Research Paper

Identification of items for evolving an instrument for the Assessment of Internet Use in Indian Context

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ABSTRACT

Background: Internet can be used for searching information, communication, academics, research, work/business, entertainment purpose, making friends, sharing sexual contents, connecting to strangers as well as expressing our thoughts. *Methods:* To identify the items for evolving an instrument for the assessment of Internet use. Semi-structured Interview Schedule (developed by the investigator and content validated by the 10 experts) and Internet Addiction Test (IAT) were administered. 6 Focus Group Discussions (FGD) conducted with 32 experts. A total of 75 samples, aged from 16 – 40 years, minimum one year of internet use, screened to identify Mild to Severe Internet addiction (N=50) through IAT, used stratified random sampling. *Results:* The themes and concepts were derived from the semi-structured interview schedule responses given by FGD as well as 50 sample responses. There were numerous factors revealed and three components were generated (ie; Internet usage patterns, Internet overuse/addiction and dysfunctions/consequences due to Internet use) and 69 items were shortlisted from the 147 items. *Conclusion:* The present study has given procedural steps for item generation for instrument development as well as the pattern of internet use. It will be helpful to screen the internet overuse.

Keywords: *Internet, Instrument, Identification, Items*

In the current scenario, internet use is one of the daily routine activities for most of people. There is a great deal in the contract of trepidation about the impacts, predominantly negative side especially unable to function effectively in face-to-face interaction, now it is an immense deal of apprehension by the society as well as mental health professionals. Most of the individuals may have withdrawnness due to online activities.

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Internet Use in Indian Context**

There is an increase in internet accessibility among 55.1% of the world's population. According to worldwide internet users, 7.4 billion world population use the internet in 2017[1]. There are 81% of internet users in the developed world and 41.3% of internet users in the developing world[2].

Currently, India has 123 crores (1.23 billion) Aadhaar digital biometric identity cards. 121 crores (1.21 billion) are using mobile phones and 44.6 crore (446 million) using smartphones[3 & 4]. India has been identified as the fastest growing online market, with a 41% increase in internet use. In terms of gender, men (71%) are using more internet in India with comparison to women's (29%)[1].

Internet springs an opportunity for real-time discussion for the people around the world but it is not just a medium of communication, it also has broadcasting ability to distribute the information to a countless audience[5].

Internet addiction commonly causes depression, anxiety, and feeling of loneliness, hence, a substantial number of individuals with internet addiction experience stress and revelation of low self-esteem[6, 7, 8, 10, 11, 12, 13]. Internet overuse has been detected that the rates of depression, stress, and suicidal ideation escalation as an Internet Addiction develops more serious[14 & 15]. Internet Addiction has been connected to other addictive propensities, such as alcohol and drug use[16].

The various assessment tool has been evolved to assess the Internet use, overuse, and addiction to helps this group for healthy use of technology. Commonly used assessment is Internet addiction test[17]. There are 21 existing assessments developed to assess the internet addiction and related issues which are, Cyber pornography addiction test, Internet gaming disorder-20 test, Problematic Internet Use Questionnaire, Short Internet addiction questionnaire, Generalized problematic Internet use questionnaire 1& 2, Internet Process addiction test, Chen Internet addiction scale, Problematic and Risky Internet use screening scale, problematic internet entertainment for adolescents, Gaming addiction inventory for Adults, Assessment for computer and internet addiction screener and Internet addiction proneness scale. All these assessments validated from the different age groups especially school going children to College students, there are no certain age criteria followed in the previous study. And also, some of the studies founded the dimensions based on exploratory as well as confirmatory factor analysis, the factors were loaded single minimum and maximum 4. The following factors were observed in the validation of available tools/tests in such as lack of control, time management problems, compulsive use, and withdrawal, tolerance, interpersonal and health-related problems, interference with daily routines and with family members, consequences, emotional and cognitive preoccupation with the internet and craving. The Young's Internet Addiction test has been continuously validated in different countries and got good psychometric properties. All these assessments were created in different dimensions due to a lack of confirmed criteria. However, in India, the internet addiction test was used but not validated. There is no gold standard of Internet addiction classification even though there were 21 different existing assessment instruments have been identified[18]. Therefore, the present study focused on the pattern of internet use and development process of an instrument for the assessment of Internet use in the Indian context.

