



# Preparing Nurse Practitioner Students to Deliver Adolescent Screening, Brief Intervention, and Referral to Treatment (SBIRT) for Substance Use

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## Background and Significance

Adolescent substance use has been identified as our nation's number one public health problem, contributing to preventable injury, illness, disability, and death. Screening, brief intervention, and referral to treatment (SBIRT) is an evidence-based clinical approach, designed to assist individuals in preventing or changing substance use behaviors before more serious problems develop. Universal SBIRT is recommended as part of routine health care, yet few health care professionals are prepared to deliver this service.

## Objectives / Aims

The purpose of this project was to 1) assess the feasibility of integrating Adolescent SBIRT into an advanced practice health assessment course in nursing, and 2) to determine whether a combination of education and clinical simulation would result in improved *competence* and *confidence* in the delivery of Adolescent SBIRT by nurse practitioner students in an advanced health assessment course.

## Methods

Sixty-seven nurse practitioner students, across a variety of specialty areas, were offered 1) a highly advanced, interactive computer simulation (*SBI with Adolescents*, Kognito, Figure 1), 2) a didactic lecture on prevention and SBIRT for substance use in primary care (Strobbe, 2014) and 3) a face-to-face clinical simulation, including interactive role-plays in group settings, based on materials prepared and provided by NORC at the University of Chicago. An incentive of 1% extra course credit was issued. Activities were conducted in accordance with an IRB waiver for clinical education.

SBIRT skills were scored automatically in conjunction with a computer simulation Assessment Challenge. Self-perceived competence and confidence were measured via pre- and post-survey items that focused on specific Adolescent SBIRT skills, using Likert-style questions. Two-tailed tests were applied at significance levels of  $\alpha=0.05$  with Bonferroni adjustments for multiple comparisons. Additional questions asked students to evaluate the program and their experiences.

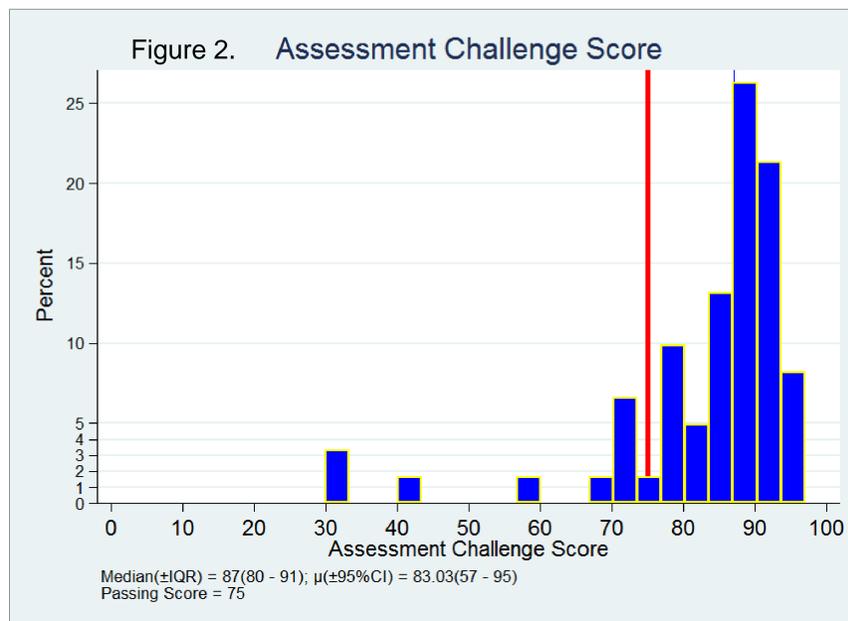
## Results

Of 67 nurse practitioner students taking an advanced health assessment course, 61 (91%) engaged in educational and clinical activities related to Adolescent SBIRT, and provided both pre- and post-survey data. The majority of students (74%) indicated that they had not received training in substance use screening prior to this course. Upon completion, 52 of 61 (85%) students achieved a recommended passing score of  $\geq 75$  (Figure 2). Significant improvements in self-reported competence and confidence were noted across all measured domains ( $p < 0.001$ , Table 1), and students responded positively to questions related to various elements of the program, and their experiences.

## Computer Simulation, Assessment Challenge, Competence and Confidence, Subjective Experience



Figure 1. *SBI with Adolescents* (Kognito). An interactive computer simulation provided guidance and feedback to nurse practitioner students as they worked with virtual adolescent patients on issues related to substance use.



## Change in Selected Pre- and Post-Survey Competence and Confidence Items

Competence	# + change % + change	p value
Asking adolescents about their alcohol and drug use	41 / 60 68%	$p < 0.001$
Providing personalized feedback about risk associated with drinking, drug use	46 / 61 75%	$p < 0.001$
Tailoring brief interventions to adolescent's motivational level	55 / 61 90%	$p < 0.001$
Helping adolescents identify benefits of cutting back or stopping use	48 / 61 79%	$p < 0.001$
Helping adolescents develop a personal plan for cutting back or stopping use	56 / 61 92%	$p < 0.001$
Referring adolescents with alcohol and drug problems to appropriate treatment	51 / 61 84%	$p < 0.001$
Arranging follow-up	53 / 61 89%	$p < 0.001$
Confidence	# + change % + change	p value
Ability to screen adolescents for substance use	41 / 61 67%	$p < 0.001$
Ability to provide brief motivational counseling for substance use	39 / 61 64%	$p < 0.001$
Ability to refer to additional services	35 / 60 58%	$p < 0.001$

## SELECTED RESPONSES TO QUALITATIVE QUESTIONS

### What did you like best about the course?

*"I really enjoyed being able to learn the material in three different environments. Each step reinforced the previous and seemed to really maximize memory and content retention. I'll remember the SBIRT course for a long time."*

### Please share at least one action you will take to change your professional practice / performance.

*"Making drug and alcohol screening part of my daily practice."*

## Conclusions and Implications

Adolescent SBIRT was successfully integrated into an advanced health assessment course. Nurse practitioner students demonstrated learning and reported significant increases in competence and confidence in the delivery of Adolescent SBIRT. Future efforts will focus on implementation and clinical outcomes associated with the delivery of Adolescent SBIRT in interprofessional settings.

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