AN EVALUATION OF HIV COMMUNICATION MECHANISMS FOR YOUNG ADULTS

by

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A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Honors Bachelor of Arts in Sociology with Distinction

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ABSTRACT

The purpose of this project is to investigate the attributes and overall "relatability" of certain HIV pamphlets and materials aimed at educating young adults. With HIV still a very real threat, especially regarding the young adult population of the United States, education efforts are paramount. This project explores the "relatability" of specific HIV education materials; that is, the extent to which these materials are perceived and received among its target audience (young adults). To better understand the messages and aims of these specific materials an interview was conducted with the Education and Outreach Director at AIDS Delaware, and a series of focus groups were conducted with University of Delaware undergraduate students to examine if these messages and aims were indeed received as well as to attain the target audiences' general perceptions of these materials. Data from the focus groups suggests, echoing the basic tenets of SENTAR and EPPM theories, that visually appealing materials with minimal wording, fear appeals, and scare factors present, result in heightened risk perception among the participants. Materials that were relatable for a college-student population were more impactful as well. By identifying key themes in the participants' responses, I conclude by offering potentially effective ways to enhance HIV educational materials targeted towards young adults, as well as fruitful avenues for future research.

Chapter 1

INTRODUCTION AND LITERATURE REVIEW

Introduction

HIV infection among young adults is an increasing problem within the United States. Many American young adults do not utilize protection when engaging in sexual intercourse, do not get regularly tested for HIV, and are simply not fully aware of their risk for contracting HIV. In 2009, young people between the ages of 13 and 29 accounted for 39% of all new HIV infections, while that age group only accounted for 21% of the US population in 2009 (CDC, 2011). In terms of the number of people diagnosed with HIV in 2009, young adults made up about 20% (CDC, 2011). Astoundingly, 75% of these diagnoses occurred specifically among those between the ages of 20 and 24 (CDC, 2011), suggesting that college-aged persons may be significantly at risk. Colleges and universities are indeed sites of high rates of sexually transmitted disease transmission, which is often attributed to risky behaviors (i.e alcohol and illegal drug abuse, unprotected sexual intercourse) that are reportedly practiced among college students (Shartshopoko & Bonasjr, 1998). Studies have shown that college attendees (and young people in general) in the US use alcohol, tobacco, and drugs at higher rates than other age groups (CDC, 2011). Moreover, both casual and chronic substance users are more likely to engage in high risk behaviors,

such as unprotected sex, when they are under the influence (CDC, 2011). Perhaps most alarming however, is that research has shown that a large proportion of young people are simply not concerned about becoming infected with HIV (CDC, 2011).

Given these issues, there has been extensive research on educating young adults about HIV transmission and risk. Much of this research has focused on what "works" and what does not, as well as the effectiveness of specific HIV prevention/education programs such as those aimed at reducing risk behaviors, encouraging safe-sex practices, and/or simply expanding knowledge regarding HIV and STDs in general. There has been minimal research, however, focusing on the actual materials/pamphlets (the qualities of these materials and characteristics of the messages nested therein) used for these educational purposes. The CDC argues that when being given information, it is vital that adolescents and young adults receive accurate, age-appropriate information about HIV, how to reduce risk factors, how to talk with their partner, how to get tested, and how to use a condom correctly. (CDC, 2011). Therefore, understanding the connectedness between the messages and aims offered in educational materials/pamphlets (geared towards young adults), and the messages of these materials/pamphlets perceived and received by young adults is essential. If we are to make any progress in reducing the rates of HIV infection among young adults, we must critically evaluate the actual effectiveness and "relatability" ¹ of the educational materials aimed at this increasingly vulnerable sub-population.

This project has served as a continuation of my work as an Education and Outreach Intern at AIDS Delaware in Wilmington, Delaware. I investigated the efforts being made to educate young adults, primarily college students, about HIV/AIDS. While there I looked at the educational pamphlets and materials, wondering if these materials would actually be appealing to and relatable for young adults, and whether the information would have any impact or make them think differently about their risk for HIV.

The results of this study will benefit many parties. The students involved in focus groups will be exposed to information that they might not have been exposed to before, and will now be more aware of their risk for HIV. Hopefully, these students will share their knowledge with friends and family, and many more people will be more aware. Similarly, AIDS Delaware generously donated the pamphlets used in this study, so the results will be shared with AIDS Delaware. With the findings from this study, AIDS Delaware can look at their educational materials from the perspective of young adults, the group whom these specific pamphlets are targeting, and make informed changes to their materials.

¹ I use the term "relatability" to describe the way readers are able to relate and feel connected to the materials. While I acknowledge that "relatability" is not a dictionary word, I use this word throughout the project, because I feel that it most successfully and accurately addresses the issues of materials being relatable to its target audience.

In addition, I will use these findings to further my academic and career goals. I will be attending graduate school starting in the Fall 2013 semester pursuing a Masters degree in Public Health, with a concentration in Behavioral Science and Health Education, at Emory University. I am interested in health promotion and prevention, so understanding what young adults respond positively to will be vital information for my future endeavors.

My focus group research will provide me with the knowledge to decipher different layouts and pieces of educational materials, to determine which aspects appeal most to a young adult population. With the information I collect, I can provide the creators of these written educational materials with constructive feedback on how their materials are perceived by their target audiences.

Literature Review

In this section, I will discuss findings from other research that relate to my project. Such topics include college students and their sexual health education and knowledge, research on health education materials, methods of communication, and theories behind health promotion methods. These are all important because these multiple components give background knowledge that serves as a base for my research.

College Students and HIV Perception

Inungu and colleagues (2009) surveyed U.S. college students about their HIV knowledge, sources of information about HIV, attitudes towards individuals with HIV/AIDS, and their own sexual behaviors. Given the persistent denial of vulnerability among young adults, Inungu and colleagues suggest that the held misconceptions about transmission (in conjunction with this lack of concern for their vulnerability) raises significant concern regarding young adults' perception of HIV, how it "happens", and their own susceptibility.

Hoppe et al. (2004) conducted a series of focus groups with young adults to try to determine what factors teens consider when making decisions regarding sex and condom use. They found that their participants did not relate to the HIV information about HIV prevention, knowledge about HIV was not used in their decision making, and participants reported being bored with AIDS education. The participants wanted education that was more tailored towards/for them, that would keep them engaged.

Noar et. al. (2009), among others, state that effective educational campaigns that alter/heighten individuals' perceptions of their own vulnerability and risk of HIV (and perhaps change behavior) must clearly define and accurately hone in on their target audience and tailor the message(s) of these campaigns to these specific audiences. A study conducted by Rothman and colleagues (1999) examined whether making risk (of unsafe sexual behavior) more salient would actually increase expressed interest in HIV testing. In this study, HIV related beliefs were assessed before and after individuals viewed a vulnerability-oriented film about HIV/AIDS.

After the film, individuals expressed heightened perceptions of risk and concern, and an increased desire to get tested (Rothman et. al., 1999).

Sexual Health Education Materials

As stated earlier, to effectively present sexual health information to young adults, age-appropriate and engaging programs are vital. However, the information given out to young adults in the forms of pamphlets and hard materials have to be effective on their own as well. Griffin, McKenna, and Toot (2003) argue that in order for written educational materials such as pamphlets, to be relatable and effective and actually reach their target audience, they should: a.) be written at a level that can be understood by the target audience, and b.) grab the interest of the target audience by sparking emotion through graphs, illustrations, charts, and overall tone (Griffin, McKenna, & Toot, 2003).

Common Characteristics of Effective Programs – applied to written educational materials

Many HIV prevention programs that have been found to be effective share a few common characteristics. Interestingly, researchers have suggested that some of these characteristics can be applied to written informational materials as well.

Similarly to what was stated earlier, a common trait is that a program assess and address the relevant needs and assets of the young people they were targeting.

Specifying the health goal you are trying to achieve is also important. Regarding written material, it is vital that it the message of the information is clear and direct. If

it is difficult to understand the main message of the material, it is unlikely that an individual will walk away from reading the material with the knowledge that they need. A clear and consistent behavioral message about protective and sexual behaviors will insure that individuals are well aware of different behaviors and how those behaviors will affect them and anyone they are involved with. The clear consistent message also should be age appropriate (Kirby, Laris, & Rolleri, 2006). For example, programs that were evaluated in one study noted that programs designed for younger youth who were less likely to be sexually experienced were more likely to place a higher emphasis on abstinence than on condom use. On the other hand, programs that were designed for older, more sexually experienced youth were more likely to place a greater emphasis on condom use (Kirby, Laris, & Rolleri, 2006).

