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Social work interventions as catalysts for educational equity: Turning vision into action in Visakhapatnam

¹Gummadi Prasanthi and ²Peethala Arjun

¹Research Scholar, Department of Social Work, Andhra University, Visakhapatnam, Andhra Pradesh, India

²Research Director, Department of Social Work, Andhra University, Visakhapatnam, Andhra Pradesh, India

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Corresponding Author: Gummadi Prasanthi

Abstract

The COVID-19 pandemic has significantly disrupted traditional educational systems, creating widespread uncertainty among students, parents, teachers, and the general public. With technology becoming more accessible, digital learning emerged as a critical solution in areas equipped with necessary infrastructure. Globally, child welfare remains central in education, making it essential for both parents and teachers to consider the holistic development of children, especially as they face new psychological and developmental needs. This study investigates how social work interventions in schools can promote educational equity in times of crisis by addressing issues such as learning loss prevention, support for remote learning, reduction in dropout rates, and the establishment of healthy, adaptive school environments. Focusing on Visakhapatnam, the research analyses the role of social workers in enhancing educational support services and fostering rapid learning as schools stabilize post-pandemic. A sample of 320 respondents was randomly selected, with the sample size determined by the formula $n = z^2 \cdot p \cdot q / d^2$ (where n is the desired sample size, z is the standard deviation, p is the proportion in the target population, and d is the absolute precision). Various statistical methods, including ANOVA, exploratory data analysis, chi-square tests, correlations, and descriptive statistics, were used to analyse the data. Findings highlight that amid rapid technological shifts, social work interventions are essential in achieving sustainable and impactful educational equity in Visakhapatnam, Andhra Pradesh.

Keywords: Education, social work, sustainability, educational equity, digitization

Introduction

“Action without study is fatal. Study without action is futile” - Mary Beard.

The COVID-19 repercussions on education and social services and needed social work in action to sustain impactful and constructive virtual support systems that can tackle the socio-emotional difficulties faced by the student community in their learning environment, revealing broad disparities in the use of digital tools across tribal, rural, and urban areas of the Visakhapatnam district in Andhra Pradesh. Social workers / Teacher Counsellors played a crucial role in mitigating the impact of these changes by addressing the digital divide, providing emotional support to students and their families, and collaborating with schools to ensure educational equity for all (Lopez *et al.*, 2020) [3]. Economic hardships in rural and tribal areas have forced many students to leave school to support their families,

exacerbating dropout rates (Kundu *et al.*, 2013) [2]. Additionally, issues like teacher absenteeism due to COVID-19, a shortage of qualified teachers to handle such crisis, and inadequate educational resources hinder effective learning (Sujatha, 1999) [5]. It remains essential in addressing academic, behavioral, and emotional challenges while maintaining connections between students, families, and schools (Michael *et al.* 2021) [4]. The increase in anxiety and mental health issues among students highlights the necessity of counselling services provided by social workers (Ashley *et al.*, 2021) [1]. To address these disparities, more efficient resource allocation and support from social workers are required to ensure quality education for all.

Materials and Methods

a. Relevance of Research: The pandemic crisis has made the gap between people in India who have internet

access and those who do not and made education more unequal and put pressure on the school system, the study examines how a lack of internet access affects students ability to continue learning and be treated equally. On the contrary, social work intervention help by advocating for equal internet access for everyone, providing emotional support, and ensuring that online classes remain accessible to all students, the research aims to develop strategies that improve education systems during difficult times in Visakhapatnam, Andhra Pradesh.

- b. Purpose of the Study:** The study examines how technological disruptions in tribal, rural and urban Visakhapatnam affect educational resilience and highlights the need for social work interventions, focuses on evaluating the impact of technological innovations on learning outcomes and how social work can support equitable access, and address barriers to digital education.
- c. Problem Statement:** The pandemic has deepened educational inequalities in tribal, rural, and urban Visakhapatnam, Andhra Pradesh, with declines in access, enrollment, and achievement. Advances in technology, hence social work support can help individuals tackle challenges and use technology well by establishing robust schools that can manage difficulties. Student enrollment and health issues while fostering creativity and ethical behaviour in students remains crucial.
- d. Research Objective:** To investigate how social work interventions in schools can promote educational equity in times of crisis by addressing issues such as learning loss prevention, support for remote learning, reduction in dropout rates, and the establishment of healthy, adaptive school environments.
- e. Data source:** The researcher intends to gather extensive and varied data, focusing on the student population sample as the primary source. Emphasis remains placed on ensuring that the study population comprises real individuals and reliable data, drawing information from diverse sources to facilitate in-depth analysis.
- f. Statistical technique:** The researchers used the Chi-

square method to test the hypothesis. The sample selection calculated on a sample of student beneficiaries is $n = z^2 * p * q / d^2$ (n = desired sample size, z = normal standard deviation, p = proportion in target population, d = absolute precision or accuracy). Descriptive statistics, such as frequencies and means, Box plot, Histogram and Q-Q Plot are used to summarize the data. Inferential statistics, including t-tests and ANOVA, EDA, and Correlation analysis is also employed to examine relationships between variables, such as the impact of social work interventions on educational outcomes.

- g. Data Analysis:** Qualitative Analysis: Thematic analysis is employed to identify recurring themes and patterns in the interview data. The analysis focuses on understanding the role of social work in mitigating educational challenges during the pandemic.

Quantitative Analysis: Statistical analysis is conducted using SPSS software. Descriptive statistics, such as frequencies and means, Box plot, Histogram and Q-Q Plot are used to summarize the data. Inferential statistics, including t-tests and ANOVA, EDA, Chi square are used to explore differences in perceptions based on demographic factors. Correlation analysis is also employed to examine relationships between variables, such as the impact of social work interventions on educational outcomes.

Results

Interview discussions with Mrs. Kumar, Head Mistress, MVDM High School, Visakhapatnam; stressed that ICT technologies were the most frequently discussed topic, appearing in 47% of the responses. Remote learning remained highlighted in 29% of the responses, while educational quality remained addressed in 24%, the statistical study highlights how important technology tools are and how they helped modify schooling during the pandemic; emphases on using efficient remote learning techniques to empower student and teacher communication.

