

Music Preference as a Mediator Between Ethnicity and Perceptions of Acceptability and Harm with Substance Use

2014

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MUSIC PREFERENCE AS A MEDIATOR BETWEEN ETHNICITY AND
PERCEPTIONS OF ACCEPTABILITY AND HARM WITH SUBSTANCE USE

by

DEEDRA K. DE KEMPER

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Psychology
in the College of Sciences
and in The Burnett Honors College
at the University of Central Florida
Orlando, Florida

Spring Term 2014

Thesis Chair: Dr. Chrysalis Wright

DEDICATION

For my Mom and Dad. You have supported me through all the upheaval, all the stress and all the success. Without your faith in me I would have never begun this journey. I hope I continue to make you proud as I begin the next stages of my life. All my life you have taught me to be capable and strong. You are amazing, and I dearly love you both.

ACKNOWLEDGEMENTS

I would like to express my gratitude to Dr. Chrysalis Wright. Dr. Wright's amazing dedication to research and her students is inspirational. This thesis would not have been possible if I had not landed in your Statistical Methods class. Thank you, Dr. Wright, for making research accessible to your students, for inspiring interest and enjoyment in your classes, and for making the research process achievable. Your praise and faith in me has been invaluable.

ABSTRACT

The purpose of this study was to examine the interaction between substance use messages in music media and how it impacts perception of substance and current substance use for different ethnicities. Four hundred and eighty four participants were recruited from a large southeastern university. Participant ethnicities included Caucasian, Hispanic, African American and Asian. This study examined frequency of substance use messages in popular music lyrics and music videos, along with participant self-reported ethnicity and, rates of substance use and perceived risk from substance use. Differences in perception of risk and current substance use were indicated between Caucasian and African American participants. Interestingly, an inverse relationship between exposure to substance use messages and perception of risk of harm from substance use was noted, with more frequent exposure being correlated with greater perceived risk and lower current substance use. Regression analysis indicated that ethnicity predicted frequency of substance use messages in music media, and exposure to substance use messages predicted both perception of risk of harm from substance use and current substance use, supporting the hypothesized role of music as a mediator between ethnicity and substance use.

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CHAPTER ONE: INTRODUCTION

Substance use is a particular behavior that has been associated with rebellious music choices (ter Bogt, et al., 2012). The content of popular music often includes references to substance use, which may have influenced the listeners' decisions regarding substance use (Christenson, Roberts & Bjork, 2012; Diamond, Bermudez & Schensul, 2006; Herd 2008; Markert, 2001; Mulder et al, 2009; Primack, Douglas & Kraemer, 2009; Slater & Henry, 2013). Studies have analyzed the content of drug references in popular music for trends in substance use portrayals in songs (Christenson et al, 2012; Diamond et al, 2006; Herd, 2008; Markert, 2001; Primack et al, 2009). Additionally, researchers have found correlations between music choices and rate of substance use among adolescents and various youth cultures, both in the United States and in other countries (Furr-Holden, Voas, Kelley-Baker & Miller, 2006; Kelly et al, 2013; Lim, Hellard, Hocking & Aitken, 2008; Lim, Hellard, Hocking, Spelman & Aitken, 2010; Mulder et al, 2009). While much of the research on music preference and substance use has looked at differences in gender, little research has considered differences based on ethnicity. Research on the different ethnic groups revealed differences in trends of substance use among African Americans and Caucasians (Stern & Wiens, 2009), and African Americans and Asian Americans (Thai, Connell & Tebes, 2010). The purpose of this study was to explore a potential relationship between music preference, ethnicity, and substance use. The hypothesis proposed that differences in substance use and perception of harm from substance use between African American, Caucasian, Asian, and Hispanic ethnic groups would be mediated by music preference (see Figure 1). For this study substance use included tobacco and alcohol, as well as illicit drug use.

Substance Use Lyrics in Music

Music and music media are a nearly constant aspect of American life, from listening to the radio, watching music videos, attending concerts, going to bars, or even walking through a department store. As music itself has changed in form over the last decades, so has its content. A review of the top billboard songs over the course of four decades showed substantial increases in references to substance use (Christenson et al, 2012). Substance use messages in rap music has increased from being included in 11% of the songs in the early 1980's to 69% of the songs on the late 1990's (Herd, 2008). High school students are exposed to an average of 27 cannabis references in popular music each day (Primack, et al, 2009). An analysis of ecstasy referenced in rap music found that 69 songs between 1996 and 2003 referenced the drug (Diamond et al, 2006).

