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Preference Of Online Versus Offline Education Among Adolescents In Chennai - A Cross Sectional Survey

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ABSTRACT

Background: Educational system is affected because of COVID-19 . Online classes were conducted by the management for the welfare of the students. Online classes are conducted over the internet and it is very convenient during lockdown. But technological challenges can make the students think back towards their blackboard class setup. **Aim:** To assess the perception and reception of online and offline education among adolescents in the Chennai population. **Methods:** A cross sectional survey was conducted among adolescent students of schools and colleges. A standardized questionnaire was prepared and circulated through an online platform (google forms) among adolescents in chennai. The responses recorded were tabulated and analyzed using SPSS software version 23. **Result:** Total no of participants were 101. 63% were male and 38% were female.38.51% of the male participants and 13.86% of female participants preferred online class for better understanding of their subjects(chi square value, p value =0.015). 40.59% of male participants and 24.75% of female participants said that during online classes they cannot sit satisfactorily for the duration of the class (chi square value, p value = 0.942). 30.69% of the male participants and 24.75% of the female participants preferred offline class for gaining more knowledge (chi square value, p value= 0.942) **Conclusion** Student's perception of online learning is relatively good with

several obstacles but it needs some improvement. Students are willing to continue online learning because it is very convenient which can be done anywhere and at any place.

KEYWORDS Online, offline, adolescents,COVID-19, innovative technology

INTRODUCTION

Coronavirus COVID-19 is an ongoing pandemic. It was identified in december 2019 in wuhan china and it was first found out by chinese and temporarily named as 2019-ncov. It is a contagious disease that causes severe acute respiratory syndrome . Coronavirus causes more than 118000 deaths in 114 countries. It also causes great impact among the young generation in their studies .

The long lockdown for the COVID-19 pandemic has closed schools, colleges and other educational institutions. (1) Due to these consequences, online classes are conducted over the internet. Online learning means learning activities are carried out with online media and face to face meetings are replaced by internet based virtual(2).According to dewi interaction in learning can use apps like zoom, google meet, live chat or through whats app groups .

Online class is conducted by the management for the welfare of the student. Students can learn their lesson and communicate with their fellow students and instructor Students can also raise their doubts in online class(3). Online class is distance learning that connects the student using the internet. Learning with this method can increase the learning efficiency(4). According to Harsi, students may get bored or skip the classes. There is no one to monitor them so the result will lead to lack of interest while listening to the online class. Unwanted messages may distract the student from listening to the classes(5).

In offline class, students will study in a disciplined manner. The classroom provides a space where learning can take place uninterrupted by outside distraction . In normal classes there are different types of methods to show the student to show more interest in their studies. Smart class learning helps the students to improve the learning skills and academic achievements(6) Our team has extensive knowledge and research experience that has translate into high quality publications (13),(14),(15),(16),(17),(18),(19),(20),(21),(22),(23),(24),(25),(26) The main aim of this study is to analyse the perception and acceptance of online education in comparison with the conventional offline education among adolescents in the Chennai population.

MATERIALS AND METHODS

The cross sectional study was conducted in the Chennai population, nearly 101 participants had participated in the survey The questionnaire consisting of 10 close-ended questions were prepared, pre-tested and distributed through online google forms. Adolescents pursuing school and university education were chosen as the participants. The participants were randomly selected, and after obtaining the consent for participation, they were recruited in the study. Those of the students who have not attended online classes were excluded from the study. The data collected was entered in Microsoft Excel and exported to SPSS software. The statistical analysis was performed to find the association between various parameters using Pearson's chi square test. The p-value less than 0.05 was considered significant.

RESULTS

The study consisted of 101 of respondents. Of the total participants, 63% were male and 38% were female(fig 1). 16.83% of them were 12-16 years of age, 49.50% of them were 17-21 years of age,

33.66% of them were 22-24 years of age (fig 2). 20.79% of them were high school students, 8.91% were higher secondary students, 49.50% were college undergraduate students and 20.79% were postgraduate students (fig 3). 88.12% have been solely attending the online class and 11.9% of them have been alternated with online and offline class during the current pandemic scenario (fig 4). 52.48% said that online class helps to understand the key point (fig 5). 61.39% of them felt that quality of interaction is better in online class and 38.61% of the population said that quality of interaction is better in offline class (fig 6). 57.43% of students said that online class makes the student lethargic (fig 7) and 55.45% of the population said that more knowledge gained offline is more than online class (fig 8) . 55.45% of the participants prefer that offline class teaching is more accurate and improves the marks (fig 9). 63.35% of students encounter more distraction during online class (fig 10).

38.61% of the male participants and 13.86% of female participants preferred online class for better understanding of their subjects. p value 0.015 (<0.05), hence statistically significant (fig 11). 30.69% of the male participants and 24.75% of the female participants think that they gained more knowledge in offline class p value 0.094 (>0.05), hence statistically insignificant (fig 12). 40.59% of male participants and 24.75% of female participants said that during online classes they encounter more distraction than offline classes p value 0.942 (>0.05) , hence statistically insignificant. (fig 13). 37.62% of male participants and 19.80% of female participants said that during online classes they cannot sit satisfactorily for the whole duration of the class p value 0.938 (>0.05), hence statistically insignificant (fig 14).

