# PARENT-CHILD RELATIONSHIPS, SCREEN TIME AND PSYCHOLOGICAL WELL-BEING IN ADOLESCENTS

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A cross-sectional study was carried out to investigate if parent-child relationships are associated with screen time and psychological well-being in adolescents. The hypotheses were: there is likely to be a significant relationship between parent-child relationship and psychological well-being and screen time is likely to act as a moderator between parent-child relationship and psychological well-being in adolescents. The sample comprised adolescents (*N*=120) recruited from public sector schools of Lahore. Assessment measures included parent-adolescent relationship scale (Hair, 2005), screen time addiction questionnaire (Singer, 2006), and psychological well-being scale (Ryff, 1995). Correlation analysis, independent sample *t*-test and hierarchical regression analysis were used to test the hypotheses. The findings revealed that parent child relationship and screen time were significant predictors of psychological well-being in adolescents. Furthermore, screen time was a significant moderator between the parent-child relationship and psychological well-being. Lastly, significant gender differences were reported in psychological wellbeing, as boys reported better psychological wellbeing as compared to girls. The findings highlighted the need to focus on improving the quality of parent-child relationship that may consequently decrease screen time and increase the psychological well-being of adolescents.

*Keywords:* parent-child relationship, psychological well-being, adolescents, screen time

Parents play a crucial and developmentally vital role in the physical and psychological well-being of adolescents. However, adolescence is the time when the relationship between parents and their children is usually transformed (Rankin & Anthony, 2015). In this regard, the rise of technology has played a significant role as now-a-days, an adolescent's life is fused with technology and innovation. It has been reported that almost all of the adolescents in the US have access to a smart phone and 45% of them are online almost all the time (Romer et al., 2016). Twenge et al. (2019) reported that televisions, tabs, smartphones, and video games are increasingly occupying the time of an adolescent which may disrupt their relationships and psychological well-being. This has raised concerns for parents, mental health professionals, and educators about the consequences of screen time on well-being of children and adolescents (Kardaras, 2017).

Research reported that a possible cause of ADHD in young children is an early exposure to technology (Twenge et al., 2019). Teenagers who spend most of their time

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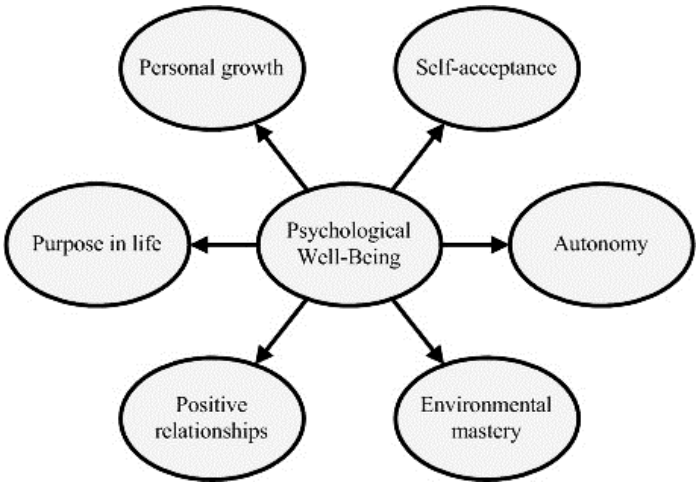
using technology spend less time exercising, which can lead to obesity at a noticeably young age. Furthermore, research showed that adolescents who stay up late using their phones or other electronic devices experience more frequent morning headaches (Radesky & Christakis, 2016). Furthermore, adolescents with higher screen time and inadequate coping methods are more likely to develop behavioral addictions (such as smartphone addiction) or engage in activities without taking in account their negative consequences (Romer et al., 2016). Screen time activities are readily available and this has sparked interest in whether these activities have opened a gateway of possibilities or have replaced other critical activities for healthy development.

