

# Attitude of Accredited Social Health Activists towards Creating Awareness on Oral Cancer in Rural Community of Chikkaballapur District, Karnataka

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## Abstract

**Background:** Accredited social health activists (ASHAs) form a link between rural community and health system in India; hence, it is important to understand their attitude to render health services. **Objectives:** The objectives of the study were to develop a tool for measuring the attitude to create awareness on oral cancer (OC) using theory of reasoned action and planned behavior (TRA/PB) to the community and to assess the attitude of ASHAs about the same. **Methodology:** A culturally relevant self-administered questionnaire was developed based on TRA/PB which was subjected to validity and reliability and then pilot tested. The sample size was estimated to be 278. A cross-sectional research design was used to assess the attitude of ASHAs. Multistage sampling technique was carried out to include ASHAs from three of six taluks of Chikkaballapur district. **Results:** The content validity ratio of the items was in the range of 0.6–0.7, and Cronbach's alpha was 0.762. Exploratory factor analysis provided three factors with eigenvalue >1. The mean age of study participants was 31.8 years. The mean work experience was 5.7 years. The attitude of ASHAs was favorable (82.45%) as they believed that it was their responsibility to contribute in disease prevention (normative belief). Some had seen suffering of OC patients closely (behavioral beliefs) and few opted to follow their authority instructions (perceived behavioral control). **Conclusion:** The developed tool with good validity and reliability was used to assess the attitude of ASHAs. Their attitude was favorable to educate the community about OC and contribute in disease prevention.

**Keywords:** ASHAs, oral cancer awareness, rural population, theory of reasoned action and planned behavior

## INTRODUCTION

Oral cancer (OC) is a public health problem in most of the developing countries. In India, age-adjusted incidence rate was 20/100,000 cases. The most common risk factors for OC are tobacco and alcohol which are most prevalent among rural population, particularly in the less privileged groups.<sup>[1,2]</sup> This can be prevented if the risk factors are avoided or detected early, but the challenge is that these habits are developed for long time and are quite difficult to overcome. There is less awareness about the disease among the people, and some of these risk factors are culturally accepted.<sup>[3,4]</sup> The health-related information about this should be accessible to people at regular intervals to have an impact. In 2005 and also reiterated in 2013 as noncommunicable disease prevention, World Health Assembly Crete Declaration suggested to prevent OC by integrating with national programs of the developing countries

and to include primary health workers (HWs), but till now, the sustained action has not yet materialized.<sup>[5,6]</sup>

HWs form a link between the rural community and the health system. This link should be explored in the prevention of OC in rural areas as there is unfavorable dentist-to-population ratio.<sup>[7]</sup> Studies in Sri Lanka and India have shown that HWs are helpful in screening, educating, and referring individuals with high risk to tertiary centers. The HWs and accredited social health

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activists (ASHAs) were also involved in antitobacco health messages during their routine home visits and meetings.<sup>[8-10]</sup>

The Government of India has taken certain measures such as prevention of OC as part of the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke<sup>[11]</sup> and Treatment procedures for OC under Ayushman Bharat or Pradhan Mantri Jan Arogya Yojana,<sup>[12]</sup> which can be conveyed to underprivileged through ASHAs. However, it takes time to implement it. Till then, voluntary action of ASHAs should be taken as a move toward this task.<sup>[13,14]</sup> However, their voluntary involvement depends on their attitude to achieve positive actions. The acceptance to additional responsibility by HWs and other health auxiliaries should be explored to benefit the community.

The theoretical frameworks would be beneficial to understand and predict the factors influencing the behavior. Theory of reasoned action and planned behavior (TRA/PB) focuses on the beliefs influenced by family, friends, and external factors to perform a behavior. This also facilitates in planning the interventions to bring the desired outcomes.<sup>[15]</sup>

Hence, the current study was undertaken with the objectives to develop a questionnaire to assess the attitude of the ASHAs using TRA/PB and to assess their attitude using the developed questionnaire in Chikkaballapur district in Karnataka.

## METHODOLOGY

A cross-sectional study was conducted in primary health centers (PHCs) of Chikkaballapur district from July to November 2016. The ethical clearance was obtained from the institutional ethics committee. The questionnaire was developed and pilot tested, and then, the sample size was calculated. One of the favorable outcomes was the intent to create awareness about OC, which was used to calculate sample

size (64.1%). The sample size was 278 with the assumption to create awareness to 64.1%, with 9% relative error and 95% confidence interval.

