

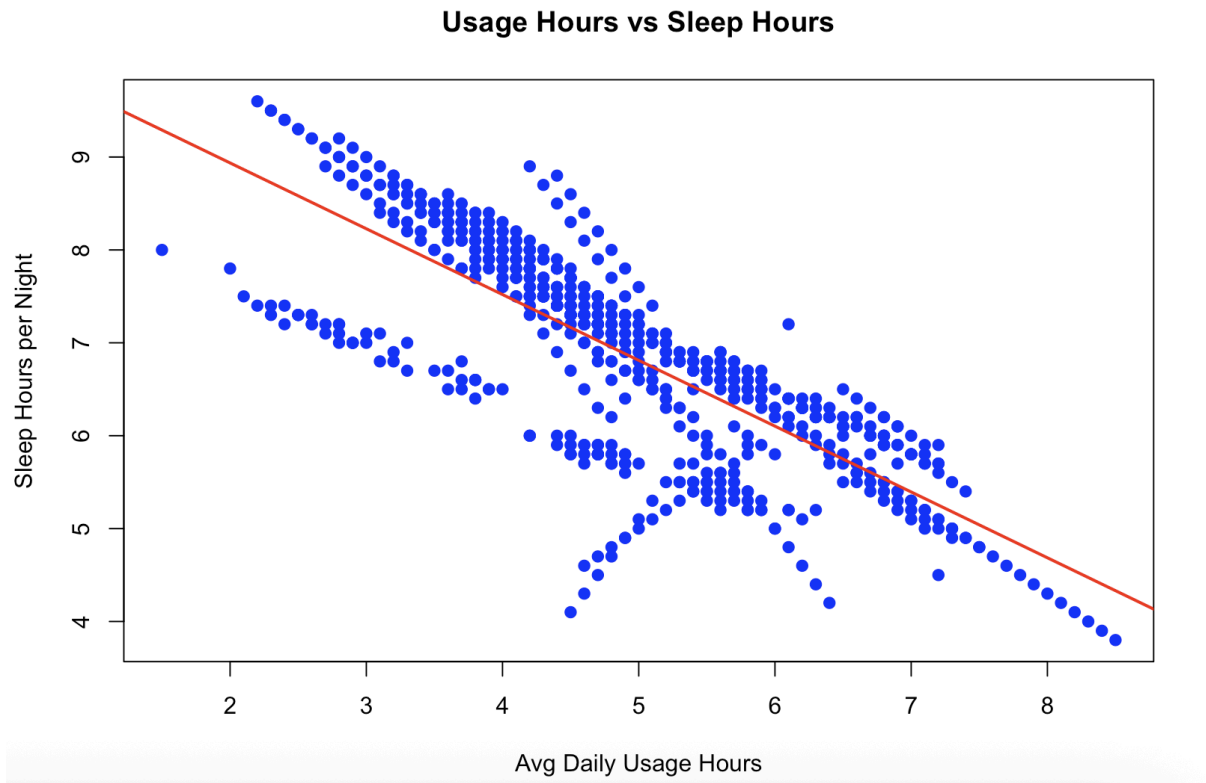
THIS IS WHAT SOCIAL MEDIA IS REALLY DOING TO STUDENTS: THE ADDICTION TRAP NO ONE TALKS ABOUT

Nam N Lai - Data 101- September 21 2025

Social media has long been identified as a lifeline of youth culture, which is a good way to connect, share and broaden networking for everyone, especially students. But behind the endless feeds and usage screen times is the hidden cost few expect. What if the price of your favourite social media, which is a part of your routine, is not just wasted hours, but lost sleep, the effect of study and fragile mental health.

By using the “ Students Social Media Addiction dataset ” of Adil Shamim on Kaggle (linked [here](#)), I explore how addiction of social media, conflict, mental health and academic performance have a mutual impact on students and their relation. The findings reveal a crisis that goes far beyond “just scrolling” on social media platforms.

Lost of sleep to Scrolling: The Shocking impacts of TIKTOK and INSTAGRAM between FACEBOOK on students' time.