In this regard, parent-child relationship plays a significant role as adolescents with positive parental relationships are less likely to experience any psychological problems (Indumathy & Ashwini, 2017). More than any other relationship, the parent-child relationship has a significant impact on an individual's development. It frequently serves as the cornerstone for all other relationships that an individual makes during their lifetime. This connection not only develops love, trust, intimacy, and security but also enhances well-being. Strong parent-child relationship protects adolescents against poor mental health and prevents engagement in harmful health behaviors (Lenhart et al., 2001). Few research studies have looked into the associations between parent-child relationships and various types of screen usage, and the results are varied. One study found that adolescent boys who watched programmes with greater violent material had worse parent-child relationships and well-being (Chowhan & Stewart, 2007), but another found no link between screen time (TV, video, and gaming) and parent-child interactions despite anecdotal worries that television viewing would damage relationships (Brodersen et al., 2005; Morre & Harre, 2007). Research that focused on video or computer gaming also produced contradictory results (Durkin & Barber, 2002). Out of all the different types of screen time, internet use has attracted most attention in research. In children, a study found no correlation between children's screen use and differences in parent-child interaction (Olds et al., 2006). However, in adolescents, screen time was significantly associated with overall psychological well-being and parent child relationships (Stiglic & Viner, 2019). Psychological well-being during adolescence has been consistently focused in research. Ryff's six-factor model of psychological well-being (figure 1) gives a thorough framework to explore positive functioning in adolescents (Ryff & Keyes, 1995; Ryff, 2014). It proposed a theoretical model of psychological well-being which involves six distinct parts of positive functioning, such as environmental mastery, autonomy, growth, self-acceptance, positive relationships and meaning in life. It has been studied in countless observational and clinical investigations done in different settings (Ryff, 2014).

Concerns about how screen time is associated with an adolescent's health are growing. Research has shown that excessive screen time is negatively associated with an adolescent's well-being (Orben & Przybylski, 2019; Stiglic & Viner, 2019). In this regard, parents play an important role in setting the screen time of adolescents (Sanders et al., 2018). The impact of excessive screen time may, therefore, be partially mitigated by strengthening the relationship between parents and children. Parents, who serve as

**Figure 1**

*Figure Showing Ryff's Model of Psychological Well-Being (Ryff & Keyes, 1995)*



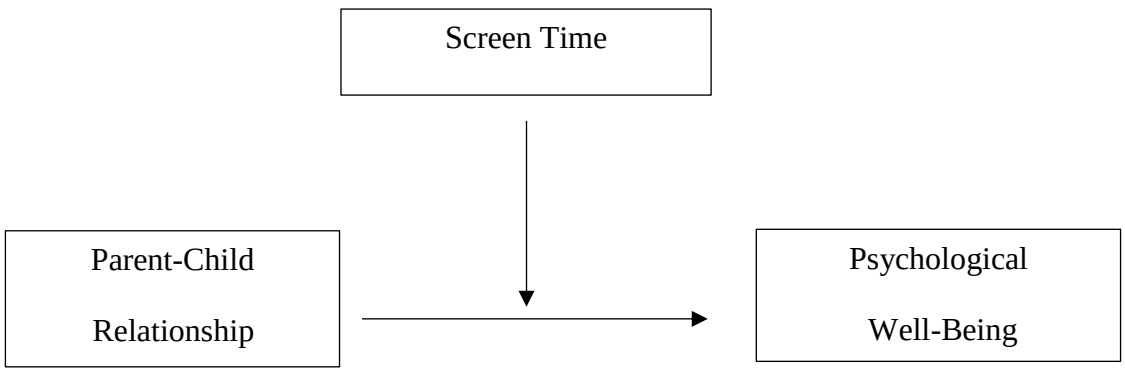

the primary caregivers, have the power to establish behavioral control in the house, frequently through observation and the imposition of rules (Rankin & Anthony, 2015). Therefore, it is essential to identify how parent-child relationships play a role in screen time and psychological well-being of an adolescents. The objective of the present study was to examine how the parent child relationship is associated with the time an adolescent spend on screens and their psychological well-being.

**Hypotheses**

- There is likely to be a significant relationship between parent-child relationship, screen time and psychological wellbeing in adolescents
- Parent-child relationship and screen time are likely to predict psychological wellbeing of adolescents.
- Screen time is likely to moderate the relationship between parent-child relationship and psychological well-being of adolescents.

**Figure 2**

*Proposed Model of the Study*



# Method

## Research Design

A cross-sectional study was carried out to investigate the relationship between parent-child relationship, screen time and psychological well-being in adolescents.

