

# “Must be the music:” Validation of a theory-based survey

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# Introduction

- Early sexual initiation among American adolescents represents a major public health problem
- African-American adolescents (AAAs) report earlier ages of sexual initiation, which places them at an increased risk of ill health outcomes<sup>(1)</sup>
- Perhaps the most important components in adolescents' lives, the media, has rarely been explored as a mediating factor on early sexual initiation and sexual behavior.

## Introduction continued

- A relationship among media exposure and media's influence on adolescents' sexual perceptions, attitudes, and intentions has been suggested.
- What is not known is does exposure to sexually-oriented music lyrics influence early sexual behavior and can it be predicted?

# Purpose

- The purpose of this study was to develop a reliable and valid instrument based on the Theory of Reasoned Action to enable researchers to predict the influence of sexually-oriented music lyrics on the sexual attitudes, beliefs, and intentions of AAAs.

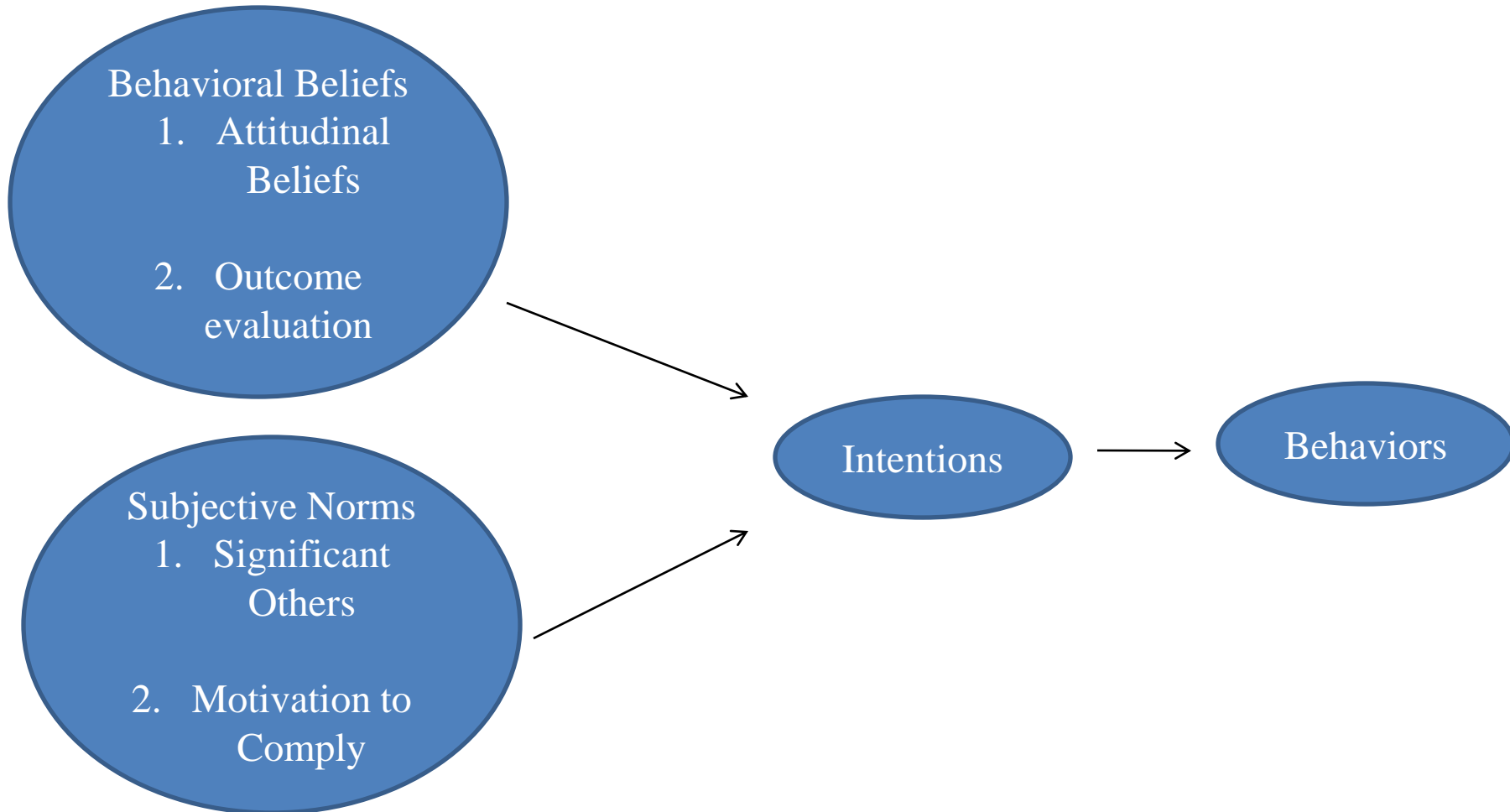


# Theoretical Framework

- The development of the Survey to Predict the Influence of Sexually-Oriented Music Lyrics on African-American Adolescents (SPISOML-AAA) was based on the Theory of Reasoned Action (TRA)<sup>(2)</sup>
- The TRA was developed through an effort to understand the relationship between attitudes, intentions, and behaviors <sup>(3)</sup>

# Theoretical Framework continued

Graphic Depiction of the TRA, adapted from Ajzen, 1967



# Methods

- Used an adapted version of Mueller's (1986) procedures for the development of an attitude and belief instrument.
- Procedures employed replicated those of Perko (1996) who utilized a 9-step model in survey development.
- The study's protocol was approved by The University of Alabama's IRB prior to data collection.

## Methods continued

1. Identified the attitudinal object
