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# INTERNET ADDICTION, SELF-OBJECTIFICATION, CYBER VICTIMIZATION AND SELF-ESTEEM AMONG UNIVERSITY STUDENTS

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## ABSTRACT

*The study was carried out to assess the relationship between internet addiction, self-objectification, cyber victimization and self-esteem among university students. A purposive sample of 300 students, from private and public universities (age range 18-25 years) was collected through standardized questionnaire which included Internet Addiction Test, Surveillance subscale of Objectified Body Consciousness Scale, Online Victimization Scale and Rosenberg Self-Esteem Scale along with demographic information. Pearson correlation, independent sample t-test, simple linear regression and one-way ANOVA were used to analyze data using IBM SPSS 26.0. Results indicated significant positive relationship among internet addiction, self-objectification and cyber victimization and significant inverse relationship of self-esteem with internet addiction, self-objectification and cyber victimization. Gender differences showed that boys had higher scores on cyber victimization and internet addiction than girls. Cyber victimization, especially vicarious online racial discrimination was higher in urban as compared to rural areas. Self-esteem was significantly higher in public as compared to private universities. Findings indicated that internet addiction is a significant predictor of cyber victimization, self-objectification and self-esteem. Cyber victimization is significantly higher in humanities as compared to social sciences, natural sciences, mathematical and physical sciences and medical sciences. This study has wide implications in the area of cyber psychology as it highlights the need for a digital literacy program to educate students about the potential risks of excessive internet usage. It also stresses upon the need for gender-specific intervention, considering the exacerbating rate of internet addiction and cyber victimization among males.*

***Keywords:***
*Internet addiction, self-objectification, cyber victimization, self-esteem, university students*

## INTRODUCTION

### Background

Internet has become widely popular and has become an integral part of our lives. We cannot imagine a life without internet as we have become completely dependent on it for communication, information gathering, gaming, learning purposes etc. (Mihajlov & Vejmelka, 2017). Despite its benefits, its excessive usage can be harmful to individuals especially adolescents and teenagers

(Matsuzaki et al., 2023). Research indicates that people who use social media on a regular basis are approximately 3.5 billion, comprising 45% of the total people around the world (Mohsin, 2020).

Internet addiction refers to strong desire to do something that might harm ourselves. It is an inability to stop that behavior and it has both biological and environmental component which causes and trigger addiction (Pezoa-Jares et al., 2012). It refers to having symptoms of addiction in reference to excessive usage of internet that may cause impairment in psychological, physical and social functioning (Kuss et al., 2014; Jia et al., 2018). Kuss et al. (2014) also states that internet addiction can cause anxiety, depression, dysfunctional behavior and weakened immunity. Mihajlov and Vejmelka (2017) states that excessive internet use is considered as measure of escape from the reality. It also harbors negative feelings in a person when he gets bullied or criticized online. Due to increase in internet usage, cyber victimization has become prevalent. It refers to online harassment of an individual in which a person is being harmed repeatedly through different online measures (Xin et al., 2021). Memon et al. (2022) states that cybercrime has increased at a faster rate because of 3G and 4G networks, in Pakistan. Moreover, people who spent more time on internet by posting obscene images or hateful comments on other posts, most likely become a victim as well. It negatively affects students as they get easily frustrated, get high levels of anxiety, depression, low self-esteem, have suicidal thoughts and difficulty sleeping (Mayungbo et al., 2022). A study on Pakistani culture (Musharraf & Anis-ul-Haque, 2018) found that males have higher scores on cyber victimization and higher score on cyber aggression as well. It is also easier to bully online, rather than in real life, where the person can hide facial expressions and reactions and will not have to face consequences (Brown et al., 2014).

There is also a noticeable increase in self-objectification due to excessive internet usage. Self-objectification is defined as a process in which an individual view themselves as an object or collection of body parts. According to Calegaro (2011), self-objectification occurs when an individual view himself or herself through the lens of others and engage in chronic self surveillance of their body and body parts that result in considering themselves as an object. Women are likely to be more affected by self objectification due to the societal pressure and media exposure. It has been documented that the detrimental use of internet and appearance related social media networking sites can cause self objectification and women become dissatisfied of their bodies (Seekis et al., 2020).

The media exposure to ideal body image also lead men to be more focused on their body that results in heightened body concerns among them even though they experience less self objectification then women. The ideal body trends on social media particularly muscular physique lead male to internalize these standards of masculinity. Hence they start putting greater emphasis on their physical appearance and involved in body self-surveillance behavior and extreme physical activities (Daniel et al., 2016).

