RESEARCH ARTICLE

A STUDY ON PREVALENCE OF MYTHS RELATED TO DENTAL HEALTH CARE AMONG THE POPULATION OF DISTRICT LUCKNOW.

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Abstract

Introduction: Today we believe that our society is very well aware of dentist, dentistry and its principles, but this crude traveling has its marks left in the minds of our society, and these exist in the form of myths.

Aim & Objectives: The aim of this study was to find the prevalence of myths related to dental healthcare among the population of district Lucknow. It was done by finding the prevalence of myths related to dental healthcare among Urban and Rural population of district Lucknow and also comparing both the population.

Material & Method: A total number of 687 individuals were interviewed out of which 408 were male and 279 were female, with a questionnaire containing a set of nine close-ended multiple choice questions, to facilitate data analysis avoid ambiguity.

Results: Among various myths associated with tooth extraction, the myth that tooth extraction 'weakens eyesight' was most common (71.2%) followed by 'should not be done during rainy season' (68.1%), 'consumption of certain contraindicated items causes inflammation in gums' (51.7%), 'restriction on intake of certain food items' (42.9%), 'affecting hearing' (13.5%), affecting brain (12.1%) and causing hair fall (13.1%). For each of the items related with tooth extraction a high proportion of respondents (2.9% to 18.9%) did not reflect any opinion.

Conclusion: The findings of present study showed that prevalence of dental myths was more common in underprivileged population, particularly women from lower socioeconomic strata. These findings indicated the need for a community initiative. Keeping in view the modifiable nature of myths, mass awareness campaigns using mass media, particularly audio-visual media are recommended apart from holding dental checkup camps in less privileged urban and rural areas.

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Introduction:-

Today we believe that our society is very well aware of dentist, dentistry and its principles, but this crude traveling has its marks left in the minds of our society, and these exist in the form of myths. It is generally believed that the urban population of a country is much more educated, much civilized, and moreover has a good infrastructure to prevail much better services of health, education and income (work) but the reality is far behind this assumption. There was no relevant data found in literature exclusively for urban population related to dental myths.¹⁻⁵ With this background in mind a study of myths related to dental health care among the population of district Lucknow was conducted in both urban and rural population of Lucknow.

Aim & Objectives:-

The aim of this study was to find the prevalence of myths related to dental healthcare among the population of district Lucknow.

1. To find the prevalence of myths related to dental healthcare among Urban population of district Lucknow.
2. To find the prevalence of myths related to dental healthcare among Rural population of district Lucknow.
3. To compare the prevalence of myths related to dental healthcare among both Urban and Rural population of district Lucknow.

Material & Method:-

The study was conducted in two parts: First in the central part of the city and Second part in the rural part of the district. A total number of 687 individuals were interviewed out of which 408 were male and 279 were female, with a questionnaire containing a set of nine close-ended multiple choice questions, to facilitate data analysis avoid ambiguity. All the subjects were interviewed at their home. Initially, the subject of dental myths was discussed informally with friends and colleagues. The ideas and thoughts that transpired were carefully noted and transcribed into salient points. A focus group discussion with colleagues and peers was conducted. From this a matrix of items which could have been included in the questionnaire was evolved.

The questionnaire was made in the local Hindi language and later on translated into English. The subjects participating in the study were questioned about the myths related to tooth extraction, oral prophylaxis and tobacco habits. For the subjects who were illiterate, all the questions were verbally presented to them one by one, and the responses were recorded. It was kept in mind that the subjects should not give any response under any pressure or just to pretend ideal in front of investigator.

Age, Sex, Income and Educational status of all the subjects were recorded and the subjects were divided into groups as follows:

Age-

Group A1: 18-37 years, Group A2: 38-57 years, Group A3: 58 and above

Sex-

Group M: Males, Group F: Females

Educational status-

Group E0:

Illiterate, Group E1: Educated up to primary level, Group E2: Educated above primary level.

Monthly Income-

Group I0: No income, Group I1: Up to 3000, Group I2: 3000-5000. Group I3: above 5000.

After the collection of data it was analyzed using SPSS15.0.

Inclusion and Exclusion criteria was defined and followed.

Study design was Cross sectional study

Results:-

The present study was carried out with an aim to find out the prevalence of different myths related with dental problems and their treatment, For this purpose, a survey was carried out in which a total of 687 subjects were enrolled. Majority of respondents were males (59.4%). Majority of respondents were from urban areas (53.6%). only 14.7% of respondents were illiterate. Maximum number of respondents had per capita monthly income between Rs 3,000-5,000/- (45.6%).

