Development of Sexual Orientation Scale

K. Sagayaraj1 and C. N. Ram Gopal1

Abstract

Background: Sexual orientation is a continuing amorous pattern of attraction toward the opposite sex (heterosexual), same sex (homosexual), or both sexes (bisexual) or it is lack of sexual desire toward anyone (asexual). Psychosocial and biological explanations regarding the development of an individual's sexual orientation are related to life incidents, parenting patterns, psychological attributes of the individual, or may also be related to an imbalance in sex hormones. There is no strong evidence-based scientific research revealing the exact causes for one's sexual orientation for it is not static but dynamic in nature.

Aim: The purpose of the study is to develop a psychological assessment scale which identifies an individual's sexual orientation, particularly when he/she denies to reveal his/her sexual preference in the marital life.

Methodology: A tool with 32 items was developed by conducting focus group discussion, interviewing the experts in the relevant fields and reviewing the literature. Test-retest and split half reliability were established with Cronbach's alpha to analyze the internal consistency. Both logical-based validity (face, content, and focus group) and empirical-based validity (criterion, concurrent, convergent, and divergent) were established. These methodologies were standardized by a sample of 506 participants (217 males and 289 females) between the age range of 18 and 50 years.

Results: The test-retest reliability was found to be \( r = 0.96 \), Spearman-Brown and Guttman split half reliability was 0.73, and Cronbach's alpha ranged from \( \alpha \) 0.71 to 0.88.

Implications: This scale would be beneficial for premarital counselors and mental health professionals to understand the sexual orientation of their clients explicitly.

Keywords

Asexual, bisexual, heterosexual, homosexual, LGBTQ, sexual orientation

Introduction and Background

The term orientation is widely referred as having relation with something or with someone. Sexual orientation is said to be the continuing amorous pattern of attraction toward the opposite sex or same sex or to both sexes. The psychological and social aspects on these pattern of attractions are majorly categorized under heterosexuality (attraction toward opposite sex), homosexuality (attraction toward same sex), bisexuality (attraction toward both sex), and asexuality (lack of sexual attraction to anyone) by the American Psychological Association, 2008.1 Sexual orientation is about the following: with whom you are attracted to and toward whom you feel drawn to romantically, emotionally, and sexually. It is different from gender identity. Gender identity is defined as a personal impression of oneself as a male or female. It can be the same as the sex assigned at birth or it can differ from it. It is not completely identified that why somebody may be lesbian, gay, straight, or bisexual;2-4 however, analysis does show that sexual orientation can be probably caused by biological factors.5 Coleman proposed that one’s sexual
orientation is primarily determined by the objects of one’s sexual fantasies and desires. After a decade of research in human sexual behavior, Alfred Kinsey quoted that there have not been sufficient answers to the questions regarding human sexual behavior and orientation that itself is represented as one of the least explored segments of biology, psychology, and sociology. In his research, Alfred had also developed the heterosexual-homosexual rating scale which later influenced the multidimensional scale of sexuality, self-assessment of sexual orientation, and Klein sexual orientation grid. These scales are in the form of direct questions, are easily predictable, and applicable in the Western context. Hence, developing a new standardized scale which is suitable and relevant in the Asia Pacific context, specifically for Indian culture, is much needed in the sexual medicine field.

In diverse countries like India, it had been considered that lesbian, gay, and bisexual are taboo subjects in the civil society. There is no official data available for lesbian, gay, bisexual, transgender, queer (LGBTQ) population in India; however, the administration of India submitted figures to the Supreme Court in 2012, as indicated by which, there were about 2.5 million gay individuals recorded in India. These figures are just founded on those people who have self-proclaimed to the Ministry of Health. International human rights law indicates that all human beings are persons before the law, regardless of their sexual orientation or gender identity, entitled to freedoms deriving from the inherent dignity of the human person (universal declaration of human rights; article 26 of the ICCPR).

