Big Data Analytics

Mini project

Is Your Child Too Connected to Be Disconnected?

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Aim

This project aims to acknowledge the behavioral changes and lifestyle changes of school students spawning from changes in normalcy during the Covid-19 pandemic. To analyze the effects and changes of this online learning platform, a form titled 'Is Your Child Too Connected to Be Disconnected?' was circulated to parents through a school. The form had some basic questions about child's age and grade. Further questions included: screen time of the children spent on activities other than those required by the school, any physical effects, parent's opinions on whether children's peer relations, or family relations are starting to have negative effects and so on. Finally, the concluding questions required parents' opinions on whether they preferred online or offline education. 817 responses were received from the parents which were used for visualization and analysis. The results and conclusions of this may help the school to take necessary actions, for the betterment of the students.
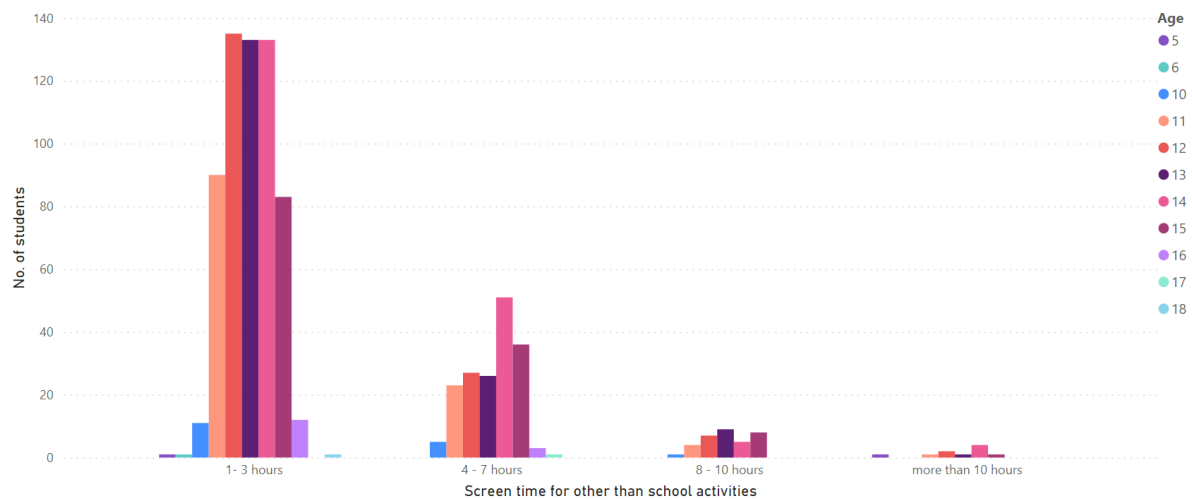
Analysis and Visualizations