METHODOLOGY

Aim:
To identify the items of an instrument for the assessment of Internet use in the Indian context.

Objectives
- To develop the semi-structured interview schedule for identifying the pattern of internet use.
- To generate items for the development process of an instrument for the assessment of Internet use.
- To assess the pattern of internet usage.

Participants
75 samples were selected randomly from the community (i.e., college students, staffs or professionals from Government and Private sector and working in Cybercafé, those who were working on the internet at least for a minimum period of one year) with the age range from 16 – 40 years resided in Bangalore, India. Those who comprehend the English language and both the gender male and female were included in this study.

Internet Addiction Test was administered on 75 samples, identified the Mild to Severe Internet Addiction from the 75 samples, then the subjects were asked to respond to the instrument evolved such as Socio-Demographic Data, Semi-Structured Interview (20 Questions) and the instrument for the assessment of Internet use items (24 items). Thus, the present study used a stratified random sampling method. The present study was approved by the Institutional Ethics Committee.

Instruments
1. **Sociodemographic data sheet:**
    A face sheet was prepared to obtain the socio-demographic data, it was developed by the researcher to collect socio-demographic details of each subject included in the sample such as Age (16-20, 21-25, 26-30, 31-35 and 36-40 years), Gender (Male and Female), Education (Minimum 8th standard), number of siblings, birth order, Marital Status (Unmarried, Married, Divorced, Widowed, Separated and Live in relationships), Family type (Nuclear, Joint, Single parenting), and Domicile (Rural, Urban and Semi-urban).
2. **Semi-Structured Interview Schedule for Item Generation**
    It was prepared by the investigator, it consists of two parts are as follows,
    (i) developed the general questions to elicit basic information like accessibility to use of gadgets, age of started using internet, usage hours per day and types of activity/sites accessed through internet which includes use of social networking sites, entertainment, personal use, restricted sites, academic-related sites and professional use.
    (ii) all the questions were framed using open-ended, close-ended questions framework and also some questions were taken using the rating/ranking method. It elicited the information's includes place of accessing internet, ranking the greatest to least watching sites, duration of watching internet activity, usefulness of internet, preferable time to use internet, use of internet in academics, habits, number of attempts to try to stop, familial issues due to using of internet use, significances

occur if not able to access internet as well as using internet and associated psychosocial problems.

The semi-structured interview was given to the Experts those who participated in the Focus Group Discussions as well as to individual Experts.

3. **Internet Addiction Test (IAT)** [17]

It consists of 20 questions and adopted to evaluate the participants level of internet addiction. Each item was scored using a five-point Likert scale, a graded response can be selected (1 = "rare" to 5 = "always"). The reliability of this test is 0.899 in Cronbach's Alpha indicates highly reliable. The present study was found the Cronbach's Alpha value (N = 100) of 0.898 shows reliable indicates this test has been used in the present study to find out the concurrent validity.

Procedure

The procedure of instrument development for the assessment of Internet use has 4 steps such as,

Step 1: Expert Suggestions for Semi-Structured Interview

The semi-structured interview schedule was developed by the investigator which evolved the pattern of internet use (accessing gadgets, hours of internet usage, frequent visits of internet sites, psychosocial factors associated with internet use, etc.) then given to 10 professionals those who works in the field of Clinical Psychology. The experts were asked to do content validation in terms of appropriateness and typological errors of the schedule.

Step 2: Focus Group Discussions for Item Generation

Each FGD's had Clinical Psychologists, Social Workers, Psychiatrists, Substance-related professional, Software professional, College student, Teacher, Homemaker, and other professionals like Nursing faculty, Physiotherapist and Occupational therapist. There were 32 experts participated in the overall FGD (ie; 1st 4FGD's = 5 Experts each and next 2 FGD's = 6 Experts each respectively).

Step 3: Item Generation

For the instrument development, Items were pooled through available tools/review of the literature and potential items were generated to assess the internet use by the investigator through Focus Group discussion.

Step 4: Preliminary Testing (Item generation)

75 samples were screened for the presence of mild to severe internet addiction using Internet Addiction Test taken from the community (i.e., college students, staffs or professionals from Government and Private sector and working in Cybercafé, those who are working on the internet at least for a minimum period of one year). Socio-Demographic Data, Semi-Structured Interview (20 Questions) and the instrument for the assessment of Internet use items (24 items) was administered for selected samples. Finally, the item refinement was done in terms of modified the order of items, checking the typological errors and selected two reversal items.