Evaluation of myths was done under three categories:

1. Myths associated with extraction of teeth
2. Myths related with oral prophylaxis
3. Myths associated with tobacco/pan use

Myths Associated with Extraction of Teeth

A total of eight myths were explored:

1. Extraction of teeth affects eyesight
2. Extraction of teeth affects brain
3. Extraction of teeth affects hearing
4. Extraction of teeth does not affect anything
5. Extraction of teeth should not be done during rainy season
6. Extraction of teeth does not restrict intake of certain food items for certain time
7. Consumption of restricted items might cause inflammation of gums

Among various myths associated with tooth extraction, the myth that tooth extraction ‘weakens eyesight’ was most common (71.2%) (Table 2)

Table 2:-Frequency Table for Myths associated with Tooth Extraction

SN	Myth	Respondents holding myth		Respondents denying myths		Non-responders	
		No.	%	No.	%	No.	%
1.	Weakens eyesight	489	71.2	68	9.9	130	18.9
2.	Affects brain	83	12.1	474	69.0	130	18.9
3.	Affects hearing	93	13.5	464	67.5	130	18.9
4.	Causes hairfall	56	8.2	501	72.9	130	18.9
5.	Does not affect	90	13.1	556	86.1	41	6.0
6.	Should not be done during rainy season	468	68.1	187	27.2	32	4.7
7.	Restricts intake of certain food items for some days	295	42.9	372	54.1	20	2.9
8.	Consumption of such items causes inflammation in gums	355	51.7	308	44.8	24	3.5

The myth that oral prophylaxis weakens teeth was widespread as majority of respondents (50.1%) endorsed it as a myth held by them. (Table 3)

Table 3:-Frequency Table for Myths associated with Oral Prophylaxis and Pan/Tobacco use

SN	Myth	Respondents Holding Myth		Respondents Denying Myths		Non-Responders	
		No.	%	No.	%	No.	%
1.	Oral prophylaxis weakens teeth	344	50.1	323	47.0	20	2.9
2.	Tobacco/Pan use reduces risk of dental caries and periodontitis	164	23.9	511	74.4	12	1.7
3.	Tobacco/Pan reduce dental pain	156	22.7	515	75.0	16	2.7

A total of 8 (1.2%) respondents were indecisive with total score 0 but were non-responders on 6 or more items. (Table 4)

Table 4:-Categorization of Total Myth Scores

SN	Myth	No.	%
1.	Indecisive (Non-responders on 6 or more items)	8	1.2
2.	Generally progressive (Scores ≤ 2)	191	27.8
3.	Somewhat conservative (Scores 3 and 4)	183	26.6
4.	Generally conservative (Scores 5 and 6)	269	39.2
5.	Strongly conservative (Scores 7 and above)	36	5.2

Statistically, the difference between two groups was significant for all the items except item tooth extraction affects hearing. (Table 5a)

Table 5a:-Itemwise association of demographic profile with myths associated with tooth extraction

(a) Region

SN	Myth	Rural (n=319)		Urban (n=368)		Statistical significance	
		No.	%	No.	%	χ^2	'p'
1.	Weakens eyesight	267	83.7	222	60.3	45.50	<0.001
2.	Affects brain	47	14.7	36	9.8	3.943	0.047
3.	Affects hearing	45	14.1	48	13.0	0.165	0.685
4.	Causes hairfall	16	5.0	40	10.9	7.821	0.005
5.	Does not affect	12	3.8	78	21.2	45.82	<0.001
6.	Should not be done during rainy season	192	60.2	276	75.0	17.26	<0.001
7.	Restricts intake of certain food items for some days	159	49.8	136	37.0	11.58	<0.001
8.	Consumption of such items causes inflammation in gums	199	62.4	156	42.4	27.35	<0.001

Statistically, the difference between two genders was also significant for all the items except the item that tooth extraction should not be done during rainy season. (Table 5b)

Table 5b:-Itemwise association of demographic profile with myths associated with tooth extraction