However, drug references in music are not always positive. Diamond, Bermudez, and Schensul (2006) found that while 35 of the rap songs portrayed ecstasy positively, 19 had ambiguous messages, and 15 had clearly negative messages about ecstasy. One study found that marijuana and cocaine were the most frequently mentioned drugs in rap songs, with positive attitudes toward drugs increasing and negative attitudes in songs decreasing from 1979 to 1997 (Herd, 2008). Heroin and cocaine were generally portrayed negatively in rap and heavy metal music; hallucinogens have been portrayed far more negatively than positively in music since the 1980's (Market, 2001). Until the 1990's, marijuana was portrayed fairly positively, but since then the attitudes of the songs have become more divided between positive and negative feelings toward the drug (Market, 2001).

Substance Use and Music Genre Preference

Many researchers around the world have considered correlational links between music genre and substance use. A study of Dutch adolescents found that pop and classical music was

associated with less substance use, hardcore punk and techno as well as reggae music was associated with more substance use (Mulder, 2009). Adolescents who preferred pop and adult oriented music were also less likely to perceive that their peers are using drugs, whereas those who prefer hard rock were more likely to perceive that their peers were using drugs (Mulder, 2010). Music festivals offered researchers an opportunity to further examine the correlations between drug use and music preference trends, finding that rap, heavy metal, and dance/ house music listeners reported higher rates of substance use; those who preferred pop or rock music reported lower rates of substance use (Lim et al., 2008; Lim et al., 2010).

Highlighting the importance of understanding substance use trends and music preference, a study of impaired driving following an electronic music dance event found that about 2/3 of attendees who used drugs or alcohol intended to drive following the event (Furr-Holden et al., 2006). Likewise, music festival attendees reported more illicit drug use than the general population of the same age, making them a specific risk group (Lim et al., 2008; Lim et al., 2010). The most common drugs used among Australian music festival attendees are, from highest to lowest, cannabis, ecstasy, speed/amphetamine, hallucinogens, cocaine, and injected drugs (Lim et al., 2010). Using knowledge of the correlations between music, substance use and impaired driving, groups with higher risk of substance may be more effectively targeted for impaired driving interventions.

Music and Peer Influences on Substance Use

Music preference played a role in forming friendships in adolescence, with mutual friends having a high similarity in overall and specific music preferences (Selfhout, Branje, ter Bogt & Meeus, 2009). Adolescents whose peers participated in substance use were more likely to participate in substance use themselves (Miranda, Gaudreau, Morizot & Fallu, 2012).

When adolescents listened to music related to higher substance use they tend to seek friends who listen to similar music (Selfhout et al, 2009). Adolescents likely perceived that these friends were more likely to participate in substance use, which reinforced substance use as normal and increased the desire for substance using peers (Miranda et al, 2012; Slater & Henry, 2013)

Ethnicity and Substance Use

Substance use may be viewed differently by different ethnic groups. Stern and Wiens (2009) studied differences in substance use among African American and Caucasian adolescents. Caucasian adolescents reported higher rates of tobacco, alcohol, and inhalant use compared to African Americans (Stern & Wiens, 2009). No significant difference in use of marijuana, cocaine, hallucinogen or ecstasy use was found (Stern & Wiens, 2009). However, African Americans perceived tobacco use to be more wrong than Caucasians perceived it to be (Stern & Wiens, 2009). Strong racial identity among African Americans may help play a protective role against substance use, especially when in a predominantly Caucasian environment (Stock, et al., 2013).

A study comparing substance use differences among Asian American adolescents and other ethnic groups found no significant differences except that Asian American adolescents used substances more than African Americans (Thai, et al, 2010). Substance use is counter to the stereotype of Asians being the model minority, with even Asians believing that most Asians do not use drugs (Hunt, Moloney & Evans, 2011). While, Asian adolescents have several ways to balance substance behaviors and their Asian identities (Hunt, et al, 2011), peer substance use was a potential risk factor for substance among Asian adolescents more than other ethnicities (Thai, et al, 2010).