Q1. During the pandemic and post - pandemic, students' families and community-based resources had access to school social workers and counsellors

Table 1: Distribution of respondents based on access to school social workers and counsellors for students' families and community resources during and after the pandemic

Q. no:1	Statement	Never	Occasionally	Sometimes	Often	Always	Total
A	Family-level parent-school advisory councils, home visits, and online parent workshops	38	108	127	24	23	320
		11.88%	33.75%	39.69%	7.50%	7.19%	
B	Engage community services at the school, Encourage the community service continuum as instructed by the school, and consult with community services to benefit the students	23	136	89	31	41	320
		7.19%	42.50%	27.81%	9.69%	12.81%	

Note:

Table 2: Shows the frequency of respondents' access to family- and community-level support from school social workers and counsellors during and after the pandemic, with responses ranging from "Never" to "Always." The data reflect moderate but varied access to these resources across respondents.

QA) Area of the respondent	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	87.063 ^a	8	.000
Likelihood Ratio	85.317	8	.000
Linear-by-Linear Association	4.830	1	.028
N of Valid Cases	320		
a. 2 cells (13.3%) have expected count less than 5. The minimum expected count is 3.52.			
QB) Area of the respondent	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	66.836 ^a	8	.000
Likelihood Ratio	69.147	8	.000
Linear-by-Linear Association	12.136	1	.000
N of Valid Cases	320		
a. 2 cells (13.3%) have expected count less than 5. The minimum expected count is 3.52.			

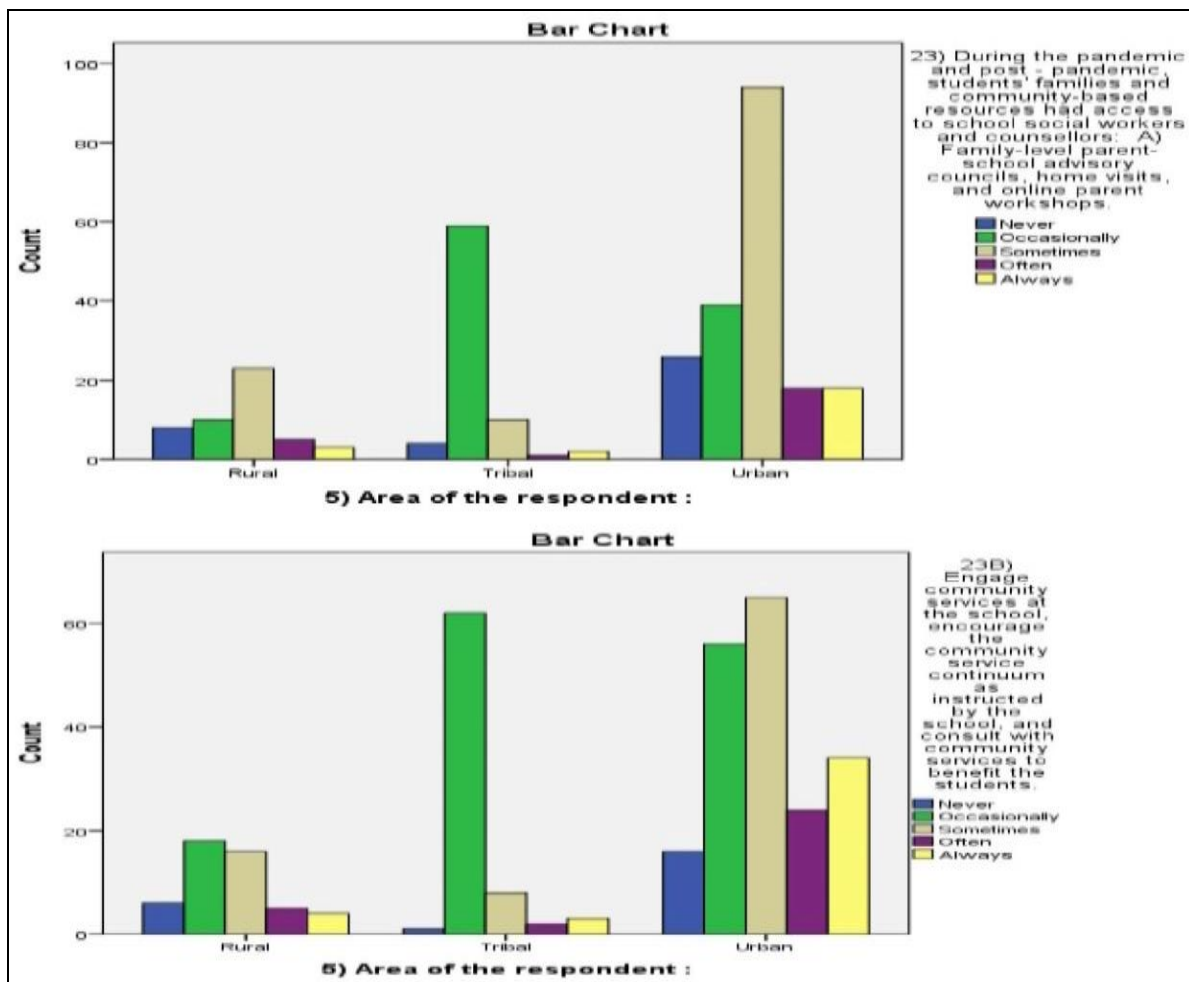


Fig 1: Area of the respondent

Table 3: Statistics on access to school social workers and counsellors for students' families and community resources during and after the pandemic

		Q23: During the pandemic and post - pandemic, students' families and community-based resources had access to school social workers and counsellors:
N	Valid	320
	Missing	0
Mean		2.7141
Median		2.5000
Skewness		.724
Std. Error of Skewness		.136
Percentiles	25	2.0000
	50	2.5000
	75	3.0000

The survey findings on access to school social workers and counsellors during and after the pandemic revealed that, out of 320 responses, the average rating was 2.71, with a median of 2.5. The responses showed a slight skew towards

the positive side, indicating that more people rated access higher than the average. Most responses fell within the range of 2.0 and 3.0.