To annihilate the myths and misconceptions about sexual orientation in India, it is important to have evidence-based research in the sexual orientation which is lacking in the area of psychological assessment. Hence, the purpose of the study is to develop the psychological assessment scale which identifies the individual sexual orientation, especially when they deny to reveal their sexual preference in the marital life. It will be useful in the field of sexual medicine and marital counseling for proper diagnosis and further management. It will assess an individual’s predominate sexual orientation in the aspects of being heterosexual, homosexual, bisexual, and asexual. The aim of the study is to develop a psychological scale to identify the sexual orientation of the individual and statistically standardize the reliability and validity of the developed sexual orientation scale.

Methodology

Research Design

Scale validation research design was adopted for this study.

Development of Scale

The scale items were developed by reviewing the supportive literature and existing scales in the Western context. The preliminary 45 items scale was sent to 22 different university professors, research scholars, and psychology graduates in India for content analysis and feedback. Their suggestions and modification were noted for further development of the scale. Focus group validity was established by conducting a focus group discussion with various experts in the sexual medicine field.

Selection of Items

After the logical-based validation, the items were cut down from 45 to 32 items and principal component analysis computation was done. As a rule of thumb any item with the extraction value of above 0.5 could be included in the final scale. The extraction values for the developed scale ranged from 0.501 to 0.900 and also no 2 items had similar correlation; hence, all the 32 items were included for the final assessment.

Sampling Technique

Convenient sampling method was opted for the study, to collect the required samples. The participants were selected across India by the willingness and voluntary consent to the study. The corresponding author collected hard copy of samples in and around Chennai and soft copy of data was collected by using Google forms from major cities such as Pondicherry, Cochin, Bangalore, Mysore, Hyderabad, Mumbai, and Delhi-NCR. A formal telephonic discussion was made for the further clarification on the study.

Sample Selection Criteria

To standardize the scale in the Indian context, the following inclusion and exclusion criteria were followed.

Inclusion Criteria

Both males and females with age between 18 and 50 years, who could speak and write in English, were included.

Exclusion Criteria

Transgenders, people aged below 18 years and who could not understand English were excluded.

Sample Description

A sample of 506 participants from all over India took part in this study. The age of the participants ranged from 18 to 50 years. Out of 506 participants, 217 were males and 289 were females. For all samples, the minimum educational level ranged from high school or post high school to maximum of doctor of philosophy level. Age, gender, educational qualification, and current relationship status were the major demographic details collected for the study.
Administration

The participants who took part in this study were from different workplaces such as colleges, universities, and corporate offices. They were approached individually and in group form. An introduction about the background and need for the study were addressed by the researcher. Also, details regarding voluntary participation and the right to withdraw from the study were informed. Anonymity and confidentiality were assured for all the participants. After building the rapport the instructions were given.

Ethical Considerations

As sexual orientation is a sensitive topic which may create misunderstanding of the study, the researcher ensured about giving the introduction including explanations of the procedures involved and its corresponding benefits to the society. The participants were included in the study after obtaining informed consent from them. This research study was approved with modifications suggested by Institutional Human Ethics Committee of Chettinad Academy of Research and Education, Kelambakkam, Chennai, Tamil Nadu, India.

Scoring

The scoring procedure for Sexual Orientation Scale is very objective and separate scoring pattern strictly needs to be followed for both males and females for an accurate evaluation. A higher score in the particular dimension indicates the ultimate sexual orientation of the subject.

Scoring for Males

From item numbers 1 to 28 (part I) are Likert types which are rated in 4-point scale as follows: Always, 3; Sometimes, 2; Rarely, 1; Never, 0.

The respective dimensions for male participants for part I scoring as follows: (a) Heterosexual: 1, 5, 10, 13, 18, 22, 25; (b) Homosexual: 2, 6, 9, 14, 17, 21, 26; (c) Bisexual: 3, 7, 11, 15, 19, 23, 27; (d) Asexual: 4, 8, 12, 16, 20, 24, 28.