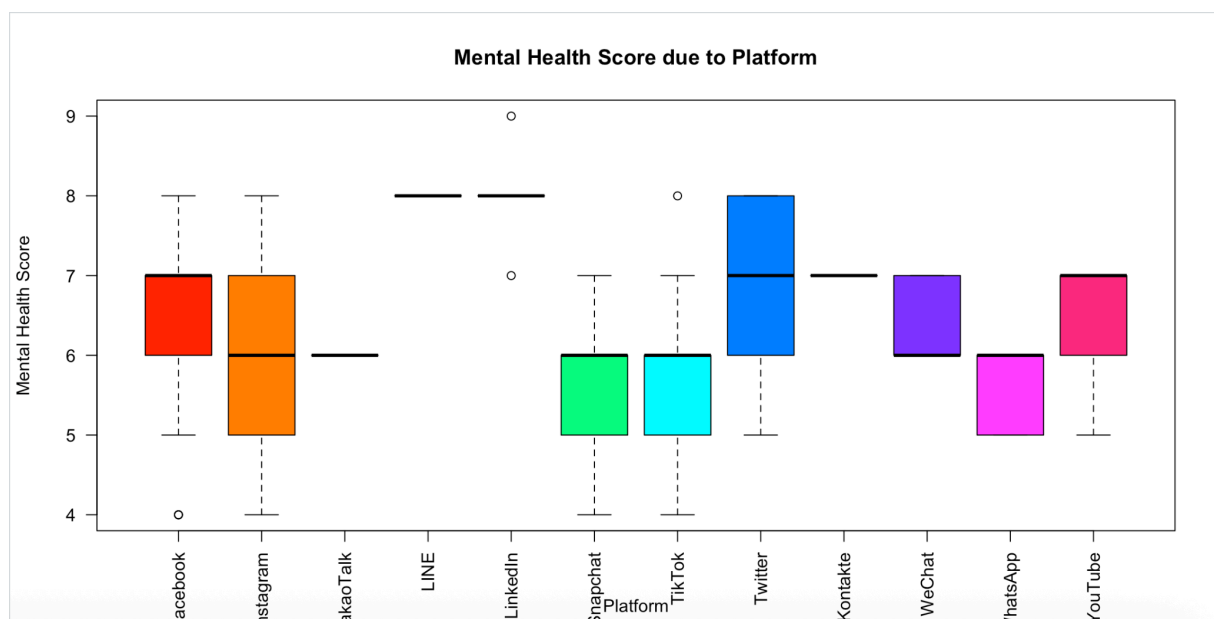
Basically, we all know between sleep times and use time will have an inverse relationship with each other. This can be depicted in the scatter plot of **Usage Hours vs. Sleep Hours** reveals a clear negative relationship: the more time students spend on social media, the fewer hours they sleep at night. Moreover, the downward red regression line highlights this overall trend. Beside that, in addition to the points in the straight line in this trend, there are many wide scattered points at the top and bottom of this Linear road revealed the deeper story:

- **Balanced users:** A small group of students, which is represented as the points above the Linear trend, managed around **5 hours of daily use but still slept 8+ hours**. The special features of these are that they are most **Facebook users**, showed only moderate addiction levels (fluctuate between 5-6 points) , reported low conflicts (about 2 points) , and maintained relatively strong mental health (about 7 points) . They are considered balance users students

because despite the time of use, their level of addiction is very low and almost less affecting mental health.

	Gender	Academic_Level	Most_Used_Platform	Addicted_Score
192	Male	Graduate	Facebook	6
195	Female	Undergraduate	Facebook	5
198	Male	Graduate	Facebook	6
201	Female	Undergraduate	Facebook	5
204	Male	Graduate	Facebook	6
210	Male	Graduate	Facebook	6
		Conflicts_Over_Social_Media	Mental_Health_Score	Relationship_Status
192		2	7	In Relationship
195		2	7	Single
198		2	7	In Relationship
201		2	7	Single
204		2	7	In Relationship
210		2	7	In Relationship

→ Interestingly, compared to other addictive social networks, students using most Facebook will have a higher Mental Health score with other platforms. It is 7 scores (only lower than Line and Linkeln are two platforms that are less used by students). Prove that this is a good social networking platform, less addictive and less conflict for students.



- **Burnout users:** In contrast, another cluster stood out, which is represented as the points under the Linear trend, students who used social media only 4–5

