

THE MODERATING ROLE OF PERSONAL GROWTH INITIATIVE IN THE RELATIONSHIP BETWEEN DYSFUNCTIONAL CELL PHONE USAGE AND PSYCHOLOGICAL PROBLEMS

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ABSTRACT

The quick rise in adolescent mobile phone use during recent years has led to significant concerns about their psychological health. The study explores how dysfunctional mobile phone utilization affects psychological distress by evaluating stress and anxiety and depression symptoms alongside an investigation of how Personal Growth Initiative (PGI) serves as a buffer against these effects. PGI represents deliberate personal growth engagement that helps protect people who use technology from adverse effects. The researchers analyzed data from 384 adolescents residing in Khyber Pakhtunkhwa region of Pakistan through purposive sampling procedures. A set of standardized measures was employed to evaluate mobile phone dependency together with psychological distress and Personal Growth Initiative. The assessment demonstrated that dysfunctional cell phone usage creates psychological distress yet PGI acts as a buffer by decreasing the severity of these emotional symptoms. Data showed that Gender together with socioeconomic status and family structure influenced the levels of PGI. Results indicate PGI serves as a useful preventive factor to protect adolescent mental health.

Keywords: technology, Smartphones, psychological issues, Self-Determination, and personal development

INTRODUCTION

Mobile phones function as everyday necessities for the youth population within the digital era. People derive several advantages from these devices for simpler connections and information retrieval along with entertainment purposes yet researchers worry about how people use these devices improperly over and over again (Bellini et al., 2025). People who use smartphones in dysfunctional ways by spending too much time on their devices develop psychological issues because of this type of behavior. Research shows that teenage individuals who use smartphones excessively develop higher anxiety levels and depression with greater stress. The continuous

growth of mobile technology dependence requires better comprehension of protective elements that reduce mental health deterioration (Arrivillaga & Extremera, 2022).

Research interest has intensified regarding individual psychological attributes which function as protective elements. Personal Growth Initiative (PGI) attracts researchers because evidence shows its protective potential (Singh, 2021). The term PGI defines the method through which a person actively chooses to develop themselves personally. The concept incorporates multiple elements which combine meaningful objective-setting with developing personal insight through assuming

responsibility for personal development and performing initiative-driven activities to improve oneself. (Bakker et al., 2016). High PGI levels among adolescents make them more competent in handling dysfunctional smartphone usage both emotionally and mentally thus decreasing their susceptibility to adverse mental health impacts (Andersson, 2022).

The research connection between PGI and dysfunctional smartphone usage remains poorly understood despite holding substantial worth. Research fails to identify which demographic characteristics about gender and economic status and household configurations affect PGI measures in teenage populations. The study of these population variations would generate meaningful healthcare recommendations about intervention approaches that promote adolescent health across every demographic group (Bakker et al., 2016).

Objectives of the Study

1. To examine the relationship between dysfunctional mobile phone use and psychological problems.
2. To assess the role of Personal Growth Initiative (PGI) as a moderator in this relationship.
3. To explore gender, socioeconomic, and family structure differences in PGI.

Problem of Statement

Mobile phone dependency among young people leads to increasing psychological troubles including stress along with anxiety and depression. Compulsive checking and overuse along with dysconnectivity issues become widespread among teens because their developing brains make them susceptible to emotional disturbances. Many adolescents encounter psychological challenges but certain individuals show higher psychological strength which leads to questioning what protects them. The development of Proactive Behavior along with intentional efforts for personal improvement known as Personal Growth Initiative acts as a protective factor. Research examining PGI as a moderating factor between mobile phone overuse and mental health in mobile phone users remains limited even though it holds critical importance particularly within the sociocultural environment of Pakistan. The research targets an existing knowledge gap by evaluating how Personal

Growth Initiative operates as a protective mechanism against dysfunctional mobile phone usage psychological impacts on adolescents while examining gender-specific and socioeconomic and familial structure-related PGI differences.

Literature Review

This section examines dysfunctional smartphone usage effects on adolescent mental health while explaining how Personal Growth Initiative acts as a protective element and analyzing the theories of Self-Determination and Self-Regulation alongside gaps in research on PGI demographics.

1. Dysfunctional Smartphone Usage and Adolescent Mental Health

Smartphones exist as critical devices which support people's everyday life specifically among young adolescents in the modern world. Smartphones bring many benefits that enable simple communication access and entertainment options and connectivity for social needs and educational resources. The advantages of smartphones lead to increased worries about excessive smartphone misuse that damages mental wellness (Khan, 2024). People who struggle to limit smartphone use develop behaviors which generate adverse effects throughout their life domains such as schoolwork, body health and social connections (Mohammed, 2023).

