

A study to evaluate the health effects of senior secondary students in Jaipur who use smartphones and other digital devices and their invisible addiction to them

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Abstract:The smart phones are causing a shift in the method in which individuals connect with one another, in addition to having a significant impact on both their academic and social life. It is essential for young people to have a smart phone since it is a crucial instrument for communication among their peer group and for being a member of their peer group. Smart phones have become the focal point of the identity of teenagers. Because of this, their interaction with one another has evolved into a fully networked society. The cell phone has become a status symbol for many young people in today's society. Sixty % of teens were interested in upgrading their mobile phone, and the appearance of the phone, its functionality, and the individualized accessories all spoke to the status of their phone. Young people consider it as a fashion item that meets their urge for individualization by allowing them to choose their mobile phone wall paper, ring tones, phone coverings, carry bags, and any other accessories that are required for the phone. An issue that is widely present but rarely discussed, smart phone addiction, is covertly making its way into the younger generations of many countries.

Keywords: Smart Phone, Ring Phone

INTRODUCTION

In an era of knowledge explosion and technological advancements, the era of smart phones highlights the latest technology that, for better or worse, appears to be encouraging people to spend relatively more time with technology and less with fellow humans. Mobile has become a necessity of every human being. The mobile phones are boon of this century. Mobile phone is considered as an important communication tool and became the integral part of the society, being a necessary social accessory. The cell phone today is a lifeline for many; is more of a necessity for them than a luxury. With constant texting, calling, listening to music, playing phone games or simply fiddling with the phone being such an integral part of their lifestyles, it is little wonder that

not having it around strike them with paranoia. **Sohane et al. (2022)** The term "social media" refers to a certain kind of online networking that facilitates two-way conversation and the dissemination of ideas.

Yu et al. (2022) This study highlights the importance of providing additional support to promote the well-being of young people, particularly those in disadvantaged situations (e.g., non-intact family), during and after contexts like the pandemic, and provides important evidence for the potential protective effect of guiding adolescents to use social networking sites/apps appropriately to mitigate their negative emotions in such contexts.

You, Yueyue et al. (2022) purpose of this research were to investigate how adolescents' usage of social media affects their health-related quality of life. We suggest more research be done into the correlation between adolescent social media use and HR QoL.

Sohn et al. (2019) The study concluded that PSU was reported in approximately one in every four CYP and accompanied by an increased odd of poorer mental health. **Shao and Wang (2019)** The study concluded based on the findings were that there was a significant positive correlation between exposure to violent video games and adolescent aggression; normative beliefs about aggression had a mediation effect on exposure to violent video games and adolescent aggression, while family environment moderated the first part of the mediation process.

Gracy Stella (2019) conducted a study to assess the level of mobile phone addiction in relation with risk taking behavior among adolescents of selected school at Bharuch. There was significant association between mobile phone addiction and risk taking behavior with age and use of leisure time.

Sethuraman, et al. (2018) The study concluded that medical college students of Andaman and Nicobar Islands are more vulnerable for smart phone addiction.

Mehrnaz, M. et al. (2018) conducted the study on Smartphone Addiction, Sleep Quality and Mechanism. Study considered novel and noteworthy phenomena: Internet and smartphone addictions.

Lee et al. (2018) conducted the study on Does Parental Control Work with Smartphone Addiction? Data were collected from children aged 10–12 years (N = 208) by a self-report questionnaire in two elementary schools and were analyzed using t test, one-way analysis of variance, correlation, and multiple linear regression. Result shows that Most of the participants (73.3%) owned a smartphone, and the percentage of risky smartphone users was 12%. The more

parental control perceived by the student, the higher the SAS. There was no significant relationship between parental control software and smartphone addiction.

[Kayastha, et al. \(2018\)](#) conducted a study to assess the level of internet addiction among adolescents. Adolescents are more vulnerable to internet addiction (IA) as they have less ability to control their enthusiasm for internet activities. **Cha and Seo (2018)** conducted the study on Smartphone use and smartphone addiction in middle school students in Korea: Prevalence, social networking service, and game use. Participants were 1824 middle school students who used a smartphone. They were sampled randomly from strata based on city, age, and sex. Result revealed that there was a significant difference between the two groups in terms of the awareness of their excessive game use.

