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Assessing the Impact of the Covid-19 Pandemic on Adolescent Mental Health

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Assessing the Impact of the Covid-19 Pandemic on Adolescent Mental Health

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Background

Adolescence is a crucial period in which adverse childhood experiences, social relationships, and habits can influence mental wellbeing. **According to the CDC, the onset of mental illness is 14.5 years old, which is why it is imperative that individuals with mental health conditions receive early intervention.**^{1,2} Since the start of the Covid-19 pandemic, research has shown a dramatic decline in adolescent mental health.² **Specifically in New Jersey, it has been reported that individuals ages 18-23 have the highest levels of stress and depressive symptoms since the start of the pandemic.**³ In light of these findings, it is vital that more research is performed to better understand the impact that the pandemic has had on adolescent mental health, as well as explore ways in which we can improve upon the dissemination of mental health resources to this demographic.

Variable	BSI-Depression	BSI-Anxiety	BSI-Somatization	Stress
	β (95% CI)	β (95% CI)	β (95% CI)	β (95% CI)
Gender (Male = 1)	-	-	-	-0.17 (-0.32, -0.01)* p = 0.036
Class Level (> freshmen = 1)	-	0.16 (0.01-0.31)* p = 0.039	-	-
Trust news media (Yes = 1)	-	-	-0.17 (-0.32, -0.02)* p = 0.024	-
Time spent looking for information on news sites (> 1hr = 1)	-	0.21 (0.04-0.38)* p = 0.016	0.12 (-0.03-0.27) ns	-
Time spent looking for information on social media (> 1hr = 1)	-	0.03 (-0.14-0.2) ns	-	-
Academic difficulties—Ability to focus on academic work (Yes = 1)	0.24 (0.09-0.42)** p = 0.003	0.17 (0.00-0.35)* p = 0.047	0.21 (0.04-0.39)* p = 0.014	0.18 (0.02-0.37)* p = 0.033
Academic difficulties—Difficulties with online learning (Yes = 1)	0.16 (-0.04-0.32) ns	0.10 (-0.06-0.27) ns	0.08 (-0.09-0.24) ns	0.12 (-0.04-0.29) ns
Everyday difficulties—Lost job, reduced wages or work hours (Yes = 1)	0.25 (0.1-0.40)** p = 0.001	0.12 (-0.04-0.28) ns	-	-
Everyday difficulties—Obtaining medications and hygiene supplies (Yes = 1)	0.13 (-0.02-0.28) ns	0.13 (-0.02-0.29) ns	-	0.18 (0.02-0.33)* p = 0.024
Everyday difficulties—Obtaining food (Yes = 1)	-	-	-	-
Concerned about COVID-19 (Very to extremely)	-	0.08 (-0.07-0.23) ns	0.21 (0.05-0.36)** p = 0.008	-
Test Statistics	F(4,146) = 11.75; p<0.001; R ² = 0.24	F(8,142) = 4.87; p<0.001; R ² = 0.22	F(5,145) = 5.50; p<0.001; R ² = 0.16	F(4,145) = 6.98; p<0.001; R ² = 0.16

Note: All dichotomous variables were coded 0 or 1. ns—not significant
 * p < 0.05
 ** p < 0.01
 *** p < 0.001.
<https://doi.org/10.1371/journal.pone.0239696.t004>

Figure 1. Predictors of mental health burden among undergraduate college students during Covid-19 pandemic include lost employment, academic difficulties and concerns about Covid-19.⁴

Objectives

- Identify the disparities in mental health and barriers preventing adolescents across different demographics from accessing mental health resources.
- Identify the implications of the Covid-19 pandemic on mental health in adolescents aged 14-21.
- Investigate whether traditional mental health treatment can be supplemented by virtual platforms to improve outcomes.
- Educate adolescents about mental health, identifying signs and symptoms of declining mental health, coping mechanisms, and accessible local resources.

Methods

The data used in this study is sourced from the World Health Organization (WHO), Center of Disease Control (CDC), Substance Abuse Mental Health Services Administration (SAMHSA) and accredited publications. Data was collected from PubMed, JAMA, and New England Journal of Medicine. Data reviewed included demographic data, quantitative and qualitative measures of incidence, risk factors, and management of mental health disorders globally and in New Jersey.