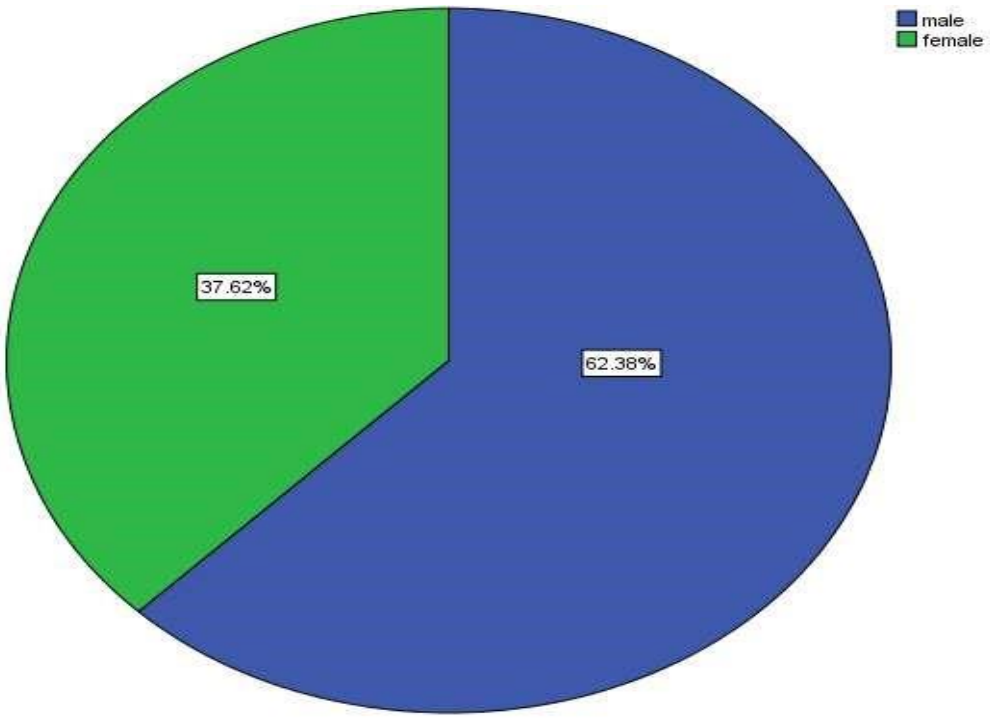

Fig 1: Pie chart showing gender distribution among study participants. Blue indicates males and green indicates females. The study comprised 62.38% of male participants and 37.62% of female participants.

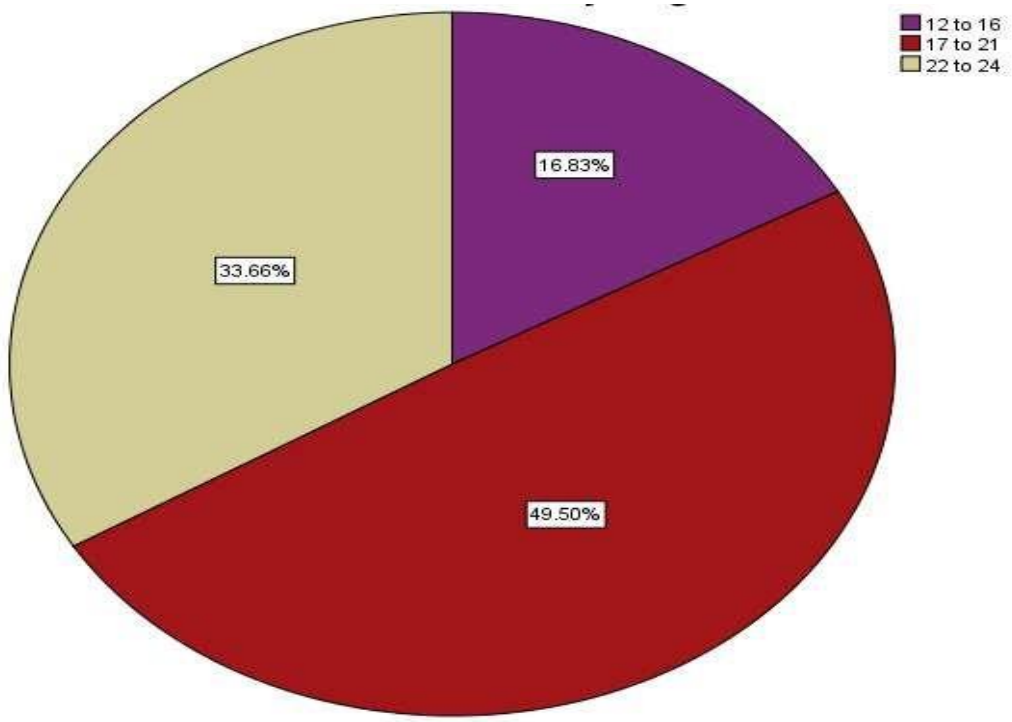

Fig 2 : Pie chart showing age distribution among study participants.Purple indicates 12-16 years of age , red indicates 17-21years of age and Brown indicates 22-24 years of age. 16.83% of people in 12-16 years of age, 49.50% in 17-21 years of age, 33.66% in 22-24 years of age participated in the study.