For part II, item numbers 29, 30, 31, 32 scoring need to be done, as done for the male population. By adding part I and part II scores together the final score can be calculated.

For Item numbers 29, 30, 31, 32, sexual orientation dimensions as follows: (a) Option A indicates homosexual; (b) Option B indicates heterosexual; (c) Option C indicates bisexual; (d) Option D indicates asexual.

The maximum possible score for each dimension is as follows: Heterosexual, 29; Homosexual, 37; Bisexual, 45; Asexual, 53.

Scoring for Female

From item numbers 1 to 28 (part I) are Likert types which are rated in 4-point scale as follows: Always, 3; Sometimes, 2; Rarely, 1; Never, 0.

The respective dimensions for female participants for part I scoring are as follows: (a) Heterosexual: 2, 6, 9, 14, 17, 21, 26; (b) Homosexual: 1, 5, 10, 13, 18, 22, 25; (c) Bisexual: 3, 7, 11, 15, 19, 23, 27; (d) Asexual: 4, 8, 12, 16, 20, 24, 28.

For part II, item numbers 29, 30, 31, 32 need to be scored as option A, 4; option B, 2; option C, 6; and option D, 8.

By adding part I and part II scores together the final score can be calculated to identify the predominate sexual orientation of the subject.

Statistical Analysis

Descriptive statistics was used to find out the mean (M), standard deviation (SD) of the data; Pearson’s correlation was used to find out the relationships between the variables; Cronbach’s alpha was used to test the internal consistency of the tool; principal component analysis was done to find out the factors that emerge out of the variables; and independent t test was used to find out the significant difference in demographic variables.

Statistical Validation

Reliability

1. Test-Retest Reliability: The developed scale was administered on group of 40 people (20 males and 20 females) with age ranging from 20 to 30 in the time period of 20 days of interval. By computing the Pearson correlation coefficient between the test and retest results, it was found to be as \( r = 0.945 \) which is highly correlated and dependable.

2. Cronbach’s Alpha: This scale was developed in a unique way to assess the male and female sexual orientation in 4 different dimensions (heterosexual, homosexual, bisexual, and asexual). The items in one particular dimension will not measure similar to the other dimensions in any form; hence, dimension-wise detailed Cronbach’s alpha was used to measure the internal consistency of the overall scale. The value ranged from 0.71 to 0.88 and indicated that all the items were found to be highly reliable dimension-wise. Hence, all the items were included (refer to Table 1).

| S. No. | Dimensions     | No. of Items | Cronbach’s Alpha |
|--------|----------------|--------------|------------------|
| 1      | Male heterosexual | 7            | 0.77             |
| 2      | Male homosexual  | 7            | 0.88             |

(Table 1 Continued)
Table 3 shows the extraction value of each item, using principal component analysis. As per statistical computation, any item with the extraction value above 0.5 could be included. Since the extraction values range from 0.501 to 0.900 and also no 2 items have similar correlation, all the items were included for a final assessment.

Table 2. Split Half Reliability of 506 Participants $P < 0.05$

| Part 1 | No. of items | 16 |
|--------|--------------|----|
| Total no. of items | 32 |

Spearman-Brown coefficient 0.73

Table 3. Extraction Value of Individual Items

| Initial | Extraction |
|---------|------------|
| Q 1  | 1.000 | 0.621 |
| Q 2  | 1.000 | 0.686 |
| Q 3  | 1.000 | 0.634 |
| Q 4  | 1.000 | 0.524 |
| Q 5  | 1.000 | 0.800 |
| Q 6  | 1.000 | 0.765 |
| Q 7  | 1.000 | 0.654 |
| Q 8  | 1.000 | 0.612 |
| Q 9  | 1.000 | 0.872 |

