

# 2022-2023 Stacked Deck Program Evaluation Highlights

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# About the program



The North Carolina Problem Gambling Program integrated the Second Edition of the Stacked Deck program with middle and high school aged youth throughout the state. Stacked deck is an evidence-based prevention intervention and was adapted into two separate methods of teaching and learning. Alison Wood-Drain, Youth Prevention and Treatment Coordinator, meet with community stakeholders including teacher and community centers to discuss the most effective modalities of distributing the curriculum. As a result, this program evaluation examines the impacts of those modalities.

- One modality was a more autonomous learning approach via a learning management system (LMS). The Stacked Deck curriculum was adapted by content experts who provided supplemental content via videos. The Stacked Deck curriculum and supplemental videos were included in the LMS. This combination of materials aided in creating an interactive learning experience for the LMS teaching modality.
- The second modality was a teacher-led method. Instructors/teachers received training and materials that were adapted for instructor led teaching of the Stacked Deck curriculum as well as for the two bonus lessons on Gambling in Gaming and Building Resilience.

**In addition to the five Stacked Deck lessons, two additional lessons developed by experts using a social-emotional-learning lens were implemented. One lesson focused on gambling in gaming and problematic internet media use, and the other lesson focused on building factors of resilience. Both lessons were implemented at the LMS and teacher led modalities with youth.**



# Overview



## **TEACHER LED-MODALITY**

A total of 944 youth received the teacher-led modality of the Stacked Deck Program and two supplemental lessons. In addition, they completed a survey on gambling, gaming, resiliency, knowledge, attitudes, beliefs and engagement prior and after (pre and post) completing the Stacked Deck curriculum and two supplemental lessons.

Of these, 53% identified as male and 47% identified as female. Ages of the participants ranged from 10-18 years old. With 21% identifying as age 14, 17% as age 16, 16% as age 15, 13% as age 13, 11% as age 12, 13% as ages 10-11 and 9% ages 17-18. Participants grade levels varied, with 22% in grade 9, 17% in grade 8, 16% in grade 11, 14% in grade 6, 14% in grade 10, 10% in grades 7 and 12, and 7% in grade 5.

Participants reported the name of the school or community organization through which they completed the teacher-led modality of Stacked Deck and two supplemental lessons. These were categorized into counties with 31% in Wake County, 25% in Macon County, 10% in Stokes County, 8% in Haywood County, 7% in Graham County, 7% in Yadkin County, 6% in Durham County, and approximately 6% in Cherokee County.



## **LMS MODALITY**

A total of 476 participants received the Learning Management System (LMS) modality of the Stacked Deck Program and two supplemental lessons. In addition, they completed a survey on gambling, gaming, resiliency, knowledge, attitudes, beliefs and engagement prior and after (pre and post) completing the Stacked Deck curriculum and two supplemental lessons.

Of these, 54% identified as male and 46% identified as female. Ages of the participants ranged from 12-18 years old. Of these, 36% identified as age 14, 33% as age 13, 18% as age 15, 10% as age 12, and 3% as ages 16-17. Participants self-reported their current school grade level, with 44% in grade 8, 28% in grade 9, 26% in grade 7, and 2% in grades 10 and 12. Participants reported the school through which they completed the LMS modality of Stacked Deck and two supplemental lessons. With 27% in Southeastern Stokes Middle School, 25% in Mount Airy Middle School, 17% in Piney Grove Middle School, 13% in South Stokes High School, 6% in North Stoke High School, 5% in Ranger School, 4% in West Stokes High School, and 3% in Nantahala School.

# Learning experiences

## Instructor-led

Out of the youth who completed the teacher led modality of Stacked Deck and two supplemental lessons, 88% reported their instructor reviewed a PowerPoint lesson on gaming and problematic internet media use.

In addition, youth reported the following regarding their experience with completing the instructor led curriculum:

- 57% have been able to recognize forms of gambling in games which I have previously not thought to be gambling
- 88% where asked questions and engaged with the instructor regarding the curriculum
- 65% where engaged in group discussions regarding the curriculum

## LMS-Modality

Of the youth who completed the LMS modality of Stacked Deck and two supplemental lessons, 53% reported they reviewed the lesson videos as a class and 41% watched the lesson videos on their own.

