

ORAL HEALTH KNOWLEDGE, ATTITUDE AND PRACTICE AMONG PRISON INMATES OF DISTRICT JAIL IN NORTH INDIA

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ABSTRACT

Aim

The study was to assess the oral health knowledge, attitude and practice among prison inmates of District Jail in North India.

Materials and method

It was a cross sectional study conducted on 570 prisoners after meeting the eligibility criteria. A 23 item closed ended structured questionnaire was used to assess the oral health related knowledge, attitude and practice among prison inmates.

Results

The results show that oral health knowledge was poor among prisoner as 51% of the subjects did not know about the meaning of gum bleeding and 83% of subjects have no knowledge of dental plaque. Knowledge about injurious effects tobacco was better. Prisoner shows their negative attitude towards dental treatment as 45.6% of the subjects think, it is necessary to visit a dentist and 62.24 % Of the subjects had never visit to a dental clinic even before imprisonment. 38.66 % of the subjects had their last visit for more than five year ago. Tooth extraction (27.4%) was the most common cause of last visit. Practice among

prisoner reveals, 58% of the subjects do brush their teeth at least once a day and most of the subjects 90% use toothbrush and paste for cleaning their teeth. Most of the subjects (79%) brush their teeth in morning and 59% perform brushing for more than 2 minute.

Conclusion

Prisons are no more the detention or punishment centers. Oral health education should be imparted to the prisoner time to time and De-addiction clinics or programs should be established in the prisons.

KEYWORDS

Oral Health, attitude, Practices, Jail, Prison Inmates

INTRODUCTION

Health is a fundamental right of every individual and oral health is an integral part of general health.¹ National & international health care delivery systems have finally come to the conclusion of concentrating on primary & secondary level of health care to lessen the burden of expenditure for the state and to reduce the burden of ill-health on the community.^{1, 2} Access is one of the main barriers of health care

delivery system which we want to overcome by primary health care.² Population is not unique but dynamic. Each population group needs different approach for health care. One of the strategies in public health is to identify unique population groups, study their health problems and explore methods for health care. Prisoners make a special group of population as they are different from other people in context of their “freedom of movement.”^{1, 2, 3} Prisoners are psychologically, socially and morally affected group and are usually from low socioeconomic background. Such socio demographic factors are closely associated with poor health status and when they are admitted to correctional institutions (prisons), they are deprived of their liberty for a period that may be long or of uncertain period. Deprivation of liberty inevitably involves deprivation of choices taken for granted in the outside of the community. They can no longer freely decide where to live, with whom to associate and how to fill their time and must submit to discipline imposed by other. Communication with family and friend is limited and is often without privacy.^{1,2} Many prisoners entered the prison with poor oral health requiring emergency treatment this may be due to lack knowledge about good oral health practices. Substance misuse contributes to high levels of tooth decay and gingival disease. Tobacco use increases the prevalence and severity of periodontal diseases and by for the greater risk of oral cancer.⁴ The lack of knowledge about good oral health and negative attitude might be another cause of poor health. There is no such literature available which reveal the knowledge, attitude and practices among the prison inmates about oral health so that comparison can be done in order to find out differences between general population and prisoners. Therefore, present study is being taken to reveal their knowledge, attitude and practices about oral health.

METHODOLOGY

Present study was done to assess the oral health status and dental knowledge, attitude and practice among prison inmates of Amritsar district (Punjab) India. The ethical clearance for the present study was obtained from the ethical committee of Swami Devi Dyal hospital and

Dental College, Barwala, Panchkula prior the onset of study. A 23 item closed ended structured questionnaire used to assess oral health related knowledge and attitude among prison inmates of Amritsar District, Punjab. The questionnaire was reviewed by experts and ensured content validity and questionnaire was then translated to the local language (Punjab) for better understanding by the subjects. Pilot study was done to determine the reliability of the survey questions in the present scenario. After the pilot study, necessary changes were done in the questionnaire. The entire prisoner was included in the study that was willing to participate. Those who were not willing to participate and hard Core Prisoner those were not allowed to get out of cell for more than one hour per day were excluded.