Ethnic influences and music preference both influence substance use. This study included African American, Caucasian, Asian and Hispanic groups for comparing attitudes regarding substance use. While trends in music genre selection and substance use have been found in many studies, the single common trend among the various studies has not been found. Unlike previous research, which appeared to focus primarily on adolescents' substance use trends or on substance use at music events, such as large music festivals or rave events, this study focused on the substance use habits of emerging adults. It was hypothesized that differences in substance use and perception of harm from substance use between African American, Caucasian, Asian and Hispanic ethnic groups would be mediated by music genre exposures to drug use.

CHAPTER TWO: METHOD

Participants

Data was collected from 484 participants from a diverse southeastern University. Participants identified their ethnicity as Caucasian (64.8%, $n = 300$), Hispanic (14.5%, $n = 67$), African American (12.5%, $n = 58$), and Asian (8.2%, $n = 17$). A total of 21 participants were removed from this study because they identified themselves as either American Indian/Alaska Native ($n = 3$) or other ($n = 18$). Subgroups this small inhibit the ability to make comparisons between groups. The age of the participants ranged from 18 to 59 years, with the majority being 18 to 21 years (86.2%, $n = 399$). Three hundred and twenty one participants were female (69.3%) and 142 participants were male (30.7%).

Measures

Demographic Questionnaire

Participants are answering 25 questions that assess their age, racial and ethnic background, immigration status, gender, year in college, grade point average, plans following graduation, parents' marital status, and relationship status.

Music Exposure to Drug Use

Participants rated 25 music artists on how much they liked the artists, how frequently they listened to the artists, and how often they were visually exposed to the artists (through music videos, television programs, movies, etc). Ratings ranged from 1 (*extremely dislike*) to 5 (*don't know this artist*) for how much they like the artists and 1 (*never*) to 5 (*daily*) for how often they listen to the artists or watch the artists.

Exposure to drug content in music lyrics and corresponding videos was based on measures of content analysis using the frequency method for five songs performed by artists of

interest using two independent raters. Artists of interest were selected based on participants responses to how much they liked each artist, with the top 10 artists selected. Participants reported that they liked (1) Eminem, (2) Beyonce, (3) Rihanna, (4) Katy Perry, (5) Jay-Z, (6) Drake, (7) Taylor Swift, (8) Adele, (9) Red Hot Chilli Peppers, and (10) Usher the most of the 25 artists they were presented. Songs for each artist of interest were selected from the top-40 charts that had been given air play on radio stations and music television.

Raters coded for the frequency of the following drug related references: (a) drug use behavior and body language (e.g., smoking marijuana, pill consumption, injection of needles, hand gestures referencing drug use, drug use implied, drug use explained), (b) drug use language (e.g., about plans or desires to use drugs, talk about drug use that has occurred, talk toward the use of drugs, advice regarding the use of drugs, drug use as a goal, drug selling as a goal, manufacturing of drugs as a goal), and (c) violent messages (e.g., violence related to drug use, manufacturing, or selling). This technique was modified from a similar method that was implemented by Collins, Martino, Elliot, and Miu (2011) in an examination of exposure to sexual content on television. More recent research has used a similar technique to examine content within current popular music and its relation to sexual behaviors (Wright, 2013). Inter-rater reliability for the current study was significant, $r(162) = .82, p < .001$.

Exposure variables were then created for exposure to drug related references via lyrics and videos by multiplying self-reported listening and viewing habits of each of the above artists by the average content contained in song lyrics and music videos. This technique, too, was modified from that used by Collins et al. (2011) and was recently used to assess sexual content in music (Wright, 2013). Because participants in the current study reported listening to a variety of music, rather than specific music genres, total exposure variables were created by summing the

lyrical and video content across the artists that participants' reported exposure to. The total exposure variables for music lyrics and videos were used in analysis.