2. Collected a pool of opinion items
3. Submitted pool of items to expert panel for review
4. Pilot test draft of survey
5. Administered item pool to a group of respondents
6. Scored each item for each respondent
7. Summed respondents' item scores
8. Correlated item scores with total scale scores for all respondents
9. Applied statistical criteria for elimination of test items



# Results

## 1. Identify the attitudinal object.

Literature review – TRA was appropriate for the purpose of the study

Focus groups – 12; 16 urban, 20 rural; 19F, 17M; 6<sup>th</sup> – 8<sup>th</sup> graders

Expert panel submissions – no existing surveys were submitted by the panel

## 2. Collect a pool of opinion items.

95 items were constructed for use in the initial pool of items

4 areas: demographics, behavioral beliefs, subjective norms, and behavioral intention

## Results continued

3. Submit pool of items to expert panel for review Submit pool of items to expert panel for review and comments

5 of 11 experts reviewed the initial pool of items based on criteria provided

22 items were omitted based on clarity of questions, relevance, and lack of conformity to the tenets of a TRA questionnaire

Items were refined until a consensus was reached that the items used were representative of a TRA survey

- 27 additional items were deleted

# Results continued

## 4. Pilot test draft of the survey

The pilot draft of the survey consisted of 46 items

12 AAAs (6 urban, 6 rural) in grades 6-8 answered survey items of the pilot test draft

The survey was further refined based on group feedback

In general, definitions of terms were clarified, time intervals were changed, and students suggested additional questions be added

# Results continued

## 5. Administer item pool to a group of respondents

The final draft of the survey was administered to a total of 185 AAAs

Participants included AAAs from 4 school systems, 5 schools, and 3 counties in Alabama

