Kathmandu University Medical Journal (2003) Vol. 2, No. 2, Issue 6, 119-123

Original Article

Backache prevalence among groups with long and normal working day

Pradhan A[1]
[1]Lecturer, Kathmandu Medical College

Abstract
Objectives: to describe the prevalence of backache among groups with long and normal working day.
Design: A cross sectional study of prevalence of backache among groups with long and normal working day.
Materials and Method: Among the 19 wards of Kirtipur municipality, ward no. 11 was selected as a random cluster. 64 households of different socioeconomic status were selected at random. Total of 64 individuals from these households were selected in the study.
Conclusion: The backache was found to be 62.5% prevalent. 75.8% of individuals in long working day category were found to be suffering from backache whereas 48.4% in normal working day group were suffering from it.

Key words: backache, working day

Introduction

Nepal is by all major indicators, one of the poorest countries of the world. It has been estimated that around 38% households are living below poverty line. More than 90% population of Nepal is living in rural area[1]. The major financial resource is agriculture, which covers 61% of the national gross domestic product in the year 1996[2]. Being a poor and agriculture based country with 81% of its economically active population engaged in agriculture; it has to rely on heavy work daily to survive[1]. The experience of work is very influential in shaping one's health.

In a national level study, it was found that Nepalese women spend 10.8 hours in working per day in an average whereas this is only 7.5 hours per day for men[3]. This physical work burden results in backache which is neither recognized nor treated within the health system.

Education is the main process to enlighten the lives of people. Yet country like ours is still living in the darkness of illiteracy. Nepal has large proportion of illiterates in its population distribution. Nepalese women hold only 42.8% among its literate population whereas the male literacy rate holds 65.5%[4].

Back health hazards usually involve spasms of the large, supportive muscles alongside the spine. Back pain is a major health problem, not only because of the high prevalence and incidence of low back problems, but also because of the important consequences for disability and the use of health services[5].

Studies have shown that long tedious work may expose too many health hazards including skeletal problems, which can lead to deformity and disability. One of such is damage to vertebral column (spine) which due to overwork can degenerate and lead to arthrosis (a degenerative rheumatism) or cyphosis (a permanently bent back)[6].

Workshop on "Gender and Women's Health" points out few determinants of backache due to heavy work.

Table 1. Occupational health hazards due to domestic work[7]

Occupational health/ Domestic work	Determinants
Backache due to heavy work	Overwork/ difficult work. Double burden, long walking distance for carrying heavy load of water/grass/firewood

Source: Recphec, 1994, Kathmandu

Correspondence
Ms. Amita Pradhan
Lecturer, Department of Community Medicine
Kathmandu Medical College
E-mail: amiseason@yahoo.com

Many reviews have been published 0f studies concerning the risk factors of backache. These studies indicate that the psychological risk factors during work are considerably smaller than the physical load[8].

Table 2. Work related risk factors

Physical aspects of work • Heavy physical work • Lifting and handling of loads • Awkward postures (e.g.: bending, twisting, static postures) • Whole body vibration
Psychosocial work related factors • Low social support • Low job satisfaction

Source: "Work related low back disorders", European agency for Safety and Health at Work, 2000

Methodology

Objectives: to describe the prevalence of backache among groups with long and normal working day

Design: A cross sectional study of prevalence of backache among group with long and normal working day.

Sampling technique Among the 19 wards of Kirtipur municipality, ward no. 11 was selected as a random cluster. 64 households of different socioeconomic status were selected at random. Total of 64 individuals from these households were selected in the study.

Tools

1. Semi structured questionnaires were used to conduct an interview with the respondents.
2. Observation and informal chat was used to gather further information.

The collected data were analyzed and interpreted by using the SPSS software package.

Result

Economical status of the respondents

In this study the economical status of the households (HHS) is determined by the monthly income of the households.

Table 3. The monthly income of the house holders.

Income in Rs.	No. of households	%
Below 3000	22	34.37
3000-5000	22	34.37
5000-7000	4	6.25
9000-11000	2	3.12
11000-13000	4	6.25
13000-15000	6	9.37
Above 15000	4	6.25
Total	64	100.0

The majority of the respondents were very poor. 34.37% of the House holders were with very low income of below 3000 per month. Whereas the majority consisting 68.7% of the House holders were below 5000 of the monthly income. Still there were some House holders earning above 13000 per month covering the 15.6% of the sampled House holders. Among these 15.6% House holders 6.25% were earning above 15000 Rs. per month. These House holders had their own family business.

Educational status of the respondents

The 6.3% of the respondents were illiterate and all were female. Most of the respondents were the dropouts during 5-6 class.

Occupational status

Unemployment is the biggest challenge in our country. In our study 37.5% of the total respondents were without paid job .