Step 5: Data Analysis for Preliminary Testing

The data was coded for SPSS 20.0.0.0 analysis. Frequencies and Descriptive statistics were performed in this step. Based on the analysis of Semi-structured Interview and responses of Instrument for the Assessment of Internet Use, the instrument items

improvised to 50 from 24. After this step, the present study moved into Instrument Validation.

RESULTS

Statistical Package for the Social Sciences 20.0.0.0 (SPSS 20.0.0.0) was used to analyze the obtained data. Descriptive statistics such as mean, standard deviation frequency, and percentages were used to examine the socio-demographic information in all the phases. The results formed based on the procedure are as follows,

Step 1: Expert Opinion for Semi-Structured Interview Schedule

In this step, there were 10 Experts opinion solicited in terms of content appropriateness and typological errors for Semi-structured Interview before starting the Focus Group Discussion (FGD). Semi-structured interview schedule (SSIS) questions were framed based on patterns of internet use, to elicit as much information as possible on various aspects.

Initially, a total of 39 questions developed and it was presented in a semi-structured format to elicit as much. Semi-structured Interview schedule was framed to elicit as much information as possible on various aspects of place of accessing internet, ranking the greatest to least watching sites (searching information, play online games, chat services, use of social networking sites, access pornography, E-mailing, face book chatting, checking out new websites, watch you tube, uploading/downloading movies, accessing pornographic sites, and project/research/office work), duration of watching internet activity (Search Engines: Google/Yahoo/MSN, Social Networking sites, chatting online, Downloading Music/Video/Game, Pornography, Online shopping/gambling/Gaming, and Google earth), usefulness of internet use, preferable time to use internet (After getting up/Before going to bed and both), use of internet in academics, Offline activities like Socialization, Family time, Work, Relaxation and Academic), number of attempts to try to stop, familial issues due to using of internet use, significances occur if not able to access the internet as well as using the internet and associated psychosocial problems (Feel lonely, Get angry, Restless/Irritable/Anxious, feel sad, general distress, frustrated, impatient, confused, feel relaxed, feel bored, stress, Decreased work/academic performance, reduced attention and concentration and health related issues like headache, eye strain and disturbed sleep).

Step 2: Focus Group Discussions for Item Generation

A total of 32 experts participated in the overall Focus Group Discussion (FGD) (ie; 1st 4FGD's = 5 Experts each and next 2 FGD's = 6 Experts each respectively). Each FGD's duration was 45 minutes to 1 hour. Developed semi-structured interview schedule and theme of the Internet Use was given to Experts those who have participated in FGD.

The theme and concepts related to internet use had been identified from the Focus Group Discussion as follows such as,

(1) Internet Usage Patterns: Internet is used for getting information, research purpose, entertainment, and business, Approximately, 2 or 3 professional E-Mails comes per day, Whenever, he/she gets bored/ lonely / they will use the internet more. If they don't have friends or less interaction with the family members or friends, they will use the internet more (Watching movies/songs/reading, etc.), Internet used to be Watching drama, TV serials, playing games (entertainment), Checking mails / Face Book / Twitter continuously without

purpose, If the person is not able to involve in enjoyable activities and have no company (Loneliness) they will use internet more, If we are using internet purposefully that is normal pattern of use, if not purposeful and using continuously that is overuse. They could not able to stop thinking about internet use. Internet is useful for banking / shopping / skype / video chat / information research / interaction / commerce and Adolescent used to search more things. Wants to see porn videos-they are curious and wants to touch that website but this is unnecessary things (Curiosity).

(2) Internet Overuse / Addiction: If the person continuously works 3 hours without purpose it will lead to the addict, thinking about online activities, preoccupation, urges about internet use. Repetitive thinking about online activities, Frequency of using, repeatedly checking emails / FB / Twitter if not needed or required. Based on priorities and age differences also an important factor, when he/she enters the room or get up from the bed immediately switch it on the desktop/laptop/tab/smartphone. Particular content watching repetitively, if starts using the internet it continues but he/she should know when to stop. Search by search and want to know new things and due to curiosity or enthusiastic going online activities continuously, the person is not able to control his usage of internet due to watching movies / listening songs / viewing pornography etc, not able to stop using internet, if internet connection is not there feeling like craving/go around and access the internet, neglecting social activities/avoiding social contact. He/she is not able to restrict, If I can put a female picture in FaceBook, immediately so many likes have come that also will lead to overuse, If working more on internet/online activities, sleep will be disturbed, If we are using internet continuously at least 6 months if one day cut the connection, we are depressed, Person is not feeling comfortable with talking directly and If neglecting the work and focused on online activities that will lead to overuse.

