

RECRUITER AND PARTICIPANT CHARACTERISTICS
INFLUENCING RECRUITMENT OF SMOKERS INTO
SMOKING CESSATION PROGRAMS

By

LAURA C. CARTER

Bachelor of Arts

Ripon College

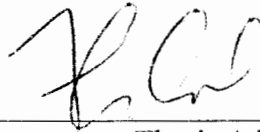
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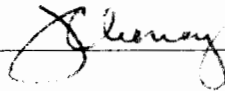
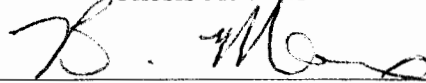
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Thesis Approved:



Thesis Advisor



Wayne B. Powell

Dean of the Graduate College

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Abstract

Cigarette smoking is one of the most potent causes of or contributors to disease and death, yet its effects are largely preventable with cessation. Despite this fact, and the wide availability of smoking cessation intervention, 48 million Americans continue to smoke, including African Americans (AA), who are at a higher risk for smoking-related illness and have lower smoking cessation rates than any other ethnic group. One reason for this lack of success quitting may be that many smoking cessation interventions fail to reach AA smokers, largely because those interventions are not culturally tailored to the unique values and customs of this ethnic group. Lack of cultural tailoring renders the existing smoking cessation programming largely irrelevant to AA smokers. One way to make a message more culturally relevant is to have it be delivered by a member of the target population, especially one who is well-known within the community or knowledgeable about the subject matter. This study presented videotapes of four models speaking to Euro American (EA) and AA participants on behalf of a smoking cessation program. Models were an AA university athlete, EA university athlete, AA university faculty member, and EA university faculty member. Athletes were visible within the community, and faculty presented themselves as experts on smoking cessation. Faculty were consistently viewed more positively than athletes by both groups of participants. EA participants viewed the AA models less positively than the AA participants viewed the AA models. AA participants, however, held both models in approximately equal favor. Results suggest that, in recruitment efforts, ethnicity of the model should match the ethnicity of the target group, except when the target group is mixed. In that case, the model should be EA, since neither EA nor AA smokers react poorly to EA models.

Recruiter and Participant Characteristics Influencing Recruitment of Smokers Into Smoking Cessation Programs

Cigarette smoking is acknowledged as one of the most significant yet preventable causes of or contributors to disease and death (American Cancer Society [ACS], 1997). It is associated with several cancers, including cancer of the mouth, pharynx, larynx, esophagus, pancreas, uterine cervix, kidney, and bladder and even contributes to more minor illness such as colds and gastric ulcers. Smoking is a primary cause of coronary heart disease and cardiovascular disease, chronic bronchitis, stroke, emphysema, and cerebrovascular disease (ACS, 1997). Each year, more than 400,000 Americans die as a result of smoking-related illness. The effects of smoking are, however, largely preventable if cessation occurs prior to end-stage smoking-related illness. With cessation, much functioning can be regained and disease risk can decrease dramatically. Within one year of cessation, the risk of heart disease is halved; within 10 years, the risk of lung cancer is halved; and within 15 years, the risk of stroke equals that of never-smokers. Further, with cessation, individuals report fewer health complaints, better health status, and fewer days of illness (Manley, 1997).

The effects of smoking are well-publicized and well-known by smokers (Kuller, Meilahan, Wentworth, Svendsen, & Neaton, 1991). Warnings appear on cigarette packages, and anti-smoking messages have been developed for television and radio public service announcements and in a plethora of other literature. Physicians and dentists regularly warn their patients who smoke about the dangers of smoking. Further, news regarding prevalence of smoking-related illness and anti-tobacco legislation is difficult to overlook. For children and adolescents, the warnings about smoking begin early with

school education about drug and alcohol use, including nicotine use. Further, support for smokers who want to quit is widely available in a variety of forms, many of which do not incur a cost to the smoker, are minimally invasive, and can often be conducted in the home.