Table 4. Type of job among the respondents

Type	No. of respondents	%
No job	24	37.5
Factory work	2	3.1
Cap/shawl/textile/carpet weaving	11	17.1
Carpenter	6	9.4
Catering	2	3.1
Daily wage	2	3.1
Electrician	3	4.7
Shopkeeper	1	1.6
Mechanic	1	1.6
Service	8	12.5
Student	4	6.3
Total	64	100

Factors affecting backache

1. Exercise followed by the respondents

Following exercise in the morning is one of the chief determinants to reduce the low back pain, provided one should have sound knowledge of it. But in this study it was found that most of the respondents did not follow the exercise. Only 17. 1% of respondents were found to follow exercise in the morning.

2. Agriculture

The survey area was living in the subsistence and seasonal agriculture. Among the main work the respondents follow in the afternoon, one was the agricultural work.

The majority of the responding House holders i.e. 93.75% (60 out of 64) were involved in the agriculture. They were getting two crops per year namely wheat and paddy. The crop yields were sufficient for the family purpose only and that is also for up to 6 to 7 months. 75% of the respondents performed the agricultural work. They said agricultural season was the hardest time when they had to follow long working days.

3. Duration of work

Work duration for the respondents is defined as the time they spent on work per day. It was determined by asking them the questions regarding their wake up time, sleeping time, whether they take rest or not and their pattern of work of whole day.

The duty hour in the job was considered 7 hrs. The students working hrs. was considered to be 5 hrs. in the school/college. The working hour for the person sitting idle at home or outside was considered to be 0 hrs.

The working day of up to 7 hours per day was defined as normal working day whereas more than 7 hour was defined as long working day for the study.

Table no. 5 Backache among individuals with long and normal working day

	Working day		
Backache	Long	Normal	Total
Yes	25(75.8%)	15(48.4%)	40(62.5%)
No	8(24.2%)	16(51.6%)	24(37.5%)
Total	33(100%)	31(100%)	64(100%)
	P = .023		

The total of 62.5% of the respondent was suffering from backache.

Among the respondents with long working day 75.8% were suffering. In normal working day group, 48.4 % were sufferers. The association was found to be statistically significant (p=0.23)

65% of the sufferers thought that pain was due to the long working day they had to perform whereas 12.5% answered that they were unaware about the cause. Rest of the respondents showed mixed causes such as working posture(10%), reproductive health(5%), body weight(2.5%) and bike riding(2.5%).

4. Posture

Working posture is one of the factors related to the health of a human being. Still the government does not pay attention to it. None of the awareness programmes talk about the posture.

Table no. 6 Knowledge of working posture among the respondents

Knowledge	No. of respondents	%
Yes	11	17.18
No	53	82.81
Total	64	100

Only few respondents were aware about the body posture while working and yet they also did not follow it.

5. Medical advice

According to the respondents, the PHC in Panga was not well equipped. Only few general medicines like cetamol, iodine etc were available in the PHC. They could not afford expensive medical advice outside.

Most of them did not seek medical advice for the pain. Only 7 (17.5%) of the respondents with the backache tried to see a doctor for this particular problem. There were several reasons behind not seeking a medical advice. One of them being their thought of seeing this problem as simple matter resulted due to overwork. 28 (84.8%) of the individuals out of 33 who did not seek for medical advice, responded that the pain was merely due to long working day without rest. They said that the doctor could not help since they could not stop working.

Conclusion

The backache was found to be 62.5% prevalent. The prevalence of backache was mainly due to the long working day of the respondents. 75.8% of individuals in long working day category were found to be suffering from backache whereas 48.4% in normal working day group were suffering from it. According to them the agricultural season was the hard time. Along with the long working hour they generally did not follow the right posture while working which in return produces back disorders.

References

1. UNDP. Human Development Report. 2001.
2. UNDP. Human Development Report. 1998.
3. Acharya M. & Bennet L. The rural women of Nepal: an aggregate analysis and summary of 8 village studies: the status of women 1981.
4. Central Bureau of Statistics Census report, 2001
5. European Agency for Safety and Health at Work. Work related Low Back Disorders. 2000. http://agency.osha.eu.int/
6. Devereux J.J. et.al. Epidemiological study to investigate potential interaction between physical and psychosocial factors at work that may increase the risk of symptoms of musculoskeletal disorder of the neck and upper limb. 2002 occupational and environmental medicine, http://oem.bmjjournals.com/misc./terms.shtml
7. Recphec. Report of Workshop on Gender and Women's Health. 1994.

8. Hoogerdoorn W.E. et.al. High physical work load and low job satisfaction increase the risk of sickness absence due to low back pain: results of a prospective cohort study. 2002 occupational and environmental medicine, http://oem.bmjjournals.com/misc./terms.shtml