(3) Dysfunctions / Consequences due to Internet use
Not able to give time for useful activities like household chores, sports, academic or professional uses, Low interaction with family members/friends or socialization, Eye strain, back pain, Sleep disturbance, overeating or not eating and substance uses, Anxiety, depression, increased loneliness, etc, Looking FB for every few minutes (Social desirability) that will be compulsive, Every time we used to get up we used to check emails / FaceBook etc, Currently, people avoiding direct communication. He / She is not confident to talking directly because if talks directly somebody will tease, Gambling, different restricted sites, posting hatred speech, etc and Hacking somebody websites is criminal offense, If the person is not able to control the usage of internet or online activities except professional or academic use that leads to being addiction. For example Searching Unnecessary or unwanted things, we need to check about how many times are using the internet without purpose. And also using for escape from the problems, coping behaviors and with co-morbidities like eating disorder, substance use disorders or other psychiatric disorders, If the internet connection is not working, he/she may feel upset, discomfort, irritable, restlessness and feel bad, Not concentration on his work/studies, Depressed/moody, Memory problems, Anger/irritability/frustration, Not mingling with family members/friends, decreased energy level, not able to eat on time and Guilt feelings of using internet more.

These patterns of internet use were derived from the responses through a semi-structured interview schedule given by discussants those who participated in the Focus Group

Discussion. Finally, 147 items were generated in the first 3 FGD's, then 69 items were shortlisted in the 4th and 5th FGD's, then 24 appropriate items had been finalized in 6th FGD

Step 3: Item Generation
In this step, instrument construction is the collection of items forming the initial item universe. In most of the instrument construction procedures reviewed earlier, selection of tests from various published tests has been a commonly used approach. Another option is to generate items on certain theoretical propositions of Internet Addiction. But this was not much suitable as the study due to not available or not proper evidenced criteria for Internet addiction. For the present study, two approaches were followed, (1) The instrument items were generated from the Focus Group Discussion (2) and reviewed from existing tests. Initially, a total of 147 items were generated through the analysis of the literature. Finally, 69 items shortlisted for the second step Focus Group Discussion.

Step 4: Preliminary Testing (Item generation)
Out of 75 samples, 50 samples met the criteria of mild (41), moderate (09) and severe (0) internet addiction based on Internet Addiction Test. The (N=50) samples were involved to participants in the present study. Socio-Demographic Data, Semi-Structured Interview (20 Questions) and the instrument for the assessment of Internet use items (24 items) was administered.

Step 5: Data Analysis for Preliminary Testing
The data was coded for the Statistical Package of Social Sciences 20.0.0.0 (SPSS .20.0.0.0) to analyses the data. On analyzing data, the frequencies and percentages were performed. The results are as follows,

Table – 1 shows the Frequency and percentage for Socio-Demographic variables (N = 50)

Variables	Category	Frequency	Percentage (%)
	16 – 20	5	10.0
	21 – 25	18	**36.0**
Age	26 – 30	15	30.0
	31 – 35	8	16.0
	36 – 40	4	8.0
Gender	Male	38	**76.0**
	Female	12	24.0
	School	3	6.0
Education	UG	27	**54.0**
	PG	19	38.0
	Diploma	1	2.0
	0	4	8.0
	1	12	24.0
No. of Siblings	2	21	**42.0**
	3	10	20.0
	4	3	6.0
	1	20	**40.0**
Birth order	2	18	36.0
	3	10	20.0
	4	2	4.0

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Variables	Category	Frequency	Percentage (%)
Marital Status	Unmarried	38	**76.0**
	Married	12	24.0
Religion	Hindu	35	**70.0**
	Muslim	3	6.0
	Christian	9	18.0
	Others	1	2.0
Family type	Joint	9	18.0
	Nuclear	37	**74.0**
	Single parent	4	8.0
Occupation	Student	12	24.0
	Professionals	36	**72.0**
	Others	2	4.0
Domicile	Urban	46	**92.0**
	Rural	4	8.0
Mother Tongue	Kannada	17	**34.0**
	Hindi	8	16.0
	Tamil	6	12.0
	Telugu	10	20.0
	Others	9	18.0
Income	Nil	14	28.0
	Below 20000	10	20.0
	21000 – 50000	18	**36.0**
	51000-1 lakh	6	12.0
	More than 1 lakh	2	4.0