In addition, youth reported the following regarding their experience with completing the LMS curriculum:

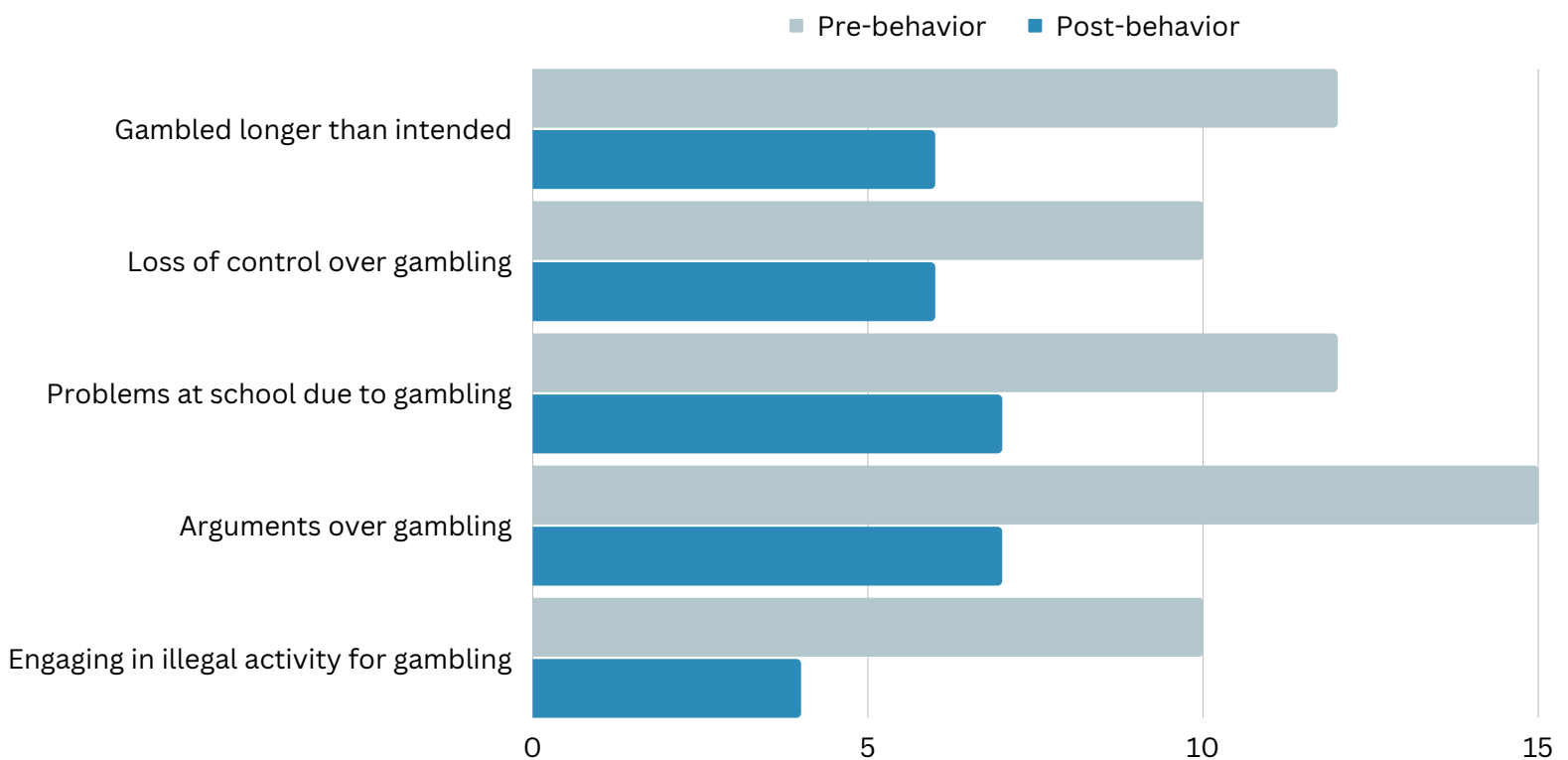
- 76% engaged with their instructor by being asked questions regarding the curriculum
- 56% where placed in groups by an instructor to engage in group discussions regarding the curriculum

# Reduction of risk factors

Known risk factors for gambling were measured at pre and post intervals.

