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Mobile Phone Addiction, Work- Study Conflict and Sleep Problems Among Young Adults

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ABSTRACT

The rapid expansion of smart phone usage has transformed communication, social interaction, and work habits, yet excessive reliance on mobile devices has given rise to behavioral concerns such as mobile phone addiction. This study examined the relationship between mobile phone addiction, work-study conflict, and sleep problems among young adults in Sialkot, Pakistan. Using a cross-sectional design, data were collected from 299 participants through standardized measures: the Smartphone Addiction Scale-Short Version (SAS-SV), Work-Study Conflict Scale, and Sleep Quality Scale. Findings revealed significant positive correlations between mobile phone addiction and work-study conflict ($r = .58$, $p < .001$), as well as between mobile phone addiction and sleep problems ($r = .53$, $p < .001$). Work-study conflict was also positively associated with sleep disturbances ($r = .43$, $p < .01$). Mediation analysis showed that work-study conflict partially mediated the relationship between mobile phone addiction and sleep problems. Gender differences were also observed, with males reporting 1higher levels of mobile phone addiction, work-study conflict, and sleep issues compared to females. These findings highlight the detrimental implications of excessive mobile phone use on young adults' academic, professional, and psychological well-being. Interventions promoting digital literacy, healthy device use, and improved sleep hygiene are necessary to mitigate the risks of mobile phone addiction.

Keywords:*Mobile phone addiction, work-study conflict, sleep problems, young adults, Pakistan*

INTRODUCTION

The proliferation of smartphones has reshaped modern lifestyles, particularly among young adults who rely heavily on mobile devices for social networking, gaming, communication, and academic tasks. While mobile phones enhance connectivity, their compulsive use can disrupt essential aspects of well-being, including academic productivity, work-life balance, and sleep quality (Shehzadi,& Akhter,2024).Behavioral scientists classify excessive smartphone use as a form of addiction, similar in nature to gambling or internet addiction, with symptoms such as withdrawal, tolerance, and compulsive checking (Billieux, 2015).

Young adults in Pakistan often balance academic responsibilities with part-time or full-time work, making them vulnerable to work-study conflict—a role conflict where professional and educational demands collide (Beutell, 1985). At the same time, excessive late-night phone use has been strongly linked to sleep disturbances, largely due to screen-emitted blue light and psychological arousal (Cajochen, 2005). Despite growing international literature, little research has explored how these three constructs interact in the Pakistani context. This study addresses this gap by examining the relationship between mobile phone addiction, work-study conflict, and sleep problems among young adults(Arshad & Akhtar, 2024).

Mobile phone addiction has been associated with stress, anxiety, reduced productivity, and impaired sleep (Elhai et al., 2017). Work-study conflict arises when occupational demands reduce the time and energy available for academic obligations, often leading to burnout and poor academic performance (Greenhaus &Beutell, 1985). Sleep disturbances, on the other hand, compromise memory, concentration, and emotional regulation (Walker, 2017). Previous studies suggest that excessive mobile phone use contributes both directly and indirectly to poor sleep quality by intensifying academic and professional conflicts (Demirci, 2015).

Hypothesis

I. Mobile phone addiction is positively associated with work study conflict among young adults
II. There is positive correlation between mobile phone addiction and sleep problems
III. Work-study conflict is positively associated with sleep problems
IV. Work-study conflict mediates the relationship between mobile phone addiction and sleep problems
V. There are significant differences in mobile phone addiction, work-study conflict and sleep problems based on gender

METHODOLOGY

Research Design

A cross-sectional research design was used in this study.

Sample and Sampling Techniques

Sample of 299 young adults (150 male and 149 female) was chosen. The data for this study were obtained from universities, colleges and workplaces in Sialkot city ages ranging from 18 to 26 years and convince sampling technique is utilized in this research.

Mobile Phone Addiction Scale SAS-SV (Min Kwon, 2013)

The Smartphone Addiction Scale–Short Version (SAS-SV) developed by Min Kwon (2013) is a 10-item self-report tool rated on a 6-point scale to screen mobile phone addiction. It demonstrates strong internal consistency ($\alpha = .83$) and good construct and criterion validity.

Work-Study conflict Scale (Netemyer, 1996*)*

The Work-Study Conflict Scale, adapted from Netemeyer's (1996) Work-Family Conflict Scale, consists of 10 items (5 work-study, 5 study-work) rated on a 7-point Likert scale. It demonstrates strong reliability ($\alpha = .82–.90$) and measures bidirectional conflict between academic and work roles

Sleep Quality Scale (Chol Shin, 2006).

The Sleep Quality Scale (Yi et al., 2006) is a 28-item self-report tool rated on a 4-point Likert scale that assesses six dimensions of sleep quality. It shows excellent reliability ($\alpha = .92$) and validity, with higher scores indicating more severe sleep problems.

