# Development and Validation of a Scale for the Assessment of Psychosocial Issues Associated with Internet Pornography among Male University Students

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## Abstract

**Background:** Studies have shown that viewing internet pornography is like addiction. Addictions have been implicated in the development of psychosocial issues. It is important to develop an indigenous tool for the assessment of psychosocial issues in individuals viewing internet pornography.

**Objective:** The current study was aimed to develop a scale for the assessment of psychosocial issues associated with internet pornography in male university students.

**Methodology:** Initially, twenty five male university students were interviewed individually and item pool was generated by 40 different psychosocial issues statements explained by them. After the exclusion of dubious and repetitive items, the scale of 37 items with 3-point rating was given to twenty university male students for the pilot study. Finally, the scale with 37 items was administered on 200 university male students.

**Results:** By using Principle Component Factor Analysis through Varimax Rotation the results extracted four factors solution of the scale namely, Anxiousness, Sexual preoccupation, Neurotic guilt and Low self-esteem.

**Conclusion:** The scale has satisfactory internal consistency and concurrent validity. Moreover, the results were discussed in terms of implications of the study and psychosocial issues associated with internet pornography for counseling services.

**Key words:** Psychosocial issues, internet pornography, university male students, anxiousness, sexual preoccupation, neurotic guilt, low self-esteem.

## Introduction

**P**ornography is considered as disgraceful act as it affect the individuals in several ways. In the present age, the one that is in the grip of the pornography are adolescents and the persons emerging adulthood.[1,2] With the passage of the time as the individual grew up, different psychological, emotional and physical changes occur in the body. These changes manifest behaviorally in individual and the adolescents finds it difficult to handle or manage them in a proper way.[3] According to the theory of the Freud, the individual passes through different stages and if the requirements at the specific stage are not full filled, it may lead to the difficulties in the later life. So, in this way the hidden needs, desires and the requirements when not full filled may lead to the various emotional and behavioral problems including sexual problems in the adolescents.[4] Sexual problem mainly occurs when the adolescents crosses the teenage and achieves the puberty.[5] One of the sexual problem is related to the internet pornography that has taken the emerging adults in its grip.[6] Pornography which is the representation of the sensational material or clear display of sexual organs or activities is available on internet in the form of videos, photographs, literature, books, magazines and art of exposed genitals.[7]

It has been revealed through surveys that every second, 28,258 internet users watch pornography worldwide and every second 372 people typed the word "adult porn" in their search.[8] About 35% of all internet downloads were related to

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**Authors Contribution**

KR & MRD conceptualized the project and performed the statistical analysis, drafting, revision & writing of manuscript. KR also did the data collection literature search.

pornography and 25% of search engine queries were related to pornography globally ("Internet pornography by the numbers", n.d.). Several studies estimated the average rate of pornography usage ranging 50% to 99% in males and 30% to 86% in females globally.[9] According to recent article published in The Express Tribune and by recent data of Porn MD, Google and other websites related to pornography, Pakistan was rated among the top countries where porn is frequently watched. In 2016, Pakistan Telecommunication Authority (PTA) blocked 429,343 websites that contained pornographic material.[10] This has affected the situation as viewers in Pakistan satisfy their cravings of sex by directly viewing online on social media, smart phones and other sources at any time and at any place.[11] The adults spent their maximum time in watching pornography alone in their rooms and with peers.[12]

Individuals view pornography due to several reasons that led to sex addiction. It involves the interplay of biological, cognitive, behavioral and social factors. In terms of the biological, adolescent's brain especially the prefrontal cortex isn't fully developed due to which the adults don't make reasonable decisions and involve in pornography consumption.[13] On the other hand, as the individual achieves the puberty, hormonal changes in the adulthood led to the feelings of the sex as it is the biological need. To overcome the biological sexual need, the level of pleasure seeking neurotransmitter i.e. dopamine increases which results in internet pornography addiction. [14]

With the exception of the biological causes, there are psychological reasons like severe stress, isolation, low self-esteem, traumatic and abusive childhood, and depressive symptoms, as a result of internet pornography.[15] By doing this, individuals opts secure approaches in order to self-mediate their anger, sadness, dissatisfaction, loneliness, and soreness for some time.[16] This pornography addiction leads the individual to become hostile, angry and aggressive.[5] Internet Pornography exposure can lead to emotional disturbance, frustration, guilt, shame which affect their daily life activities.[16] Excessive use of internet pornography is associated with interpersonal and psychological distress.[17]

Briefly describing, the impact of internet pornography has been studied around the globe in different perspectives. There are certain assessment tools to measure the level of psychosocial issues associated with the individuals viewing internet pornography. Studies have shown that psychosocial issues vary in different cultures. So, there is need to develop an assessment scale to measure psychosocial issues in university students (male) associated with internet pornography which is the rationale of the current study.

