ORIGINAL RESEARCH ARTICLE

ORAL HEALTH RELATED QUALITY OF LIFE OF B.Ed STUDENTS IN DAVANGERE CITY, INDIA.

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ABSTRACT

Background: To assess the effect and impact of oral health on quality of life among B.Ed students of Davangere city, India.

Methods: A questionnaire study, using OHQoL-UK (W) questionnaire, which takes into consideration both 'effect' and 'impact' of oral health on life quality, incorporating an individualized weighting system. The questionnaire was administered to a sample of 269 B.Ed students, of Davangere city, India. Gender variations on the responses of their effect and impact on OHRQoL was analyzed using Chi- square test.

Results: The overall response rate was 89.67%. Of the total students 39.8% (n=107) were males and 60.2% (n=162) were females. 63.17% believed that their oral health enhanced their QoL, 30.34% believed that their oral health had no effect on their QoL and 6.48% believed that their oral health reduced their QoL. Most frequently (29.78%) the respondents have stated that the various aspects of oral health have moderate impact on their quality of life. Response related to breath odour was only found to be statistically significant between the genders.

Conclusion: To conclude, the study shows that the B.Ed students of Davangere city, India perceive oral health as affecting their QoL and also has an impact on QoL in a variety of physical, social and psychological ways.

Key words: Oral health, B.Ed students, Quality of Life

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INTRODUCTION

Oral diseases such as dental caries and periodontal diseases are highly prevalent and their consequences are not only physical, they are also economical, social and psychological. They seriously impair quality of life (QoL) in a large number of individuals and can affect various aspects of life, including oral function, appearance and interpersonal relationships.[1]

Symptoms that arise from oral disease, such as toothache, are among the most common health problems and a large number of school and work days are lost due to oral health problems and/or their treatments. Over the past decade there has been an explosion of interest in conceptualizing, developing and assessing the impact of oral heath on life quality.[2]

The World Health Organisation agrees, 'QoL' is an individual's perception of their position in life in the context of culture and the value systems in which they live and in relation to their goals, expectations, standards and concerns. It is ultimately a personal and dynamic concept, a concept which respects the autonomy of the individual and acknowledges that people can provide information about what is in their own interest.[3] Consequently, there has been a tremendous growth in the literature concerned with these constructs. This is also the case in dentistry, where there has been a proliferation of instruments and scales seeking to assess what has come to be called oral health-related quality of life (OHR-QoL) and ⁄ or the quality of life of patients with various oral conditions.[4]

In dentistry, measures of oral health-related quality of life have been used in oral health surveys of adolescents, adults, and elderly populations, and as outcome measures in clinical trials of implant therapies and evaluations of dental care programs for special care populations. Their use in clinical practice and clinical decision making has yet to be reported.[5] Further more, the majority of existing instruments measure only the prevalence of the effects of oral health on life quality and fail to capture the importance or salience of their effects overall i.e. impact (weighting).[6] Hence the present study has been undertaken to explore the perception of B. Ed students who will be future school teachers towards their OHRQoL. The objective of the study thus was to assess the effect and impact of oral health on quality of life among Bachelor of Education (B.Ed) students of Davangere city, Karnataka, India.

METHODS

Study population

The target population was B.Ed. students of Davangere city. Three B.Ed colleges were randomly selected, which had a total enrolment of 300 students. Of the total B.Ed students 269 students were available on the day of survey, and thus were included in the study. Prior to the survey, the permission was obtained from the principals of the respective colleges and programme was scheduled accordingly. All questions in the questionnaire were close-ended.

The data was collected by two post graduate students posted in the Department of Preventive and Community Dentistry, College of Dental Sciences, Davangere. The questionnaires were distributed to the B. Ed students of various colleges on the scheduled dates.

Data collection

The survey is a questionnaire survey, a specially designed OHRQoL questionnaire by McGrath C and Bedi R was used[6]. It consists of a battery of 16 questions which takes into account both effect and impact of oral health on quality of life. In the beginning of the questionnaire, the personal information regarding the subject was obtained like name, sex, age and college.

