case control study was carried out among STDs patients to assess the occupation as a risk factor of STDs.

MATERIALS AND METHODS

The present case-control study was carried out in the Department of Skin and Venereal Diseases at Indira Gan-

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dhi Medical College and Hospital, Nagpur. Cases were defined as patients coming to skin and venereal diseases, out patient department with signs and symptoms of STDs. Controls were the patients coming to the same OPD for complaints other than STDs. Thus 322 cases and age group-matched and sex pair-matched similar numbers of controls were included in the present study. Interview technique was used as tool for data collection. The information was collected about the nature of the occupation and it was categorized as unskilled, semi-skilled, skilled, professional and housewives. The statistical analysis included calculation of percentages and proportions and application of test of significance e.g.: chi square test. The risk was calculated by estimating odds ratio, attributable risk proportion and population attributable risk proportions along with their 95% confidence intervals.

RESULTS

Table 1 shows the distribution of study subjects according to demographic characteristics. Majority (53.72%) of the study subjects belonged to 20-30 years age-group. 295 (91.6%) of the subjects were males.

Table 2 shows the distribution of study subject according to the occupational characteristics. Nature of occupation as the degree of skill ness was considered. This table shows that the numbers of unskilled subjects were more among the cases, as compared to controls. Similarly when it was asked whether their job required frequent travelling, 10.2% of the cases reported that frequent travelling was required in their job while only 5.4% of the subjects in the control group mentioned that their job required frequent training.

Table 3 depicts the various statistical parameters calculated for the two varieties of the occupation as a risk factor. It can be observed that unskilled labour was a risk factor for the sexually transmitted disease as is the job requiring frequent travelling.

DISCUSSION

The present case-control study revealed that most of the subjects belonged to sexually active group. Male to female ratio was found to be 10.9:1 indicating a male preponderance. This can be attributed to more freedom enjoyed by the males in all respects, including sex, in the Indian society. The earlier studies have also reported a similar finding.^[1,2]

The majority of the cases of sexually transmitted diseases belonged to unskilled profession and thus most of these were unemployed. The study revealed that unskilled workers were at higher chances of developing STDs (OR= 1.4; 95% CI= 1.03-1.86). This can be attributed to the poor socio-economic status of these subjects due to unemployment and thereby

Table 1: Distribution of subjects according to demographic characteristics

Characteristics	Cases N (%)	Controls N (%)
Age (in years)		
< 15	2(0.60)	2(0.60)
15-20	27(8.38)	27(8.38)
20-25	97(30.12)	97(30.12)
25-30	76(23.60)	76(23.60)
30-35	59(18.32)	59(18.32)
≥35	61(18.94)	61(18.94)
Sex		
Male	295(91.6)	295(91.6)
Female	27(8.4)	27(8.4)

Table 2: Distribution of study subjects according to occupational characteristics

Characteristics	Cases N (%)	Controls N (%)
Nature of Occupation		
Skilled	67(20.8)	72(22.4)
Semi-skilled	14(4.3)	12(3.7)
Unskilled	181(56.2)	154(47.8)
Professional	2(0.60)	4(1.2)
Unemployed	26(8.1)	36(11.2)
Student	17(5.3)	25(7.8)
Housewives	15 (4.7)	19 (5.9)
Job requiring travel		
Yes	27(10.2)	13(5.4)
No	237(89.8)	229(94.6)

Table 3: Estimates of various statistical parameters

Statistical parameter	Estimate
Unskilled profession	
Prevalence of unskilled in cases	56.2%
Prevalence of unskilled in controls	47.8%
Odds ratio and 95% confidence intervals	1.4 (1.03-1.86)
Mantel Haenszel chi square, p value	4.53 (0.03)
ARP and 95% confidence intervals	0.285 (0.029- 0.46)
PARP and 95% confidence intervals	0.15 (0.01- 0.28)
Job requiring travel	
Prevalence of unskilled in cases	10.2%
Prevalence of unskilled in controls	5.4%
Odds ratio and 95% confidence intervals	2.0 (1.01-3.95)
Mantel Haenszel chi square, p value	4.08 (0.043)
ARP and 95% confidence intervals	0.5 (0.009- 0.746)
PARP and 95% confidence intervals	0.051 (0.0005- 0.137)

the interplay of various social factors in precipitating the development of risky sexual behaviour. Chaubey^[3] *et al* found that 63.5% of their subjects belonged to unskilled and semi-skilled occupational group while Nair^[4] *et al* reported that 34% belonged to unskilled group. Other studies^[5,6] have also reported similar results.

When the job requiring frequent travel outside the place of residence was evaluated, it was found that more number of cases was employed in such occupation as compared to controls. They also had twice higher risk of having STDs as compared to controls (OR=2; 95% CI= 1.01-3.95). This can be attributed to the fact that when these workers work away from their family, the social fear is minimized to certain ex-

tent. This may provoke them for development of sexual promiscuous behaviour. Though no such study has been reported, on the basis of studies on the long distance truck drivers^[7-10] carried out all over the world suggest that working away from the family and separation from the family may contribute to the development of sexually transmitted diseases due to the development of sexual risky behaviour.

The analysis of statistical parameters suggested that in this study 28% of the total cases of STD could be attributed to the unskilled profession and 50% to the job requiring frequent travel. Similarly, 15% of the total STD in population can be attributed to the unskilled profession; while only 5% can be attributed to the job requiring frequent travel. This can be attributed to the widespread unemployment in the population resulting in poverty which thereby can result in development of sexually transmitted diseases due to interplay of various social factors.

Thus on the basis of study findings it can be concluded that occupation can be considered as a significant risk factor for acquiring sexually transmitted diseases. The unskilled and unemployed on one hand and those employed in occupations, which require frequent travel outside the place of residence, constitute the high-risk groups. Thus all attempts for the prevention of sexually transmitted diseases in terms of health education to change risky sexual behaviour, promotion of con-

dom usage and early diagnosis and treatment should be directed towards them.

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