



## CONSTRUCTION AND STANDARDIZATION OF SCALE FOR MEASURING PUBLIC ATTITUDE TOWARDS HIV / AIDS PATIENTS

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### Abstract:

*For measuring public attitude towards HIV/AIDS patients, the present task was undertaken to construct and standardize an attitude scale. For this, the data were collected from individuals (above 18 years of age) belonging to different professions by adopting the procedure of multi-stage systematic sampling technique. An item pool was developed initially by consulting various sources and theoretical and empirical literature available in the concerned area. This item pool was put to evaluation and criticism by technical as well as language experts. The preliminary draft of attitude scale was further subjected to item analysis to select highly discriminating items only for the scale. The reliability of scale was ascertained with the help of test-retest and split-half method which were found to be appreciably high. The validity of attitude scale was also ascertained and norms were established for interpretation of obtained scores on the scale. In the last, conclusions have been presented and implications in the shape of the applicability and usefulness of attitude scale have been discussed.*

**Keywords:** Construction, Standardization, Public attitude, HIV/AIDS.

### INTRODUCTION

Among one billion inhabitants living in India, around 2.4 million people are currently living with HIV (Human immunodeficiency virus). It is the virus that causes AIDS. The severity of the HIV/AIDS epidemic in the early 1980s captured more political and scientific mobilization than any other disease. The latest data from WHO reveal that 33.4 million people live with HIV virus worldwide with almost 90% of the infected living in developing countries. The first case of AIDS was found in 1981 among the young male homosexuals in Los Angeles and New York (United States). Later on, India also comes in the grip of the HIV/AIDS epidemic. India's first case of HIV was diagnosed among commercial sex workers in Chennai (1986). Soon after, the Government of India established the National AIDS Committee within the Ministry of Health and Family Welfare. This formed the basis for the current apex Government of India body for HIV surveillance the National AIDS Control organization (NACO). The spread of HIV in India is primarily restricted to the southern and north-eastern regions of the country. The highest HIV prevalence is found in Andhra Pradesh, Maharashtra, Tamil Nadu and Karnataka in the south and Manipur and Nagaland in the north-east. The main factors which have contributed to India's large HIV infected population are extensive labour, migration, poverty and low literacy levels in certain rural areas resulting in lack of awareness and gender disparity. Across India, HIV prevalence appears to be low among the general population, but disproportionately high among high risk groups such as injecting drug users (IDUs 7.2%), female sex workers (5.1%), men who have sex with men (MSM 7.4%), STD clinic attendees (3.6%) as well as truck drivers and migrant workers. In India, where young people in the age group 15-24 years comprise almost 25% of the country population, accounts for 31% of the AIDS burden. In the conservative society where sex-related issues constitute a taboo for discussion, young people are hindered from actively seeking counseling regarding sexual health. Social ostracism and disease – associated stigma have created an attitude of negativity and shame in the minds of especially young people. Hence, the emerging pandemic of HIV/AIDS had an adverse impact on the country's economy.

AIDS is one of the tragedies of our society that persons infected with HIV/AIDS not only have to bear the burden of their illnesses but also have to face the torment of discrimination and stigma. The epidemic of fear, stigmatization and discrimination has underlined the ability of individuals, families and societies to protect themselves and provide support and reassurance to affected ones. The diseases HIV and AIDS are becoming more common in society yet sadly some people are still undereducated and misinformed about the illnesses. Unfortunately, there are people who have a negative attitude to patients and act in an irresponsible way in various organizations. In the majority of developing countries like India, families are the primary caregivers when somebody falls ill. Presently not all family responses are supportive. It has been revealed by the research studies that HIV positive members of the

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family find themselves stigmatized and discriminated against within the home and in the community. Physical and social isolation at home and community, blocked entry to common facilities, blocked entry to public places, denial of death rituals and blocked access to spouse, children and other relatives represents negative attitude of individuals towards HIV/AIDS patients. There is concern that women and non-heterosexual family members are more likely than children and men to be mistreated. In the workplace, people living with HIV are experiencing stigma from their co-workers and employers such as social isolation and ridicule as experience discriminatory practice, such as refusal of employment. Previous research studies have shown that in healthcare settings, people living with HIV are experiencing stigma and discrimination such as being refused medicines, access to facilities, receiving HIV testing without current and a lack of confidentiality. A brief overview of research studies is provided here:

## REVIEW OF RELATED LITERATURE

It was revealed by Kelly et. al. (1987) that the students held negative and prejudiced attitudes towards both the AIDS and homosexual patients. This finding suggests that medical educators should recognize that many students have stigmatizing, negative attitudes towards homosexuals and patients with AIDS. Bharat (1996) found that although a majority of those who had shared their HIV status with their families received care and support, it was largely men rather than women who qualified for such care. Forms of discrimination against women with HIV included being refused shelter; being denied a share of household property, being denied access to treatment and care; and being blamed for a husband's HIV diagnosis especially when diagnosis was made soon after marriage. Deshmukh, Wadhva & Zodpey (1998) observed that students pursuing science from Nagpur University in Central India held a fairly positive attitude towards people with AIDS compared with the arts and commerce students. Massawe et. al. (2001) determined the acceptability of counseling and testing and participation in a mother-to-child HIV-1 transmission intervention study using antiretroviral therapy. It was found that out of 68%, only 16.7% of enrolled women disclosed their positive HIV serostatus to their sexual partners. The main reasons for not disclosing the HIV serostatus were fear of stigma and divorce. Sixty percent of informed sex partners agreed to be tested for HIV and 69% tested HIV positive. Kumari (2004) reported severely discriminatory attitude of Indian youth, from a group of students from the state of Jharkhand, where 95.8% said that they would prefer not to have medical treatment in a hospital where HIV/AIDS patients are treated, while 76.4% said that they would like to terminate a friendship with a person found to be HIV positive. Chand & Gupta (2010) revealed that the current level of knowledge, belief and attitude among the students of the National Institute of Technology, Hamirpur (H.P.) about HIV/AIDS. Overall knowledge about HIV/AIDS was found moderately high. Girl students' were found to have better knowledge regarding the transmission and prevention of HIV/AIDS than the boys. Misconceptions were found to exist regarding mode of transmission and prevention. There seemed a substantial negative attitude towards HIV/AIDS positive patients. Turan et. al. (2011) studied the HIV/AIDS stigma and refusal of HIV testing among pregnant women in rural Kenya. Rate of anticipated HIV/AIDS stigma were high-32% anticipated break-up of their relationship and 45% anticipated losing their friends. Women who anticipated male partner stigma were more than twice as likely to refuse HIV testing, after adjusting for other individual level predictors.

## OBJECTIVES OF THE STUDY

1. To prepare the preliminary draft of a scale for measuring public attitude towards HIV/AIDS patients.
2. To carry out item analysis of preliminary draft of scale for attitude towards HIV/AIDS patients.
3. To estimate reliability of scale for attitude towards HIV/AIDS patients through test-retest method and internal consistency method.
4. To ascertain the validity of scale for attitude towards HIV/AIDS patients.
5. To establish norms for interpretation of scores obtained on scale for attitude towards HIV/AIDS patients.

## METHODOLOGY

For construction and standardization of scale for measuring public attitude towards HIV/AIDS patients, survey technique under descriptive method of research was employed by the investigators.



### *Sampling:*

Multistage sampling technique in combination with systematic sampling technique was employed in this investigation. The sample for the present investigation was taken from Mandi, Kullu and Kangra districts of Himachal Pradesh. Firstly, a sample of 120 individuals was selected for carrying out item analysis of preliminary draft of attitude scale towards HIV/AIDS patients. At the second stage, a sample of 50 individuals was taken for estimating test-retest reliability of attitude scale. At the third stage, a sample of 55 individuals was selected to compute split-half reliability of the attitude scale. At the last stage, a sample of 310 individuals (above 18 years of age) was selected for establishing norms for interpretation of scores obtained on scale for attitude towards HIV/AIDS patients.

### *Technique Employed for Developing Scale for Measuring Attitude towards HIV/AIDS Patients:*

For development of attitude scale, the method of summated ratings as given Likert (1932) was employed. Each item of the scale was rated on five consecutive points i.e., strongly agree, agree, undecided, disagree and strongly disagree. An individual's total attitude score towards HIV/AIDS patients is calculated by adding the scores on all items. The items are scored in such a manner that, if the answer to a positive item is 'strongly agree', a score of '5' is given, for 'agree', a score of '4', for 'undecided', a score of '3', for 'disagree', a score of '2' and for 'strongly disagree', a score of '1' is given. On the other hand, in case of negative items, the above scoring procedure was reversed completely. The sum of scores on all statements is considered as respondent's total attitude score towards HIV/AIDS patients. The total attitude score on the scale can range from 36 to 180. The higher score on the scale indicates favourable attitude towards HIV/AIDS patients.