Scope of the study

This study will help us identify the invisible smart phone addiction and its impact on health. Smartphone addiction is a widely prevalent but unspoken issue, is silently creeping into the youth of many countries and India is no exception. The symptoms include preoccupation with the device, excessive use with loss of control, use in socially inappropriate/dangerous situations, adverse effects on relationships, symptoms of withdrawal. Planned health education be imparted to students on prevention of addiction, effective use of mobile, good habits to prevent physical impact, establishment of parental control can be suggested for healthy life of the students.

Statement of the problem

The adolescent years are a pivotal time of development, bridging the gap between childhood and adulthood. Unmet needs during this time period have far-reaching consequences for the individual, the family, the community, and the nation at large, so special care must be taken to ensure they are met. Online social networking is the practise of establishing and maintaining personal and professional relationships through the use of social media websites and applications. Sites like Facebook, Twitter, LinkedIn, Classmates.com, and Yelp facilitate social and professional networking. When used to excess, these sites can have negative effects on users' mental and physical well-being, academic performance, relationships with family

members, and even the development of aggressive and violent tendencies. Students' physical and mental well-being suffers when they regularly spend too much time on these sites, which makes them sluggish and unmotivated to make real-world connections with others. The primary goal of this work is to shed light on how adolescent social media addiction affects their behaviour in terms of psychological and physiological factors. Methods to curb teenage substance abuse were also proposed in this study. So the study is entitled as “ASTUDYTOASSESTHEINVISIBLEADDICTIONOFSMARTPHONEUSAGEANDACTIVITIESANDITSIMPACTONHEALTHOFSENIORSECONDARYSTUDENTSSTUDYINGINJAIPUR”

Objectives

- To assess the knowledge, attitude and practice of senior secondary students regarding the usage of smart phones.

METHODOLOGY

The present study will conduct to know about the Invisible Addiction of Smartphone Usage and Activities and Its Impact on Health of Senior Secondary Students Studying in Jaipur. The sample for the study comprised of 520 respondents, divided in two groups. The Core Group consisted of 400 adolescents in the age group of 16-18 years. There will 200 girls and 200 boys in this group. The second group comprised of 120 parents of the 60 adolescents (60 mothers and 60 fathers) of the core group.

Research Approach: Cross-sectional, non-experimental

Study Design: Descriptive Study

Study Setting: Schools in Jaipur

Study population: Senior secondary students(11,12 class)

Sample size: 700

Sampling technique: Purposive sampling

Operational Definitions: Assess knowledge, attitude, practice, physical activity, psychological behavior, academic activity.

Results:

The second goal was to determine whether or not senior high SS in Jaipur are AC to their MP. This included both MAF pupils. Calculating the frequency distribution of scores and on Smart

PA among senior high school students, both male and female, allowed for the study and interpretation of this aim. The information may be found laid out in the following manner in tables 1 and 2.

Table 1: The Frequency Scores and %s of Male Senior Secondary Students Concerning Smart PA in Senior Secondary Students

Sub-Scale	Range of Scores	Frequency	%	AC Level
Maladaptive Usage	9-20	90	33.33	Low
	21-29	34	47.22	Moderate
	30-45	14	19.44	High
Self-Expression	9-22	23	31.94	Low
	23-32	136	50	Moderate
	33-45	13	18.06	High
Attitude	6-17	31	43.06	Low
	18-22	40	43.06	Moderate
	23-30	10	13.88	High
Knowledge	4-12	24	33.33	LowAC
	13-16	33	45.83	ModerateAC
	17-20	15	20.83	HighAC
Impulsivity	4-12	134	47.22	LowAC
	13-16	26	36.11	ModerateAC
	17-20	112	16.66	HighAC
Usagetime	5-12	19	26.38	LowAC
	13-17	143	59.72	ModerateAC
	18-25	10	13.88	HighAC
Scale as a whole	37-99	26	36.11	LowAC
	98-127	133	45.83	ModerateAC
	128-185	13	18.05	HighAC

When looking at table 4.1 and graph 4.1, it can be seen that 33.33% of the MS had scores ranging from 9 to 20 on the maladaptive use sub-scale, which is referred to as the low 5% lie group.

