



A CROSS SECTIONAL STUDY TO ASSESS THE HEALTH STATUS OF PRIESTS IN A PILGRIMAGE CITY OF CENTRAL INDIA

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ABSTRACT

Background: Priesthood demands some characteristic unique working environment i.e. mostly closed damped, smoky, noisy & crowded workplace. They are more prone accidents at workplace & are suppose to take high calorie diet in form of Prasad (every-day) & in religious ceremonies (occasionally). This lifestyle may affect their health status & give rise to various diseases. The objective of this study was to assess the health status & quality of life of priests serving in temples of Ujjain city.

Method: Sample size was calculated with the help of formula $n = 4pq/L2$. A total of 440 priests were interviewed. As a study instrument, we used the generic questionnaire 36-item short form survey (SF-36).

Results: Mean ages (SD) of study participants were found to be 41.6 (± 17.6). Majority of study participants 264(60%) had excellent Physical functioning. Role play emotional was excellent in most of the study participant's 332 (74.5%).

Conclusion: There is a high prevalence of Non communicable disease among the priest of the pilgrimage city of central India.

Key words: Priest, Health Status, Quality of life, Modified SF-36

INTRODUCTION

Ujjain is an ancient city of Malwa region in central India, on the eastern bank of the Kshipra River with geographic area of 93 km² & population of 515,215 & is regarded as 72nd largest city in India and 5th in M.P¹. Ujjain being a religious city with around 327 registered temples² distributed throughout the city, large numbers of people are indulged in priesthood as an occupation.

Priest have to be viewed and focused with utmost importance as they belong to Nobel profession especially in country like India. Like everything priest hood have its two sides good and bad. After 20th century, an increasing number of lifestyle disease had been especially focused by policymakers.

The effect of lifestyle on health status of priest is an unexplored area. As these priest are more vulnerable for health related problem due to their lifestyle and very few studies have been done in these area.

Priesthood demands some characteristic unique working environment i.e. mostly closed damped, smoky, noisy & crowded workplace. Their occupation along with some personal eligibility requires something more i.e. being bare footed, making voice modulation during aarti, wearing traditional clothing & sitting mostly in sukhasna posture (sitting in a simple cross-legged position while opening the hips and lengthening the spine) for long working hours. They have got very few hours of sleep with no holiday even on Sunday or at festi-

vals. They are more prone accidents at workplace & are suppose to take high calorie diet in form of Prasad (everyday) & in religious ceremonies (occasionally). This lifestyle may affect their health status & give rise to various diseases.

The condition of health of a community at any given point of time is described as the health status of the people. The health status of an individual or a community is usually determined by three sets of factors namely, promotive, preventive and curative factors which affects the health of an individual.³ The purpose of this work was to assess the health status of the priests of Ujjain city in Central India.

METHODS

It was a Cross Sectional Study conducted among the registered priest of temples of Ujjain city, Madhya Pradesh from September 2013-February 2014 with an objective of, to assess the health status & socio demographic profile of priests serving in temples of Ujjain city. To author's knowledge, not much of the work has been done on this aspect of the priest. A total of 1032 registered priests in temples of Ujjain city². Priest who gave written consent were included in the study. Sample size was calculated by assuming 50% prevalence of life style disorder among priest with 5% relative precision and 95% confidence level. The calculated sample size was 400. Considering a non-response error of 10%, final sample size was calculated to be 440. The selection of study participants from the study population was done by using simple random sampling method and is done by using computer generated random numbers. Self-reported morbidities were reported among the priests (N=164) during the study. Participants informed written consent was obtained after explaining them, method, risks & benefits of the study. Information given was administered in proformas including socio demographic profile, medical history & habits. General examination was done & anthropometric measures were taken. As a study instrument, we used the RAND 36-Item Health Survey (Version 1) (SF-36), (4) which defines the health status of the studied population by eight different domains: physical functioning, social functioning, limitations in usual role activities due to physical problems (role physical), limitations in usual role activities due to emotional problems (role emotional), mental health, vitality, bodily pain, and general health perception. These 36 items were adapted from longer instruments completed by patients participating in Medical Outcome Study (MOS). All items are scored so that a high score define a more favorable health state. Each item is scored on a 0 to 100 range so that the lowest and highest possible scores are set at 0 and 100 respectively. (4). Health

status score was modified into 5 categories with respect to their scores, which were poor(0-25), below average (26-49), average (50), above average(51-75) and excellent (76-100). Health status of the priest was then modified into two categories on the basis of their scores which were, Healthy(>50) and unhealthy (<50). A bilingual community physician did translation of the questionnaire from English to Hindi language. Another independent bilingual community physician translated the Hindi questionnaire back to English language. The differences were noted, and the differences were sorted out by involving both the bilingual translators. Thus, a final Hindi version was arrived which was used to carry out the study. A pilot study was conducted before the study among the priest other than the study subjects to validate the above translated questionnaire. A predesigned and pretested questionnaire was used to collect data on Socio-demographic profile. Socio-economic status of study subjects was calculated as per B.G. Prasad's classification.⁵

Ethical clearance for the study was obtained from the Institutional Ethics & Technical Advisory Committee. Permission was also taken from the Collector of the city. Each participant was described the objectives of the study, the participant's involvement, benefits, risks, and confidentiality in local language (Hindi) prior to obtaining a written consent. They were informed that their participation was completely voluntary and that they were free to refuse to answer any question or to withdraw at any time from the study.

