

## The Prevalence of Bed-Time Procrastination and Internet-Usage among Adolescent Students

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### ABSTRACT

The present study attempts to cast a glance at the relationship of Bed-Time Procrastination and Internet Usage among Adolescent Students. A great deal of research on the common and detrimental phenomena of Procrastination focuses on academic behavior. Furthermore, Procrastination can adversely impact bed-time habits and other health-related behaviors. Research has shown that Procrastination significantly affects the relationship between sleep deprivation and the individual's well-being. In this study, 100 Adolescent students were selected from University of Lucknow through Purposive Sampling, General Procrastination scale by Lodha et.al, 2016, Bed-Time Procrastination was assessed through self-report questionnaire by Kroese et.al, 2014, Internet- Usage was assessed through Saini & Kaur, 2016. Results indicate that Bed-Time Procrastination and Internet Usage have positive significant relationship. Further gender difference was measured for Procrastination, Bed-time Procrastination and Internet-Usage, where males are high on Procrastination and Internet Usage than females and females are high on Bed-time Procrastination than males.

**Keywords:** *Procrastination, Bed-Time Procrastination, Internet Usage, Adolescent Students*

In today's world, putting things off is a common and detrimental habit (Ferrari, 2010). It is a behavioral propensity or personality trait connected to a range of situational and individual factors. According to Steel and Klingsieck (2016), Procrastination is the deliberate postponement of crucial and essential tasks, even when one is aware that the consequences will be negative. Nevertheless, the potential for these delays has been linked to a number of detrimental effects, such as issues with one's physical and mental health, one's capacity to meet professional and academic objectives, and one's financial stability (Steel, 2007).

Many areas of life are investigated in the context of Procrastination. Klingsieck (2013) identified six primary areas of life where people tend to put things off.

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Research has shown that procrastinators are less likely to practice wellness habits like exercise and a healthy diet (Sirois et al., 2003; Sirois & Pychyl, 2002). They may also be less likely to seek medical attention for health issues, which could contribute to their poor health (Sirois et al., 2003).

Bed-time Procrastination is defined as the psychological state of deliberately putting off going to bed with no external circumstances (Chow, 2011). It is a multifaceted experience with affective and cognitive components that reflects a lack of self-control (Kroese et al., 2014b). Reduced conscientiousness, impulsivity, and self-regulatory abilities are some of the domains upon which the Procrastination construct is based (Kroese et al., 2014a). Studies in the past have linked anxiety (Türkarşlan et al., 2020), depression, smartphone addiction (Geng et al., 2021), weariness and insufficient sleep (Kroese et al., 2014a), insomnia (Hammoudi et al., 2021), and bed-time Procrastination. Hairston and Shpitalni (2016) concluded that Procrastination during the night is connected to ruminative cognition and sleep difficulties, while Sirois et al. (2015) pointed out that Procrastination is associated with numerous measures of sleep quality.

Bed-time Procrastination is negatively correlated with sleep length and sleep quality (Li et al., 2020). Depression (Geng et al., 2021), social jetlag (Li et al., 2020), and anxiety (Rubin, 2020) have all been connected to Bed-time Procrastination in terms of mood.

Bed-time Procrastination may serve as a mediator between poor sleep resulting from unhealthy habits and a lack of self-control (You et al., 2021; Zhang & Wu, 2020). In a similar vein, improving self-regulation, reducing Bed-time Procrastination and enhances the quality of sleep (Kühnel et al., 2018; Valshtein et al., 2020).

Researchers like Kroese (2014) have looked into how Bed-time Procrastination affects the quality of sleep, how lack of self-regulation contributes to Bed-time Procrastination, and how self-regulation training could help reduce it (Exelmans & Van den Bulck, 2016; Zhang & Wu, 2020). Bed-time Procrastination is a major factor linking poor self-regulation and poor sleep quality (Kroese & de Ridder, 2016; Nauts et al., 2019). Going to bed later than

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planned owing to Procrastination fundamentally predicts poor sleep quality (Wang et al., 2019). Procrastination also affects circadian sleep cycles (Chen & Gau, 2016).

According to the Procrastination Wellbeing Model (Sirois, 2007), there is a strong risk of poor sleep quality due to procrastination. This is supported by various empirical studies (Błachnio & Przepiorka, 2019). Research indicates that Procrastination before bed-time continues to be a significant factor in inadequate sleep (Kadzikowska-Wrzosek, 2018).