RESULTS

The demographic details of the subject's shows mean age was 35.26 years with a standard deviation of 12.29 years. The minimum subject age was 18 years while the maximum was 88 years. A total of 115 (9.07%) females and 1159 (91.97%) males were explored in the study. Table no.1 showing the distribution of education level amongst the prisoners with maximum subjects (26.1%) being illiterate followed by 20.56 % with high school education. 10% of the study subjects having graduation degree with 7.2% and 2.8% of the subjects having graduation and post-graduation degree respectively.

Table 1: Distribution of subjects by Educational qualification

Education	Frequency	Percent (%)
Illiterate	333	26.13
Primary school	156	12.24
Middle school	234	18.36
High school	262	20.56
Intermediate	162	12.71
Degree	100	7.84
Postgraduate	27	2.1
Total	1274	100.0

Table 2: Distribution of subjects by their Occupation prior to imprisonment

Table 2 Shows the distribution of the subjects according to the occupation before imprisonment, on interview, it was revealed that maximum prison subjects examined belonged to class V/ clerical, shopkeeper, former partly (30.06%) before entry into prison. 13% of the subjects belong to class I/ unemployed. Although 15.38 % of the subjects were belongs to the semi-

Occupation	Frequency	Percent (%)
Unemployed	170	13.34
Unskilled	36	2.82
Semi-Skilled	77	6.04
Skilled worker	231	18.1
Clerical, Shopkeeper, Former	383	30.06
Semi-Professional	196	15.38
Professional	181	14.2
Total	1274	100.0

professional class.

Table 3: Showing Knowledge of prison inmate regarding oral health

Most of the subject (95.4%) agreed with fact that oral health is a part of general health. 47% of the subjects knows about dental caries and 80% of the subjects believes that brushing of teeth can prevent dental decay. However, 51% of the subjects did not know about the gum bleeding meaning where as 40.8% of subjects has some knowledge of it. Knowledge about how to prevent from gum bleeding was poor as 48% of the subject did not know about it. When the subjects ask about dental plaque, 83% of subjects have no knowledge of dental plaque. Most of the subjects (86.81%) knew that smoking is injurious to health

and 72.05% of subjects know that chewing tobacco can cause oral cancer.

	Frequency	Percent (%)
1. Do you know dental health is as important as general health?		
a) yes	1216	95.4
b) No	58	4.6
2. Do you know about dental caries?		
a) yes	599	47.01
b) no	675	52.98
3. Brushing of teeth can prevent dental decay?		
a) yes	1024	80.37
b) no	256	20.09
4. What does gum bleeding mean?		
1. Healthy gum.	46	3.6
2. Swollen gum.	520	40.8
3. Gum recession. .	54	4.2
4. I do not know.	654	51.3
5. How do you protect yourself from gum bleeding?		
1. Using toothbrush and paste	448	35.2
2. Using soft food.	34	2.7
3. Regular visit to dentist.	176	13.8
4. I do not know.	616	48.4
6. What does plaque mean?		
1. Soft debris on the teeth.	106	8.3
2. Staining of the	69	5.41
	34	2.7

teeth.	1065	83.59
3. Hard debris on the teeth.		
4. I do not know.		
7. What does dental plaque lead to?		
1. Swelling of the gum.	138	10.8
2. Staining of the teeth.	38	3.0
3. Dental caries.	38	3.0
4. I do not know	1060	83.2
8. Do you know smoking is injurious to health?		
a) yes	1106	86.81
b) No	168	13.18
9. Do you know chewing tobacco can cause oral Cancer?		
a) yes	918	72.05
b) No	356	27.94

Table 4: Distribution of knowledge Score of prison inmates regarding oral health

Table 4 shows the Distribution of knowledge Score of prison inmates regarding oral health and Table 5 Shows attitude of prison inmates regarding oral health. Attitude of the subjects regarding oral health was poor as only 45.6% of the subjects think that it is necessary to visit a dentist and 62.24 % Of the subjects had never visit to a dental clinic even before imprisonment and most common reason given by subjects (42%) that there is no pain to go to dentist. Out of those who had a dental visit before imprisonment, 38.66% of the subjects had their last visit for more than five year ago. Tooth extraction (27.44) was most common cause of last visit. Most common reason given by the subjects (39.50%) for their last visit to dental clinic was dental pain. However, 49% of the subjects were not afraid at

all when they visited to a dentist for the first time showing somehow positive attitude.

