THRIVE RESILIENCE PROGRAM FOR TEENS: EXAMINING SOCIAL EMOTIONAL LEARNING, SELF-ESTEEM, AND PERCEPTIONS OF HARM REGARDING SUBSTANCE ABUSE

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ABSTRACT

The THRIVE Resilience Program for Teens aims to mitigate adolescent substance abuse through psychoeducation and resilience-building strategies. This study evaluated the program's effectiveness in enhancing social-emotional learning (SEL), self-esteem, and perceptions of harm regarding substance use. The study comprised three distinct investigations: (1) validated the Perceived Harm of Substance Use Scale (PHSUS), (2) assessed changes in perceptions of harm post-program completion, and (3) examined shifts in SEL and self-esteem. Findings indicated that the PHSUS is a reliable instrument, and the program significantly increases students' perceptions of substance use harm. However, while SEL improvements were significant, changes in self-esteem were not statistically significant. The study underscores the THRIVE program's potential to foster resilience and reduce substance abuse risks among adolescents, suggesting areas for further research and program enhancement.

Keywords: substance abuse, resilience, social emotional learning

INTRODUCTION AND LITERATURE REVIEW

Drug abuse is a global epidemic. The prevalence of global substance abuse was reported by the United Nations World Drug Report to be 5.6% of the population aged between 15 and 64 in 2020 (UN Office of Drugs and Crime, 2022). In North America, individuals are reported to use illicit substances for the first time between ages 15 and 17 (Boak et al., 2020). This is particularly problematic when considering research presented by Jordan and Anderson (2017) indicating that individuals who begin using substances early in adolescence are at a higher risk of both physical and psychological substance abuse-related issues. Addressing these complex issues, the THRIVE Resilience Program for Teens (THRIVE) seeks to prevent adolescent substance abuse by providing students with psychoeducation and practical knowledge regarding the consequences of using substances. By providing students with information about the consequences of substance use and developing alternative coping strategies to stressors, the program's primary goal is to stop substance use in adolescents before it starts.

THE THRIVE RESILIENCE PROGRAM

The THRIVE program has been implemented in over 30 junior high and high schools throughout Arizona, satisfying requirements of the ARS 15-701.02 Mental Health Instruction legislation requiring health education to incorporate mental health (Huntington & Huntington, 2020). The program is a nine-week trauma-informed course focused on creating a positive and engaging atmosphere for grade school and middle school students to learn about and develop resilience. In addition to psychoeducation focused on resilience, program facilitators provide students with practical information and healthy coping strategies to facilitate resisting drugs and other risky behaviors. The program has three projected outcomes: enhance socialemotional learning competencies, reduce substance abuse, and enhance decision-making and problemsolving skills (Huntington & Huntington, 2020). These outcomes are achieved through the development of resilience (Ginsburg & Jablow, 2011).

RESILIENCE

The THRIVE program provides psychoeducation intending to increase resilience and equip students with the practical and emotional tools to resist substance abuse. When describing resilience, the THRIVE program focuses on factors contributing to well-being described by Ginsburg and Jablow (2011) as the "7 Cs" of resilience: control, competence, confidence, contribution, coping, connection, and character. According to Ginsburg and Jablow (2011), effective interventions targeting resilience should positively impact one or more of these seven factors. Incorporating the work of Ginsburg and Jablow (2011), the THRIVE program developed nine lessons that were administered over nine weeks. These lessons focus on the 7 Cs of resilience and promote protective factors that enable adolescents to make positive choices, see their value, and internalize healthy lifestyles (Huntington & Huntington, 2020).