According to one of the research, students procrastinate more before bed than non-students do (Herzog-Krzywoszanska and Krzywoszanski, 2019). This emphasizes how important it is to look into students' bed-time Procrastination. Results on social media addiction (Sai et al., 2020; Exelmans and Van den Bulck, 2021), smartphone addiction (Zhang and Wu, 2020; Geng et al., 2021; Chen et al., 2022; Mao et al., 2020), and internet addiction (Reinecke et al., 2018; You et al., 2020) have all connected bed-time Procrastination to behavioral addiction. In this regard it becomes important to understand Internet usage and its impact on Adolescent Students.

The excessive use of the Internet can have a detrimental impact on mental health and cause issues with day-to-day functioning. Adolescents' insatiable curiosity, lack of self-control, and incapacity to establish a sense of identity make them vulnerable to developing an Internet addiction. Studies have shown a connection between excessive adolescent Internet use and psychosocial problems such as difficulty telling the difference between the real and virtual worlds, difficulty adjusting to life, poor academic performance, avoidance of social interactions, extreme exhaustion, and irregular sleep cycles.

Based on the literature, it can be concluded that Procrastination is a problematic behavior, which leads to voluntary delay of necessary task despite knowing that one will be worse off for doing so (Steel and Klingsieck, 2016) which may result in negative consequences. Different domain of Procrastination have not much been explored in the past, therefore this study makes a small effort to uncover a small aspect of one of the domains of Procrastination that is health and to understand the relationship between Bed-time Procrastination and Internet Usage.

### ***Objectives:***

- To assess the level of Procrastination among Adolescent Students across gender.
- To explore the level of Bed-Time Procrastination and Internet Usage among Adolescent Students across gender.
- To Study the effect of Internet-usage on Bed-Time Procrastination among Adolescent Students.
- To understand the sleeping habits of Adolescent Students that lead to Procrastination.

### ***Hypothesis:***

- Males would be higher in Procrastination as compared to females among Adolescent Students.
- Females would be higher in Bed-Time Procrastination as compared to males among Adolescent Students.
- Males would be higher in Internet-Usage as compared to females among Adolescent Students.

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- There would be a positive relationship between Bed-time Procrastination and Internet Usage among Adolescent Students.

### **METHODOLOGY**

**Research Design:** Descriptive research design is used in the present study.

**Sample:** The sample of the study included 100 Adolescent Students age range from 16 to 20 (50 males and 50 females), who were selected from a college in Uttar Pradesh.

**Sampling Method:** Purposive Sampling method was used for the present Study.

**Measures used:** The General Procrastination Scale by Lodha et al. (2016) was used to determine the degree of Procrastination among the Adolescent students in this study. A 23-item measure comprising four domains: Procrastination-related civic duties, the workplace, the medical field, and academia. It is a 5-point likert scale. Scores are obtained by summing the response of each item and ranges from 23 to 115.

To assess level of Bed-Time Procrastination among Adolescent Students in the present study, Bed-time Procrastination Scale by Kroese et.al. (2014) was used. A 9-item 5-point scale ranging from 1 (never) to 5 (always). A score between 9 and 18 points indicates a regular bed-time, whereas a score between 36 and 45 points indicates Bed-time procrastination. The BPS total score ranges from a minimum of 9 to a maximum of 45 points. The scale's principal component analysis yielded an eigenvalue of 5.57 and Cronbach's alpha of 0.92, indicating that it evaluates a uniform construct.

To assess level of Internet Usage among Adolescent Students in the present study, Internet Usage Scale by Saini and Kaur (2017) was used. A 20 item 5-point scale, which measures the internet usage level of the respondents. The split half reliability of the scale is 0.91 and the validity of the scale was well established.

Demographic details including sex, age, etc. and an open-ended questionnaire related to bedtime routine and internet usage habits was also used.

**Statistical analysis used:** In the present study, SPSS version 20 was used for statistical analysis, "t" and the mean standard deviation were computed.

**Procedure:** Participants were informed of the study's objectives and confidentiality protocols at the start of the data collection. After obtaining consent, participants were given a demographic questionnaire to complete in order to provide information about their gender, age, location of residence, educational background, and other pertinent factors. Additionally, participants were asked to complete the General Procrastination Scale, which was only used for screening. Those who scored moderate to high on the scale were chosen, and their answers to the Bed-time Procrastination and Internet Usage Scale were also gathered, along with their answers to an open-ended questionnaire about their internet usage habits and bed time routine. Following data collection, scoring, analysis, and result interpretation were carried out.