Age demographic
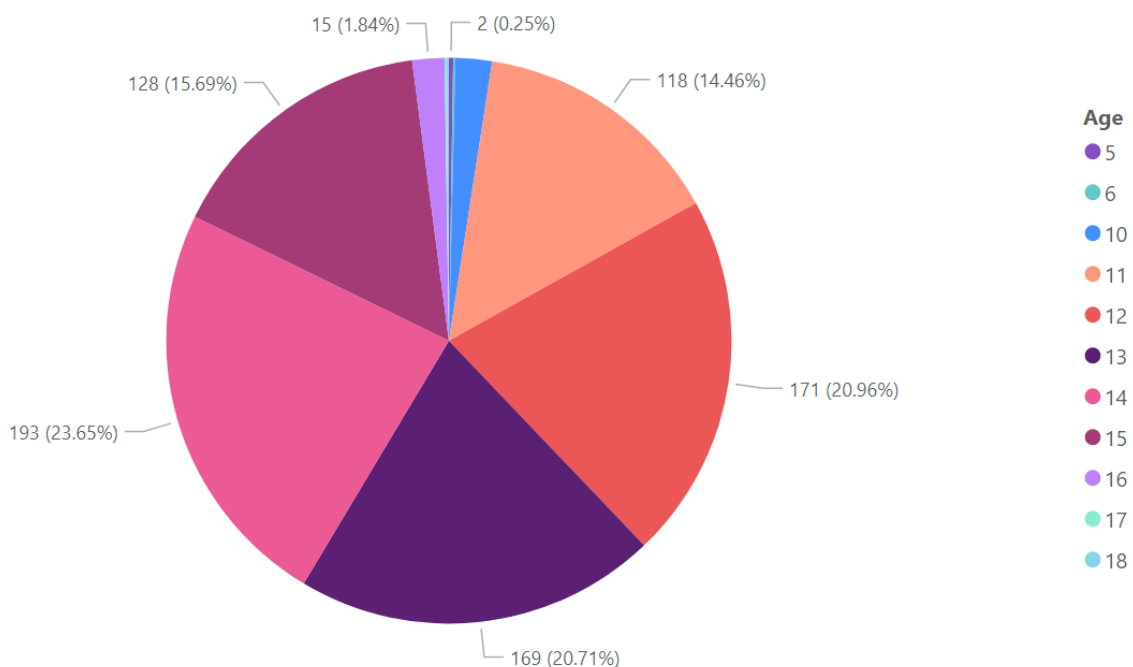
Analysis
Responses received from the form were majorly from parents of students between 11-15, with a few responses also from parents of students of ages 5, 6, 10 and 16-18.
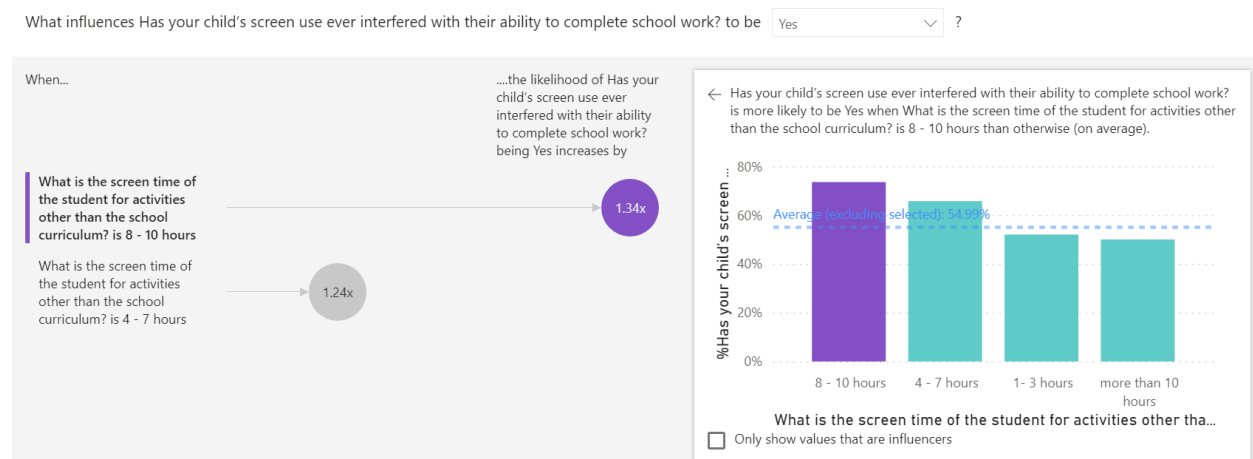
Screen time of students for activities outside the school curriculum

Analysis

While majority of the students (**600** out of 817) tend to spend 1-3 hours on screens after school work, **172** tend to spend around 4-7 hours, **27** spend 8-10 hours, while **10** spend more than 10 hours. Noticeably the age group of 12-14 show higher time spent on screens. The students of age **14** particularly have the highest number of students spending 4-7 hours and more than 10 hours on screens when compared to students of other ages.

Possible influence of high screen time on productivity/ability to concentrate

What influences Has your child's screen use ever interfered with their ability to complete school work? to be [Yes ▾] ?