Socio-Demographic Characteristics:
Table 1 shows the frequency and percentage of Socio-demographic variables. Majority of the participants were 21 – 25 years age group. In terms of gender, the male showed the majority of this present study. With regard to education, the majority of the participants were studied under graduation, on consistency, 97% of the participants graduated in college used the internet more than other education group. Most of the participants were unmarried (76%). Maximum participants were from the Nuclear family. In Domicile, majority of the participants were urban background in the present study and the majority of the participants earned the income of 21000 to 50000).

Semi-structured interview schedule findings revealed the following factors,

Place and Gadget of Accessing, Time and Amount Spent on using the Internet:
Majority of the participants were using the internet at Home (50%) and Workplace (50%) and using the internet by Smartphone (50%) for 12 hours (20%). On approximately, 3 hours of using internet per day (32%) and spent 301 – 500 rupees per month (34%).

Purpose of using the Internet:
Majority of the participants using for the purpose of internet are, often uses social networking sites (E-mailing, chat services & Facebook etc.) (40%) Entertainment (uploading/downloading movies or songs, watching YouTube, playing online games, using

internet Forums (e.g., hobby, culture), news reading etc (56%), Personal use (banking, online shopping, personal sites (e.g., blog, downloading software, etc.) (42%) and Academic-related sites (e.g., Library, online journals etc.), projects / research / office work (46%). Subsequently, accessing pornography / restricted sites sometimes (24%).

In addition to that, majority of the participants were given the responses for Daily routine (checking mail/searching for information etc.) (54% always) as well as Social (interaction with family members, children & friends / colleagues) (40% always) and Occupation (40% always) for internet use. 40% (sometimes) of the samples were watching movies, 56% of Pornography/Restricted sites and 12% (sometimes) of gambling.

Started Age of Using Internet activities:
Most of the samples responded always for the use of social networking sites (E-mailing, chat services & Facebook, etc.) (30%) and online gaming (36%) started in the age range of 12 – 15 years. Majority of the online shoppers were 36 – 40 years (34%), Academic related sites (e.g., library, online journal) used by 26 – 30 years (26%).

Time Spent on Internet activities:
Most of the participants were using 2 hours for Social networking websites: Emailing/Orkut/Facebook/ Google Talk (32%), 1 hour of online gaming, 2 hours of Search engines: Google / Yahoo / MSN (32%), 1 hour of Downloading (Music/Videos/Games) (50%), 3 hours of watching Youtube (42%), 1 hour of Usenet newsgroup (28%), 1 hour of watching Pornography/restricted sites (22%), 1 hour of using Internet forum (e.g., hobby, culture) (22%), 1 hour of accessing Google Earth/Map, 1 hour of online gambling (6%), 1 hour of online shopping (36%) and 1 hour of using academic related sites (18%).

Preferences of Internet activities:
The present study samples given the first preferences to use Social networking sites (surfing, chat, Facebook, Email, etc) (64%), 2nd preference for Entertainment (games, news, watching videos etc) (20%), 3rd preference for Personal usage (online shopping / banking / blog etc) (14%) and not given priority for Academic related activities (70%).

Related Activities with Internet Use:
The present study samples talking through mobile phone (60%), watching television (70%) and eating (62%) while using the internet and also the majority of the participants were using the internet before going to bed. Thus, if we are doing something always some associated factors combine with it.

Spent Time in Healthy Activity with the presence of Internet Use:
Most of the participants spent time to some healthy activities like socialization (meeting friends, going for a party/functions, etc) (36% sometimes), family time (44% always), relaxation (38% often) and academic activities (36% often).

Expressing emotions when not able to access the internet:
On analysis of emotional expression if not access the internet, majority of the participants were given the response of sometimes such as restlessness/irritability (28%), loneliness (38%), anxiety (30%), sadness (30%), impatience (34%), boredom (40%), happiness (34%) and relaxed (38%). Though the samples got angry often when not able to access the internet (32%).