## Methodology

### Phase I

In order to know about the psychosocial issues associated with internet pornography in university male students, phenomenology was explored by interviewing university male students. Total twenty five male students were interviewed and approached directly and through snowball sampling techniques. Open ended questions were asked from them such as, "According to you, how the individual suffers psychologically and socially after viewing pornography on internet and how viewing internet pornography affected their life?" After phenomenology exploration, the repeated and dubious items were excluded and a final list of 40 psychosocial issues associated with internet pornography was handed over 6 experts (3 clinical psychologist, 1 clinical counselor and 2 individuals who involved in pornography act), for empirical validation. Thirty seven items out of 40 were found appropriate and more illustrating by the experts to be kept in the final psychosocial issues associated with internet pornography scale.

### Phase II

In order to determine the initial reliability and responsiveness of constructs, pilot study was done by administering the newly developed scale (Psychosocial Issues associated with Internet Pornography Scale) on 20 university students. The outcomes of pilot study suggested that the scale's items were understandable and user friendly.

### Phase III

This phase was intended to determine the psychometric properties of psychosocial Issues associated with Internet Pornography Scale (PSIPS).

The participants comprised of 200 university students, who were involved in viewing internet pornography act in Pakistan. The age of participants ranged from 18 to 30 years. The sample was selected from universities of Pakistan through purposive and snowball sampling.

Demographic questionnaire included the items of age, residence, time spent on internet, age introduce to pornography, source of introduce to pornography, time spent in watching porn, frequency of watching porn, and others.

PSIPS, newly developed scale was the indigenous scale that was developed by the

researcher. The main purpose of the scale was to measure the psychosocial issues of the adults that view pornography on the internet. The scale comprised 3 point Likert scale of 0-3 rating. The scale comprised of 37 items which described the psychological and social issues of the adult that view internet pornography.

In order to validate the indigenous scale, depression anxiety scale was used to check the concurrent validity. The Cronbach alpha for the anxiety, stress and depression subscales of DASS scale was 0.69, 0.82 and 0.77 respectively. The subscale of depression had high correlation 0.94.

Total 200 samples were targeted directly and questionnaires were filled from the participants who were willing to participate in the study voluntarily maintaining confidentiality of their name and identity.

Apart from this, the participants were approached online. For this purpose, a confession regarding the main purpose of the research with provided email was posted on the confession, department and hostel pages of different private and government universities. The participants who were involved in this activity and wanted to be a part of this research showed willingness by responding on the provided email. In this way the participants were approached and questionnaire were filled from them. Almost 15-20 minutes were spent to fill the questionnaires.

The ethical permission was taken by the committee of Institute of Clinical Psychology, University of Management, Lahore.

## Results

Item analysis was done by computing item-total correlation on 37 items of PIPS, all items showed significant item-total correlation. The items above .30 loading were retained and considered in final factor structure. Further sampling adequacy, Kaiser-Meyer-Olkin (KMO) was found to .88, and Bartlett's test of sphericity was found to be significant ($x^2$ (666) = 8050.32, $p < .001$). A scree plot was obtained which described the number of factors that can be extracted by noticing the slope of the curve. In the Figure, the slope of the curve suggested that five factors can be extracted. However by noticing the Eigen value and considering the dubious items 4 factors solution was retained for further analysis. Factor Structure and Eigen Values of 37 Items of PIPS with principle component analysis and Varimax Rotation are shown in the Table-1.
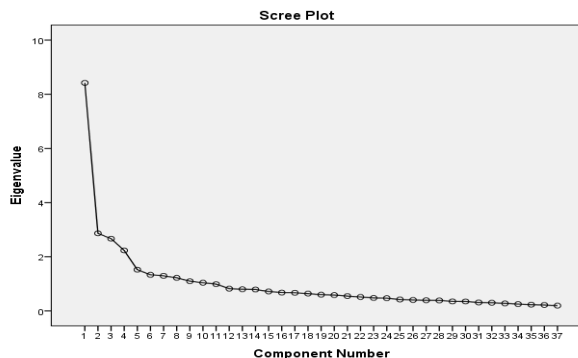