Table 4: Tests of Normality on access to school social workers and counsellors for students' families and community resources during and after the pandemic

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Q) During the pandemic and post - pandemic, students' families and community-based resources had access to school social workers and counsellors	.169	320	.000	.917	320	.000

The results of the normality tests for the availability of school social workers and counselors during and after the pandemic show that the data does not follow a normal distribution. The Kolmogorov-Smirnov test showed a

statistic of 0.169 with a significance level of 0.000, and the Shapiro-Wilk test showed a statistic of 0.917 with a significance level of 0.000, both indicating significant deviations from normality.

Table 5: Exploratory Data Analysis on access to school social workers and counsellors for students' families and community resources during and after the pandemic

Exploratory Data Analysis (EDA)	Statistic		
	Q23: During the pandemic and post - pandemic, students' families and community-based resources had access to school social workers and counsellors:	Mean	2.7141
95% Confidence Interval for Mean		Lower Bound	2.6118
		Upper Bound	2.8163
5% Trimmed Mean		2.6771	
Median		2.5000	
Variance		.864	
Std. Deviation		.92947	
Minimum		1.00	
Maximum		5.00	
Range		4.00	
Interquartile Range		1.00	
Skewness		.724	
Kurtosis		.276	

The analysis of respondents' perceptions regarding access to school social workers or counsellors in crises reveals a mean rating of 2.7141 indicating a moderate level of perceived access. The data is slightly positively skewed (0.724) with low kurtosis (0.276), suggesting that responses are close to a normal distribution but lean towards more positive perceptions, the responses range from 1.00 to 5.00, with a median of 2.50 and an interquartile range of 1.00, indicating

that most responses cluster around the middle and the data reveal that respondents' perceptions of access to support services vary from region to region that reflects a complex perspective on the topic.

Histogram: Based on access to school social workers and counsellors for students' families and community resources during and after the pandemic.

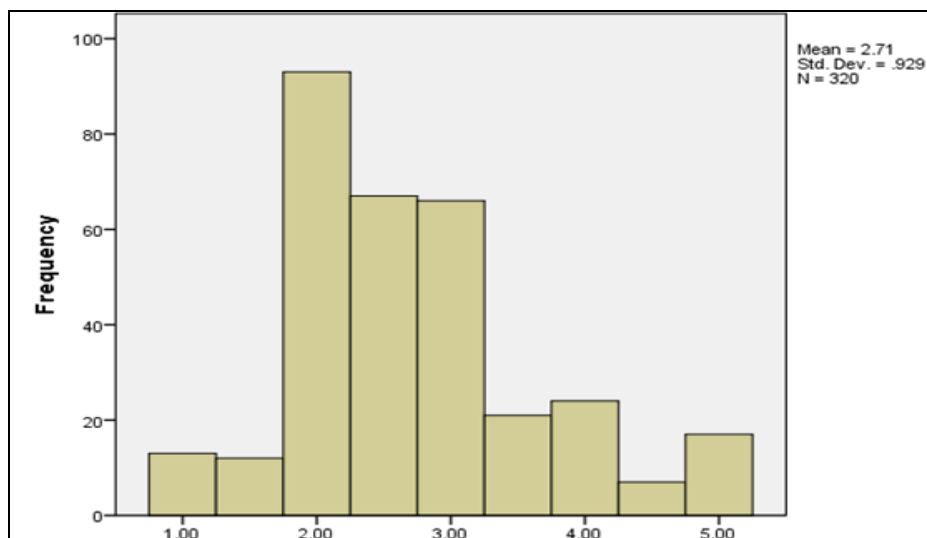


Fig 2: Histogram based on access to school social workers and counsellors for students' families and community resources during and after the pandemic

The histogram shows the frequency distribution of 320 responses on access to school social workers and counsellors in difficult times, a mean of approximately 2.71 and a standard deviation of 0.929, the distribution remains skewed towards lower values. The majority of the responses centred around the number 2; suggesting that many respondents thought their access to these services was

inadequate or restricted. Fewer respondents gave their access good ratings.

Normal Q-Q PLOT

Based on Access to School Social Workers and Counsellors for Students' Families and Community Resources During and After the Pandemic.

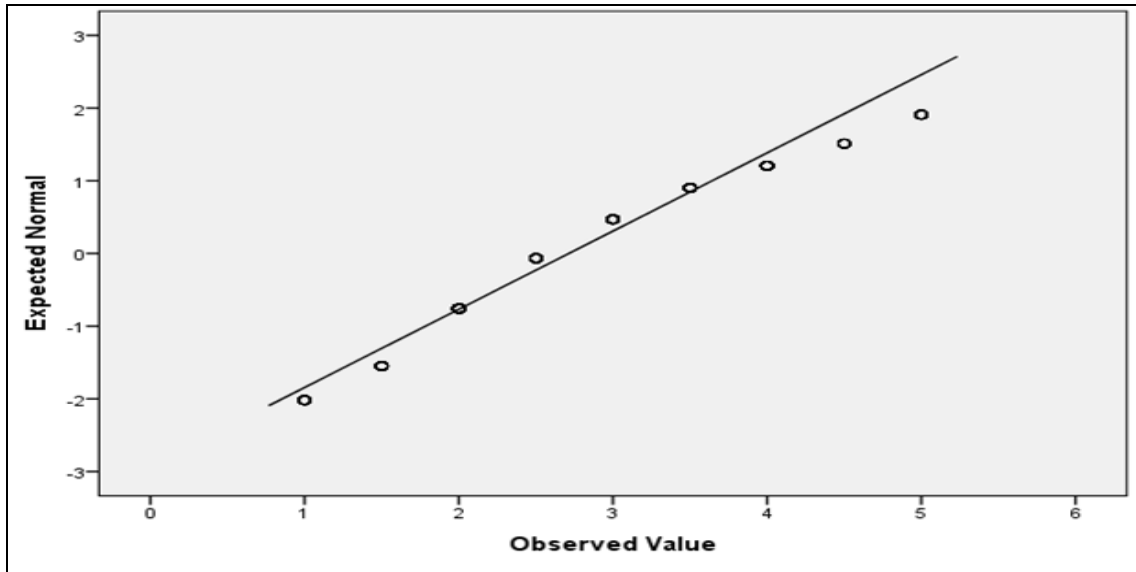


Fig 3: Normal Q-Q Plot based on access to school social workers and counsellors for students' families and community resources during and after the pandemic

The Q-Q plot illustrates the distribution of responses regarding access to school social workers and counselors during and post-pandemic, comparing it to a normal distribution; the points on the plot mostly follow a straight line, indicating that the data approximately follows a normal distribution suggests that the responses are reasonably normally distributed, with only minor deviations from the

expected values supporting the validity of parametric statistical tests for further data analysis.