Validit y

Scale validation is the degree to which the scores generated by the instrument accurately measure the purpose of the assessment. In psychology, a scientifically validated scale
Table 4. Rotated Component Matrix (N = 506)

| Q. No. | 1     | 2     | 3     | 4     | 5     | 6     |
|--------|-------|-------|-------|-------|-------|-------|
| Q 22   | -0.678| 0.611 | 0.078 | -0.014| 0.139 | 0.154 |
| Q 10   | -0.666| 0.636 | 0.074 | -0.009| 0.128 | 0.144 |
| Q 9    | 0.641 | -0.637| 0.039 | -0.040| -0.166| -0.131|
| Q 18   | -0.594| 0.562 | 0.203 | -0.054| 0.073 | 0.161 |
| Q 17   | 0.583 | -0.562| 0.201 | -0.121| -0.188| -0.120|
| Q 14   | 0.579 | -0.331| 0.313 | -0.173| -0.237| -0.025|
| Q 21   | 0.570 | -0.488| 0.142 | -0.003| -0.076| 0.004 |
| Q 13   | -0.551| 0.087 | 0.319 | -0.079| 0.014 | 0.161 |
| Q 26   | 0.076 | -0.526| 0.087 | 0.231 | -0.397| 0.045 |
| Q 5    | -0.135| 0.653 | 0.159 | 0.058 | 0.065 | 0.187 |
| Q 25   | -0.204| 0.607 | 0.202 | 0.013 | 0.282 | 0.184 |
| Q 1    | -0.431| 0.576 | 0.267 | 0.029 | 0.025 | 0.130 |
| Q 6    | 0.560 | -0.375| 0.732 | -0.087| -0.186| -0.144|
| Q 2    | 0.487 | -0.222| 0.722 | -0.145| -0.289| -0.045|
| Q 7    | -0.243| -0.022| 0.641 | 0.086 | -0.100| 0.060 |
| Q 15   | 0.154 | 0.027 | 0.575 | -0.164| -0.131| 0.004 |
| Q 23   | 0.196 | 0.254 | 0.149 | -0.673| -0.048| 0.058 |
| Q 3    | 0.080 | 0.291 | 0.215 | 0.647 | 0.070 | 0.034 |
| Q 19   | -0.061| -0.223| 0.641 | 0.503 | 0.014 | 0.202 |
| Q 11   | -0.202| -0.222| 0.575 | 0.647 | 0.122 | 0.203 |
| Q 8    | -0.015| 0.121 | -0.035| 0.503 | -0.624| -0.050|
| Q 20   | -0.117| -0.089| 0.166 | 0.087 | 0.576 | -0.172|
| Q 4    | 0.211 | 0.112 | -0.101| 0.047 | 0.457 | -0.034|
| Q 12   | -0.163| -0.454| 0.127 | 0.060 | 0.787 | 0.230 |
| Q 16   | 0.143 | -0.117| 0.004 | 0.137 | 0.624 | 0.416 |
| Q 28   | 0.036 | 0.075 | -0.033| 0.049 | 0.132 | -0.516|
| Q 24   | 0.002 | -0.007| 0.034 | 0.134 | 0.062 | -0.859|
| Q 27   | 0.317 | 0.317 | 0.425 | 0.031 | 0.081 | 0.449|

Note: Extraction method: Principal component analysis; Rotation method: Equamax with Kaiser normalization.

justifies the measured outcome which will be used for betterment of individuals. The validation of the sexual orientation scale was done by logical and empirical based (Figure 1) methods proposed by Cronbach and Meehl in the year 1955.13

1. Face Validity
The sexual orientation 32 items scale’s face validity was found to be good. The participants found it easy to comprehend and respond. The words and sentences have been made it in a simple way to benefit even the moderately educated people. The scale items can be applicable to urban, semi-urban, and rural lifestyle of the population.

