# A Formative Evaluation of the Dentists Fighting Nicotine Dependence (DFND) program to prevent adolescent tobacco use in Saudi Arabia

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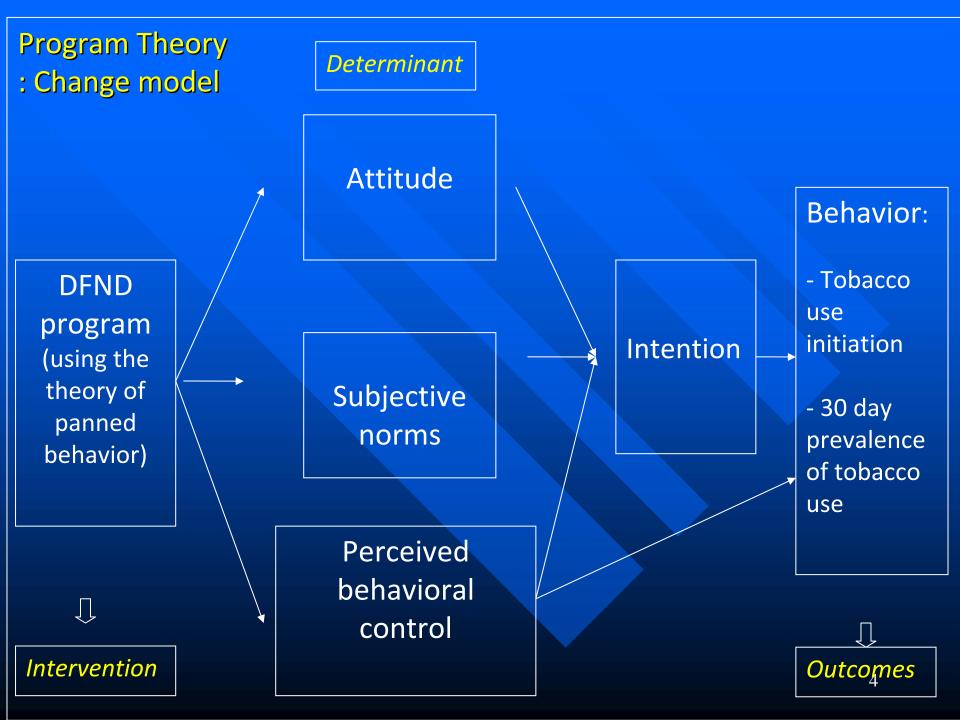
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# Background

- Adolescent tobacco use in SA:Results of a cross-sectional study in 2010
  - Associated with social influences
  - Clear gender differences in prevalence of and, social influences and attitudes towards tobacco use
- Need to develop gender specific programs for tobacco control
- Religious and moral beliefs were found as effective factors when advocating abstinence

#### **DFND**

- A school-based prevention program
- Provides tobacco prevention messages to help adolescents
  - Not initiate tobacco use
  - Improve tobacco knowledge
  - Enhance their level of control over tobacco use behavior
- Program goal/outcomes
  - Decrease in incidence of smoking initiation
  - Decrease in 30 day prevalence of tobacco use



## Conduct outcome evaluation

#### Research design

A quasi experimental design was applied using carefully matched comparison groups

#### Measures

- Attitudes, subjective norms, perceived behavioral control, behavioral intention, knowledge on tobacco, current tobacco use and tobacco use during the past 30 days
- Data collection
  - Using survey methods (Quantitative)
- Statistical analysis
  - T-test, paired t-test, structural equation model

#### Results

- A significant difference in
  - attitude (p<.001) and knowledge (p<.0001) between before and after the intervention in intervention groups,
  - knowledge (p<.0001) after the intervention between intervention and control groups.
- Significant decreases between before and after the intervention in intervention groups in
  - current tobacco use (p<.01)</li>
  - tobacco use during the past 30 days (p<.0001).</li>
- Only PBC is an important predictor of
  - tobacco use (t=3.3397)
  - tobacco use during the past 30 days (t=3.3141)

# Program implementation (Action model)

# Components of DFND

	Target determinants			
Classroom- curriculum	Attitudes, subjective norm, knowledge, skills (PBC)			
Video tapes	Knowledge, attitudes			
Media campaign	Knowledge			
Parent's newsletters	Subjective norm			
Drawing contest	Knowledge, attitudes, subjective norm			
Booklet	Knowledge			

#### Program Theory: Action Model

Program components	Plan	Actual implementation
Implementing organizations	Middle schools in Jeddah, SA: 4 male and female schools for intervention groups and 4 male and female schools for control groups	Implemented as planned
Implementers	Instructors: total 16: 8 females and 8 males. 2 instructors per class room	Adequately recruited and trained
Intervention protocol	DFND program guided manual	Administered with some difficulty
Associate organizations	Effective centralized school system; Directors of education and regional directors	Had all the support
Ecological context	Support from schools and parents	Had all the support
Target population	Middle school students in Jeddah, SA	Recruited as planned











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## Student and Parent Survey results

#### Student satisfaction survey:

- To assess the level of student satisfaction
- The average satisfaction score on curriculum sessions was 4.79/5 (0.64).
- Overall the average satisfaction score with the program was 4.72/5 (0.74)
- About 277 students (81%) listened to the school broadcast program regarding tobacco topics and their mean satisfaction score was 4.2/5(1.17).

#### Parent survey

 61.5% of the intervention group's parents responded to the parent survey

# Key lessons

- Applying a well developed evaluation design
  - identifies the factors that affect expected program outcomes
  - Helps uncover other issues or factors that further contribute to program success especially in achieving fidelity of implementation in practice

#### References

- 1. Ajzen, I. \* Madden, T.J. (1985). Prediction of goal-directed behavior: attitudes, intentions, and perceived behavioral control. Journal of Experimental Social Psychology, 22:453-474
- 2. Weiss, C.H. (1998). Evaluation 2nd edition, Upper Saddle River, NJ: Prentice Hall.
- 3. Weiss, C.H.(1999). Theory-Based Evaluation: Past, Present, and Future. NEW DIRECTIONS FOR EVALUATION. 76
- Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W.B. (2003). A review of research on fidelity of implementation: implications for drug abuse prevention in school settings. Health Education Research, 18(2): 237-256
- 5. Chen, H.T. (2005). Practical program evaluation. Assessing and improving planning, implementation and effectiveness. Thousand Oaks, Sage Publications.

Thank you