

## Construction and Standardization of Cleanliness Attitude Scale (CAS)

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### ABSTRACT

*The paper deals with the development and standardization of cleanliness attitude scale (CAS) for women residing in slum areas. At the initial stage, the scale consisted of 100 items, then the items were reduced to 54 after extensive scrutiny by the subject experts. Subsequently item analysis was carried out. Finally, a set of 38 items was retained for the final scale. The final version of the cleanliness attitude scale consists of 20 positive and 18 negative items. The reliability of the scale was ascertained by Cronbach Alpha and it was found significant. Content validity and face validity was also determined by evaluation from subject experts. For the interpretation of data norms was also established.*

**Key Words:** *Cleanliness, attitude, Slum women, Standardization, Reliability, Validity, Item analysis*

### Introduction

Cleanliness is next to Godliness is a very common aphorism. This aphorism also signifies the fact that cleanliness and godliness are very similar. Cleanliness is both the abstract state of being clean and free from dirt, and the process of achieving and maintaining that state. The significance of cleanliness cannot be overlooked by any society. Unfortunately, today people themselves do not putting very good examples of cleanliness. In fact, habits like smoking, chewing tobacco, spitting on roads are very common in our society. Many public places used for defecating are leading to many diseases. Litter on roads, polluted water bodies and poor sanitation make the public places as breeding grounds for pests rats, mice, cockroaches, flies, and mosquitoes serve as hosts for transmitting disease among us. A healthy environment is needed if we want to live healthy. If the environment is polluted, it affects the health of the people living around. We can lead a healthy life by wealth of having clean and hygienic environment. It is the responsibility of every individual to maintain certain hygienic standards and cleanliness for a clean and healthy environment.

Attitude is simply expressions of how much we like or dislike any things. It shows our preferences towards an object. In the present scenario as we are looking for a dream that neat and clean India 2019. Our prime minister Narendra Modi has taken it as movement that is Swachha Bharat Abhiyan. So the dream of neat and clean India comes true only when we make our attitude more positive towards cleanliness. In slum areas were cleanliness often takes a holiday. Women are the pivot point of family if she hold strong positive attitude towards cleanliness definitely she could develop the more and more positive attitude and good habits among their children and family members to behave in a good manner and follow the rules to maintain a personal as well as public cleanliness.

Maintaining good personal hygiene is the first step to cleanliness and healthiness. Practicing good body hygiene is also helps us to feel good about our self, which is also important for our mental health. Proper personal hygiene is also necessary for social interactions and respect in the professional areas. People who have poor hygiene (bad breath, body odor etc) often are seen as unhealthy and may face discrimination. In the process of developing positive cleanliness behavior among the people there is need to change their cleanliness attitude. To know the cleanliness attitude of slum women cleanliness attitude scale is required. Present study was undertaken to construct and standardized an attitude scale to measure the women attitude towards cleanliness.

### Objectives of the study

1. To construct a attitude scale for slum women towards cleanliness (CAS).
2. To standardize cleanliness attitude scale.

I- To establish the reliability.

II- To establish the validity.

III- Setting up norms

### **Method**

In the present study effort is made to develop a cleanliness attitude scale ( CAS) to measure the cleanliness attitude of slum women. To construct and standardization of cleanliness attitude scale following steps were taken.

### **Preparation of items**

For construction and standardization of cleanliness attitude scale relevant literature (Journals, newspapers, articles, online available material) were searched out to collect statements which deal with cleanliness attitude in a two important dimension of cleanliness i.e. personal cleanliness and public cleanliness. Initially 100 items were constructed and framed on the basis of two dimension i.e. personal cleanliness and public cleanliness.

### **Reviewing and editing of the items**

First of all 100 items were made and the draft of containing the 100 items was given to 15 experts in the field of education and psychology for analyzing the content language, nature of the items as well as for editing the statements. Out of 100 items that were constructed only 54 items were retained and 46 were rejected.