## Sample & Sampling Strategy

The research was carried out using convenience and snowball sampling technique. Participants were recruited from public sector schools and colleges of Lahore. Data was collected in group administration mode from O-levels (O2, O3), A-levels (A1, A2) and F.A/FSc. students. Due to lockdown, data was gathered through google form. Sample consisted of both adolescent boys and girls (*N*=120). Adolescents who met the inclusion/exclusion requirements were recruited. Only those adolescents who were enrolled in English-medium schools and colleges with a minimum tuition of 10,000 Pakistani rupees were selected. Furthermore, adolescents who had a daily screen time of more than two hours (TV, iPad, smart phone, video games) were selected. Adolescents were excluded if they were diagnosed with any psychiatric illnesses or if their parents, either one or both, has passed away. Lastly, students who shared their phone or laptop with others and had computer classes as required subjects were also excluded.

Table 1 shows demographic characteristics of the participants. In the present study, average age range of the adolescents was 17.6 years. Most of the participants were belonging to nuclear family system. Lastly, most of the participants (54%) were using mobile or tablets.

**Table 1**

*Demographics Characteristics of the Participants*

| Variables | *n* | *%* |
|---|---|---|
| Education level | | |
| O-levels | 51 | 42.5 |
| A-levels | 69 | 57.5 |
| Gender | | |
| Boys | 52 | 43.4 |
| Girls | 68 | 56.7 |
| Family system | | |
| Nuclear | 74 | 61.6 |
| Joint | 36 | 38.3 |
| Parent’s work status | | |
| Both employed | 39 | 32.5 |
| Mother employed | 28 | 23.3 |
| Father employed | 53 | 44.1 |
| Parent’s marital status | | |
| Divorced/separated | 15 | 12.5 |
| Married/living together | 105 | 87.5 |

| | | |
|---|---|---|
| Frequent Screen use time | | |
| Day | 61 | 73.2 |
| Night | 59 | 49.1 |
| Frequent Screen use Type | | |
| Mobile/tab | 65 | 54.1 |
| Laptop / computer | 15 | 12.5 |
| All | 40 | 33.3 |

*Note*. *N*=120. Participants were on average 17.6 years old (SD=1.3), average school fee was Rs. 19755.8 (*SD*=15326.5), average income was Rs. 102500 (*SD* =110300) and average screen time was 7.47 hours (*SD* = 4.26)

## Assessment Measures

### *Demographic Information Sheet*

The sheet was developed in order to get information regarding participant's age, gender, education level, screen use hours, parent's occupation, parental marital status and types of screen used by participants, family system etc.

### *Parent-Adolescents Relationship Scale (Hair et al., 2005)*

Parent-adolescent's relationship scale was used to assess the quality of parent-child relationships (Hair et al., 2005). The scale consists of two domains: perceived parental support and identification with parents. Using a 5-point Likert scale, three items explain identification with parents. Response possibilities range from 0 "strongly disagree" to 2 "strongly agree". Response options for the five items on the 5 point Likert scale that describe perceived parental support vary from 0 (never) to 4 (always). Cronbach's alpha for the scale was .87. In the present study, alpha reliability of this scale was .82.

### *Screen Time Addiction Questionnaire (Singer, 2006)*

Screen time of adolescents was measured by using screen time addiction questionnaire developed by Singer (2006). It consists of 7-items and uses a dichotomous scale including Yes/No responses. The scale has a Cronbach's alpha of .85. In the present study, alpha reliability of this scale was .80.

### *Psychological Well-Being Scale (Ryff & Keyes, 1995)*

It is an 18 items inventory measuring psychological well-being developed by Ryff and Keyes (1995). These items cover 6 domains including personal growth, autonomy, relationships, purpose in life, self-acceptance and environmental mastery. Responses were taken on a 6-point Likert scale ranging from 1 "strongly disagree" to 6 "strongly agree". This scale has a Cronbach's alpha of $\alpha$=.95. The alpha reliability of this scale was .92 in the present study.

**Procedure**

Data collection required approval from school authorities. This study was conducted during the COVID-19 outbreak, so 73 participants were approached via social media. Google form was prepared for online data collection then it was forwarded to concerned groups. Participants were recruited as per the specified inclusion and exclusion criteria. Assessment measures were used with the authors' consent. All participants were made aware about the nature and goal of the study, and their written agreement was obtained. Instructions were given before administering the assessment tools. The participants showed a maximum completion time of 15 to 20 minutes. While gathering data, ethical considerations were taken into account**.**

**Ethical Considerations**

- The research was approved by the departmental committee at the Institute of Applied Psychology, University of the Punjab, Lahore.
- Formal permission was acquired from heads or principals of the schools.
- All study participants were given the assurance of confidentiality and were made aware that taking part was entirely optional and voluntary

## Results

The present study was conducted with the aim to assess the role of parent-child interaction in relation to screen time and psychological wellbeing in adolescents, and to explore the moderating role of screen time between these two study constructs. SPSS (version 20.0) was used to analyze the data.