Communication Theory for Health Promotion

Health communication, "the study and use of communication strategies to inform and influence individual and community decisions that enhance health," plays a significant role in the success of health education materials (Edgar, 2012; p. 588). Theories, when used and understood, strive to create messages that are "innovative, relatable, and motivating" to target audiences (Edgar, 2012; p. 588). Two particular theories employed within health communication research, the Activation Model and the Extended Parallel Process Model, directly apply to this specific study.

The activation model examines an individual's desire for sensation seeking, or "the desire for varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experiences" (Edgar, 2012; p. 588). People with a higher need for sensation seeking tend to be more likely to take part in risky behaviors, such as unprotected sex. Young adults often fall into this category of high sensation seekers (Edgar, 2012), especially in regards to engaging in unprotected sex. One media strategy that has been developed in order to target high sensation seeking groups is SENTAR (SENsation seeking TARgeting) (Edgar, 2012). This strategy encourages campaign and prevention planners to create messages with a higher sensation value for those who are high sensation seekers. Materials with high sensation value are comprised of eight main characteristics or traits: a.) Novel, creative, unusual; b.) Complex; c.) Intense stimuli that are emotionally powerful or physically arousing; d.) Graphic or explicit; e.) Somewhat ambiguous; f.) Unconventional; g.) Fast Paced; h.) Suspenseful. (Edgar, 2012).

These characteristics have been shown to have a positive effect when used to create communication materials and I anticipate that they will be effective in health education materials as well.

Extended Parallel Process Mode, (EPPM) is another theory that has been found to be successful among communication efforts, and could have potential to be efficient in regards to health education communication as well. EPPM focuses on how to

construct effective risk-related messages that are grounded in fear appeals and scare tactics. While studies have resulted in mixed reviews about the relatability of fear appeals, there is evidence to support that fear appeals and scare tactics can be successful if implemented to their fullest extent and in the correct manner.

Fear appeals are defined as "...pervasive communication attempting to arouse fear in order to promote precautionary motivation and self protective action, leading to an unpleasant emotional state triggered by the perception of threatening stimuli." (Ruiter, 2001: p. 615). Ruiter argues that these emotional states have the potential to elicit cognitive and behavioral responses that are aimed at altering or even eliminating the perceived threat. Fear appeals involve two types of information: arousing fear by presenting a threat to which the recipient is susceptible, and the search for "safety conditions" prompted by recommending protective action (Ruiter, 2001). Fear appeals and scare tactics are phrases that are often used interchangeably for the same concept. However, it should be noted that fear appeals and scare tactics are somewhat controversial, and there has been disagreement regarding the actual effectiveness of these tactics and how they are utilized (Health, 2003). A National University of Ireland Galway publication (Health, 2003) cited the many potential negative outcomes of scare tactics, such as: a.) People become sensitized to fearful messages, so they could become paranoid about daily life; b.) Stigmatization and victim blaming; c.) People could become immune or used to the messages if overexposed, thus a diminished response rate; d.) The desire of forbidden activity; e.)

Risk portrayed could be so powerful that people give up hope of protecting themselves, leading to a lack of feeling of control (Edgar 2012).

Edgar (2012), studied how individuals respond to health risk messages with fear appear through two primary forms of cognitive appraisal: threat appraisal and efficacy appraisal. According to Edgar, threat appraisal occurs with initial exposure to a fear appeal, individuals exposed to these fear appeals have to decide whether the unpleasant or fearful outcome associated with not changing a behavior is serious enough to be concerned with it (e.g. the severity of the outcome). If there is a reasonable probability that the feared negative outcome will actually happen an individual has to evaluate their probable susceptibility. In order for fear appeals to be successful the perceived severity and susceptibility both must be considered to be high. If so, then individuals engage in efficacy appraisal. Self-efficacy is an individual's confidence in his or her own ability to perform a certain behavior -which is an important quality for anyone trying to make a positive behavior change. Response efficacy requires the recipients of the message to look past the ability to perform the new positive behavior and to decide whether the behavior will really make a difference. The principles of EPPM suggest that if both self-efficacy and response efficacy are high then fear appeal will be successful (Edgar, 2012).

Given the roots of these theories, I would anticipate that health communication and education materials targeting vulnerable groups, such as college students, will be successful if they consist of a bit of fear appeal and scare tactics. While it has been

argued that a large amount of fear appeal is not successful, I believe that scare tactics in moderation can be productive, such as in these materials.

In addition to scare tactics, I believe that HIV education materials must be direct when discussing risks and other information, so that the target populations will be able to easily read and comprehend the material given. The target population is important to keep in mind as well, especially for young adult college students. Many young adult college students have already engaged in sexual activity, therefore it is important that materials for young adults address how to protect yourself when sex is occurring, as opposed to a strictly abstinence approach.

Chapter 2

METHODS

This project takes a multi-method approach employing content analysis of educational materials (pamphlets), focus groups with college-aged students, and an indepth interview with the director of a local AIDS/HIV educational organization. The use of human subjects was approved by IRB for this study.

Interview

The interview was conducted with Frank Hawkins, the Director of Education and Outreach at AIDS Delaware in Wilmington, Delaware. One particular directive of this meeting and interview was to have Mr. Hawkins select specific written educational materials based on the following questions/criteria: a.) Which materials are his favorite (what materials did he "like" the most)? b.) Which ones are used/handed out to young adults most frequently? and c.) Which does he feel most strongly about? These materials were selected by an expert because I was interested in what types of materials he believed were effective as I wanted to compare his thoughts about the materials (and the messages therein) with the perspectives of young adults - to see if they matched up. If these thoughts did not match up, there would be reason to further explore the perceptions and effects of these materials. It is pertinent that messages being presented and assumed by the experts are the messages that are

actually being received by the participants, and being received to the intended extent. Frank was aware that these materials would be used in sex-separated focus groups of college students, and I asked for materials that would be relatable to these groups.

Frank selected five written materials. Three pamphlets: *HIV for Young Women, HIV for Guys*, and *HIV Facts* were selected along with a Health and Wellness booklet for young women, and a Condom packet for young men (see Appendix A-F for examples of these materials). From my own experiences at AIDS Delaware events, I selected an additional pamphlet that framed the danger of having a high number of partners. I had not thought of sex in this manner before, and I imagined that many other students my age also would not have thought of this. Therefore, in total, I brought six pamphlets/materials for my focus groups - two would be used for both male and female focus groups, two would be used in the female specific group, and two would be used in the male specific group.

Given the aims of this study, I was also interested in Mr. Hawkins's perspective on the following questions (about each material respectively): How was this constructed/who put this together? Who is the target population for this material? Where are these distributed? Who hands these out? If he were to pick one piece of information or message that he wanted people to get out of this material, what would it be? These questions were important because a primary aim of this study is to examine if the intended message(s) of educational materials "matches" the message(s) received/perceived (if any) by the target audience. Mr. Hawkins's perspective, in this

case given his position within the organization, serves as proxy of the perspective of the organization in general. Therefore, these questions could provide valuable insight into how HIV/AIDS organizations construct and offer certain messages to particular audiences. Then, through the focus groups, I can see if these messages are indeed received and are perceived relatable (degree of "relatability") by the audience.

Focus Groups (and Pre-survey)

The target population for this project was heterosexual male and female college students therefore I conducted six focus groups - 3 all female students, and 3 all male students. Because HIV affects both men and women, especially among young adults, I believe that it is important to use both sexes in this study. The written educational materials chosen for this study are geared more towards heterosexual young adults, as stated by Mr. Hawkins. Focus groups were separated into groups of all males and all females for the following reasons: a.) the nature of the topic; HIV can be a sensitive subject, because it involves talking about sex and discussions about sex and STDs can be awkward in mixed-sex groups, and b.) some of the materials used were geared specifically towards males or females..

Focus groups were chosen as the means for evaluation for multiple reasons.

Previously, focus groups have served as productive and efficient means of evaluation for many social science and human service research studies. I was looking for degrees of both consensus as well as multiple perspectives regarding the health education

materials, thus focus groups appeared to be the most efficient means for that. Focus groups allow for a "dynamic interchange between the group members, which may result in more in-depth and unbiased information concerning a particular topic" ("Focus Groups"). Dynamic interchange between group members and open discussion is important because focus groups allow group members to play ideas off of each other. Additionally, when one member of the group makes a statement, others can speak up if they agree, allowing me to know whether multiple people have the same thought. This could not be accomplished through one-on-one interviews because all points might not be brought up by the same people, potentially leaving out great evidence. A questionnaire or survey would also not have allowed for divergence of the prompt question, thus much intelligent and useful discussion would not have been possible via just a questionnaire or survey. In addition, I chose focus groups over individual interviews because of the nature of the topic. HIV and sex is an intimidating topic for some, therefore individual conversations in a one-on-one setting may have led to less encompassing/broad responses than a small group setting, where members could bounce ideas off of each other, and each participant was not required to answer every question. The focus group discussion questions can be found in Appendix H.