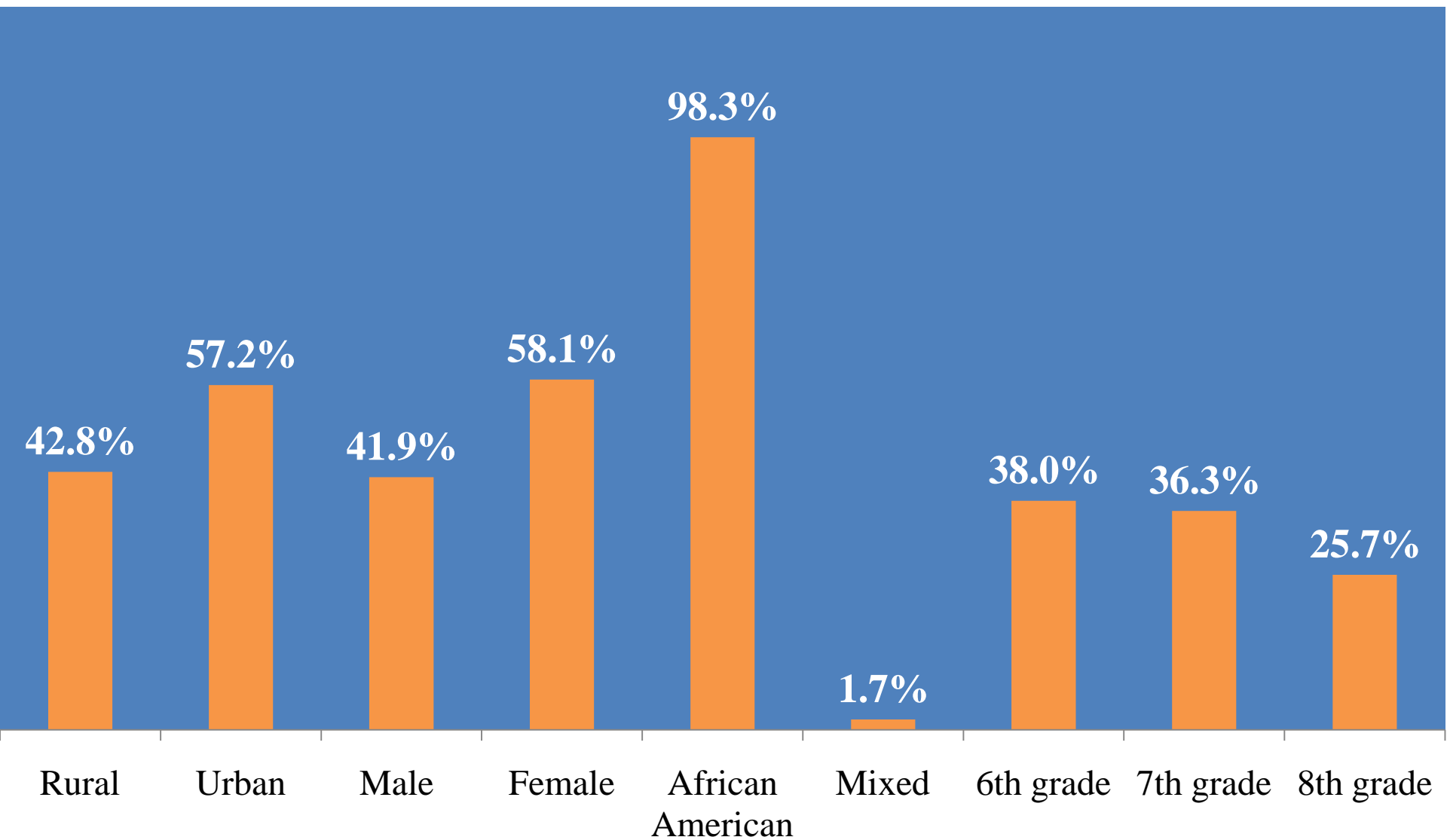
Total response rate: 17%

Four surveys were omitted due to biased responses

The total sample for analysis was 181 completed surveys

# Results continued

Demographics of Study Sample (N=181)