The OHRQoL questionnaire was distributed to the students. The students were made to understand each and every question and about effect and impact related to each question, each of the proposed sixteen items were scored firstly on effect, with responses ranging from bad-to-good effect, on quality of life. Then students were asked to rate the “impact” of each “effect” on a scale ranging from none-to-extreme impact, in that way incorporating an individualized weighting system. (Fig 1)

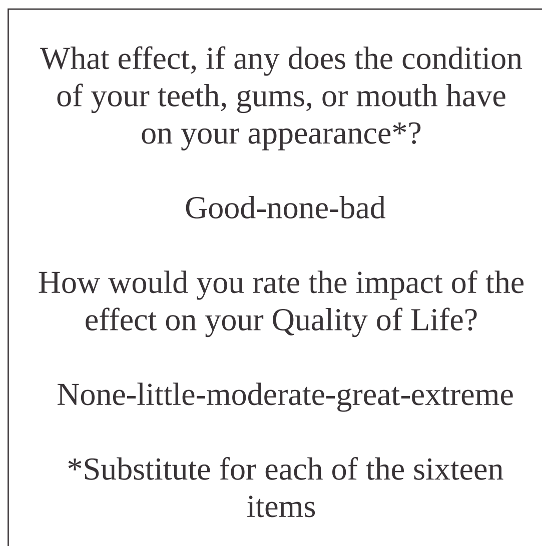

Fig.1:
Example of working of OHRQoL questions

Each item could thus be scored on a scale from 1 to 9.

Scoring criteria

1. Good effect of extreme impact
2. Good effect of great impact
3. Good effect of moderate impact
4. Good effect of little impact
5. No effect of no impact
6. Bad effect of little impact
7. Bad effect of moderate impact
8. Bad effect of great impact
9. Bad effect of extreme impact

Ethical clearance for conducting the study was obtained from the Ethical Committee of the college.

Statistical analysis

The data were coded and analyzed using the Statistical Package for Social Sciences version 18.0 (SPSS software). Chi square test was used to know whether there was any statistically significant difference between males and females on their responses to effect and impact on oral health related quality of life. The level of significance was set at $p = 0.05$.

RESULTS

The overall response rate was 89.67% with 269 students participating in the study. Of the total students 39.8% (n=107) were males and 60.2% (n=162) were females.

Table I shows the distribution response of the 269 participants. 63.17% believed that their oral health enhanced their QoL, 30.34% believed that their oral health had no effect on their QoL and 6.48% believed that their oral health reduced their QoL. Most frequently the respondents have stated that their oral health has good effect on their quality of life in all aspects except breath odour (35.3%, 95). In particular 42.8% (115) and 43.1% (116) respondents stated that their oral health has no effect on their breath odour and mood respectively. Less frequently, respondents have stated oral health as detracting from their quality of life, most often by causing bad effect.

Table II shows the distribution of responses of “OHRQoL-impacts” of these “effects”on the quality of life. Most frequently (29.78%) the respondents have stated that the various aspects of oral health have moderate impact on their quality of life. 27.5% (74) respondents stated that there is no impact of oral health on their work /usual jobs and 27.9% (75) stated there is little impact of oral health on their mood.

Table III shows the distribution of responses to “OHRQoL-impacts” of these “effects” on oral health related quality of life (gender variation). Response related to breathe odour was only found to be statistically significant.

Table IV shows the gender variations of these effects on their OHRQoL. There is no statistically significant difference observed between males and females regarding the following mentioned effects on their OHRQoL.

DISCUSSION

This study focused on future school teachers who

Table I: Distribution of responses to OHRQoL- effects

Response	Effects		
	Good effect % (n)	No effect % (n)	Bad effect % (n)
Physical aspects			
a) Eating	74.7 (201)	19.3 (52)	5.9 (16)
b) Appearance	71.4 (192)	19.3 (52)	9.3 (25)
c) Speech	74 (199)	20.4 (55)	5.6 (15)
d) General health	62.5 (168)	33.8 (91)	3.7 (10)
e) Comfort	69.5 (187)	24.2 (65)	6.3 (17)
f) Breath odour	35.3 (95)	42.8 (115)	21.9 (59)
Social aspects			
a) Social life	57.6 (155)	36.8 (99)	5.6 (15)
b) Romantic relationship	65.4 (176)	32 (86)	2.6 (7)
c) Smiling/laughing	77.7 (209)	17.1 (46)	5.2 (14)
d) Work/usual jobs	57.6 (155)	39.4 (106)	3 (8)
e) Career	59.9 (161)	36.8 (99)	3.3 (9)
Psychological aspects			
a) Confidence	71.7 (193)	22.7 (61)	5.6 (15)
b) Carefree	52 (140)	38.7 (104)	9.3 (25)
c) Sleep/ability to relax	59.1 (159)	36.4 (98)	4.5 (12)
d) Mood	51.3 (138)	43.1 (116)	5.6 (15)
e) Personality	71 (191)	22.7 (61)	6.3 (17)
Total	63.17%	30.34%	6.48%