Analysis

On trying to map a correlation between high screen times and children not being able to focus/complete school work, it was found that the likelihood of a child's screen use interfering with their ability to complete school work **increased by 1.34 times** when their casual screen time ranged from 8-10 hours per day. Similarly, when the screen time (on activities other than school work) ranged from 4-7 hours per day, the child was **1.24x more likely** to not be able to complete school work. These observations were made only based on the screen time and cannot be considered exact. There could be many factors not recorded that also influence a child's ability to complete their school work.
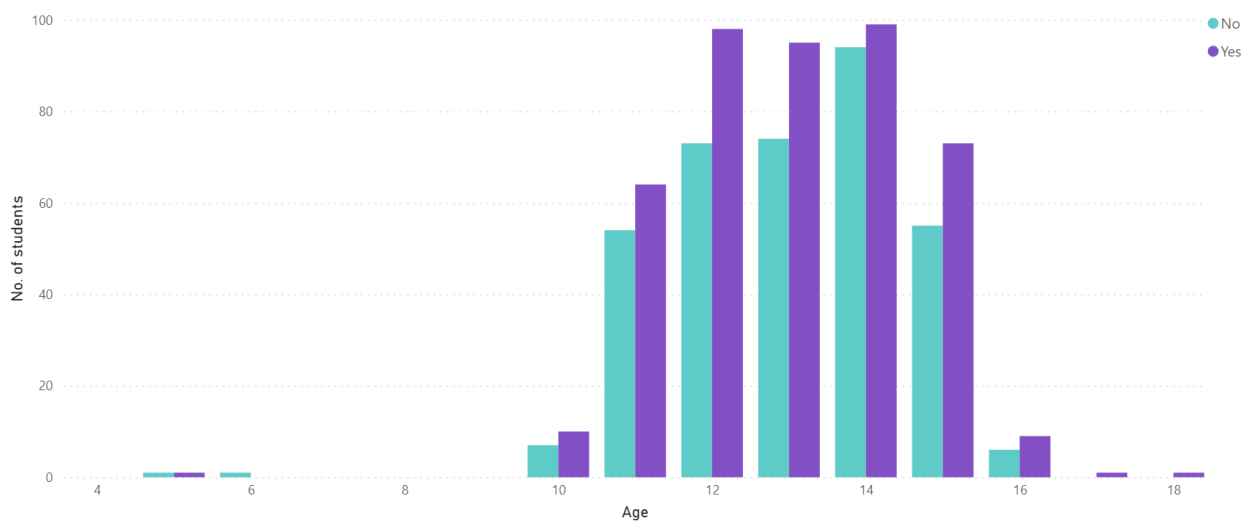
Physical Effects

Analysis

The common physical effects obtained from the form included changes in sleep patterns, eye problems, backache, headache and neck pain. The most common of these was headache with 334 students (40.93%) suffering from it.

Students showing lack of interest in physical activity
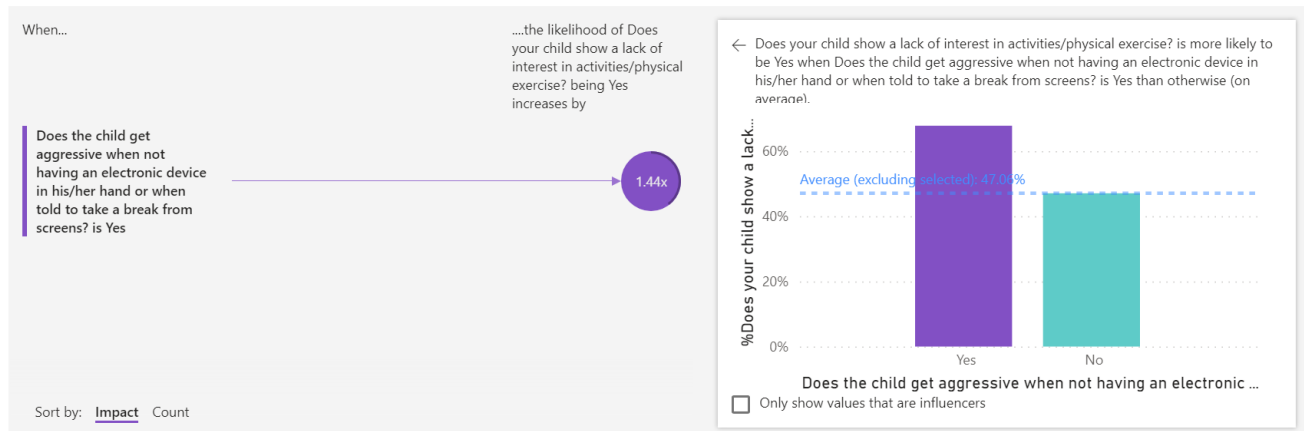