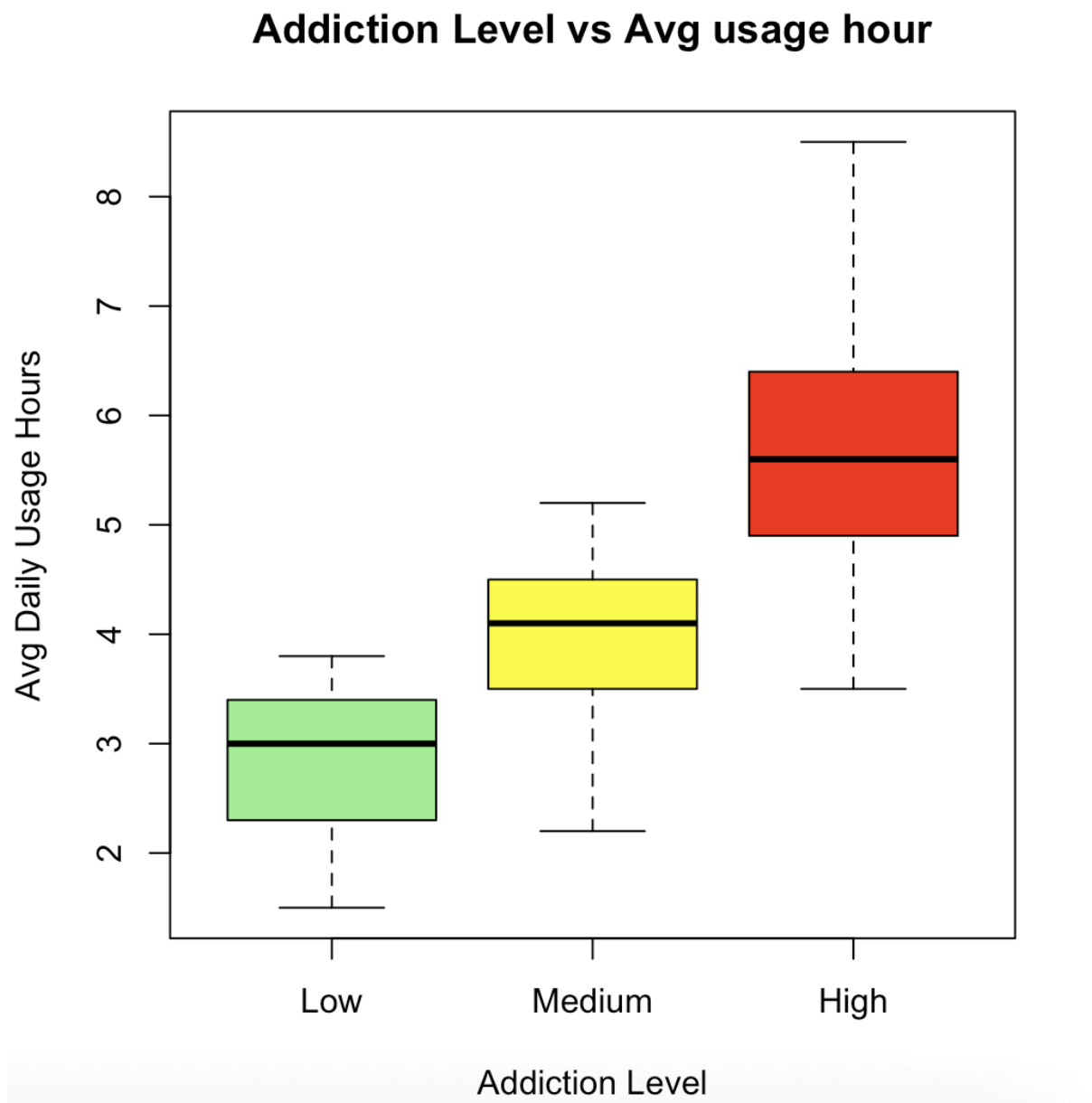
hours per day but slept 5 hours or less. The special features of these are most **Instagram or Tiktok users**, they reported high conflicts (fluctuate between 3-4 scores), poor mental health (~6 scores), and elevated addiction scores (fluctuate between 7-8 scores). They are considered burnout users because although the time of use is not too high, their level of addiction is very high and almost most affecting mental health.

	Gender	Academic_Level	Most_Used_Platform	Addicted_Score	
148	Female	Undergraduate	Instagram	7	
151	Male	Undergraduate	TikTok	7	
154	Female	Graduate	Instagram	7	
157	Male	Graduate	Facebook	7	
160	Female	Undergraduate	Instagram	7	
196	Male	Graduate	TikTok	8	
202	Male	Graduate	TikTok	8	
208	Male	Graduate	TikTok	8	
214	Male	Graduate	TikTok	8	
220	Male	Graduate	TikTok	8	
		Conflicts_Over_Social_Media	Mental_Health_Score	Relationship_Status	
148		3	6	In Relationship	
151		3	6	Single	
154		3	6	In Relationship	
157		3	6	Single	
160		3	6	In Relationship	
196		4	6	In Relationship	
202		4	6	In Relationship	
208		4	6	In Relationship	
214		4	6	In Relationship	
220		4	6	In Relationship	

→As analyzed in the previous picture, it can be seen that **Instagram** and **Tiktok** really negatively affect the user. It can prove that Instagram can cause conflicts for users as well as the success of Tiktok's short focus effect, which can lead to these consequences.