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Relationship between Internet use and Psychosocial Factors:

On analyzing the associated factors with internet use by the participants, 36% (18) of mild relationship in stress. 40% (20) of mild relationship in Low mood/sadness. 30% (15) of moderate relationship in decreased work/academic performance. 44% (22) mild relationship in reduced attention and concentration. High relationship in Health (headache/eye strain/ disturbed sleep etc (26%).

Table – 2 shows shortlisted Instrument Items for the Assessment of Internet Use

The response scale selected in the instrument items for the assessment of internet users is, Not Applicable (0%), Sometimes (50%), Often (50%) and Always (100%).

S.No	ITEMS
1	I check my e-mail before doing anything else
2	I continue to be online despite I am intending to stop
3	I lose my academic grade/job performance due to the usage of internet
4	I wish to be online whenever I am offline
5	I lost my interest in hobbies and enjoyable activities due to internet use
6	I often find myself anticipating when I will go online again
7	I think about the internet, even when not online
8	I want to spend few more minutes whenever I like to shut down or stop down or stop the session/internet use
9	Others are concerned that I am spending too much time in the internet
10	I engaged in pornography / sexual fantasies with anonymous user
11	I exceed my anticipatory/desired duration of use whenever I am online
12	I use internet to overcome the feelings of unhappiness
13	I feel tensed if internet connection has some technical problem
14	My family members and others are concern about my internet use
15	I look forward to opportunity for having my next internet session
16	I feel good to be online for a longer period of time than anticipated/in comparison to small session of internet use
17	I feel depressed when offline which goes away once back online
18	It is a problem/difficult for me to stop using the internet when I am online
19	I am thinking about the internet repeatedly
20	My interaction with my family members and friends is very low
21	I experienced headache or bodily pain or eye strain
22	I feel satisfied/good whenever I have extended period of online usage
23	It is difficult for me to be without internet for too long
24	I feel uncomfortable when stopped online or restricted by others
25	I am unsuccessful in reducing my online usage
26	I made unsuccessful effort to minimize or discontinue internet use
27	I use the internet more than I ought to
28	I am not able to control watching sexual videos/stories in online
29	I find it difficult to switch off my computer/laptop
30	I avoid others to be alone in my room for having online activities or to play/use computer/laptop
31	I prefer to spend time online rather than with the rest of my family members
32	I neglect household chores to spend/save/get more time for online activities
33	I feel more tired and fatigued due to frequent use of before the internet came along
34	Due to my online internet use, I am not bother/concern about daily hassle/problems

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S.No	ITEMS
35	I neglect my daily obligations (work, school or family life) because I prefer to go on to the internet
36	I lost good relationships with my friends due to spend more time in online
37	I have a good experience in pain in my fingers because I am using internet too much
38	It's a waste of time thinking about my internet use
39	I am making effort to use of internet less
40	I have used my internet search to make myself feel better when I am feeling down
41	I must reduce my internet use
42	I enjoy my use of internet but I moved like to continue using it I prefer engagement in online activities to intimacy with my partner
43	I would do almost anything to get time for internet use
44	I face sleep disturbances due to late-night log-ins/internet use I lose my temper / become irritable when someone bothers me while being online
45	I feel better/relax of the internet use
46	I find that feeling light-headed is often irrelevant in deciding when to stop internet use
47	I like to play games in online without seeing time
48	I think that I should reduce usage of the internet
49	My internet use is quite fine
50	I am secretive about my duration of online use / I hide from others about my duration of internet use
51	I have been told that I spend too much time on my internet use
52	I like to play games in online without seeing time
53	When I shut down my laptop, I think some message came to my mail
54	I prefer in my online when my relatives or friends comes to meet me
55	I try to cut down the amount of time I spend online and fail
56	I have just brought changes in my internet use habits
57	I am fine with internet use as I do now
58	Currently, I am actually changing my internet use habits
59	I felt I have ever had a problem with internet use
60	I felt like I would like to stop internet use but I couldn't
61	I lost time from work (or school/college) because of internet use
62	I used internet most of the time when I compared with others
63	I felt that the amount or frequency of my internet is normal
64	I felt guilty about my internet use
65	I never stopping or reducing my internet use
66	I always able to stop internet use when I want
67	My internet use created problems between me and any member of my family or friends
68	I feel pleasure/good while being online
69	As soon as I see any cybercafé, I have a strong desire to be online

Table 2 shows the shortlisted Instrument Items from the Focus Group Discussion. 69 items (Shortlisted from 147 items) were finalized based on the Focus Group Discussion. The experts those who participated in the present study also recommended using a 4-point Likert rating scale better instead of 6-point Likert rating scale. They reported that no difference was seen for Occasionally to rarely and Frequently to Often shows there is not much difference, so the response scale was changed 4-point rating scale like Not Applicable (0%), Sometimes

(50%), Often (75%) and Always (100%). Thus, the instrument for the assessment of Internet Use fixed the response scale (Not Applicable, Sometimes, Often and Always).