Box Plot

Based on Access to School Social Workers and Counsellors for Students' Families and Community Resources During and After the Pandemic.

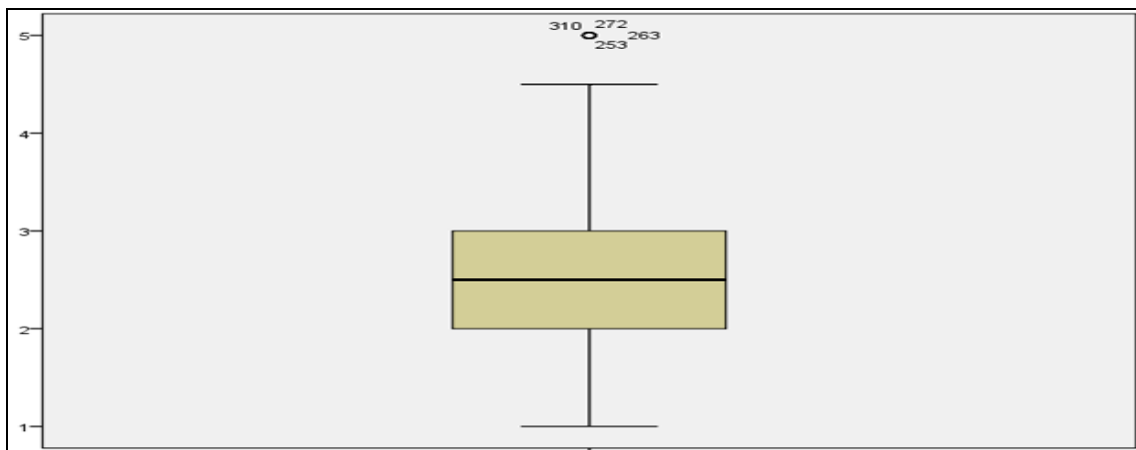


Fig 4: Box Plot based on access to school social workers and counsellors for students' families and community resources during and after the pandemic

The box plot summarizes the replies on the availability of school social workers and counsellors before and after the pandemic. A median score of approximately 3 indicates that access became moderate. The centre 50% of responses fall within the interquartile range (IQR), which extends from roughly 2 to 3.5. A minimum of one whisker and a

maximum 5 indicate a wide variety of opinions, with a few outliers representing extreme viewpoints. The information indicates that while some respondents claim noticeably more or less advantageous access, the majority of respondents appear to have moderate access to these services.

Conclusion

The findings highlight several theoretical frameworks. *Systems Theory* emphasizes the need for consistent family-school and community engagement structures, revealing gaps in coordination. *Resilience Theory* points to the importance of stable support systems for adapting to educational challenges. *Social Justice Theory* indicates disparities in engagement based on geographic location, while *Ecological Systems Theory* stresses the interdependence of family, school, and community interactions. The *Educational Policy Analysis Framework* calls for policy adjustments to ensure equitable support for all families.

Patterns and Relationships

The study shows that only 7.19% of respondents experienced consistent family-school engagement, with

73.44% reporting infrequent involvement. Additionally, only 12.81% experienced consistent community service access. Chi-square analysis reveals significant relationships between geographic location and both family engagement (Pearson Chi-Square value of 87.063, $p=.000$) and community service access (Pearson Chi-Square value of 66.836, $p=.000$).

The findings underscore the need for consistent family-school and community support. Social workers should advocate for equitable engagement strategies tailored to diverse communities. Recommendations include developing inclusive policies, enhancing structured family-school collaboration, and promoting regular community involvement to create supportive learning environments for all students.

Q2. Strategies to enhance educational learning outcomes

Table 6: Descriptive statistics on strategies to enhance educational learning outcomes

Q.no: 2	N	Minimum	Maximum	Mean	Std. Deviation
A) A school should have a social worker or counsellor who can support, look out for, and advocate for the students who matter to our community. Do you agree?	320	2	5	4.21	.873
B) Social workers and school counsellors have been identified as alternative educational service providers for underprivileged students. Do you agree?	320	1	5	3.53	.860
C) A demand exists for qualified social workers familiar with rural areas' unique requirements and difficulties working in schools. Do you agree?	320	1	5	3.99	.994
D) Do you agree that the school social worker or counsellor improves communication and increases the visibility and involvement of parents in the student's education?	320	1	5	3.88	.928
E) Do you agree that integrating social-emotional learning (SEL) into the classroom would be supported and promoted by a school social worker or counsellor?	320	1	5	3.89	.897
F) Do you agree that the COVID-19 school closures would influence learning differences between girls and boys, students from wealthy and low-income families, and communities with various economic levels post-pandemic?	320	1	5	3.73	1.007
G) Do you agree post-pandemic Indian school closures affect students' learning and academic progress, particularly those from low- and middle-income students?	320	1	5	3.78	.884

The study explores strategies to improve educational outcomes; descriptive statistics revealed varied levels of agreement, respondents strongly agreed that schools should have a social worker or counsellor to support students (mean = 4.21, SD = 0.873). Moderate agreement was found on the role of social workers and counsellors as alternative service providers for underprivileged students (mean = 3.53, SD = 0.860), and the need for social workers familiar with rural needs (mean = 3.99, SD = 0.994). Agreement was also

evident regarding the improvement of communication and parent involvement (mean = 3.88, SD = 0.928) and the support for social-emotional learning (mean = 3.89, SD = 0.897). Additionally, respondents agreed that COVID-19 school closures would impact learning differences and academic progress post-pandemic (mean = 3.73, SD = 1.007; mean = 3.78, SD = 0.884), findings points out the positive impact of social workers and counsellors in educational settings.