2. Content Validity
Content validity is a form of validation that measures all the facts that need to be addressed in a particular administration. A 45 items scale was developed on sexual orientation and was given out to 22 different colleges and universities across India. Comments, suggestions, and feedback were collected from graduates, postgraduates, research scholars, and professors from psychology and psychiatric social work background. It was also circulated to 5 different institutionalized counseling psychologists and special educators. From the obtained responses, a modified version of the scale with 32 items was developed, which also had high reliability.
3. Focus Group Validity

Focus group validation involves people who are required to be unfamiliar with each other and from a homogeneous population, with whom a social-orientated procedure is conducted and further evaluated for qualitative research. Along with the team of 10 panel experts from the fields of clinical, counseling, marital, and corporate psychological services, external view-based focus group validation was done. The session lasted for about 150 min. The influencing modern trends, social factors, cultural changes, individual freedom of choices, and related topics were covered and key points were noted down and modified accordingly in the 32-item tool.

4. Criterion Validity (Concurrent Validity)

Concurrent validity is an evidence-based method that confirms the existing outcome. It is demonstrated when the results of the current outcome correlate well with the previously measured outcome. A group of 15 people who were found to be heterosexual were administrated with the Kinsey scale (1948) and all individuals were found to be exclusively or predominantly heterosexual. The same population was assessed by using the 32 items sexual orientation scale and found to have heterosexual orientation. The results were well correlated with the existing results, and hence, evidence-based validation was obtained.

5. Construct Validity

a. Convergent Validity (correlating the developed tool with the exiting standardized tool that measures the same construct)

The developed 32 items sexual orientation scale’s convergent validity was examined by correlating the results with sell assessment of sexual orientation scale developed by Randall L. Sell. The test-retest reliability of the heterosexual dimension of sell assessment scale was found to be \( r = 0.93 \) and this is highly correlated with the developed 32 items sexual orientation scale. The test-retest reliability found to be as 0.94, indicating convergent validation.

b. Divergent Validity (the tests items that are not supposed to be related)

The developed 32 items sexual orientation scale’s divergent validity is established by comparing the existing sexual identity scale with the one developed by Stern et al. By using the Campbell and Fiske test validity technique on discriminant (divergent) validity, the average interitem correlations between the 2 scales were analyzed and the result obtained was 0.53 which is less than 0.85, the accepted ratio, and hence, we can conclude that divergent validity exists between the sexual orientation scale and the sexual identity scale. These 2 scales theoretically measure different constructs.

Table 5 shows the comparison of the gender difference in the 4 dimensions. The heterosexual and homosexual dimensions were found to be significantly different between male and female population at 0.01 confidence level. The bisexual and asexual dimensions were found to be nonsignificant at 0.01 confidence level.

Discussion

There are many scales available to assess one’s sexual disorder but very few notable tools exist to assess sexual orientation in the Western context. Sexual orientation is a culture-related concept and hence developing and

|                | Mean | SD  | df | t-Value |
|----------------|------|-----|----|---------|
| **Heterosexual** |      |     |    |         |
| Male           | 23.2 | 4.26| 216| 5.45**  |
| Female         | 20.9 | 4.91| 287|         |
| **Homosexual**  |      |     |    |         |
| Male           | 2.6  | 4.51| 216| 2.84**  |
| Female         | 3.8  | 4.37| 287|         |
| **Bisexual**   |      |     |    |         |
| Male           | 4.2  | 4.64| 216| 0.97NS  |
| Female         | 4.7  | 6.26| 287|         |
| **Asexual**    |      |     |    |         |
| Male           | 7.3  | 3.68| 216| 2.27NS  |
| Female         | 8.1  | 4.91| 287|         |

Note: ** denotes that the result is significant at \( P < .01 \); NS refers to not significant.
standardizing a tool for the Indian perspective is much needed. The items for this scale were developed by reviewing the supportive literature and existing scales in Western context. The preliminary items were sent out to 22 different university professors, research scholars, and psychology graduates for content analysis. Their suggestions and modification are noted for further development. Focus group validity was established by conducting focus group discussion with various experts in the sexual medicine field. A pilot study was done on a group of 40 people using the test-retest method with a gap of 20 days. 506 participants (217 males and 289 females) took part in the survey across India between the age of 18 and 50 years. Gender, educational qualification, and current relationship status were the major demographic details collected. The test-retest reliability of the tool was found to be $r = 0.945$, which indicates the high reliability of the scale. Split half reliability value was found to be $(\lambda) 0.73$ and Cronbach's alpha ranged from $(\alpha) 0.71$ to $0.88$; both these values represent the high reliability and internal consistency of the scale. The principal factor analysis (equamax rotation) emerged from the 32 items that were tabulated and each emerged values as per the dimension of highest relevance were labeled accordingly.