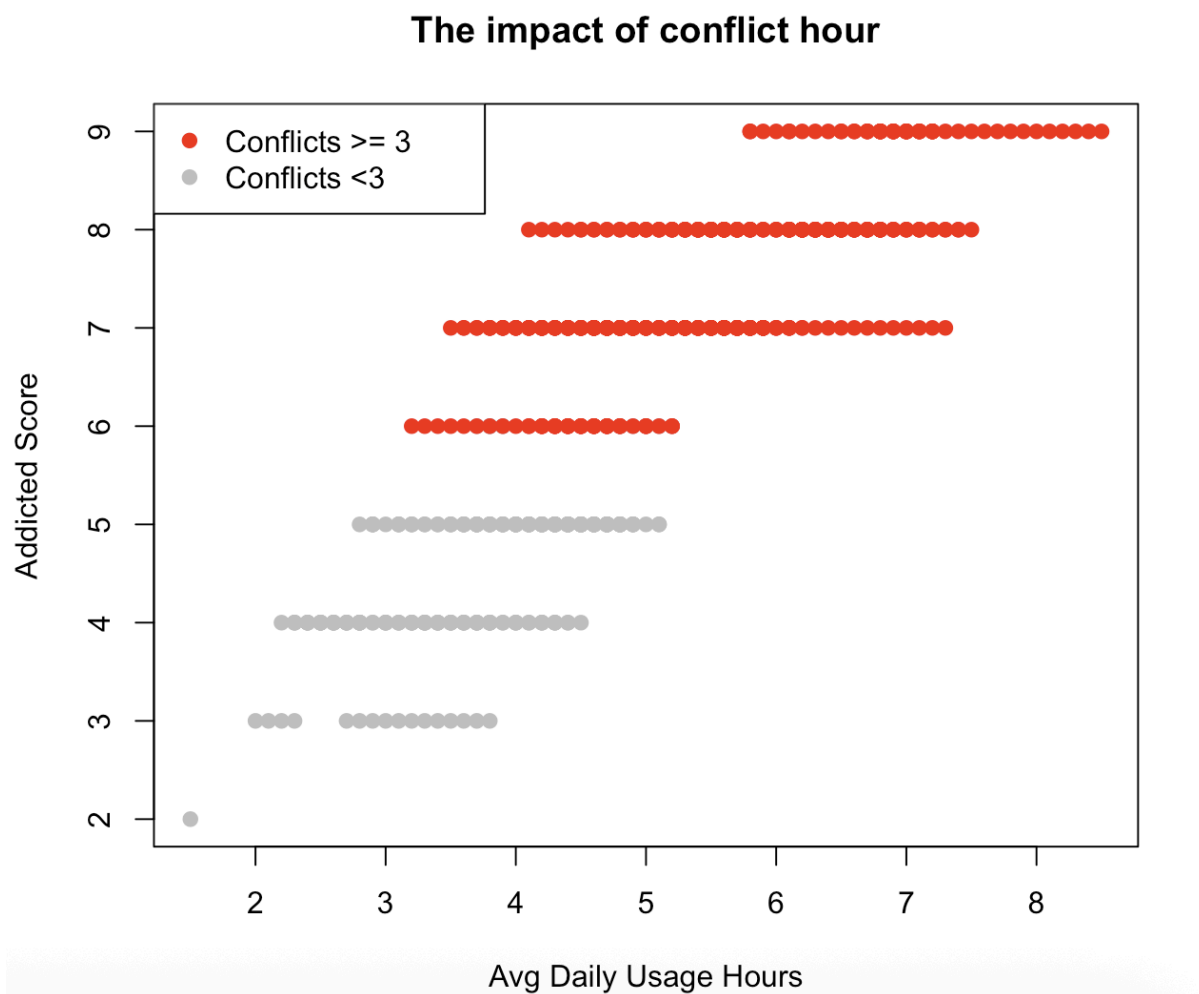
While the regression line shows the "average" trade between web surfing and sleep, the extreme levels remind us that not all students are equally affected. The use of different platforms can also lead to the effects on their sleep, mental health,...

Conflict Fuels Addiction: Even with Low Usage but high Addiction of students



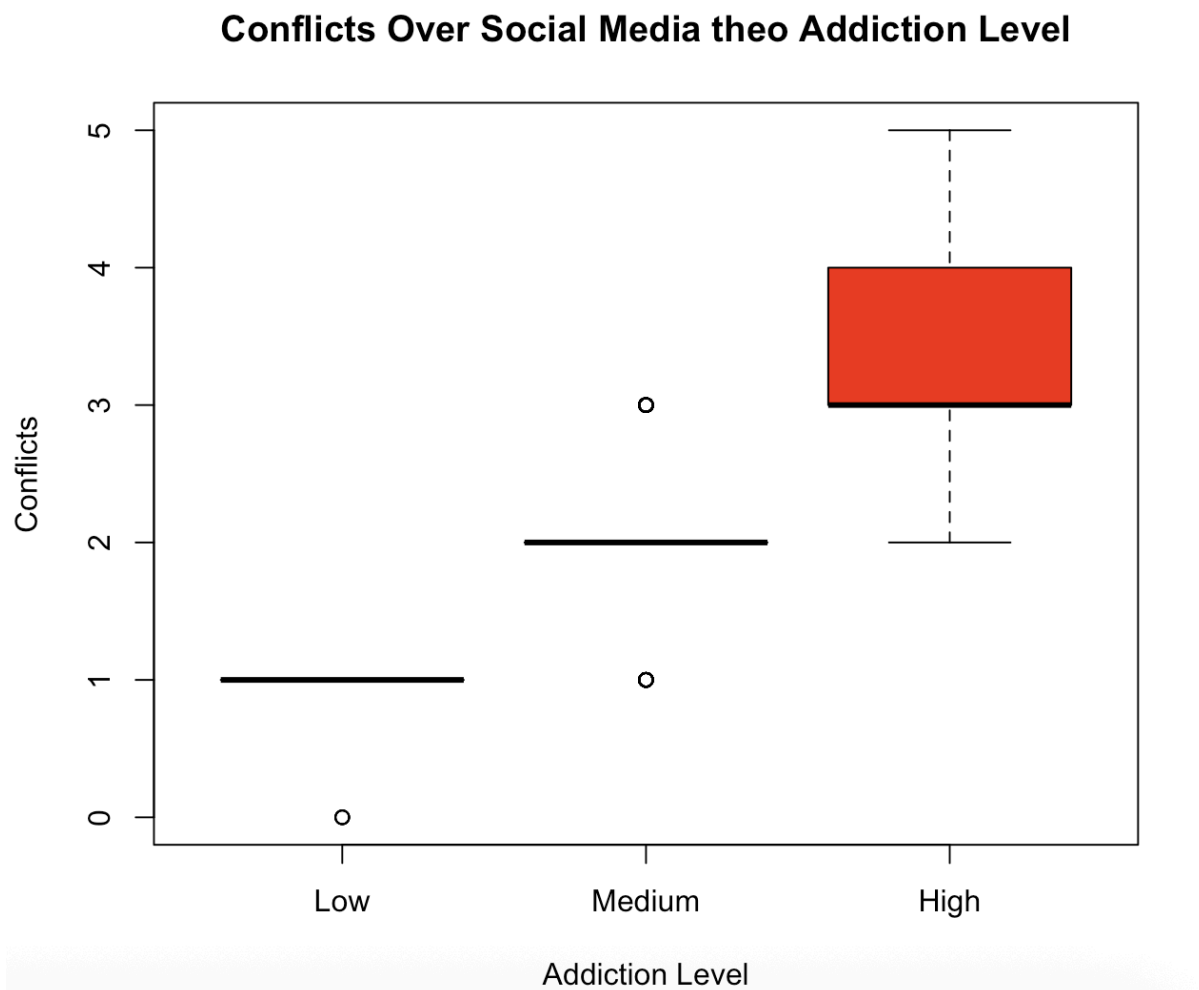
At first glance, perhaps most of us think that the more time we spend on social networks, the more addicted score to the social network. But then a twist appeared, some