### Development of questionnaire to assess the attitude of accredited social health activists using theory of reasoned action and planned behavior

A culturally relevant self-administered questionnaire was designed in the following steps:<sup>[16]</sup> (a) initially, literature review carried out and the domains were identified from the framework of TRA/PB by Ajzen and Madden 1986. The domains identified are behavioral beliefs (BB), normative beliefs (NB), perceived behavioral control (PBC), and intentions of a person to perform a behavior. (b) Interviews and Focus Group Discussions (FGDs) were conducted to understand more about the attitude and current practices of ASHAs. (c) Triangulation of the data from the above steps from which 20 items were developed. (d) The items based on the level of understanding of the target group. The statements were clear and unambiguous, and responses were assessed on Likert's five-point scale. (e) Content validity was done using Lawshe's method, and 12 subject matter experts were selected from the departments of public health dentistry, oral medicine, oral surgery, and community medicine. The suggestions were incorporated, and 15 items scoring >0.6 were included and then subjected to reliability using Cronbach's alpha and intraclass correlation which were 0.762 and 0.744 (sig 0.00), respectively. Exploratory factor analysis (EFA) for dimension reduction using data extraction method by principal component analysis (varimax rotation with Kaiser normalization) was done ( $n = 83$ ). EFA yielded three factors when the eigenvalue was >1. Items 8 and 10 were not included in any of the three; it was also justified theoretically as these items reflected the intention [Table 1]. (f) The questionnaire was translated to Kannada, back translated, and subjected to face validity. The

**Table 1: Rotated component matrix from exploratory factor analysis (varimax rotation)**

Items	Component analysis		
	Component 1	Component 2	Component 3
1. Feel satisfied			0.801
2. Anxious to educate		0.677	
3. People think that it's my duty			0.770
4. Contribute in preventing the disease	0.645		
5. Do not educate to look good among colleagues		0.582	
6. To make a difference	0.635		
7. Understand it's my responsibility			0.719
8. Educate at least two people in a week			
9. My duty to prevent oral cancer	0.657		
10. Plan to start health education			
11. If my authorities instruct		0.726	
12. Seen suffering of my close ones	0.840		
13. People trust me	0.762		
14. Expect to get remuneration		0.581	
15. Time is the constraint		0.788	

Extraction method: Principal component analysis, rotation method: Varimax with Kaiser normalization. Kaiser-Meyer-Olkin measure of sampling adequacy was 0.762 Bartlett's test of sphericity where significance level was 0.00, eigenvalue >1

final tool had 15 items to assess the attitude, and two questions about current practices were also included. (g) Then, pilot testing was carried out among 32 participants for assessing feasibility and practicability.<sup>[16]</sup>

### Data collection

Multistage sampling was used to include ASHAs from the three of six taluks. After seeking permission from the health administrative officers, ASHA supervisors were contacted to inform the participants. On the assigned days during their monthly meetings in PHCs, data were gathered through self-administered questionnaire after obtaining the consent, ensuring the anonymity and confidentiality. The questionnaire was given to participants with clear instructions to fill, 15-20 mins was given to respond and data was collected.

The data were analyzed using The SPSS-18.0 software (SPSS Inc. Released 2009. PASW Statistics for Windows, Version 18.0. Chicago: SPSS Inc.) The descriptive statistics, frequencies, and Pearson's correlation were assessed. Correlation between attitude and demographic variables was done. The analysis for overall attitude was carried out by computing scores for all the item responses. The one which increases the likelihood for performing desired behavior was considered as favorable attitude (scored as +1, +2), not performing as unfavorable (scored as -1, -2), and neutral values were assigned score 0. After computing the values, they were divided into favorable, neutral, and unfavorable groups.

### RESULTS

The mean age of the study group was  $31.8 \pm 6.43$  years (19–55 years). The education level was as follows: 72.4% of ASHAs had attended high school, 25.1% preuniversity, and the rest had a degree. The mean years of experience was  $5.7 \pm 3.10$  years. EFA generated three components: component 1 reflected BB, Component 2 PBC, and Component 3 NB [Table 1]. The attitude of ASHAs was assessed, and the

frequencies are presented in Table 2; 44.2% of them have strongly agreed that they have intention to create awareness and 44.8% would talk about the OC at least twice a week. The overall attitude was derived, and the current practices are reported in Table 3. Pearson's correlation was done to assess the correlation with the above demographic variables and attitude. There were a positive correlation with education ( $P = 0.001$ ) and a negative correlation with age ( $P = 0.04$ ) and years of experience ( $P = 0.32$ ).

### DISCUSSION

In the present study, the questionnaire was developed to understand the attitude of ASHAs based on TRA/PB which was first of its kind. This theory facilitated to understand the attitude in terms of subjective norms, beliefs, and PBC.<sup>[15]</sup> The items were developed based on these domains which had acceptable validity and reliability values.