Analysis

For nearly every age group the number of students showing lack of interest in physical activity/exercise is greater than those still interested in physical activities. Only exceptions to this are students of age 5 and 6. The most noticeable gap occurs with students of age **12** with 93 students out of 171 showing lack of interest in physical activities.

## Possible influences on lack of interest in physical activity

Key influencers Top segments

What influences Does your child show a lack of interest in activities/physical exercise? to be Yes

When...

....the likelihood of Does your child show a lack of interest in activities/physical exercise? being Yes increases by

Does the child get aggressive when not having an electronic device in his/her hand or when told to take a break from screens? is Yes

1.44x

Does your child show a lack of interest in activities/physical exercise? is more likely to be Yes when Does the child get aggressive when not having an electronic device in his/her hand or when told to take a break from screens? is Yes than otherwise (on average).

Average (excluding selected): 47.0%

Does the child get aggressive when not having an electronic ...

☐ Only show values that are influencers

Sort by: Impact Count

Analysis

On trying to map possible influences for students that showed a lack of interest in physical activities, it was found that the students that became aggressive when told to put away screens were **1.44 times more likely** to show a lack of interest in physical activities. This presents the possibility of students becoming addicted to screen use, leading to aggressiveness when told to take a break and then further on leading to lack of interest in other activities including physical activities or exercises.
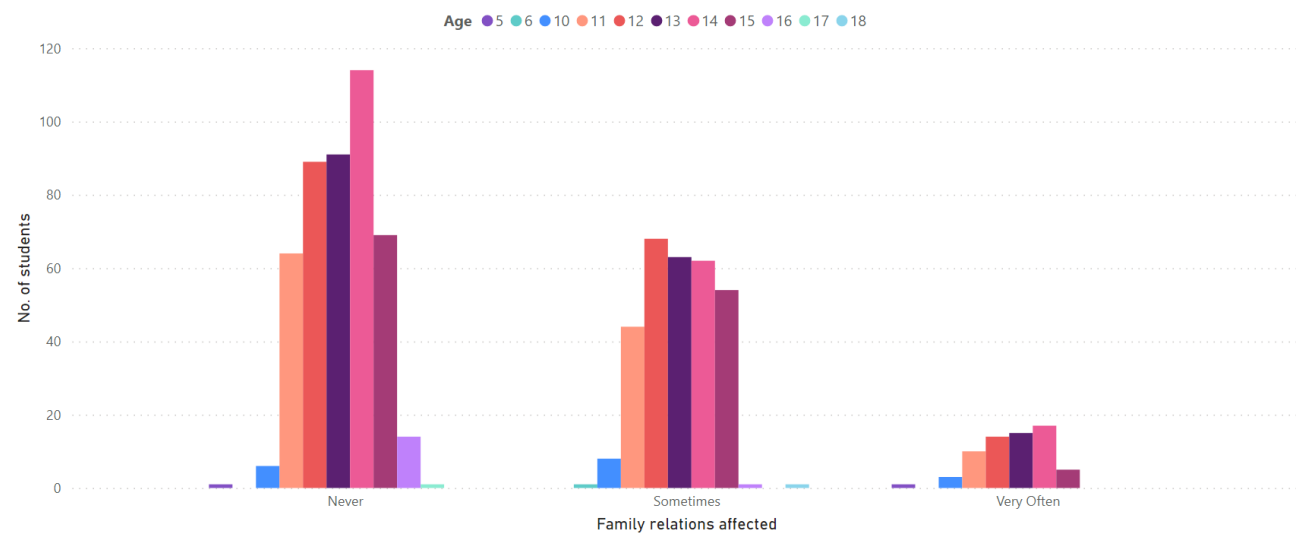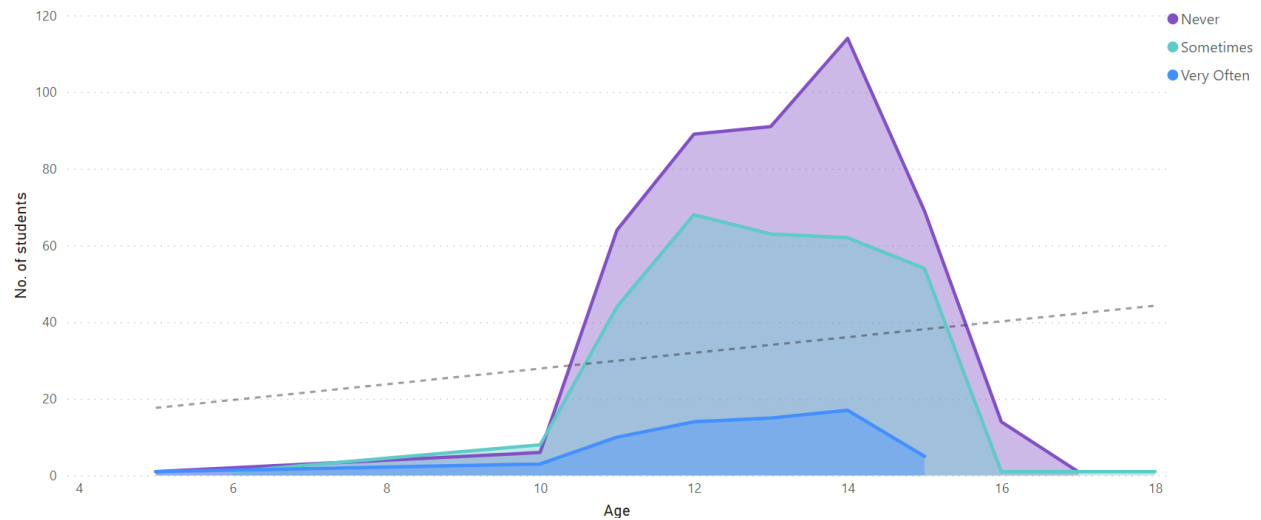
Parents worried about child's peer relations
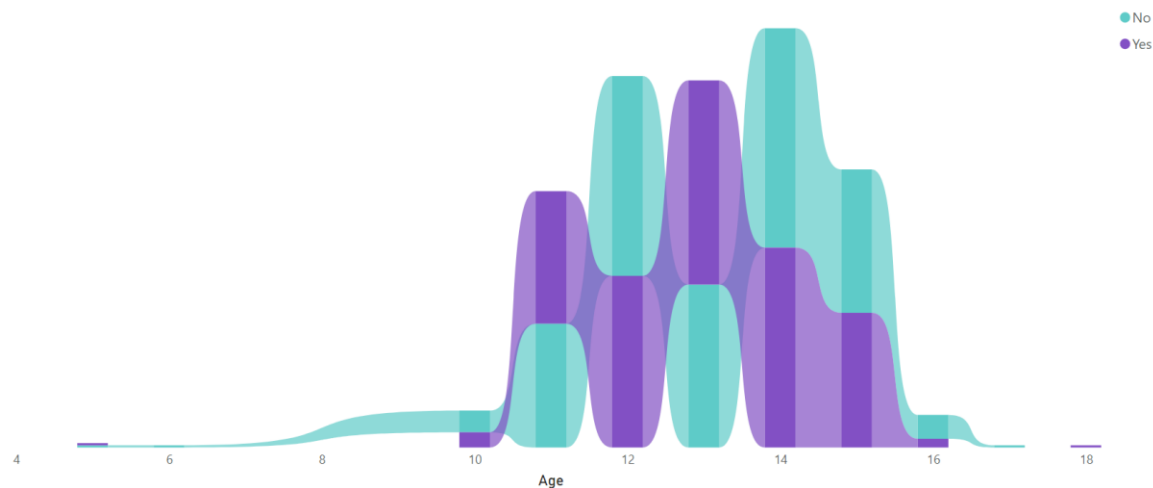
Analysis