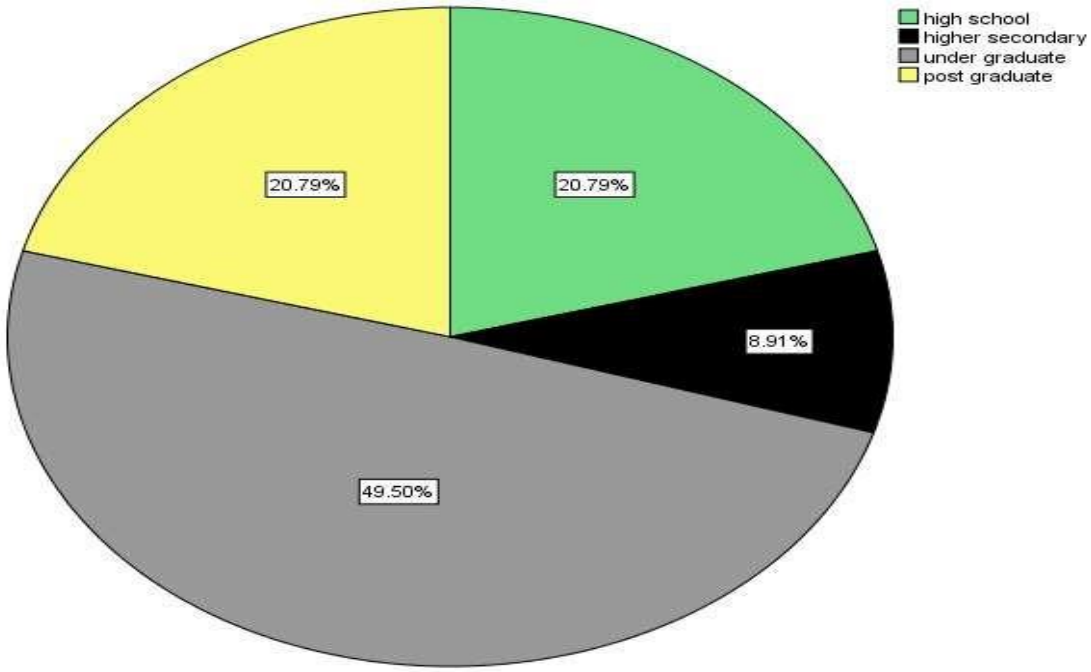

Fig 3: Pie chart shows distribution about the level of education among adolescents. Black indicates higher secondary students, Grey indicates UG students, Purple indicates PG students and Green indicates high

school students.20.79% of the participants were high school students, 8.91% of them were higher secondary students, 49.50% of them were UG students and 20.79% were PG students.

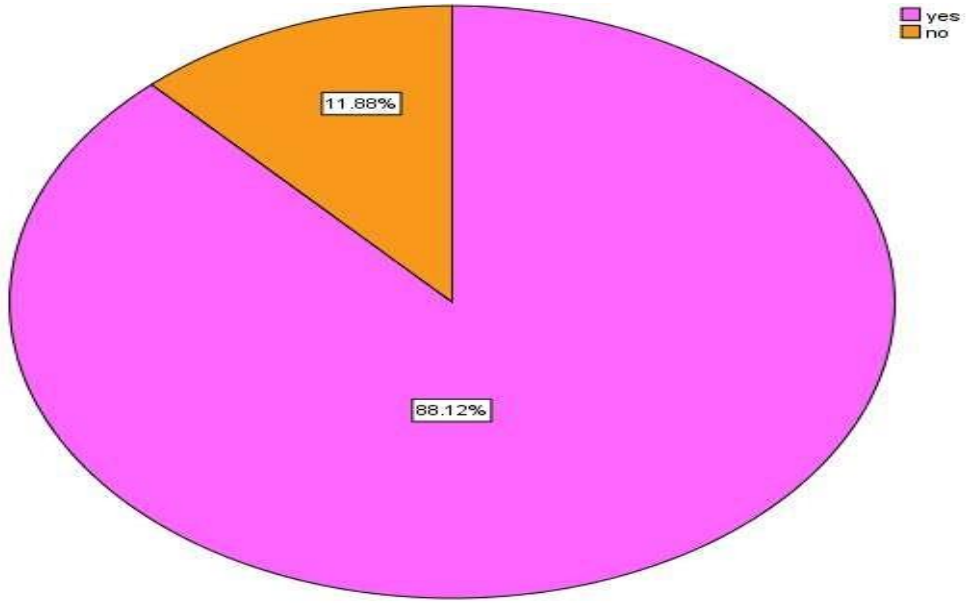

Fig 4: pie chart showing the distribution of participants attending online and offline classes. Pink indicates students attended the online class. Orange indicates students haven't attended the online class. 88.12% have been solely attending the online class and 11.9% of them have been alternated with online and offline class during the current pandemic scenario.

