

Construction And Standardization of Phubbing Scale Among Gen Z Population

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ABSTRACT

The study aimed to develop and validate a culturally appropriate Phubbing Scale for Malayalam-speaking Generation Z individuals in Kerala. Item and factor analysis were used to reduce a 19-item preliminary pool to a final 11-item uni-dimensional scale. The scale showed satisfactory validity and adequate internal consistency (Cronbach's $\alpha = .73$). Significant relationships with stress ($r = .314$), internet addiction ($r = .603$), and FOMO ($r = .563$) demonstrated criterion validity and validated the scale's ability to measure phubbing behavior in the Indian context.

Keywords: *Phubbing, Scale development, Internet addiction, Stress, Generation Z, Kerala*

The rapid development of mobile technology has resulted in a considerable increase in people's desire to use mobile devices (Revilla et al., 2016). According to O'Dea (2021) there were 7.1 billion mobile phone subscribers globally in 2021, up from 6.95 billion in 2020. According to projections, there may be 7.49 billion users worldwide in 2025 (O'Dea, 2021). These figures correspond with the rapid spread of the COVID-19 infection, which has resulted in severe limitations and isolation across the globe (T. Abel & McQueen, 2020), including extended lockdowns, online learning and employment, and meetings that increase internet and phone use (King et al., 2020; Mestre-Bach et al., 2020; Wiederhold, 2020). Mobile phones can undoubtedly entertain and connect people regardless of their geographic distance from one another, but excessive phone use has also been linked to a number of psychological issues and dysfunctional behaviours, such as "phubbing" (Fernández et al., 2020; Ho et al., 2014).

The issue of phubbing is getting more widespread as smartphone and handheld device dissemination increases along with the number of individuals using and adopting smartphones globally (Qian, 2014; Relling, 2014; and Pheeraphuttharangoon, 2015). To have a deeper knowledge of the phubbing culture, studies have been conducted. Extended research is starting to shed light on the phubbing phenomenon, but they are few in number. In the context of non-Western countries, the dearth of studies on phubbing culture is much more severe. There is no comprehensive explanation of what phubbing is, how it is

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practised, why it is practised, or how people perceive it in the context of non-western society.

Phubbing lowers the standard of social interactions because those who engage in it may come across as rude to those around them, showing a desire to avoid interpersonal engagement or a lack of awareness or interest in their surroundings (Anshari et al., 2016). Phubbing can also happen at any time or location, including during social events with friends and relatives, meetings, conferences, and meals (Nazir and Pişkin, 2016). Phubbing is a disorder that intersects with various addictions as a result of the design of cell phones. Phubbing describes the behaviour of ignoring someone while talking on a smartphone (Angeluci, 2016). Phubbing is a portmanteau that combines the words "phone" and "snubbing," and it refers to the practise of snubbing someone directly in their presence (Haigh, 2012).

Development and Planning of the Scale

If suitable scales do not exist to measure the variables of interest, or if researchers feel that existing scales are inadequate, then they may need to develop their own scales. There isn't a single standardised psychological test available to Malayalam-speaking individuals who want to test their phubbing behaviour. Those currently in use as measuring tools were developed in western settings, not Indian ones. The way a person perceives and handles problems, as well as how they seek out support systems and avoid stigma, are all influenced by cultural belief systems. So, creating a test that is culturally fair and also understanding the meaning assigned for cultural norm for each society is important while developing a test. Culture is also not limited to race and ethnicity but rather includes immigration and refugees, differently abled population, homelessness, LGBT communities, and religious communities. Cultural awareness of the researcher is mandatory in this process. Many cultural characteristics associated with education, religion, geographical area, language, occupation, income, and social status influence one's awareness of the world, and how they perceive things.

When developing psychometric scales, researchers should include a larger number of items in the preliminary item pool than the number required for the final psychometric scale(s). For statistical or methodological reasons, many items will be eliminated during the development process that follows.

Also, people are reluctant to reply to study instruments with a wide variety of items these days. When evaluating a scale with several items, central tendency or social desirability mistake can be observed. In light of this, the researcher decided to construct a scale using the fewest possible components.

Preparation of Items

The researcher considered developing a scale to assess a person's phubbing with the fewest possible statements after reviewing the phubbing literature that was currently available. The decision was made to create a uni-dimensional scale that has at least 10-20 questions with anchors of the 5-point Likert type (Never, Rarely, Sometimes, Often, and Very Often). In the beginning, 25 items were created in both English and the regional language of Malayalam. To verify the construct, it was distributed among experts in the field of psychology (Associate Professors and Assistant Professors at the University of Kerala) as well as psychologists who are employed as counsellors, trainers, etc. Some aspects were

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removed, added, or completely rewritten after the recommendations were received. As a result, 6 items were eliminated, leaving the final draft scale with 19 items.

METHOD

Participants

Participants of this study consists of 204 people from generation z category. Among them 84 were males and 120 were females. All participants belong Kerala and speak Malayalam language.