**Table 2**

*Psychometric Properties of Study Scales*

| Scales | *M* | *SD* | Range | Cronbach's α |
|---|---|---|---|---|
| Parent-Child Relationship | 21.83 | 7.74 | 9-30 | .82 |
| Screen Time | 4.4 | 2.3 | 0-7 | .80 |
| Psychological Well-being | 57.89 | 20.22 | 30-195 | .92 |

The above table describes the descriptive statistics of study constructs. Psychological wellbeing scale showed the highest reliability (*α=.92*) whereas, parent-child relationship questionnaire (*α=.82*) and screen time scale (*α=.80*) showed good reliabilities. Alpha values for all measures are in acceptable range.

**Table 3**

*Correlation Analysis between the Studies Constructs*

| Variables | *M* | *SD* | 1 | 2 | 3 |
|---|---|---|---|---|---|
| Parent-Child Relationship | 21.83 | 7.74 | - | | |
| Screen Time | 4.40 | 2.30 | -.40*** | - | |
| Psychological Wellbeing | 57.89 | 20.22 | -.40*** | -.46*** | - |

*Note. N*= 120. *** *p*<.001

Table 3 indicates that parent child relationship has a significant negative correlation with screen time ($r$=-.40, $p$<.001). This finding reflects that poor quality of parent-child relationship is linked to excessive screen time in adolescents. Moreover, it was found that parent-child relationship tends to have significant negative correlation with psychological wellbeing ($r$=-.46, $p$<.001). This indicates that adolescents who do not have satisfactory relationship or interaction with parents tend to have poor psychological wellbeing. Furthermore, it was found that screen time has a significant negative relationship with psychological wellbeing ($r$= -.40, $p$<.001). It suggests that excessive screen time is linked with decreased psychological wellbeing of adolescents as reflected by the direction of correlation.

**Table 4**

*Hierarchical Regression Analysis showing the Predictors of Psychological Well-being in Adolescents*

| | | 95% CI for *B* | | | | | |
|---|---|---|---|---|---|---|---|
| Predictors | *B* | *LL* | *UL* | *SE B* | β | $R^2$ | $\Delta R^2$ |
| Step 1 | | | | | | .26 | .26*** |
| Constant | -.63** | -3.69 | -.16 | .04 | | | |
| Parent-child relationship | -.40** | -.36 | .01 | .64 | -.43** | | |
| Step 2 | | | | | | .32 | .05*** |
| Constant | -.43** | -3.54 | -.86 | -1.90 | | | |
| Parent-child relationship | -.55** | -7.68 | -1.54 | .05 | -.20** | | |
| Screen time | -.34*** | .01 | .06 | .08 | -.24*** | | |

*Note.* *** $p$<.001

Overall model explains 32% of variance in psychological well-being. Results indicated that parent-child relationship and screen time were statistically significant and negative predictors of psychological well-being. This finding reflected that poor quality of parent-child relationship and excessive time spent on screen predicts poor psychological wellbeing in adolescents.