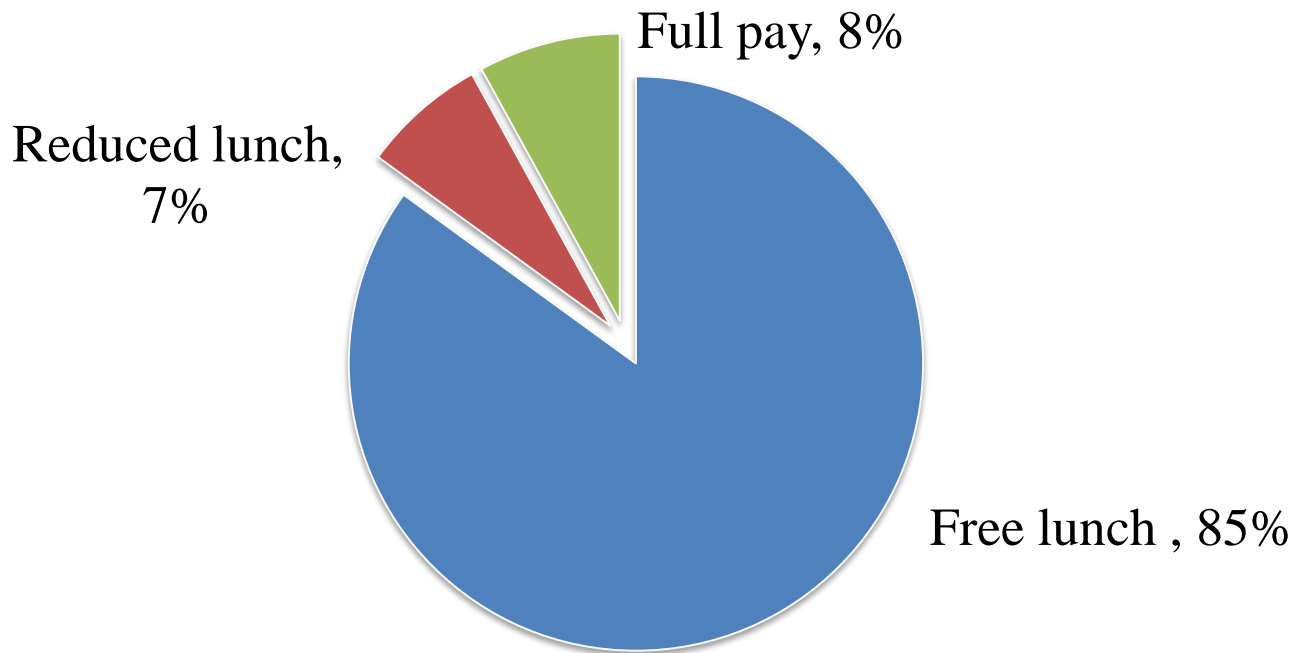


# Results continued

## Meal Plan Eligibility

Free:	2 ≤ \$18,200 year	3 ≤ \$22,880 year	4 ≤ \$27,560 year
Reduced:	2 ≤ \$25,900 year	3 ≤ \$32,560 year	4 ≤ \$39,220 year

## Measure of Household Income (N=181)



## Results continued

### 6. Score each item for each respondent

Each item was scaled as having a positive or negative weight

“Strongly agree” and “agree” received a score of 5 and 4

“Strongly disagree” and “disagree” received a 1 and 2

“Neither agree nor disagree” received a 3

# Results continued

## 7. Sum respondents' item scores

Positive responses toward the attitudinal object received a high score, and negative responses toward the attitudinal object received a low score

Ex. "I would listen to sexually-oriented music lyrics for advice about sexual activities."

1 : 2 : 3 : 4 : 5  
(SD) (D) (N) (A) (SA)

Mean, Standard Deviation (SD), and Range of scores of the survey, by construct

<u>Construct</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>
Behavioral Beliefs (4 items)	176	2.8594	.85300	1.00-4.75
Subjective Norms (21 items)	150	3.1213	.70832	1.00-4.86
Intentions (2 Items)	177	1.9040	1.08021	1.00-5.00



# Results continued

## 8. Correlate item scores with total scale scores for all respondents

Item scores were correlated with total scores one at a time for each item

## 9. Apply statistical criteria for elimination of test items

Factor analysis: used to examine the pilot data for patterns, and to eliminate insignificant variables

- Correlations of .30-.50 are acceptable: .50 or higher indicate a strong relationship among variables
- Items not loading at .40 or higher were deleted from the scale
- 1 item was eliminated as a result of the initial factor analysis

“I would listen to sexually-oriented music lyrics to know what sexual activities people do” loaded at .397

# Results continued

## 9. Apply statistical criteria for elimination of test items

### Factor analysis:

- 4 subscales were indentified, factor analyses were run on each

Minimum correlation among items in the subscale 1 was .40 (SN items)

Minimum correlation among items in the subscale 2 was .78 (SN items)

