

Parent Prevention Communication Profiles and Adolescent Substance Use: A Latent Profile Analysis and Growth Mixture Model



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- Millions each year are spent on the prevention of the consumption of illegal substances.
- Adolescents remain at risk for early onset of use.
- The typical pattern tends to include...

a shift in early
adolescence
from anti-
substance
attitudes
and norms



to more pro-
substance
attitudes and
norms



to early
experimentation



Parents— the anti-drug?


Parents
Matter

- Interventions involving parents decrease teen substance use.
- Parents exert an influential role in adolescent substance use behavior and this influence tends to mediate the effects of peer influence on teen consumption and misuse of substances.
- Findings have been inconsistent
- Typically cross-sectional studies

Theory



- **Primary Socialization Theory** (Oetting & Donnermeyer, 1998) suggests that influential role models, such as parents, may influence adolescent substance use perceptions and behaviors through their speaking favorably or unfavorably about substance use or those who use, shaping cognitive expectancies and attitudes, and establishing norms of behavior.

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- No “one size fits all” approach to providing prevention messages to youth about substance use.
 - A possible explanation for some contradictory findings regarding the efficacy of parent-child communication in preventing substance use might stem from the variety of approaches parents take when communicating prevention messages.

Previous Research

- Presence/absence of parent-teen “drug talks” and frequency.

- ***General expressiveness or openness in a family’s communication environment***
 - ***Setting the stage for prevention discourse***

- The degree to which families create a climate in which all family members are encouraged to participate in unrestrained interactions about a wide array of topics (Koerner & Fitzpatrick, 2002, p. 85).

Substance Specific Prevention Communication

- Most recently, there has been more focused investigation of **substance-specific prevention communication (SSPC)** (Kam & Yang, 2013; Miller-Day & Kam, 2010; Reimuller, Hussong & Emmett, 2011)
- **Direct or indirect prevention messages that focus on issues related to substances and substance use that may occur on an ongoing basis or at a few situated times during an adolescent's development** (Kam, 2011; Kam, Castro & Wang, 2014; Reimuller et al., 2011; Shin, Pettigrew, Miller-Day, Hecht, & Krieger, 2014)

Parent Prevention Profiles



- Does “one size fit all” in parent prevention discourse? Or are there a variety of parent prevention profiles?

Goals of this Study

Parent Prevention Profiles?

- To determine if distinct parent “prevention communication” profiles emerge when using SSPC and general family communication expressiveness as prevention communication indicators.

Does it Matter?

- To examine if profiles have differential effects on adolescent substance use over time.



Methods

Methods

Sample

- Part of a randomized control trial (kiR) in rural U.S.
- Randomly assigned Control Schools (N = 11) used in this study
- 784 students
 - 47% Female
 - 92% Caucasian
 - Mean age = 12.3 years (SD = .51)
- **3 waves of data collection**
- **Surveys**
 - **Wave 1: beginning of 7th grade**
 - **Wave 2: end of 7th grade**
 - **Wave 3: end of 8th grade**

Measures

□ **General Family Communication**

- **Family Communication Environment Inventory (Fitzpatrick & Richie, 1994).**
- **17 items**

□ **Substance Specific Prevention Communication**

- **Targeted Parent-Child Communication about Alcohol Scale (Miller-Day & Kam, 2010). Adapted to assess messages about alcohol, tobacco, and other drug use.**
- **Frequency of a variety of parental prevention messages**

Measures

□ **Substance use**

□ **Lifetime use (e.g., Hansen & Graham, 1991)**

- **Alcohol**
- **Smoking Tobacco**
- **Chewing Tobacco**

Missing Data

- We examined the impact of data “missingness” influenced growth factors on substance use.
- Across all substances, types of missingness did not significantly influence growth factors.

Data Analysis

Latent Profile Analysis

- To determine if distinct parent “prevention communication” profiles emerge when using SSPC and general family communication expressiveness as prevention communication indicators.

Growth Mixture Model

- To investigate youths’ lifetime substance use trajectories over the 3 waves as a function of these latent profiles

Results

Results

LPA

- 4 Profile Model Solution
 - ▣ ***Passive-Silent (36%)***
 - ***Lowest frequency of SSPC, Lowest expressiveness***
 - ▣ ***Active-Silent (15%)***
 - ***High frequency of SSPC, Low expressiveness***
 - ▣ ***Passive-Open (31%)***
 - ***Low frequency of SSPC, high expressiveness***
 - ▣ ***Active-Open (18%)***
 - ***Highest frequency of SSPC, highest expressiveness***

Model Fit Indices

Table 1. *Model Fit Indices for 1- to 5-Class Solutions of Parent Prevention Communication Profiles*

Model	Loglikelihood	BIC	Adjust BIC	LMR	BLRT	Entrop
1-profile solution	-30714.64	61762.49	61603.72	N/A	N/A	N/A
2-profile solution	-29036.06	58578.61	58337.27	3337.89**	3357.16***	0.91
3-profile solution	-28514.42	57708.61	57384.71	1037.28	1043.27***	0.87
4-profile solution	-28192.94	57238.91	56832.5	639.29	642.98***	0.90
5-profile solution			Not Well Identified			