students with **only 3–4 hours of use** still showed **high addiction**. So the question is what happened leading to high addiction scores of students besides the time of use ? And feuds are conflicts through social networks. Through the below scatter plot of Addicted Score and Avg Daily Usage Hours, there are still red dots for students with high conflicts > 3 at the level of using social networks very little from 3-4 hours/ day, but they are addicted to high-foul social networks (6-7 scores).



Also from the picture above we can also discover, the more addicted to social networks(**high level** addicted) , the more conflicts(median ~ 3) through these platforms because using Instagram and Tiktok, Whatsapps are more: Instagram, Whatsapps can cause conflicts with friends or relationships around and make them go to dramas every day, and tiktok is the place where there can be conflicts, conflicts or comments or short -term

comments or comments Is more than losing between users. This will be clearly shown in the sequel on the effects of social networks.



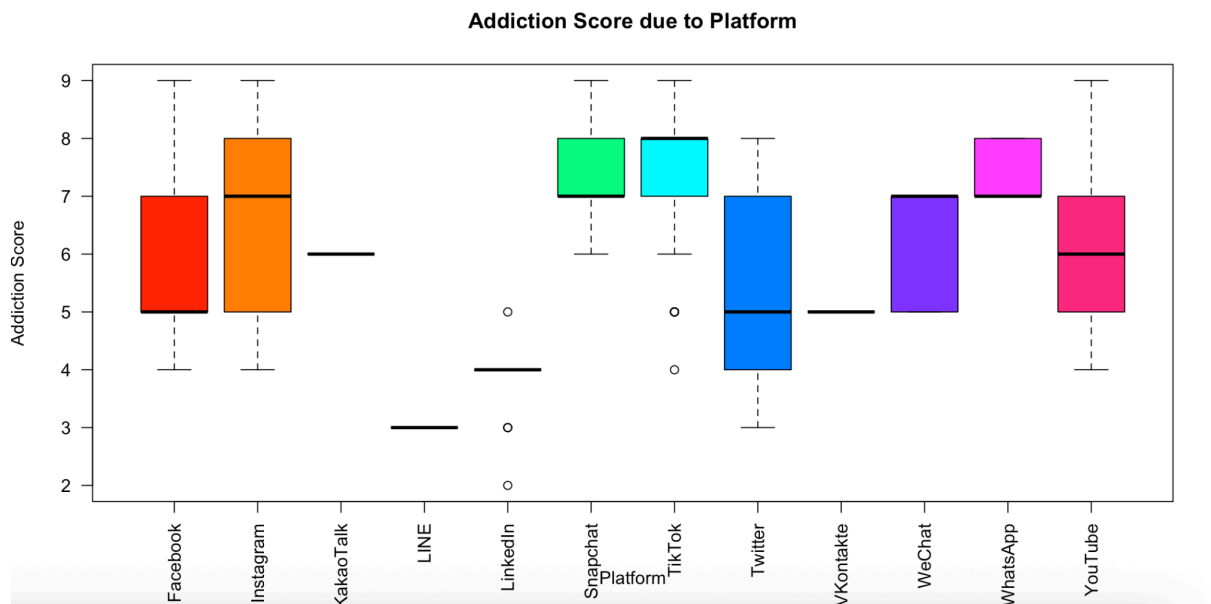
Thereby it can be seen that, although the use of time has contributed strongly to the social network addiction of the student, the conflict from social media also contributed significantly to them being caught up in social networks' addiction.