### **Preliminary Try out**

Based on the feedback received from the experts some of the 54 statements were modified and they were arranged accordingly dimensions of cleanliness. There are 30 items were positive and 24 items were negative. Total 54 items were retained as final for preliminary try out now the tool was administered in 100 slum women to determine the level of understanding and appropriateness of the dimension and the items of the scale .Out of 54 statements 10 statements were rejected and now the scale comprised of 44 items including 28 positive and 16 negative items.

### **Try out**

For the try out cleanliness attitude scale consisting of 44 items was then administered to 350 slum women. In this stage scale consisted of 28 positive and 16 negative items.

### **Item analysis**

For the present study the method suggested by A. L. Edward (1957) was used for item analysis. For the basis of rejecting statements the frequency distribution of the scores based upon the responses to all the statements was taken. Edward (1957) suggested that 25% or some other percentage of the subjects with highest total score and lowest total score must be taken. For the purpose of item analysis also top 25% as well as the bottom 25% of the score was taken as two groups. The t value for significance of differences between the mean attitude scores of the top 25% and the bottom 25% group of respondents that were indicates their difficulty and discrimination power were calculated for all 44 items even though a crude and approximate rule of thumb was to regard 't' value equal or greater than 1.75 as indicating that average response of high and low groups to a statement differs significantly (Edward, 1957). In this case those items which were significant at 0.01 level were retained for final form of the test and remaining statements were rejected. The t ratio of 38 items retained in final form of the scale (1-20 items for personal cleanliness and 21-38 items for public cleanliness dimension ) have been placed in following table 1.

**Table 1 Item analysis of cleanliness attitude scale (CAS)**

Cleanliness Attitude Scale (CAS)			
Personal cleanliness attitude dimension		Public cleanliness attitude dimension	
Items	t	Items	t
1	-11.547**	21	-9.294**
2	9.111**	22	-28.882**
3	-7.396**	23	-7.332**
4	-9.524**	24	-22.901**
5	-9.175**	25	-18.267**
6	-12.009**	26	-8.088**
7	-10.017**	27	-14.211**
8	-11.325**	28	-10.607**
9	-4.303**	29	-22.737**
10	-6.698**	30	-14.643**
11	-3.411**	31	-21.157**
12	-10.453**	32	-16.9274**
13	-12.852**	33	-10.30506
14	-4.959**	34	-12.598**
15	-14.991**	35	-16.556**
16	-10.978**	36	-10.252**
17	-17.118**	37	-9.627**
18	-4.507**	38	-8.191**
19	-14.273**		
20	-9.774**		

**\*\* Significant at .01 level**

**Items retained in final scale** -Total 38 items were retained in final CAS. CAS (cleanliness attitude scale) having two dimensions 1- Personal cleanliness attitude dimension.

2- Public cleanliness attitude dimension.

Personal cleanliness attitude - Following items were included in personal cleanliness attitude dimensions.

1. Many diseases can be avoided by washing hands before eating.
2. Bathing daily is beneficial for health.
3. Brushing before bed is important for Teeth protection.
4. Infectious diseases can be avoided by covering your mouth with cloth while coughing or sneezing.
5. A mother must wash her hands before feeding the child and after defecating the child.
6. It is not necessary to wash fruits and vegetables before use.
7. Many diseases can be avoided by drinking boiled water.
8. Place to store drinking water must be clean.
9. Always keep water covered.
10. I don't mind when my house is dirty.
11. I like to put garbage in a designated place.
12. The floor of the house should be cleaned every day.
13. I have no problem in sleeping on a dirty or messy bed.
14. I like to do gardening in my house.
15. Using dirty toilets does not cause any infections.
16. Throwing of polythene does not spread dirt.
17. Dustbins should be kept closed.
18. Using of cloths during menstruation does not cause any infections.
19. Used cloth at the time of menstruation should be washed with warm water and dry in sunlight.
20. Used sanitary napkins should dispose in a proper way.