may be involved in teaching oral health related topics and may influence the adoption or implementation of oral health programs that may benefit children.

This is one of the first attempts to understand how the future school teachers perceive oral health and its effects and impacts on their quality of life. Since not many studies have been published that measures OHRQoL among future school teachers, comparisons will be made with similar studies conducted on different populations.

The response rate to this study was 89.67% which is similar to the studies conducted by Colman McGrath et.al in 2001[6] and Manish Kumar et.al in 2007[7] using the same OHRQoL indicator, which is a good signal to incorporate oral health related quality of life components into oral health surveys.

In this study female respondents (60.2%) outnumbered the male respondents (39.8%) which is similar to the studies conducted by Colman McGrath et.al in2001[6] and Manish Kumar et.al in 2007[7] this reflects the enrollment pattern of B.Ed students. Women perceived oral health as impacting more strongly on their quality of life as compared to men[8].

A large portion of the respondents (63.17%) perceived that oral health has good effect on their quality of life in all physical, social and psychological aspects, which is comparable to a study conducted by Manish Kumar et.al in 2007[7] on first grade college students where 65.6% of the respondents reported enhanced effect. However it is in contrast to the study conducted by Colman McGrath et.al in 2001[6] on general population where

Table II: Distribution of responses of OHRQoL – impacts

Response	Impacts				
	None %(n)	Little %(n)	Moderate%(n)	Great% (n)	Extreme%(n)
Physical aspect					
a) Eating	10.8 (29)	21.6 (58)	30.5 (82)	28.6 (77)	8.6 (23)
b) Appearance	13.4 (36)	14.9 (40)	33.1 (89)	30.1 (81)	8.6 (23)
c) Speech	13.8 (37)	11.9 (32)	27.9 (75)	36.4 (98)	10 (27)
d) General health	16 (43)	21.6 (58)	30.9 (83)	23.4 (63)	8.2 (22)
e) Comfort	12.6 (34)	23 (62)	29.4 (79)	25.7 (69)	9.3 (25)
f) Breath odour	25.7 (69)	20.1 (54)	24.2 (65)	22.3 (60)	7.8 (21)
Social aspects					
a) Social life	25.7 (69)	20.1 (54)	30.1 (81)	17.5 (47)	6.7 (18)
b) Romantic relationship	21.9 (59)	12.6 (34)	35.3 (95)	19.3 (52)	10.8 (29)
c) Smiling/laughing	11.2 (30)	17.8 (48)	28.6 (77)	31.2 (84)	11.2 (30)
d) Work/usual jobs	27.5 (74)	18.6 (50)	26 (70)	23.4 (63)	4.5 (12)
e) Career	22.7 (61)	19.3 (52)	27.9 (75)	21.9 (59)	8.2 (22)
Psychological aspects					
a) Confidence	11.2 (30)	21.6 (58)	36.1 (97)	21.6 (58)	9.7 (26)
b) Carefree	23.8 (64)	21.2 (57)	32 (86)	17.5 (47)	5.6 (15)
c) Sleep/ability to relax	21.9 (59)	21.6 (58)	28.3 (76)	22.3 (60)	5.9 (16)
d) Mood	19.7 (53)	27.9 (75)	27.5 (74)	20.4 (55)	4.5 (12)
e) Personality	13 (35)	16.7 (45)	28.6 (77)	30.5 (82)	11.2 (30)
Total	18.18%	19.41%	29.78%	24.51%	8.18%

only one third of population reported a good effect of oral health on their quality of life.

