Project Towards No Drug Abuse (TND)

University of Southern California
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Breakout Session: Topics

• Theoretical foundation of Project TND
• Evaluation research findings
• Project TND objectives, content, methods, and activities
• Fidelity of TND implementation
• TND dissemination

Background

• Very few effective drug abuse prevention programs that target senior high school-age youth (14-18) have been developed.
• For younger teens (middle school), drug abuse prevention programs based on social influences model have been most effective.
  – For older teens, a different approach is needed.
• Project TND is an effective drug abuse prevention program that targets high school age youth.
Project TND Awards and Recognition

- Considered a "model" program by:
  - National Institute on Drug Abuse (NIDA)
  - U.S. Department of Education
  - Substance Abuse and Mental Health Services Administration (SAMSHA): NREPP and CSAP
  - University of Colorado "Blueprints" Project
  - Health Canada
  - California Department of Education
  - Maryland Blueprints
  - U.S. Department of Defense

Project TND Model and Theory

The ABCs of Health Behavior Research

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antecedents</td>
<td>Behavior</td>
<td>Consequences</td>
</tr>
<tr>
<td>(e.g. intra-personal, inter-personal, environmental variables)</td>
<td>(e.g. smoking, unsafe driving, drug use)</td>
<td>(e.g. heart disease, cancer, accidents)</td>
</tr>
</tbody>
</table>
**Motivation-Skills-Decision Making**

Model of Problem Behavior

- **Motivation/Cognitive Misperceptions**
- **Social and Self-control Skills**
- **Decision Making**
- **Behavior:**
  - Violence-related
  - Drug use

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**Motivation**

In TND lessons (#2, 3, 8, 11), students:
- Examine their beliefs and perspectives
- Examine their ambivalence about drug use
- Clarify what kind of person they are and what they value
- Resolve self arguments

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**Behavioral Skills**

- Youth at high risk for drug abuse lack:
  - Self-control skills
  - Anger management skills
  - Pro-social listening and conversation skills
- Instruction in behavioral skills facilitates:
  - Bonding to variety of peer groups
  - Ability to seek social support when needed
  - Coping with stressful situations
Skill Development in TND

• Social skills
  – Session 1: Active listening. Students learn the importance of listening and other communication skills.
• Self-control
  – Session 9: Self-Control. Students learn how to match their behavior to different social situations.
• Coping

Decision Making in TND

• Session 12: Decision-Making and Commitment
  – Students examine the many choices they have about behaviors, including drug use.
  – They make a personal commitment regarding drug use (e.g., to think about the dangers of drug use, reduce or quit drug use, or continue to be drug free).

Target Audience for Project TND

• High school youth, ages 14-19, including males and females
• Students in regular and alternative high schools
• Youth from diverse cultural/ethnic groups (e.g., white, Latino/Hispanic, African American, Asian)
Objectives of the Program

- At the completion of this program, students will be able to:
  - Stop or reduce the use of cigarettes, alcohol, marijuana and hard drugs
  - Stop or reduce weapon carrying
  - State accurate information about environmental, social, physiological and emotional consequences of drug use and abuse
  - Demonstrate behavioral and cognitive skills
  - Make a personal commitment about drug use

Program Evaluation Research

Evaluation of TND

- 6 experimental (randomized) evaluation studies have been conducted since 1994.
- Studies have involved ethnically diverse groups of students from regular and alternative high schools, in urban, suburban, and rural areas.

<table>
<thead>
<tr>
<th>Design (Random assignment)</th>
<th>Implementers</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Program vs. control</td>
<td>USC health educators</td>
<td>Alternative* high schools (CA.)</td>
</tr>
<tr>
<td>2. Program vs. control</td>
<td>USC health educators</td>
<td>Regular high schools (CA.)</td>
</tr>
<tr>
<td>3. Program taught vs. self-instruction</td>
<td>USC health educators</td>
<td>Alternative* high schools (CA.)</td>
</tr>
</tbody>
</table>

* In California, alternative high schools are referred to as “continuation” high schools. Across the 3 studies, more than 2400 students participated.