**Figure 1: Scree plot which suggest that five factors can be extracted, but by noticing the eigen values and considering the dubious items 4 factors solution was retained for further analysis.**

**Table 1: Factor structure and eigen values of 37 Items of psychosocial issues associated with internet pornography scale with varimax rotation. (N=200)**

| Sr. no | Item no. | F1 | F2 | F3 | F4 |
|---|---|---|---|---|---|
| 1 | 26 | **.49** | -.02 | .00 | .26 |
| 2 | 27 | **.65** | .07 | .01 | .25 |
| 3 | 28 | **.68** | .19 | .17 | .02 |
| 4 | 29 | **.70** | .13 | -.00 | .21 |
| 5 | 30 | **.60** | .17 | .06 | .25 |
| 6 | 32 | **.60** | -.00 | .33 | .06 |
| 7 | 33 | **.46** | .08 | -.02 | .27 |
| 8 | 34 | **.60** | .11 | .27 | -.04 |
| 9 | 35 | **.52** | .19 | .33 | .01 |
| 10 | 36 | **.58** | .18 | .04 | .13 |
| 11 | 2 | .10 | **.63** | .19 | .15 |
| 12 | 3 | .09 | **.50** | .19 | .15 |
| 13 | 4 | .02 | **.70** | .00 | -.07 |
| 14 | 6 | .03 | **.70** | -.04 | .14 |
| 15 | 7 | .07 | **.71** | .09 | .19 |
| 16 | 9 | .18 | **.67** | .07 | .24 |
| 17 | 16 | .23 | **.32** | .04 | .35 |
| 18 | 23 | .19 | **.62** | .00 | -.04 |
| 19 | 31 | .51 | **.45** | .02 | -.03 |
| 20 | 8 | -.06 | .27 | **.60** | .02 |
| 21 | 11 | .09 | .04 | **.49** | .02 |
| 22 | 17 | .06 | -.04 | **.64** | .04 |
| 23 | 18 | .00 | -.02 | **.62** | .08 |
| 24 | 22 | .16 | .18 | **.66** | .08 |
| 25 | 24 | .18 | -.03 | **.63** | -.07 |
| 26 | 25 | .43 | -.02 | **.35** | .17 |
| 27 | 37 | .24 | .15 | **.52** | -.04 |
| 28 | 12 | .19 | .122 | **.46** | .32 |
| 29 | 1 | .11 | .16 | .14 | **.30** |
| 30 | 5 | .18 | .32 | .08 | **.38** |
| 31 | 10 | .05 | .11 | .46 | **.50** |
| 32 | 13 | .14 | .16 | .08 | **.63** |
| 33 | 14 | .19 | -.11 | -.18 | **.68** |
| 34 | 15 | .01 | .00 | -.20 | **.67** |
| 35 | 19 | .19 | .01 | .33 | **.50** |
| 36 | 20 | .09 | .22 | .20 | **.52** |
| 37 | 21 | .35 | .22 | .09 | **.54** |
| Eigen value | | 4.63 | 4.00 | 3.80 | 3.72 |
| % Variance | | 12.53 | 10.82 | 10.29 | 10.06 |
| Cumulative % | | 12.53 | 23.36 | 33.65 | 43.71 |

Note: Items with .30 or above loading are boldfaced

Table-1, showed the final factors that were extracted with .30 or above loading. For the factors extraction, factor analysis with 2, 3 and with 5 factor solution was tried but the best fit solution with minimum dubious items was with 4 factor. The items no. 16, 31 and 11 were placed into their respective factors by the clinical judgement. The Factor 1 has 10 items while factor 2, 3 and 4 has 9 items.

**Factors description**

By considering the common themes and appropriateness of every item, each factor was assigned a specific label by a researcher.