The overall attitude of ASHAs was favorable (82.4%) as they believed it as their responsibility in disease prevention (53.9%). More than half of the ASHAs opined that they feel satisfied (55.5%) if they share information about OC and its effects with their people, may be because some had seen the suffering closely (43.9%). The study also assessed the current practices of ASHAs as they are already educating community about the ill effects of tobacco and alcohol (53.3%). Hence, the experiences set a belief in a person to perform certain action. The study by Persai *et al.* and Mishra *et al.* suggested that if ASHAs and HWs have attitude, then they can contribute in primordial and primary prevention of oral diseases.<sup>[14,17]</sup> In a study by Birur *et al.*, trained HWs could identify 45% of the cases using Mobile application which was further confirmed by specialists.<sup>[18]</sup> This shows that the trained HWs will be helpful in connecting the health-care services in rural areas, but emphasis should be given to motivate them so that they can sustain their

**Table 2: The distribution of the responses of accredited social health activist workers to the questionnaire**

Items	SA	A	N	D	SD
Feel satisfied	177 (55.5)	77 (24.1)	16 (5)	20 (6.3)	29 (9.1)
Anxious to educate	54 (16.9)	58 (18.2)	27 (8.5)	99 (31.0)	81 (25.4)
People think that it's my duty	152 (47.6)	88 (27.6)	21 (6.6)	33 (10.3)	25 (7.8)
Contribute in preventing the disease	121 (37.9)	85 (26.6)	27 (8.5)	33 (10.3)	53 (16.6)
Do not educate to look good among colleagues	87 (27.3)	53 (16.6)	31 (9.7)	86 (27.0)	62 (19.4)
Want to make a difference to their life	170 (53.3)	85 (26.6)	24 (7.5)	21 (6.6)	19 (6.0)
Understand it's my responsibility	172 (53.9)	84 (26.3)	18 (5.6)	19 (6.0)	26 (8.2)
Educate at least two people in a week	143 (44.8)	99 (31.0)	20 (6.3)	30 (9.4)	27 (8.5)
My duty to prevent oral cancer	159 (49.8)	93 (29.2)	16 (5.0)	25 (7.8)	26 (8.2)
Plan to start health education	141 (44.2)	93 (29.2)	22 (6.9)	31 (9.7)	32 (10.0)
If my authorities instruct	90 (28.2)	43 (13.5)	25 (7.8)	111 (34.8)	50 (15.7)
See the suffering of my close ones	140 (43.9)	88 (27.6)	31 (9.7)	32 (10.0)	28 (8.8)
People trust me	164 (51.4)	85 (26.6)	26 (8.2)	15 (4.7)	29 (9.1)
Expect to get remuneration	87 (27.3)	49 (15.4)	35 (11.0)	94 (29.5)	54 (16.9)
Time is the constraint	59 (18.5)	39 (12.2)	33 (10.3)	137 (42.9)	51 (16.0)

SD: Strongly disagree; D: Disagree, N: Neutral, A: Agree, SA: Strongly agree

**Table 3: The attitude and current practices of the accredited social health activists toward creating awareness on oral cancer to the community**

	Frequency (%)
Attitude	
Favorable	263 (82.4)
Neutral	4 (1.3)
Unfavorable	52 (16.3)
Total	319 (100.0)
Practices	
About ill effects of tobacco and alcohol	229 (71.8)
Benefits of early diagnosis	59 (18.5)
Neither both	31 (9.7)
Total	319 (100.0)

interest. In our study, it was observed that age and experience of ASHAs were negatively correlated.

The study showed that some of them (27.3%) would take up the task if their authorities instruct. This was PBC which was external as suggested in TRA. There were mixed opinions about the remuneration expected. Some desired to do so for their people irrespective of incentives and time constraints because people trust them (51.4%) as they are the source of contact for health-related information. In a study by Vinnakota reported that 69.5% of ASHAs were approached by their community regarding oral health issues. Hence, they were ready to learn to help community.<sup>[19]</sup>

From the above findings, we would suggest that ASHAs should be considered for creating awareness about OC and its early management. Even in our study, ASHA had a favorable attitude that will be beneficial for their community as the prevalence of OC is more in rural area and it is attributed to the use of tobacco among lower socioeconomic strata. This tool can be used to assess the attitude of other peripheral health-care workers. In the future, the intervention modules can be prepared and empower ASHAs so that we can achieve our countries target set by the WHO for noncommunicable diseases by 2025.<sup>[6]</sup>

## CONCLUSION

The validity and reliability of the tool developed to assess the attitude of ASHAs toward creating awareness in rural community about OC were acceptable. ASHAs in the study had favorable attitude to educate community and contribute in disease prevention.

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## Conflicts of interest

There are no conflicts of interest.

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