DISCUSSION

The present study focused on the identification of items for evolving of an instrument for the assessment of internet use. For analysis, frequency and percentage were done used through Statistical Packages for Social Sciences 20.0.0.0. The present study socio-demographic characteristics revealed that majority of the participants were 21 – 25 years age group which supported with one survey[19] stated that 98% of the population used the internet with the age group of 18 – 29 years. On contradictory, 46.2% were used the internet with the age range of 35–64 years[20]. Male gender showed the majority, supported one of the survey studies showed that 89% of the participants were using the internet by males[19], Most of the participants studied under graduation - similar to this, 97% of the participants graduated in college used the internet more than others education group. Most of the participants were unmarried, though 74% of the adult faced an impact on their marriage due to use of the internet[21]. Maximum participants were from Nuclear family which is consistent with the result of the traditional nuclear family has the highest rate of technology usage and ownership. On analyzing the Domicile, majority of the participants were urban background in the present study, supported with one survey[19] that, 92% of the participants were belonging to the urban background. Majority of the participants earned the income of 21000 to 50000, supported the one survey finding that, 81% of the participants earned less than 30,000 US dollar[19].

After the content validation of Semi-structured interview schedule by the 10 experts, 6 focus group discussions were conducted with the help of 32 experts. According to semi-structured interview responses (given by the experts), the themes and concepts derived related to internet use. Focus group discussion evolved the components of Internet usage patterns, Internet overuse/addiction and dysfunctions/consequences due to Internet use.

The present study was derived the results in terms of Place and Gadget of Accessing, Time and Amount Spent for using Internet, Purpose of using Internet, Started Age of Using Internet activities, Time Spent for Internet activities, Preferences of Internet activities, Related Activities with Internet Use, Spent Time in Healthy Activity with presence of Internet Use, Expressing emotions when not able to access internet, Relationship between Internet use and Psychosocial Factors.

Based on these themes/concepts/ components the items were generated of an instrument for the assessment of the internet use. A total of 69 items shortlisted from 147 items were finalized based on the suggestions from the Focus Group Discussion. Similar to this study, all the other existing tests also followed some of the criteria/dimensions/components such as, Internet addiction Test developed based on the criteria for substance dependence and pathological gambling[22]: loss of control, neglecting everyday life, relationships and alternative recreation activities, behavioral and cognitive salience, negative consequences, escapism/mood modification and deception[17]. Another scale named Internet Addiction Proneness Scale -Short form developed based on the criteria for tolerance, withdrawal, addictive automatic thoughts, disturbance of adaptive function, deviate behaviors and virtual interpersonal relationships[23]. Two scales such as Compulsive Internet Use Scale [24] and Problematic Internet Entertainment Use Scale for adolescents[25] developed based on DSM-

IV-TR criteria of substance dependence and pathological gambling[26]: loss of control, preoccupation, withdrawal symptoms, coping/mood modification and conflict (inter-and interpersonal).

However, like other existing tests the present study also found some unique components/criteria for identifying the items to develop an instrument for the assessment of internet use in the Indian context. The strength of the study is to generate the items based on expert suggestions/responses the items were identified as well as taken responses from the 50 participants taken enormous age group from 16 – 40 years. The present study implied that there is a huge gap to form the concepts, theory, and criteria to develop a test for internet use/overuse and addiction and also need to develop and validate Indian based instrument for the assessment of internet use. Further study will be focused on the standardization process for developed items.

LIMITATIONS

- The present study main limitation is the small sample size and data collected from only one urban area.
- Those who were using the internet for a minimum period of one year, taken for the study but study did not representa wider or varying period of internet use.
- Majority of the participants were included in the results as well as discussion, other responses were not included/tabulated.

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