Table 7: Frequency Distribution on strategies to enhance educational learning outcomes

	Frequency	Percent	Cumulative Percent
Valid	1.57	1	.3
	2.00	1	.6
	2.14	1	.9
	2.43	2	1.6
	2.71	3	2.5
	2.86	5	4.1
	3.00	30	13.4
	3.14	18	19.1
	3.29	19	25.0
	3.43	19	30.9
	3.57	17	36.3
	3.71	14	40.6
	3.86	19	46.6
4.00	31	56.3	

4.14	77	24.1	80.3
4.29	6	1.9	82.2
4.43	7	2.2	84.4
4.57	8	2.5	86.9
4.71	7	2.2	89.1
4.86	20	6.3	95.3
5.00	15	4.7	100.0
Total	320	100.0	

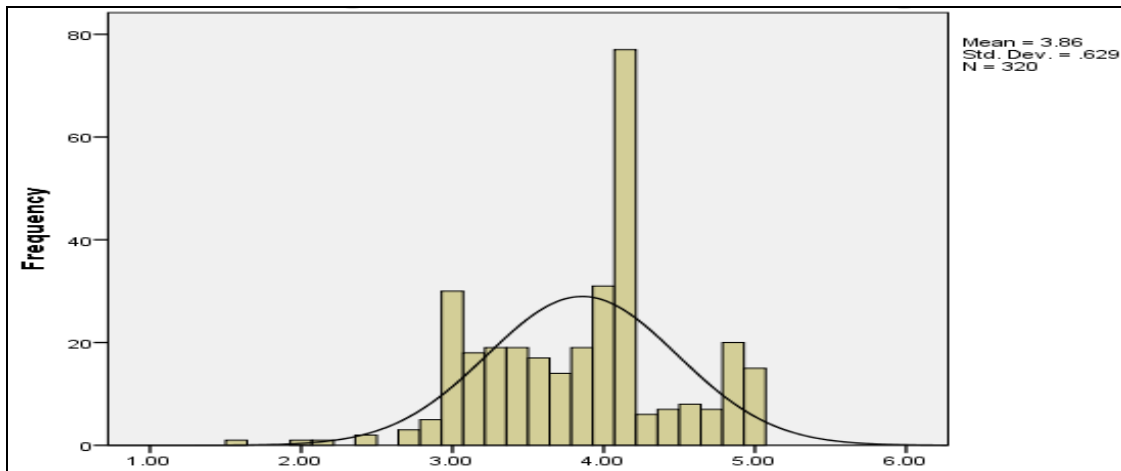


Fig 5: Frequency distribution on strategies to enhance educational learning outcomes

Table 8: ANOVA analysis on strategies to enhance educational learning outcomes

	Sum of Squares	df	Mean Square	F	Sig.	
Q28: Strategies to enhance educational learning outcomes:	Between Groups	12.253	2	6.127	17.025	.000
	Within Groups	114.073	317	.360		
	Total	126.326	319			

The ANOVA study analysis for survey question 28; explores the strategies to enhance educational learning outcomes reveals significant group differences with an F-value of 17.025 ($p = 0.000$); indicating substantial variation in responses across different groups. The overall model is significant ($p = 0.002$), highlighting that the factors studied explain differences in opinions, individual factors such as age, gender, respondent category, type of school, and area are insignificant, the interaction between gender and respondent category remains significant ($p = 0.026$),

showing that these combined factors influence responses. Post hoc tests using LSD indicate a significant difference between the 41-50 years and 51-60 years age groups, with the latter viewing strategies more positively (mean difference = 0.4168, $p = 0.033$). Homogeneous subsets show no significant differences among parents, teachers, and students, but views vary significantly by area of residence. Rural respondents are less favourable compared to those in tribal areas, while tribal respondents remained favourable than those in urban areas.

Table 9: Respondents' distribution based on strategies to enhance educational learning outcomes

Q. no. 28	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
A	A school should have a social worker or counsellor who can support, look out for, and advocate for the students who matter to our community. Do you agree?	0	9	68	90	153	320 (100%)
		0%	3%	21%	28%	48%	
B	Social workers and school counsellors have been identified as alternative educational service providers for underprivileged students. Do you agree?	5	17	147	105	46	320 (100%)
		2%	5%	46%	33%	14%	
C	A demand exists for qualified social workers familiar with rural areas' unique requirements and difficulties working in schools. Do you agree?	4	17	84	88	127	320 (100%)
		1%	5%	26%	28%	40%	
D	Do you agree that the school social worker or counsellor improves communication and increases the visibility and involvement of parents in the student's education?	9	12	70	148	81	320 (100%)
		3%	4%	22%	46%	25%	
E	Do you agree that integrating social-emotional learning (SEL) into the classroom would be supported and promoted by a school social worker or counsellor?	7	15	60	161	77	320 (100%)
		2%	5%	19%	50%	24%	
F	Do you agree that the COVID-19 school closures would influence learning differences between girls and boys,	11	28	67	145	69	320 (100%)
		3%	9%	21%	45%	22%	

	students from wealthy and low-income families, and communities with various economic levels post-pandemic?						
G	Do you agree post-pandemic Indian school closures affect students' learning and academic progress, particularly those from low- and middle-income students?	5	17	87	146	65	320 (100%)
		2%	5%	27%	46%	20%	

Table 10: Chi-Square tests on strategies to enhance educational learning outcomes