Though warnings are abundant, the effects of smoking are largely reversible with cessation, and support is available for those who want to quit, 48 million Americans over the age of 18 (25.5%) continue to smoke (ACS, 1997). Most smokers (93%) agree that smoking is harmful, and 70% report that they would like to quit smoking (Glass, 1990). Still, smoking cessation interventions have generally had mixed success. Despite the large number of interventions available, the vast majority of smokers are not attracted to established programs and would rather quit on their own, with a minimum of external assistance. One paper found that only one-third of participants interested in quitting smoking indicated that they would be willing to seek outside help in doing so (Lando, Pirie, Hellerstedt, & McGovern, 1991). Even when smokers do enroll in smoking cessation programs, the results are generally marginal and only a small percentage actually quit and remain abstinent for long. While many smokers do reduce their smoking during the intervention and even for a short time after, relapse is common and is often triggered by largely uncontrollable and unavoidable factors such as stress and other types of nicotine cues. African American (AA) smokers seem to be at particularly high risk for these types of factors.

The review of literature that follows will address a number of topics relevant to the recruitment of AAs into smoking cessation programs. First, the typical success of smoking cessation interventions will be discussed, and information will be provided on the

success rates of the most common types of interventions, including clinic-based programs. Smoking cessation specifically with regard to AAs will then be discussed, including discussion regarding the high health risk that smoking poses to AA smokers, explanations for the continually high smoking prevalence of this group, and proposed reasons for their limited quit success. Literature regarding the importance of cultural relevance of smoking cessation intervention will be reviewed, including reasons that cultural tailoring of such programs may significantly enhance quit success. Further, methods used to recruit AA smokers into clinic-based smoking cessation programs will be discussed. These include the Attraction-Similarity Hypothesis, social marketing, and use of recruiters who are AA, who are both visible within the AA community and knowledgeable about the field of smoking cessation. Finally, the literature studying the response of AAs and Euro Americans (EA) to recruiters of various ethnic backgrounds will be discussed, followed by discussion of the goals of the current study.

Limited Success of Smoking Cessation Interventions

Smokers who want to quit may attempt cessation using a number of methods. As mentioned, most try self-quitting at some point, and formal intervention is available in a variety of forms for those who want outside help quitting. Self-quitters may use a variety of medications, including the patch, gum, nasal spray, and pill (Zyban) to aide in their efforts. Formal intervention may also make use of these medications combined with education and/or training. Formalized treatment includes clinic or community-based programs (e.g., American Lung Association programs, University-based programs),

worksite-based programs, and even media-based programs such as those offered via audiotape (self-hypnosis), videotape, and television.

Smoking cessation programs in general, including self-quitting, have extremely low success rates. The typical abstinence rates for individuals in formalized treatment is 4.9% to 13.2% at six months post-cessation and 4.2% to 13.9% at 12 months post-cessation, depending on criteria for abstinence (Cohen et al., 1985). Other studies report success rates as high as 15% for individuals using self-help books and other self-education materials and 6% for individuals receiving no support or information at all (Viswesvaran & Schmidt, 1992).

Many smokers prefer the idea of self-quitting to that of attending a formal program because self-quitting, either with or without medication, is less intrusive, structured, and time-consuming than formal intervention. However, self-quitting, contrary to popular belief, is no more successful than programmed quitting. In an analysis of results from 10 studies of individuals who attempted to self-quit, it was found that self-quitting is indeed no more effective than formal intervention and may often be less successful. In fact, abstinence rates of self-quitters are equal to or lower than rates of those engaging in formal treatment. Further, demographic and smoking-related characteristics of individuals in both were similar, which is contrary to the common idea that mostly hard-core, more highly addicted smokers engage in formal treatment (Cohen et al., 1989).

A meta-analysis of results from 633 smoking cessation studies supported the efficacy of formal treatment, especially for individuals who are physically ill (e.g., coronary or pulmonary disease). The study examined success rates of various methods of cessation, including self-quit, educational, drug-based programs, hypnosis, physician advice, aversive

methods, and various types of cessation clinics (e.g., smoking withdrawal clinics). Results showed a 15% success rate for self-quitting, which was described as individuals attempting cessation using only self-help books and other educational materials, and a 6% quit rate for individuals with no support at all. Those advised by a physician had a quit rate of 7%, and those enrolled in group withdrawal clinics quit at 26%. Of pulmonary patients, 34% quit, and cardiac patients had the highest quit rate (42%). The authors concluded that self-quit methods were less effective than formal cessation treatment (Viswesvaran & Schmidt, 1992).

