



Risky Behaviors in Central Appalachia/Eastern Kentucky: Teen Pregnancy and Sexually Transmitted Infections



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Background/Purpose

The Big Sandy Optimal Health Teen Pregnancy Prevention (TPP) program was implemented by Mountain Comprehensive Care Center (MCCC) to improve the optimal health of youth ages 10-19 and to reduce teen pregnancy and sexually transmitted infections within the Big Sandy Region of Eastern Kentucky. This region consists of Floyd, Johnson, Magoffin, Martin and Pike counties (see Figure 1, yellow highlight).

Within this region, the teen pregnancy rates per 1,000 females ages 15-19 were: **Floyd (55.9), Johnson (30.3), Magoffin (57.3), Martin (50.7)** and **Pike (38.2)**. These rates were higher than Kentucky's rate (29.7) and more than double the national rate of 16.9 (Centers for Disease Control, 2021; Kids Count, 2019).

Sexually transmitted infection rates within the area were also high. Chlamydia rose more than 200% and syphilis more than 300% between 2011 and 2017. Many of these cases were in young adults (Meehan, 2018).

Figure 1: Big Sandy Region of Kentucky



Source: GISGeography.com

Project Overview

To ensure the goals of the TPP program were met, MCCC utilized an evidence-based practice (EBP). The EBP for this project is called Botvin LifeSkills Training (LST).



Botvin LST is the top research-based prevention program in the United States and has been proven to reduce risky behaviors (See Figure 2; Results & Recognition, 2022).

Figure 2: Effectiveness of Botvin LST



The EBP is largely focused on substance use prevention but provides information on preventing/reducing other risky behaviors as well. This is accomplished through programs components such as drug resistance skills, personal self-management skills, and general social skills to prepare participants for risky situations and encourage them to resist peer pressure (LST Overview, 2019).

Evaluation Overview

The effectiveness and implementation of the TPP program was monitored using pre-tests/post-tests to understand knowledge, attitudes, and behaviors, and in-person observations of the curriculum administration to assess fidelity to the curriculum. The evaluation was approved by the Morehead State University Institutional Review Board.

Questions from the pre-test included true/false statements such as:

- "Peer pressure" means that an adult tries to get you to do something you do not want to do.
- Your risk-taking is impacted by your drug or alcohol use.

Other pre-test questions used a Likert scale, such as:

- Kids who smoke cigarettes have more fun than non-smokers.
- I would say NO if someone tried to get me to drink beer, wine, or liquor.

Participant Overview

There were **356 participants** who participated in the curriculum and completed the pre-test ($n = 181$ in the elementary schools; $n = 175$ in the high schools). Below is an overview of the age and gender of participants.*

Age of Elementary School Participants
($n = 171$)



Gender of Elementary School Participants
($n = 174$)



Age of High School Participants
($n = 173$)



Gender of High School Participants
($n = 172$)



*Missing data excluded from percentages in graphics.

Pre-Test Data

The pre-test data used for this analysis was gathered from schools in Floyd County; these schools included:

- May Valley Elementary School
- John M. Stumbo Elementary School
- Prestonsburg Elementary School
- Allen Elementary School
- DACE Elementary School
- South Floyd Elementary School
- Betsy Lane High School
- Floyd Central High School
- Prestonsburg High School

According to the elementary school pre-test data, there is a significant positive correlation ($r=.812, p<.001$) between elementary students believing that it is best to make decisions quickly and believing that there is nothing they can do about peer pressure except go along with it.

According to the high school pre-test data, there is a significant positive correlation ($r=.572, p<.001$) between high school students believing that drinking alcohol lets you have more fun and that peers their age who drink alcohol have more friends.

Discussion/Improvements

Due to this project being on-going, post-test data is not yet available for comparison. During implementation of the TPP program, issues with maintaining scheduled observations arose due to hazardous weather conditions or sickness. This can be noted as an opportunity for improvement as the project progresses to accommodate for online/at-home learning.

Sources: About Teen Pregnancy. Centers for Disease Control and Prevention. (2021, November 15). Retrieved March 21, 2022, from <http://www.cdc.gov/teenpregnancy/about/index.htm>; KY Kids Count. (2018 & 2019). Retrieved from: <https://datacenter.kidscount.org/data#KY/5/0/char/0>; LST Overview. Botvin LifeSkills Training. (2019, February 26). Retrieved April 20, 2022, from <https://www.lifeskillstraining.com/lst-overview/>; Meehan, M. (2018). A Failure of Public Health: Sexually Transmitted Diseases Rise as Health Budgets Fall. Retrieved from: <https://wfp.org/a-failure-of-public-health-sexually-transmitted-diseases-rise-as-health-budgets-fall/>; Results & Recognition. Botvin LifeSkills Training. (2022, March 9). Retrieved April 21, 2022, from <https://www.lifeskillstraining.com/results-recognition/>