28A) Area of the respondent	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	43.666 ^a	6	.000
Likelihood Ratio	43.811	6	.000
Linear-by-Linear Association	.991	1	.320
N of Valid Cases	320		
a. 2 cells (16.7%) have expected count less than 5. The minimum expected count is 1.38.			
28B) Area of the respondent	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	45.547 ^a	8	.000
Likelihood Ratio	48.075	8	.000
Linear-by-Linear Association	2.883	1	.090
N of Valid Cases	320		
a. 5 cells (33.3%) have expected count less than 5. The minimum expected count is .77.			
28C) Area of the respondent	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	70.311 ^a	8	.000
Likelihood Ratio	76.602	8	.000
Linear-by-Linear Association	6.848	1	.009
N of Valid Cases	320		
a. 5 cells (33.3%) have expected count less than 5. The minimum expected count is .61.			
28D) Area of the respondent	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	60.107 ^a	8	.000
Likelihood Ratio	63.087	8	.000
Linear-by-Linear Association	.445	1	.505
N of Valid Cases	320		
a. 4 cells (26.7%) have expected count less than 5. The minimum expected count is 1.38.			
28E) Area of the respondent	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	52.855 ^a	8	.000
Likelihood Ratio	56.003	8	.000
Linear-by-Linear Association	1.094	1	.296
N of Valid Cases	320		
a. 5 cells (33.3%) have expected count less than 5. The minimum expected count is 1.07.			
28F) Area of the respondent	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	61.894 ^a	8	.000
Likelihood Ratio	63.241	8	.000
Linear-by-Linear Association	2.073	1	.150
N of Valid Cases	320		
a. 3 cells (20.0%) have expected count less than 5. The minimum expected count is 1.68.			
28G) Area of the respondent	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	62.969 ^a	8	.000
Likelihood Ratio	69.129	8	.000
Linear-by-Linear Association	2.237	1	.135
N of Valid Cases	320		
a. 5 cells (33.3%) have expected count less than 5. The minimum expected count is .77.			

Note:

This table shows respondents' levels of agreement on the role of school social workers and counsellors in enhancing educational outcomes. Key areas include student advocacy, support for underprivileged and rural students, parental

involvement, social-emotional learning (SEL), and addressing post-pandemic learning disparities. Percentages for each response category indicate varying levels of support for these strategies.

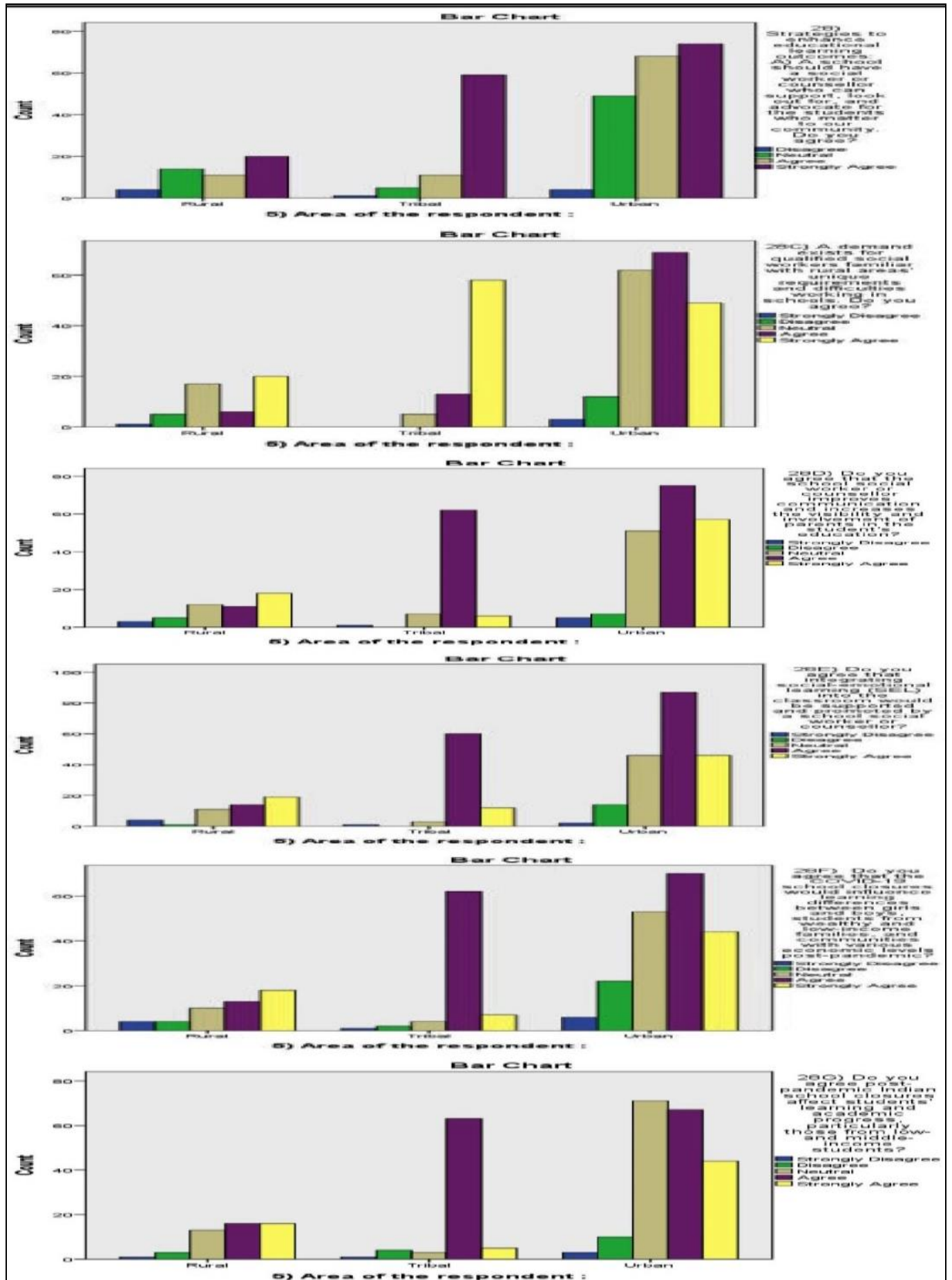


Fig 6: Area of the respondent on strategies to enhance educational learning outcomes

Table 11: Statistics on strategies to enhance educational learning outcomes

		Q28: Strategies to enhance educational learning outcomes:	
N	Valid	320	
	Missing	0	
Mean		3.8580	
Median		4.0000	
Skewness		-.210	
Std. Error of Skewness		.136	
Percentiles	25	3.3214	
	50	4.0000	
	75	4.1429	

The study reveals strategies to enhance educational learning outcomes and received 320 valid responses, average rating remain 3.86, with most respondents rating 4. The responses are slightly skewed to the left, meaning high ratings remain, the substantial percentiles remains 25% of respondents rated 3.32 or lower, 50% rated 4 (the median), and 75% rated 4.14 or lower, suggesting that most respondents view the strategies positively.