**RESULTS AND DISCUSSION**

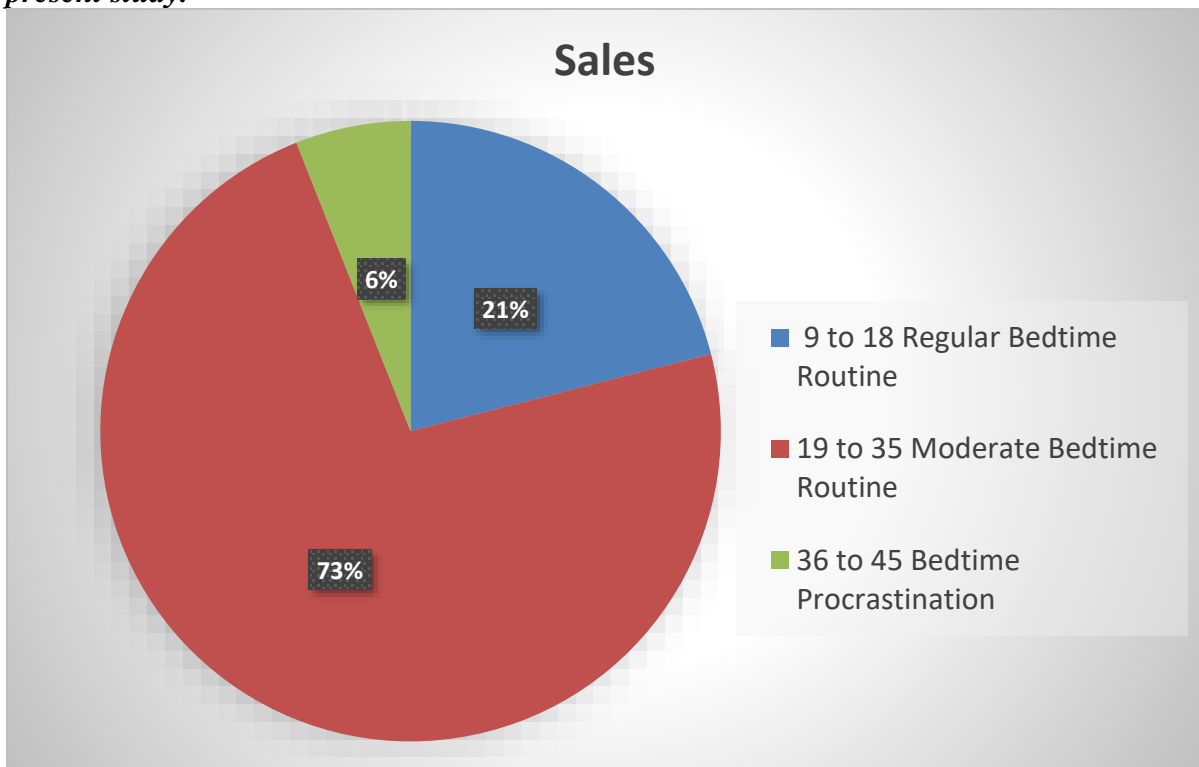
*Table 1: Showing findings of gender difference in Procrastination among Adolescent Students, using General Procrastination Scale.*

	Mean	SD	SEM	SED	T	P value	Findings
Male	68.04	5.72	.81	1.30	6.81	.000	Highly Significant
Female	59.14	7.25	1.02				

*Table 2: Showing findings of gender difference in Bed-Time Procrastination among Adolescent Students, using Bed-time Procrastination Scale.*

	Mean	SD	SEM	SED	T	P value	Findings
Male	22.24	6.32	.89	1.22	- 4.22	.000	Highly Significant
Female	27.44	5.96	.84				

*Figure 1: Showing distribution of Bed-Time routine among Adolescent Students in the present study.*