Over all ages nearly half of the parents are worried about their child's peer relations. Having spent more than a year without regularly meeting and interacting with students of their own age has had its impact on nearly all ages equally.
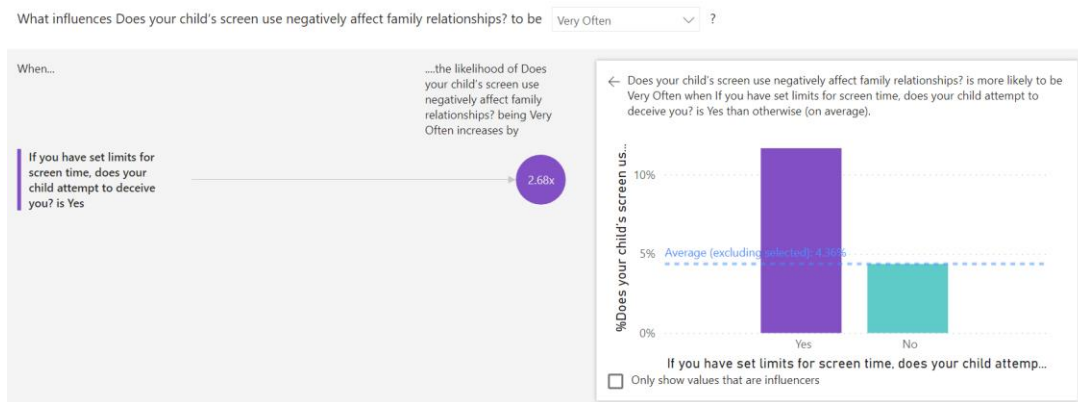
Effects on family relations

Analysis

While **449** parents have said that family relations are never affected, **239** say that they observe negative effects on family relations sometimes and **129** found family relations to be negatively affected very often. Amongst those that say that family relations are affected very often, we find this tendency to increase from the ages 11 to 14.

Possible influences on negative effect on family relations

Analysis

On trying to map possible influences for family relations that were being negatively affected, it was found that in cases where the child attempted to break limits for screen time or attempt to deceive parents regarding it, the likelihood of family relations being negatively affected very often increases by **2.68 times** as compared to the average.
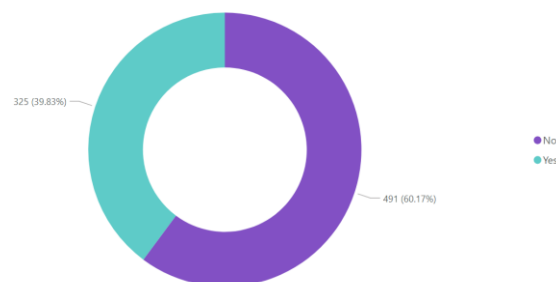
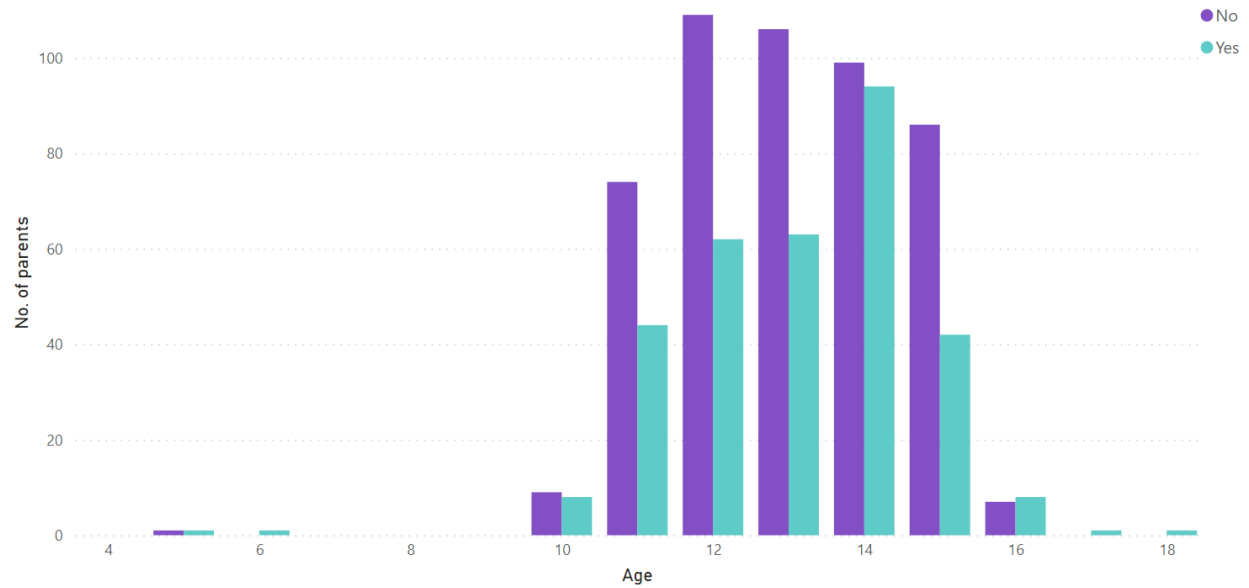## Preferred mode of education
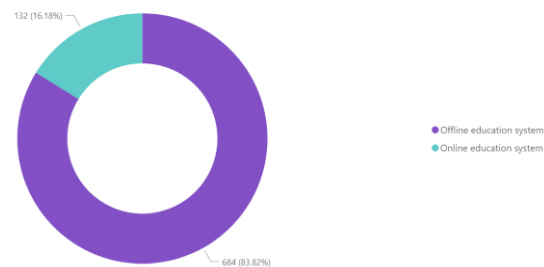
Analysis