Subject recruitment consisted of convenience and snowball sampling techniques. Convenience sampling was the primary method of sampling for this project given the nature of the topic. There is still a stigma attached to HIV, so it was important to have individuals who were comfortable enough discussing HIV and sex

in a group, and with me (a young female). A sense of comfort and ease is very important for any study, and this study specifically because it was vital that participants offered honest and open opinions regarding the written educational materials. I sent out an email and/or Facebook message to between 200 and 300 students here at the University of Delaware (males and females, of various races/ethnicities, and various years in school), asking for their participation. In this email (see Appendix I) I briefly stated what the nature of the study - looking at the effectiveness of HIV education materials and that participation was completely voluntary. As is evident in Appendix I, I also requested that potential participants invite their friends to contact me if they were interested in participating (snowball sampling). The only exclusionary criteria applied was that students must be 18 years or older to participate. As potential participants responded to this initial recruitment method, or contacted me via email to participate, I arranged a series of focus groups based on their availability.

As noted earlier, 6 separate focus groups (3 all male, and 3 all female) were organized, each consisting of between 5 to 7 participants. Informed Consent forms were distributed to participants at the beginning of each focus group. These forms reiterated (among other points) that participation was completely voluntary and that participants could terminate their participation in the study at any time. Students were given pizza and soda during the focus groups as compensation for their participation in the study.

After agreeing to and signing the Informed Consent Forms, subjects filled out a pre-survey (see Appendix G). This survey contained a series of questions aimed at evaluating participants' HIV knowledge (prior to the start of the focus group), and the extent of their HIV education in their high schools. I wanted to see how much knowledge participants had overall about HIV, and I additionally went over the answers to some of the questions at the end of the focus groups to increase subject knowledge. For example, one question on the survey asked about modes of HIV transmission – even though participants likely learned the modes of transmission from looking at the pamphlets, I went over all of the correct answers, obtained from Avert.org and medical websites, so that they walked away knowing the correct information. Once these surveys were completed, they were collected, and focus group discussion began.

Four pamphlets were used in each focus group: two of them were the general pamphlets (meaning they were used for both male and female focus groups), and two of them were the gender-specific material. The order in which these pamphlets were presented to the participants was the same for each focus group (regardless of sex) remained the same for all focus groups, and was as follows:

1. Sexual Exposure Chart

- 2. (sex specific) HIV For Young Women/ HIV For Guys
- 3. (sex specific) Health and Wellness Booklet for Young Women/ Condom Packet for

Young Men

4. HIV Facts

Materials were given out in the same order for every focus group to ensure consistency. I wanted to make sure that seeing certain materials before others did not result in differing opinions of later materials, so to avoid this potential limitation, the pamphlets were distributed in the same order during every focus group.

Copies of the materials were passed around (1 at a time) to all participants, and participants were given a few minutes to look through each material. Participants where then asked a series of questions about their perceptions of and attitudes towards each of the materials (see Appendix H). All questions were addressed in some way for each material, whether it was as the result of me asking them directly, or participants answering them on their own. This allowed for a degree of consistency in types of responses for each pamphlet, so they could be compared to each other. Each of the focus groups were audio recorded (with the permission of the participants), and these recordings were later transcribed. I also took short notes and memos during the focus groups regarding particularly interesting and/or poignant points. When there were no more comments regarding a particular material, I would then introduce the next material. This process continued until each of the materials had been presented and discussed and no other comments were offered by participants. Each focus group lasted for about 30 to 45 minutes.

Study Sample

The study sample was comprised of 35 participants, 19 females and 16 males. Ages of participants ranged from 18 years old through 22 years old. There were participants from all undergraduate classes, freshmen through seniors:

8 Freshmen (5 male, 3 female)

4 Sophomores (1 male, 3 female)

11 Juniors (3 male, 8 female)

12 Seniors (8 male, 4 female)

In regards to race, two participants were African American, and all other participants were White or Caucasian.

Subject Confidentiality and Data Storage

To protect participant confidentiality, each participant was assigned a study ID number for use during the focus groups. Names were not exchanged at the beginning of the focus groups, and study ID numbers were assigned to each participant by the order in which they arrived for the focus group. Their study ID number was used as their identification on the pre-survey as well, and participants were asked to state their study ID number before making comments during focus group discussion.

Focus group discussion was recorded with an Audio Recorder rented from the University of Delaware Library Multimedia Center. Focus group recordings were converted to an mp3 format, and transferred to my computer. Recordings were then

completely erased from the audio recorder. The files remained on my personal computer as well as a flash drive until the completion of this study. All focus group meetings were transcribed into a word document once they were completed. Those word documents remained on my personal computer for reference purposes until the completion of the study. All Informed Consent Forms and Pre-Surveys were completed in the form of a paper copy. Those paper copies remained in a file folder that only I had access to.

Analyses and interpretation of qualitative data

Data were analyzed by using a multistep coding process. Transcripts were read by me, the principal investigator, to identify and develop initial coding categories. The goal of this initial analysis process was to identify general trends and similarities in statements of focus group participants. This open coding process yielded the following codes: visual appearance, wordiness/ease of reading, scare/shock factor, title/cover, degree of realism for target population, assumption of perceived risk, relatedness/connectivity, prior knowledge, and future behavior. The transcripts were color coded based on these initial codes, and then placed into two categories: Physical Attributes of Pamphlets and Message Connectedness. What emerged from the data was the concept of the degree to which the target audience can relate to the materials presented (what I have termed "Relatability"), as will be discussed in later sections.

Included in identification of these codes were any statement, or series of statements, that related to the given code. For example, for the code "scare/shock factor," any statements describing fear, scare, nervous, eye-opening, or other extreme reactions were counted as "scare/shock factor" and color coded accordingly. In another example, for the code "assumption of perceived risk," responses that were coded within this factor included statements such as: "I had no idea I was so at risk," "you hear about this stuff but never realize," and "people think that it won't happen to them." Tables 1 and 2 below provide some examples of statements made my focus group participants.

 Table 1
 Coded focus group qualitative data – Physical Attributes of Pamphlets

Category	Code	#of focus groups mentioned	Total references	Participant's statements
Physical Attributes of Pamphlets	Visual Appearance	6/6 (all)	82	"It attracts my eye, it's interesting to look at" (Female, subject 2) "I feel like graphs/charts/pictures say much more than a bunch of words could" (Female, subject 5) "These pictures are really awkward, I don't feel like they are serving any purpose" (Female, subject 10). "This chart basically just sums everything up" (Male, subject 18) "It feels really juvenile with the cartoons, and the colors aren't very 'young adult' " (Female, subject 22) "I think the pictures make you take it less seriously because they're cartoon drawings" (Male, subject 34)
	Wordiness/Ease of Reading	6/6 (all)	7.1	"Easy to read, easy to understand, something that isn't all words" (Female, subject 1) "It's easy to read and look at quickly. So it's good for college students because we don't really have time to sit down and read an article" (Female, subject 21). "I like how it doesn't bombard you with copious amounts of information, it is simple." (Male, subject 30) "This is way too much" (Male, subject 35) "The amount of information in here wouldn't hold their attention" (Male, subject 32)
	Title/Cover	6/6 (all)	21	I think it'd be embarrassing for someone to see me looking at a pamphlet that says HIV" (Male, subject 18) "I like that it says 'Young Women' on the front, since it says 'Young Women' I would pick it up because it applies to me" (Female, subject

22) "HIV and people smiling doesn't draw you to it, the cover is dumb" (Male, subjects 28, 29)