Instruments

1. Phubbing scale: Phubbing Scale consists of 19 items in Malayalam and English language with 5-point Likert type response category was used to measure or collect responses from the participants. The scale was built in such a way that it may be answered any anybody who can read and write Malayalam and English. The responses were marked in the right side of each statement. Instructions were clearly displayed in the top of the scale and subjects will take below 15 minutes to response the remarks.

Try out

Twenty-five PG Psychology students from the Psychology Department at the University of Kerala were administered the scale in order to determine how each individual would receive, perceive, interpret, and respond to each item. Almost all respondents said they had no difficulties understanding the statements' meanings or marking their responses, etc.

Procedure

The principal and class teachers were personally met by the investigator, who they spoke with about the study's goals, significance, and purpose. After getting permission, the class teacher presented the researcher to the subjects, described the study's goals and importance to them, and requested for their unwavering participation. The scale was distributed to each participant after obtaining written consent from them, and they were asked to complete them in accordance with the instructions provided on the instruments themselves. Even then, the researcher instructed the participants orally to improve the quality of their replies. It was gathered back and verified for omission after the completion of both instruments. Then, for additional statistical analysis, both instruments were scored/coded in accordance with the previously created scoring key and placed into a spreadsheet.

Item Analysis

The responses of all individuals in each item were put into a spread sheet and loaded into statistical software. There are numerous strategies accessible for item selection. Here the investigator opted to compute the corrected item-total correlation (Point Biserial Correlation) and discriminating power of each item in the scale. The criterion for including an item in the scale was as follows. If an item attains, corrected item-total correlation of .25 or above (Seema, n.d), discriminating power more than 2.58 (t value) as indicated by Edwards (1957) above will be include in the final scale.

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Table 1: Corrected Item–Total Correlation and Discriminating Power of Items

	Corrected Item-Total Correlation	Discriminating Power (t-value)
Item 1	.418	5.76
Item 2	.309	4.45
Item 3	.355	6.74
Item 4	.304	7.48
Item 5	.198	3.75
Item 6	.550	7.12
Item 7	.343	5.93
Item 8	.451	6.09
Item 9	.228	5.05
item 10	.478	7.73
item 11	.302	4.13
item 12	.485	6.88
item 13	.409	5.80
item 14	.407	7.41
item 15	.592	7.05
item 16	.510	7.51
item 17	.146	2.93
item 18	.531	7.16
item 19	.479	4.97

From the table it is seen that items 5, 9 and 17 were removed as they don't satisfy the condition of attaining corrected item-total correlation of .25 or above and, discriminating power more than 2.58. The remaining 16 items were analysed for factor structure by principal component method and varimax rotation with Kaiser Normalization. The result of varimax rotation presented in reveals that items are clustered in components (factors) either in one component. The preset criteria for selecting an item were those items which have a factor loading .45 or above. From analyzing the factor loadings items 8,10,12,13 and 15 are eliminated.

Table 2 - Factor Loadings of Exploratory Factor Analysis of Phubbing Scale

Item	Factor loadings
item 1	0.627
item 2	0.482
item 3	0.631
item 4	0.786
item 6	0.551
item7	0.681
item 8	0.381
item 10	0.327
item 11	0.581
item 12	0.422
item 13	0.400
item 14	0.499
item 15	0.309
item 16	0.871
item 18	0.588
item 19	0.676

Reliability

Reliability of the total scale was estimated by the method of Cronbach Alpha and found to be 0.73.

Validity

The test possesses face validity and content validity as judged by the experts in the field of psychology. Criterion Validity showing the correlations between Phubbing and related constructs (FoMO, Internet Addiction, and Stress) are given below.

Table 3: Criterion Validity showing the correlations between Phubbing and related constructs

Variable	Correlation with Phubbing (r)
Fear of Missing Out	0.563
Internet Addiction	0.603
Stress	0.314

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Conflict of Interest

The author(s) declared no conflict of interest.

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APPENDIX

Phubbing Scale

The statements given below are related to life experiences and your behaviour pattern. Choose to what extent each statement is correct or incorrect according to you. For each statement there are five possible response categories: A- never, B- rarely, C- sometimes, D- often, E- very often. Write the option on the right side of each item in the given column.

SN	Items	Response (A–E)
1	Even when I am having a good conversation with my friends, I have the tendency to check my smartphone.	
2	I always place/put my phone where I can actually see the notifications.	
3	If a conversation feels boring, I would check my phone.	
4	When I am playing games I would not pay attention to the people who are talking to me.	
5	Social media is more important to me than attending social gatherings or social activities.	
6	I believe direct interactions are less interesting than WhatsApp group chats.	
7	I fear losing an important call or notification if I put my phone on silent.	
8	I feel like my days are incomplete without the use of social media.	
9	I came late to many meetings and gatherings as I lost track of time using/playing with my phone.	
10	I constantly think that the online world is much more interesting than the real world.	
11	I feel more attached to my online friends than to my family or friends around me.	