Substance Use Risk

Participants' perception of risk associated with substance use was measured by presenting participants with 18 drug use scenarios such as "smoke one or more packs of cigarettes per day," "try cocaine once or twice," "use hallucinogens regularly," and "try prescription drugs without a prescription once or twice." For each of these options participants respond to the question "How much do you think people risk harming themselves (physically or in other ways) if they.." on a scale of 1 (*no risk*) to 4 (*great risk*). These items were modified from the Student Survey of Risk and Protective Factors – Perceived Risk of Drug Use Scale (Arthur, Hawkins, Catalano, & Pollard, n.d.). Alpha reliability for the current study was .88. Items were summed to derive at a total substance risk score that was used in analyses. The complete questionnaire can be found in Appendix B.

Recent Substance Use

Participants were asked to report their frequency of substance use in the past 12 months on a scale of 1 (*never*) to 6 (*daily*) for 10 different types of substances, such as tobacco, alcohol, salvia and ecstasy. These items were modified from Stern and Wiens (2009). Alpha reliability for the current study was .71. Items were summed to derive at a total substance use score that was used in analyses. The complete questionnaire can be found in Appendix C.

Procedure

The current study was submitted to the IRB for review and was approved as exempt. The approval letter can be found in Appendix A. The questionnaire was entered into the University of Central Florida's Sona System, which was used to collect data.

All participants read an explanation of research prior to completing the online questionnaire. Participants took on average 12.00 minutes to complete the questionnaire. Participants were asked questions about their music preferences and listening habits followed by questions regarding their substance use attitudes and behaviors. Participants answered questions related to their demographic information last.

Preliminary analyses indicated that missing data for the current study was less than 3%. Therefore, a simple mean substitution imputation method was used (Kline, 2005). This method involves replacing the missing data with the overall mean value for the variable. There is the possibility that replacing missing data in this manner can distort the distribution of the data. However, comparison of variable distributions before and after imputation indicated that this method had no detectable effect on the data. The new data set was used in analyses.

CHAPTER THREE: RESULTS

Preliminary analyses indicated that missing data for the current study was less than 3%. Therefore, a simple mean substitution imputation method was used (Kline, 2005). This method involves replacing the missing data with the overall mean value for the variable. There is the possibility that replacing missing data in this manner can distort the distribution of the data. However, comparison of variable distributions before and after imputation indicated that this method had no detectable effect on the data. The new data set was used in analyses.

The following sections are used to describe the analysis conducted to complete the study objectives. The sections include: (a) intercorrelations of study variables, (b) analysis of variance to determine if ethnic differences exist for substance use risk and current substance use, and (c) a Test of Joint Significance to test the mediation model of ethnicity influencing exposure to drug use references via music lyrics and music videos, which, in turn, impact substance use risk and current substance use.

Intercorrelation of Study Variables

Intercorrelation of study variables were first conducted. Substance references in music lyrics were positively correlated with substance use references in music videos and with recent substance use. Perceived risk associated with substance use was negatively correlated with substance use references in music lyrics. A positive correlation was indicated for African American participants and substance references in music videos, as well as perceived risk of drug use. African American participants were negatively correlated with recent substance use. On the other hand, Caucasian participants were negatively correlated with substance use references in music videos and perceived risk with substance use. Caucasian participants were positively correlated with recent drug use. No significant correlation between Asian or Hispanic participants were found for recent substance use, perceived risk of substance use, or substance

use references in music lyric or videos. Intercorrelations of study variables are presented in Table 1.

Perception of Substance Use Risk and Frequency of Substance Use

An analysis of variance (ANOVA) between ethnicity and perceived risk associated with substance use indicated statistically significant difference between groups, $F(3, 459) = 5.22, p < .001$. A Tukey post hoc test revealed statistical significance differences for substance use risk between African American and Caucasian groups. No significant differences for perceived risk associated with substance use were indicated for Asian or Hispanic groups. Descriptive statistics for ethnicity and substance use risk can be found in Table 2.

A second ANOVA was conducted between ethnicity and frequency of recent substance use. Results indicated statistically significant differences between groups, $F(3, 459) = 3.51, p = .015$. Post hoc analysis revealed statistically significant differences for substance use totals for African American and Caucasian groups, whereas no statistically significant differences in drug use totals were indicated for Asian or Hispanic groups. Descriptive statistics for ethnicity and substance use can be found in Table 3.