	Frequency	Percent (%)
1. Do you think it is necessary to visit a dentist?	580	45.6
a). Yes	694	54.4
b) no		
2. How often do you visit your dentist?	92	7.22
1. Regularly every 6-12 months.	206	16.16
2. Occasionally.	204	16.01
3. When I have dental pain.	793	62.24
4. I never visited a dentist.		
3. Last time I visited a dentist was:	98	20.37
1. Six months ago.	88	18.29
2. Last 6-12 months.	45	9.35
3. Last 1-2 years.	64	13.30
4. Last 2-5 years.	186	38.66
5. More than 5 years		
4.The treatment(s) I sought during my last visit to the dentist was (were):	102	21.20
	2	0.41
1. Check my teeth.	97	20.16
2. Take x-rays.	0	0
3. Have scaling.	19	3.95
4. Have fluoride on my teeth.	63	13.09
5. Treat my gums.	48	9.97
6. Have filling.	0	0

7. Have crown/bridge.	132	27.44
8. Have orthodontic treatment.	18	3.74
9. Have tooth extraction.		
10. Others (specify).....		
5. The reason for my last visit to the dentist was	190	39.50
1. Dental pain.	46	9.56
2. Family & friend advice.	59	12.26
3. A dentist advised me.	85	17.67
4. Another reason (specify).....		
6. When I first visited the dentist:		
1. I was scared and reluctant.	46	9.56
2. Slightly afraid.	89	18.50
3. Very slightly afraid.	106	22.037
4. I was never afraid.	240	49.89
7. Reason of my visit to the dentist		
1. There was no dental pain.	39	18.10
2. There was severe dental pain.	79	16.42
3. There was little dental pain.	102	21.20
4. I was feeling not comfortable.	136	28.27
5. I felt nothing.	44	9.14
6. There was enough time for treatment.	81	16.83

8.If you do not visit the dentist or are afraid of him or her, the reason(s) is (are):	103	12.99
1. I am afraid of the dental needle	311	39.21
2. There are no dental clinics in jail.	46	5.80
3. There is no time.	333	41.99
4. There is no pain to go to dentist.		

Table no. 5 Distribution of Attitude score among prison inmates regarding oral health

Table 6 Shows distribution of practice score among prison inmates regarding oral health. Practice about oral health among the subjects was satisfactory as 58% of the subjects do brush their teeth at least once a day and most of the subjects 90% use brush and paste for cleaning their teeth. Most of the subjects (79%) brush their teeth in morning and 59% take more than 2 minute for brushing. However, tobacco use practice among inmates was high as 59.4 % of subjects use tobacco in any form and smoking was most common form of tobacco use.

	Frequency	Percent (%)
1. How often do you brush your teeth?		
1. Less than once per day.	130	10.20
2. Once per day.	746	58.55
3. Twice per day.	36	28.25
4. More than twice per day.	38	2.99
2. What do you use for cleaning your teeth?		
1. Brush + toothpaste.	1146	90.0
2. Datun	70	5.5
	36	2.8

3. Finger.	12	.9
4. Charcoal.	10	.8
5. Others (specify).....		
3. When do you brush your teeth?	1010	79.22
1. Morning.	30	2.4
2. Noon (after lunch).	22	1.7
3. Before going to bed.	130	10.2
4. Morning and evening	82	6.4
5. Other times (specify).....		
4. For how long do you brush your teeth?	90	7.1
1. Less than one minute.	96	7.5
2. One minute.	328	25.7
3. Two minutes.	760	59.7
4. More than two minutes.		
5. Are you in habit of tobacco use?	758	59.4
a) yes	516	40.6
b) no		
6. Which form of tobacco?	575	75.9
a)smoking	106	14.0
b)chewing	77	10.1
c)both		

Table no. 6- Distribution of Practice score of prison inmates regarding oral health

DISCUSSION

The present study was undertaken to assess the oral health knowledge, attitude and practice among the prison inmates of the Amritsar district,