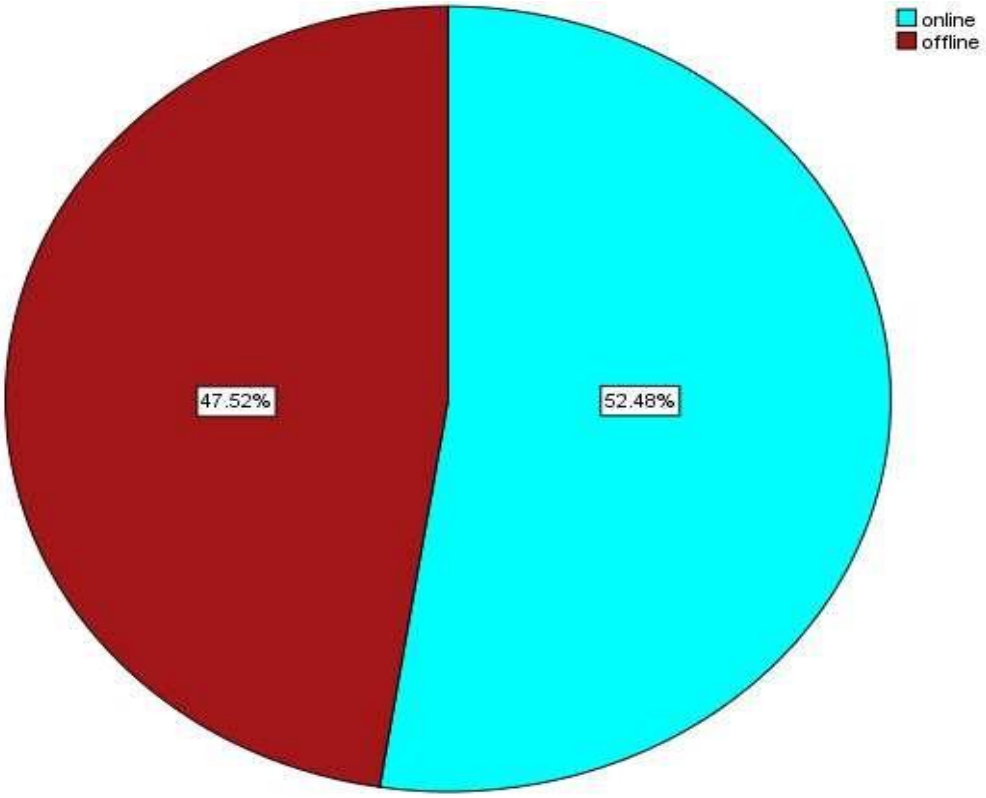

Fig 5: Pie chart showing which method of teaching helps participants to understand the key points. Blue indicates online class. Red indicates offline class.52.48% of participants believed that online classes made them understand the subject key points. 47.52% of participants felt that offline classes made them understand the subject key points.

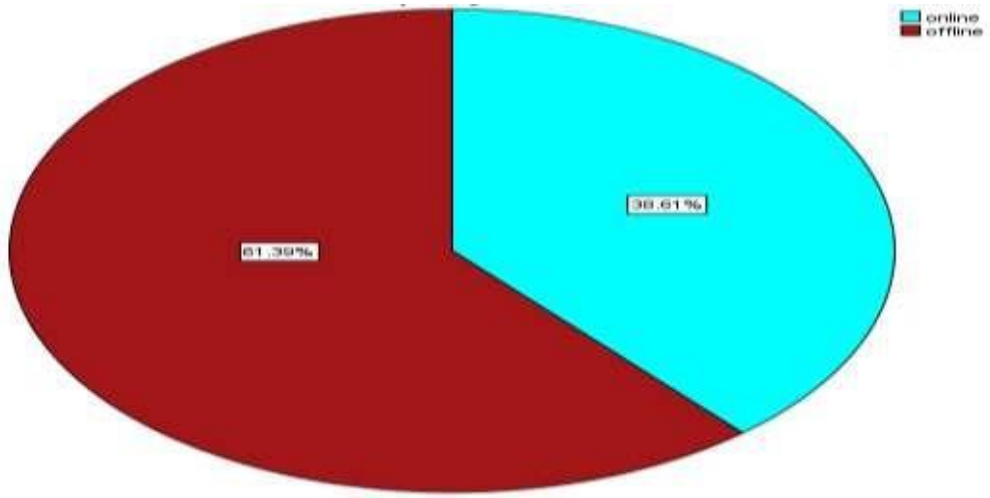

Fig 6 : pie chart showing the response about quality of interaction is better in online or offline class.Blue indicates online class and Red indicates offline class. 61.39% of the participants preferred offline class for the quality of interaction and remaining 38.61% of them felt that interaction is better in online class.

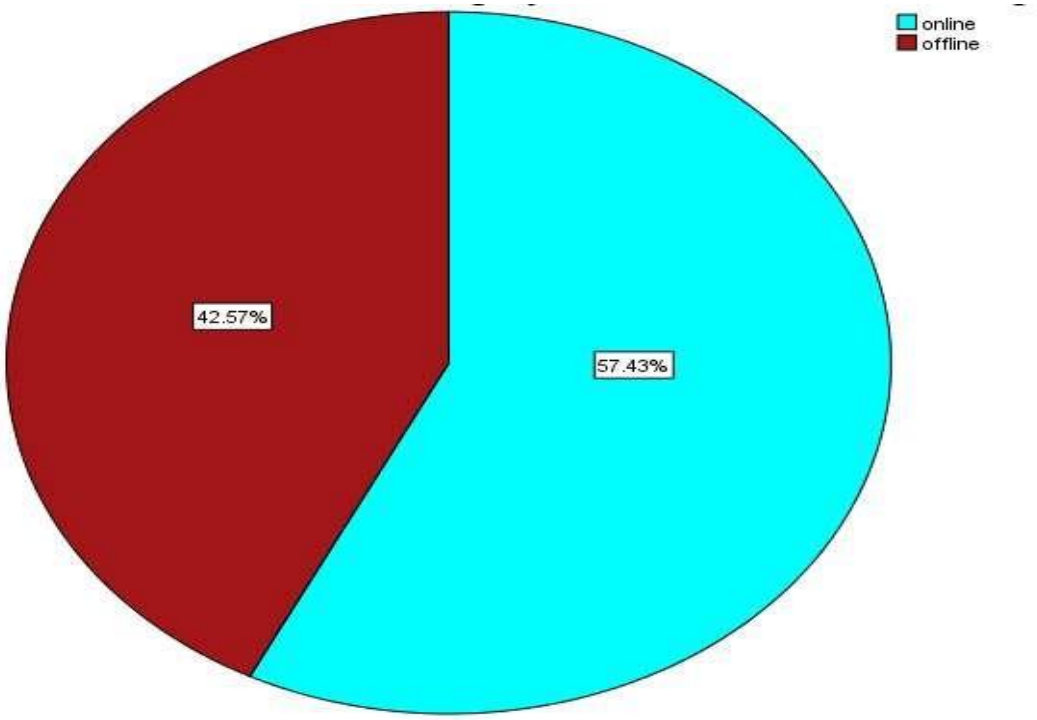

Fig 7: pie chart showing the response of which method of teaching makes the students lethargic. Blue indicates online class. Red indicates offline class. 57.43% of the participants felt that online class methods made them lethargic and lazy and remaining 42.57% prefer offline classes made them lethargic and lazy.