Mediation Model of Ethnicity, Drug Use Exposures in Music, and Substance Use and Substance Use Risk

To test the hypothesis that music drug use exposures via lyrics and videos mediate the relationship between ethnicity and drug use habits, regression analyses were performed using the Test of Joint Significance (TJS). In the TJS the path from the predictor (ethnicity) to the mediator (drug references in music lyrics and videos) and the path from the mediator to the outcome variable (drug use risk and recent drug use) must be significant in order to conclude a mediational relationship (Cohen & Cohen, 1983; Kenny, Kashy, & Bolger, 1998). Prior to performing the mediation analysis, the mediator variables and outcome variables were

transformed into z scores. Predictor variables included ethnicity (African American, Caucasian, Asian, Hispanic). The mediator variables were exposure to drug references in music lyrics and music videos and the outcome variables examined included total variables for substance use risk and recent substance use.

The first analysis regressed ethnicity on drug use references in music lyrics. Results were not significant (see Table 4). The second analysis regressed ethnicity on drug use references in music videos. Results were significant (see Table 4); confirming that participant ethnicity influences the amount of drug use references participants are exposed to via music videos.

When exposure to drug related references in music lyrics and music videos were used as predictors for perception of risk associated with substance use, TJS analysis indicated significant results. Likewise, exposure to drug related references in music lyrics and music videos significantly predicted frequency of recent substance use. Predictive results can be found in Table 5.

CHAPTER FOUR: DISCUSSION

This study focused on the role of music media in relation to substance use among ethnicities. It was hypothesized that substance use references in music lyrics and videos would act as a mediator between current drug use and perception of risk of drug use and ethnicity. Previous research suggests correlations between drug use and music preference.

Ethnicity and Substance Use

While no significant results were found for Asian or Hispanic ethnic groups for current substance use or perceived risk of substance use, differences were noted between African American and Caucasian ethnic groups in regards to perceived risk of substance use and current substance use. Not surprisingly, perceived risk of substance use and frequency of current substance use appear to have an inverse relationship. African Americans reported higher perceived risk and less frequency of current use. Conversely, Caucasians reported lower perceived risk and greater frequency of current use. Such findings seem quite logical, as a stronger perception of risk should lead to decreased desire to participate in substance use. This supports research that found African Americans and Caucasians have different perceptions of and rates of use for tobacco, alcohol, and inhalants (Stern & Wiens, 2009). Differences in rates of use may also indicate a socialization mechanism among college students, as perception of peer substance use may be an important factor for individual substance use (Mulder, et al, 2010; Slater & Henry, 2013).

Music as a Mediator

Exposure to substance use references in music lyrics and videos predicted the frequency of recent substance use. Additionally, ethnicity influenced the amount of exposure to substance use in music videos. While ethnicity did not predict exposure to substance use references in

music lyrics, it did predict exposure to references in music videos. These results support the hypothesis, with music mediating frequency of current substance use by ethnicity.

Significant differences in exposure to substance use references in music videos were found among African American and Caucasian ethnic groups. This is interesting when considered with the rates of exposure to substance use references in music videos for both groups. Higher exposure to substance references in music have been correlated with increased substance use (Primack, et al, 2009). Although in this study Caucasians were exposed to fewer substance use references in music videos, they reported more frequent current substance use and less perceived risk of substance use. Exposure to substance use in music videos was higher for African Americans; however they reported less frequent current drug use and more perceived risk. This may be a result of how the substance use messages are portrayed. Previous research has noted that not all substance use messages in music media are positive (Christenson, et al, 2012; Markert, 2001). Many times substances are portrayed in a negative manner or as having negative consequences, such as addiction, health problems, and problems with the law (Herd, 2008). Exposure to substance use references may then increase awareness of risk and decrease usage.

Unlike music videos, references in music lyrics were not significant for any ethnic group. This is explained in part by previous research that found dance music, such as techno, which often has few or no lyrics, to be associated with higher substance use (ter Bogt, et al., 2012). Factors such as artist's behavior or social influences associated with a music choice influence substance use (ter Bogt, et al., 2012). An artist's behavior, characteristics, and social culture may be more strongly modeled in music videos than in lyrical content.