### *Preparation of Initial Draft of Attitude Scale:*

At the first stage, a list of items was prepared, which were pooled from various sources. For this, the statements were pooled from various print and non-print sources as well as critical discussions with the experts in the field. The statements were added on the basis of discussions with researchers, psychologists, doctors, counselors, mass education and information officers and health workers. Thus, an initial draft of attitude scale comprising of 42 statements was prepared. These items were initially prepared in Hindi language in order to improve their usefulness by bringing better understanding among the individuals for whom it is mainly intended for.

After preparing initial draft of attitude scale towards HIV/AIDS patients, the items were reviewed by seeking the experts' opinion. The initial list of 42 items was given to 25 experts for rating each item on a scale i.e. '0' for item/statement 'not acceptable', '1' for 'doubtful' item and '2' for 'acceptable' item. The experts were researchers, medical officers, psychologists, counselors, doctors, mass education and information officers and health workers. They were explained the evaluation criterion and requested to evaluate each item in terms of its technical and logical accuracy as well as relevance to the object under consideration i.e. attitude towards HIV/AIDS patients. On the basis of criticisms and comments offered by experts, only those items which received atleast 90% approval of the experts were retained for try-out form of attitude scale towards HIV/AIDS patients. In the light of this, 6 items were rejected from the initial draft. Thus, try-out form of attitude scale towards HIV/AIDS patients was comprised of 36 items. In addition to this, the help of language experts was also sought in order to remove any sort of linguistic ambiguity contained in the items. For this, the copies of attitude scale towards HIV/AIDS patients were given to experienced language teachers teaching in schools and colleges. Their suggestions were taken into consideration and necessary changes were made. Out of 36 items in try-out form of attitude scale, 8 items were of positive type and rest 28 items were of negative type.

## **DATA ANALYSIS AND RESULTS**

### **Item Analysis of Preliminary Draft (Try-Out Form) of Attitude Scale:**

The technique of item analysis was employed for the selection/rejection of statements for preparing final draft of attitude scale towards HIV/AIDS patients. For this, the try-out form of attitude scale was administered on 120 individuals. Afterwards, 27% of individuals with lowest total scores and 27% of individuals with highest total scores on attitude scale were taken into consideration. The middle 46% individuals were weeded out and not considered for future analysis. Then, the mean and standard deviation for each



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item/statement separately for high scoring group as well as low scoring group were calculated and then onwards, 't' values were computed to find out the significance of mean difference among two groups separately for each item of the scale. The value of 't' is a measure of the extent to which a given item/statement differentiates between high and low scoring groups of individuals. According to Edwards (1957), 't' value equal to or greater than 1.75 indicates that the average response of high and low scoring groups to item/statement differs significantly. Thus, 't' values for all 36 items of try-out form of attitude scale towards HIV/AIDS patients were computed and the statements having 't' value equal to or greater than 1.75 were selected for final draft of attitude scale towards HIV/AIDS patients and rest of the statements having 't' values less than 1.75 were rejected. The 't' values in respect of each item of try-out form of attitude scale towards HIV/AIDS patients are given in Table 1.

Table 1. 't'-Values in respect of Various Items of Try-out Form of Scale for Attitude towards HIV/AIDS Patients

Item Number	't' Value	Item Number	't' Value
1	2.86	19	1.76
2	1.85	20	3.62
3	3.57	21	3.43
4	1.85	22	1.34 *
5	3.54	23	4.7
6	2.01	24	3.24
7	0.38 *	25	2.32
8	1.95	26	2.57
9	3.36	27	1.81
10	3.69	28	5.00
11	3.29	29	3.05
12	2.41	30	2.50
13	3.54	31	4.26
14	2.12	32	3.15
15	3.94	33	2.95
16	1.79	34	2.58
17	3.94	35	0.13 *
18	3.13	36	1.12 *

Note: \* indicates rejected items ( $t < 1.75$ ).

After carrying out item analysis procedure, four items with serial number 7, 22, 35 and 36 in the try-out form of attitude scale were rejected and remaining thirty two items were selected for final draft of attitude scale towards HIV/AIDS patients. In the final draft of attitude scale comprising of 32 items, 6 items (with serial no. 7, 24, 26, 27, 31 and 32) were of positive type and remaining 26 items were of negative type. A copy of final draft of attitude scale is given in Annexure-I.