Majority of the parents i.e., **83.82%** say they prefer offline in-person education when considering all the pros and cons of online education.

## Back to school without vaccination

Analysis

While the vast majority of parents said they prefer offline education, **60.71%** said they wouldn't send their child back to school without getting them vaccinated. Analyzing this over the age groups, it was found that:

- For the students of age 14 the counts of Yes and No were close. Here **99** parents said they wouldn't send their child back to school without vaccination but **94** said they would
- For students of age 16 the counts of Yes were greater than No. Here **8** parents said they would send their child back without vaccination while **7** said they weren't comfortable in doing so.

This could indicate that parents with children of higher age groups, tend to feel more comfortable with sending their kids back to school even without the safety of vaccination.

Preferred mode of education vs. vaccination
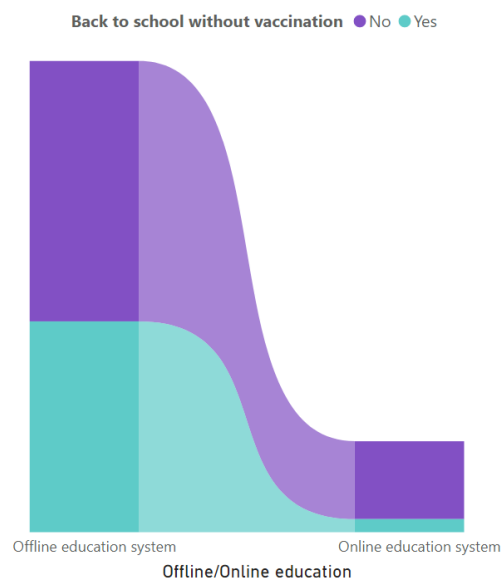
Analysis

Out of the **684** parents that said that they prefer **offline** education for their children:
- **306** are ready to send their children back to school before their children are vaccinated.
- **378** are unwilling to send their children back to school before their children are vaccinated.

Out of the **132** parents that said that they prefer **online** education for their children:
- **19** are still ready to send their children back to school before their children are vaccinated.
- **113** are unwilling to send their children back to school before their children are vaccinated.

Most of the parents seem to be cautious of allowing their children to be exposed to crowds without getting them vaccinated regardless of whether they prefer online or offline education. Yet **19** parents that prefer online education still are ready to send their children back without vaccination. This implies they might feel the effects on children so far through the pandemic are greater than the risk of possible exposure.