Results

Disparities among Demographics in High School Students

- Suicide is the fourth leading cause of death among 15-19 year-olds.²
- Since the onset of the Covid-19 pandemic, suicide-related emergencies in adolescents have significantly increased.⁵

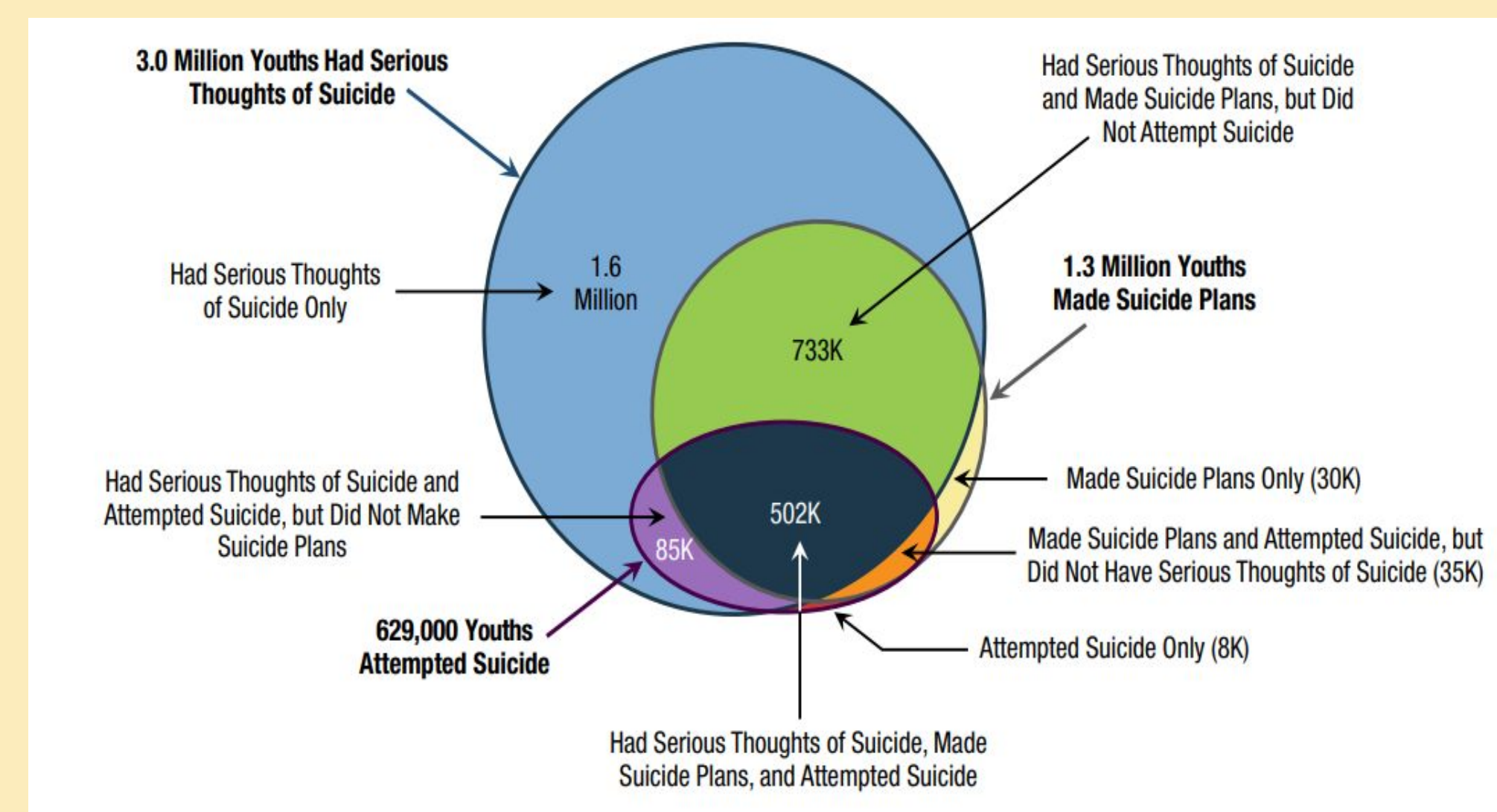


Figure 2: Millions of adolescents had serious thoughts about suicidal ideation, made suicide plans, or attempted suicide in the past year.⁵

Disparities among Demographics in College Students

- New Jersey college students reported higher levels of anxiety and heightened risk perception during the COVID-19 pandemic compared to pre-pandemic.⁴
- Compared to male students, female students were more likely to report higher levels of stress as a result of the pandemic.⁴

Virtual Interventions

- Social medial intervention, *In One Voice*, saw a significant improvement in attitudes towards mental health issues in adolescents after one year.⁶
- Online peer-based interactions through behavioral intervention technology, Project TECH, saw an improvement in adherence and accountability to treatment in adolescents with depression.⁷