Procedure

The synopsis of this study was approved by the research committee. After permission the data was gathered by handprint forms, after that permission was taken by the authors of the scales which was arranged. The scales which will be use in our research will be Mobile Addiction Scale Short Version, Sleep Quality Scale, Work-study conflict Scale was taken. Then participants from the city of Sialkot filled the hand printed forms which was given to the participants of Sialkot. Data was collected for a specific period. Informed consent was given to the participants. Researcher was ensured the participants that their confidentiality was maintained,and researcher was debriefing the participants with study findings and resources for mobile phone addiction and sleep problems. After collecting the data, data analysis was used IBM SPSS 21. Different test e.g. correlation test was used to explore the relationship between the variables.

Prior to doing research and the associated discovery procedures, all safe tools were used. This process provided the researcher with a constructive approach to more thoroughly examine the findings. Before beginning a study, research informs participants of all the conditions involved to facilitate research. In summary, every important ethical factor pertaining to study findings should be well organized prior to the data collection process.

RESULTS

Table1

Demographic Characteristics of the Sample (N = 299)

Variable	Category	F	%
Gender	Male	150	50.2
	Female	149	49.8
Age	18–20	61	20.4
	21–23	96	32.1
	24–26	142	47.5
Marital Status	Married	78	26.1
	Unmarried	221	73.9
Education Level	Undergraduate	160	53.5
	Graduate	139	46.5
Field of Study	STEM	70	23.4
	Business/Economics	93	31.1
	Social Sciences	100	33.4
	Other	36	12.0
Institution Type	Public University	157	52.5
	Private University	142	47.5
Socioeconomic Status	Low	35	11.7
	Middle	193	64.5
	High	71	23.7
Income	10k–30k	36	12.0
	30k–70k	151	50.5
	Above 70k	112	37.5
Living Area	Rural	118	39.5
	Urban	181	60.5
Family System	Joint	119	39.8
	Nuclear	180	60.2
Current Status	Worker	30	10.0

	Student + Worker	269	90.0
Employment	Part-time	144	48.2
	Full-time	155	51.8
Duration of Employment	1–3 years	148	49.5
	4–7 years	96	32.1
	7–10 years	37	12.4
	Other	18	6.0

Note. F=Frequency and %=Percentage

The sample (N = 299) was almost evenly divided by gender. Most participants were between 24–26 years, unmarried, and undergraduate students. A majority came from urban areas, lived in nuclear families, and belonged to the middle socioeconomic class. The dominant fields of study were social sciences and business/economics. Most respondents were student-workers, with employment distributed nearly equally between part-time and full-time, and about half had 1–3years of work experience**.**

Table 2

Correlation among Mobile Phone Addiction, Work-Study Conflict, and Sleep Problems (N=299)

Variables	**Mobile phone addiction**	**Work study conflict**	**Sleep problems**
Mobile phone addiction	-	.580**	.529**
Work study conflict	-	-	.439**
Sleep problems	-	-	-

The results show significant positive correlations among all three variables. Mobile phone addiction is strongly associated with work-study conflict ($r = .580$, $p < .01$) and sleep problems ($r = .529$, $p < .01$). Similarly, work-study conflict is positively correlated with sleep problems ($r = .439$, $p < .01$). This indicates that higher mobile phone addiction tends to increase work-study conflict and sleep disturbances among young adults.

Table 3

Regression Mediation Analysis: Work-Study Conflict as Mediator (N=299)

	Coefficient	**SE**	**T**	**p**	**95% CI (LL, UL)**
Mobile → Work-Study	.7047	.0574	12.28	<.001	[.5918, .8176]
Work-Study	.2963	.0885	3.35	.001	[.1220, .4705]

→ Sleep					
Mobile → Sleep (Direct)	.7472	.1075	6.95	<.001	[.5356, .9588]
Mobile → Sleep (Total)	.9560	.0891	10.74	<.001	[.7807, 1.1313]
Indirect Effect (via WS)	.2088	.0564	—	—	[.0988, .3215]

The mediation analysis revealed that mobile phone addiction significantly predicted work-study conflict (β = .7047, p < .001), and work-study conflict, in turn, significantly predicted sleep problems (β = .2963, p = .001). The direct effect of mobile phone addiction on sleep problems remained significant (β = .7472, p < .001), while the total effect was stronger (β = .9560, p < .001). The indirect effect via work-study conflict was also significant (β = .2088, 95% CI [.0988, .3215]), indicating partial mediation. This suggests that mobile phone addiction influences sleep problems both directly and indirectly through increased work-study conflict.