Possible influences on negative effect on family relations
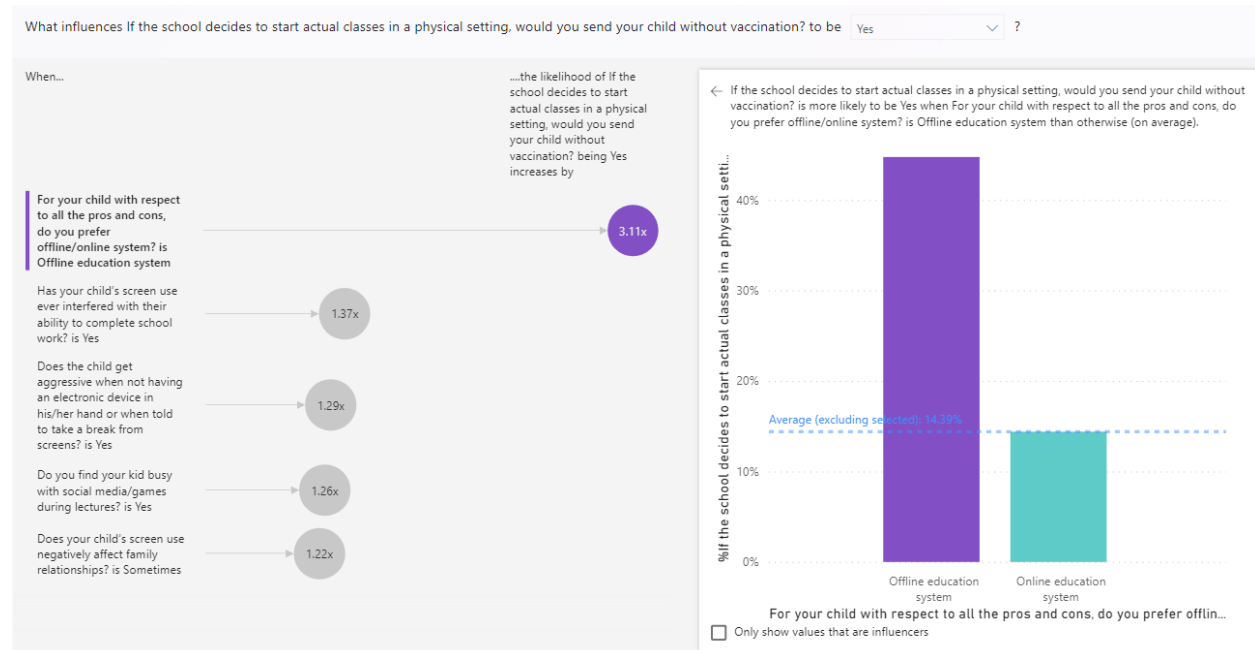
Analysis

On trying to map possible influences for parents tending to send their child back to school without them receiving vaccination, it was found that:

- Parents preferring **offline** education are **3.11 times more likely** to send them back without vaccination
- Parents of children whose screen usage has started to affect **completion of school work** are **1.37 times more likely** to send them back without vaccination
- Parents of children who show **aggressive behavior** when asked to take a break from screens are **1.29 times more likely** to send them back without vaccination

- Parents of children who are **distracted by social media/games** during online school classes are **1.26 times more likely** to send them back without vaccination
- Parents who feel that their child's screen time sometimes **negatively affects family relations** are **1.22 times more likely** to send them back without vaccination

Conclusion

Acknowledging and analysing the behavioural changes and lifestyle changes of school students spawning from changes in normalcy during the Covid-19 pandemic, we got onto some conclusions which can be implemented in schools for betterment of students. We concluded that 16.18% of parents are still not ready to send their ward to school to take education in offline mode, which is they want their children to take online education. Whereas 83.82% of parents are ready for offline education mode. But offline education mode can be implemented only if students are vaccinated according to the analysis, we obtained as most of the parents are not ready to send their child to school without vaccination.