SOCIAL-EMOTIONAL LEARNING

Empirical research underscores the pivotal role of social-emotional learning (SEL) in cultivating resilience among individuals. Durlak et al. (2011) conducted a comprehensive meta-analysis of over 213 school-based SEL programs and found that SEL interventions significantly enhanced students' social and emotional skills, leading to improvements in academic performance, emotional well-being, and behavior. Addressing the long-term effectiveness of SEL programs, Taylor et al. (2017) reviewed 82 school-based SEL programs and found that compared to controls, adolescents who participated in an SEL program continued to demonstrate improvements in social-emotional learning and academic achievement up to four years beyond program completion. These insights collectively highlight how SEL equips adolescents with the tools to make adaptive choices and foster positive relationships, enabling them to withstand stressors and external pressures leading to risky behaviors such as substance abuse.

PURPOSE OF THE STUDY

The purpose of the following is to examine the impact of the THRIVE Resilience Program for Teens in terms of social-emotional learning, selfesteem, and perceptions of harm regarding substance abuse. Focusing on these specific variables allows for an investigation of the program's overall effectiveness by focusing on its primary goals.

The following research questions were examined:

- 1. Is the Perceived Harm of Substance Use Scale (PHSUS) a reliable and valid instrument for measuring perceptions of harm regarding substance use? (Study 1)
- 2. Will students experience a significant change in perceptions of harm regarding substance use after completing the THRIVE Resilience Program for Teens? (Study 2 and Study 3)
- 3. Will students experience a significant change in social-emotional learning after completing the THRIVE Resilience Program for Teens? (Study 3)
- 4. Will students experience a significant change in self-esteem after completing the THRIVE Resilience Program for Teens? (Study 3)

The study's overall hypothesis is that students will report an increase in all three areas: socialemotional learning, self-esteem, and perception of harm regarding substance abuse.

STUDY 1: VALIDITY AND RELIABILITY OF THE PHSUS \ Introduction

The purpose of this study is to validate the Perceived Harm of Substance Use Scale (PHSUS), a tool developed by the THRIVE program to measure adolescents' perceptions of harm regarding substance use. This study hypothesizes that the PHSUS will be a reliable and valid instrument.

METHODS

Survey Procedures

The study was conducted in accordance with the Declaration of Helsinki and was approved by the Ethics Committee of Grand Canyon University (no. 2022-5217) on November 30, 2022, with the need for written informed consent waived. The Thrive Perceived Harm of Substance Use Scale (PHSUS) was administered to students during their initial course session to establish a pretest baseline of perceptions regarding the harm of substance use. The THRIVE curriculum was then completed over the following nine weeks by a small cadre of trained THRIVE facilitators who provided the same training to each classroom of students. Upon completion of the nine-week course, students reaccomplished the PHSUS. The data were paired using a unique nonattributable identifier for each student to maintain student anonymity. The PHSUS is an instrument developed by the THRIVE program to examine the perceived harm of substance use. Study 1 (N =411) was conducted to test and establish the validity and reliability of the instrument. Following its validation, it was used in Study 2 (N = 74) to test the efficacy of the THRIVE program.

MEASURES

The PHSUS is a scale developed specifically for the THRIVE program. This 10-question scale asks students to respond to each question using a four-point ordinal scale ranging from 1 (No risk) to 4 (Great risk) regarding the use of substances including alcohol, marijuana, nicotine, and narcotics, the method of the use (e.g., vaping, edibles/oral, drinking, smoking), and frequency of use. The sum of response scores to the 10 questions provides an overall measure of perceived harm of substance use, with higher scores indicating students view substance use as having harmful effects. A confirmatory factor analysis was completed to test the efficacy of the PHSUS.

RESULTS

Data were collected from participants enrolled in the THRIVE program as part of the curriculum established at five suburban and urban junior high schools and high schools in a metropolitan area. The PHSUS was administered to 445 junior high students (grades 7-9) at the beginning of the 2023 Spring semester. After cleaning data for incomplete responses, straight-line responses, and univariate outliers, the total sample size was N = 411, exceeding the recommended minimum sample size of at least 200 for a factor analysis of a scale with 10 items (Meyers et al., 2013). Descriptive statistics for the sample are presented in Table 1.