Table 2 Coded focus group qualitative data — Message Connectedness of Pamphlets

Category	Code	#offocus groups mentioned	Total references	Participant's statements
Message Connectedness of Pamphlets	Scare/Shock Factor	6/6 (all)	99	"It has to have the fear factor to make you want to look at it and read more and learn more, especially about the risk" (Female, subject 6) "I think that would really scare someone and I think that's effective" (Female, subject 2). "It's eye opening, you don't think about it when you're out, you look at this and you think about it." (Male, 17) "I think it's something I've considered, but seeing the statistic in itself is very shocking" (Female, 24) "This plays on the biggest fear that I have about having sex" (Male, subject 32)
	Realistic for target population	(III) 9/9	78	"It's also like an age thing, college is prime" (Female, focus group 1) "Prevention strategies – like don't have sex isn't really a good one, it would be better to target the audience that is already having sex" (Female, subject 6) "I feel like this definitely targets young adults" (Female, subject 9) "I think we have sex with more people than the generation before us, so you look at it a lot more" (Female, subject 15) "Most of it is also not realistic for a college population" (Female, subject 22) "I feel like I'd see this in middle school" (Male, subject 35)
	Assumption of perceived risk	6/6 (all)	89	"So you heighten your risk exponentially everytime you have sex with someone else" (Female, subject 2) "I think that young people think that this doesn't apply to them sometimes, but this males you realize it is a really big deal" (Female, subject 11) "I was unaware of the risk you're putting yourself in, if you have sex with one person you don't know how many people they've had sex with one in the person you don't know how many people they've had sex

Table 2 contd. Coded focus group qualitative data - Message Connectedness

Category	Code	#offocus groups mentioned	Total references	Participant's statements
Message Connectedness of Pamphlets	Relatability/ Connectedness	(le) 9/9	30	"It's generic and not relatable at all" (Female, subject 1) "The outside is pictures of real people, instead of drawings, so it makes it more relatable" (Female, subject 1) "I think the big message is 'the future is in your hands' like every page has 'your future your choice' " (Female, subject 12) "It says ten grand, and young adults don't think about cost, like I don't have 10 grand to afford a baby" (Male, subject 26)
	Prior Knowledge	4/6	13	"It's enforcing things that I kind of knew" (Female, subject 11_) "I feel like it's just stuff that guys learn growing up, like you hear it from other guys in school" (Male, subject 14) "Most of what I read I learned in health class in high school" (Female, subject 23)
	Future Behaviors	6/6 (all)	20	"I might get tested a little more often" (Male, subject 16) "I think I will think about it and think about the person I'm with more" (Male, subject 17) "I think it just makes me want to be a lot less casual as a single girl it makes me really want to think twice" (Female, subject 24)

"Also because we're still young, so for us we could change ourfuture

"I think this improves your future decision making, so people know what they're possibly getting themselves into" (Male, subject 28)

behavior seeing this" (Female, subject 22)

Chapter 3

RESULTS

HIV Expert's Views – Intended Messages, Target Audiences, and Hoped Relatabilty

An interview with Frank Hawkins, AIDS Delaware's Education and Outreach Coordinator looked at the HIV education materials used in the focus groups, and questions were asked regarding target populations, main messages, origin of the materials, where the materials are distributed, and projected reaction of focus group participants. All materials except the Sexual Exposure Chart were chosen based on my statement of materials targeting "young adults." I additionally chose to include the Sexual Exposure Chart, Pamphlet #1, because I had seen it at an AIDS Delaware sponsored event, and was particularly intrigued by the fear appeal. Although Pamphlet #1 was not chosen by Mr. Hawkins, I was personally interested to see the reactions of other students my age, so I decided to utilize it as a focus group material.

Pamphlet #1 (Appendix A) was chosen by me, because I had been exposed to it at an AIDS Delaware function, and found it to be powerful. From my point of view, this material instilled some degree of fear, and a great amount of awareness in me. I was interested to see what other young adult college students thought of this material. Frank felt that this material stresses the point that the more partners you have, the more at risk you are for contracting HIV, or any other STD. "This is especially true

when you look at Delaware's population of less than one million people" he added.

"The main message is not to have unprotected sex. It only takes one infected person for HIV to be transmitted."

Regarding Pamphlet #2 (Female) (Appendix B), HIV for Young Women and Pamphlet #2 (Male) (Appendix C) HIV for Guys, (used in the female and male focus groups respectively) Director Hawkins stated that the main difference was in the "look" of the pamphlet. By "look," he meant that the cover and photos were targeting different sexes; for example the HIV For Guys pamphlet was designed to be more visually appealing for men, while HIV for Young Women was designed to be more visually appealing for women. "More visually appealing" meant that the pictures and colors were chosen to more specifically target either men or women. Additionally, Director Hawkins added that the "HIV for Young Men" pamphlet is intended for a heterosexual male audience. Heterosexual men and homosexual men face different barriers when it comes to protecting themselves from HIV. Homosexual men are most likely to be infected by sexual intercourse with other men, while heterosexual men are most likely to be infected by heterosexual sexual contact with a woman. Additionally, the information presented in HIV For Guys discusses heterosexual relationships, and does not address homosexual relationships.

Pamphlet #3 (Female) (Appendix D) "The Wellness Booklet", which was shared with the female focus groups, was, according to Director Hawkins, designed to help women with many areas regarding health. While not geared specifically towards HIV, Pamphlet #3 (Female) does focus on reproductive health, especially pregnancy

prevention and goal settings. Mr. Hawkins stated that he liked this material because "...it is an interactive booklet, so if I was seeing women repeatedly I would definitely use this to help them work towards behavior change." Therefore, according to Mr. Hawkins, the key focus of Pamphlet #3 is behavioral change as it relates to sex and reproductive health.

Pamphlet #3 (Male) (Appendix E), "The Condom Packet" used during the male focus groups, was material that Director Hawkins had personally helped to create. "This is a program for men, only for men, and the idea is to help men to think responsibly about having children" he said. As is evident (see Appendix E), on the outer packaging it says *A baby costs 10 grand a year, a condom costs a buck* and 50% of pregnancies are unplanned. Frank mentioned that the size of the material, being small enough to fit in one's pocket, would hopefully encourage more men to carry it around or take it.

Pamphlet # 4 (Appendix F), "HIV Facts", was chosen because it covered such a wide range of information (includes risk factors, prevention, etc.) without having to have someone explain it all to you in person. The chart on the inside serves the ability to answer questions about the various modes of transmission, and Frank believes that it covers all necessary information. This material would be used for college students, in his opinion, because "...he [the male on the cover] looks like a college student, she [the female on the cover] looks like a college student, this couple looks like a college student." From his perspective, Mr. Hawkins believes that Pamphlet #6 offers a great deal of relatability given the "look" of the individuals represented on the cover and

within the pamphlet. Furthermore, the education material, according to Mr. Hawkins, is straightforward and encompassing.

Pre-Survey Results

All focus group participants took a pre-survey before the beginning of the focus groups, before looking at any education material. These pre-surveys were used to determine participants' general HIV knowledge, including transmission processes, as well as participants' perception of risk.

HIV transmission

Participants were asked, "In which ways can HIV be transmitted? (List all that you are aware of)." Responses were counted and tallied into two categories: a.) either as one of the four ways that HIV is transmitted (sex, blood to blood contact, injecting drugs/needles, mother to child transmission), or b.) into "other", which contained either incorrect responses or responses that were considered to be ambiguous (could be correct, but due to the lack of clarify/specificity it was unclear).

As Table 3 shows, 100% (35) of respondents correctly replied that sex was a mode of transmission of HIV, 74.29% (26) of respondents correctly replied that blood to blood contact was a mode of transmission of HIV, 37.14% (13) of respondents correctly replied that injecting drugs/needles was a mode of transmission of HIV, and 28.57% (10) of respondents correctly replied that mother to child transmission was a

mode of transmission of HIV. Only 5.714% (2 respondents) correctly supplied all four forms of HIV transmission on their pre-survey.

"Other" or ambiguous responses included 'bodily fluids' (10 respondents) and open wounds (1 respondent). Incorrect answers, categorized as "other" included 'slob' (1 respondent), 'kissing' (1 respondent), and 'sharing drinks' (1 respondent).

Transmission Methods	Sex	Blood to Blood	Injecting Drugs/	Mother to Child	Other
		Contact	Needles	Transmission	
Accepted	Sex	Blood	Drug users	Infected	Bodily fluids (10)
Responses	Sexual intercourse	Blood to	Needles	Mother	Slob/a lot of saliva
given	Unprotected sex	blood	Infected	to child	(2)
	Semen	contact	needles		Kissing (1)
	Vaginal secretions			Birth	Sharing drinks (1)
	Sexual Contact	Infected	Injection	Breastfeeding	Open wounds (1)
	Sexually	blood		Breast milk	
	Sex juices		Sharing	Mother to	
	Sexual fluids	Blood	needles	child	
	Vaginal	transfusion		during	
	fluid/semen			pregnancy	
	exchange	Exchange of			
	_	blood			

Table 3: Reponses to Focus Group Pre-Survey Question #2: "In which ways can HIV be transmitted? (list all that you are aware of)"

Prior Education

Participants were also asked "Did you receive HIV and other STI education in high school or college?" 91.428% (32) of respondents replied 'yes,' and 8.571% (3) respondents replied 'no.' Some responses included additional pieces to answers, such

as "a little," "limited," "some," "minor ed. in MS health," "I think so," and "not a lot." All of these statements were counted as a 'yes'.