Statistics: The data collected were analyzed with SPSS version 16.0. Questionnaires were checked for completeness and correctness before entering into the work sheet. Data validation checks were performed at a regular interval for data entered into the worksheet of Microsoft excel. Chi-squared tests used for analysis. The level of significance was $P < 0.05$.

RESULTS

A total of 440 participants were interviewed. Mean age (SD) of study participants was found to be 41.6 (± 17.6). Maximum numbers of study participants 129 (29.3%) belonged to the age group of 20-30 years followed by 87(19.8%) in less than 20 years and 40(9.1%) in the age group of 51-60 years. The study showed that maximum number of study participants 180(40.9%) lived in third generation family. Modified Prasad's classification (5) was used to know there socioeconomic status & it was found that maximum subjects 225(51.1%) belonged to Class II followed by 133(30.2%) in Class III. (Table 1)

Table 1: Socio demographic profile of study participant

Characteristics	Priests (n=440) (%)
Age	
Less than 20	87 (19.8)
20- 30	129 (29.3)
31 – 40	67 (15.2)
41- 50	60 (13.6)
51 – 60	40 (9.1)
More than 60	57 (12.9)
Education	
Illiterate	0 (0)
Primary school certificate	4 (0.9)
Middle school certificate	77 (17.5)
High school certificate	47 (10.7)
Intermediate or post high school diploma	117 (26.6)
Graduate or postgraduate	195 (44.3)
Professions or honours	0 (0)
Marital status	
Unmarried	100 (22.7)
Married	323 (73.4)
Divorced	0 (0)
Widower	17 (3.9)
Family type	
Nuclear	144 (32.7)
Joint	116 (26.4)
Third generation	180 (40.9)
Socio economic status (BG Prasad classification)(5)	
Class I	53 (12)
Class II	225 (51.1)
Class III	133 (30.2)
Class IV	29 (6.6)
Class V	0 (0)

Table 2 - Distribution of study participants according to the Self Reported Morbidities

Self Reported Morbidities	Priests (n=164) (%)
Hypertension	52 (31.7)
Diabetes mellitus & Hypertension	48 (29.3)
Diabetes mellitus	32 (19.5)
Asthma	24 (14.7)
Haemorrhoids	4 (2.4)
Allergy	4 (2.4)

A total of 164 priest have **Self Reported Morbidities**, among them 52(31.7%) have Hypertension 48(29.3%) were suffer from both Diabetes mellitus & Hypertension with 32 (19.5%) were suffer from Diabetes mellitus. (Table no. 2)

Majority of study participants 264(60%) had excellent Physical functioning. Among most of the study participants 284(64.5%) role play physical was found excellent. Body pain component was also excellent in majority of participants i.e. 224(50.9%). Vitality component of study participants was also found above average in majority of study participant's 304 (69.1%). Among most of the study participants 264(60.0%) mental health was found to be in excellent condition. The above finding shows that most of the priests have better quality of life. Health status of majority of study participants 224(50.9%) was excellent. Among the study participants none of them were having poor health status. (Table 3)

Table: 3 - Distribution of study participants according to the 8 domains of health status (n=440)

Domains	Poor	Below Average	Average	Above Average	Excellent
Physical. Functioning	0(0)	36(8.2)	20(4.5)	120(27.3)	264(60.0)
Role-play physical	148(33.6)	0(0)	4(0.9)	4(0.9)	284(64.5)
Body pain	8(1.8)	88(20.0)	0(20.0)	120(22.3)	224(50.9)
General health	28(6.4)	12(2.7)	8(1.8)	236(53.6)	156(35.5)
Vitality	0(0)	64(14.5)	32(7.3)	304(69.1)	40(9.1)
Social functioning	4(0.9)	28(6.4)	76(17.3)	124(28.3)	208(47.3)
Role-play emotional	108(24.5)	0(0)	0(0)	0(0)	332(74.5)
Mental health	0(0)	20(4.5)	0(0)	156(35.5)	264(60.0)
Health Status	0(0)	76(17.3)	4(.9)	136(30.9)	224(50.9)

Figures in parenthesis indicate percentages

Table 4: Relationship between Health status & selected variables

Variables	Healthy*	Unhealthy**	P value
Socioeconomic status			
Upper class	335 (92.03)	76 (100)	0.01
Lower class	29 (7.97)	0 (0)	
Education			
Illiterate	0 (0)	0 (0)	0.0009
Primary school certificate	0 (0)	4 (5.26)	
Middle school certificate	61 (16.76)	16 (21.05)	
High school certificate	39 (10.71)	8 (10.53)	
Intermediate or post high school diploma	101 (27.75)	16 (21.05)	
Graduate or post- graduate	163 (44.78)	32 (42.11)	