The following graph demonstrated the changes in behaviors by percentage of youth prior to completion and after completion of the Stacked Deck Curriculum and two supplemental lessons.

## Self-reported risk factors for problem gambling among youth



Youth reported higher engagement with known gambling risk factors prior to completing the Stacked Deck program and two supplemental bonus lessons on: Gambling in Gaming and Problematic Internet Media Use and Building Resiliency.

As shown in the graph, less known risk factors for problem gambling were found after completing the Stacked Deck program and two supplemental bonus lessons on Gambling in Gaming and Problematic Internet Media Use as well as the lesson on Building resiliency.

# Gambling activities



Youth reported on their current engagement in gambling activities by frequency and duration. This information was gathered before and after completing the Stacked Deck prevention program and supplemental lesson. This chart demonstrates the combined percentage of reported engagement of gambling activities at the pre and post intervals as well as the percentage of change in the gambling activity.

<u>Gambling activity</u>	<u>Pre</u>	<u>Post</u>	<u>Change</u>
Betting on games of skill against other people	33%	22%	11%
Playing cards or dice for money	26%	15%	11%
Sports betting	24%	17%	7%
Lottery tickets & scratch off tickets	23%	13%	10%
Bingo	24%	14%	10%
Slot Machines	17%	8%	9%
Horse or dog races	17%	9%	8%
Internet gambling	21%	13%	8%
Social casino games	20%	11%	9%

**Overall, youth reported significantly LESS gambling activity after completing the prevention program**

# Gambling in gaming activities



Youth were asked open-ended questions regarding their experiences in activities and behaviors surrounding problematic gaming and gambling in gaming. Below are verbatim highlights of the most common youth experiences and behaviors surrounding problematic gaming and gambling in gaming.

Youth reported the following ways they gamble in video games:

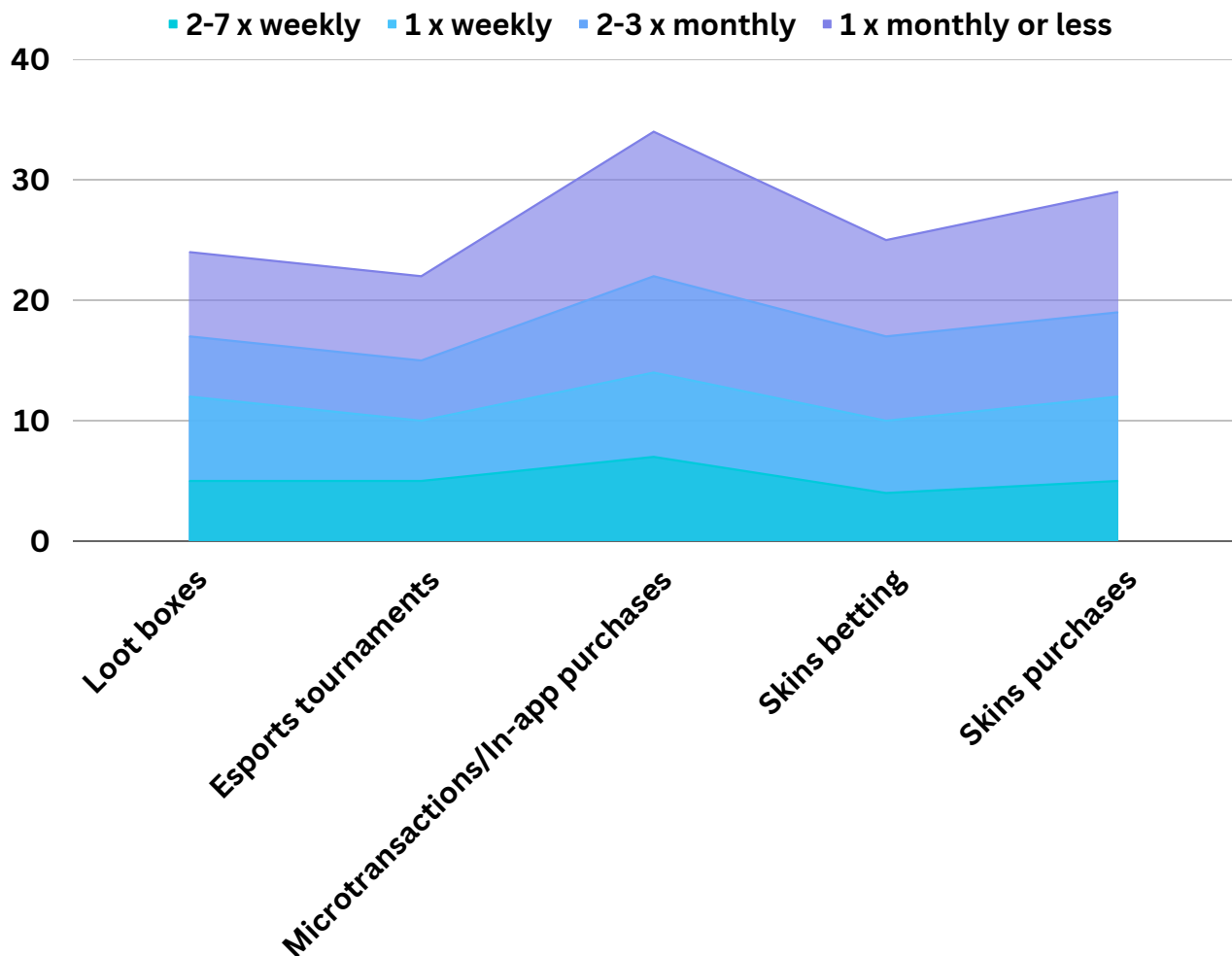
- “Buying in-game purchases, skins, or loot”
- “Buying things without knowing and leaving it all up to chance”
- “I go to the casinos inside video games, like in GTA 5, and spend money”
- “I bet my friends that I will win”
- “Depending on the game, some games whole point is to have a point system which you use for boxes and randomly pick items”
- “I don’t spend real money but I do take risks”
- “Sometimes I bet money or rare items on blackjack or dice”
- “Taking chances on RNG”
- “I bet with in game currency”

When asked how gaming may lead to problems in their life, youth responded:

- “Can cause you to be addicted to gaming”
- “Can cause you to be addicted to it/obsessed. My grandpa is obsessed and can’t stop gambling”
- “If you play games too much, you may not want to do other stuff”
- “It can lead to depression, drug abuse, anxiety, and severe debt”
- “It could affect your mental health, and relationships if you game too much. It could even lead to disorders anxiety, depression, etc.”
- “They can be addicting and lead you to playing them can make you do it every day and cause you to lose days of getting to do things”
- “They can affect your mental health in ways and may cause problems with friends or family”
- “You could spend all your money and start stealing money from family members”
- “You get lazy and don’t want to go to work. This an experience from someone I know”
- “You’re spending money that you most likely need and gaining less. Your family needs that money you need that money. It causes stress and making you wanting to do it over and over again, like a drug”

# Gambling in gaming

Prior to completing the Stacked Deck program and supplemental lesson on Gambling in Gaming and Problematic Internet Media Use, youth reported high frequency in activities associated with gambling in video games. This chart demonstrates the percentage they reported engaging in these behaviors.



After completing the supplemental lesson on Gambling in Gaming and Problematic Internet Use, youth reported the following change:

- **12% reduction in Loot boxes**
- **16% reduction in Esports tournaments**
- **20% reduction in Microtransactions/in-app purchases**
- **12% reduction in Skins betting**
- **16% reduction in Skins purchasing**

# Knowledge, attitudes, & beliefs: Gambling

Questions designed to examine youth’s knowledge, attitudes, and beliefs in gambling were asked to assess changes after youth completed the Stacked Deck Curriculum and two supplemental lessons on Gambling in Gaming and Building Resiliency. Below is a summary of the results.