Platform of doom: And who will suffer most ?

Subsection: "Characteristics of the most dangerous platform"

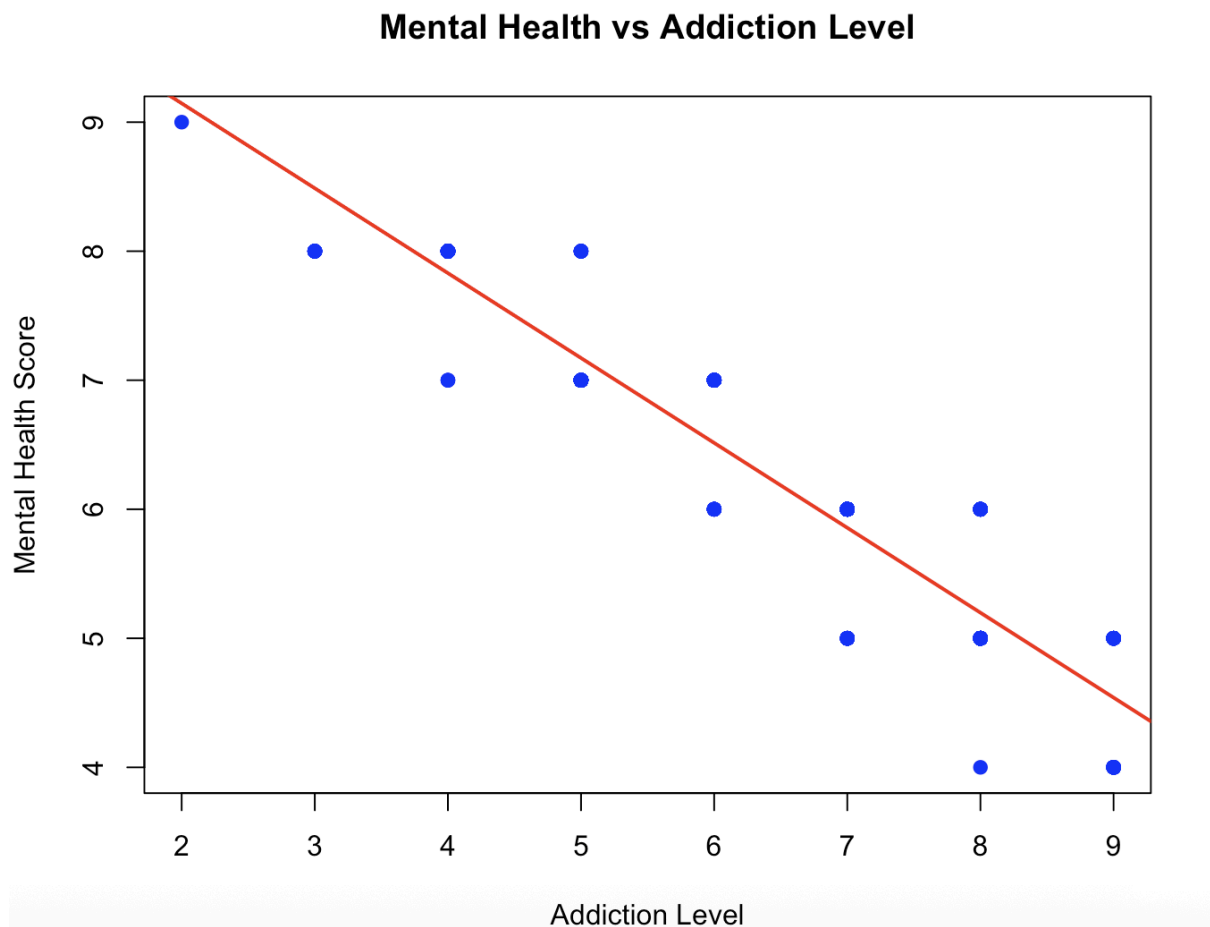
When comparing between different platforms, the result is not surprising because it tends to be like my previous analysis, the highest addiction scores came from: **Instagram(7 scores) , TikTok (8 scores), WeChat (7 scores), Snapchat (7 scores), WhatsApp(7**

scores), and YouTube (6 scores). Most of these apps are chats that allow students to talk to share with each other, so they can contribute to increasing conflict. There are two famous platforms to watch the video, it seems that Tiktok will be more addictive because the "Short of Attention Span" effect and YouTube will have a slightly smaller addictive level.