Table 12: Tests of Normality on strategies to enhance educational learning outcomes

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Q2: Strategies to enhance educational learning outcomes:	.129	320	.000	.960	320	.000

The normality tests for the survey question on strategies to enhance educational learning outcomes indicate that the data is not normally distributed. Both the Kolmogorov-Smirnov test ($D(320) = .129, p < .001$) and the Shapiro-Wilk test ($W(320) = .960, p < .001$) show significant deviations from normality.

Table 13: Exploratory Data Analysis on strategies to enhance educational learning outcomes

Exploratory Data Analysis (EDA)			Statistic
Q2: Strategies to enhance educational learning outcomes:	Mean		3.8580
	95% Confidence Interval for Mean	Lower Bound	3.7888
		Upper Bound	3.9272
	5% Trimmed Mean		3.8636
	Median		4.0000
	Variance		.396
	Std. Deviation		.62929
	Minimum		1.57
	Maximum		5.00
	Range		3.43
	Interquartile Range		.82
	Skewness		-.210
Kurtosis		-.117	

The data shows that respondents rated strategies to enhance educational learning outcomes positively with an average rating of 3.86 and a median of 4.00. There remains some variation in responses, as reflected in the standard deviation of 0.63 and a range from 1.57 to 5.00. The slight negative skew and low kurtosis suggest that while most ratings are high, a few lower ratings affect the overall distribution. The data indicates a favourable view of the strategies with a relatively consistent but slightly varied response pattern.

Histogram: Based on strategies to enhance educational learning outcomes.

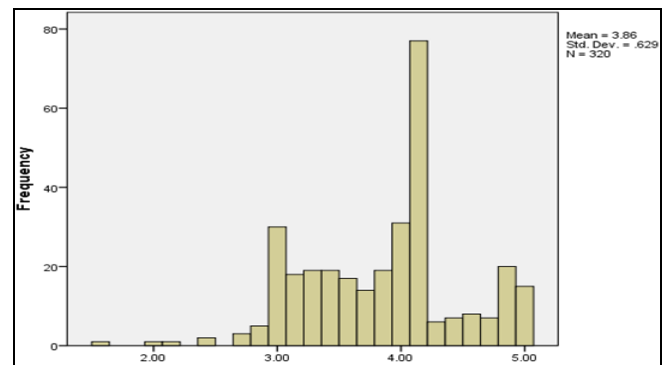


Fig 7: Histogram

The histogram illustrates the frequency distribution of responses regarding strategies to improve educational learning outcomes, the data exhibits a distribution with a prominent peak near the value of 4.0. Based on 320 respondents (N), the mean response value is 3.86, with a standard deviation of 0.629. Most responses remain concentrated around the mean, with fewer responses at the lower and higher extremes of the scale.

Normal Q-Q plot: Based on strategies to enhance educational learning outcomes.

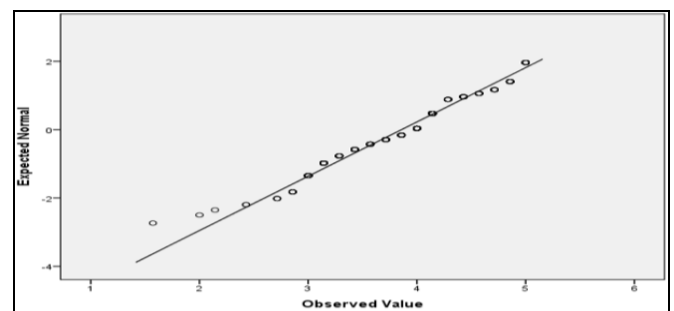


Fig 8: Observed Value

The normal Q-Q plot evaluates the data's normalcy in relation to methods for improving learning outcomes in education, the reference line is closely followed by the data points, suggesting that the data is roughly regularly distributed. The little deviations from the line imply that any departures from normalcy remain significant.

Box Plot: Based on strategies to enhance educational learning outcomes.

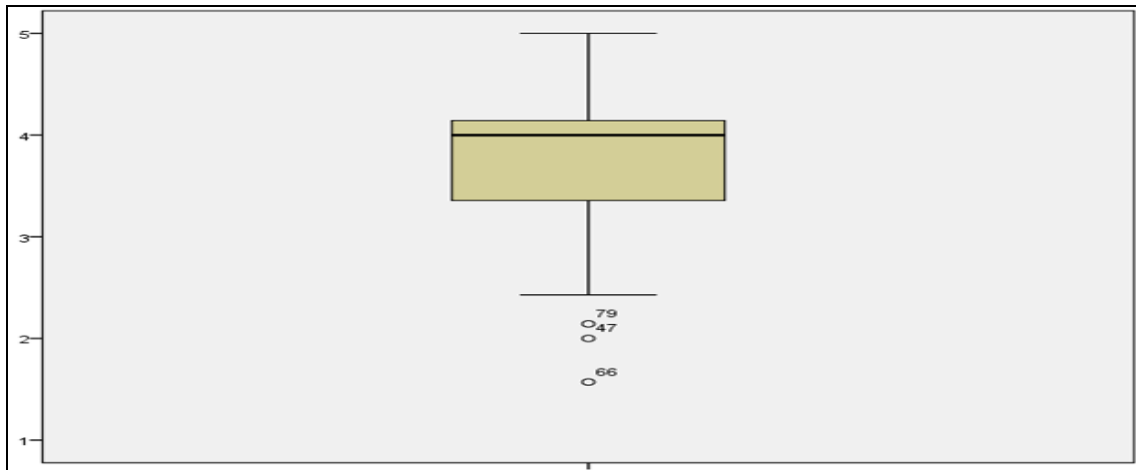


Fig 9: The box plot displays the spread and outliers of responses based on strategies to enhance educational learning outcomes

The box plot displays the spread and outliers of responses based on strategies to enhance educational learning outcomes, the median is centered within the interquartile range (IQR), suggesting a symmetric distribution around the median. A few outliers are indicated by individual points beyond the whiskers. The IQR spans from approximately 3.5 to 4.3, with the median around 4.0. Outliers are present, marked as individual data points outside the whiskers. These visualizations collectively indicate that the responses to strategies for enhancing educational outcomes are generally centered around the mean, with a reasonably normal distribution, though some outliers are present.