Knowledge Content Area	Question	Pre-Correct Response	Post Correct Response	Change in Pre- & Post
Gambling Knowledge Questions	Most casinos make most of their money from.	55%	73%	18%
	Which age group has the highest rate of problem gambling?	36%	68%	32%
	Has gambling been around for thousands of years?	47%	76%	29%
	How does modern gambling differ from older forms of gambling?	52%	65%	13%
	In the United States and Canada, which of these is the most popular way to gamble?	40%	51%	11%
	Which of the following is associated with the highest rates of problem gambling?	50%	66%	16%
	Which of the following sets of lottery numbers have a greater probability of being selected as the winning combinations?	46%	78%	32%
	Which slot machine gives you a better chance of winning the jackpot?	54%	76%	22%
	A gambler goes to the casino and comes out ahead 75 percent of the time. How often has that person likely gone to the casino?	48%	57%	9%
	You go to a casino with \$100, hoping to double your money. Which strategy gives you the better chance of doubling your money?"	29%	52%	23%
	Which game can you consistently win money at if you use the right gambling strategy?	36%	69%	33%
Gambling Beliefs Questions	What are the odds that heads will come up on the next flip?	63%	76%	13%
	Which of the following is least likely to happen to the average person this year?	62%	78%	16%
	Which of these is a risk factor for becoming a person living with problem gambling?	47%	67%	20%
	Which best describes your belief about the benefit or harm that gambling has for society?	46%	68%	22%
	If you were to buy a lottery ticket, which would be the better place to buy it?	55%	74%	19%
Gambling Attitudes Questions	Gambling can become as addictive as drugs or alcohol.	74%	85%	11%
	How lucky are you? If your name and nine others were put into a hat and one was drawn for a prize, how likely is it that your name would be chosen?	68%	81%	13%
	Your chances of winning the lottery are better if you are able to choose your own number.	59%	79%	20%
	A positive attitude increases your likelihood of winning money at bingo or slot machines.	70%	81%	11%

**Overall, there was a positive increase in youth’s gambling knowledge, attitudes, and beliefs after completing the prevention program.**

# Knowledge, attitudes, & beliefs: Gaming



Questions designed to examine youth’s knowledge, attitudes, and beliefs in gaming were asked to assess changes after youth completed the Stacked Deck Curriculum and two supplemental lessons on Gambling in Gaming and Building Resiliency. The two tables below summarize the changes.

Knowledge Content Area	Question	Pre-Correct Response	Post Correct Response	Change in Pre- & Post
Gaming Knowledge Questions	Gaming can impact the brain by	44%	59%	15%
	What is problematic gaming?	55%	79%	24%
	What does the spectrum of gaming behavior mean?	49%	77%	28%
	How does gambling appear in video games?	47%	70%	23%
	Gaming can release hormone on our brain that can impact our moods	73%	94%	21%

Knowledge Content Area	Question	Pre-Responded Yes	Pre-Responded No	Post-Responded Yes	Post-Responded No
Gaming Beliefs Questions	Do you think gaming leads to any problems in your life?	22%	68%	30%	70%
	Do you gamble when playing video games?	8%	92%	10%	90%
	Do you think what you see on the internet impacts how you feel?	18%	72%	23%	77%
Gaming Attitudes Questions	Over the past three months, I felt the need to play games more often or for longer periods of time	29%	61%	19%	81%
	Over the past three months, I have been able to recognize forms of gambling in games which I have previously not thought of gambling.	36%	54%	57%	43%
	Do you plan to gamble on any game in the next three months?	26%	74%	10%	90%

**Overall, there was a positive increase in youth’s gaming knowledge, attitudes, and beliefs after completing the prevention program and supplemental Gambling in Gaming and Problematic Internet Media Use lesson.**

# Resiliency

Building resiliency has been shown to improve youth’s overall wellbeing and mental health as well as protect against risk-factors. Therefore, questions were designed to assess resiliency and mental health factors before and after completing the prevention program including the supplemental lesson on Building Resiliency. The following tables demonstrate the results at pre and post intervals.