Minimum correlation among items in the subscale 3 was .46 (BB, SN, & I)

“I would listen to sexually-oriented music lyrics for advice about sexual activities”  
loaded at .383

Minimum correlation among items in the subscale 4 was items of .54 (BB)

“It is important to know what sexual activities other people do” loaded at .380

“It is important to relax my mind” loaded at .300

- 3 items were deleted as a result of the factor analysis

# Results continued

## 9. Apply statistical criteria for elimination of test items

Item response discrimination was used to determine the adolescents' with positive attitudes as opposed to those with negative attitudes

- Responses were compared for clustering
- Items that did not have a range in responses were deleted from the scale, no items were deleted through this method

Cronbach's alpha was used to determine internal consistency among the items

- Items in the scale that loaded at .40 or higher were considered reliable measures
- Cronbach's alpha for the scale (total items = 27) was .846

# Results continued

## 9. Apply statistical criteria for elimination of test items

Cronbach's alpha:

- Subscale 1 had an alpha of .930
- Subscale 2 had an alpha of .946
- Subscale 3 had an alpha of .833 : rerun after elimination of item .831
- Subscale 4 had an alpha of .671 : rerun after elimination of item .722

# Results continued

The final draft of the SPISOML-AAA consists of 48 items

27 construct items

- 4 Behavioral Belief items: Cronbach's alpha .574
- 21 Subjective Norm items: Cronbach's alpha .879
- 2 Intention items: Cronbach's alpha .820

21 demographic variables

The Cronbach's alpha for the SPISOML-AAA was .846

# Validity of the Instrument

The SPISOML-AAA went through a rigorous review process:

- Face validity: Questions not deemed a valid measure by the expert panel were deleted
- Construct validity: Items correlated highly with one another on the identified scales indicating each item was a valid measure
- Discriminant validity: Lower loading items were not measuring what they were developed to measure as well as the other items
- Convergent validity: (Subscale 4) After weak items were eliminated from the subscales, the item correlations increased

Indicating higher internal consistency among the remaining items

# Strengths of the Study

Developed survey items based on recommendations from literature and TRA authors

- Information from experts in the field
- Conducted focus group interviews with 36 students, Ajzen and Fishbein recommended 15-20

Developed culturally sensitive and age appropriate instrument

- Detailed transcriptions of focus group data
- Pilot tested instrument to subset of population
- Input from stakeholders in the community

# Limitations of the Study

Small sample size  
17% response rate

Social desirability

Generalizability

Controversial topic



# Recommendations identified in the literature addressed by the instrument:

Investigate the effects of music lyrics on adolescents' sexual attitudes and behaviors

SPISOML-AAA was developed specifically to examine the influence of music lyrics on adolescents attitudes, beliefs, and intentions

Include early and at risk adolescents in research efforts examining media

SPISOML-AAA was developed for early African-American adolescents

Refine data collection methods

SPISOML-AAA provides a valid and reliable instrument to enable researchers to examine the influence of sexual music lyrics

Include theory in intervention methods

SPISOML-AAA developed based on the TRA

# Recommendations for Further Research

Studies should be conducted to understand the how adolescents make sense of sexual music lyrics and the value they place on messages conveyed though lyrics

Data should be gathered, using the SPISOML-AAA, from AAAs in both urban and rural geographic regions

Studies should be conducted to assess the influence of significant others on subjective norms, and studies should focus on specific attitudinal differences among AAAs

Additional applications of the SPISOML-AAA should concentrate on adding weights to the items in each construct as put forth by the TRA to determine the strength of relationships as they lead to behavioral intentions and, ultimately, behavior

## Food for thought from study participants

*“They don’t want it to be sexual, but it sounds that way to me”*

*6<sup>th</sup> grade male, rural site*

*“I think if a 13 year old listen to sexual music it will make you want to do it at that time”*

*7<sup>th</sup> grade male, urban site*

*“Music back then had meaning, even the rap, the lyrics today are sad. They don’t realize that people listen to their songs and try to do what it says”*

*8<sup>th</sup> grade female, urban site*

# References

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3. Fishbein, M. & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, Mass. Addison-Wesley.