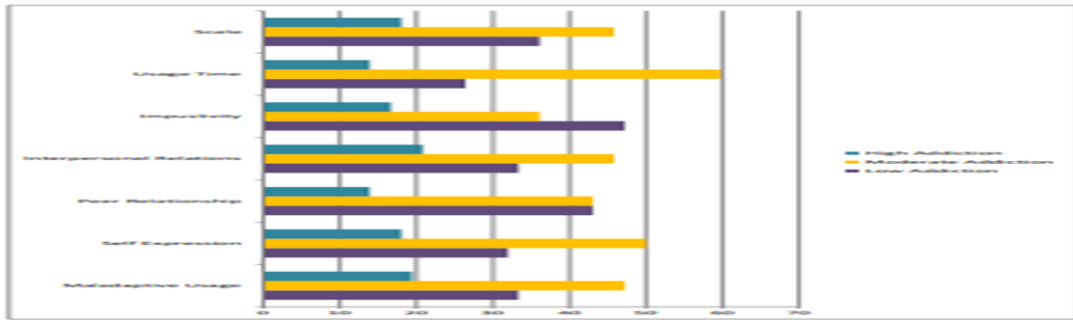


Fig. 1: Diagrammatic Representation of the Male Senior Secondary Students Who Admit to Being AC to MP

On top of that, over half of the MS, or 47.22%, had scores that fell somewhere in the range of 21 to 29 on the maladaptive use sub-scale. Because of this, they are classified as being in the moderate category, which indicates that their maladaptive use is at a moderate level. Lastly, over one fifth of the MS, or 19.44%, achieved scores ranging from 30 to 45 on the maladaptive use sub-scale, which placed them in the high % idle category. According to these findings, the vast majority of MS (47.22%) are AC to making unhealthy use of their MP. In addition, the data presented in the table and graph above demonstrate that close to one-third (31.94%) of the MS obtained scores ranging from 9 to 22 on the self-expression sub-scale.

As a result, these students are classified as belonging to the low 2% group of self-expression. On the self-expression subscale, (50%) of the guys had scores ranging from 23 to 32, which placed them in the moderate % and indicated that they suffered from moderate level self-expression. Last but not least, 18% of the men who participated in the survey achieved scores ranging from 33 to 45 on the self-expression sub-scale, which placed them in the high % category. This indicates that fifty % of people have a moderate AC to expressing themselves via their MP.

Nearly half of the MS (43.06%) got scores ranging from 6 to 17 on the peer-relationship sub-scale, which placed them in the low % of the whole population.

This can be seen in table 2 and graph 1, which are located above. On the attitude subscale, a comparable number of the guys (43.06%) achieved scores between 18 and 22, which placed them in the moderate 2%. Last but not least, on the attitude sub-scale, 13.88% of the male respondents achieved values ranging from 23 to 30. Because of this, they belong to the top 10% category. This indicates that 43.06% are dependent on using their CP for the purpose of creating attitude.

According to the data shown in table no. A and graph no. 1, which can be seen above, 33.33% of the MS had scores ranging from 4 to 12 on the knowledge sub-scale, which places them in the category of low %. In addition, it was discovered that over half of the male participants, or 45.83%, had received scores on the knowledge subscale ranging from 13 to 16 points, which placed them in the moderate % category? Finally, twenty-one point eight three % of the male respondents had scores ranging from seventeen to twenty on the knowledge sub-scale, which placed them in the high % category. This indicates that 45% have a moderate AC to using their SP for information, while 20.83% have a strong AC to using their MP.

On the "impulsivity" sub-scale, the results of which are shown in table no. 3 and graph 1, it can be seen that over half of the MS s, or 47.22%, earned scores between 4 and 12, which placed them in the low AC category. On the impulsivity subscale, another 36.11% of the guys achieved scores between 13 and 16, which placed them in the moderate % category. Last but not least, 16.66% of the male respondents fell into the high % group on the impulsivity sub-scale since they had scores ranging from 17 to 20 on that scale. This suggests that the majority, or 47.22%, do not use their MP for acting on impulses.

The "Use Time" subscale, which can be seen in table no. 6A and graph no. 1A, reveals that slightly more than a quarter of the MS, or 26.38%, scored between 5 and 12 on the usage time subscale, which corresponds to the low % group. On top of that, 59.72% of the male respondents earned values ranging from 13 to 16 on the use time sub-scale, which placed them in the moderate.

Last but not least, 13.88% of the male respondents achieved scores that fell between 18 and 25 on the use time sub-scale, which placed them in the high % category. This indicates that 59.72% of people have a moderate AC to using their MP at inappropriate times.