Punjab. A total of 1274 subjects from two different prisons were enrolled in the study. The mean age of the study population in our study was found to be 35.26 years with minimum subject age was 18 years while the maximum was 88 years which is similar to other studies done by Dhanker K et al (2013),¹ Heidari E et al (2007),² and Osborn M et al (2007).⁵ Male to female ratio (10.08:1) was similar to other studies Heng C K (2002),⁶ Mack F (2004)⁷ and Avon S L (2016).⁹ While most studies were conducted only on male prisoners Wyatt C L (2002)⁸ and Avon S L (2003),⁹ Only one study was found to be conducted exclusively on female inmates Heng C K (2013).⁶ In this present study Education level varied amongst the prisoners with maximum subjects (26.1%) being illiterate followed by 20.56 % with high school education. Total subjects having graduation degree were only 10%. The level of education of the study subjects was similar to study reported by Dhanker K et al (2013),¹ Nobile C G A (2007),¹⁰ where around 35 % of the study subjects had no or only elementary education. Subjects holding a degree were 9.95%, which was lower than Nobile C G A (2007).¹⁰ High percentage of subjects with less education in prison could be because such people will have less opportunity for jobs and resort to illegal activities and land up in jail. Overall literacy rate was similar to that reported by Sajid A et al (2006).¹¹ A high number of inmates (30.06) were falling in the category of clerical, shopkeeper and former followed by semiprofessional and least was the unskilled which is similar to other study done by Salive M E et al (1989).¹² The reason for being maximum subjects in the category of farmer and clerk is that, they might have less education and have less opportunity to get good job placements. In the present study the knowledge about the oral health is found to be poor as only 47% of the subjects about the dental caries and 51% of the subjects did not know how to protect from gum disease which is accordance with Cheah W L (2009)¹⁴ but lesser than the study done by the Humagain M (2011)¹³ and Al Omiri et al (2005).¹⁵ Only 8.3% of the subjects know about dental plaque which is not accordance with other study Arlappa N et al (2011)¹⁶ done on general population showing the lesser level of knowledge among the prisoners about oral health. Although 86.81% of subjects

believe that smoking is injurious to health and 72.05% subjects knew that it can cause cancer. This may be attributed to the warning sign over the tobacco products.

In this present study attitude of prison inmates shows that 45% of the subjects believe, it is necessary to visit to dentist for better oral health which is accordance with study done by Humagain M (2011)¹³ but contrary to it, 62.24% of subjects had never visited to dentist even before imprisonment which is lesser than the study done by Al- Omiri MK et al (2005)¹⁵ and Peterson PE(2005)¹⁸ showing negative attitude. The reason might be restricted freedom of movement in the prison which is main barrier to access to oral health care services. In the present study 39% of the population had past dental visit which is in accordance with other studies conducted by Nobile C G A et al (2007)¹¹ and Osborn M et al (2003)⁵. Out of total population most common reason for visit is dental pain which is in accordance with study conducted by E. Heidari (2007),² Cheah W L (2009)¹⁴ in general population and 27.44% of subjects had tooth extraction in last visit. This may be due to the fact that prisoner with low knowledge of oral health and they seek treatment only in dental emergencies. However most of subjects 90.0 use tooth brush and toothpaste as cleaning aid which is similar which is similar to the other studies other studies. Jones C M et al (2002)¹⁷ and Heidari E et al (2007).² Out of total population 58% of the subjects brush their teeth once a day. Although more than half of the study subjects used to smoke tobacco, it was found to be lesser than that found in other studies Cropsey K L et al (2007)¹⁸. Nobile C G A et al (2006)¹⁰. Along with smoking tobacco, quite of large number of subjects were habitual of chewing tobacco. Hence, the overall use of tobacco was found to be similar to Cropsey K L et al (2007).¹⁸

CONCLUSION

Prisons are no more the detention or punishment centers. They are the centers for correction of social behavior. Hence, the prisoners' health becomes the total responsibility of the state

government. Total medical and dental examination should be made mandatory for people before admission to the prisons to prevent further complications and to treat the existing conditions. Oral health education should be imparted to the prisoner time to time and De-addiction clinics or programs should be established in the prisons.

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