Why the Study?

- Few studies have examined the actual situations of first smoking experiences of adolescents
- About 80% who experimented with cigarettes did it before 18 years of age (CDC, 1998)
- Initial experimentation is a critical step in becoming a regular smoker (Dupre, Miller, Gold, & Rospenda, 1995)
- Asian-American middle- and high-school youth are at high risk for smoking initiation (Chen et al., 1999, Kershaw, 2001)
Objective

To explore the metamotivational states experienced during early smoking experiences of the Asian-American adolescents
Conceptual Framework

Why do adolescents initiate smoking?

- Smoking is an intricate human action
- Complex interaction between environmental, personal, and behavioral factors (Bandura, 1986, 1989)
- Personal variables:
  - Stable personal variables – age, gender
  - Fluctuating personal variables - moods, emotions, and metamotivational states
Reversal Theory (RT)

- A general theory of human behavior and human experience.
- RT explains why an individual can be in the same situation at different times but experience it differently and behave in different ways depending on motivation.
- Individuals possess an innate propensity to change or alternate between opposing states of mind known as “metamotivational” states.
RT – Metamotivational States

- Telic State
  - goal and future-oriented, serious minded
  - avoid high arousal, value tranquility and calmness

- Paratelic State
  - present-oriented, spontaneous, playful, and open
  - seek high arousal (Apter, 1989; O’Connell, 1988)
  - value stimulation and intensity (Apter, 2001)
RT – Metamotivational States (cont)

- **Conformist state**
  - rules provide structure and meaning and one is pleased to comply
  - absence of anger and rebelliousness.

- **Negativistic state**
  - rules of all kinds are experienced as restrictions
  - feel the desire to rebel against rules or conventions
  - anger is a frequent concomitant of the negativistic state
Reversal Theory Application

- Smokers more likely lapsed when they were either in paratelic or negativistic states and in situations where cigarettes were available and smoking was permitted (Cook, Gerkovich, O’Connell, & Potocky, 1995; O'Connell, Gerkovich, Bott, Cook, & Shiffman, 2000; O’Connell & Cook, 2001; O'Connell, Cook, Gerkovich, Potocky, & Swan, 1990).

- Adolescents lapsed during smoking cessation in paratelic state or when less effort was required to obtain cigarettes (Burris & O'Connell, 2003).
The Study

- We were interested in adolescents’ states during smoking initiation.

- We focused on telic/paratelic and conformist/negativistic states.
To determine if Asian American adolescents’ metamotivational states during smoking initiation mirrored the states of adults and other adolescents during smoking cessation, we tested the following hypothesis:

- Smoking initiation episodes more likely happen in the paratelic and negativistic states.
We investigated the differences among the smokers, resisters, and smoking naives

- Smokers
  - Experimenters
  - Current smokers
- Resisters
- Smoking naives
Methods (cont)

Sample

- N = 328
- 16-19 years of age
- Mean age = 17.2 yrs (SD = 1.13)
- Gender = F – 54.6%, M – 45.4%
- Grade level = 9th grade to a college senior
- Ethnicity: Chinese, Filipino, Korean, South Asian/Indian, Japanese, Vietnamese and multiethnic
Methods (cont)

Measures

- 25-item Demographic Questionnaire
- 22-item Smoking Opportunity Survey
- 12-item Telic/Paratelic State Instrument (O’Connell, & Calhoun, 1999)
- 4-item Rebellious State Scale (Cook et al., 1995)
Measures (cont)

- Temptation Episode Survey
  - Revised and developed into a paper-and-pencil survey
  - Assessed the metamotivational states
    - First Smoking Occasion
    - First Resisted Smoking Opportunity
    - Imagined First Smoking Occasion
Procedure

Adolescents were asked to describe the smoking, resisted, imagined experiences

- If smoked, the first smoking occasion
- If never smoked but had opportunity to smoke
- If never had the opportunity to smoke
Results

Distribution of Participants

- Smokers (36.9%, $n = 121$)
- Resisters (14.9%, $n = 49$)
- Smoking naïves (47.9%, $n = 157$)