Note. Bold indicates best fit. Lowest

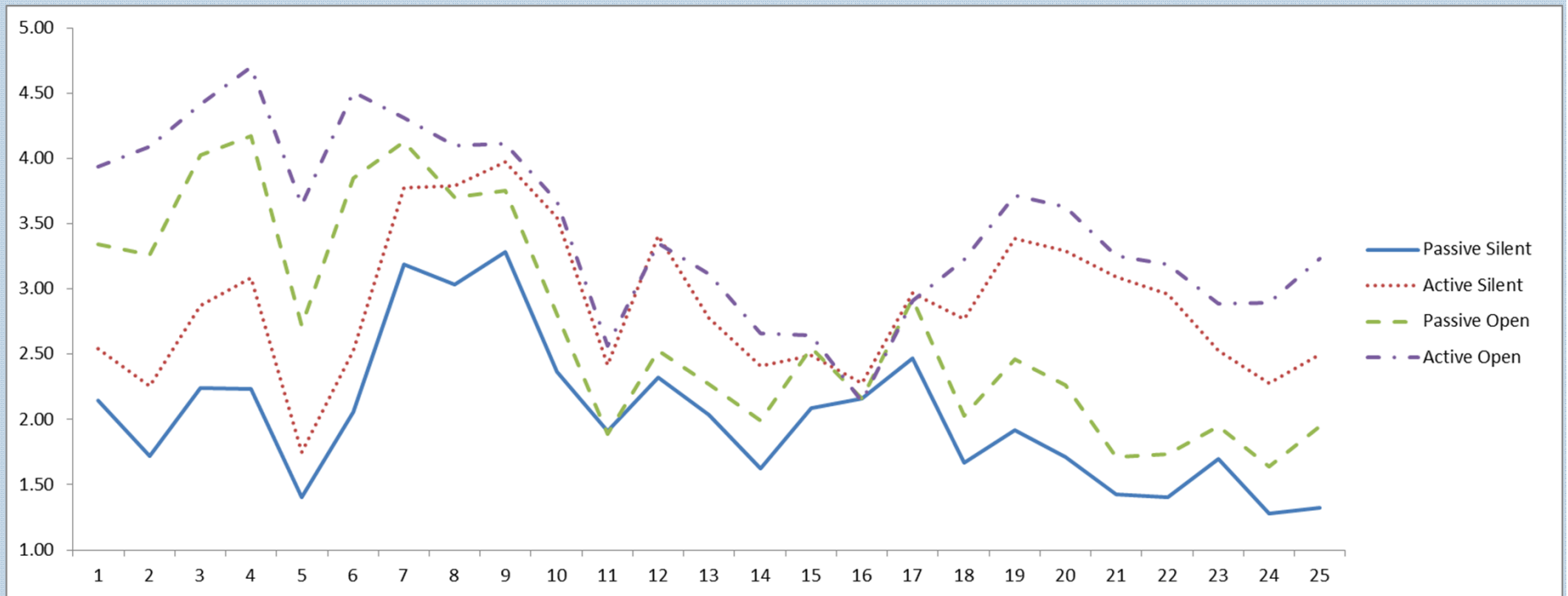
BIC: Bayesian information criterion

LMR: Lo-Mendall-Rubin likelihood difference test

BLRT: Bootstrap Likelihood ratio test

** < .01, *** < .001

Figure 1. Profile Plots for General Family Communication (FC) and SSPC Variables



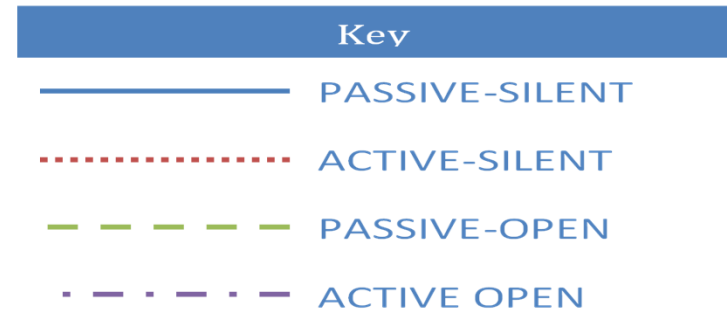
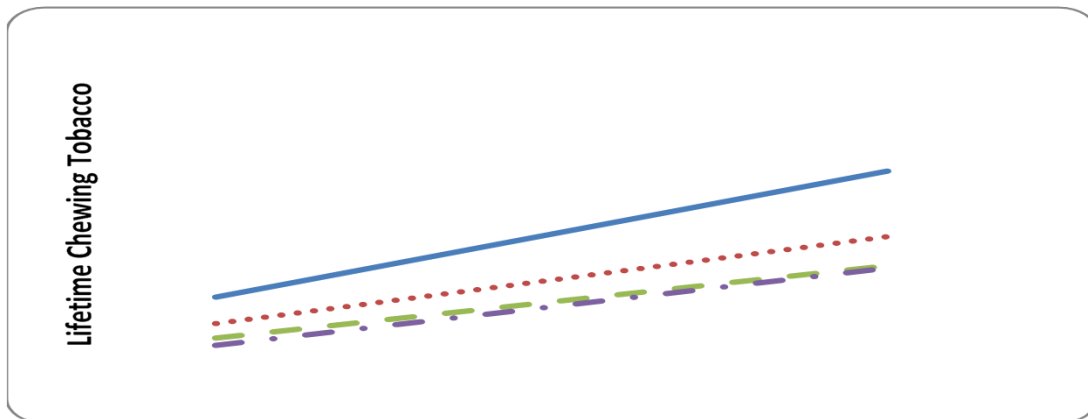
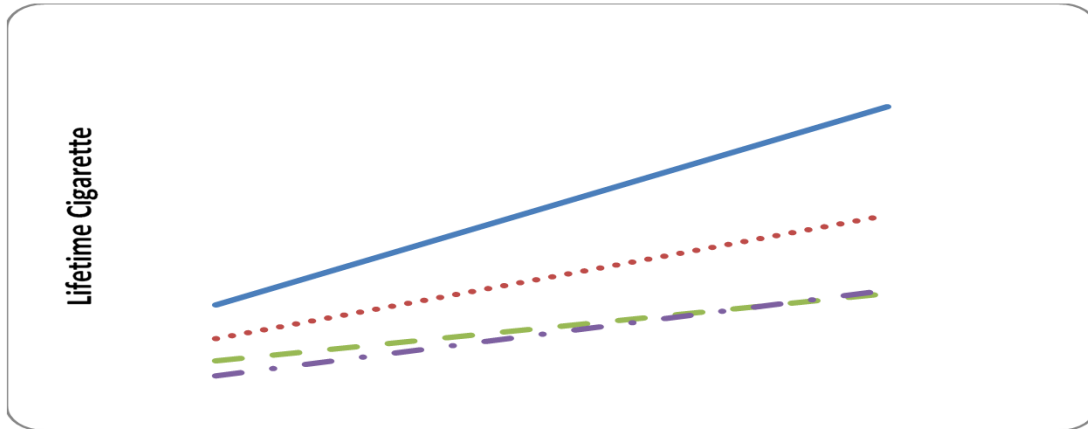
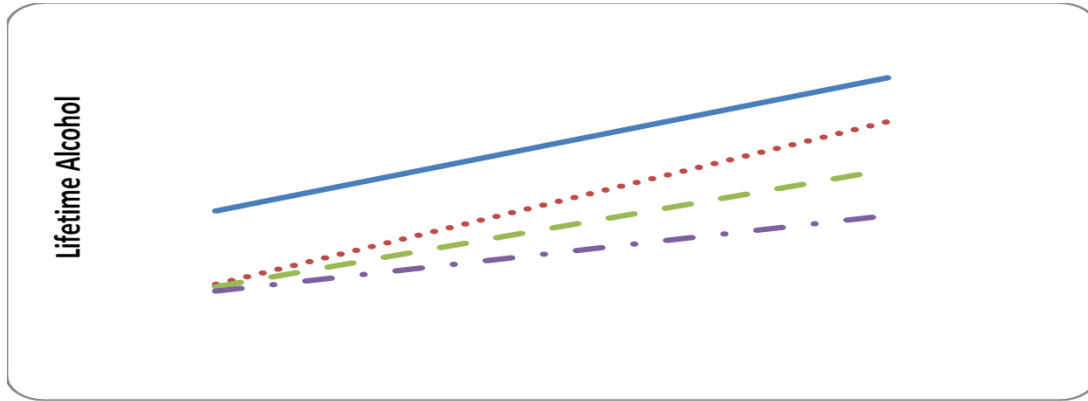
Note. Numbers in x-axis are corresponding to item numbers for measures. Numbers in the y-axis are corresponding to item means.

Results

Growth Mixture Models

- Substance Use Trajectories
 - ▣ ***A trend toward increased alcohol, smoking, and chewing tobacco over time***
 - ▣ ***Different rates of use observed depending on parent prevention communication profile.***

Figure 2. Trajectories for lifetime substance use



Results



- Average rate of lifetime alcohol use in Active-Silent and Passive-Silent families increased at a more rapid rate than Active-Open profile.
- The slope in the Passive-Silent profile was statistically higher than slopes in Active-Open or Passive-Open profiles for smoking tobacco.
- Not statistical differences for chewing tobacco.
- The Passive-Silent Profiles (36% of sample) presented the highest risk

Discussion



- ❑ One size does not fit all.
- ❑ 4 discrete profiles of parent prevention communication
- ❑ Parental prevention communication is consequential
- ❑ Passive-Silent profile demonstrated the most overall alcohol and tobacco use, as well as the fastest rates of increase in use over time.

Key Points



- Being active (frequent SSPC) is better than not addressing substance use at all or employing prevention communication infrequently.
- Maintaining expressive family communication is better than being silent.
- Facilitating expressive family communication while also engaging in SSPC is better than either one independently.

Thank you