In my interview with the Education and Outreach Coordinator at AIDS

Delaware, there was discussion about lack of HIV education in Delaware's high
school. When I asked about pamphlet and HIV material distribution, he said that
many of these items used for the focus groups were not allowed to be distributed in
Delaware high schools. I found this to be interesting, particularly because it further
solidified that there was a range of HIV or sex education given in high schools.

Perceived Risk

In order to assess participants' perception of risk, participants were asked on the pre-survey "On a scale from 0-5, 0 being not at all at risk and 5 being extremely at risk, how would you rate sexually active college students in terms of their risk to HIV?" Scores were averaged for both males and females for this question. The average score for female students' perceived risk for sexually active college students was a 2.89, and the average score for male students' perceived risk for sexually active college students was a 2.68, slightly lower.

Similarly, participants were asked "on a scale from 0-5, 0 being not at all at risk and 5 being extremely at risk, how would you rate yourself in terms of your risk to HIV?" Scores were again averaged for both males and females for this question.

The average score for female students' perceived self-risk was a 1.26, and the average score for male students' perceived self-risk was again slightly lower, at a 1.125.

Chapter 4

FOCUS GROUP FINDINGS & DISCUSSION

In this section I will discuss key qualities and findings from the focus group data.

Communication Theory

As discussed earlier, Communication theory is used to guide messages that are "innovative, relatable, and motivating" to target audiences (Edgar, 2012). Through focus group discussion, it was evident that these are the traits that participants desired out of HIV education materials. Innovation and creativity were brought up multiple times, both for a great deal of and a lack of. Statements such as "this is a much smarter approach" (Male, subject 35) in regards to a more creatively manufactured material (Pamphlet #3), lends the idea that young adults want more than just an old fashioned paper pamphlet. Many participants echoed these sentiments, with the first material, the Sexual Exposure Chart, receiving praise for being "different" and "unique." Participants in my focus groups responded more positively to materials that were not just the "run of the mill" paper pamphlets – they wanted new and innovative ways to give the necessary material. In this day in age, especially with the increasing popularity of the internet, people can simply look to online platforms in order to obtain the information they are looking for. Therefore, it is very important for materials to be

visually appealing enough, and different from the usual paper pamphlet, so that people will actually pick it up and read the information that is presented inside – and this was made clear by the participants of the focus groups.

SENTAR, the strategy that was discussed earlier from the Activation Model, suggests that campaign and prevention planners create messages with high sensation value for high sensation seekers, such as sexually active young adults.

Fear Appeal Findings

Interestingly, statements offered during the focus groups with young adults in this specific study appear to be in contrast with previous literature regarding fear appeal and scare tactics. Previous literature suggested the fear appeals and scare tactics are not effective (Ruiter, 2001). However, in my study, multiple statements regarding fear factors were positive, and there were no statements or feelings expressed that would suggest a negative experience or perception from the fear appeals presented in some of the materials. The following statements were expressed by focus group participants in regards to fear or scare tactics:

"I think it's pretty scary that if you've had 12 partners, out of 4,095 people the chances are that one of them will have possibly something that you could be exposed to" (Female, subject 2, Pamphlet #1).

"It's really scary...it's just making me more aware and be more careful, and help my friends be a little more careful" (Female, subject 3, Pamphlet #1).

"I think that would really scare someone and I think that's effective" (Female, subject 2, Pamphlet #1).

"Scared...I just wouldn't imagine that I'd be exposed to such a great number of people" (Male, subject 35, Pamphlet #1).

"This plays into the biggest fear that I have about having sex" (male, subject 32, Pamphlet #3).

As is evident, focus group participants were more emotionally and intellectually affected, and more likely to actually engage with the information when a bit of fear was instilled in them. These, along with other positive comments about the effects of fear appeal, counter the findings and assumptions from prior literature. Pamphlet #1, the Sexual Exposure Chart, was the impactful material across all six focus groups, because of the fear appeal. Subjects were clearly affected by the high numbers and obvious intent of the pamphlet to make viewers reconsider their sexual behaviors. Although this material did possess fear appeal, this fear was not drastic in nature. Indeed, prior literature suggested that part of the reasons they believed that fear appeals were not successful was because the extent of the fear instilled was too great – people would either become paranoid, or fail to listen to any information because they would feel helpless in changing the situation. The data from this specific study suggests that fear appeals and scare tactics can be effective mechanisms to relay educational messages, especially in health promotion efforts, and perhaps particularly with young adults.

Physical Attributes of Pamphlets

Qualities coded as Physical Attributes were visual appearance, wordiness, and title/cover. These codes were created in order to gather information about what the participants thought about the many physical attributes of the materials.

Visual Appearance

Much discussion regarding physical appearance involved descriptions of "eyecatching" materials, especially with pictures, numbers, and graphics. Pamphlets that were deemed as "eye-catching" or "appealing to look at" by focus group participants than those materials that were not. Animated or cartoon drawings, such as those on male and female material number two, were seen as "juvenile" and "not age appropriate," which resulted in less satisfaction and influence from that material. However, the stick-figure like characters portrayed in material number 1, the Sexual Exposure Chart, were perhaps the most impactful, because of the layout. Representations of individuals became more difficult to separate and focus once the number of persons exposed to increased. I believe that this distinction is because the stick figure-like characters from the Sexual Exposure Chart were directly linked to a number, and the figures showed that number in a very visual way. Imagining that each one of the stick figures is someone you have been sexually exposed to is overwhelming and very eye opening. In contrast, the cartoons in the other pamphlets served a different purpose; they were there to assist with communication of the words in the materials. Because the cartoons did not serve as much of a real purpose, I

believe this is why the stick figures and cartoons were received differently. At the top of the chart, the individual symbols were easy to see, but "turned into more like dots" as you looked farther down the chart. This visual made it clear how quickly the number of people increase, in terms of exposure.

Real photos and images, such as those on Pamphlet #4 were more impactful than the majority of cartoon or animated graphics, because they were "more relatable" (high "relatability") and "more personal." From the data it appears that high levels of visual appearance resulted in materials that were more liked.

Wordiness

Wordiness played a large role in whether or not materials were well-received and deemed relatable by focus group members. Pamphlets that had paragraphs or long sentences in them, especially materials two and four, were not as well received because "there are just too many words, I would never read this." This, and other statements similar to this, were very common. "College students don't have time to read through all of this" was one statement that received consensus in the forms of head nods and participants saying "yeah" following the statement. Materials with less wording, especially material number one and male material number three, received praise for getting "straight to the point without a lot of wording." This finding is important because in order to keep the attention of young adults, it is important to know how much they will actually read and pay attention to.

Title/Cover

One recurring theme regarding the title and cover of pamphlets was the idea of the word HIV being on the cover of the pamphlet. This is not something that I had previously thought to be an issue, but many statements were made that lead me to believe otherwise. Many focus group participants expressed concern with having the word 'HIV' so predominantly featured on the front of pamphlets, for fear that anyone seeing them reading these materials would assume that they had HIV. Stigma plays a role into this, as HIV is still stigmatized in the United States and within a young adult population. However, knowing that having 'HIV' featured on the front of a pamphlet might turn away some readers, more creative titles should be investigated. For example, female subject number 24 suggested a cover and title change:

"I think instead of 'HIV Facts' if you had a question or Something maybe like 'Who has he been sleeping with and how does that affect you?' and you have a woman and a man and behind the man are all of the people he's slept with, men and women, or something like that."

Message Connectedness

Qualities coded as Message Connectedness include Scare Factor, Realistic for Target Population, Assumption of Perceived Risk, Relatedness, Prior Knowledge, and Future Behavior (as it relates to information presented in the pamphlets).