**Factor 1: Anxiousness**

It represents the first factor and contains 10 items. The high score on this factor means that the individual become more anxious, have feelings of tension and distresses regarding his habit of watching pornography on internet and vice versa. The items included in this factor are, "not satisfy with life", "refrain from sitting with friends," "become frustrated", "become anxious on small things", "fear of infertility", etc.

**Factor 2: Sexual preoccupation**

It represents the second factor that contains 9 items. The high score on this factor means the individuals have tendency to be more fixated with sexual thinking, feelings and behavior after viewing pornography on internet. The items included, "sexual thoughts hover on mind", "imagine all after viewing the movie", "masturbate after watching the movie", "wanted to engage with girls in sexual relationship", "thinking about the movie again and again", etc.

**Factor 3: Neurotic guilt**

The third also contains 9 items. The high score on the factor indicated the individual become

remorse that he had violated some standards and done something bad. It was closely associated to sense of shame. The items included, "repent after watching movie", "fear from doomsday after watching movie", "considers himself impure after watching movie," "consider himself inferior", "feelings that he has committed sin" etc.

**Factor 4: Low self-esteem**

This factor contains 9 items. The high score on this factor indicated that the individual has low self-worth due to which he didn't want to engage with others and didn't focus on the task. The items included were, "didn't wanted to meet others", "hating himself", "mind became blank", "become furious after watching movie," "become lazy", etc.

The psychometric properties of PIPS were determined through descriptive analysis and based on mean, standard deviation, Cronbach's Alpha, values and inter-factor correlation that demonstrated the relationship among factors of psychosocial issues associated with internet pornography scale (PSIPS).

**Table 2: Psychometric properties of psychosocial issues associated with internet pornography scale (PSIPS. N= 200)**

| Factor | k | M (SD) | α |
|---|---|---|---|
| 1. ANX | 10 | 17.15 (6.52) | .83 |
| 2. SXP | 9 | 18.06 (5.71) | .81 |
| 3. NEGLT | 9 | 17.96 (4.54) | .78 |
| 4. LSE | 9 | 16.44 (6.06) | .77 |
| 5. PSIPS T | 37 | 69.59 (17.27) | .90 |

Note: n = no. of items. α = Cronbach's alpha. ANX= Anxiousness; SP= Sexual preoccupation; NEGLT= Neurotic guilt, LSE = Low self-esteem; PSIPS = Psychosocial issues associated with internet pornography scale

**Table 3: Summary of intercorrelations, means, standard deviations, and cronbach alphas of psychosocial issues associated with internet pornography scale, factors, and DASS-21. (N=200)**

| Measure | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| 1. ANX | – | .42*** | .42*** | .51*** | .80*** | .61*** | .49*** | .53*** | .60*** |
| 2. SP | | – | .29*** | .42*** | .71*** | .45*** | .21*** | .43*** | .41*** |
| 3. NEGLT | | | – | .43*** | .67*** | .20** | .15** | .19** | .20** |
| 4. LSE | | | | – | .79*** | .44*** | .39*** | .42*** | .45*** |
| 5. PSIPT | | | | | – | .59*** | .43*** | .54*** | .58*** |
| 6. S | | | | | | – | .64*** | .81*** | .93*** |
| 7. A | | | | | | | – | .69*** | .84*** |
| 8. D | | | | | | | | – | .94*** |
| 9. DASS | | | | | | | | | – |
| M | 17.15 | 18.06 | 17.96 | 16.44 | 69.59 | .10.26 | .911 | 10.24 | 29.60 |
| SD | 6.52 | 5.71 | 4.54 | 6.06 | 17.27 | 4.36 | 3.58 | 4.20 | 11.04 |
| α | .83 | .81 | .78 | .77 | .90 | .82 | .69 | .77 | .90 |

Note. ANX = Anxiousness; SP = Sexual preoccupation; NEGLT= Neurotic guilt; LSE = Low self-esteem; PSIPST = total Psychosocial Issues associated with Inter Pornography Scale; D = depression; A = anxiety; S = stress; DASS T = total of Depression Anxiety Stress Scale ***p < .001.

The Table-2 showed significant positive correlation with its factors. Further, Cronbach Alpha value ranges from .77 to .83 showing that factors and total of PSIPS have acceptable internal consistency.