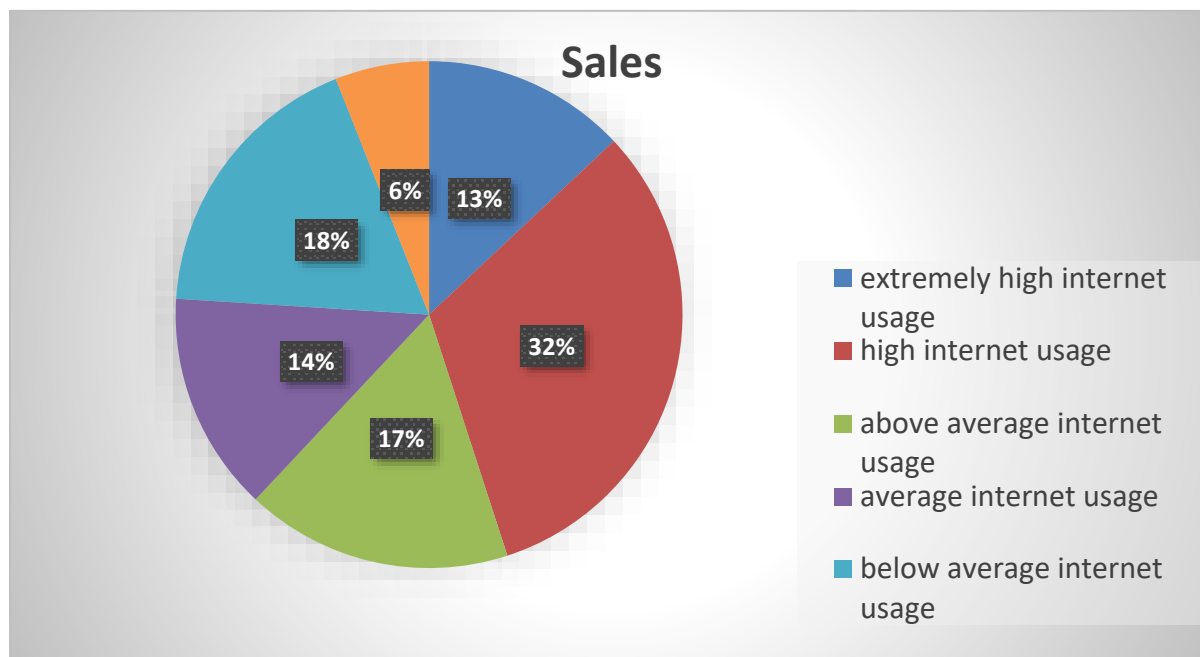


*Table 3: Showing findings of gender difference in Internet Usage among Adolescent Students, using Internet Usage Scale.*

	Mean	SD	SEM	SED	T	P value	Findings
Male	68.5	6.42	.91	1.89	12.28	.000	Highly Significant
Female	45.24	11.75	1.66				

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**Figure 2: Showing the distribution of level of Internet Usage among Adolescent Students in the present study.**



**Table 4: Showing correlation between Bed-Time Procrastination and Internet Usage among Adolescent Students.**

		Bed-Time Procrastination	Internet Usage
<b>Bed-Time Procrastination</b>	Pearson Correlation	1	-.266**
	Sig. (2-tailed)		.007
	N	100	100
<b>Internet Usage</b>	Pearson Correlation	-.266**	1
	Sig. (2-tailed)	.007	
	N	100	100

**\*\*Correlation is significant at the 0.01 level (2-tailed).**

To identify gender difference, the independent t test was used in this study on General Procrastination Scale, Bed-Time Procrastination and Internet Usage Scale. The t-test, mean, and standard deviation were used to analyse the collected data. Mean, standard deviation and t-test value of Procrastination, Bed-Time Procrastination, and Internet Usage across gender among Adolescent Student is presented in the Table 1, Table2 and Table 3. And the relationship between Bed-Time Procrastination and Internet Usage is shown in the Table 4.

Results indicate that there is a significant difference between male and female ( $t= 6.81, p < 0.0001$ ) and males have higher level of Procrastination (Mean= 68.04) than females (Mean= 59.14), hence accepting the first hypothesis. According to the consistent findings of Desheng Lu, Yiheng He, and Yu Tan (2022), gender differences are more strongly associated with academic Procrastination than with general Procrastination, and graduate students show the highest gender differences linked to Procrastination tendency. Males consistently procrastinate more than females, in line with a different study by Brittany Cangialosi and Heidi Lee Dempsey (2019) on the difference in Procrastination by gender and age.

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Equivalent results from a different study on university students conducted by Farhah Kassim et al. (2022) indicate that gender, location, and management style have a major influence on high school students' academic Procrastination, which is consistent with the finding that males procrastinate more than females. Dr. Vijay Kumari and Prof. B.S. Kumar Reddy discovered a similar conclusion in 2021.