Scare Factor

As discussed above, my focus group data indicated that scare factor and fear appeal were more effective than materials that did not possess these attributes. Although the fear appeal was not extreme or dramatic, it caused enough of a reaction to result in participants' emotions being stirred. While prior literature suggests that fear appeal and scare factor are not effective means of health communication, my pilot study suggests that these techniques can lead to promising message relatedness. "I don't know what the average college student [sexual partner count] is here, but I feel like it's definitely up here [towards 12] and that's just unreal I had no idea the numbers [of people exposed to] could get that big" (Female, Pamphlet #1). There was a great amount of consensus when participants stated "This is terrifying." This bit of scare factor made participants more aware of the reality and the severity of HIV and how easy it is to be exposed to HIV or any other sexually transmitted disease. EPPM, as discussed in the literature review, comes into play when discussing fear appeals. Extended Parallel Process Model, EPPM, has been found to be successful among communication efforts, and I believe it can be applied to health communication materials as well. Constructing effective risk-related messages grounded in fear appeals and scare tactics can, and were, effective.

Realistic for Target Audience

Appealing to a target audience is an extremely component for any health education, especially young adults, who tend to be an especially vulnerable group.

Materials that are not realistic or likely for the target groups are not likely to be as impactful. For example, material number four mentions "avoiding drinking alcohol and drug use" as a way to prevent the spread of HIV. While this is general knowledge, college students often engage in alcohol and drug consumption and have multiple sex partners, making this an ineffective suggestion for many young adult college students. "For preventing HIV, the suggestions are just unrealistic and not common – like it says avoid alcohol and drugs – there is no way this is for college kids" (Male, Pamphlet #2). In line with participants' statements, perhaps a more effective message to college students would be, "if you plan to be under the influence of alcohol or drugs, make sure you take precautions such as having a condom to lessen the risk of potential HIV transmission." Such an approach would potentially be more relatable for college students, and therefore possibly better received. Many statements were made that the suggestions were not age appropriate, and that the materials were targeting people before they had sex, even though many young adults have already engaged in sexual activity and continue to do so. Therefore, it is especially important that education materials, especially health related, are appropriate for their target audience. This includes many qualities, but content is an important one. Especially for college students, who engage in riskier behaviors than other age groups.

Assumption of Perceived Risk

Effective materials, according to the participants in this study, appear to have the ability to increase (or at least acknowledge) an individual's perceived risk of

becoming HIV positive. Pamphlet #1 was especially effective in this arena, because the quickly increasing number of exposed individuals "wasn't realized" by most focus group participants prior to looking at this chart. Study participants frequently offered that they had felt that "it [HIV] won't happen to me," which has been found to be a general feeling shared among many young adults. This lack of perception of risk was also present in the pre-survey data, with individuals consistently ranking their individual risk lower than the risk of those in their age group every time. This was evident in many comments made my focus group participants reflecting how they were unaware of their risk or how they hear about risk for others, but had previously not associated it with their own risk. This was also evident in the pre-surveys, when both males and females scored their personal risk for HIV as lower than sexually active college students' risk. This is important because, according the pre-survey, college students did not have a high level of perceived risk. Females had higher perceived risks both for themselves and for a young adult population than males, but it was not much higher. The average score by females for sexually active college students was 2.89, and the average score by males for sexually active college students was 2.68. The average score for female students' perceived self-risk was a 1.26, and the average score for male students' perceived self-risk was again slightly lower, at a 1.125.

Relatedness and "Relatability"

My focus group data revealed that the ability to relate to materials made the messages more powerful and realistic. Photographs of real people were more relatable than cartoons, because as one focus group participant stated, "I can see these people walking around campus." In addition, statements made in some of the pamphlets were relatable, while others were not. For example, in material number four, a health worker discussed how she has to make sure she is careful when working with needles and blood. This statement is relatable for anyone who is planning on going to work in the healthcare field, as well as other people.

Other Interesting Findings

Prior Knowledge (As Related to Information in Pamphlets)

The majority (91.428%) of respondents indicated that they had received some degree of HIV or sex education in high school or college, many mentioning high school specifically. This was brought up numerous times in focus group discussion, especially when mentioning that the information in the pamphlets "was learned in high school health class."

Future Behavior

Not all focus groups mentioned future behaviors or potential behavior change, but when it was mentioned, they were mostly positive. Female subject number 24, in particular, stated that "I think it just makes me want to be a lot less casual as a single girl, it really makes me want to think twice." Female subject number 22 also made a valid point, by stating that "because we're young, we could change our future behavior seeing this." Future behavior changes were also positive among men, many stating that they would be more likely to use condoms and think about who they were having sexual relations with.

All of these findings are important because they provide insight from the target population directly about what types of materials they find to be informative and effective. Young adults, especially college students, need to be given materials that they will take seriously and want to engage in. Taking these findings into consideration when creating education materials for HIV and other STDs will allow for more effective and relatable materials to be produced for target audiences, hopefully leading to increased knowledge and behavior change.

Connectedness between HIV expert and focus group participants

The messages received by students did not always match up with the messages that
were attempted by Frank Hawkins. Director Hawkins emphasized how Pamphlet #2

(for guys and girls) was constructed in order to be visually appealing for the respective
sexes. However, the consensus from focus groups suggested that the animated
pictures from those pamphlets were actually not appealing.

Pamphlet #3 for women, the Wellness Booklet, had connectedness between Mr. Hawkins and female focus group participants. Frank emphasized that the booklet

was interactive, which was stated by focus group members as well. Behavior change, especially regarding sex and reproductive health, was stated by both parties as the main point of this pamphlet. Pamphlet #3 for men was also successful with connectedness between Frank and the male focus group members. "The idea is to help men to think responsibly about having children" said Frank. This was echoed by the men in the focus groups, saying that this would make them think again before having sex without a condom.

Pamphlet #4, HIV Facts, demonstrated more disconnect than the other materials. This material was chosen by Frank because of its large amount of information, which the focus group participants very clearly disliked. Frank thought that the wide range of information was a good reason to distribute this to young adults, while my participants repeatedly stated the opposite; how the information was just too much and they were not interested in reading it. However, the photos of real people on the cover successfully served the purpose of "looking like a college student," as Frank had hoped.

The table below is a summary of the most common positive and negative aspects of each pamphlet, as discussed in the focus groups.

Table 4: Positive and Negative Aspects of Pamphlets from Focus Group Discussion

Pamphlet	Positive Aspects of Pamphlet	Negative Aspects of Pamphlet •Questions/some confusion about calculated increase at first	
1. Sexual Exposure Chart	Scare factor Impact of the numbers adding up so quickly Visual transition from stick figures to small dots as the numbers increased Ipage, easy to look at and read quickly Can be applied to other STDs in addition to HIV Attracts the eye		
2. (Female) HIV For Young Women	Gives a lot of different types of information not as commonly known Most important information bolded – easy to pick out that information	Boring Generic, not relatable HIV written on the cover – stigma Too many words Unrealistic suggestions	
2. (Male) HIV for Guys	* Gives a lot of different types of information not as commonly known	Animated pictures/cartoons made it seem "juvenile" Unrealistic suggestions Too wordy	
3. (Female) Wellness Booklet	Visually appealing Fun to read through and think about prompt questions	* Might not stay up to date with updating it	
3. (Male) Condom Packet	Magnum: good quality condom Shocking number associated with having a baby Simple, not bombarded with information	•Smartphone scan feature difficult to navigate	
4. HIV Facts	Photos of real, college-looking people on the cover Discusses more than just the basic information Inside section would be good for a poster in a doctors office	Too big, hard to maneuver Too many words Unrealistic suggestions – not appropriate for target population overwhelming	

Chapter 5

CONCLUSION AND FUTURE RESEARCH

"This is especially important for our age group [young adults] because our risk for HIV/AIDS is directly correlated to the fact that we don't always think about our future and we don't connect the future with our current decisions." (Female)

Young adults are a unique population, especially for sexually transmitted diseases, including HIV. Literature and my focus group data revealed that many young adults, especially college students, are unaware of their risk for HIV, and are not fully educated on the matter. In order to appeal to them, health education materials must contain many components to be successful. Materials must be visually appealing, increase risk, not contain excessive wording, and, according to my research, contain a degree of fear appeal or scare factor (with contrasts with prior literature findings).

This study was a pilot study, aimed at learning more about what messaging and marketing techniques would be most effective at reaching a young adult audience.

More research should also be done on fear appeal and scare factor, and the varying degrees to which they are successful. With more research and investigation, health education manufacturers will be able to create more successful and effective written health education materials, which will productively reach and make an impact on their target populations.