On the Smart PA Scale as a whole, it was discovered that more than one-third (36.11% to be exact) of the MS scored between 37 and 99, which placed them in the category of low % scorers. On the basis of the total scores they received on the Smart PA Scale, we are able to draw the conclusion that 36.11% of the male respondents did not suffer from a significant AC to MP. An additional 45.83% of the male participants achieved scores ranging from 98 to 127 on the Smart PA Scale as a whole, which placed them in the moderate % category.

This indicated that they suffered from a moderate degree of AC to MP. Last but not least,

18.05% of the male respondents achieved scores between 128 and 185 on the Smart PA Scale as a whole, putting them in the high % category and indicating that they suffer from a high degree of AC to MP. This is a cause for worry given that 18.05% of people are already hooked to MP to a high degree, while 45.83% are AC to MP to a moderate degree.

Table 2: Frequency Scores and % of Female Senior Secondary SS Who Are AC to Their MP

Scale	Range of Scores	Frequency	%	AC Level
Maladaptive Usage	9-15	7	8.05	Low
	16-23	90	39.08	Moderate
	24-45	146	52.87	High
Self-Expression	9-19	11	12.64	Low
	20-28	41	47.12	Moderate
	29-45	135	40.22	High
Attitude	6-14	17	19.54	Low
	15-20	34	39	Moderate
	21-30	136	41.37	High
Knowledge	4-9	6	6.89	Low
	10-15	48	55.17	Moderate
	16-20	33	37.93	High
Impulsivity	4-10	15	17.24	Low
	11-14	32	36.78	Moderate
	15-20	140	45.97	High
Usagetime	5-11	8	9.19	Low
	12-15	137	42.52	Moderate
	16-25	142	48.27	High
Scale as a whole	37-85	7	8.04	Low
	86-108	29	33.33	Moderate
	109-185	31	35.63	HighAC

When looking at table 2 and graph 2, it is possible to see that 8.05 % of the FS fell into the low

% group on the maladaptive use sub-scale. These students had scores ranging from 9 to 15 on the scale. In addition, more than one third of the female respondents, which is equivalent to 39.08%, achieved scores ranging from 16 to 23 on the maladaptive use sub-scale.

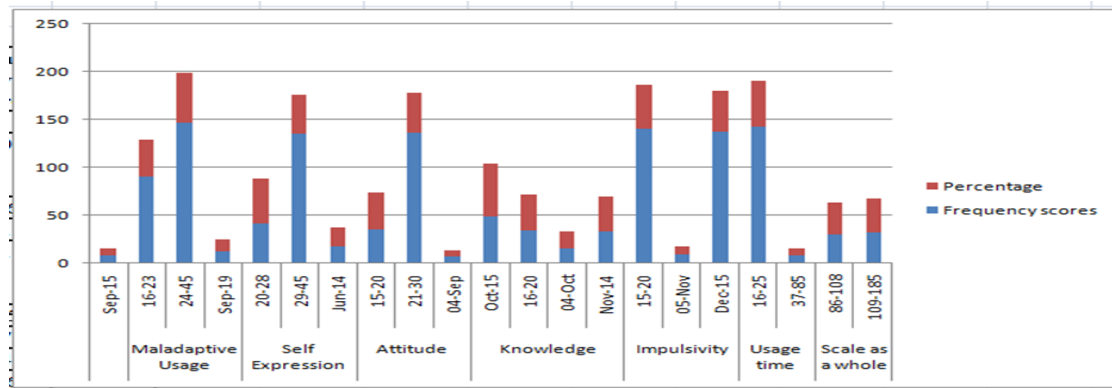


Fig. 2: Graphical Representation of % of Smart PA Score of Female Senior secondary students of Jaipur

They fall into the moderate % category, which suggests that they have a moderate degree of AC to MP as a result of their maladaptive use of these devices. Lastly, on the maladaptive use sub-scale, more than half of the female respondents in the survey, or 52.87%, achieved scores between 30 and 45, which placed them in the high % category. This suggests that the majority of FS, 52.87%, show a significant AC towards the maladaptive use of MP.

It can be seen from table 2 and graph 2 that 12.64% of the students who are female belong to the group that has scores in the low % on the self-expression sub-scale. These students' scores range from 9 to 19. In addition, over half of the girls (47.12%) had scores ranging from 20 to 28 on the self-expression subscale, which placed them in the moderate.