These results indicate that targeting substance use interventions using music media specific to ethnicity may be valuable. As Asian and Hispanic groups had no significant results for perceived risk of substance use or current substance use, targeting these groups would be inappropriate. Likewise, the African American group reported higher perception of risk and lower use, therefore based on these results decreasing exposure to substance use in music media would be inappropriate. However, the Caucasian group reported less exposure, less perceived risk, and higher current use. This group would be an appropriate target for a music media based substance use prevention message.

Limitations

Several limitations should be considered with the study results, including issues with generalizability, directionality issues, and retrospective data collection. Study results are based on retrospective data collected by single response, online survey. This questionnaire format limits the range of responses available to participants, and may alter their accuracy. The possibility exists that music preferred by Asian or Hispanic ethnic groups was not included in the questionnaire, which could account for the non-significant results. Also, a broad range of substances were included in the survey and grouped together in the results. Distinctions between types of substances that are legal, such as tobacco or alcohol, and ones that are illegal, such as heroin and cocaine, were not made. Looking at the various substances individually or in groups may show different results. Retrospective data collection may result in inaccurate responses due to inability to recall details of past events. Additionally, this method of data collection presents directionality issues, presenting an inability to state a cause and effect relationship for the variables.

The sample was taken from a population of emerging adults from a university. While the university has a diverse population of students, the college environment is different than that of the general population, limiting generalizability to a non-college population.

Future Research

This study reveals some interesting results regarding differences in perception and use of substances and how ethnicity and music relate to them. However, it reveals a number of questions to be addressed by future research. Differentiating between perception of risk and current substance use and various substances or groups of substances may allow for more precise results. Researchers may look more closely at the portrayal of substance use in music videos to understand the inverse relationship between substance use content and perception of risk of substance use. A broader population including a wider age range and non-college participants would increase generalizability. Other factors, such as gender, socioeconomic status, or religious beliefs, could be explored in addition to ethnicity and music preference for substance use, which may further define the most at risk groups.

APPENDIX A: APPROVAL OF EXEMPT HUMAN RESEARCH



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: UCF Institutional Review Board #1
FWA00000351, IRB00001138

To: Chrysalis L. Wright and Co-PI: Deedra K. De Kemper

Date: May 03, 2013

Dear Researcher:

On 5/3/2013, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination
Project Title: Music and racial differences in drug use patterns
Investigator: Chrysalis L Wright
IRB Number: SBE-13-09376
Funding Agency:
Grant Title:
Research ID: NA

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 05/03/2013 01:10:10 PM EDT

A handwritten signature in black ink that reads 'Joanne Muratori'.

IRB Coordinator

APPENDIX B: SUBSTANCE USE RISK QUESTIONNAIRE

How much do you think people risk harming themselves (physically or in other ways) if they?

- a) No risk
- b) Slight risk
- c) Moderate risk
- d) Great risk

- 1) Smoke one or more packs of cigarettes per day
- 2) Try marijuana once or twice
- 3) Smoke marijuana regularly
- 4) Take one or two drinks of an alcoholic beverage nearly every day
- 5) Try Cocaine once or twice
- 6) Use cocaine regularly
- 7) Try Amphetamines once or twice
- 8) Use amphetamines regularly
- 9) Try Salvia (Hallucinogen derived from the *salvia divinorum* plant) once or twice
- 10) Use salvia regularly
- 11) Try Hallucinogens (LSD, acid, mushrooms) once or twice
- 12) Use hallucinogens regularly
- 13) Try Ecstasy once or twice
- 14) Use ecstasy regularly
- 15) Try Inhalants once or twice
- 16) Use inhalants regularly
- 17) Try Prescription drugs without a prescription once or twice
- 18) Use prescriptions drugs without a prescription regularly

APPENDIX C: RECENT SUBSTANCE USE QUESTIONNAIRE

In the past 12 months, in general, how often did you use the following:

- a) Never
- b) Once a year
- c) Once a month
- d) Once a week
- e) More than once a week
- f) Daily

- 1) Tobacco
- 2) Alcohol
- 3) Cannabis
- 4) Cocaine
- 5) Amphetamines
- 6) Salvia
- 7) Hallucinogens (LSD, acid, mushrooms)
- 8) Ecstasy
- 9) Inhalants
- 10) Prescription drugs without a prescription