Table 6
Independent Samples t-Test for Gender Differences (N=299)

Variable	Gender	M	SD	t	p
Mobile Phone Addiction	Male	41.86	9.46	3.05	.002
	Female	38.20	10.02		
Work-Study Conflict	Male	51.68	10.40	4.97	<.001
	Female	45.54	12.78		
Sleep Problems	Male	78.65	19.71	2.19	.029
	Female	74.20	15.63		

The t-test results showed significant gender differences across all three variables. Male participants reported higher levels of mobile phone addiction (M = 41.86, SD = 9.46) compared to females (M = 38.20, SD = 10.02), t (297) = 3.05, p = .002. Similarly, males scored higher on work-study conflict (M = 51.68, SD = 10.40) than females (M = 45.54, SD = 12.78), t(297) = 4.97, p< .001. Finally, males also reported more sleep problems (M = 78.65, SD = 19.71) than females (M = 74.20, SD = 15.63), t(297) = 2.19, p = .029.

DISCUSSION

This study investigated the connections between young adults' sleep issues, work-study conflict, and mobile phone addiction. Strong positive correlations between these factors were found in the results, indicating that increasing work-study conflict and sleep problems are highly correlated with higher degrees of mobile phone addiction.

Support was found for the first hypothesis, which suggested a positive correlation between work-study conflict and cell phone addiction. Regular phone use was linked to role overload and decreased academic production. This aligns with findings from (Thomée, 2011), who found that frequent mobile phone use was associated with increased stress and decreased academic productivity also noted that college students with higher mobile phone usage reported lower academic performance and more time management issues. Additionally, the second hypothesisthat there is a positive correlation between mobile phone addiction and sleep issueswas validated. In line with other research, problematic phone use disrupts sleep cycles and melatonin synthesis, particularly at night. The results showing a significant relationship between mobile phone addiction and sleep problems are consistent with previous findings. (Demirci, 2015) found that individuals with problematic smart phone use reported higher levels of sleep disturbances, while (Bulck, 2016) showed that bedtime phone use was linked to delayed sleep onset and reduced sleep duration. The third hypothesis, which predicted a connection between sleep issues and work-study conflict, was confirmed by a statistically significant positive correlation. This confirms earlier research showing that balancing job and school obligations causes sleep disruptions. The significant relationship between work-study conflict and sleep problems supports the findings of (Akerstedt, 2006), who emphasized that occupational stress can lead to sleep difficulties such as insomnia. (Galambos, 2009) also observed that students juggling both academic and work responsibilities experienced greater sleep disturbances.

According to the fourth hypothesis, the link between mobile phone addiction and sleep issues is mediated by work-study conflict. Process analysis was used to confirm this, showing that addiction to mobile phones indirectly affects sleep issues by increasing conflict. These results are supported by the conservation of resources theory and role strain theory, which highlight the stress brought on by conflicting demands on one's time. These results are consistent with earlier studies that shown addiction to mobile phones worsens time management and raises psychological stress (Elhai, 2016). Students who use their phones problematically frequently procrastinate and disturb their daily schedules, which increase the tension between job and study.

Lastly, gender differences were evaluated by the fifth hypothesis. The findings indicated that men had greater rates of sleep issues, work-study conflict, and cell phone addiction. Previous research demonstrates that phone use patterns vary by gender, indicating that men may be more susceptible because of their inclination for entertainment and games. s. The finding that males report higher levels of mobile phone addiction, work-study conflict, and sleep problems is somewhat mixed in the literature suggested females may use phones more for social communication, potentially leading to higher dependency. However, (Lopez Fernández, 2017) found higher scores among males in certain subgroups, particularly when phone use was related to gaming or entertainment (Akhtar & Ahmad, 2025)

Overall, the study finds that mobile phone addiction, particularly among young adults who are male, has a poor impact on sleep quality both directly and indirectly by contributing to work-study conflict. These results highlight the importance of digital activity for academic and psychological well-being and point to the necessity for gender-sensitive treatments.

CONCLUSION AND IMPLICATIONS

The findings demonstrate that mobile phone addiction among young adults contributes to increased work-study conflict and poorer sleep quality, with significant implications for academic achievement and overall well-being. Universitie1s, employers, and policymakers should introduce awareness programs on healthy digital ha1bits, provide counseling services addressing stress management and device overuse,

and enco1urage improved sleep hygiene and time management skills. Future research should use longitudinal designs to establish causal links and expand to diverse Pakistani regions.

LIMITATION AND RECOMMENDATION

The results may not be as generalized to other demographics or age groups because the sample was limited to young adults from a particular academic background. Some participants were hesitating and felt ashamed to disclose their history of mobile phone usage. only data from Sialkot was gathered because of the restricted resources, and more importantly the short time frame. The research was unable to achieve the greatest results because of the small population size. Universities and other educational establishments educate students on the possible drawbacks of excessive mobile phone use, especially about how it may affect their ability to complete their coursework and get enough sleep.

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