The principal indicators of smartphone dysfunction in teens include obsessive habit checks on messages and surveillance of alerts and the persistent anxiety of FOMO alongside poor ability to control screen durations. Multiple scientific investigations confirm that overuse of smartphones directly connects to higher anxiety levels together with depression symptoms and feelings of loneliness and sleep problems and elevated stress measures (Thomé, 2018). The needs of adolescents to develop cognitively and emotionally couple with their sensitivity to peer interactions and social acceptance make them especially susceptible to smartphone-related risks. The mental health risks for adolescent users increase because the developmental phase of adolescence brings both identity uncertainty and emotional fragility which decreases individual resistance to smartphone addiction (Pera, 2020).

2. Personal Growth Initiative (PGI) as a Protective Factor

These days increasing psychological worries about smartphone misuse have led scientists to study protective psychological qualities which help safeguard against detrimental smartphone effects. Personal Growth Initiative (PGI) stands as a protective factor because it describes deliberate dedication of individuals to systematic development of themselves (Miller et al., 2021). As a protective factor the system of PGI includes strategizing goals while monitoring personal progress combined with deliberate execution for development purposes (Keyser, 2018). People with high PGI demonstrate proactive behavior towards life struggles as well as resilient emotional responses and they possess effective coping strategies (Stith, 2019).

Studies show that individuals with high PGI ratings have better emotional control and reduced feelings of anxiety and depression and they display less recourse to improper behaviors including heavy smartphone usage. PGI helps teens keep control of their lives while allowing them to maintain their personal sense of direction - these two effects develop mental qualities which protect against stress causes. The act of intentional self-growth in young adults leads them toward conducting healthy behaviors that promote their overall well-being (Parker & Field, 2023). Promoting PGI stands out as a potential effective method to boost mental health status in adolescents whose mental health faces risks from problematic technology involvement (Stith, 2019).

3. Theoretical Frameworks: Self-Determination and Self-Regulation

PGI protects students through two psychological models called Self-Determination Theory (SDT) and Self-Regulation Theory (SRT). Through Self-Determination Theory Deci and Ryan establish that satisfaction of autonomy, competence and relatedness represents the essential psychological needs for people. SDT demonstrates that people with experiences of self-determination and personal influence start internal drives toward personal development along with enhanced psychological health and better resilience. Adolescents who demonstrate high PGI coupled with natural growth motivations will strengthen

their ability to combat the addictive attributes of smartphone behavior (Parker & Field, 2023).

Self-Regulation Theory mentions that people need emotional and behavioral control abilities for reaching extended personal goals. The self-regulatory strengths developed through PGI enable teens to handle their urges better thus reducing their need to use smartphones in problematic ways. The PGI program provides adolescents with both autonomy skills and self-regulation abilities which protect them from smartphone dependency risks and enables their personal development toward meaningful objectives (Keyser, 2018).

4. Gaps in Research and the Importance of Demographic Variables

Research investigating the positive impact of PGI on mental health completed a small amount of work regarding its role as a modifier between smartphone misuse and adolescent psychological state. Block research about PGI and smartphone usage exists as individual independent constructs instead of investigating how both elements influence one another. Research about demographic elements like gender combined with socioeconomic status (SES) together with family structure does not provide sufficient understanding of PGI levels among adolescents (Bar et al., 2025).

The way young females grow through personal activities remains unclear because studies show women might focus more on feelings and self-analysis which represent fundamental PGI elements. Children from higher socioeconomic backgrounds tend to have better options to develop personally due to their access to environments which support their autonomy growth. The nature of adolescent family arrangements transforms their PGI development since it defines their connections with emotional supports and their ability to encounter growth-focused mentors (Mihailidis, 2014).

Insights about demographic characteristics enable experts to produce specific interventions that support PGI development thus leading to better smartphone utilization patterns. Targeted interventions should help at-risk populations develop their abilities in self-growth which would lead to better mental health results as digital dependence keeps rising (Callender et al., 2024).

Methodology

This study employed a cross-sectional quantitative research design to explore the relationship between dysfunctional mobile phone usage, psychological problems, and the moderating effect of Personal Growth Initiative (PGI). The sample consisted of 384 adolescents aged 15 to 19 years, selected using purposive sampling from various schools and colleges in Khyber Pakhtunkhwa (KPK), Pakistan. Participants voluntarily agreed to take part in the study, and ethical considerations such as informed consent, anonymity, and confidentiality were strictly maintained throughout the research process. Three standardized psychological instruments were used: The Problematic Use of Mobile Phone Scale (PUMPS) to measure dysfunctional cell phone usage; the Depression Anxiety Stress Scale (DASS-

21) to assess psychological problems; and the Personal Growth Initiative Scale-II (PGIS-II) to evaluate participants' level of intentional self-growth. All tools were validated for internal consistency, with Cronbach's alpha values exceeding acceptable thresholds. Data were analyzed using SPSS software version 26, applying descriptive statistics, independent sample t-tests, one-way ANOVA, and regression analysis. Moderation analysis was conducted using PROCESS Macro Model 1 developed by Andrew F. Hayes, which assessed the interaction effect between dysfunctional phone usage and PGI on psychological problems. The findings provide statistical insight into how PGI may serve as a buffer against the mental health risks posed by excessive mobile phone use.