APPENDIX D: TABLES

Table 1. Intercorrelation of Study Variables

	Lyrics	Video	Perception of Risk	Substance Use	African American	Caucasian	Asian	Hispanic
Lyrics		.40**	-.13**	.22**	-.02	.03	-.02	-.00
Video	.40**		.07	.10*	.17**	-.21**	.07	.07
Perception of Risk	-.13**	.74		-.51**	.16**	-.15**	-.00	.05
Substance Use	.22**	.10*	-.51**		-.11*	.13**	-.08	-.02
African American	-.02	.17**	.16**	-.11*		-.51**	-.11*	-.16**
Caucasian	.026	- .21**	-.15**	.13**	-.51**		- .41**	-.56**
Asian	-.02	.07	-.00	-.08	-.11*	-.41**		-.12**
Hispanic	-.00	.07	.05	-.02	-.16**	-.56**	- .12**	

* $p < .05$; ** $p < .01$.

Table 2. Perception Drug Use Risk by Ethnicity

<i>Ethnicity</i>	<i>M</i>	<i>SD</i>
African American ^a	63.67	6.26
Caucasian ^b	59.55	7.59
Asian	60.37	8.53
Hispanic	61.37	7.98

Table 3. Recent Substance Use by Ethnicity

<i>Ethnicity</i>	<i>M</i>	<i>SD</i>
African American ^a	12.47	2.77
Caucasian ^b	14.03	4.41
Asian	12.55	3.44
Hispanic	13.42	3.62

Table 4. Predicting Exposure to Drug Related References in Music Lyrics and in Music Videos

Variable	Lyrics			Videos		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
African American	-.07	1.44	.02	.59	.14	.20**
Caucasian	-.45	1.42	.02	-1.41	1.39	.04
Asian	-.08	.17	-.02	.38	.17	.11*
Hispanic	-.03	.14	-.01	.32	.13	.11*
R^2		.00			.05	
<i>F</i>		.12			5.99**	

* $p < .05$; ** $p < .01$.

Table 5. Predicting Perception of Risk Associated with Substance Use and Recent Substance Use by Exposure to Substance Use Related References in Music Lyrics and Music Videos

Variable	Associated Risk			Recent Use		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Lyrics	-.19	.05	-.19**	.22	.05	.22**
Videos	.15	.05	.15**	.02	.05	.02
R^2		.03			.05	
<i>F</i>		8.38**			11.84**	

* $p < .05$; ** $p < .01$.