Findings on Bed-Time Procrastination also show that there is significant difference between males and females ( $t= 4.22$ ,  $p < 0.0001$ ) and females (Mean= 27.44) have higher level of Bed-Time Procrastination than males (Mean= 22.24), hence accepting the second hypothesis. Females reported higher levels of study-holism and bed-time Procrastination than males in an undergraduate study on study engagement, bed- time Procrastination, and study-holism.

Demographic factors like education and working, non-working etc. all play an important in Bed-time Procrastination. Similar results were found by Ahmad and Khurshid on Self-regulation, Bed-time Procrastination and Sleep Quality that compared to male, it was discovered that females were more likely to have significantly worse sleep quality and slightly higher Bed- time Procrastination.

Figure 1 shows the Bed-Time routine distribution in percentage among Adolescent Students, where 21% of Adolescent Students who scored between 9 to 18 have regular Bed-Time routine, 73% of Students scored between 19-35 have moderate Bed-Time routine, and 6% of Students who scored between 36 to 45 have Bed-Time Procrastination in the present study may be due to small sample size.

Findings on Internet Usage show that there is a significant difference between males and females ( $t= 12.28$ ,  $p < 0.0001$ ) and the level of Internet Usage is higher in males (Mean= 68.5) than females (Mean= 45.24), accepting the third hypothesis. Dufour et al. (2016) found a continuous gender difference in students' Internet use and problems with it. Specifically, they found that males use the Internet substantially more than females do, where greater number of females intensely use social networks whereas greater numbers of males intensively use massive multiplayer online role-playing games, online games, and adult sites. Similar results were found by Amin (2016) in a study on Internet use and gender difference at senior secondary school level, where it was found that males have better use of internet for academic purpose and males and females both are found similar in internet use for recreational and communication purpose.

Figure 2 shows the distribution of Level of Internet Usage in percentage among Adolescent Students, where 13% of Adolescent Students show extremely high Internet Usage, 32% Adolescent Students show high Internet Usage, 17% students show above average Internet Usage, 14% students show average Internet Usage, 18% students show below average Internet Usage, and 6% Adolescent Students show low Internet Usage in the present study. Further on questions like “What do you do in your free time”, “Do you use cellphone before going to bed, if yes, which online platform you visit before going to bed”, “For what purpose you mostly use internet for”. Most common answer for the first question was to use internet or mobile phone and to socialize. For the second question, most common answer was found to be surfing on social networking sites like Instagram, WhatsApp, Facebook and YouTube. Lastly for third question, entertainment was ranked highest, then Academics and finally Socialization.

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Lastly the results indicate a significant correlation at p-value 0.01 level between Bed-Time Procrastination and Internet Usage, hence accepting the fourth hypothesis, that there is positive correlation between Bed-Time Procrastination and Internet Usage among Adolescent Students. Most of the study found were on Smartphone addiction or problematic internet use. Bozkurt et al. conducted a study on bedtime procrastination, sleep quality, and problematic smartphone use in Adolescents, results showed that 46.9% of Adolescents use their smartphones problematically for an average of 2.8 hours per day and found a strong association between the duration of smartphone use in bed and poor sleep quality, with 90.6% of users using their phones while in bed. Another study by Aiya & Bhansali on relationship between mindfulness, Bed-time Procrastination, Smartphone Addiction and Well-being implies that Bedtime Procrastination and smartphone addiction can lead to dissatisfaction and disconnection, negatively impacting overall well-being.

### CONCLUSION

To summarize the findings of the current study it can be stated that there is a significant gender difference among Adolescent Students, where males Procrastinate more than females, but in Bed-time Procrastination females Procrastinate more than males resulting in poor sleep quality, accepting the first two hypothesis.

Further results also state that males Internet Usage is high than females and there is a significant relationship between Bed-time Procrastination and Internet usage, such extensive use of Internet may impact overall well-being and health, hence accepting the third and the fourth hypothesis.

In future educational workshops or intervention program to reduce Procrastination and excessive Internet Usage which can provide information on the negative consequences of Procrastination and excessive Internet Usage like poor academic results, lack of goal-oriented behavior and poor physical and mental health and teach skills to improve self-control or enhance self-regulation practices can be effective in dealing with such behavioral issues.

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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