And when considering the levels of influence on Mental Health, it is the **high addictive social media platform that leads to low mental health: Instagram (~ 6.1 scores) , TikTok (~ 5.7 scores), WeChat (~ 6.4 scores), Snapchat (~ 5.5 scores), WhatsApp (~5.5 scores)** and from there we can comment that if the higher the addicted score of a student, the lower the mental health of that student (clearly reflected through the *red linear line* drawn below)

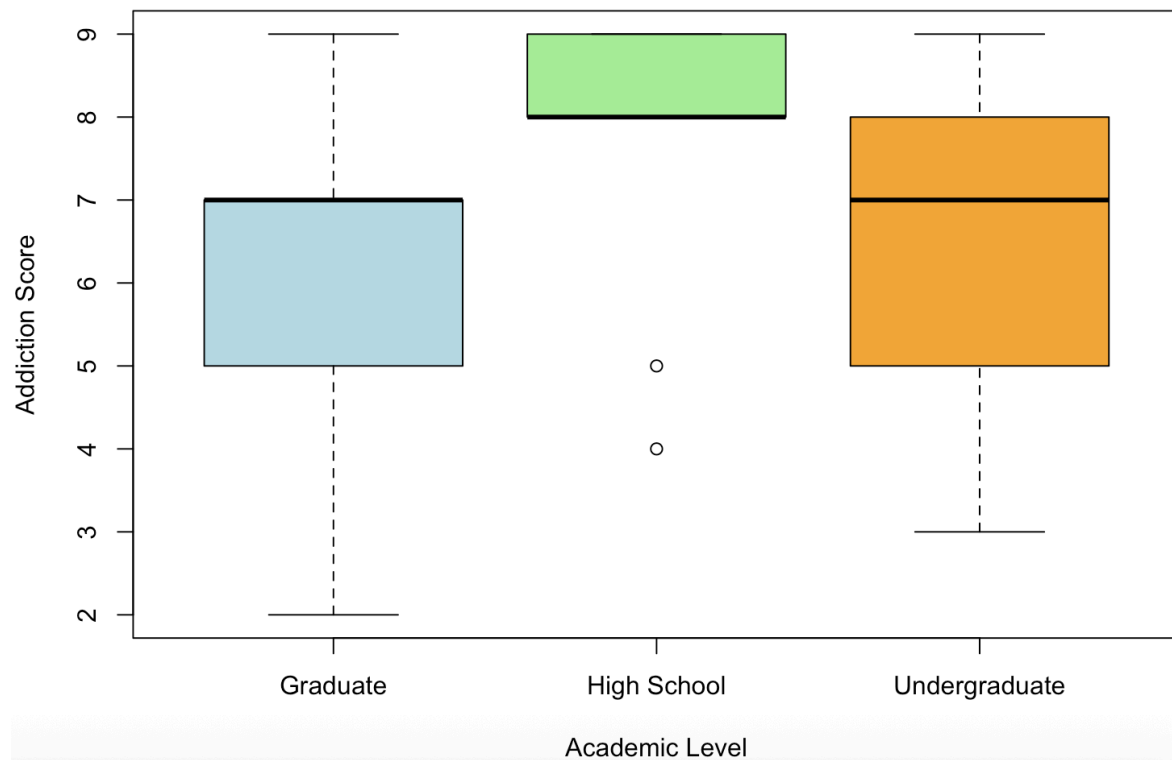
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> tapply(dataset$Mental_Health_Score, dataset$Most_Used_Platform, mean)
Facebook Instagram KakaoTalk    LINE  LinkedIn  Snapchat   TikTok   Twitter VKontakte
6.715447  6.124498  6.000000  8.000000  8.000000  5.538462  5.714286  6.833333  7.000000
  WeChat  WhatsApp   YouTube
6.466667  5.537037  6.600000
> |
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Subsection: “High School Students: The Most Vulnerable”

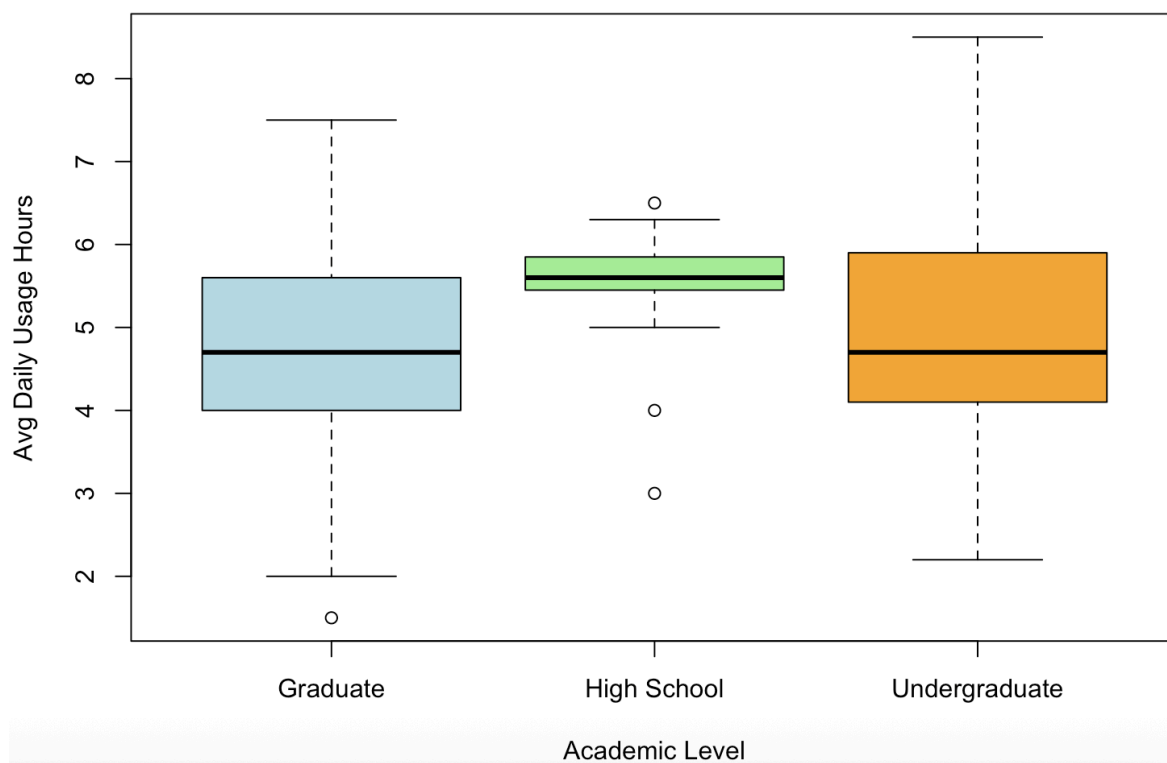
Between academic levels: Highschool, Undergraduate, Graduate, students in **High School will be addicted to social networks (median about 8 scores)** . Because at this age, students have not been able to control the use of their social networks and easily have conflict through social networks with friends and family.