Media exposure that leads to self-objectification and cyber victimization also reportedly lowers the self-esteem of individuals (Gedik et al., 2021). Self-esteem is how a person evaluates his positive and negative aspects and evaluates his worthiness by himself. Rosenberg 1965 in his book "Society and the adolescent self-image" states that self-esteem is a subjective overall evaluation or assessment of an individual's own worth and values as a person. A high level of self-esteem is associated with the ability to accept change, handle challenging situations, cope effectively with drastic situations and acknowledge their strengths and weaknesses (Sharma et al., 2015; Stavropoulos et al., 2015). Furthermore, low self-esteem effects our mental health in a negative way. It is positively correlated with depression, anxiety and poor academic performance due to stress (Ayyub et al., 2022; Nguyen et al., 2019).

Extensive research has explored the associations between internet addiction, cyber-victimization, self-esteem, and self-objectification. A descriptive study done by Erden et al. (2022) investigate a significantly moderate association between

internet addiction and cyber-victimization (Xin et al., 2017) indicates that individuals are more prone to internet addiction due to their involvement in gaming and online activities. Furthermore, Wang et al. (2020) revealed that cyber-victimization was significantly positively correlated with internet addiction and depression can act as a partial mediator between this relationship as also confirmed by Iftikhar et al. (2025).

Research also indicates the relation between self-objectification and internet addictive behaviour. Bell and Dunbar (2018) investigated the effect of posting selfies on Instagram in context with self-objectification indicating that women with higher self-objectification were linked to a greater number of posts on social media. Fox et al. (2021) showed that women who took selfies scored high on self-objectification, which had a negative effect on mood and lower self-esteem than others.

Moreover, previous research extensively studied the relationship between internet addiction and self esteem indicating a consistent pattern of negative correlation. Cross-cultural research (Seabra et al., 2017) identifies three dimensions of internet addiction including staying away from others and problems such as negative emotions when offline and hiding, social and personal consequences that arise due to the detrimental usage of the internet and too much usage. A correlational study done by Malik and Khan (2015) reveals a significant positive relationship between Facebook addiction and narcissism behaviour while a significant inverse relationship between self-esteem and Facebook addiction.

Furthermore, cyber victimization is strongly associated with low self-esteem. Gedik et al. (2021) observed that cyber victims had lower self-esteem levels compared to non-victims. A cross-sectional research by Öztürk Emiral et al. (2020) showed a 62.6% prevalence of cyber victimization and the various variables that affected it such as individuals from rural areas, low family income, multiple social media accounts, online gaming, engaging in online arguments, being shy online, and low self-esteem. Palermiti et al. (2022) showed that individuals with "consistently high" self-esteem were less vulnerable to victimization and bullying as compared to those with a "self-derogation" profile.

In view of the above, we aim to examine the relationship between internet addiction, self-objectification and cyber victimization and to determine whether internet addiction predicts cyber victimization, and self-objectification and self-esteem of university students. It is conducted to investigate the gender differences, differences among rural and urban areas, differences among students of public and private universities and differences among academic disciplines in terms of internet addiction, self-objectification, cyber victimization and self-esteem.

**Problem Statement**

With the rise of digitalization, university students are spending more time online than ever before (Kuss & Lopez-Fernandez, 2016). While past research has explored the impact of internet addiction on adolescents (Lin et al., 2020; Nguyen & Wright, 2019), very little is known about its effect on young adults, especially in terms of self-objectification, cyber victimization, and self-esteem. As university life comes with its own set of challenges, understanding these relationships is crucial. Without addressing this gap, students may continue to face negative psychological effects without proper support. By shedding light on these dynamics, we can make interventions to mitigate negative effects and enhance the overall development of university students.

**Method**

**Participants**

The study utilized a correlational research design. A purposive sample of 300 young aduts consisting of 120 boys and 180 girls was selected, with an age range of 18-25 years, and a mean of 21.68 (SD = 1.90). Students between the age ranges of 18-25 years were included in the study and students below the age of 18 years and above the age of 25 years were excluded from the study. In this sample. 40% were boys and 60% were girls, predominantly undergraduates (83%). Participants represented a diverse range of academic disciplines, including

Social Sciences (43.3%), Natural Sciences (10%), Mathematical and Physical Sciences (29.3%), Humanities (10.3%), and Medical Sciences (7%). The university affiliation of participants was also recorded, with 180 (60%) attending public universities and 120 (40%) enrolled in private institutions. A significant proportion were single (92%), and resided in urban areas (80%). The majority belonged to the middle-income group (89%).

Regarding internet behavior, 29.3% rarely shared content online, while 13.3% shared daily. Most participants used the internet between 1-10 hours per day, though a small fraction (3.3%) reported usage exceeding 21 hours. Notably, 21.7% of participants reported experiencing cyber victimization.

## Instruments

### Demographics

A section of demographics was added in the questionnaire which consisted of information including age, gender, family system, educational level, university i.e. public or private, departments, marital status, residential status and socioeconomic status.