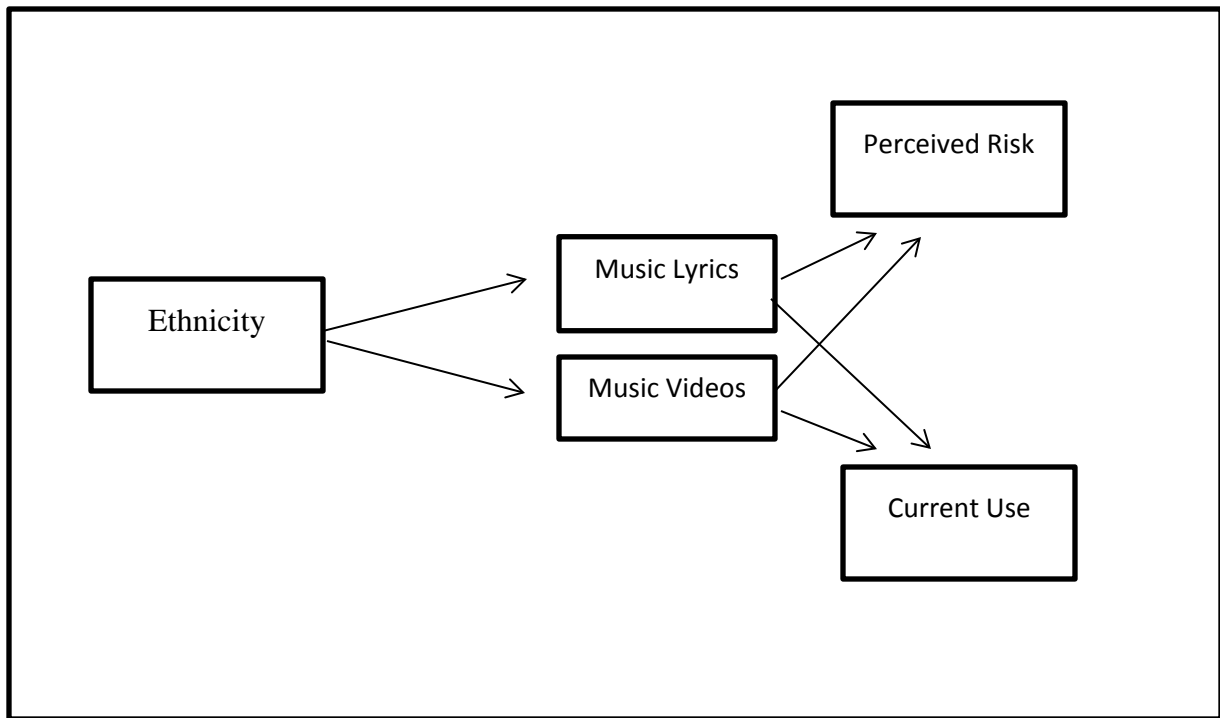


Figure 1. Hypothesized Model

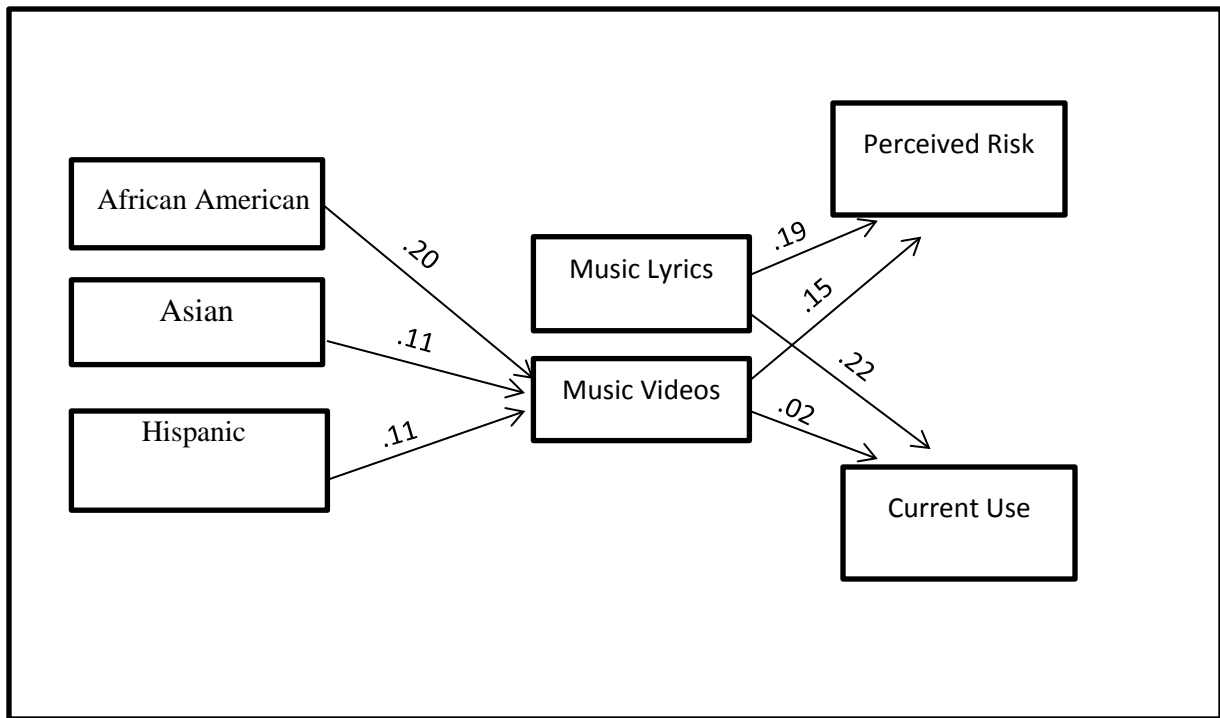


Figure 2. Regression Model

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