Conclusion

The findings highlight the importance of various theories in education: *Systems Theory* advocates for interconnected support roles in schools; *Resilience Theory* emphasizes adaptive strategies for underprivileged and rural students; *Social Justice Theory* demands equitable resource access; *Ecological Systems Theory* shows how environments impact student experiences; and the *Educational Policy Analysis Framework* calls for policies that include social work support.

Patterns and Relationships

From 320 respondents, 76% support integrating social workers and counselors in schools, especially for underprivileged and rural students. While opinions on social workers as educational service providers varied, 68% saw the need for qualified professionals in rural areas.

Additionally, 71% and 74% supported increased parent involvement and integrating social-emotional learning (SEL) in classrooms, respectively. Chi-Square tests revealed significant demographic influences on these views. The study recommends recruiting school social workers in Andhra Pradesh to support rural and disadvantaged students, enhancing their well-being and academic outcomes in light of COVID-19's disproportionate impact. Collaborating with the central government to provide essential support will create a more inclusive educational environment. Specific interventions should address these students' needs to foster support and resilience.

Main findings

Students' families and community-based resources had access to school social workers/counselors during the pandemic and post-pandemic. It remains reported that access to school social workers/counselors was not uniform during and after the pandemic. The statement remains made by 39.69% of respondents that family support like parent-school advisory councils, home visits, and online workshops were "sometimes" there, while 33.75% noted they were "occasionally" available. Similarly, 27.81% of respondents used community engagement in schools to include consultations about community service, while 42.50% said it was "occasionally" used. These findings suggest a moderate and diverse level of accessibility to school social workers/counselors during these times.

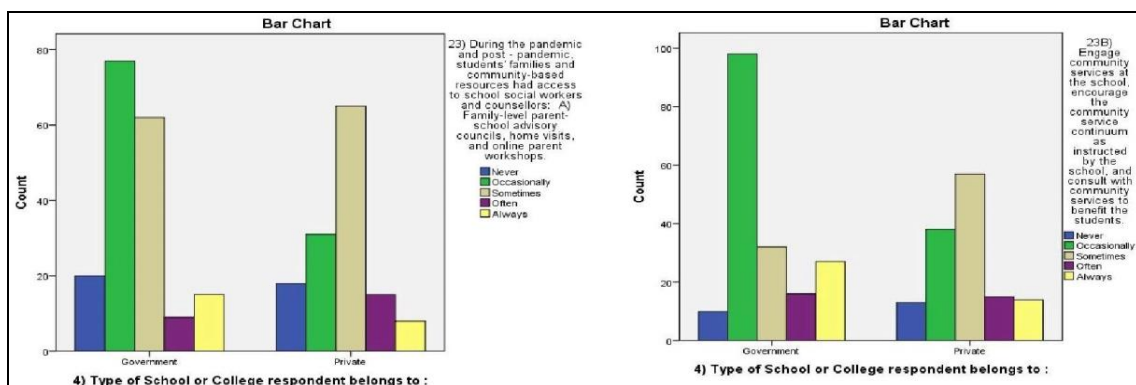


Fig 10: Type of school or college respondent belongs

Strategies to enhance educational learning outcomes

The findings clearly show that several strategies can enhance educational learning outcomes. As an example, a vast group of 76% asserted whether they agree or strongly agree that schools should utilize social workers or counsellors to be there for them and defend them. A similar proportion of 47% states that social workers and counsellors are important for disadvantaged students, while 68% see the need for professionals who are used to rural issues. In addition, 71% approve of school social workers' role in assisting parents in communicating with teachers more efficiently and getting involved in their children's schooling. Also, these professionals come out strongly as people who would effectively support integrating social-emotional

learning (SEL) in classrooms at a rate of 74%.

Furthermore, 67% know that COVID-19 has worsened learning inequalities among various student groups, while 66% witnessed how school closures have hurt poor or even average students most regarding academic advancement. $p = 0.002$, less than 0.05, indicating a statistically significant difference between tribal and urban respondents; tribal respondents' views differ significantly from urban respondents, $p = 0.027$, which remains less than 0.05, which identifies a statistical significance difference between respondents from rural and tribal areas, rural respondents perceive the strategies differently compared to tribal respondents due to physiographic structure, mobility of the students and cultural norms.

Table 14: Multiple Comparisons

Post Hoc Tests LSD (Homogeneous Subsets)				
(I) 5) Area of the respondent	(J) 5) Area of the respondent	Mean Difference (I-J)	Std. Error	Sig.
Rural	Tribal	-.2432*	.10971	.027
	Urban	.0120	.09569	.900
Tribal	Rural	.2432*	.10971	.027
	Urban	.2551*	.08098	.002
Urban	Rural	-.0120	.09569	.900
	Tribal	-.2551*	.08098	.002

Discussion

Mental health and the role of social work intervention

Significant variations in stress levels across communities revealed the critical need for mental health support, underscoring the importance of social workers in addressing these challenges. Localized outreach programs are necessary to provide mental health services to students, teachers, and parents. A proactive integration of social workers into school systems can facilitate early intervention for mental health issues and create supportive environments that respond to the varied stressors in each community.

To support educational recovery, inclusive reforms and adaptable curricula can address the unique needs of diverse student populations, particularly in tribal and rural communities. Social workers remain essential for addressing mental health challenges heightened by the pandemic, especially in underserved communities.

Conclusion

This study underscores the critical role of social workers in addressing educational and mental health challenges intensified by COVID-19, especially within Visakhapatnam's diverse educational landscape. Key action points include investing in digital infrastructure in rural and tribal areas to ensure equitable learning opportunities, integrating social workers into schools to support mental health, financial assistance, and digital learning, and adopting flexible, culturally responsive curricula that address specific regional needs. Training educators in culturally responsive and technologically integrated approaches will further enhance their capacity to meet diverse learning needs.

Recommendations for Enhancing the Education System in the New Normal

Enhancing School Social Work Services: Recruiting qualified school social workers to provide social and

emotional support and address mental health issues. Focusing on underprivileged areas for an equitable resource distribution, which is to be initiated by local social work agencies and community organizations.

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