### Young's Internet Addiction Test (IAT)

IAT is a reliable and valid measure of addictive use of the internet developed by Dr. Kimberly Young in 1998. It is a 20-item questionnaire that is used to measure the behaviors associated with compulsive use of the internet including compulsivity, dependency and escapism. It also measures severity of the addiction in individuals (Lin et al., 2020). It is rated on a five-point Likert-type scale from 0 (Not applicable) to 5 (Always). The scale includes items like "How often do you find that you stay online longer than you intended." and "How often do you lose sleep due to being online." The highest score that an individual can get is 100 and scores that are below 36 are considered normal. Reliability test showed Cronbach's alpha value of .90 (Nugroho & Wijayanti, 2020). The value of Cronbach's alpha is .85 in our study.

### Online Victimization Scale-21 (OVS-21)

OVS was developed by Tynes, Rose and Williams in 2010. It consists of 21 items that measures four aspects of victimization: General online victimization (8 items), online individual racial victimization (4 items), online vicarious racial victimization (3 items) and online sexual victimization (6 items). It is a five-type likert type scale (0= never to 4=everyday). Previous researchers have also used this scale for young adults (e.g. Matsuzaka et al., 2022) and it includes items like "People have said negative things about the way I look, act, or dress" and "People have asked me for sexy pictures of myself online" Higher score indicates that individuals were highly victimized. In the original study the Cronbach's α for each sub scale are as follows; general online victimization is .84, individual online racial victimization is .66, vicarious online racial victimization is .76 and sexual online victimization is .89 (Tynes et al., 2010). In our study, values of Cronbach alpha are: general online victimization (α = .90), sexual online victimization (α = .88), individual online racial victimization (α = .86) and vicarious online racial victimization (α = .77).

### Objectified Body Consciousness Scale (OBC)

In order to measure self-objectification, surveillance scale of Objectified Body Consciousness Scale was used, which was developed in 1996. Previous researchers have also used this subscale for measurement of self-objectification (e.g. Mercurio & Landry, 2008). The subscale consists of 8 items including "I think more about how my body feels than how my body looks." and "During the day, I think about how I look many times." It is rated on a seven-point Likert-type scale starting from 1(strongly disagree) to 7(strongly agree). In original study, the value of internal consistency is .79 for surveillance scale and test-retest reliability of 2 weeks was also good (McKinley & Hyde, 1996). The value of internal consistency (α) is .67 in our study.

**Rosenberg Self-Esteem Scale (RSES)**

The RSES scale is used to measure self-esteem and was developed by Morris Rosenberg in 1965. It is a 10 item scale including items like "On the whole, I am satisfied with myself" which are scored on a 4-point likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) where the higher the score, higher the self esteem of individual. Levels of Cronbach's alpha range from .72 to .87, in various researches (Mercurio & Landry, 2008). It has good construct validity as it has been seen to be correlated with other self-estem scales e.g. Coopersmith Self-Esteem Inventory (Rosenberg, 1965). The value of Cronbach's alpha is .73 in present study.

**Procedure**

A total of 300 university students were utilized as study participants; students were recruited through convenience sampling. In-person data collection (n = 200) was completed by directly approaching students in high foot-traffic areas across the university, such as libraries, cafeterias, and student lounge areas. For online data collection (n = 100), students were recruited using social media-based targeting, and through the university's official online messaging and communication platforms to ensure that the sample was as diverse as possible. Because the variables studied were of a sensitive nature (e.g., cyber victimization, self-objectification); stringent ethical standards were established to safeguard participant confidentiality. All participants received a detailed information sheet describing the purpose of the study, their ability to participate voluntarily, and their right to withdraw from the study without penalty at any time. For online study participation, participants provided consent by reading the information sheet and then indicating their consent by clicking the "I agree" checkbox before they were allowed to access the questionnaire. For in-person study participation, informed consent was obtained in writing and was collected separately from the response sheets to prevent any identifying signatures from being linked to participant responses.

**Data Analysis**

**Results**

In this study, Pearson product moment correlation, independent sample t-test, simple linear regression and one-way ANOVA were calculated by using SPSS.

**Table 1 Psychometric Properties of Scales (N=300)**

| Scale | M | *SD* | Range | *α* |
|---|---|---|---|---|
| Internet Addiction Test (IAT) | 41.69 | 14.45 | 0-100 | .85 |
| Online Victimization Scale-21 | 39.11 | 18.11 | 21-126 | .94 |
| General Online Victimization | 15.16 | 8.00 | 8-48 | .90 |
| Sexual Online Victimization | 10.64 | 5.87 | 6-36 | .88 |
| Individual Online Racial Discrimination | 6.80 | 4.09 | 4-32 | .86 |
| Vicarious Online Racial Discrimination | 6.51 | 3.57 | 3-18 | .77 |
| Objectified Body Consciousness Scale (OBC) | | | | |
| Surveillance scale | 27.51 | 6.83 | 8-56 | .67 |
| Rosenberg Self-Esteem Scale (RSES) | 26.38 | 4.21 | 10-40 | .73 |