Addiction Score based on Academic Level

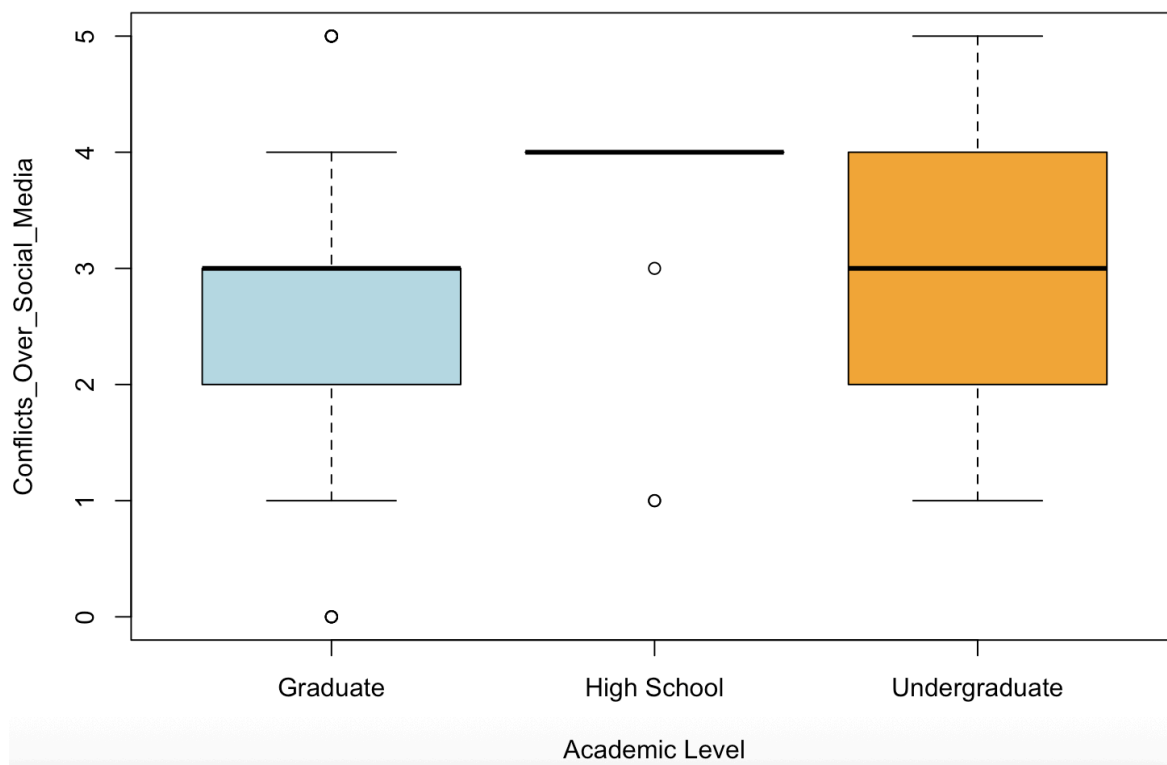


And they not only have more time to spend on social media (median ~5 h/day) than the remaining 2 levels, but also have higher conflicts(median ~4 conflict) than undergraduates and graduates. These are also alarms for parents about social networking behavior.

Usage Hours vs Academic Level



Conflict vs Academic Level



For younger students, social media is more than a distraction, it's a **disruptor of learning, mental health, and relationships**. The higher the level of addiction, it will definitely affect academic performance (on the table below with 100% proportion of high addicted score affects study) .

	No	Yes
Low	1.0000000	0.0000000
Medium	0.8392857	0.1607143
High	0.0000000	1.0000000

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