**Public cleanliness attitude - Following 18 items were included in public cleanliness attitude dimensions.**

1. I felt very guilty for wasting water.
2. I like to go for defecating in an open area.
3. I take out the garbage from my house and put it in the dustbin, everyday.
4. I would like to wash cloths in the public drains, pond, well, etc.
5. We should not spread dirt in public places like pond, well, temple, etc.
6. Ponds, Rivers and public Drains are the appropriate places for animals bathing.
7. There should be no provision of punishment to those who spit on the walls of public building.
8. I get angry on those who throw the garbage out of the window during the journey.
9. Household waste should be dumped at designated place.
10. By following the rules of hygiene in public places can prevent dirt.
11. Sending children in an open area for defecation is fine.
12. We should not use public toilets.
13. Keeping public toilets clean is not our responsibility.
14. Unwashed utensils should be washed in the place of drinking water in public places like temple, bus stand, railway, station etc.
15. I can't tolerate dirt in the place of drinking water.
16. Polythene should not be thrown with garbage.
17. Use of polythene pollutes the environment.
18. Leaving pets in open area spreads dirt.

In the final scale of CAS total 38 items were remained, all items are lie in five point rating scale ,i.e .strongly agree, agree, neutral ,disagree and strongly disagree. Scoring was done by giving a score of 4, 3,2,1,0 for positive items and for negative items 0,1,2,3, and 4.

**The final version of the test**

In the final version of the scale, there are 38 items including 23 positive and 15 negative statements. The final form of the test consist of 38 items and these statements were arranged in a random order for the final administration .The CAS is a five point scale which has the responses as strongly agree, agree, neutral ,disagree and strongly disagree. Scoring for each item of the scale was done by giving a score of 4, 3,2,1,0 for positive statements and for negative statements 0,1,2,3, and 4. So the maximum score is 152 and minimum is 0.

Table 2: Distribution of items for the final scale consisting of 38 items

Dimension	Total no. of question	Negative question	Positive question	Items number	Maximum Score
A-Personal cleanliness Attitude	20	6	14	1,2,3,4,6,7,8,9,10,,12,13,14,15,16,17,20,21,22,23,24	80
B-Public Cleanliness Attitude	18	9	09	25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,43, 44	72
Total	38	15	23		152

**Standardization of the scale**

**I-Estimate of Reliability**

For finding out the reliability Cronbach Alpha method of estimating reliability is used to estimate the internal consistency of the scale (table 3).

**TABLE: 3** Internal Consistency of the Scale

S.no.	Reliability method	N	no. of items	Reliability Coefficient
1.	Cronbach's Alpha Method	300	38	.910

**II-Estimate of validity**

To find out the validity of the scale face validity was carried out with the help of experts in the field of Education and Psychology that it does convey the concept and has a logical link with the objectives. Scale has also content validity because after the items were constructed the draft were given to 16 experts in the field of education and psychology and according to their suggestion and useful recommendations the items were modified and some were rejected also. After try out was carried out and only the items that significant at 0.01 level were selected for the scale and remaining all were rejected .So it can be said that the scale also having content validity.

**III-Establishment of Norms**

In order to establish the norms of the scale, data were collected from 500 sample were used. The raw score obtain from the 500 sample are converted in to percentile (table 4).

**Table 4 Showing norms for interpretation**

Dimension	Raw Score	Percentile	Interpretation
I-personal cleanliness attitude	85 and above	81-100	Strongly agree
	79- 84	61-80	Agree
	73-78	41-60	Neutral
	66-72	21-40	Disagree
	65 and below	<20	Strongly disagree
II-public cleanliness attitude	>71 and above	81-100	Strongly agree
	66-70	61-80	Agree
	55-65	41-60	Neutral
	50-54	21-40	Disagree
	<49 and below	0-20	Strongly disagree

**Conclusion**

Present study was done to construct and standardized a cleanliness attitude scale (CAS) for women residing in slum area of Bilaspur city in Chhattisgarh state. Scale CAS has been found to be reliable and valid in terms of face validity and content validity. Norms have been establish which serves as frame of reference for interpreting the obtained score. So CAS is reliable and valid and it can be used by researcher who is working with cleanliness, Swachhha Bharat campaign and also by educationist and psychologist who are interested to find out the cleanliness attitude of women in slum areas.

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