Demographic Characteristics of Students in the Early TND Evaluations

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Study 1 (AHS)</th>
<th>Study 2 (RHS)</th>
<th>Study 3 (AHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Male</td>
<td>62</td>
<td>47</td>
<td>54</td>
</tr>
<tr>
<td>% Anglo</td>
<td>37</td>
<td>34</td>
<td>45</td>
</tr>
<tr>
<td>% Latino</td>
<td>46</td>
<td>38</td>
<td>42</td>
</tr>
<tr>
<td>% African American</td>
<td>8</td>
<td>26</td>
<td>5</td>
</tr>
<tr>
<td>% Asian</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>% Other ethnicity</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

NOTES: AHS=Alternative High School; RHS = Regular High School; N=2473

Baseline Behavioral Characteristics of Students in the Early TND Evaluation Studies

<table>
<thead>
<tr>
<th>Drug Use</th>
<th>Study 1 (AHS)</th>
<th>Study 2 (RHS)</th>
<th>Study 3 (AHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Using CIGARETTES</td>
<td>57</td>
<td>24</td>
<td>57</td>
</tr>
<tr>
<td>% Using ALCOHOL</td>
<td>64</td>
<td>36</td>
<td>63</td>
</tr>
<tr>
<td>% Using MARIJUANA</td>
<td>55</td>
<td>22</td>
<td>54</td>
</tr>
<tr>
<td>% Using HARD DRUGS</td>
<td>29</td>
<td>7</td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Violence</th>
<th>M</th>
<th>F</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>% WEAPON CARRYING</td>
<td>60</td>
<td>22</td>
<td>34</td>
<td>15</td>
</tr>
<tr>
<td>% VICTIMIZED</td>
<td>68</td>
<td>40</td>
<td>37</td>
<td>28</td>
</tr>
</tbody>
</table>

NOTES: AHS=Alternative High School; RHS = Regular High School
M=male, F=female
Drug use %: pertains to any use in last 30 days. “Hard drugs” includes stimulants, hallucinogens, cocaine, stimulants, and other drugs.
Violence %: pertains to any such behavior in the last 12 months. Weapon carrying includes guns and/or knives.
N=2473
Drug Use and Violence-Related Effects across the first 3 TND Evaluation Studies: Compares Reduction of Program Group(s) Relative to Control Group(s)

<table>
<thead>
<tr>
<th></th>
<th>Study 1 (AHS)</th>
<th>Study 2 (RHS)</th>
<th>Study 3 (AHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarettes</td>
<td>NS</td>
<td>NS</td>
<td>27%</td>
</tr>
<tr>
<td>Alcohol</td>
<td>7%</td>
<td>12%</td>
<td>9%</td>
</tr>
<tr>
<td>Marijuana</td>
<td>NS</td>
<td>NS</td>
<td>22%</td>
</tr>
<tr>
<td>Hard Drugs</td>
<td>25%</td>
<td>25%</td>
<td>26%</td>
</tr>
<tr>
<td>Victimization*</td>
<td>23%</td>
<td>17%</td>
<td>6%</td>
</tr>
<tr>
<td>Weapon Carrying*</td>
<td>21%</td>
<td>19%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Notes: AHS=alternative high schools; RHS=regular high schools; NS=not statistically significant; drug use refers to last 30 days; victimization refers to last 12 months; * among males only.

Recent TND Evaluation Studies (2000 to present)

<table>
<thead>
<tr>
<th></th>
<th>Design (Random assignment)</th>
<th>Implementers</th>
<th>Setting*</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>Program vs. control</td>
<td>USC health educators and trained classroom teachers</td>
<td>Regular and alternative high schools (CA.)</td>
</tr>
<tr>
<td>5.</td>
<td>TND vs. TND w/ social network focus vs. control</td>
<td>USC health educators</td>
<td>Alternative high schools (CA.)</td>
</tr>
<tr>
<td>6.</td>
<td>Program (regular teacher training) vs. program (enhanced training) vs. control</td>
<td>Trained classroom teachers</td>
<td>Regular and alternative high schools (across U.S.)</td>
</tr>
</tbody>
</table>

*Across 3 studies, more than 5700 students participated.