SM/P (Serious-Minded/Playful) Subscale scores

- $M = 29.5$ ($SD = 6.66$, $N = 328$).
- 14% ($n = 46$) scored $< 23$ (0-22) = serious-minded state
- 86% ($n = 282$) scored $> 22$ (23-60) = playful state
Results (cont)

Serious-Minded Playful Subscale Scores

- No significant difference between the
  - smokers ($M = 28.28, SD = 6.43$) and
  - resisters ($M = 27.96, SD = 8.72$), $p = 1.0$
- Significant difference between
  - smokers ($M = 28.28, SD = 6.43$) and
  - smoking naives ($M = 30.91, SD = 5.79$), $p = 0.003$
- Smoking experiences most likely occurred in the playful states
- Smoking naives scored the highest
Results (cont)

AA/AS (Arousal-Avoidant/Arousal-Seeking) Subscale Scores

- $M = 20.45$ ($SD = 4.50$; $N = 328$)
- 27% ($n = 88$) scored $< 18$ = arousal avoidant
- 73% ($n = 240$) scored $> 17$ = arousal seeking
Results (cont)

AA/AS Subscale Scores

- No significant difference between
  - smokers ($M = 19.33, SD = 4.30$) and
  - resisters ($M = 18.57, SD = 5.30$), $p = .888$
- Significant difference between
  - smokers ($M = 19.33, SD = 4.30$) and
  - smoking naives ($M = 21.92, SD = 3.89$), $p < .001$
- Smoking naives scored the highest
Results (cont)

Rebelliousness Scale Score

Significant differences among the groups $F(2, 322) = 14.68, p < .001$.

- Post hoc analysis revealed no significant difference between the
  - smokers ($M = 14.64, SD = 2.95$) and
  - resisters ($M = 15.31, SD = 3.18$), $p = .627$.

- Significant difference between the
  - smokers ($M = 14.64, SD = 2.95$) and
  - smoking naives ($M = 16.65, SD = 3.19$), $p = <.001$. 
Temptation Episode Survey

- The actual, resisted, imagined first smoking experiences occurred in permissive social and physical environments
  - where friends and peers were smoking
  - where parents or adults were not present
  - where cigarettes were available with easy access
  - in the afternoon after school
Discussion

- The reversal theory pairs had never been used to predict smoking initiation before.
- The actual, resisted, imagined first smoking experiences most likely occurred when in paratelic and negativistic states.
- Results of first smoking experiences parallel that of smoking cessation when the individuals lapsed during paratelic state and in a highly tempting situation (Burris & O’Connell, 2003).
Discussion (cont)

- First smoking experiences occurred in permissive physical and social environments (Delorme et al., 2003; Friedman, Lichtenstein, & Biglan, 1985; Presti et al., 1992).
- There was little differentiation between the smokers and resisters.
- Those who resisted at initiation were as likely to be paratelic and negativistic as those who smoked.
- Factors that differentiated these two groups remain unclear.
Discussion (cont)

Major differences were in smoking naives

- Imagined first smoking experiences occurred in even more risk-taking and playful situations than actually occurred
- Overestimated smoking prevalence among their peers
- Had unrealistic notions about what was occurring
- Unprepared to resist the pressures to smoke
- Vulnerable to later initiation when faced with the opportunity to smoke
Limitations

- Convenience sample
- Study based on retrospective accounts of the adolescents
- Survey answers came from self-reports
- Questionnaires on smoking occasions not used before to explore initial smoking episodes and resisted smoking opportunities
Future Research

- Characteristics of the resisters and smoking naives
- Prevention and intervention strategies to capitalize or strengthen the adolescents’ capacities to resist
- Ethical obligations to intervene with risks behaviors
Practice Implications

- Consider importance of the physical and social environments and psychological states of adolescents when they smoke the first time.
- Emphasize modeling of appropriate refusal skills.
- Educate merchants about illegally selling cigarettes to minors.
- Inform the public the importance of keeping cigarettes away from adolescents.
Conclusions

- The first study to look into the first smoking experiences of Asian American adolescents.
- The first to use Reversal Theory pairs as a framework for smoking initiation.
- Beginning perspectives of adolescents who resisted the first smoking opportunity and the views of naïve smokers.
- Contribution to research literature on smoking initiation.
Thank you!
Questions/Comments