Table 1 shows the psychometric properties of the scales used in the study. The Cronbach's alpha value of the Internet Addiction Test (IAT) was .85 which show good internal consistency. The Cronbach's alpha value of the Online Victimization Scale (OVS) was .94, which indicates excellent internal consistency. The Cronbach's alpha value of all the subscales of Online Victimization Scale (OVS) are .90, .88, .86 and .77 respectively, which indicate good internal consistency. Cronbach alpha's value of surveillance scale, a subscale of Objectified Body Consciousness (OBS), was .70 which indicate satisfactory internal consistency. The Cronbach

alpha's value of Rosenberg Self-Esteem Scale (RSES) was .73 which indicate satisfactory internal consistency.

**Table 2 Independent Sample t-Test Comparing Gender Differences, Public and Private School Students, and Rural and Urban Populations (N=300)**

| Variables | Boys (*n*=120) | | Girls (*n*=180) | | | | | Public (*n*=180) | | Private (*n*=120) | | | | | Urban (*n*=240) | | Rural (*n*=60) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t* (298) | *p* | Cohen's *d* | *M* | *SD* | *M* | *SD* | *t* (298) | *p* | Cohen's *d* | *M* | *SD* | *M* | *SD* | *t* (298) | *p* | Cohen's *d* |
| Internet Addiction | 43.94 | 13.59 | 40.19 | 14.84 | 2.22 | .03 | .26 | 40.61 | 15.14 | 43.32 | 13.25 | -1.59 | .11 | -.19 | 41.68 | 14.67 | 41.73 | 13.65 | -.03 | .98 | -.00 |
| Cyber Victimization | 45.42 | 20.28 | 34.90 | 15.15 | 5.13 | .00 | .59 | 38.16 | 18.61 | 40.53 | 17.30 | -1.11 | .27 | -.13 | 40.25 | 18.61 | 34.53 | 15.22 | 2.48 | .03 | -.32 |
| GOV | 17.46 | 8.885 | 13.63 | 6.999 | 3.998 | .00 | .48 | 14.78 | 8.07 | 15.73 | 7.90 | -1.01 | .31 | -.11 | 15.51 | 8.18 | 13.77 | 7.13 | 1.64 | .10 | .23 |
| SOV | 12.62 | 6.733 | 9.32 | 4.80 | 4.63 | .00 | .56 | 10.35 | 5.81 | 11.08 | 5.96 | -1.05 | .30 | -.13 | 10.95 | 6.18 | 9.40 | 4.24 | 2.29 | .07 | .30 |
| ROV | 8.03 | 4.71 | 5.98 | 3.40 | 4.10 | .00 | .50 | 6.56 | 4.07 | 7.16 | 4.12 | -1.25 | .21 | -.15 | 6.99 | 4.16 | 6.03 | 3.75 | 1.62 | .10 | .24 |
| VROV | 7.32 | 3.61 | 5.97 | 3.44 | 3.24 | .00 | .38 | 6.47 | 3.69 | 6.57 | 3.39 | -.22 | .82 | -.03 | 6.80 | 3.68 | 5.53 | 2.81 | 3.38 | .00 | .45 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Self-Objectification | 27.76 | 5.59 | 27.34 | 7.55 | .54 | .58 | .06 | 27.83 | 7.04 | 27.03 | 6.51 | 1.00 | .32 | .12 | 27.68 | 7.00 | 26.85 | 6.11 | .84 | .40 | .13 |
| Self-esteem | 26.63 | 4.57 | 26.21 | 3.94 | .85 | .39 | .10 | 27.12 | 4.27 | 25.27 | 3.88 | 3.83 | .00 | .45 | 26.20 | 4.17 | 27.08 | 4.32 | -1.45 | .15 | -.21 |

Mean, Standard deviation, Pearson correlation, independent sample t-test, simple linear regression and one-way ANOVA were calculated by using SPSS. All data variables such as Cyber victimization, Internet Addiction, Self-esteem and Self-Objectification were correlated with each other. An Independent Sample T-test was conducted to determine the significant differences in means based on variables such as gender, family system, university and residential status. Cronbach's Alpha value of each scale was also computed to ensure reliability.