Going into the field of public health, specifically community health and health promotion, it is important for me to understand how to successfully reach a target audience with important health education. I would like to continue this research so that education material producers are more aware of what types of qualities are effective. With the increasing use of technology, paper materials might not be looked at in the same way they were before. More attention might be paid to online sources, so it is of the upmost importance that written educational materials are strong and engaging for those in the target populations. While studying at Emory University for the next two years, I would like to continue research on this matter. In the city of Atlanta, and with more research knowledge, I would be able to use different sampling methods and have a wider range of participants. Given that I want to go into the field of public health, specifically community health prevention, these findings will guide me in my health promotion efforts. Having the knowledge of how to cater to a young adult population will allow me to create more effective materials from the start. I would like my future research to remain focused on young adults, because I believe that young adults are a very vulnerable group, but a group that has the power to make changes if they are influenced to do so.

Limitations

There were a few limitations of this study which should be addressed for any further research on this topic. One limitation was having a fully heterosexual group of participants. This was not screened for prior to the focus groups, but should be in the

next set of research. This is important because of the nature of the pamphlets and how they are geared towards a heterosexual population. There are other materials that are geared towards homosexual individuals, especially homosexual males, but those pamphlets were not used in this study because there needed to be consistency.

A larger sample size would also make for a more inclusive study – my sample size was 35 participants. Participants were only taken from one school, the University of Delaware, which is also a limitation. I used convenience and snowball sampling to recruit students at the University of Delaware for many reasons, one being the sensitivity of the topic of HIV and sex. I chose participants who were comfortable enough to talk openly about these topics, but a simple random sample of students from multiple universities from around the country would have lead to a stronger sample. If multiple schools were not an option due to funds, a simple random sample of University of Delaware students would be fairly sufficient as well. In addition, my sample was not comprised of an even distribution of age or grade. The majority of my sample was made up of students who were juniors or seniors, who might have been exposed to more HIV knowledge because they are a few years older.

Despite the limitations of this study, the major findings are evident and can be used to make noticeable change in written educational materials. From this study, I found that scare tactics and fear appeals can indeed be helpful. In fact, the overwhelming opinion of all focus group participants was that the materials which provoked some degree of fear were the materials they took the most seriously, and were most impacted by.

Real photos of people who fit into the target population of young adults were liked more than cartoons or animated pictures, which made participants feel "juvenile." Photos of individuals who looked like they could have been friends of the participants or people they see around campus had more of an impact than photos who did not look like people the participants knew.

When creating written educational materials, creativity is key. Titles and covers which explicitly used "HIV" were viewed as negative, for a few reasons. The major reason was because of stigma. Although much more is known about HIV, there is still a stigma that surrounds it. Focus group participants expressed concern about being seen with a pamphlet that blatantly said HIV, and expressed a desire for a more creative title that would get students to be interested to look at the information.

Future Directions

Relatability and effectiveness of written health communication materials is something that should continue to be explored and studied. For future research, I would make a few changes to this study. I would consider implementing a post-survey to follow up with participants two months, and then six months, after their focus group sessions. This follow up meeting would allow me to see if knowledge learned during the focus group sessions was retained and utilized in the daily lives of participants. I would also be interested to see if there was any significant behavior change.

For future research, I would likely more specifically define a target population.

A sample of mostly Caucasian students at the University of Delaware is certainly not

the most at-risk population of young adults for contracting HIV. I would utilize the Center for Disease Control and Prevention's Youth Behavioral Risk Factor Surveillance System (BRFSS) to determine a more high risk young adult population. For example, African American heterosexual men make up a more high-risk population, so that would be a group I would be interested to work with in the future.

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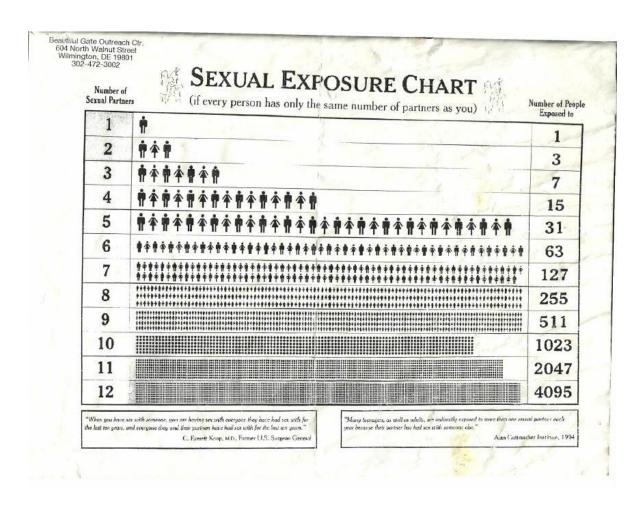
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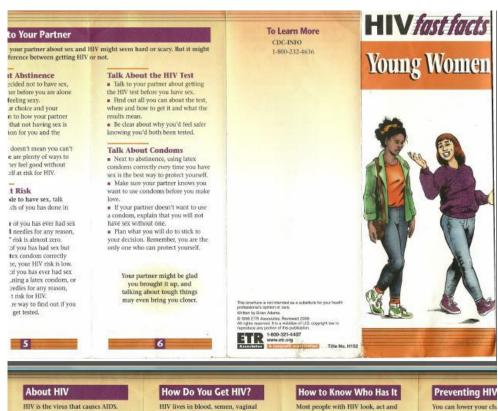
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Appendix A FOCUS GROUP PAMPHLET #1: SEXUAL EXPOSURE CHART



Appendix B

FOCUS GROUP PAMPHLET#2 (FEMALE): HIV FOR YOUNG WOMEN



HIV is the virus that causes AIDS.

- the part of the body that fights infections.
- · People with HIV may not know they have it. They can look and feel healthy for a long time. But they can still pass HIV to others.
- If HIV damages the immune system enough, the person begins to get sick. The stage of HIV when people get diseases or illnesses is called AIDS.
- There is no vaccine and no cure for HIV. But there are medicines to help people stay healthy longer.
- The more you know about HIV, the easier it is to keep from getting it.



HIV lives in blood, semen, vaginal fluids and breast milk. To get HIV, one of these infected fluids has to get inside your body.

There are 3 main ways to get HIV:

- Sex. You can get HIV by having unprotected sex (without a) condom) with a person who has
- Needles. You can get HIV by sharing drug needles or works with a person who has HIV. You can also get HIV by sharing needles for tattoos, piercing, steroids or any other reason.

 Being born with it. Babies born to
- women with HIV are also at risk. A pregnant woman can take medicines to greatly reduce the baby's risk.

How You Don't Get HIV

You can't get HIV from casual, everyday contact:

- You don't get HIV from touching, hugging, dry kissing, or just hanging out with a person who has HIV. Wet kissing is safe if neither person
- has sores or cuts in or on the mouth.
- HIV is passed in blood, not saliva. You can't get HIV from giving blood.
- You can't get HIV from mosquitoes or other insects.

Most people with HIV look, act and feel healthy. So you can't tell by looking if someone has HIV.

Before you decide to have sex with someone, find out:

- Has the person ever had sex without using condoms?
- Has the person ever shared needles for any reason?
- Has the person ever had an STD or had sex with someone who had an

If the answer to any question is yes, the person could have HIV.

The HIV Test

A simple test can tell you if you have HIV:

- · You can be tested at a public health or family planning clinic, doctor's office; or an HIV testing center. • Results take 2 weeks to come back.
- Many sites offer a quick test. You can get results in a few minutes. Teens can be tested without permis-
- ston from their parents in all states.

 HIV usually takes up to 3 months to show up on a test. Rarely, it can take up to 6 months. So it's best to be tested again after any unsafe sex or needle sharing.

 Call your state or local health
- department or AIDS agency for more information about HIV testing.

getting HIV.

- Don't have sex. This nence. It means no vagir sex. Abstinence is the beyourself from getting HI
- # If you choose to have · Have sex with on
- who doesn't have I only has sex with y called monogamy
- · Get tested for HIV
- have sex.

 Use latex condom every time you ha who are allergic to plastic (polyuretha These come in boti female styles.