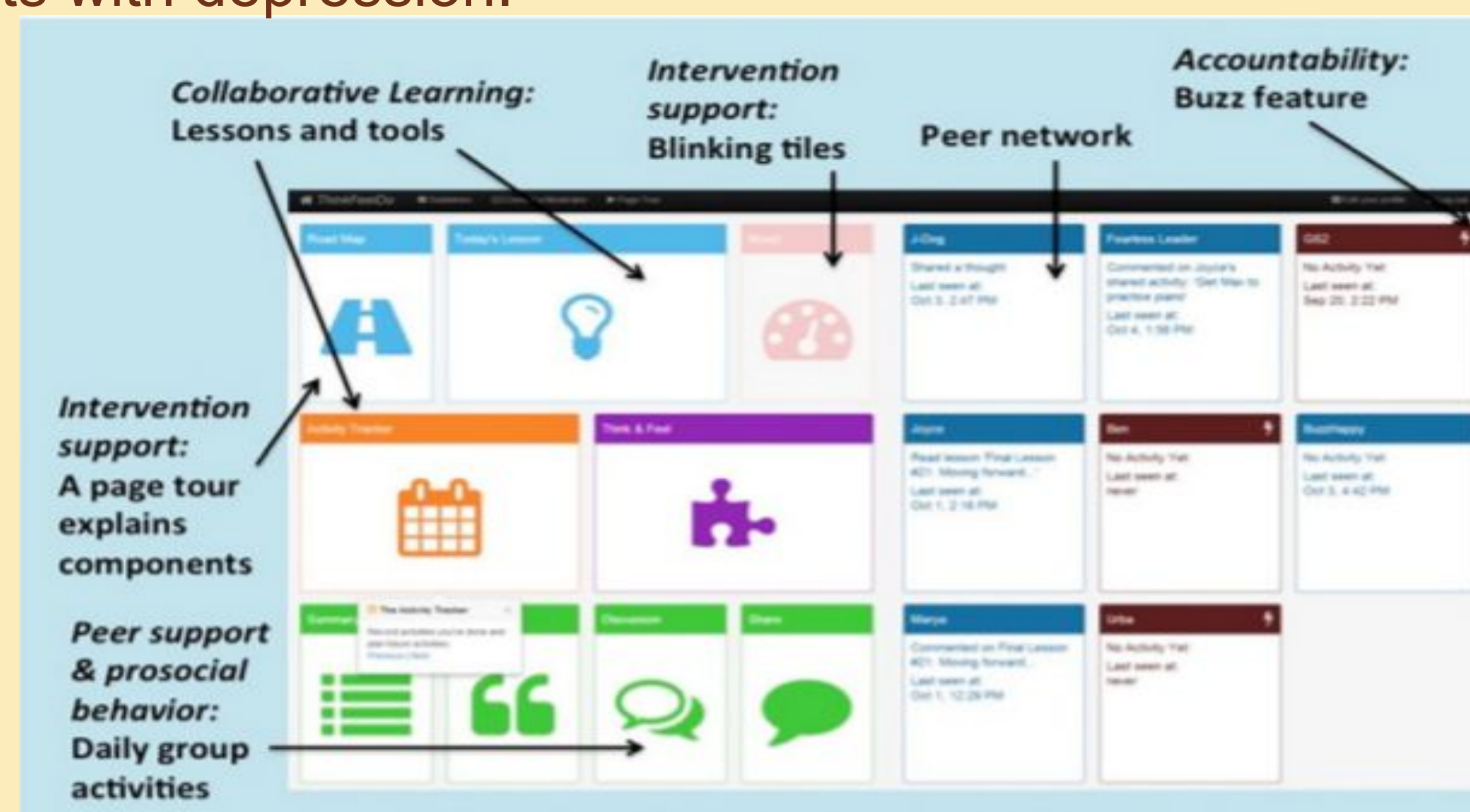


Figure 3: Project TECH enables adolescents diagnosed with depression to interact with their peers on a platform designed to create a safe and educational space for connecting.⁷

Conclusion

The COVID-19 pandemic has negatively impacted the mental health of students, which means that additional efforts must be made to better address this growing national crisis.⁴ The school setting is ideal for mental health interventions because it is an environment that educates young people, fosters social relationships, and can reduce stress.⁸ Virtual platforms have shown to be promising environments through which adolescents can engage peers for emotional support and learn more about healthy ways to manage stress and other mental health concerns.¹⁰ Further research is necessary to analyze the efficacy and outcomes of social media interventions in adolescent mental health. Some limitations of this research were the variability in measures across studies, the nature of self-reported data, and the lack of generalizability of the data.

Proposed Intervention

- Identify local barriers to mental health resources for adolescents in school settings
- Create flow-charts that assist students with identifying specific school-based mental health services that address their needs
- Create student-ran social media platforms for school-based mental health assistance
- Advocate for increased funding in schools for counseling services
- Promote youth Mental Health First Aid training for all administration, faculty, and staff
- Provide support for families to help decrease the effects of parental burnout on adolescent mental health

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References

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