Table 1.

Descriptive Statistics for Perceived Harm of Substance Use

Measure	М	SD	Min	Max	Skewness (SE)	Kurtosis (SE)
Perceived Harm	30.01	6.172	11	40	-0.630 (0.124)	0.049 (0.248)
N = 441						

Before an analysis to test the effectiveness of the THRIVE program, PHSUS was evaluated in terms of construct validity. Because the test was developed with the goal of measuring perceived harm of substance use, which is a single known factor, confirmatory factor analysis (CFA) was implemented (Henson & Roberts, 2006). The CFA for PHSUS was conducted using AMOS (v. 27). Endogenous variables were represented by questions 1-10, and the latent variable was described as Perceived Harm of Substance Use. Regression paths were developed between each endogenous variable and Perceived Harm of Substance Use, and error terms were associated with the endogenous variables.

Based upon the original model, the model fit was poor, as demonstrated by an RMSEA value of .114 and a chi-squared value of 220.906 (p < .001)—although chi-squared test scores for factor analyses with N > 200 may be considered unreliable and other fit indices should be used (Meyers et al., 2013). As shown in Table 2, other fit indices also indicated questionable fit. The path model is presented in Figure 1A.

Upon review of the modification indexes, we observed that some lines of questioning included similar themes, including vaping (Q1, Q2, and Q7), marijuana use (Q2, Q8, and Q9), and frequency of substance use (Q5, Q6, Q7, and Q9). In response, paths were developed between those error terms.

Model	χ²	df	GFI	NFI	CFI	RMSEA	AIC	BCC	ECVI
Original	220.906*	35	.900	.898	.913	.114 (.100, .128)	260.906	262.009	0.636
Respecified	82.633*	28	.959	.962	.974	.069 (.052, .086)	136.633	138.122	0.333

 Table 2.

 Chi-square and Goodness of Fit Indices for Confirmatory Factor Analysis

Note: * p < .001

The respecified model fit ranged from acceptable (RMSEA = .069 [.052, .086]) to good (NFI = .962, GFI = .959, CFI = .974) as shown in Table 2. Figure 1B shows the path coefficients described by the respecified model analysis.

Figure 1.

Confirmatory Factor Analysis Model for Perceived Harm of Substance Use



Table 3 reports the standardized item loadings for the CFA. All items had positive loadings for the construct.

Table 3.

Standardized Item Loadings for Latent Variables of Perceived Harm (Respecified Model)

Item	Standardized Loading	Sig.
Q1	.687	< .001
Q2	.769	< .001
Q3	.788	< .001
Q4	.687	< .001
Q5	.578	< .001
Q6	.561	< .001
Q7	.754	< .001
Q8	.633	< .001
Q9	.813	< .001
Q10	.666	< .001

An additional reliability test was conducted using Cronbach's alpha. The 10 items offered outstanding reliability, $\alpha = .91$. Based on the CFA and Cronbach's alpha, PHSUS demonstrated an acceptable model fit for use in the comparative analysis that follows in Study 2.

STUDY 2: EFFECTIVENESS OF THRIVE PROGRAM ON PERCEPTIONS OF HARM

Introduction

This study investigates whether the THRIVE Resilience Program for Teens effectively changes students' perceptions of harm regarding substance use. The hypothesis is that students will experience a significant change in perceptions of harm regarding substance use after completing the program.

METHODS

Participants

The sampling frame consisted of students across two demographically diverse schools in the Phoenix metropolitan area, as shown in Table 4. The sample included students participating in the THRIVE program within each school, with each student completing the Thrive Perceived Harm of Substance Use Scale (PHSUS) prior to beginning the program and again upon the completion of the program. Of the original 80 participants, three of the pairs were removed due to incomplete data during data cleaning and data screening and an additional three pairs were removed due to participant straight-lining, in which the participants scored all scores as all 1s, vielding a final sample size of 74 pairs of data for comparison. The sample was sufficient to detect a medium effect with statistical significance and sufficient statistical power (1 - β = .95), which required a minimum of 54 matched pairs.