In conclusion, on the self-expression sub-scale, the high % was reached by 40.22% of the women who participated in the survey. Their scores ranged from 29 to 45. According to these findings, 47.12% of people have a moderate AC to expressing themselves via their MP.

The results of the attitude sub-scale, which are shown in table 4.3 and graph 4.2, demonstrate that 19.54% of the FS fell into the low % group with scores ranging from 6 to 14. In addition, over than one-third (39%) of the girls who participated in the research had scores ranging from 15 to 20 on the attitude subscale, which placed them in the group corresponding to the moderate. Last but not least, regarding the attitude sub-scale, 41.37% of the female respondents achieved

scores that fell between 21 and 30, which placed them in the high % category.

This suggests that around one-third of people (39%) are somewhat hooked to using their CP for the purpose of creating attitude.

According to the results of the knowledge sub-scale, which can be seen in table 2 and graph 2 above, 6.89% of the FS fell into the low % group with scores between 4 and 9. On the knowledge subscale, more over half (55.17%) of the female respondents achieved scores between 10 and 15, which placed them in the intermediate % category.

Last but not least, on the knowledge sub-scale, more over one-third (37.93%) of the female respondents achieved scores between 16 and 20, which placed them in the high % category. This suggests that more than half, 55.17%, have a moderate AC to using their MP for information, while 37.93% have a strong AC to using their MP for knowledge.

When looking at the "impulsivity" sub-scale at table No. 2 and graph No. 2, it can be seen that 17.24% of the FS fell into the low % group on the "impulsivity" sub-scale. This is the group that scored between 4 and 10 on the "impulsivity" sub-scale. On top of that, it was found that more than one-third of the girls, or 36.78%, earned scores between 11 and 14 on the maladaptive use subs-scale, which placed them in the moderate % category. In conclusion, over half of the female respondents in the survey, or 45.97%, achieved scores of between 15 and 20 on the impulsivity sub-scale, which placed them in the high % group of the distribution. This suggests that the majority of people, 45.97%, have a strong AC to using their MP for risky behavior.

On the "use time" sub-scale, which is shown in table 2 and graph1, it can be seen that 9.19% of the FS scored between 5 and 11, which places them in the group that falls into the low % category. In addition, 42.52% of the women scored between 12 and 15 on the use time subscale, which placed them in the moderate % category. In conclusion, over half (48.27%) of the female respondents in the survey achieved scores ranging from 16 to 25 on the use time sub-scale, which placed them in the high % group of the distribution. This demonstrates that the majority, 48.27%, have a strong AC to using their MP at inappropriate times.

It was discovered that more than one-third (8.04%) of the FS scored between 37 and 85 on the Smart PA Scale, which placed them in the low % category. On the Smart PA Scale as a whole, another 33.33% of the female participants had scores ranging from 86 to 108, which placed them in the moderate (26-75).

Last but not least, 35.63 % of the women who participated in the study had scores anywhere from 109 to 185 out of 200 on the Smart PA Scale, which places them in the high % category. According to the data, there are more FS overall. 35.63% of people are already extremely hooked to their MP, while 33.33% are just somewhat dependent.

Table 3: MASD of the AC to MP among Senior Secondary Students in Jaipur, both Male and Female.

Gender	Number	Mean	SD
Male	272	109.14	19.89
Female	387	115.51	23.63

According to table No. 4.5 and graph No. 4.4, the mean scores of male senior secondary students for AC to MP are 109.14, and the mean scores of female senior secondary students for AC to MP are 115.51. This means that the MS of 6.37 is in favor of FS, which suggests that female senior secondary students have a somewhat stronger smart PA than the male senior secondary students. The t-test is an example of an inferential statistic that was used to evaluate and interpret the data in order to determine whether or not there was a significant DB the two groups.

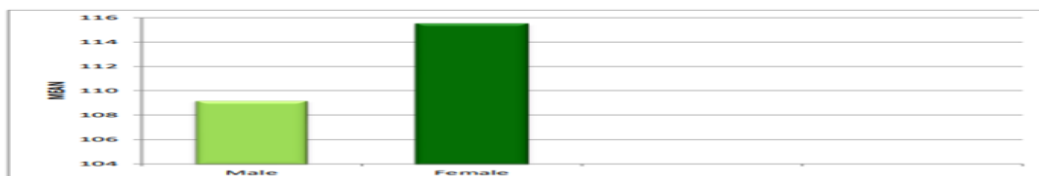


Fig. 4.3: Following is a graphical representation of the mean scores obtained by MAF senior secondary students in Jaipur