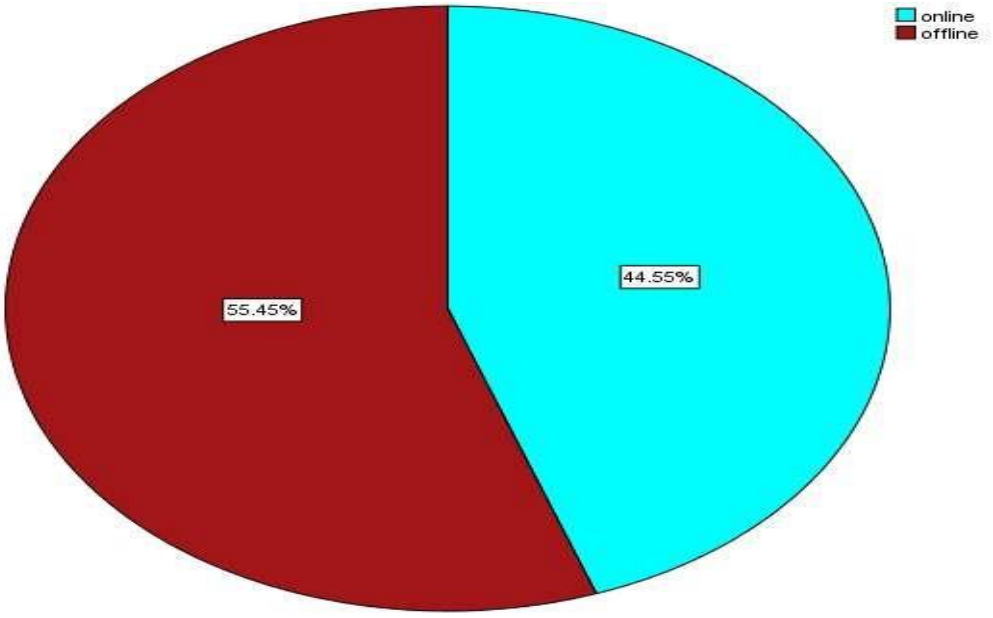

Fig 8: pie chart showing the response about degree of satisfaction.Blue indicates online class. Red indicates offline class. 44.55% of students said that they gain more information in online class and remaining 55.45% of students said that they gain more information in offline class.

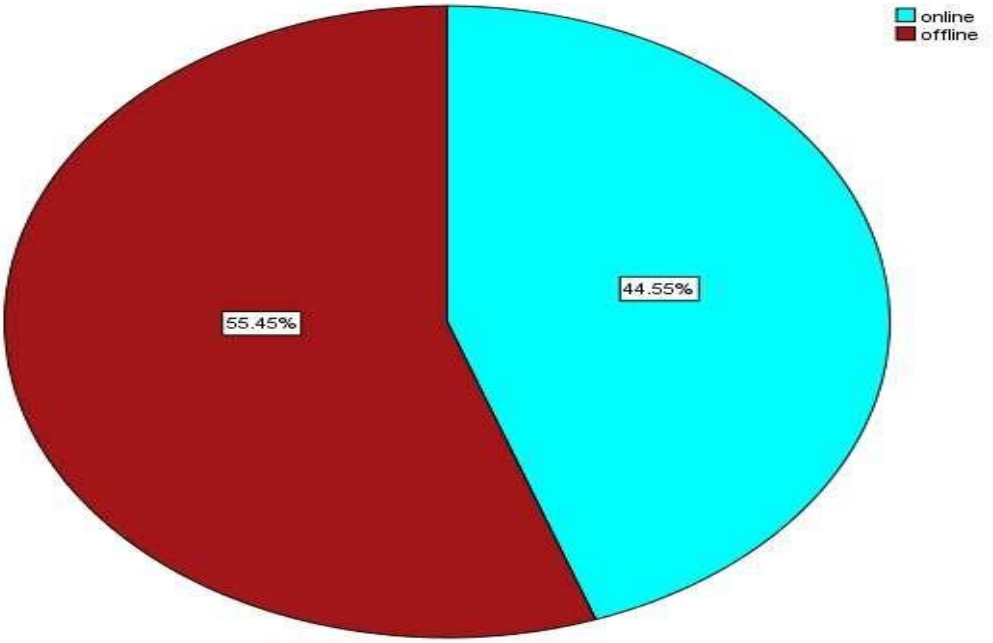

Fig 9: pie chart showing the response of assessment of academic progress is more accurate in online or offline class. Blue indicates online class. Red indicates offline class. 55.45% of the participants prefer

that offline class teaching is more accurate and improve the marks and 44.55% of the participants prefer that online class teaching is more accurate and easy to understand.