Near about one-third (30.34%) of respondents stated that there is no effect of oral health on their quality of life, which is in accordance with a study conducted by Manish Kumar et.al in 2007[7] where 24.2% of respondents stated the same.

It is interesting to note that a vast majority of respondents (77.7%) agree to the fact that smiling and laughing had a good effect, while least number of respondents believed that a good smile and laugh had no impact on OHRQoL, reflecting the respondent's high concern towards their social life. This is in accordance with a study conducted by Manish Kumar et.al in 2007[7] on first grade college students where respondents reported similar result but is in contrast to the study conducted on general population by Colman McGrath et.al in 2001[6] where 61% of respondents stated that oral health has good impact on their eating, reflecting a high concern towards the physical aspect of quality of life.

Respondents claim that their oral health effects all the aspects of quality of life equally, which clearly indicates that future school teachers were oriented towards all physical, social and psychological aspects of OHRQoL, this is in contrast to the study conducted on general population by Colman McGrath et.al in 2001[6] where respondents were more inclined towards physical aspects and is in accordance to the study by Manish Kumar et.al in 2007[7].

Table III: Distribution of responses to OHRQoL – impacts (gender variation)

Response	Impacts										p-value
	None		Little		Moderate		Great		Extreme		
	M % (n)	F % (n)	M % (n)	F % (n)	M % (n)	F % (n)	M % (n)	F % (n)	M % (n)	F % (n)	
Physical aspects											
a) Eating	8.41 (9)	12.35 (20)	20.56 (22)	22.22 (36)	32.71 (35)	29.01 (47)	29.91 (32)	27.78 (45)	8.41 (9)	8.64 (14)	0.894
b) Appearance	8.41 (9)	16.67 (27)	16.82 (18)	13.58 (22)	34.58 (37)	32.09 (52)	28.97 (31)	30.86 (31)	11.22 (12)	6.79 (11)	0.248
c) Speech	13.08 (14)	14.20 (23)	14.95 (16)	9.88 (16)	27.10 (29)	28.40 (46)	36.45 (39)	36.42 (59)	8.41 (9)	11.11 (18)	0.743
d) General health	16.82 (18)	15.43 (25)	18.69 (20)	23.46 (38)	31.78 (34)	30.25 (49)	26.17 (28)	21.60 (35)	6.54 (7)	9.26 (15)	0.743
e) Comfort	10.28 (11)	14.20 (23)	24.30 (26)	22.22 (36)	28.97 (31)	29.63 (48)	28.04 (30)	24.07 (39)	8.41 (9)	9.88 (16)	0.834
f) Breath odour	15.89 (17)	32.10 (52)	19.63 (21)	20.37 (33)	28.04 (30)	21.60 (35)	28.04 (30)	18.52 (30)	8.41 (9)	7.41 (12)	0.034
Social aspects											
a) Social life	24.30 (26)	26.54 (43)	20.56 (22)	19.75 (32)	29.91 (32)	30.25 (49)	16.82 (18)	17.90 (29)	8.41 (9)	5.56 (9)	0.913
b) Romantic relationship	15.89 (17)	25.93 (42)	14.02 (15)	11.73 (19)	36.45 (39)	34.57 (56)	20.56 (22)	18.52 (30)	13.08 (14)	9.26 (15)	0.366
c) Smiling/ laughing	14.02 (15)	9.26 (15)	16.83 (18)	18.52 (30)	28.04 (30)	29.01 (47)	29.91 (32)	32.10 (52)	11.22 (12)	11.11 (18)	0.821
d) Work/ usual Jobs	23.37 (25)	30.25 (49)	21.50 (23)	16.67 (27)	25.23 (27)	26.54 (43)	25.23 (27)	22.22 (36)	4.67 (5)	4.32 (7)	0.694
e) Career	24.30 (26)	21.60 (35)	16.82 (18)	20.99	28.04 (30)	27.78 (45)	20.56 (22)	22.84 (37)	10.28 (11)	6.79 (11)	0.754
Psychological aspects											
a Confidence	11.22 (12)	11.11 (18)	20.56 (22)	22.22 (36)	40.19 (43)	33.33 (54)	20.56 (22)	22.22 (36)	7.48 (8)	11.11 (18)	0.757
b) Carefree	21.50 (23)	25.31 (41)	24.30 (26)	19.14 (31)	30.84 (33)	32.72 (53)	19.63 (21)	16.05 (26)	3.74 (4)	6.79 (11)	0.588
c) Sleep/ ability to relax	20.56 (22)	22.84 (37)	19.63 (21)	22.84 (37)	29.91 (32)	27.16 (44)	26.17 (28)	19.75 (32)	3.74 (4)	7.41 (12)	0.512
d) Mood	18.70 (20)	20.37 (33)	27.10 (29)	28.40 (46)	26.17 (28)	28.40 (46)	25.23 (27)	17.28 (28)	2.80 (3)	5.56 (9)	0.504
e) Personality	14.02 (15)	12.35 (20)	12.15 (13)	19.75 (32)	34.58 (37)	24.69 (40)	28.97 (31)	31.48 (51)	10.28 (11)	11.73 (19)	0.306