Logical- and empirical-based validities were established. The face and content validities of the scale were found to be good and easily comprehensible. The developed 32 items sexual orientation scale’s convergent and divergent validities were also established. From the gender comparison analysis, the heterosexual and homosexual dimensions were found to be significantly different between male and female population. The bisexual and asexual dimensions were found to be nonsignificant.

Results

The test-retest reliability of the sexual orientation scale is $r = 0.945$, split half reliability is $(\lambda) 0.73$. The scale in this study has 32 items with high internal consistency of Cronbach’s alpha ranging from $(\alpha) 0.71$ to $0.88$. The logical-based validities emphasize the theoretical-based justification of the scale. In empirical-based validity, the convergent validity correlation value is $r = 0.94$, and the divergent validity interitem correlation is $0.53$.

Conclusion

The developed tool on sexual orientation is found to be highly reliable and valid. It concisely measures the individual’s sexual orientation and categorizes them into heterosexual, homosexual, bisexual, and asexual categories. The tool can be used by psychologists, counselors, and educationalists, especially by clinical psychologists, rehabilitation psychologists, and psychiatrists for the clinical assessment of one’s sexual orientation.

Suggestions for Future Research

Further research can be done to standardize the tool in different populations, especially in the LGBTQ community people. It is suggested to study in specific cultural settings and it can also be extended to specific age groups and sociodemographic (socioeconomic, rural, and urban) background for the vast comparison.

Limitation

This scale will not provide the causes for one’s sexual orientation and it is only administrable for people who are above the age of 18 years. It is not applicable for transgender/third gender population.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Appendix

Sexual Orientation Scale

Instructions: This questionnaire pertains to how you have been feeling for most of the time about your sexual orientation. Your honest answers will help us in understanding your sexual needs. There are no right or wrong answers. There is no time limit to fill up the questionnaire but try to give your immediate response without thinking too much. The data gathered will only be handled for research purposes and no individual identity will be revealed under any circumstances.

Sex: □ Male □ Female

Age:

Educational Level:
□ Middle/High School □ Post High School Certificate/Diploma
□ Technical/Vocational Certificate □ Graduate/Postgraduate
□ M Phil/PhD/Honors/Above Postgraduate □ Others

**Current Relationship Status:**
- □ Single □ Committed □ Married □ Divorced
- □ Separated (Not Legally Divorced) □ Living Together
- □ Long Distance Relationship □ Other