## Resiliency skills building knowledge assessment questions

Questions	Pre-Correct Response	Post Correct Response	Change in Pre-& Post
The three parts of the brain are survival, emotional, and thinking	63%	74%	11%
I am in my resilient zone when I feel calm and can make good decisions	65%	59%	-6%
A resiliency tool is a skill I can use to calm down and reduce the effects of stress	66%	76%	10%
What are different skills to help reduce your anxiety?	45%	69%	24%
Toxic stress is intense and does not go away	40%	50%	10%
Learning to reduce my anxiety can assist me with making good decisions and taking healthy risks	71%	81%	10%
When I am feeling anxiety and depression, I may take unhealthy risks such as drinking, smoking or vaping, illicit drugs use, or gambling	30%	36%	6%

## Mental health symptoms/emotional awareness questions

Timeline	Question	Never	Almost never	Some-times	Often	Almost always
Pre-response	In the past three months, I felt anxious	22%	17%	29%	14%	11%
	In the past three months, I felt worried	22%	17%	29%	13%	11%
	In the past three months, I felt angry	16%	18%	32%	16%	11%
	In the past three months, I felt so angry I felt like throwing something	31%	21%	18%	11%	12%
	In the past three months, I felt sad	20%	20%	28%	13%	12%
	In the past three months, I could not stop feeling sad	40%	19%	19%	6%	9%
	In the past three months, I felt upset	22%	19%	31%	13%	8%
	In the past three months, I felt unhappy	24%	24%	29%	11%	7%
Post-response	In the past three months, I felt anxious	22%	24%	28%	13%	9%
	In the past three months, I felt worried	20%	21%	33%	14%	7%
	In the past three months, I felt angry	17%	23%	35%	11%	8%
	In the past three months, I felt so angry I felt like throwing something	29%	23%	28%	7%	7%
	In the past three months, I felt sad	18%	25%	32%	10%	7%
	In the past three months, I could not stop feeling sad	37%	26%	14%	8%	7%
	In the past three months, I felt upset	22%	23%	30%	12%	7%
	In the past three months, I felt unhappy	24%	27%	28%	11%	5%

Overall, there was a positive change in youth’s resilience and mental health symptoms/emotional awareness after completing the prevention program and supplemental lesson on Building Resiliency.

# Summary



Research shows that prevention is effective for strengthening protective factors while reducing risk factors. Thus, in an effort to achieve this the North Carolina Problem Gambling Program intentionally and purposefully added two supplemental lessons focusing on Gambling in Gaming and Building Resiliency in their prevention program. These lessons were delivered in combination with the 2nd edition of the Stacked Deck curriculum.

Overall, the program evaluation results demonstrated that the prevention program was found to be an effective prevention intervention for :

- Positively impacting knowledge, attitudes, and beliefs about problem gambling and problem gaming
- Decreasing known associated risk factors for problem gambling and problem gaming
- Supporting known resiliency factors amongst North Carolina middle and high school aged youth

## Teaching approach

Overall, the instructor-led modality demonstrated a higher rate of reduced risk factors for problem gambling and problem gaming amongst all organizations and schools.

Both the LMS modality and instructor-led demonstrated a positive change in youth's knowledge, attitudes, and beliefs regarding gambling and gaming behaviors.

It would be recommended to deliver the stacked deck curriculum and supplemental lessons with an instructor-led approach when feasible as this offers the highest change in behaviors. However, the LMS modality is a good alternative as well as it provides a reduction in risky and problematic behaviors while increasing knowledge related to gambling and gaming.



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**Thank you to all who contributed to the success of the Stacked Deck Program and two supplemental lessons on Building resilience and Gambling in Gaming and Problematic Internet Media Use.**

**This program evaluation demonstrated that this is an effective prevention program for problematic gambling in the state of North Carolina. Additional thanks to all the educators, community members, youth, families, staff, and caregivers who have been a part of these efforts during the 2022-2023 academic year and in previous years.**