Overcoming urges to relapse is likely the most challenging barrier to permanent abstinence. In evaluating the relapse rate in clinic-based smoking cessation programs, studies report mixed results. One study reported that 80% of smokers who quit relapse within one year (Jarvik, 1995). Relapse often occurs even after months or years of abstinence, though it is more common within a short time of quitting. Carmody (1993) found that two-thirds of participants relapsed within the first three months after quitting, while other authors found that 62% began smoking again after only two weeks of quitting and that those who relapsed had a 95% probability of resuming their previous rate of smoking (Garvey, Bliss, Hitchcock, & Heinold, 1992). Predictors of relapse include prior short periods of abstinence, high levels of pre-cessation consumption of alcohol, and low levels of confidence in ability to quit and to remain abstinent. Other predictors include post-cessation weight gain, high stress levels, exposure to smoking cues, high severity of withdrawal symptoms, lack of social support, and mood fluctuations (Carmody, 1990; Garvey et al., 1992; & Cohen & Lichtenstein, 1990; Klesges, Somes, Pascale, & Klesges, 1988; & West, Hajek, & Belcher, 1989).

There are a number of reasons for the limited success of smoking cessation programs. Generally, either weaknesses reside within the program itself, or characteristics of participants themselves increase the failure-to-quit rates and relapse rates. Failure to teach relapse prevention techniques may result in extraordinarily high relapse rates (Brigham, Henningfield, & Stitzer, 1990; Powell, 1993). Programs failing to provide education about withdrawal symptoms and coping strategies for such symptoms are likely also to show high relapse rates (Hatsukami & Lando, 1993). Negligence of programs to address possible post-cessation weight gain and to teach methods of avoiding that weight gain may also result in high relapse rates, especially in women (Klesges et al., 1988; Killen, Fortmann, & Newman, 1990). Literature also suggests that interventions focused primarily on the use of a product (e.g., nicotine gum, patch) yield higher relapse rates than those which focus on clinic-related intervention such as education and support (Ives & Goldstein, 1994).

Behavior and characteristics of participants may also influence success of smoking cessation programs. Participants who attend sessions infrequently have much lower success rates (Clarke, Hill, Murphy, & Barland, 1993). Those who are not ready to change the habit of smoking will be vastly less successful than those who are ready, as measured by Stage of Change criteria (DiClemente, Prochaska, Fairhurst, & Velicer, 1991). Further, factors such as low desire to quit, high nicotine dependence, heavy smoking rates, low self-confidence, low desire for health improvement, and low social support also tend to result in decreased success rates (Thompson & Curry, 1994; Hao & Yang, 1992). Another factor impacting program success is the degree of psychological illness in its participants. This factor is less frequently addressed in the literature, and

studies that do address it typically focus only on Axis I. There is a substantial body of literature showing that Axis I disorders may impede cessation and a smaller but compelling body of literature suggesting that Axis II personality disorders may also impair quitting ability (e.g., Pritchard & Kay, 1993; Kassel, Shiffman, Gnys, & Paty, 1994).

Finally, ethnic minorities may be unsuccessful if the program is not culturally tailored to address issues unique to that minority group. The issue of cultural relevance has been discussed in the literature and cited as an important factor both in discouraging minority participation initially and in impeding cessation. The two minority groups most often addressed with regard to this issue are AAs and Hispanic Americans (Shervington, 1994; Ramirez & Gallion, 1993).

AAs and Cigarette Smoking

Smoking patterns in AAs has received some study, and these patterns have been found to be much different in AAs than EAs. Though AAs account for approximately 12% of the US population, 27.2% smoke cigarettes. This is in contrast to 26.3% of EAs and 19.5% of Hispanic Americans who smoke (ACS, 1997). Typically, AAs begin smoking later in life than EAs, smoke fewer cigarettes per day, quit at a lower rate than EAs, and prefer menthol cigarettes, which have a higher tar and nicotine content than non-menthol cigarettes (Crews, 1994). It has been found that AAs smoke more "intensively" than EAs, getting approximately 80% more nicotine from cigarettes (Hopkins, 1998). Though they smoke fewer cigarettes on average per day than EAs, AAs quit smoking at lower rates than do EAs. Further, though they are more likely than EAs to report a desire to quit smoking and more likely to attempt cessation, they are less likely to remain

abstinent over time (Royce, Hymowitz, Corbett, Hartwell, & Orlandi, 1993; Resnicow et al., 1997; Crews, 1994; Ahluwalia, 1996).