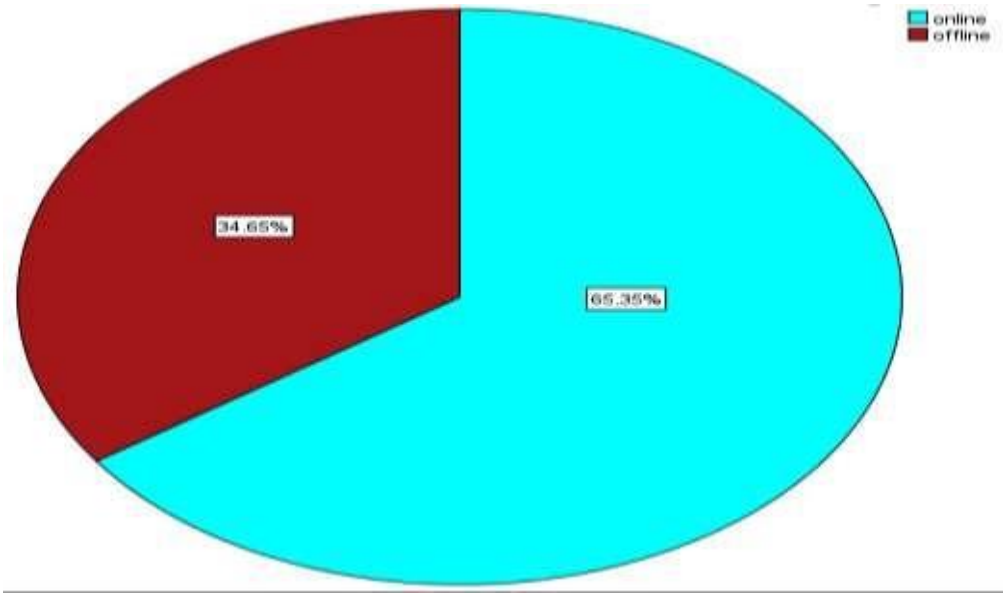

Fig 10: pie chart showing the response about more distraction encounters during online or offline class. Blue indicates online class. Red indicates offline class. 65.35% of the participants said that during online classes they encountered more distractions and 34.65% of the participants felt that during offline class they encountered more distractions.

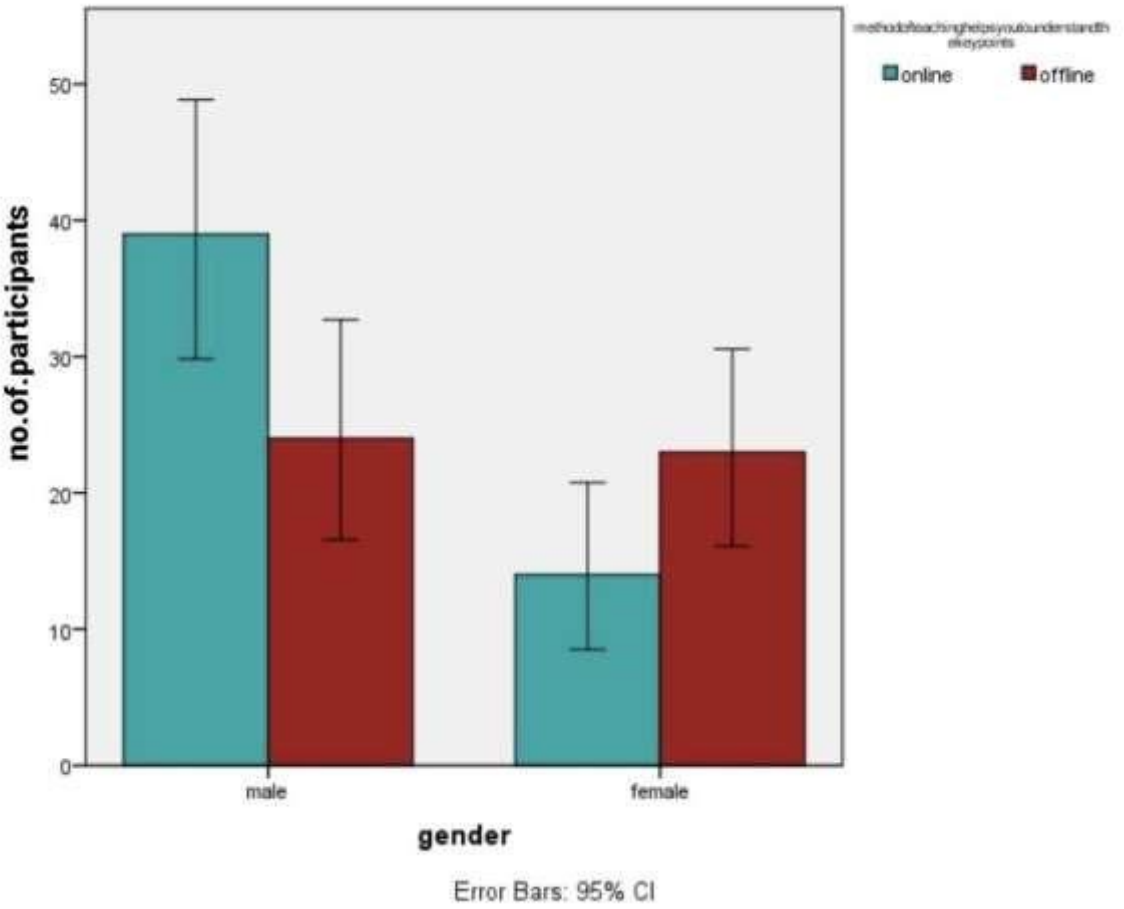

Fig 11: The bar graph represents the association between the gender and teaching method preferred by them to better understand the key subject points. X axis represents gender and Y axis represents the percentage of response. Blue denotes online class. red indicates offline class. 38.51% of the male participants and 13.86% of female participants preferred online class for better understanding of their subjects. Whereas 23.76% of female and male participants had preferred offline class for better understanding of their subjects . The difference between the groups were statistically significant (chi square value, p value= 0.015)

