



ORIGINAL RESEARCH PAPER

Anatomy

MODULATION OF KNOWLEDGE ATTITUDE AND PRACTICE OF ORAL HYGIENE IN RURAL UTTAR PRADESH.

KEY WORDS: knowledge, attitude, practice, Likert scale, oral hygiene, health education

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| ABSTRACT | AIM AND OBJECTIVE- Our attempt was to modulate the knowledge, attitude and practice of oral hygiene, after an initial assessment of the same in the rural areas of Uttar Pradesh. |
| | METHOD- an initial survey was done in the rural areas between Lucknow and Kanpur. A structured self- administered questionnaire was used as a survey tool for an initial assessment of the knowledge, attitude and practice of oral hygiene. An attempt to modulate the same was done in a phased manner, using health check-up camps, pamphlets, videos, street plays, magic shows and wall paintings as tools. |
| | RESULT- the knowledge attitude and practice scores showed that 48.3 % cases had fair scores, 0.9% cases had good scores but none had excellent scores according to the Likert scale. |
| | Significance of change observed in the first, second and third visit are as follows- First visit vs second visit: $\chi^2=60.506$; $p<0.001$ First visit vs third visit: $\chi^2=99.962$; $p<0.001$ Second visit vs third visit: $\chi^2=16.096$; $p<0.001$ |
| | CONCLUSION- with every subsequent visit the proportion of cases with fair to good knowledge attitude practice scores was observed hence showing the impact of awareness campaigns had an outcome. |

INTRODUCTION

Hygiene is a science concerned with practices for maintenance and prevention of disease through cleanliness [1]. Good oral hygiene is the foundation for a healthy oral cavity thus preventing almost 80% of all oral health problems [2]. Oral health problems not only affect the psychosocial behaviour pattern but also restrict daily work [3]. Chronic infections of the oral cavity pose a risk for premature birth, diabetes, respiratory disease and even stroke [4-7]. Dental caries and periodontal diseases are the most common conditions affecting the oral health of an individual [3-9]. Another public health problem worldwide is the use of tobacco and its products which are deadlier than tuberculosis, HIV/AIDS and malaria combined [10]. Oral cancer and lung cancer have high mortality rates [11-13]. Additionally approximately 10 different types of cancers with a variable prognosis have been found to have a direct or indirect link to tobacco habits [14]. Treatment is available for oral diseases but may be too expensive or inaccessible. Health education for community or population may prove to be a cost effective approach towards a better attitude towards oral health, thereby providing a primary tool for prevention of oral diseases. Our study aimed to show that oral health education can bring about behavioural change towards better oral hygiene practice.

MATERIAL AND METHOD

A total of 2555 participants were recruited in the study from randomly selected villages between Lucknow and Kanpur. An attempt was made to modulate the knowledge attitude and practice of oral hygiene with the help of a structured questionnaire. There were five questions each related to knowledge, attitude and practice. Each participant was awarded one point for every correct answer in the knowledge section. For questions related to attitude, 0 depicted the most negative response. For questions related to practice four points were awarded to participants without any adverse habits while one point was deducted for each adverse habit. All questions were graded according to the Likert's scale. The study was conducted in

four phases with regular visits and door to door contact in the first three phases while the fourth phase was used for compilation of the data collected in the first three phases.

Phase 1- comprised of the background preparation of messages regarding oral hygiene and adverse oral habits. Oral health check-up camps were organized within the village premises and in primary schools of each of these villages. Help from ASHA bahus and Aanganwadi workers were sought so that a door to door contact with the villagers could be established. Health care personnel trained a few volunteers in self- mouth examination technique to facilitate oral health education.

Phase 2 - Oral health check-up camps along with magic shows and street plays were organised with a purpose to show the impact of tobacco and its products on oral health. Pamphlets and wall paintings displayed information about the proper use of tooth brushes, toothpastes and floss along with the importance of oral rinsing.

Phase 3- Oral health check-up camps along with audio visual aids such as videos were shown to the participants and were encouraged to follow good oral hygiene habits. Tobacco cessation clinics encouraged participants to stop the use of tobacco and practice good dietary habits.

Phase 4 was used to compile and analyse the data obtained from the first three phases.

Care was taken that health check- up camps and oral health education camps were organised in schools on a regular basis in all three phases. Oral prophylaxis was carried out along with oral health check-up camps to aid modulation of knowledge attitude and practice of oral hygiene.

RESULTS

K- Questions related to knowledge where

- K1-food items having an adverse impact on oral hygiene
- K2-food items which strengthen teeth
- K3- good oral hygiene products
- K4- tobacco and its products harm the oral health
- K5- knowledge about dental caries or gum bleeding

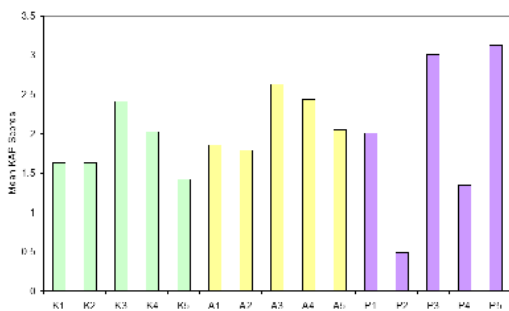
- A-Questions related to attitude
- A1-good eating habits
- A2-use of fluoridated toothpastes
- A3- use of tobacco and its products
- A4-regular visits to a dentist
- A5-care of deciduous teeth