(b) Gender

SN	Myth	Male (n=408)		Female (n=279)		Statistical significance	
		No.	%	No.	%	χ^2	'p'
1.	Weakens eyesight	274	67.2	215	77.1	7.923	0.005
2.	Affects brain	40	9.8	43	15.4	4.906	0.027
3.	Affects hearing	40	9.8	53	19.0	11.962	0.001
4.	Causes hairfall	20	4.9	36	12.9	14.168	<0.001
5.	Does not affect	82	20.1	8	2.9	43.21	<0.001
6.	Should not be done during rainy season	280	68.6	188	67.4	0.118	0.731
7.	Restricts intake of certain food items for some days	144	35.3	151	54.1	23.972	<0.001
8.	Consumption of such items causes inflammation in gums	180	44.1	175	62.7	22.97	<0.001

for myths that teeth extraction affects hearing, causes hair fall and consumption of contraindicated items might cause inflammation in gums were unaffected by the age of patient ($p>0.05$). (Table 5c)

Table 5c:-Itemwise association of demographic profile with myths associated with tooth extraction

(c) Age

SN	Myth	18-37 Years (n=409)		38-57 Years (n=184)		58 & above (n=94)		Statistical significance	
		No.	%	No.	%	No.	%	χ^2	'p'
1.	Weakens eyesight	278	68.0	145	78.8	66	70.2	7.31	0.025
2.	Affects brain	49	12.0	22	12.0	12	12.8	0.048	0.976
3.	Affects hearing	44	10.8	37	20.1	12	12.8	9.536	0.008
4.	Causes hairfall	36	8.8	12	6.5	8	8.5	0.900	0.638
5.	Does not affect	43	10.5	23	12.5	24	25.5	15.22	<0.001
6.	Should not be done during rainy season	261	63.8	130	70.7	77	81.9	12.273	0.002
7.	Restricts intake of certain food	157	38.4	92	50.0	46	48.9	8.584	0.014

	items for some days								
8.	Consumption of such items causes inflammation in gums	201	49.1	108	58.7	46	48.9	4.963	0.084

For items, tooth extraction restricts intake of certain food items for some days and consumption of such items causes inflammation in gums, the frequency of those holding the myths was lower in literates as compared to illiterates ($p < 0.001$). (Table 5d)

Table 5d:-Itemwise association of demographic profile with myths associated with tooth extraction

(d) Education

SN	Myth	Illiterate (n=101)		Upto Primary level (n=32)		Above Primary level (n=554)		Statistical significance	
		No.	%	No.	%	No.	%	χ^2	'p'
1.	Weakens eyesight	89	88.1	32	100.0	368	66.4	33.19	<0.001
2.	Affects brain	26	25.7	0	0.0	57	10.3	23.82	<0.001
3.	Affects hearing	13	12.9	0	0.0	80	14.4	5.435	0.066
4.	Causes hairfall	8	7.9	4	12.5	44	7.9	0.848	0.654
5.	Does not affect	4	4.0	0	0.0	86	15.5	15.09	0.001
6.	Should not be done during rainy season	71	70.3	24	75.0	373	67.3	1.078	0.583
7.	Restricts intake of certain food items for some days	73	72.3	12	37.5	210	37.9	41.59	<0.001
8.	Consumption of such items causes inflammation in gums	81	80.2	12	37.5	262	47.3	39.74	<0.001

For items weakens eyesight, affects hearing, does not affect general health, restricts intake of certain food items for some days and consumption of restricted items causes inflammation in gums a statistically significant association between income and prevalence of myths was observed. (Table 5e)

Table 5e:-Itemwise association of demographic profile with myths associated with tooth extraction

(e) Income

SN	Myth	≤3000 (n=165)		3000-5000 (n=313)		>5000 (n=209)		Statistical significance	
		No.	%	No.	%	No.	%	χ^2	'p'
1.	Weakens eyesight	145	87.9	210	67.1	134	64.1	30.06	<0.001
2.	Affects brain	21	12.7	33	10.5	29	13.9	1.395	0.498
3.	Affects hearing	8	4.8	49	15.7	36	17.2	14.27	0.001
4.	Causes hairfall	8	4.8	24	7.7	24	11.5	5.601	0.051
5.	Does not affect	8	4.8	43	13.7	39	18.7	15.565	<0.001
6.	Should not be done during rainy season	103	62.4	212	67.7	153	73.2	4.976	0.083
7.	Restricts intake of certain food items for some days	93	56.4	125	39.9	77	36.8	16.459	<0.001
8.	Consumption of such items causes inflammation in gums	117	70.9	141	45.0	97	46.4	32.268	<0.001

For item Tobacco/Pan reduce dental pain, the difference between two regions was not significant. (Table 6a)