MATERIALS

The PHSUS was used to measure students' perceptions of harm regarding substance use. This 10-question scale asks students to respond to each

Table 4.	
Demographic Characteristics (Sample 1)	

Variable	Frequency	Percentage
Male	37	50.0%
Female	33	44.6%
Prefer not to say	4	5.4%
Total	74	100.0%
Hispanic	32	43.2%
White or Caucasian	22	29.7%
Multiracial	15	20.3%
Black or African American	5	6.8%
Total	74	100.0%
Grade 7	18	24.3%
Grade 8	24	32.4%
Grade 9	28	34.8%
Grade 10	4	5.4%
Total	74	100.0%

question using a four-point ordinal scale ranging from 1 (No risk) to 4 (Great risk).

PROCEDURE

Students were administered the PHSUS at the beginning of the program to establish a pretest baseline. The THRIVE curriculum was then completed over the following nine weeks. Upon completion, students were administered the PHSUS again as a posttest.

RESULTS

Descriptive Findings

The effectiveness of the THRIVE program for raising awareness about substance use was determined by paired-samples *t*-test to compare differences in perceived harm of substance use by students before and after program completion. The dependent variable, Perceived Harm, is measured as the total score of the PHSUS for each student. Data were screened to test for the assumptions of a paired-samples *t*-test, and all assumptions were met. The descriptive statistics for Perceived Harm are described in Table 5.

RESULTS

The present study examined to what extent, if any, the THRIVE program may have had an effect on the perceived harm of substance use. Students were measured for perception of harm by substance use prior to the course (pretest) and then immediately following the course (posttest). The data were screened for the paired-samples *t*-test assumptions, and all assumptions were met. The results of the paired-samples *t*-test demonstrate a statistically significant difference between pretest scores (M =31.08, SD = 5.317) and posttest scores (M = 34.07, SD = 5.467, t(73) = -3.536, p < .001, d = .411. The results indicate there was a moderately increased awareness of perceived harm due to substance use among middle school and high school students following participation in the THRIVE program.

STUDY 2 DISCUSSION

The THRIVE Resilience Program is a promising practice in reducing future substance abuse, developing social-emotional learning, and bolstering self-esteem. Focused on building students' socio-emotional skills and coping strategies, the program encourages alternatives to stress management that do not include substance use. This study focused on evaluating the program's primary goal of educating students about the harms of substance use, and it investigated changes in perceptions of harm associated with substance use in adolescents before and after participation in THRIVE.

Results indicate that students increased in their perceptions of harm associated with substance abuse, indicating that the program is successful in instilling the idea that substance abuse has consequences that students may not have been aware of before completing the THRIVE Resilience Program. This is a beneficial consequence as interventions at early stages of substance use are known

Table 5. Perceived Harm

Timepoint	Mean	SD	Skewness	Skew SE	Kurtosis	Kurtosis SE	Min	Max
Pretest	31.08	5.317	-0.520	0.279	0.221	0.552	14	40
Posttest	34.07	5.467	-0.972	0.279	0.127	0.552	20	40

to be beneficial for youth (Welsh et al., 2024). This is a promising finding as the pretest results for the PHSUS were already high (M = 31.08), indicating that students began the program with some knowledge of the consequences associated with drug use. These findings reiterate the results of Radu et al. (2023), who found that developing self-regulation skills, improving social environments, and increasing awareness of substance use and its consequences improved youth's perceptions of harms associated with substance use. Increased measures of perceived harm after the THRIVE program indicate that the program was able to provide information and education beyond what was previously available to students and contribute to an increase in perceptions of harm associated with substance abuse.