Results and Discussion

Table 1: Psychometric Properties of PGIS-II

Scale	No. of Items	Cronbach's Alpha	Mean	SD
PGIS-II	16	0.87	52.34	7.89

Internal reliability of the PGIS-II reached 0.87 according to Cronbach's alpha measurement which demonstrates its usefulness in measuring personal growth initiative among adolescents.

Table 2: Mean Difference in PGI Among Male and Female Adolescents

Gender	N	Mean	SD	t-value	p-value
Male	190	50.12	8.01	-3.27	.000**
Female	194	54.52	7.42		

Female adolescents showed higher Scores on PGI than male adolescents as measured in the study indicating different ways males and females tend to grow during their developmental phase.

Table 3: Mean Difference in PGI Among Socioeconomic Status (SES) Groups

SES Level	N	Mean	SD	F-value	P-value
Low	128	48.91	8.14	11.24	.000**
Middle	130	52.63	7.34		
High	126	55.48	7.05		

Results indicated that higher SES teenage students showed higher PGI levels than their middle and low SES counterparts.

Table 4: Mean Difference in PGI Among Intact vs Shattered Family Adolescents

Family Structure	N	Mean	SD	t-value	p-value
Intact Family	246	53.92	7.68	4.01	.000**
Shattered	138	49.21	7.82		

Adolescents who grow up in healthy families receive higher PGI scores than young adults who come from unstable homes according to research results.

Table 5: Moderation Analysis Summary: PGI as Moderator Between Dysfunction cell phone use (PUMPS) and Psychological problems (DASS)

Predictor	B	SE	t	p	95%CI
PUMPS	0.42	0.05	8.40	.000**	{0.32' 0.52}
PGI	-0.35	0.06	-5.83	.000**	{-0.47' -0.23}
Interaction (PUMPS*PGI)	-0.14	0.04	-3.50	.001**	{-0.22' -0.06}

The analysis showed PGI functions as a protective factor that reduces how much dysfunctional cell phone usage affects psychological distress. Higher PGI decreases the level of distress from problematic cell phone usage.

Discussion

The research demonstrates through concrete proof that problematic mobile phone practices create mental health problems in adolescents but personal growth integrity works as a defense mechanism. A total of 384 adolescents between ages 15 to 19 were surveyed throughout educational institutions in different regions of a Pakistani province. This study achieves effective generalization because it includes participants from different demographics. Excessive mobile phone usage demonstrates a powerful link with higher teenage depression along with anxiety and increased stress according to the study results (Singh, 2021). The study creates new understandings by establishing PGI as the essential variable which determines how mobile phones shape adolescent mental health. Higher points on PGI characterizing adolescents indicated superior emotional resilience that shielded them from mental hardship regardless of their mobile phone engagement.

The study demonstrates psychological models which show why establishing self-regulation techniques and internal motivation practices leads to enhanced mental health outcomes. A majority of high PGI scores were determined among male students with parents belonging to upper-income brackets who maintained strong family relationships and supportive household environments. The combined power of family unity along with outside resources produces PGI development which functions to safeguard individuals from adverse technology use consequences. The data shows that schools should develop mental health initiatives which focus on developing PGI abilities in their students (Miller et al., 2021) The development of young people benefits greatly from strategic workshops that

teach goal-setting together with emotional intelligence and future planning abilities. Schools that give PGI-focused education to their students help students develop mental management abilities for psychological challenges that appear in digital environments.

Conclusion

The research shows that dysfunctional cellular phone habits serve as a major determinant which causes psychological problems among Khyber Pakhtunkhwa adolescents in Pakistan. The function of Personal Growth Initiative (PGI) in mobile phone usage is to minimize mental health problems that can result from protracted screen times. The different PGI scores among groups defined by gender and socioeconomic level and family structure demonstrate why people need environmental support for their needs. Schools and colleges should implement interventions that develop personal growth initiative because they provide essential wellness tools for adolescents in the digital era. Research should use long-term investigation methods to study PGI functions and identify different influence variables including mindfulness approaches and coping strategies together with peer assistance.

Recommendations

- The curriculum should add PGI development activities to its structure.
- Parents must create homes which develop supportive environments that remain steady.
- The development of special programs for low-SES adolescents must be established to improve PGI.
- Organizations should conduct awareness programs to teach people safe mobile phone behavior.
- Gender-sensitive strategies must be deployed for personal growth enhancement of all adolescents.

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