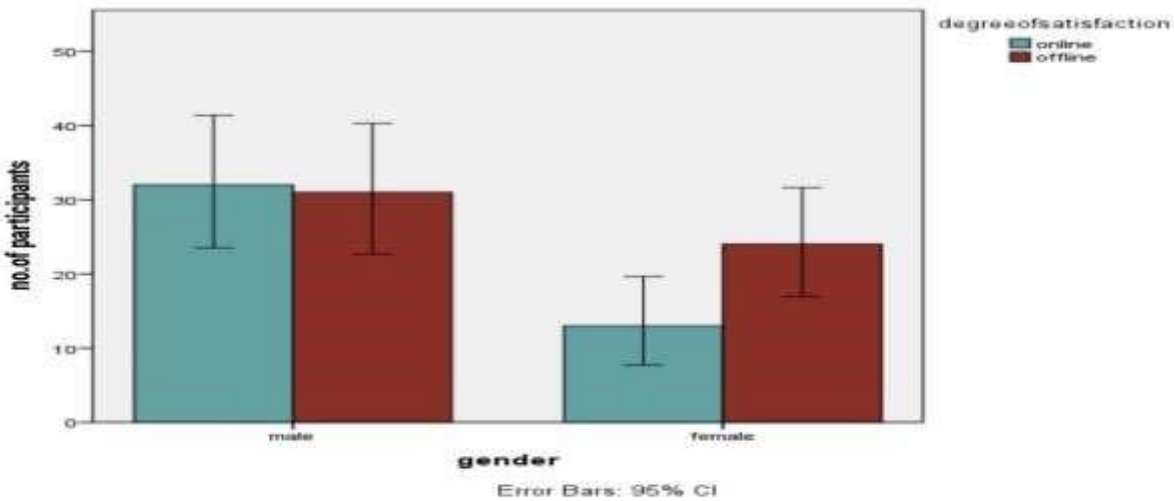

Fig 12: The bar graph represents the association between the gender and degree of satisfaction. X axis represents gender and Y axis represents the percentage of response. Blue indicates online class. red indicates offline class. 31.68% of the male participants and 12.87% of the female participants preferred that online class . Whereas 30.69% of the male participants and 24.75% of the female participants preferred offline class. The difference between the groups were statistically insignificant (chi square value, p value= 0.942)

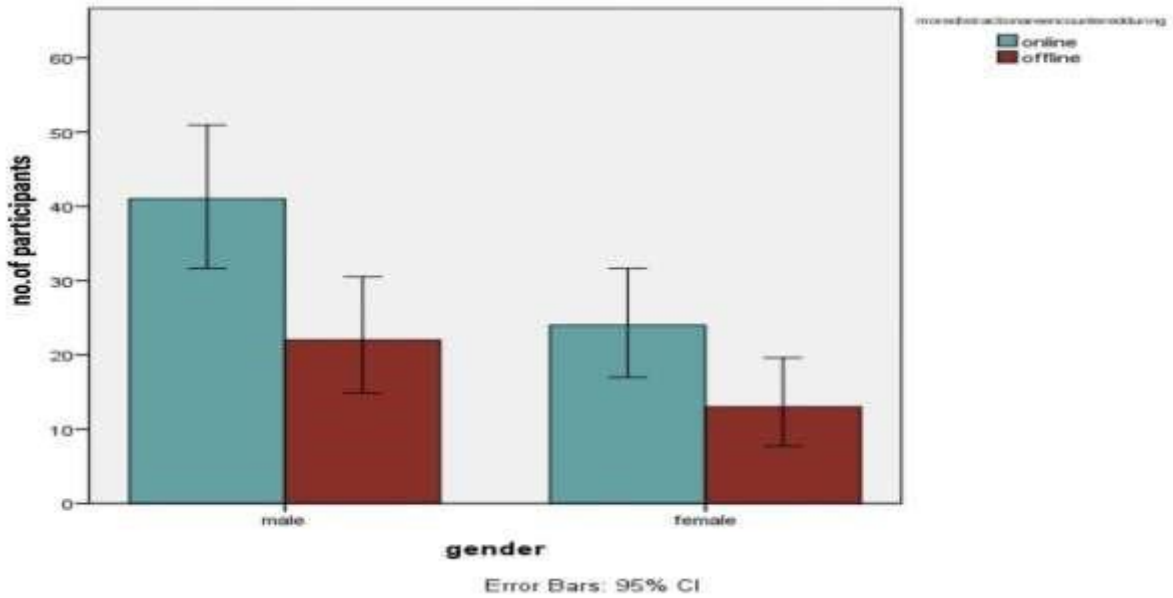

Fig 13: The bar graph represents the association between gender and more distraction encountered. X axis represents gender and Y axis represents percentage of response. Blue indicates online class and red indicates offline class. 40.59% of male participants and 24.75% of female participants said online class. 21.78/% of the male participants and 12.87% of the female participants said offline class. The differences between the groups were statistically insignificant (chi square value, p value = 0.942).