### Reliability of Attitude Scale:

In the present study, the reliability of attitude scale was established by following methods:

#### Test-Retest Reliability

The test-retest reliability of attitude scale was estimated by administered the final draft of the scale twice on 50 individuals after a time gap of 15 days. Then, the correlation coefficient was calculated between the two set of scores by applying "Pearson's Product Moment Correlation Method". On applying this method, the correlation coefficient 'r' i.e. reliability index came out to be 0.78. This value of reliability index i.e. 0.78 can be considered to be appreciably satisfactory index of reliability.

#### Split-Half Reliability

For estimating the reliability of attitude scale by split-half method, the statements of final form of attitude scale were divided into two halves by following odd-even procedure. The two halves of attitude scale were administered on 55 individuals and scoring was done separately for two halves of the scale. Then, the value of correlation coefficient was computed between the scores of two halves by using Karl Pearson's 'Product Moment Correlation Method'. On applying product moment correlation method, the correlation coefficient for only one half of the attitude scale was computed which came out to be 0.61. The reliability of the whole or complete attitude scale was obtained with the help of 'Spearman-Brown Prophecy Formula'. Thus, the split-half reliability of full attitude scale came out to be 0.757 which was higher than the table value ( $r = 0.362$ ) at 0.01 level of significance, for df 53 and can be termed as highly significant. This was indicative of the fact that the present attitude scale was internally consistent to measure the attitude towards HIV/AIDS patients.

#### Validity of Attitude Scale:

The validity of attitude scale was ascertained in terms of item validity, content validity, intrinsic validity and cross validity. Attitude scale was considered valid enough in terms of item validity because only those items were retained in the final draft of the scale which were having t-values equal to or greater than 1.75 (highly discriminating items). The content validity of attitude scale was established by carrying out critical discussions with field experts at the time of development of preliminary draft of the scale. The experts were of the opinion that the statements in the attitude scale were fully adequate and relevant to measure the public attitude towards HIV/AIDS patients. In addition to this, only those items were retained in the preliminary draft of attitude scale for which there has been at least 90 % agreement amongst experts. Thus, the attitude scale was found to possess adequate content validity. Furthermore, the attitude scale can be considered to have adequate intrinsic validity because split-half reliability of the scale was found to be 0.757 which is a fairly high correlation index. The cross validity of attitude scale was ensured by taking entirely different samples of individuals (above 18 years of age) belonging to various professions in order to carry out item analysis, establishing reliability, internal consistency and for developing norms.

#### Norms for Interpreting Attitude Scores:

Before establishing the norms for interpretation of attitude scores obtained by individuals on the scale, the obtained data were verified for possessing normality. This was done by computing the values of skewness and kurtosis for overall scores of sampled individuals ( $N = 310$ ) on the inventory. The value of skewness came out to be -0.163 showing the distribution of total attitude scores as somewhat negatively skewed. In addition to this, the value of kurtosis was calculated to be 0.251 indicating that the distribution of attitude scores is leptokurtic in nature. These values indicated that the selected sample of individuals for establishing norms does not diverge much from normality. Further, on the basis of collected data, the mean and standard deviation for total attitude scores of all sampled individuals was calculated which came out to be 122.56 and 13.41 respectively. Then, the raw attitude scores were converted into Z-scores by taking into consideration the values of mean and standard deviation in order to establish norms for interpretation of obtained attitude scores. The following range of z-scores on a continuum can be used as suggestive norms for interpreting scores obtained on scale for measuring attitude towards HIV/AIDS.

Table 2. Norms for Interpretation of Attitude Scores



Z-score Range	Attitude Scores	Interpretation
+2.01 and above	150 and above	Extremely Highly Favourable
+1.26 to +2.00	140 to 149	Highly Favourable
+0.51 to +1.25	130 to 139	Above Average Favourable
-0.50 to +0.50	116 to 129	Average / Moderate
-0.51 to -1.25	106 to 115	Below Average Favourable
-1.26 to -2.00	96 to 105	Less Favourable
-2.01 and below	95 and below	Extremely Less Favourable

### CONCLUSION

Following conclusions may be drawn with respect to construction and standardization of scale for measuring attitude towards HIV/AIDS patients:

1. The present attitude scale can be used for any type of Indian or non-Indian social and demographic situations.
2. The initial draft of attitude scale was comprised of 42 statements which was put to strict and rigorous examination in terms of expert opinions. After such critical examination and taking into consideration the suggestions of field experts, six statements were rejected and certain items were modified/revised. The preliminary draft of scale was thus comprised of 36 items. After carrying out item analysis, four statements with t-values less than 1.75 (least discriminating items) were rejected and final form of the scale has 32 items. Out of these, 6 items were positive in nature and 26 items were of negative type.
3. The reliability coefficients computed through test-retest and split half method were found to be 0.78 and 0.757 which were highly significant and thus attitude scale possessed appreciably high stability and internal consistency respectively.
4. The validity of attitude scale has also been ascertained in terms of item validity, content validity, intrinsic validity and cross validity which have been found to be satisfactory.
5. The suggestive norms for interpretation of obtained scores on the attitude scale have been developed on the basis of which, the level of attitude can be ascertained.