Demographic Characteristics of Students in Recent TND Evaluations

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Study 4 (AHS/RHS)</th>
<th>Study 5 (AHS)</th>
<th>Study 6 (AHS/RHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Male</td>
<td>52</td>
<td>62</td>
<td>48</td>
</tr>
<tr>
<td>% Anglo</td>
<td>18</td>
<td>11</td>
<td>41</td>
</tr>
<tr>
<td>% Latino</td>
<td>62</td>
<td>72</td>
<td>29</td>
</tr>
<tr>
<td>% African American</td>
<td>8</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>% Asian</td>
<td>8</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>% Other ethnicity</td>
<td>4</td>
<td>11</td>
<td>11</td>
</tr>
</tbody>
</table>

NOTES: AHS=Alternative High School; RHS=Regular High School; N=5757 across 3 studies
Key Findings from Recent TND Evaluations

Study 4:
- TND program had an effect on reducing hard drug use at 1-year follow-up.
- Fidelity of implementation (based on classroom observations) was comparable between USC health educators and trained classroom teachers.

Study 5:
- TND Network program (includes some activities taught with students in peer network groups) had effect on reducing substance use (marijuana, cocaine) at 1-year follow-up.
- TND Network was effective mainly for students with peer networks that did not use drugs.

Study 6:
- TND had effects on short-term outcomes (program-specific knowledge, beliefs, and coping skills) in program vs. control groups.
- Preliminary findings indicate more positive short-term outcomes in classrooms where teachers received enhanced training vs. where teachers received regular training.
Program Overview and Implementation

Program Delivery
- Includes 12 classroom-based lessons
  - Approximately 40-50 minutes each
- Implemented over a 4-week period (3-4 days per week)
  - Option: the program can be implemented twice a week for 6 weeks, on the condition that all lessons are taught.

Project TND Curriculum Outline
- Session 1: Introduction-Communication and Active Listening
- Session 2: Stereotyping
- Session 3: Myths and Denial
- Session 4: Chemical Dependency
- Session 5: Talk Show
- Session 6: Marijuana Panel*
- Session 7: Tobacco Basketball and Cessation*
- Session 8: Stress, Health, and Goals
- Session 9: Self-Control
- Session 10: Positive and Negative Thought and Behavior Loops*
- Session 11: Perspectives
- Session 12: Decision-making and Commitment

Note: * Three new lessons added to the TND-1 curriculum to comprise the current 12-session TND-2 curriculum.
Teaching Strategies: Socratic Method

- Emphasis on interaction of students with teacher, and students with each other
- Teacher’s use of questioning to elicit existing knowledge
- Students assemble facts and draw conclusions from facts
- Students tend to “own” the answers they produce, which enhances their beliefs against drug abuse

Methods: The T.N.D. Game

- Designed to:
  - Motivate student participation
  - Reinforce learning
  - Aid the teacher with classroom management
- Used as:
  - Previous session review at the beginning of class
  - Session summary at the end of class

Methods: Psychodrama (Talk Shows)

- Involves having a person behave like they would in a real world situation.
- Provides students with training in empathy.
- Allows students to better appreciate drug abuse consequences by experiencing a network of drug abuse-related social roles.
Methods: Role-Playing

- Involves having students practice how to handle social situations that they may experience in the future.
- Is used in session 9 (Self Control).

Additional Methods for Student Involvement

- Group discussion
- Student worksheets (e.g., character lists)
- Peer perspectives (e.g., cue cards)

Materials Needed for Session Delivery

- TND Teacher’s Manual and student workbooks
- TND Game board and pieces
- TND Game score sheets
- TND Video “Drugs and Life’s Dreams”
- Flip chart, white board, or overhead projector
- Role sheets
Fidelity in Project TND

- Process:
  - Interactive student involvement
  - Implementer enthusiasm
- Dosage: complete all 12 sessions
- Adherence: sessions taught as written (i.e., content and methods)
- Structure:
  - Delivery schedule of 3-4 days per week
  - Classroom-based (10 participants min.)

Dissemination of Project TND

Research to Practice: Selected Critical Issues

- Will "real world" settings adopt evidence-based prevention programs and implement them with fidelity?
- Will they achieve program effects?
- What type of training, technical assistance, and organizational capacity-building is necessary for effective implementation?
Project TND Dissemination

- Since 2001, program has been adopted by hundreds of organizations nationwide
- In 2005, we interviewed 120 organizations that had purchased TND ("early adopters"):  
  - 37% schools or districts
  - 48% community-based agencies
  - 15% other (including health/mental health depts.)