*Those scored more than 50; **Those scored less than 50

With respect to health status of priests, it was evident that at the time of survey out of 440 study participants, 76(17.3%) of priests were unhealthy. When the socio economic status (taking class I to III of Prasad socio economic status as Upper Class in one group & combining class IV & V as Lower Class in another group) & health status was compared, it was found that significantly higher proportion of priests 76(18.5%) of upper class were unhealthy. All the participants of lower class were found to be healthy and these association between health status & socioeconomic status of study participants was found statistically significant ($p = 0.01$). All of the study participants 4(100%) with primary school certificate were found unhealthy. Association between health status & educational status of study participants was found statistically significant ($p < 0.001$) (Table 4)

DISCUSSION

A total of 440 participants were interviewed, mean ages was found to be 41.6 years ($SD \pm 17.6$). Eugene Joseph et al.(2010) reported the similar result with its mean age of study participants to be 43.2 years ($SD \pm 11.8$).⁴ Arun J Patil et al.(2013) also reported the similar result with mean age 46.6years ($SD \pm 14.7$). In the present study all the study participants were literate. Maximum numbers 195(44.3%) were graduate or postgraduate.⁵ Pannalal et al (2014) reported that study participants with high school certificate were around 11.3% which was similar to the present study but its maximum participants belonged were having primary school certificate 22%.⁶ As compared to the present study with most of the participants having graduate degree, most of the other studies have maximum participants with primary or secondary school certificate. This difference may be due to the difference in the literacy rate, as in present study all the participants were literate which was not seen in other studies & it may also be due to Indian culture where priesthood is the most noble & respected profession which demands higher degree of knowledge & education. Majority 323(73.4%) of study participants were currently married, 100(22.7%).None of the study participant was found divorced.

The study found that 164(37.3%) priest have health problems, among them, 52 (31.7%) have Hypertension, Diabetes mellitus & Hypertension 48 (29.3%), Diabetes mellitus 32 (19.5%), Asthma 24 (14.7%), Hemorrhoids 4(2.4%) & Allergy 4 (2.4%) of study participants.

Montchai et al(2006) reported that among the known health problems (51%) prevalence of DM Hypertension, asthma & Hemorrhoids were 18.48%, 22.5%, 5.2% & 2.12% respectively which

were mostly similar to the present study.⁷ Sombat et al (2006) reported that prevalence of diagnosed diseases was 37.3 which was nearly same as that of our study.⁸ Jenchitr et al.(2007) reported that prevalence of DM in combination with hypertension was found 37.3% which was somewhat similar to the present study.⁹ Vasoontara et al (2012) reported that prevalence of asthma was around 5.1%.¹⁰ Prevalence of asthma & hypertension in the present study was more as compared to other studies on priests, the reason behind it may be due difference in religion & culture of both the study participants. As Hindu priests are considered to have sedentary lifestyle & high calories diet along with poorly ventilated smoky workplace environment which may give rise to increase in prevalence of hypertension & asthma among the study participants of present study.

In our study, a total of 364(82.7%) of study participants were found healthy. Juncture et al (2006) reported that 64.8 % of its study participants were healthy which was less than our study.¹¹ Lindholm et al (2014) reported that 93.7 % of its total study participants were found healthy which was higher than our study.¹² Hadi et al (2014) found that vitality, social functioning, mental health score of SF36 were significantly higher for study participant which is similar to that in present study.¹³

When the socio economic status & health status was compared (Table 4) it was found that significantly higher proportion of priests 76(18.5%) of upper class were unhealthy. All the participants of lower class were found to be healthy whereas 81.5 % of upper class study participants were healthy. S.L.Rao (1935) found an association between poor health status coupled with decreased socio economic status.¹⁴ Catherine E Ross (1995) showed that physical functioning & perceived health increase significantly employment & socio economic status.¹⁵

Results of the present study was similar to most of the studies as majority of the participants from upper class were healthy i.e. 81.5%. but results like none of the participants from lower class was unhealthy & 18.5 % of participants from upper class were found unhealthy didn't match with the above studies, the reason behind it might be due to the fact that most of the diseases in unhealthy priests were non communicable diseases which are found commonly in upper class individuals. Maximum number of the healthy priests 163(83.6 %) belong to priests with graduate or post graduate degrees followed by 101(86.3%) in intermediate or post high school diploma, 61(79.2%) with middle school certificate & 39 (82.9%) with high school certificate. All of the study participants 4(100%) with primary school certificate were found unhealthy. Mark C

Berger (1989) realized that schooling & good health are strongly positively correlated.¹⁶ Catherine E Ross(1995) showed that physical functioning & perceived health increases significantly with years of formal education. Present study also showed a positive correlation between health status & education.¹⁵

CONCLUSION

Majority of study participants had excellent Physical functioning. None of them have apparently poor health status. Vitality component of study participants was also found above average in majority of study participants. Non communicable disease is found to be more prevalent among the study participants.

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