Table 2 indicated that internet addiction was significantly higher in boys (M = 45.42, SD = 20.28) than girls (M = 34.90, SD = 15.15), t (298) = 2.22, p =.03, Cohen's d = .26. Cyber victimization was significantly higher in boys (M = 43.94, SD = 13.59) than girls (M = 40.19, SD = 14.84), t (298) = 5.13, p =.00, Cohen's d = .59. General online victimization was significantly higher in boys (M = 17.46, SD = 8.85) than girls (M = 13.63, SD = 6.99), t (298) = 3.98, p =.00, Cohen's d = .48. Sexual online victimization was significantly higher in boys (M = 12.62, SD = 6.73) than girls (M = 9.32, SD = 4.80), t (298) = 4.63, p =.00, Cohen's d = .56. Individual online racial discrimination was significantly higher in boys (M = 8.03, SD = 4.71) than girls (M = 5.98, SD = 3.40), t (298) = 4.10, p =.00, Cohen's d = .50. Vicarious online racial discrimination was significantly higher in boys (M = 7.32, SD = 3.61) than girls (M = 5.97, SD = 3.44), t (298) = 3.24, p =.00, Cohen's d = .38. There were no significant differences in self-objectification and self-esteem between boys and girls.

The results also indicated that self-esteem was significantly higher in public university students (*M* = 27.12, *SD* = 4.27) than private university students (*M* = 25.27, *SD* = 3.88), *t* (298) =3.83, *p* = .00, Cohen's *d* = .45. No significant differences were found in internet addiction, cyber victimization and self-objectification between public and private sectors.

The results also indicated that cyber victimization is significantly higher in urban (*M* = 40.25, *SD* = 18.61) than rural (*M* = 34.53, *SD* = 15.22) students, *t* (298) = 2.48, *p* = .03, Cohen's *d* = -.32. A subscale of cyber victimization, vicarious online racial discrimination, was significantly higher in urban (M = 6.80, SD = 3.68) than rural (M = 5.33, SD = 2.81), t (115.4) = 3.38, p =.00, Cohen's d = .45. No significant differences were found in internet addiction, self-objectification and self-esteem between students from urban and rural areas.

**Table 3 Correlational Matrix among Internet Addiction, Cybervictimization and its Subscales, Self-Objectification and Self-Esteem (N=300)**

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. Internet Addiction | - | .32** | .33** | .21** | .27** | .22** | .15* | -.19** |
| 2.Cyber Victimization | | - | .88** | .87** | .87** | .70** | .19** | -.25** |
| 3. GOV | | | - | .63** | .67** | .40** | .16** | -.25** |
| 4. SOV | | | | - | .68** | .55** | .19** | -.15** |
| 5. IORD | | | | | - | .64** | .14* | -.22** |
| 6. VORD | | | | | | - | .16** | -.18** |

| | | |
|---|---|---|
| 7. Self-Objectification | - | -.11* |
| 8. Self-Esteem | | - |

Note. General Online Victimization (GOV), Sexual Online Victimization (SOV), Individual Online Racial Discrimination (IORD), Vicarious Online Racial Discrimination (VORD)
*p < .05; **p < .01

Table 3 showed results of Pearson correlation which indicated there was positive, moderate and highly significant relationship between internet addiction and cyber-victimization ($r$ = .32, $p$ < .01), general online victimization ($r$ = .33, $p$ < .01), highly significant, positive but weak relationship with sexual online victimization ($r$ = .21, $p$ < .01), individual online radical discrimination ($r$ = .27, $p$ < .01), vicarious online radical discrimination ($r$ = .22, $p$ < .01) and self-objectification ($r$ = .15, $p$ < .05). Additionally, there is a negative, weak but highly significant relationship between internet addiction and self-esteem ($r$ = -.19, $p$ < .01). There was a positive, weak and highly significant relationship between cyber victimization and self-objectification ($r$ = .19, $p$ < .01). Furthermore, there is a negative, weak and highly significant relationship between cyber victimization and self-esteem ($r$ = -.25, $p$ < .01). Self-objectification has highly significant, positive but weak relationship with general online victimization ($r$ = .16, $p$ < .01), sexual online victimization ($r$ = .19, $p$ < .01), vicarious online radical discrimination ($r$ = .17, $p$ < .01), moderately significant, positive and weak relationship with individual online radical discrimination ($r$ = .14, $p$ < .05) and negative, moderately significant but weak relationship with self-esteem ($r$ = -.11, $p$ < .05). Self-esteem had highly significant, negative and weak relationship with general online victimization ($r$ = -.25, $p$ < .01), sexual online victimization ($r$ = -.15, $p$ < .01), individual online radical discrimination ($r$ = -.22, $p$ < .01) and vicarious online radical discrimination ($r$ = -.18, $p$ < .01).