AAs are also at a higher risk for smoking-related illness than any other ethnic group (ACS, 1997; Manley, 1997; Crews, 1994; Ahluwalia, 1996; Hopkins, 1998). Research shows that, smoking-related diseases are the leading cause of death among AAs, and that rates of smoking-related terminal cancers such as lung cancer are higher in AAs than they are in EAs (Manley, 1997; Crews, 1994). Studies have shown that AA males are 30% more likely than EA males to die from smoking-related illness, and annually, more than 45,000 AAs die from smoking-related illnesses (Manley, 1997).

The addictiveness and harmfulness of menthol cigarettes, and intensity with which many AAs smoke may account for much of the increased smoking-related disease risk in this population as well as the difficulty often encountered in cessation attempts. Studies have hypothesized that this difficulty quitting may be due to a conglomeration of factors, including high poverty rates, poor access to health care, and heavy advertising directed toward AAs. Also cited are the often high levels of stress among AAs, isolation, lack of information to facilitate quitting, use of smoking as a pleasurable activity, and lower perceived health risks of smoking (Ahluwalia, 1996). Further, less expensive cigarettes are often those containing higher levels of nicotine and tar, and often include menthol cigarettes, all of which increase addictiveness.

Other authors offer different explanations. Lopes et al. (1995) propose that attitudinal differences are a cause of smoking continuation. AAs, many of whom deal regularly with hardships related to poverty, may not identify smoking as a primary problem. Further, they may believe that their pattern of smoking fewer cigarettes per day

is less risky and less apt to cause health problems. Many AAs also may not be receiving encouragement or treatment by health care professionals, due to paucity of funds and/or lack of health insurance to pay for such care. In fact, facilities treating many AAs are publicly-funded and often focused on treating current medical conditions rather than providing preventative care, so patients using these facilities rarely receive any information regarding disease prevention. Finally, the authors propose that cessation programs, most of which are geared toward EAs, have failed to address the needs and values of AAs. They suggest that cessation programs designed for are necessary to elicit participation from this population (Lopes et al., 1995).

Cultural Relevance and Health Promotion Programs

Cultural relevance of health promotion programs is an issue that has received increasing attention in the literature, though the body of literature on this topic is still small. Most empirical investigation of this issue has addressed smoking cessation programs and HIV/AIDS prevention programs. In this context, cultural relevance refers to elements incorporated into health promotion programs or messages that are relevant to a specific ethnic group and thus likely to increase interest and participation of its members. Reflection of AA values such as community support and involvement, family connectedness, family pride, ethnic pride, ancestry, and spirituality is often viewed as the essence of cultural tailoring (Carter, 1997; Ahluwalia, 1996; Stevenson & Davis, 1994).

One way to render message more relevant to a specific population is to have it be delivered by a member of that population through channels most commonly used by the population. Messages directed toward AAs are often delivered via community networks

such as churches, community organizations, radio, television, and print media popular with members of the population. Specific individuals have also been used in health promotion efforts. Typically, AA presenters or models are used to convey the health promotion message, either in face-to-face encounters where the individual talks with groups of AAs, or via some other sort of medium popular with AAs, such as specific radio, television, or print media.

These media have been used in the study of the effect of culturally-tailored health promotion messages. Videotapes of messages are also common methods of studying the effect of various factors on audience receptivity to a recruiter/promoter or to the message itself. In efforts such as these, AA physicians have been used, as have been tribal figures from AA history, popular media personalities, athletes, and other well-known individuals (Ahluwalia, 1996; Resnicow et al., 1997; Stevenson & Davis, 1994). Also used have been leaders specific to a certain target community or even individuals such as ministers, barbers, and beauticians (Ahluwalia, 1996).

The literature identifies important elements to be included in the message itself. Use of AA language and idioms and use of Afrocentric names is important, as is clothing and music (Resnicow et al., 1997; Stevenson & Davis, 1994; Jason, 1998). Factors such as these may be especially important if the goal is to gain the attention of AA youth. One paper proposed that use of these elements provides not only a more familiar context and one with which individuals in the target group may more easily identify, but it also reinforces a sense of commitment to culture and heritage. The authors propose that a desire to maintain a sense of being AA-centered contributes to disengagement from traditionally European activities. Further, they suggest that health promotion education

that is devoid of elements unique to AA culture will tend to alienate AAs who want to avoid becoming "raceless" (Stevenson & Davis, 1994).