Table 6a:-Itemwise association of demographic profile with myths associated with oral prophylaxis and tobacco use

(a) Region

SN	Myth	Rural (n=319)		Urban (n=368)		Statistical significance	
		No.	%	No.	%	χ^2	'p'
1.	Oral prophylaxis weakens teeth	188	58.9	156	42.4	18.71	<0.001
2.	Tobacco/Pan use reduces risk of dental caries and periodontitis	64	20.1	100	27.2	4.755	0.029

3.	Tobacco/Pan reduce dental pain	68	21.3	88	23.9	0.656	0.418
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For item oral prophylaxis weakens teeth, the proportion of females was higher as compared to that of males whereas for remaining two items, the proportion of males was higher as compared to that of females. However, the association was significant statistically only for the item tobacco/pan reduce dental pain only ($p < 0.001$). (Table 6b)

Table 6b:-Itemwise association of demographic profile with myths associated with oral prophylaxis and tobacco use
(b) Gender

SN	Myth	Male (n=408)		Female (n=279)		Statistical significance	
		No.	%	No.	%	χ^2	'p'
1.	Oral prophylaxis weakens teeth	192	47.1	152	54.5	3.659	0.056
2.	Tobacco/Pan use reduces risk of dental caries and periodontitis	100	24.5	64	22.9	0.225	0.635
3.	Tobacco/Pan reduce dental pain	112	27.5	44	15.8	12.88	<0.001

Statistically, no significant association between age and myths associated with oral prophylaxis was observed. With increasing age the proportion of respondents holding myth that Tobacco/Pan use reduces risk of dental caries and periodontitis and Tobacco/Pan reduce dental pain increased significantly ($p < 0.05$). (Table 6c)

Table 6c:-Itemwise association of demographic profile with myths associated with oral prophylaxis and tobacco use
(c) Age

SN	Myth	18-37 Years (n=409)		38-57 Years (n=184)		58 & above (n=94)		Statistical significance	
		No.	%	No.	%	No.	%	χ^2	'p'
1.	Oral prophylaxis weakens teeth	213	52.1	93	50.5	38	40.4	4.174	0.124
2.	Tobacco/Pan use reduces risk of dental caries and periodontitis	84	20.5	48	26.1	32	34.0	8.349	0.015
3.	Tobacco/Pan reduce dental pain	76	18.6	44	23.9	36	38.3	17.135	<0.001

For item Tobacco/Pan reduce dental pain, the proportion of those holding this myth was significantly higher among illiterates as compared to literates ($p = 0.032$). (Table 6d)

Table 6d:-Itemwise association of demographic profile with myths associated with oral prophylaxis and tobacco use
(d) Education

SN	Myth	Illiterate (n=101)		Upto Primary level (n=32)		Above Primary level (n=554)		Statistical significance	
		No.	%	No.	%	No.	%	χ^2	'p'
1.	Oral prophylaxis weakens teeth	51	50.5	20	62.5	273	49.3	2.124	0.346
2.	Tobacco/Pan use reduces risk of dental caries and periodontitis	28	27.7	4	12.5	132	23.8	3.102	0.212
3.	Tobacco/Pan reduce dental pain	32	31.7	4	12.5	120	21.7	6.882	0.032

Statistically, no significant association between income and prevalence of myths associated with oral prophylaxis and tobacco use was observed. (Table 6e)

Table 6e:-Itemwise association of demographic profile with myths associated with oral prophylaxis and tobacco use
(e) Income

SN	Myth	≤3000 (n=165)		3000-5000 (n=313)		>5000 (n=209)		Statistical significance	
		No.	%	No.	%	No.	%	χ^2	'p'
1.	Oral prophylaxis weakens teeth	90	54.5	157	50.2	97	46.4	2.442	0.295
2.	Tobacco/Pan use reduces risk of dental caries and periodontitis	44	26.7	72	23.0	48	23.0	0.933	0.627
3.	Tobacco/Pan reduce dental pain	40	24.2	72	23.0	44	21.1	0.563	0.755

Mean myth scores were significantly higher among males as compared to females, among rural as compared to urban, among older as compared to younger, literate as compared to illiterates, among lower income group as compared to higher income groups ($p < 0.05$). (Table 7)