**Table 4 Internet Addiction as a Predictor of Cyber victimization, General Online Victimization (GOV), Sexual Online Victimization (SOV), Individual Online Racial Discrimination (IORD) and Vicarious Online Racial Discrimination (VORD), Self-Objectification and Self-Esteem (N=300)**

| Variable | *B* | *β* | *SE* |
|---|---|---|---|
| Constant (Cyber victimization) | 22.42 | | 3.04 |
| Internet Addiction | .40 | .32** | .07 |
| $R^2$ | .10 | | |
| Constant (GOV) | 7.47 | | 1.33 |
| Internet Addiction | .18 | .33** | .03 |
| $R^2$ | .11 | | |
| Constant (SOV) | 7.10 | | 1.02 |
| Internet Addiction | .09 | .21** | .02 |
| $R^2$ | .04 | | |
| Constant (IORD) | 3.58 | | .70 |
| Internet Addiction | .07 | .27** | .01 |
| $R^2$ | .07 | | |
| Constant (VORD) | 4.27 | | .61 |

| | | | |
|---|---|---|---|
| Internet Addiction | .05 | .05** | .01 |
| $R^2$ | .22 | | |
| Constant (Self-objectification) | 24.64 | | 1.20 |
| Internet Addiction | -.07 | .15** | .02 |
| $R^2$ | .02 | | |
| Constant (Self-esteem) | 28.72 | | .73 |
| Internet Addiction | -.06 | -.19** | .01 |
| $R^2$ | .04 | | |

*Note.* General Online Victimization (GOV), Sexual Online Victimization (SOV), Individual Online Racial Discrimination (IORD), Vicarious Online Racial Discrimination (VORD)
*$p$ < .05; **$p$ < .01

Table 4 indicates that internet addiction is a significant predictor of cyber victimization and its sub-types, along with self-objectification and self-esteem. Specifically, internet addiction positively predicts overall cyber victimization (β = .32), accounting for 10% of its variance. It also significantly predicts general (β = .33, 11%), sexual (β = .21, 4%), individual racial (β = .27, 7%), and vicarious racial online victimization (β = .05, 22%). Furthermore, internet addiction positively predicts self-objectification (β = .15, explaining 2% of the variance) while negatively predicting self-esteem (β = -.19, explaining 4% of the variance). Overall, problematic internet use consistently influences these psychological vulnerabilities.

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**Table 5 internet Addation Cybervictimization Subscales of Cyber Victimization, Self-Objectification and Self-Esteem of University Students belonging to Social Sciences, Natural Sciences, Humanities, Applied sciences and Other Disciplines (N=300)**

| Variables | Social Sciences (*N*=130) | | Natural Sciences (*N*=30) | | Mathematical and Physical Sciences (*N*=88) | | Humanities (*N*=31) | | Medical Sciences (*N*=21) | | *f* (4,295) | *p* | $\eta^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *M* | *SD* | *M* | *SD* | *M* | *SD* | | | |
| Internet Addiction | 42.80 | 14.96 | 41.20 | 12.38 | 41.35 | 14.73 | 43.10 | 14.37 | 34.86 | 11.87 | 1.47 | .21 | .02 |
| Cyber Victimization | 40.47 | 19.15 | 31.73 | 11.06 | 40.01 | 19.04 | 42.45 | 17.86 | 32.48 | 11.89 | 2.50 | .04 | .03 |
| GOV | 15.70 | 8.10 | 12.33 | 6.83 | 15.42 | 8.57 | 16.55 | 7.90 | 12.71 | 5.43 | 1.85 | .12 | .03 |
| SOV | 11.17 | 5.94 | 8.77 | 4.59 | 11.07 | 6.73 | 10.81 | 4.89 | 8.00 | 2.97 | 2.25 | .06 | .03 |
| IORD | 7.05 | 4.46 | 5.23 | 2.57 | 6.80 | 4.04 | 7.84 | 4.30 | 5.95 | 2.75 | 1.97 | .10 | .03 |
| VORD | 6.55 | 3.38 | 5.40 | 3.39 | 6.73 | 3.78 | 7.26 | 3.87 | 5.81 | 3.43 | 1.36 | .25 | .02 |
| Self-Objectification | 27.19 | 7.32 | 28.80 | 6.10 | 27.43 | 6.14 | 28.97 | 7.54 | 25.81 | 6.23 | 1.02 | .40 | .01 |
| Self-Esteem | 26.75 | 4.12 | 26.20 | 3.97 | 25.92 | 4.69 | 26.16 | 3.87 | 26.57 | 3.46 | .56 | .69 | .01 |

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In Table 5, an analysis of variance shows that there is significant mean difference among academic disciplines for cyber victimization *F* (4, 295) = 2.50, *p* = .04 where humanities (M = 42.45, *SD* = 17.86) has highest score on internet addiction as compared to social sciences (M = 40.47, *SD* = 19.15), natural sciences (M = 31.73, *SD* = 11.06), mathematical and physical sciences (M = 40.01, *SD* = 19.04) and medical sciences (M = 32.48, *SD* = 11.89).

There is no significant difference among academic disciplines for internet addiction *F* (4, 295)= 1.47, *p* = .21. There is no significant difference among academic disciplines for general online victimization *F* (4, 295) = 1.85, *p* = .12, sexual online victimization *F* (4, 295) = 2.25, *p* = .06, individual online racial discrimination *F* (4, 295) = 1.97, *p* = .10, vicarious online racial discrimination *F* (4, 295) = 1.36, *p* = .25. There is no significant difference among academic disciplines for self-objectification *F* (4, 295) = 1.02, *p* = .40. There is no significant difference among academic disciplines for self-esteem *F* (4, 295) = .56, *p* = .69.