- P-Questions related to practice
- P1-frequency of tooth brushing
- P2- visit to a dental clinic
- P3-use of tobacco and its products
- P4-frequency of rinsing mouth
- P5-use of pins /metals, wires and sharp objects to clear food particles

The mean Knowledge Attitude and Practice Scores are as follows

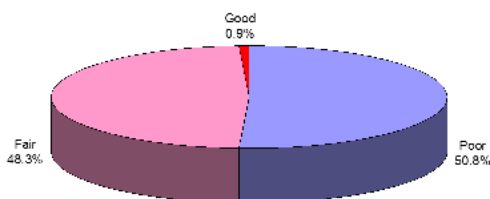
Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|------|---------|---------|------|----------------|
| K1 | 2555 | 0 | 4 | 1.63 | .928 |
| K2 | 2555 | 0 | 4 | 1.63 | .898 |
| K3 | 2555 | 0 | 4 | 2.41 | 1.051 |
| K4 | 2555 | 0 | 4 | 2.03 | .958 |
| K5 | 2555 | 0 | 4 | 1.42 | .861 |
| A1 | 2555 | 0 | 4 | 1.86 | 1.179 |
| A2 | 2555 | 0 | 4 | 1.79 | 1.036 |
| A3 | 2555 | 0 | 4 | 2.63 | .950 |
| A4 | 2555 | 0 | 4 | 2.44 | .913 |
| A5 | 2555 | 0 | 4 | 2.05 | .990 |
| P1 | 2555 | 0 | 4 | 2.01 | .798 |
| P2 | 2555 | 0 | 4 | .49 | .791 |
| P3 | 2555 | 0 | 4 | 3.01 | 1.104 |
| P4 | 2555 | 0 | 4 | 1.35 | 1.262 |
| P5 | 2555 | 0 | 4 | 3.13 | 1.052 |
| Valid N (listwise) | 2555 | | | | |



Score Categorization

- Total score <30 Poor
- Total Score 31-45 Fair
- Total Score 46-57 Good
- Total Score >57 Excellent



The knowledge, attitude and practice categorization showed that 50.8% of the subjects had a poor score which means that they scored less than 30.

48.3% of cases had fair scores; their score ranged between 31-45

0.9% cases had good scores; their score on the likert scale ranged between 46-5

None of the subjects had excellent scores

IMPACT OF AWARENESS CAMPAIGNS ON KAP SCORES IN DIFFERENT PHASES

| SN | KAP Score Level | Phase 1 | | Phase 2 | | Phase 3 | |
|------------------------|-----------------|---|------|---------|------|---------|------|
| | | No. | % | No. | % | No. | % |
| 1. | Poor | 246 | 80.9 | 581 | 56.6 | 1297 | 50.8 |
| 2. | Fair | 58 | 19.1 | 428 | 41.7 | 1234 | 48.3 |
| 3. | Good | 0 | 0.0 | 18 | 1.8 | 24 | .9 |
| Significance of change | | First phase vs second phase: $\chi^2=60.506$; $p<0.001$ First phase vs third phase: $\chi^2=99.962$; $p<0.001$ Second phase vs third phase: $\chi^2=16.096$; $p<0.001$ | | | | | |

80.9% cases in the first phase scored less than 30, in phase 2 the number dropped to 56.6%, in the third phase the percentage of poor scorers was 50.8%.

In the first phase the participants with a fair score were 19.1%, in phase 2 the percentage of participants with a fair score was 41.7%, in phase 3 the percentage of participants who scored between 31-45 were 48.3%.

None of the participants scored between 46-57 in phase, the percentage increased to 1.8% in the second phase but decreased to 0.9% in phase three.

With every subsequent visit, an increment in proportion of cases with fair to good KAP scores was observed thus showing that the impact of awareness campaigns was showing an outcome.

DISCUSSION

Oral health education has been considered as an integral part of oral health care. The goal of intervention therefore has been to modulate the knowledge, attitude and practice of oral hygiene.

Modulation of knowledge in our study was done through a set of instructions on pamphlets and wall paintings, videos, street plays and magic shows which carried messages on oral hygiene. Oral prophylaxis was an incentive in our study. Redmond et al [15], Buischi et al [16] used instructions as a method of education to a target group. Friel et al [17] attempted to modulate knowledge through instructions and video demonstrations; they also used a smile contest as an incentive for oral health education. Freitas Fernandes et al [18] used instructions, demonstrations and oral prophylaxis to modulate knowledge.

Kay and Locker [19] concluded that knowledge could be improved through oral health education. Our study also showed a positive outcome.

Our study was based on a rural backdrop and our target population were children and young adults, our attempt to modulate the behaviour pattern showed a positive outcome similar to studies by Laiho et al [20] Tai et al [21] who targeted the adolescent population. Marino et al [22] chose older migrant adults as the target population. An immediate change of attitude was seen in a study by Laiho et al [20].

Holund et al [23] used video and literature while Peng et al [24] campaigned and Azgui- Levy et al [25] gave reimbursement as an incentive to promote good oral hygiene practice, similar to our study where demonstrated good oral hygiene practices, the incentive in our study was oral prophylaxis during health check-up camps.

CONCLUSION

Our study has shown that oral health education is effective in

improving the knowledge, attitude and practice of oral hygiene. Oral health education programmes can be included in school curriculums. Community oral health carnivals, oral booths in rural and semi urban areas can be arranged so that the community is benefitted not only through health education but can also get an access to treatment facilities.

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