| S. No. | Questions                                                                 | Always | Sometimes | Rarely | Never |
|--------|---------------------------------------------------------------------------|--------|-----------|--------|-------|
| 1      | I find myself attracted to woman                                          |        |           |        |       |
| 2      | I have been infatuated with a man                                         |        |           |        |       |
| 3      | I want to try an intimate kissing experience with both men and women      |        |           |        |       |
| 4      | I was not sexually attracted to anyone                                    |        |           |        |       |
| 5      | I want to be in love with a beautiful woman                               |        |           |        |       |
| 6      | I prefer my sexual gratification from a man                               |        |           |        |       |
| 7      | I am very much comfortable with the intimate physical touch of both men and women |        |           |        |       |
| 8      | I am not sexually aroused by anyone                                       |        |           |        |       |
| 9      | I would be happy to marry a man                                           |        |           |        |       |
| 10     | My lifelong partner should be a woman                                    |        |           |        |       |
| 11     | I am comfortable in sharing my bedroom with both men and women           |        |           |        |       |
| 12     | I think sex is not required to lead a romantic life                       |        |           |        |       |
| 13     | In my leisure time, I would like to chat with a woman                     |        |           |        |       |
| 14     | I had woken up with a sexual dream about a man                           |        |           |        |       |
| 15     | I get aroused by seeing the private body parts of both men and women      |        |           |        |       |
| 16     | I do not like to get a romantic proposal                                  |        |           |        |       |
| 17     | I prefer to be sexually active with a man                                 |        |           |        |       |
| 18     | I had a crush on a woman                                                 |        |           |        |       |
| 19     | I like to impress both men and women                                      |        |           |        |       |
| 20     | I never had the desire for dating anyone                                  |        |           |        |       |
| 21     | For a romantic movie, my ideal company would be a man                    |        |           |        |       |
| 22     | My preferable dating partner is a woman                                  |        |           |        |       |
| 23     | I have sexual feelings toward both men and women                          |        |           |        |       |
| 24     | I am not comfortable with anyone touching me with their hands            |        |           |        |       |
| 25     | After a shopping trip to a mall, I think of the woman whom I found attractive |        |           |        |       |
| 26     | I admire men who have the muscular physique                               |        |           |        |       |
| 27     | I have engaged in a sex chat with both men and women                      |        |           |        |       |
| 28     | I do not like to be hugged by anyone                                     |        |           |        |       |

**Part II**

**Choose Your Gender Preference**

| S. No. | Questions                                                                 | Man | Woman | Both Men & Women | Neither |
|--------|---------------------------------------------------------------------------|-----|-------|-----------------|---------|
| 29     | I am interested in                                                        |     |       |                 |         |
| 30     | I see my future life with                                                |     |       |                 |         |
| 31     | I would like to sleep with                                               |     |       |                 |         |
| 32     | My socially acceptable partner is                                        |     |       |                 |         |
References

1. American Psychological Association resources page. What is sexual orientation. 2008. https://www.apa.org/topics/lgbt/orientation. Accessed April 04, 2020.

2. LeVay S. Queer Science: The Use and Abuse of Research into Homosexuality. Cambridge, MA: MIT Press; 1996.

3. Bohan JS. Psychology and Sexual Orientation: Coming to Terms. New York, NY: Routledge; 1996.

4. Kalra G, Gupta S, Bhugra D. Sexual variation in India: a view from the west. Indian J Psychiatry. 2010;52(7):264-268.

5. Money J. Gay, Straight, and In-Between: The Sexology of Sexual Orientation. New York, NY: Oxford University Press; 1988.

6. Coleman E. Assessment of Sexual Orientation in Men and Woman. New York, NY: Haworth; 1988.

7. Kinsey AC. Sexual Behavior in the Human Male. Bloomington, Indiana: Indiana University Press; 1948.

8. Berkey BR, Perelman HT, Kurdek LA. The multidimensional scale of sexuality. J Homosex. 1990;19(4):67-88.

9. Sell RL. The sell assessment of sexual orientation: background and scoring. J Gay, Lesbian, Bisexual Identity. 1996;1(4):295-310.

10. Klein F. Are you sure you’re heterosexual? or homosexual? or even bisexual? J Bisex. 2014;14(3):341-346.

11. BBC resources page. World Asia India website. March 14, 2012. https://www.bbc.com/news/world-asia-india–17363200. Accessed April 04, 2020.

12. Universal Declaration of Human Rights; Article 26 of the ICCPR. International Commission of Jurists. Sexual Orientation, Gender Identity and International Human Rights Law. International Commission of Jurists, Geneva, Switzerland; 2009.

13. Cronbach LJ., Meehl PE. Construct validity in psychological tests. Psychol Bull. 1955;52:281-302.

14. Stern BB, Barak B, Gould SJ. Sexual identity scale: a new self-assessment measure. Sex Roles. 1987;17:503-519.

15. Campbell DT, Fiske DW. Convergent and discriminant validation by the multitrait-multimethod matrix. Psychol Bull. 1959;56(2):81-105.