Table-3, described means, standard deviations, Cronbach alpha values, potential and actual response range with skewness values. The results indicated that value of Cronbach's Alpha ranges from .77 to .83 of factors, illustrating that psychosocial issues associated with internet pornography scale and its factors have high internal consistency.

In order to establish the concurrent validity of psychosocial issues associated with internet pornography scale, Pearson Product correlation was conducted with Depression Anxiety Stress Scale-21 (DASS-21) developed by Lovibond and Lovibond (1995). DASS-21 and its factors have a significant positive correlation with psychosocial issues associated with internet pornography scale and its factors.

## Discussion

Psychosocial issues associated with internet pornography have great impact on the life of the individuals. Due to which it has attained the attention of both clinical and counseling psychology particularly while dealing with university students. The literature suggested that there many factors other than the biological that led to the pornographic consumption.[18] Physical, social, biological, and mental changes occur during adolescence and adulthood puts the individual in critical situations to which the person has to adapt to with his level of maturity.[19] In university years, friendship, self-identity, intimacy, security, trust and others acquisitions has been developed in the individual that lead to the pornographic consumption.[20] The study suggested that the sexual related material or the gossip was clearly discussed in the group of peers that allowed the individuals to become familiar with it due to which they started watching and become addicted to viewing pornography.[21]

Adolescents were the main target of this study as specially the prefrontal cortex that assisted the brain's executive functioning involving, critical thinking, managing emotional impulses, planning and decision making was not fully developed in adolescents' brain. The connections between the limbic system and neo-cortex were not fully developed till late adolescents. The adults may therefore be unable to make reasonable decisions and may involve themselves in pornography consumption.[22] Apart from this, the adolescence also lacks the emotional development for the healthy use of the internet. Due to inability of emotional development, the private or the isolated environment makes it difficult for them to think which behavior is useful or harmful for them. On the other hand, when the individuals achieved the puberty, hormonal changes in the adulthood arouse sexual desires in them as a biological need.[23]

Anxiousness is an important factor of the indigenous scale and is linked with obsessions and compulsions. The individuals were unable to stop the urge or to control the behaviors associated with pornography despite making useless attempts to stop. It is identified that viewing pornography may lead to obsessions and compulsions.[23] The individuals may be disturbed with obsessions of the images, scenes or the pictures that they watch. These sexual thinking reminds the individual about the sexual contact which disturbs them.[23] Researchers have shown that the sexual obsessions leads to the compulsive behavior by diminishing the tolerance.[24]

Islam doesn't allow such kind of act. However due to the inability to control the urges biologically, the individual indulges in it but after drawing the pleasure he becomes disappointed and starts feeling guilty about it. Due to the religious belief, the individual feels disgusted and accuses himself for to watching porn. This attitude leads to the neurotic guilt in which the individual uses a defense mechanism of denial (repress feelings of guilt and act) in order to face fear and become anxious.[25] Viewing pornography also affects the individual's self-esteem as[26] indicated that those who frequently used internet pornography had low self-esteem and had high scores on anxiety and depression. In this regard, the researchers described that the individuals who watched more porn have anxiety in their relationships. These individuals considered themselves low as compared to their peers. This feeling led them to the social insecurity due to which they refrain from developing a relationship.[12] The individuals after watching the pornography remained isolated and show avoidance behavior from others. It is described in the study that the dependent viewers of pornography were ranked at the upper level in terms of loneliness.[18] These individuals preferred to remain alone rather than to interact with others. Another study described that the adolescents may suffer with social isolation after viewing pornography.[2]

The study was based on the expressions of the male and further study should also involve female participants. The study involved only unmarried couples but there is also need to find the effect of pornography on married participants.

Our study briefly concludes that pornography has negative impact on social, psychological and mental health of the individuals. Further, it would be useful in creating awareness in society related to psychosocial issues due to internet pornography that may pose a threat for the development of mental health in adults. In Pakistan, according to our knowledge, no study has been conducted on this topic so far. This study could therefore serve as a pioneer for developing different counseling and clinical strategies along with planning of different interventions to minimize the sufferings of individuals related to the pornography. This research will also help the clinicians to effectively deal with individuals having sexual problems.

**Conflict of interest:** None declared.

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