Most researchers agree that there is a great need to culturally-tailor health promotion messages to make them more compatible with audience values and customs such as these (cf., Stevenson & Davis, 1994; Crews, 1994; Ahluwalia, 1996). There is general agreement in the literature that individuals tend to be most receptive to messages that are most relevant to them and with which they can most easily identify (Stevenson & Davis, 1994; Kalichman, Kelly, Hunter, Murphy, & Tyler, 1993; Kalichman & Coley, 1995). Knowledge of the target group is essential to determine a culture's values and norms, worldviews, paradigms, and philosophies (Stevenson & Davis, 1994).

Cultural tailoring of health-promotion messages other than anti-smoking messages has been studied, and findings and conclusions from many of these studies may be useful in examining smoking cessation. Kalichman et al. (1993), performed a study in which HIV/AIDS risk-reduction messages were targeted to AA women. It was reasoned that lack of precaution-taking behavior in sexual situations may be a result of underestimated sense of vulnerability resulting from perception of the self as dissimilar from those at risk. This perception, perhaps, could arise from bearers of risk-reduction messages being different racially and socioeconomically from the targeted group. These authors also proposed that misperception of risk may result from lack of identification with what are usually thought of as high-risk groups, such as homosexual males and intravenous drug users. The authors hypothesized that participants would demonstrate greater knowledge acquisition and awareness of threat if HIV/AIDS information was presented to them in a context that was culturally relevant. Further, it was hypothesized that the knowledge and

awareness gained in this way would lead participants closer to readiness to change their high-risk behavior. Participants were 106 AA women living in inner-city Chicago, in an area with high incidence of HIV and AIDS. They watched one of three videotapes, each providing HIV/AIDS information but presented by different models. The models were: (1) Surgeon General C. Everett Koop together with two EA professional broadcasters; (2) three AA women presenting the exact information as was presented in Tape 1; and (3) three AA women presenting information in a context designed to be more culturally relevant than that in Tapes 1 and 2. In Tape 3, information was provided with emphasis on three themes relevant to AA women: cultural pride, community concern, and family responsibility.

The authors found that participants who watched Tape 3 were more likely than those who watched Tapes 1 and 2 to identify AIDS as a threat and to report behaviors consistent with increased threat even two weeks later (e.g., HIV antibody testing, engaging in safe sex). The authors concluded that HIV/AIDS prevention efforts may benefit from using models who are ethnically-matched and gender-matched and who communicate values related to ethnicity, family, and community.

A similar study was done by Kalichman and Coley (1995). This study was also designed to examine the impact of culturally tailored messages on subsequent risk-reduction actions of AA women. In this study, participants were 100 AA women who were shown one of three videotapes promoting HIV antibody testing. The tapes were: (1) an ethnicity-matched tape (AA male presenter) containing HIV/AIDS-related information; (2) a gender-ethnicity matched tape (AA female presenter) containing HIV/AIDS-related information; and (3) a tape containing a variety of footage, emphasizing the cultural and

personal relevance of getting tested, and including portions depicting AA couples and families. This tape emphasized the potential losses that could result from not getting tested. Results showed that participants viewing the gender-ethnicity matched tape (Tape 2) showed the greatest intent to be tested. Participants viewing Tape 3 showed behaviors indicating change in the desired direction, including talking with their partners about HIV testing and seeking testing and counseling. The authors concluded that messages reflecting the cultural norms, values, and language of the target population, rather than just information presented by a member of the target population, can influence behavior change significantly.

Another study examined the effect of culturally sensitive presentations on participants' acquisition of knowledge regarding AIDS (Stevenson & Davis, 1994). In this study, the impact of a culturally-tailored AIDS video on AIDS knowledge acquisition was tested with AA adolescents. The authors hypothesized that, since limited culturally sensitive health promotion information reaches AA adolescents, such messages, when presented in a culturally sensitive way, may have a greater impact on acquisition of knowledge and subsequent behavior change. Participants were 121 AA adolescents. They viewed either (1) an AIDS education videotape using culturally similar language, environment, fashion, life dilemmas, music, and race of actor, or (2) an AIDS education videotape using factors that were dissimilar on these dimensions. Results indicate that those viewing the culturally-similar tape had significantly greater improvement in AIDS knowledge than did those viewing the culturally-dissimilar tapes. The authors also reported that participants verbally indicated their dislike of the culturally-dissimilar tape, describing it as "corny," "immature," and "boring" (Stevenson & Davis, 1994; pg. 49).