It is important to include that the underlying assumption of the THRIVE program is that this change in perception of harm regarding substance abuse stems not only from obtaining practical knowledge regarding the repercussions of substance abuse but also through the development of socialemotional learning skills that serve as a buffer in stressful situations that may otherwise lead to substance abuse as a coping strategy (LaBelle, 2023). While these results do not lend direct evidence to the assumption that students are successfully developing resilience and other relevant social-emotional skills, they do indicate that the program is successful in its primary goal of connecting with students to address the risks of substance abuse and offering alternate coping strategies. Whether the program addresses social-emotional learning and self-esteem will be investigated in Study 3.

STUDY 3: IMPACT OF THRIVE ON SOCIAL-EMOTIONAL LEARNING AND SELF-ESTEEM

Introduction

The purpose of this study is to examine the impact of the THRIVE Resilience Program for Teens in terms of social-emotional learning, self-esteem, and perceptions of harm regarding substance abuse. Focusing on these specific variables allows for an investigation of the program's overall effectiveness by focusing on its primary goals. The following research questions were examined:

1. Will students experience a significant change in social-emotional learning after completing the THRIVE Resilience Program for Teens?

- 2. Will students experience a significant change in self-esteem after completing the THRIVE Resilience Program for Teens?
- 3. Will students experiences a significant change in perceptions of harm regarding substance use after completing the THRIVE Resilience Program for Teens?

The study's overall hypothesis is that students will report an increase in all three areas, including social-emotional learning, self-esteem, and perception of harm regarding substance abuse.

METHODS

Participants

Participants from two middle schools in the Mesa, AZ, school district completed the THRIVE program as part of their scheduled curriculum. Participants were matched based on their student numbers after program completion. After removing incomplete records and matching data, 59 pairs of data were used for analysis. Demographic information for the sample is presented in Table 6.

MATERIALS

PHSUS

The PHSUS is a scale developed specifically for the THRIVE program. This 10-question scale asks students to respond to each question using a

Table 6.

Demographic Characteristics (Sample 2)

Variable	Frequency	Percentage
Male	28	47.5%
Female	30	50.8%
Prefer not to say	1	1.7%
Total	59	100.0%
Hispanic	25	41.7%
White or Caucasian	20	33.3%
Multiracial	8	13.3%
Black or African American	3	5.1%
Other	3	5.1%
Total	59	100.0%
Grade 7	48	81.3%
Grade 8	11	18.7%
Total	59	100.0%

four-point ordinal scale ranging from 1 (No risk) to 4 (Great risk) regarding the use of substances, including alcohol, marijuana, nicotine, and narcotics, the method of the use (e.g., vaping, edibles/oral, drinking, smoking), and frequency of use. The sum of response scores to the 10 questions provides an overall measure of perceived harm of substance use, with higher scores indicating students view substance use as having harmful effects.

Rosenberg Self-Esteem Scale

Self-esteem was measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). This widely used instrument provides a quantitative measure of self-esteem by evaluating overall positive or negative feelings about oneself and self-worth. Individual items are measured on a Likert scale between 1 (strongly disagree) and 5 (strongly agree) with four reverse-coded items. The scale has excellent reliability, with test-retest coefficients ranging between .82 to .88, and Cronbach's alphas between .77 to .88 in various populations (Rosenberg, 1986).

MySaebrs

MySaebrs is a universal screener designed to help schools identify individuals struggling with social-emotional skills. SAEBRS has been reported successful in distinguishing between students who have low-, medium-, and high-risk academic behavior problems. Many studies of adolescents demonstrate that the overall risk status identified by MySaebrs remains constant throughout their education, demonstrating validity (Iaccarino et al., 2019).

PROCEDURE

Students were administered the PHSUS, Rosenberg Self-Esteem Scale, and MySaebrs at the beginning of the program to establish pretest baselines. The THRIVE curriculum was then completed over the following nine weeks. Upon completion, students were administered the same instruments again as posttests.

