**Summary:** The paper investigates “Trends of COVID-19 among school age children during the academic years 2020-2022 in the State of Qatar; a retrospective evaluation of the public health response using CDC indicators for COVID-19 community transmission”.  Despite being a significant public health concern for Qatar, this topic has already received considerable attention from numerous earlier and recently published studies as well as this topic is not now attractable from the readers as COVID-19 or lockdown is not necessary.

The purpose of the study has also been used in the past to explore comparable issues utilizing earlier data on Qatar. As a result, the paper's main original addition appears to be its application of this study to the age group, and its conclusions largely—and not surprisingly—reflect those of previous research.

The paper needs to be thoroughly proofread by a professional or expert. It is not written to a high degree for academic writing, and there are several grammatical/spelling errors, which frequently make claims and arguments less clear. Additionally, the authors ought to eliminate any similarities from this work. Numerous times, the way that statistical results are interpreted is also wrong. The paper also neglected to mention or cite comparable but equally significant published studies from the nearest countries. The introduction fails to effectively justify the need for studying the issue, tables and results are not focused on the title, objectives seem different in several part of the manuscript. Tables and their interpretations are not similar, and the paper's findings by themselves are insufficient to support the discussion and conclusions.

Below are some comments with more information:  
  
**Abstract**

**Please include the line number and page number in the main manuscript next time. However, to review purposes I inserted them. To track and resolve my comments please insert line number first.**   
  
Lines 99-101: “We explore the use of the CDC’s COVID-19 community transmission indicators to identify data based alert points to guide schools’ attendance policies and public health response.”. The objective didn’t fully support the title and also the objective used in introduction and discussion. Please make similar in whole manuscript.

Lines 31-36: Please show some numeric values/evidence in the results. “Trends in incidence and positivity percentage among all children age subgroups paralleled those of adults throughout the study period. Adolescents (12-17 years old) had higher incidence and positivity rates when compared to younger age group indicating possibility of driving higher levels of infections especially upon relaxation of social restrictions.”. Provide that score. More evidence is needed from age group and other factors from the ANOVA model. Results should be focused from the findings of ANOVA model with some association and coefficient values.

**Introduction**

Line 145: “The novel coronavirus disease (COVID-19) has affected more than 29 million individuals worldwide”. Reviewers seems that it is an old reference. Please update this information from recently published manuscript like: <https://www.sciencedirect.com/science/article/pii/S2772707623000115>.

Lines 146-147: “In the State of Qatar, more than 400 thousand persons were infected with more than 600 deaths as of September of 2022”. Authors should update this information before submitting again.

Lines 147-151: “Qatar has taken many public health measures such as social distancing strategies to protect its population from COVID-19 disease and to reduce the incidence of new cases. As part of the efforts to limit the spread of COVID-19 pandemic in Qatar, all schools were closed on March 10th of 2020[3]. Face-to-face classes were suspended, and students continued their learning through online learning platforms [3].” No need to cite multiple times with continuous lines. Please remove “[3]” from the middle.

Lines 202-203: “……the possibility of using them to identify data based alert points to guide escalations in the schools’ attendance policies [15,17], see supplementary Table 1.”. No need to cite here or refer supplementary file’s information. Authors should discuss in details about data and method in methods section.

**Materials and methods**

Lines 210-215: It should be “National SARS-CoV-2 electronic testing and laboratory database was used to identify all tests conducted between September 1st, 2020, and June 30th of 2022. Demographic characteristics were extracted from the anonymized electronic medical records and no identifying information was collected. Rapid antigen testing (RAT) started in December 2021 (21st week of 2021-2022 academic year). In Qatar, all the laboratory COVID-19 testing is centralized and is conducted at Hamad Medical Corporation’s (HMC) central laboratory.” Authors should provide some citations here, about testing methods, laboratory details, etc.

Lines 228-230: It should be “The one-way analysis of variance test (ANOVA) was used to determine the statistically significant differences between different age categories in the testing effort, incidence, and positivity rates.” Authors should explain why they did ANOVA model. Also explain details about all variables in this model.

Lines 231-232: It should be “Turkey’s test was used for post hoc analysis to determine the statistical significance of differences in group pairs means.” Reviewers think it will be “Tukey’s test” instead of “Turkey’s test”.

**Results**

There are some issues with the interpretation of results.

Use “n” instead of “N” in table 1.

Lines 246-247: “…………..corresponding to a testing rate of 1.9 test per adult and 2.3 test per child.” Please “tests” instead of “test”. Also, this result didn’t notice in the table by reviewers. Please mention it in the table.

Lines 247-248: The same happened in the second year with 13.7% [n=840,634] tests conducted on population <18 years old, a testing rate of 3.6 tests per child and 2.3 tests per adult. This result also didn’t notice in the table by reviewers. Please mention it in the table.

Lines 244-251: Most of the information is not linked to the table or taken from the table. It is difficult to identify for readers, how you calculate all results or write from where. Please keep those results which you gave in the table. I am requesting you to rewrite the result again.

Testing capacity

Lines 262-267: Here also most of the information is not linked to the table or taken from the table. It is difficult to identify for readers, how you calculate all results or write from where. Please keep those results which you gave in the table. I am requesting you rewrite the result again with valid evidence. It also seems that you mention P-value. Reviewers hardly found any P-value in any table.

Lines 269-275: Most of the information is not linked to the table or taken from the table. It is difficult to identify for readers, how you calculate all results or write from where. Please keep those results which you gave in the table. I am requesting you to rewrite the result again.

Lines 277-283: Here also most of the information is not linked to the table or taken from the table. It is difficult to identify for readers, how you calculate all results or write from where. Please keep those results which you gave in the table. I am requesting you rewrite the result again with valid evidence. It also seems that you mention P-value. Reviewers hardly found any P-value in any table.

Incidence

Lines 287-288: “During Y1 study period, the mean incidence rates per 100,000 population per week were: (116, 102, 83) in (adults, 2-17, 5-11, respectively, p<0.001”. Didn’t see any P-value in figure 2, also not mention any methods to find P-value from figure 2 in method section.

In whole result parts, interpretation not followed any table or any written result. P-values are not explained well. Not mention in methods part or in table about the P-values. Interpretation style not good enough.

**Discussion**  
Lines 488-491: However, the study shows clear differences in the COVID-19 incidence in children (5-11 years old) attending primary schools, and adolescents (12-17 years old) attending preparatory and secondary schools with higher incidence and positivity rates in the later age group.”. How did you measure the difference, any evidence in the result? Please provide some statistical evidence in any part of the manuscript.

The references used by authors for identifying similar studies seem sporadic, with low evidence from Qatar or the nearest countries’ papers. Please adjust and rewrite the whole discussion related to your result and this study.

Lines 492-495: “The observed difference between children and adolescents could also be explained by the fewer opportunities of exposure and testing among children less than 12 years old as during most of the first academic year children <12 years old were not allowed to enter shopping malls or closed spaces”. Did the author mention them in the result or is this from this finding? If not, please cite some papers or remove this.

Lines 499-501: “Alongside vaccination levels and layered prevention strategies, the Center for Disease Control and Prevention (CDC) recommends using two metrics for evaluating the level of community transmission: number of new COVID-19 cases per 100,000 persons and percentage of positive tests.” Authors should replace these lines in the method section.

The discussion part should be rewritten and should focus on the used variables from the study. This part should support the result but there is some discrepancy between the result and the discussion.

**Conclusion**

The conclusion needs to be more specific and highlight key findings. This should support the result. Suggested providing less discussion in the conclusion. As authors discuss the reason for each association in the discussion part. Much information is redundant in the discussion and conclusion.