**Table 5**

*Table Showing Moderating Role of Screen Time between PCR and PWB*

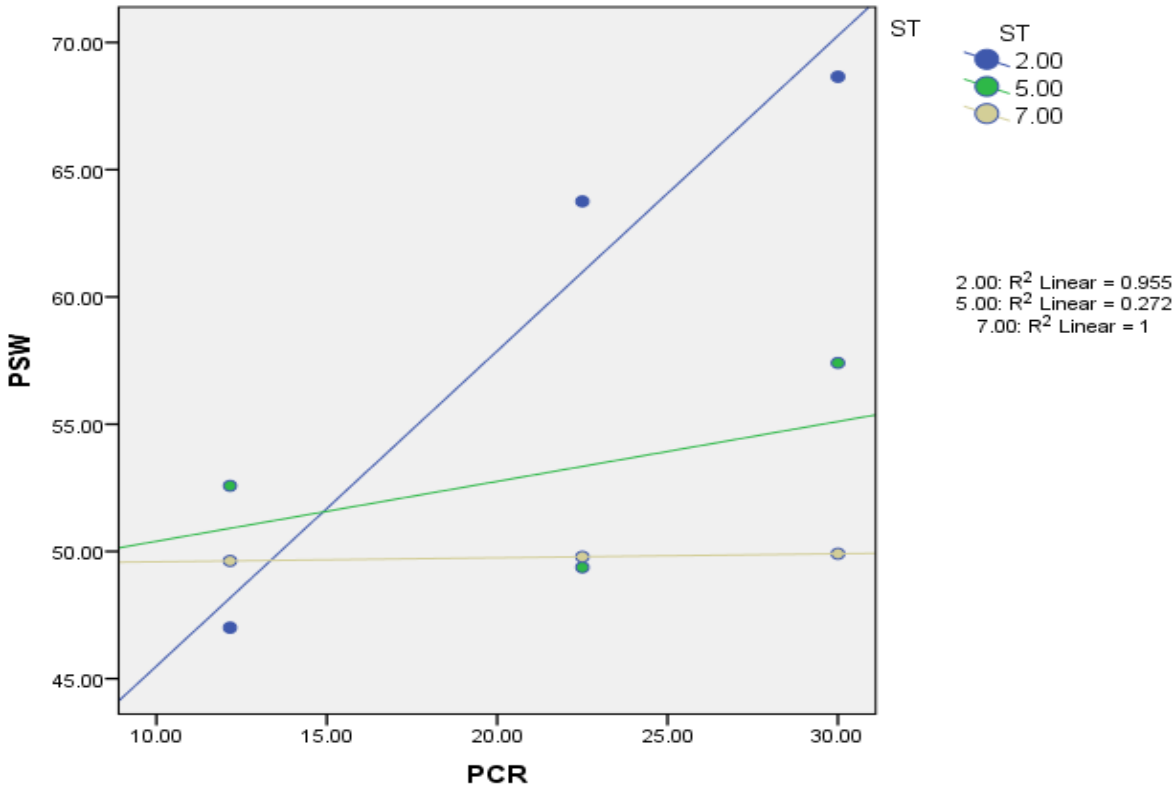
| | | | | 95% CI | | |
|---|---|---|---|---|---|---|
| Variables | *B* | *SE* | β | *LL* | *UL* | *p* |
| Constant | 72.83 | 3.94 | | 65.0 | 80.6 | .003 |
| PCR | .241 | .279 | -.39* | .293 | .790 | .046 |
| ST | -3.02 | .894 | -.34* | -4.79 | -1.25 | .001 |
| PCR * ST | -.12 | 12 | -.40 | .23 | .81 | .043 |

*Note.* $N$=120, PCR= parent-child relationship; ST= screen time; PWB= psychological well-being

To assess the moderating role of screen time between parent child relationship and psychological wellbeing, analysis was run through Process Macro. Table 5 indicates a significant interaction between parent-child relationship and screen time which confirms that screen time tends to have a significant moderating role between these variables. For more understanding regarding the moderating role of screen time, following is a mode graph which describes a clear interaction plot between study constructs. Mode graph (Figure 3) explains that screen time has a significant interaction effect with parent-child relationship in predicting psychological well-being of adolescents. As screen time decreases, both parent child relationship and psychological wellbeing increases. This increase is more profound in case of less screen time as shown by slope of the mode graph which is sharper in case of less screen time as compared to increased screen time. Interaction is evident in the graph as after point of intersection increase in screen time was generally linked with progressive decrease in psychological well-being. Participants with less screen time tend to have better psychological well-being than adolescents with increased screen time at a given point of parent-child relationship.

**Figure 3**

*Interaction Plot for Moderating Role of ST between PCR and PWB*




*Note.* PSW = psychological well-being; PCR=parent-child relationships; ST = screen time

**Table 6**

*Comparison of Psychological Well-Being on the basis of Gender in Adolescents*

| | Boys | | Girls | | | | |
|---|---|---|---|---|---|---|---|
| Variables | *M* | *SD* | *M* | *SD* | *t*(118) | *p* | Cohen's *d* |
| Psychological Well-being | 60.4 | 19.4 | 56.6 | 20.6 | -.87 | .041 | .30 |
| Screen Time | 17.0 | 3.39 | 15.3 | 3.23 | -.74 | .039 | .51 |

*Note.* Boys (*n*=53), Girls (*n*=68)

The findings of independent sample *t*-test revealed that most of the girls tend to report poor psychological wellbeing (*M*=56.6, *SD*=20.6) as compared to boys (*M*= 60.4, *SD*=19.4). Moreover, it was indicated that boys tend to report excessive screen time (*M*=17.0, *SD*=3.39) as compared to girls (*M*=15.3, *SD*=3.23). Both of these differences were significant.