Sussman et al., 2001; 2003; 2005

Program Implementation by Early Adopters

- Program Setting*:  
  - 51% regular high school
  - 51% alternative high school
  - 24% community
  - 18% other (e.g., juvenile justice)
- Implementer:  
  - 30% classroom teacher
  - 42% prevention specialist or health educator
  - 26% therapist or counselor
- Training:  
  - 44% trained by USC certified trainer

* Respondents (n=120) could check more than one category

Perceived Student Responses to Project TND

- 72.2% Positive
- 8.3% Neutral
- 3.7% Negative
- 13.9% Mixed
- 1.9% Other

N=120
Project TND Dissemination Trial: Primary Research Questions

1. Is TND effective when implemented by high school teachers in "real world" settings?

2. What is the most effective model for training teachers and preparing schools?

Rohrbach, PI; Sussman, Co-PI; funded by NIDA (#R01-DA16090)

Project TND Dissemination Trial: 3-Condition Design

- Standard teacher training workshop
- Comprehensive implementation support
  - Workshop
  - Web-based Support
  - Coaching (on-site)
  - Technical Assistance
  - Organizational Consultation
- Delayed-intervention control

Study Sample

- 65 high schools (58 regular and 7 alternative); 2800 students
- Schools had at least 1 teacher who volunteered to participate in TND training and implement the program
- School size; mean enrollment was 1877 students for regular (grades 9-12) and 137 students for alternative high schools
- Student ethnicity:
  - 41% white
  - 29% Latino
  - 16% African American
  - 3% Asian
  - 7% Mixed
  - 4% other
Location of TND Dissemination Trial Sites

Process Evaluation: Teacher Data

- Sample: 79 teachers from 65 schools
- Gender: 51.8% female
- Ethnicity:
  - 80.3% White
  - 11.5% African American
  - 6.6% Latino
  - 1.6% Asian
- Average teaching experience: 15.3 years

Teachers’ Reactions to TND

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-training confidence: can do a good job (1-10)</td>
<td>8</td>
</tr>
<tr>
<td>Post-program confidence: did a good job (1-7)</td>
<td>6.1</td>
</tr>
<tr>
<td>Post-program: Liking of TND (1-7)</td>
<td>5.9</td>
</tr>
<tr>
<td>Post-program: Comfort w/ approach (1-7)</td>
<td>5.5</td>
</tr>
</tbody>
</table>
Teachers’ Reactions: Examples

- Liked the most about TND:
  - It was very easy to implement into our health curriculum.
  - Easy to follow lesson plans.
  - Games and discussion panels made the class fun and enjoyable.
- Liked the least about TND:
  - A little more training would have been helpful, to model how to teach the program.

Fidelity Assessment

- Program dosage
  - Self-reported mean completion of lessons = 2.9
  - Scale is 1=none of lesson, 2=part lesson, 3=full lesson
- Quality of delivery
  - In-class ratings of confidence, enthusiasm, student interest, interactivity, etc. by USC observer

Fidelity Results

<table>
<thead>
<tr>
<th>Fidelity Variable</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives of lesson met (1-7)</td>
<td>4.5</td>
</tr>
<tr>
<td>Teacher elicited responses (1-7)</td>
<td>4.1</td>
</tr>
<tr>
<td>Teacher enthusiasm (1-7)</td>
<td>4.8</td>
</tr>
<tr>
<td>Student interest (1-7)</td>
<td>4.6</td>
</tr>
<tr>
<td>Class control (1-7)</td>
<td>4.8</td>
</tr>
<tr>
<td>Global rating: how well it went (1-3)</td>
<td>1.7</td>
</tr>
</tbody>
</table>

N=99 teachers
TND Dissemination Trial: Immediate Student Outcomes

- Relative to controls, program groups had:
  - Weaker intentions to use marijuana and hard drugs in the future
  - Stronger anti-drug attitudes
  - Stronger belief in health as a value
  - Weaker belief in drug use myths
  - Higher program-specific knowledge scores
- The enhanced teacher training produced more positive outcomes (intentions, attitudes, knowledge) than did the regular training.

Taking Project TND to Scale: Summary

- TND is implemented in school and non-school settings
- Reactions to the program have been very positive
- Fidelity appears comparable to that in our previous trials (specialist-delivered)
- In "real world" school settings, immediate outcomes are achieved.
- Student outcome data suggests that teacher training workshop plus implementation support is better than workshop alone.