Table 7:-Association between Demographic Profile and Overall Myth scores

SN	Characteristic	Statistic	Mean Score	SD	'p' value
1.	Gender				
	Male	408	3.59	1.72	0.001
	Female	279	4.05	1.72	
2.	Place of residence				
	Rural	319	3.94	1.58	0.019
	Urban	368	3.63	1.84	
3.	Agegroup				
	18-37 Years	409	3.53	1.71	<0.001
	38-57 Years	184	4.10	1.63	
	58 & above	94	4.22	1.83	
4.	Education				
	Illiterate	101	4.72	1.44	<0.001
	Upto Class V	32	3.50	0.72	
	Above Class V	554	3.62	1.77	
5.	Per capita monthly family income				
	Upto Rs 3000/-	165	4.10	1.43	0.017
	Rs 3000-5000	313	3.64	1.83	
	>Rs 5,000/-	209	3.77	1.76	

Discussion:-

The present study was planned to understand the prevalence of dental myths in Lucknow population. For this purpose, a survey was carried out in which both rural and urban population was targeted. The sample size was targeted to be large enough to provide scope for inclusion of almost all the demographic traits.

In previous studies,^{1,3} it has been reported that tooth extraction is often associated with patients' false myths regarding extraction of tooth to be a triggering factor to various systemic problems, moreover, patients' attitude towards getting oral prophylaxis and use of tobacco/pan products has also been seen to be affected by some myths which are primarily negative in nature and have an adverse effect on the dental health of individuals.

Hence, we targeted a total of 8 myths associated with tooth extraction, myth associated with oral prophylaxis and two myths associated with tobacco/pan use. The selection of these myths was done from a general consensus building among a pool of fellow dental practitioners and faculty of dental colleges in the city.

Among various myths associated with tooth extraction, the myth that tooth extraction 'weakens eyesight' was most common (71.2%) followed by 'should not be done during rainy season' (68.1%), 'consumption of certain contraindicated items causes inflammation in gums' (51.7%), 'restriction on intake of certain food items' (42.9%), 'affecting hearing' (13.5%), affecting brain (12.1%) and causing hair fall (13.1%).^{1,3}

These myths often discourage the patients from getting their carious teeth extracted and in turn deteriorate the entire oral health and functionality.

With respect to myths associated with oral prophylaxis and tobacco/pan use too, it was interesting to see that the myth that oral prophylaxis weakens teeth was widespread as majority of respondents (50.1%). There were 164 (23.9%) respondents who were of the view that tobacco/pan use reduces risk of dental caries and periodontitis. The myth that tobacco/pan reduces dental pain was also held by a sizeable proportion of respondents (22.7%).^{1,3} Existence of such myths is a barrier in the path of utilization of dental care and at the same time is a motivation towards promotion of such habits that otherwise have adverse impact on the oral health as well as general health too.

These findings thus suggested that in Lucknow district, the prevalence of myths is quite high and needs to be addressed seriously in order to take preventive steps to protect the dental health and at the same time to also avoid evolution of such measures which adversely affect the dental and general health of patients.

For this purpose, we evaluated the association of dental myths with demographic profile of the patients in order to identify the target areas where the interventions to bust these myths could be made while at the same time it could also be identified as to what should be the direction of interventional strategy among patients with different demography.

Problem Areas

As such with respect to conservativeness to carry the dental myths, majority of surveyed population (71.0%) was categorized as somewhat to strongly conservative with respect to magnitude of myths. These findings indicated that a generalized awareness programme is recommended in view of such widespread existence of dental myths.

Target population for a Proposed Intervention

All these myths were more common in rural as compared to urban population, in females as compared to males, in older as compared to younger, illiterates as compared to literates and to some extent more common in lower income groups as compared to higher income groups. Thus, the most preferred target population for intervention was identified as rural, poor, illiterate, elderly females.

Direction of Strategy

Once targeted population and problem areas were identified, the direction of strategy could be outlined as follows:

1. Awareness campaigns
2. Use of mass media
3. Preferably through audio-visual campaigns
4. Social messaging
5. Door to door visit
6. Organization of dental health care camps in less privileged urban and rural areas.

The findings of present study were elaborative yet not exhaustive, their pattern might vary in different geographical areas and among different demographics, hence further studies at multiple centres to assess existence of various dental myths and their manifestation pattern across different demographic groups is recommended.

Conclusion:-

The findings of present study showed that prevalence of dental myths was more common in underprivileged population, particularly women from lower socioeconomic strata. These findings indicated the need for a community initiative. Keeping in view the modifiable nature of myths, mass awareness campaigns using mass media, particularly audio-visual media are recommended apart from holding dental checkup camps in less privileged urban and rural areas.

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