Overall findings of the present study indicated that parent child relationship has a significant role in relation to screen time and psychological wellbeing in adolescents. Girls reported poor psychological wellbeing as compared to boys. Those who have satisfactory parent-child relationship tend to exhibit less screen time and better psychological wellbeing.

## Discussion

This research assesses the relationship between parent child relationship, screen time and psychological wellbeing in adolescents to shed light on many facets of the adolescents' experience during this transition phase. The current study reported a significant negative correlation between parent-child relationship, screen time and psychological wellbeing. The findings suggested that adolescents who had weak or poor quality of parent-child relationship tend to indulge in excessive screen time which ultimately influenced psychological well-being. Research shown that screen time was negatively correlated with psychological well-being of adolescents. On different psychological well-being scales, scores were low due to excessive screen time especially among adolescents (Twenge & Campbell, 2018).

Screen time has direct consequences on children and adolescents via content that can educate, advise, mislead, and induce pro-social or antisocial behaviors (Twenge et al., 2019). There can likewise be significant backhanded influences of media in term of how it can impact the parent-child relationship. The nature of the social interactions between parents and youngsters is a noteworthy factor for an adolescent's psychosocial well-being. If parents spend more time with their children instead of remaining busy in their official and home tasks, children tend to spend less time on screens which consequently enhance their psychological well-being (Anderson & Hanson, 2017). Another finding of the present study revealed that parent-child relationship and screen time were significant predictors of psychological well-being in adolescents. Many research studies indicated that parent-child interaction may have the strongest

predictive role on excessive exposure to media which is a key risk factor for poor psychological wellbeing (Zhang et al., 2018).

Furthermore, current research revealed that screen time is likely to moderate the relationship between parent-child relationship and psychological wellbeing in adolescents. Indumathy and Ashwini (2017) conducted a research to assess the relationship between parental bonding and psychological wellbeing among young adults. This research also examined the moderating role of screen time between these two study constructs. Results indicated significant relationship between parental bonding and psychological wellbeing. It was also found that association between parent child relationships and psychological well-being was moderated by screen time.

The last finding of this research indicated that girls tend to report poorer psychological wellbeing as compared to boys. This has also been shown in earlier studies as Khalid et al. (2019) conducted a study on cross-sectional sample of adolescents ($N$=1124) with the aim to analyze the psychological issues and well-being of adolescents. It was indicated that girls were more anxious than boys and reported poorer wellbeing. Another international study assessed perceived attachments with parents and their psychological well-being. Girls reported higher anxiety and depression scores suggesting poorer psychological well-being (Suldo et al., 2015). In the light of previous studies, it can be concluded that parent-child relationship plays a major role in determining the screen time during this transition period, which may lead to different psychosocial problems that needs to be screened, assessed and managed in order to promote or enhance psychological wellbeing of adolescents.

## Conclusions

Adolescence is a period where individuals continuously search for self-governance and freedom. In this phase, parents play a significant role by monitoring their children's activities. The present study concluded that 57.8% of the adolescents tend to report better psychological well-being. Comparatively, boys reported better psychological well-being. Adolescents who reported poor quality of parent-child relationship were more likely to indulge in excessive screen time and those who reported increased screen time had poor psychological well-being. Moreover, parent-child relationship and screen time were found as significant negative predictors of psychological well-being. The findings of the present study suggested that parent-child relationship and screen time play an important role in psychological well-being of adolescents. There is a need for parents to understand that parent's positive attention and low screen time will consequently enhance an adolescents' psychological well-being.

## Limitations and Suggestions

- The current research was conducted in lockdown situation during COVID-19 pandemic, so face-to face data collection was not possible. Therefore, data was collected through online sources.
- To increase the generalizability of the results, the study could be replicated in post pandemic days.

**Implications**

The present study has important implications for both psychological as well as physical health of adolescents. It showed that there is a need to develop guidelines for screen time regulation for adolescents. In this era, where electronic devices have become an integral part of an adolescent's life, it is important to focus on the family dynamics such as parents-child relationship which can play a vital role in determining the consequences or adverse effects of electronic gadgets on the psychological well-being of the young generation.

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