RESULTS

Descriptive Statistics

Descriptive statistics were generated for each variable at pretest and posttest. Results are demonstrated in Tables 7 through 12.

HYPOTHESIS TESTING

Two within-sample t-tests were employed to examine changes in Perceptions of Harm regarding Substance Abuse and Self-Esteem. There was no statistically significant difference in PHSUS scores t(56) = -1.024, p = .310 or in self-esteem t(58) = -.905, p = .369. A thorough analysis of why these results were achieved will be addressed.

Three within-sample t-tests were employed to examine each of the three subscales of the MySaebrs assessment: Social Behaviors, Emotional Behaviors, and Academic Behaviors. Individuals showed an increase in the social behavior subscale, t(58) = -9.528, p < .001; an increase in the emotional behaviors subscale, t(58) = -2.335, p = .023; and an increase in academic behaviors, t(58) = -3.224, p = .002. These results indicate that students experienced a change in social-emotional learning after program completion, and it lends credibility to the idea that the program's materials focused on resilience are related to positive changes in SEL.

STUDY 3 DISCUSSION

The THRIVE Resilience Program demonstrates significant potential concerning the reduction of future substance abuse, developing social-emotional learning, and increasing self-esteem in students. This program aims to provide psychoeducation regarding healthy alternatives to substance use and support students in sustainable behaviors that will encourage building social-emotional skills and coping strategies in a positive environment.

While the study's hypothesis regarding a decrease in perceptions of harm regarding substance abuse was not supported, one can examine the average scores at the pretest to understand why these results were obtained. The results were nonsignificant, likely due to the participants' high pretest scores. The pretest scores established high baseline scores in terms of the PHSUS (M = 31.88). Interpreting this, one should consider preexisting systems impacting these variables in students, such as effective drug protocols or education around any of the PHSUS items in the students' schools or homes. Social desirability may also play a role in the participants' high pretest scores. If this is the case, the students may have given answers they believed were desired by the THRIVE facilitators.

The study results did not find a statistically significant change in self-esteem. While the Rosenberg Self-Esteem scale is widely used in adolescent populations, THRIVE facilitators found that students had some issues comprehending the items' questions.

Table 7.

Descriptive Statistics for Perceived Harm of Substance Use Pretest

Measure	М	SD	Min	Мах	Skewness (SE)	Kurtosis (SE)
Perceived Harm	31.88	7.48	10	40	-1.221 (0.316)	1.239 (0.623)

N = 57

Table 8.

Descriptive Statistics for Perceived Harm of Substance Use Posttest

Measure	М	SD	Min	Max	Skewness (SE)	Kurtosis (SE)
Perceived Harm	32.86	6.47	10	40	-1.071 (0.316)	1.629 (0.623)

N = 57

Table 9.

Descriptive Statistics for Self-Esteem Pretest

Measure	М	SD	Min	Мах	Skewness (SE)	Kurtosis (SE)
Self-Esteem	23.36	4.57	10	36	-0.244 (0.311)	1.066 (0.613)

N = 59

Table 10.

Descriptive Statistics for Self-Esteem Posttest

Measure	М	SD	Min	Мах	Skewness (SE)	Kurtosis (SE)
Self-Esteem	24.34	5.70	10	40	-0.055 (0.311)	0.540 (0.613)
N = 59						

Table 11.

Descriptive Statistics for SEL Subscales Pretest

Subscale	М	SD	Min	Мах	Skewness	Kurtosis
Social Behaviors	13.41	2.94	7	19	-0.11	-0.517
Emotion Behaviors	11.80	2.99	6	19	0.328	-0.462
Academic Behaviors	12.92	3.08	6	19	-0.098	0.470

N = 59

Table 12.