**Discussion**

The primary aim of this study was to examine the relationships among internet addiction, cyber victimization, self-objectification, and self-esteem, and to determine the predictive role of internet addiction on these variables. The results revealed a significant positive association between internet addiction, cyber victimization, and self-objectification, alongside a significant negative association with self-esteem.

In addition to reflecting current research, these findings can be interpreted through the Generalized Problematic Internet Use (GPIU) framework to offer greater clarity. The GPIU framework proposes that individuals with underlying psychosocial weaknesses, such as the lw self-esteem of the individuals in our sample, will use the internet as a means of regulating their mood; as a result, they will have a strong tendency to engage with other people socially online (Caplan, 2010). Specifically, this will lead to poor self-regulation on the part of the individuals, which is the particular mechanism that explains the present findings as argued by Elosua et al. (2025). Because digital addiction was identified as a significant predictor of being a victim of cyber violence, this demonstrates that individuals that are not able to self-regulate their use of technology lose the ability to separate themselves from a threatening technology-related environment. It can also be said, based on the above analysis, that continuing to expose themselves unmonitored to a hostile environment, such individuals consequently become targets for cyberbullying. Similarly, their continued inability to log off, in addition to the increased likelihood of engaging with and subscribing to idealized bodies in virtual environments through social media, results in them frequently surveilling their own bodies in relation to idealized images of bodies in the digital sphere and therefore self-objectifying.

The second hypothesis, in our study, stated that self-esteem will have a significant negative relationship with internet addiction, cyber victimization and self-objectification. Results of Pearson correlation analysis supported this hypothesis (See Table 3) which means that people with high scores of internet addiction, cyber victimization and self-objectification have lower self-esteem. Separate studies were found in existing literature which showed relationship between these variables.

These findings are similar to the study which was done on 185 participants, divided in three groups including no addiction, low addiction and high addiction to find relationship among self-esteem, internet addiction and psychopathology. Findings indicated significantly negative correlation between internet addiction and self-esteem (Budak et al. (2015). Hence individuals who are more addicted to the Internet tend to have low self-esteem (Younes et al. 2016).

Another study was consistent with our findings which was aimed on investigating profiles of cyber victimization and the results revealed that cyber victims had lower levels of self-esteem as compared to non-victims (Andrea and Álvarez-García, 2021). Another findings, of a study done on young adults, revealed that self-objectification has negative and significant association with self-esteem (Kalimi, 2023), as seen in our study.

Moreover, we investigated the relationship among subscales of cyber victimization scale and other variables separately (See Table 3), which we could not find in existing literature. This was done to find which one of the subscale has strong relationship with internet addiction, self-objectification and self-esteem. The result of independent sample t-test showed that males have higher score on internet addiction (See Table 2). These findings are similar to previous literature, that males were more prone to internet addiction as they are more likely to engage in addictive activities like pornography, cybersex and online gaming compared with females (Hassan et al., 2020). Previous studies also indicate that male has a higher prevalence of mild and severe internet addiction because of their involvement in social networking and online gaming sites (Xin et al., 2017).

Cyber victimization is also more prevalent among males than females (See Table 2). Existing literature shows that males have a higher risk of cyber-victimization than females (Akcan and Ozturk 2017). The results showed that subscales of cybervictimization including, general online victimization, sexual online victimization, individual online racial discrimination and vicarious online racial discrimination was significantly higher in men than women (See Table 3).While previous studies show inconsistent findings with some research indicating that females are more vulnerable to be a victim of cyber victimization (Brown et al., 2014). On the other

hand, several studies reveal that males scored higher on cyber victimization than females (Musharraf & Anis-ul-Haque, 2018; Kazmi et al., 2024). Our results also showed that there is no significant difference between gender and self-objectification.

Moreover, this dynamic must be interpreted within the specific cultural context of the region. In a predominantly patriarchal framework, young men typically benefit from a "digital gender gap," experiencing greater access to the internet and fewer societal restrictions on their screen time. This unmoderated freedom often translates into heavier engagement in male-dominated online gaming communities and socio-political forums, which are frequently characterized by toxic and aggressive interactions, thereby elevating their risk for victimization. Interestingly, no significant gender differences were found regarding self-esteem or self-objectification, suggesting that the digital pressures impacting self-worth and body surveillance cross gender boundaries in this demographic

Furthermore, results of the present study revealed that both male and female students have no significant difference in self-esteem (See Table 2). This result contradicts previous studies that showed that males have high self-esteem as compared to women (Minev et al., 2018; Raza et al., 2022). The contradiction may be caused due to the contextual and cultural differences.