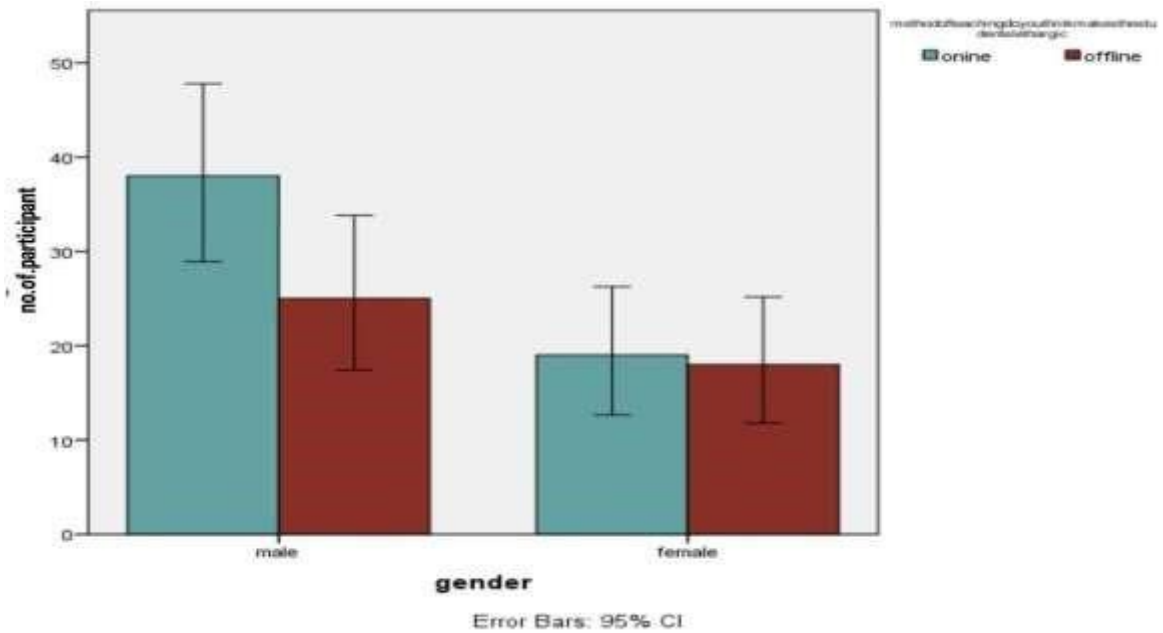

Fig 14: The bar graph represents the association between the level of education and method of teaching makes the students lethargic. X axis represents the gender and the Y axis represents the percentage of response. Blue indicates online class. Red indicates offline class. 37.62% of male participants and 19.80% of female participants said online class. 24.75% of the male participants and 17.82% of the female participants said offline class. The differences between the groups were statistically insignificant (chi square value, p value = 0.938).

DISCUSSION

Online learning is an exciting new way to learn about almost everything. Teachers' preparation and teaching by the faculty will be different in online and offline classes (7). Because of the development of technology traditional rooms are replaced by online classes . It has both positive and negative impact among the students . If we see in the negative perception students cannot concentrate for longer time in online class also sometimes feel frustrated and cannot understand the content delivered during the class . Students and teachers regarding online classes are facing a number of challenges (8).

First of all they found to be struggling with people's adaptability with this trend as switching from traditional classroom to computer based training secondly most of the areas are not well developed internet speed will be different in different areas. Third difficulty in handling the computer and smart mobiles. Some of them are aware of using electric appliances. Fourth is time management(9); adapting to an online environment can be a challenge for both facilitators and students. Students participation in online discussion forms is associated with positive outcomes for students achievement and satisfaction but research findings on the impact of class size and instructors participation on student participation have been mixed.

Even Though the internet has affected the students life Comparison of online versus offline learning there is no doubt of substantial interest to educators and the focus of numerous studies the preference for online learning increases because of its convenience and flexibility it offers the students . It is comfortable using the online learning apps and also receiving enough support and resources about the subject from teachers.

In a previous study they have found that 82.4% had lower learning of theoretical and practical aspects of the study. 80.6% of the students' guardians reported that their childrens had poor attention and concentration (10). 52.2% of them surf the internet during online classes. 43.3% of the parents reported a reduction in the seif hygiene among the children. So they concluded that the level of learning with regular classes cannot be matched by the online classes.

During Offline class teachers could pay more attention to students and students would also focus more on studies (11). Interaction between student and teacher is better when compared to offline classes.

In a previous study they have found out that online and offline mixed teaching methods are more beneficial to improve students' learning ability and better than the traditional class . Personalized and adaptive digital education was more conducive to creation of a student centered learning environment and can increase students participation in learning. When compared to the traditional class 75% of the students think that mixed teaching methods improve their communication

skill and classroom atmosphere. 81.3% of them think that this can also improve their ability of learning (12)

LIMITATION:

This study is a self report survey one concern is that participants' responses may be subject to biases, incorrect estimates and other problems. But we think that all the participants are truthful and consistent in responding to the survey questions and the second problem is the size of this study sample is small. So further studies need to be done in a large population.

CONCLUSION

Student's perception of online learning is relatively good with several obstacles but it needs some improvement. Students are willing to continue online learning because it is very convenient which can be done anywhere and at any place.

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CONFLICT OF INTEREST:

All the authors declare that there was no conflict of interest in the present stu**dy.**

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AUTHORS CONTRIBUTION:

Jayavarsha: Literature, search, data collection, analysis, manuscript drafting.

Dr. Sandhya: Data verification, manuscript drafting.

Dr.Reshma Poothakulath Krishnan: manuscript editing

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