The value of t was 1.98 when compared to the significance level at the 0.05 level when df = 157 was used, and it was 2.61 when compared to the significance level at the 0.01 level when df = 157 was used. The information may be found in table no. 3

Table 43: The mean, standard deviation, and t-value of mean scores for smart PA among senior high school students, broken down by gender and gender identity

Gender	N	Mean	SD	t-value	Remark
Male	72	109.14	19.898	1.84	Not significant at 0.05 level
Female	87	115.51	23.634		

It was determined from table 3 that the t-value was 1.84, which did not meet the criteria for

significance at the 0.05 level and with $df = 157$. It is possible, in light of these findings, to draw the conclusion that there is no substantial difference in the levels of smart PA shown by MAF students enrolled in senior secondary school. The conclusion that "there is no substantial difference in smart PA between MAF senior secondary students" was upheld as a result of this finding. According to this, gender does not seem to have a role in AC to MP.

Conclusion:

In all likelihood, the responders will have been using social media from a very young age. Most of them had been using various forms of social media for at least three to four years, having signed up for services like Facebook, Whats App, Gmail, Twitter, Rediffmail, and Yahoo! when they were in their early adolescent years. According to them, their parents never told them they couldn't sign up for social media until they were 18 years old, and they didn't know that they couldn't. They claimed to be 18 years old or older when they really were not. In terms of online friendships, males will outnumber female. Respondents were more likely to form friendships with people they already knew at school or in their neighbourhood. Girls favoured online pals who had a good online presence more than their male counterparts.

REFERENCES

- Cha, S. S., & Seo, B. K. (2018). Smartphone use and smartphone addiction in middle school students in Korea: Prevalence, social networking service, and game use. *Health Psychology Open*, 5(1).
- Gezgin, D.M., Cakir O. & Yildirim, S. (2018). The relationship between levels of nomophobia prevalence and internet addiction among high school students: The factors influencing Nomophobia. *International Journal of Research in Education and Science (IJRES)*, 4(1), 215-225.
- Gracy Stella. (2019). A Descriptive Study to Assess the Relationship between Mobile Phone Addiction and Risk Taking Behaviour among Adolescents in Selected Schools at Bharuch. *International Journal of Science and Research (IJSR)*. 8(3):1672- 1675.
- Kayastha, B., Gurung, A. and Chawal, R. (2018). A Descriptive Study to Assess the Level of Internet Addiction among Adolescents: A Case Study of High Schools in Mangalore. *J Child Adolescent Behaviour*. 6(3): 378.

- Lee, E. J., &Ogbolu, Y. (2018). Does Parental Control Work With Smartphone Addiction.*Journal of Addictions Nursing*, 29(2), 128–138.
- Mehrnaz, M., Farahnaz, M., Gholamreza, K., Mohseni. H. K., Seyed, H. S. and Majid, N. (2018). Smartphone Addiction, Sleep Quality and Mechanism. *International Journal of Cognition and Behaviour*. 1(1), 13-21.
- Sethuraman, A. R., Rao, S., Charlette, L., Thatkar, P. V. and Vincent, V. (2018). Smartphone addiction among medical college students in the Andaman and Nicobar Islands. *Int J Community Med Public Health*. 5(10):4273-4277.
- Shao, Rong& Wang, Yunqiang. (2019). The Relation of Violent Video Games toAdolescent Aggression: An Examination of Moderated Mediation Effect.*Front Psychol*. 21(10):384.
- Sohane, Arpit&Ghanghoriya, Pawan&Tiwari, Asha. (2022). Impact of Use of Social Media on Adolescent's Mental Health in a Tier 2 City—A Cross-Sectional Study. *International Journal of Recent Surgical and Medical Sciences*. 10.1055/s-0042-1743450.
- Yu, Lu & Du, Meng. (2022). Social networking use, mental health, and quality of life of Hong Kong adolescents during the COVID-19 pandemic. *Frontiers in Public Health*. 10.1040169. 10.3389/fpubh.2022.1040169.
- You, Yueyue& Yang, Junwen&Raaf, Hein & Van Grieken, Amy. (2022). Social media use and health-related quality of life among adolescents: A Cross-Sectional Study (Preprint). *JMIR Mental Health*. 9. 10.2196/39710.