### APPLICABILITY AND IMPLICATIONS

The present research work was undertaken to construct and standardize a tool (attitude scale) to measure the attitude of general public towards HIV/AIDS patients. The present scale can be used with any type of diverse group of population differentiated on the basis of any social, geographic or demographic conditions. The scale is fairly reliable and valid to measure individuals' attitude towards HIV/AIDS patients. The present attitude scale can be administered easily, scored and interpreted conveniently. The scale can be used both in individual and group situations. The responses obtained on this scale are objective in nature, conveniently interpretable and can be used for bringing modification in attitude of individuals towards different aspects of HIV/AIDS patients. The findings revealed on the basis of this attitude scale may help in designing various awareness and intervention programmes in order to curb the menace of HIV/AIDS stigma in current social scenario.

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#### ANNEXURE – 1

Si. No.	Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	HIV/AIDS patients should be home arrested.					
2	If my child is HIV infected, I would make him/her die.					
3	HIV/AIDS patients spread the feeling of alienation and apathy in the society.					
4	I would not like to join such organization where HIV/AIDS infected people work.					
5	HIV/AIDS patients should be hanged.					
6	If my parents get HIV/AIDS infected, I would arrange a separate house for them.					
7	HIV/AIDS patients should be given equal					



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- respect in family and society.
- 8 HIV/AIDS patients should not be allocated any work because they are not able to do it in a proper manner.
  - 9 HIV/AIDS patients create hindrance in the path of national development.
  - 10 Doctors hesitate to treat HIV/AIDS patients.
  - 11 There should be provision of separate homes for HIV/AIDS patients like orphanage, old age homes.
  - 12 HIV/AIDS patients are characterless people.
  - 13 There is no self-respect of HIV/AIDS patients.
  - 14 If my friend gets infected with HIV/AIDS, I would break my friendship with him/her.
  - 15 I would hesitate in shaking hand or hugging an HIV/AIDS patient.
  - 16 Children infected with HIV/AIDS should be barred from giving admissions in the school.
  - 17 The indifferent attitude of family members forces HIV/AIDS patients to leave their home.
  - 18 HIV/AIDS patients should be banned from making sexual relationships with his/her life partner.
  - 19 HIV/AIDS patients should not be allowed to get married.
  - 20 HIV/AIDS patients should not be permitted to take part in social festivals and functions.
  - 21 If I would come to know after my marriage that my life partner is HIV/AIDS infected, then I would divorce him/her.
  - 22 It is shameful for me to have any of my family member infected with HIV/AIDS.
  - 23 There should be provision of mercy death for HIV/AIDS patients.
  - 24 There should be special constitutional provisions for HIV/AIDS patients.
  - 25 HIV/AIDS patients should be socially



- discarded.
- 26 HIV/AIDS patients should not be allowed to take drinks or smoke in order to live a long and healthy life.
- 27 If any of my family member gets infected with HIV/AIDS, then I would take due care of him so that it would not spread to other family members.
- 28 HIV/AIDS patients have no right to remain in any job or official post.
- 29 I feel that if I will tell my friends about my HIV infected status, then they will make fun of me.
- 30 The future generations of the HIV/AIDS patient should be seen with suspicion.
- 31 I would not hesitate to marry an HIV/AIDS patient.
- 32 If any of my known gets infected with HIV/AIDS, I will cooperate and console him even after unfavourable attitude of society.

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Dr. Vishal Sood is presently working as Assistant Professor (Education) in ICDEOL, H. P. University, Shimla. Prior to this, he was with School of Education, IGNOU, New Delhi and also served as Associate Professor (Education) in Abhilashi P. G. College of Education, Nerchowk (H. P.). He has guided six Ph. D. research works, more than a dozen research works at M. Phil. level and more than two dozens of research works at M. Ed. level. He has published more than two dozens of research papers in leading national and international journals. He has attended a number of seminars, conferences and workshops. In addition, to his credit, he has got a total of thirteen psychological tests published from National Psychological Corporation, Agra.