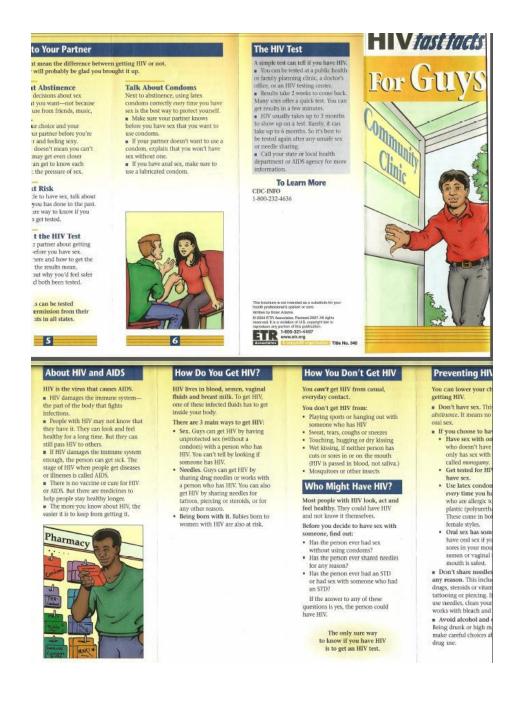
 • Oral sex has some
- have oral sex if you sores in your mout semen or vaginal f mouth is safest.
- Don't share needles reason. This includes in steroids or vitamins, or or piercing.
- Avoid alcohol and o Being drunk or high ma to make careful choices

The only sure way you have HIV is to

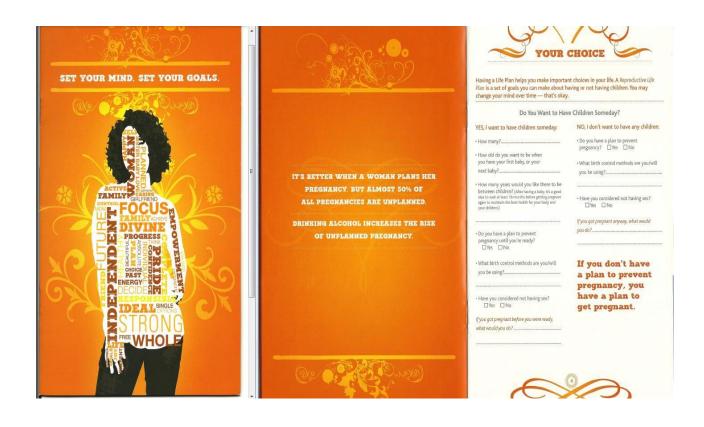
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Appendix C

FOCUS GROUP PAMPHLET #2 (MALE): HIV FOR GUYS



Appendix D FOCUS GROUP PAMPHLET#3 (FEMALE): WELLNESS BOOKLET



Appendix E

FOCUS GROUP PAMPHLET#3 (MALE): CONDOM PACKET



Appendix F

FOCUS GROUP PAMPHLET #4: HIV FACTS

at Is HIV?

is that causes AIDS. People (in their bodies have HIV

they have it.

ease with many stages. 1 HIV may have no a few symptoms or many iptoms.

have HfV for many years ling or looking sick. They en know they have HfV, n still pass the virus on to

hurts the body.

HIV damages the body's stem. The immune system a body from disease.

mmune system gets very r diseases and infections ne body. This stage of HIV



How Do People Get HIV?

HIV lives in semen, vaginal fluids, blood and breast milk of a person with HIV. It can be passed from one person to another through these infected fluids.

HIV can be passed:

- During vaginal, oral or anal sex While sharing needles and equipment to inject drugs
- By needles used for tattoos and piercing or to inject vitamins or steroi From a mother to her baby during
- pregnancy, childbirth or breastfe
- From needle-stick injuries to health. workers caring for people with HIV

HIV is not passed by:

- Donating blood
- Hugging, dry kissing or sharing food
- Telephones, toilet seats, towels or eating utensils
- Tears, saliva, sweat or uring Mosquitoes or other insects
- Before 1985, some people got HIV from infected blood transfusions. Now the blood supply in the United States is tested. So the chances of getting HIV this way are very, very small.

Protect Yourself!

- Use a new latex condom and a water-based lubricant every time for vaginal or
- . Don't use oil-based lubricants. Hand creams, massage oils, Vaseline, etc., car cause the condom to break.
- · For oral sex on a man, use a new latex
- For oral sex on a main, use a new latest condom every time.
 For oral sex on a woman or oral/nat sex on a man or woman, use a barrier such as a dental dam, a latex condom cut and rolled out flat, or plastic food wrap. Use a new barrier each time.
- People who are allergic to latex can use plastic (polyurethane) condoms. These come in both male and female styles.
- Don't have sex when you're drunk or high. Using alcohol or other drugs affects judgment and can lead to ursafe sex.





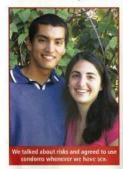
What Is Your Risk?

You are at risk if you:

- Have had sex with a man or woman who has had other partners.
- Have shared needles to inject drugs, or had sex with someone who has.
- · Have shared needles for any reason, or had sex with someone who has

not at risk if you:

- Haven't had sex, or have only had sex with one partner who doesn't have HIV and who's only had sex with you.
- Haven't shared needles to inject drugs or for any other reason, and haven't had sex with anyone who has.



The HIV Test The HIV test looks for HIV

antibodies in your body.

- If you have antibodies:
- Your test results will be positive. This means you have HIV.
- If you don't have antibodies:
- Your test will be negative. This means one of two things:
- You don't have IIIV.
 You have HIV, but your body hasn't
- made antibodies vet. It takes up to 3 months after infection for the body to make HIV antibodies. In rare cases, it can take up to 6 months.

What happens in testing?

- A health care worker takes a little blood from your arm or finger, takes cells from the inside of your cheek or gums with a cotton swab, or asks for a urine sample.
- Many test centers offer a quick test. Results take a few minutes. Positive results must be confirmed with a second test, with results in about 2 weeks
- Other places send the sample to a lab. In about 2 weeks, you go back to get the results.
- Most test centers provide counseling to help you understand the results and learn how to prevent HIV.

What Test Results Mean If you test positive:

- A confirmed positive test means you have HIV. Positive results are almost 100% accurate.
- If you test HIV positive, find a health care provider who knows about HIV right away. Early treatment can help you stay healthy longer.
- Services for people with HIV include help with health care, income, food and legal services.

If you test negative:

- A negative test means no HIV antibodies were in your body at the time of the test.
- This may mean you don't have HfV.
- A negative test might also mean you have HIV, but your body hasn't made HIV antibodies yet.
- Get tested again at least 3 months after any risky behavior.

The only way to know for sure if you have HIV is to get tested.

Who will know you

- Most test centers offe testing. Your test result you but it is also put int file. Ask who has access
- Some centers offer an testing. You are the on sees your test result. You name or number to get
- Home testing is anony HIV antibody home testi be purchased at a pharm
- . You mail a blood sam along with a code nar • Results are given by p you call and give your



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Appendix G

FOCUS GROUP PRE-SURVEY

An Evaluation of HIV Communication Mechanisms for Young Adults Pre-Focus Group Survey

Year:			
Please answer all	questions individually	using vour current	knowledge about HIV

1. What is HIV?

Subject Number:

- 2. In which ways can HIV be transmitted? (list all that you are aware of)
- 3. Which populations do you believe to be most at risk for HIV?
- 4. Did you receive HIV and other STI education in high school or in college?
- 5. On a scale from 0-5, 0 being not at all at risk, 5 being extremely at risk, how would you rank sexually active college students in terms of their risk to HIV?
- 6. On a scale from 0-5, 0 being not at all at risk, 5 being extremely at risk, how would you rank yourself in terms of your risk to HIV?
- 7. Please indicate any other HIV knowledge you have.

Appendix H

FOCUS GROUP DISCUSSION QUESTIONS

An Evaluation of HIV Communication Mechanisms for Young Adults Focus Group Questions

All participants must complete pre-survey before focus group begins

Pass out education materials to participants.

Discuss each material separately.

- 1. Is this a pamphlet that you would normally read through or look at if it was given to you? What about if it was available but not directly handed to you?
- 2. What do you believe to be the main point of this pamphlet?
- 3. What information did you learn in this pamphlet that you were unaware of before?
- 4. What information presented in this pamphlet were you already aware of?
- 5. Do you think that this pamphlet effectively targets a young adult population? Why?
- 6. How do you feel about risk for young adults after reading this pamphlet? How do you feel about your own personal risk? Why?

Allow for and encourage discussion beyond these questions. Repeat questions for each material.

Appendix I

PARTICIPANT RECRUITMENT EMAIL

Hello! My name is Kate Chiseri, and I am conducting a senior thesis project on the effectiveness of HIV education materials on college students. I will be conducting several short focus groups, no more than an hour long, and I am asking for your participation if you are interested. Pizza and beverages will be provided. I am looking for both males and females, of all collegiate ages, races, and backgrounds. If you are interested, please contact me by email (kchiseri@udel.edu) or phone (518-275-3212). In addition, if you have friends who are interested, please have them contact me as well. I am looking to recruit a diverse student population, so you participation would greatly contribute to that goal! Your answers and responses will be confidential, and your participation will not continue further than the focus groups. Please respond if you are available to participate, or if you would like more information before agreeing to participate. Thank you!