Descriptive Statistics for SEL Subscales Posttest

Subscale	М	SD	Min	Max	Skewness	Kurtosis
Social Behaviors	20.11	3.54	10	28	-0.178	0.212
Emotion Behaviors	13.15	2.90	6	20	-0.306	-0.261
Academic Behaviors	15.12	3.54	7	22	0.000	-0.513

N = 59

Additional testing regarding this variable is needed to determine how it is being impacted and understood by adolescents in the program.

In support of the study's third research question, a significant change was found in all three aspects of social-emotional learning, suggesting positive implications for the THRIVE Resilience Program. Students increased in emotional behaviors, academic behaviors, and social behaviors. These results indicate that participation in the THRIVE program increases social-emotional learning. As the program's primary focus is to build social-emotional skills to provide a buffer against substance abuse, the results are good indicators of the program's effectiveness in accomplishing its primary goal.

GENERAL DISCUSSION

The results from Study 1 indicate that the PHSUS is a valid and reliable instrument for measuring perceptions of harm regarding substance use. The confirmatory factor analysis and reliability testing demonstrated acceptable model fit and outstanding reliability, making the PHSUS a valuable tool for future research and program evaluations.

Study 2 found that the THRIVE program successfully increased students' perceptions of harm associated with substance use. This change suggests that the program effectively educates students about the risks and consequences of substance abuse, aligning with its primary goal of preventing future substance use in adolescents.

Study 3 provided mixed results. While there was no significant change in self-esteem, there were significant improvements in all three subscales of social-emotional learning. These findings indicate that the THRIVE program effectively enhances social-emotional learning, although further investigation is needed to understand its full impact on self-esteem. While Study 3 did not find significant changes in perceptions of harm related to substance abuse, after evaluating the high pretest scores, it is suggested that further research considers additional anti-drug resources available to students outside of the classroom that may account for differences in pretest scores regarding initial feelings of harm associated with substance abuse.

LIMITATIONS AND FUTURE RESEARCH

As with all research, the study has limitations. The included studies are the first uses of the PHSUS, and although the instrument is shown to be valid and reliable within the sample, continued examination of its efficacy is warranted. Additionally, the use of the PHSUS is limited by its validation with junior high students (grades 7-9); therefore, its use with other age groups may be limited.

There are limitations due to using the THRIVE program as the training source. Facilitators of the THRIVE program are also the individuals collecting data from students, introducing the potential for acquiescence or socially desirable responses. In addition to this concern, because the posttest was administered immediately following the completion of the THRIVE program, posttest scores could be expected to be higher. A recommendation includes completing a second posttest using PHSUS several months following the course to determine any decay in the treatment effect.

While results indicate that students who completed the nine-week program did show an increase in student perceptions of harm associated with substance use in Study 1 and an increase in SEL in Study 2, these results should be considered in the context of the study's methodological approach. A lack of a control group prevents a strong causal statement regarding why this change in perceptions of harm and SEL occurred. Future research should incorporate an experimental design to further probe the causal relationship between the program and changes in perceptions of harm.

Future research should continue testing the selfesteem variable using the Rosenberg Self-Esteem scale to identify whether the scale is appropriate for use in this context. An experimental design should be implemented for future testing to ensure that any changes experienced by adolescents during their time in the program are truly from their participation with the organization.

In addition to extending the results of this study by incorporating an experimental methodology, future research should focus on the psychoeducation goals described by the THRIVE program. With evidence suggesting that adolescents experience an increase in perceptions of harm associated with drug use after the program, it is important to evaluate whether the social skills taught during the program are increasing as well. The development of self-esteem and socioemotional learning is an important piece of THRIVE's intervention strategy, as the intention is for students to apply these bolstered skill sets in stressful situations instead of turning to substance abuse as a coping strategy. Evaluating the program's success in impacting these psychological variables is an important step in evaluating its efficacy.

Finally, the PHSUS should be incorporated in future studies investigating perceptions of harm associated with substance abuse in adolescents. Assessing the tool's generalizability in terms of adolescents' socioeconomic status, geographic region, or school district will help ensure the survey is being correctly applied.

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