In our study, we also observed differences among students of public and private universities. The results of independent sample t-test indicated that self-esteem was significantly higher in public university students as compared to private universities (See Table 2). No other differences were found among students in internet addiction and self-objectification. The results of independent sample t-test also indicated that cybervictimization, especially vicarious online racial discrimination was higher in urban as compared to rural areas (See Table 2). Moreover, the current study provided insights about predictive associations.

Results of simple regression analysis indicated that internet addiction is a significant predictor of cyber victimization, self-objectification and self-esteem as shown in Table 4. The results are consistent with the hypothesis that internet addiction has a direct and positive effect on cyber victimization. So students who are addicted to the internet are more likely to be cyber victimized. Previous studies also support the notion that a higher level of internet usage makes adolescents vulnerable to cyber victimization (Erden et al., 2022; Kazmi et al., 2024).

The hypothesis that internet addiction will be a significant predictor of cyber victimization was also stated. Moreover, internet addiction is a significant predictor of subscales of cybervictimization including, general online victimization, sexual online victimization, individual online racial discrimination and vicarious online racial discrimination (See Table 4). The results also indicate that the higher internet addiction is associated with increased self-objectification, with a variance of 2% (See Table 4). The findings are in line with the objectification theory, which claims that exposure to the internet or social media excessively leads to self-objectification. Previous studies have also documented that the detrimental use of social media and appearance-related social media networking sites can lead to self-objectification and body dissatisfaction (Seekis et al., 2020). Furthermore, it was seen that internet addiction is a significant predictor of subscales of self-esteem (See Table 4).

We collected data from different departments of public and private universities and divided that list of departments into five academic disciplines including social sciences, natural sciences, humanities, applied sciences and others. The results of one-way ANOVA revealed that cyber victimization is more prevalent in humanities discipline as compared to social sciences, natural sciences, mathematical and physical sciences and medical sciences whereas no significant difference was found in terms of internet addiction, self-objectification and self-esteem (See Table 5).

Thus, the current study showed that cyber victimization was considerably greater within the humanities than amongst students in the social,

natural or medical sciences. This phenomenon can be related to both the coursework students take and their social identities i.e. students of the humanities are expected to be able to consider and critically evaluate sensitive issues (e.g., socio-political, cultural, gender and ideological) throughout the duration of their coursework. As students of the humanities discuss these topics publicly in digital spaces (e.g., blogging, debating ideas, publishing critical essays), they become part of very volatile environments. Additionally, as students voice opinions about such polarizing topics, they are very visible and become targets of organized trolls and/or those people opposing those views, as well as receive targeted harassment from those individuals or groups.

**Limitations**

There are few limitations associated with the study. First, the utilization of a correlation design limits the scope in relevance to causal interpretations among internet addiction, cyber victimization, objectification and self-esteem. Moreover, the use of purposive sampling limits the generalizability of the study towards other broader populations in Pakistan. Moreover, as both online and physical questionnaires were used for data collection including social desirability which is primarily seen when data is collected physically. Selection biases may also occur when using such modes due to which the data may be slightly skewed in the current study. Moreover, low internal consistency was seen for some subscales due to which the interpretations may require caution.

**Implications**

The study contributes to GPIU theoretical framework by providing the empirical results that internet addiction significantly influences cyber victimization, self-objectification and self-esteem. The positive correlation between internet addiction and cyber victimization among university students highlights the need for a digital literacy program that educates students about the potential risks associated with excessive internet usage and promotes a conscious and responsive attitude toward the internet. Mental health education should also be provided to the students that can help them uplift their self-esteem and attenuate self-objectification.

This study suggests that there is a need to cause awareness to encourage responsible online behavior and to initiate self-esteem enhancement strategies among young adults. It is also necessary to create a positive environment that promotes acceptance of one's self and body image is essential for mitigating the potential effect of self-objectification. Counseling services and therapies should be available where professionals can psycho-educate the individuals about the potential risks associated with internet addiction and its psychological impact. This is more important for males as they are more prone to cyber victimization and internet addiction than females, as seen in our study.

So, this study also stresses upon the need for gender-specific intervention, considering the exacerbating rate of internet addiction and cyber victimization among males. Furthermore, culturally sensitive initiatives should be taken to address the issues related to excessive internet usage while ensuring the mental well-being of the students.

**Conclusion**

This study indicates that relationship exists among internet addiction, self-objectification, cyber victimization and self-esteem. Our results revealed significant positive association between internet addiction, self-objectification and cyber victimization and significant negative association with self-esteem and these variables. We also found that internet addiction is a predictor of self-objectification, cyber victimization and self-esteem. Furthermore, men had higher scores on cyber victimization and internet addiction. This study educates students about the potential risks associated with excessive internet usage and promotes a conscious and responsive attitude toward the internet.

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