Table IV : Distribution of responses to OHRQoL - effects (gender variation)

Response	Effects						p-value
	Good effect		No effect		Bad effect		
	Male %(n)	Female %(n)	Male %(n)	Female %(n)	Male %(n)	Female %(n)	
Physical aspects							
a) Eating	75.01 (81)	74.07 (120)	15.89 (17)	21.60 (35)	8.41 (9)	4.32 (7)	0.232
b) Appearance	70.09 (75)	72.22 (117)	17.76 (19)	20.37 (33)	12.15 (13)	7.41 (12)	0.401
c) Speech	89.16 (74)	77.16 (125)	21.50 (23)	19.75 (32)	9.35 (10)	4.67 (5)	0.075
d) General health	57.94 (62)	65.43 (106)	39.25 (42)	30.25 (49)	2.80 (3)	4.32 (7)	0.283
e) Comfort	69.16 (74)	69.75 (113)	24.30 (26)	24.07 (39)	6.54 (7)	6.1 (10)	0.991
f) Breath odour	38.32 (41)	33.33 (54)	41.12 (44)	43.83 (71)	20.56 (22	22.84 (37)	0.699
Social aspects							
a) Social life	62.62 (67)	54.32 (88)	33.64 (36)	38.89 (63)	3.74 (4)	6.79 (11)	0.312
b) Romantic relationship	67.29 (72)	64.20 (104)	29.91 (32)	33.33 (54)	2.80 (3)	2.47 (4)	0.836
c) Smiling/laughing	74.77 (80)	79.63 (129)	22.43 (24)	13.58 (22)	2.80 (3)	6.79 (11)	0.078
d) Work/usual jobs	59.81 (64)	56.17 (91)	36.45 (39)	41.36 (67)	3.74 (4)	2.47 (4)	0.640
e) Career	53.27 (57)	64.20 (104)	43.93 (47)	32.10 (52	2.80 (3)	3.70 (6)	0.143
Psychological aspects							
a) Confidence	68.22 (73)	74.07 (120)	27.10 (29)	19.75 (32)	4.67 (5)	6.17 (10)	0.350
b) Carefree	50.47 (54)	53.09 (86)	39.25 (42)	38.27 (62)	10.28 (11)	8.64 (14)	0.866
c) Sleep/ability to relax	56.07 (60)	61.11 (99)	38.32 (41)	35.19 (57)	5.61 (6)	3.70 (6)	0.615
d) Mood	47.66 (51)	53.70 (87)	45.79 (49)	41.36 (67)	6.54 (7)	4.94 (8)	0.592
e) Personality	67.29 (72)	73.46 (119)	19.75(32)	19.75 (32)	5.61 (6)	6.79 (11)	0.364

CONCLUSION

To conclude, this study shows that the B.Ed students of Davangere city, India agree that their oral health affects their quality of life and also has an impact on quality of life in all the aspects i.e. physical, social and psychological. Gender variation was not significant showing that both the sexes are equally aware towards their oral health and its effect and impact on their quality of life.

Perception of future school teachers towards their OHRQoL gives an insight as to how well they understand how their oral health can affect their general well being in various aspects and the important role they can play in imparting the same knowledge to the school children.

Further in future, studies relating various socio-demographic profiles as having an effect on oral health related quality of life are recommended in India.

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