Numerous studies have suggested cultural tailoring of smoking cessation intervention but few have tested such efforts empirically. For example, authors reported on a study in which discussion groups were formed with AA and Latino adolescents in order to determine reasons for smoking initiation in this population (Parker, Sussman, Crippens, Scholl, & Elder, 1996). One suggestion was that intervention and recruitment efforts be designed to be culturally relevant to the targeted groups. Other studies reporting on prevalence rates of smoking in AAs have suggested intervention that is culturally tailored (cf., Crews, 1994; Ahluwalia, 1996).

There is a striking paucity of research examining the impact of culturally-relevant smoking cessation programming and recruitment efforts, though the research that does exist provides valuable insight. Sussman et al., developed smoking prevention videotapes aimed toward AA adolescents (Sussman et al., 1995). They developed two videotapes: one provided smoking prevention information, was filmed at a shopping mall, and was geared toward a more ethnically generic audience (Tape 1). The second provided smoking prevention information in a "hip hop" manner, was filmed at an outdoor "hangout," and was geared more toward AA adolescents via use of culturally relevant language, setting, and clothing (Tape 2). Both tapes depicted AA actors. Participants were 267 seventh-grade students comprising a number ethnic groups, 41% of whom were AA, and 45% of whom were Latino. Two studies were performed using these tapes. The first compared the tapes on dimensions of audience receptivity, finding that participants rated the culturally-relevant tape as being (1) more accurate in its depiction of the AA lifestyle and culture, and (2) more helpful with regard to anti-smoking information. Participants viewing the culturally-relevant tape also learned more than those who had

seen the generic tape. In Study Two, participants viewed both tapes and discussion groups were formed. Results of this study indicated that the culturally relevant tape was more believable than the generic tape, and the generic tape was more likeable than the culturally relevant tape. The authors concluded that either videotape would be useful as a supplement to smoking prevention information and that the culturally sensitive tapes would serve to enhance receptivity to the program as a whole. They stated that the generic tape may be more effective with general audiences and the culturally-relevant more effective with at-risk, hip-hop-oriented youth.

In a similar study, Lopes et al. (1995) studied the impact of a smoking cessation videotape on smoking-related behavior in AA women. The tape depicted the efforts of an AA female who was a single working parent to stop smoking. The tape was designed to depict information in a way specific to AA females. For instance, the character was pictured participating in a self-help group composed of only AA females where stresses of raising a family alone, using smoking as a stress relieving mechanism, and need to quit as a means toward AA female empowerment were discussed. Participants were 511 AA women, all of whom viewed this videotape. Post-test data regarding smoking prevalence were obtained by telephone at a six-week follow-up. Results indicated that participants identified strongly with the characters depicted in the tape as well as with the coping strategies discussed. Further, follow-up data indicated that 59% of participants reduced their smoking since viewing the video. The authors concluded that viewing AA female characters may help AA female smokers cut down on or quit smoking.

Another study evaluated an approach to a 24-month smoking cessation intervention program in which involvement of participants in program planning and

implementation was emphasized. Intervention took place in a low-income AA neighborhood. The authors developed a smoking cessation program in which participants themselves planned a wide range of programming activities promoting non-smoking and community involvement. Smoking prevalence decline in neighborhoods in which this intervention took place were compared to prevalence decline in non-intervention neighborhoods. Results indicated that smoking prevalence in intervention neighborhoods declined significantly and did not decline in non-programming areas. The authors concluded that, in AA neighborhoods, such an informal, community organization approach may be helpful in helping individuals to quit smoking (Fisher, Auslander, Munro, Arfken, Brownson, & Owens, 1998).

Resnicow et al. (1997), developed and tested a culturally-tailored smoking cessation program geared toward AAs of low socioeconomic status. Participants were 3,000 AA smokers who received either (1) a multicomponent, culturally-relevant smoking cessation intervention containing a videotape, a guide to the videotape, and a post-treatment telephone call, or (2) general health education & information geared neither to smokers nor to a specific ethnic group. Both interventions were designed to be used at home. The videotape in Condition 1 depicted the fictional story of two smokers from Harlem who were summoned and admonished by a group of figures from AA history. At the end of the story, a well-known local physician and media personality provided instruction regarding quitting methods. The guide contained information related to the videotape, and the phone call was placed to participants in order to encourage use of the tape and guide. Comparison of these interventions initially revealed no significant difference in smoking prevalence between the two treatment groups at six months post-

treatment. However, Post hoc analyses suggested that participants receiving the multicomponent treatment were significantly more likely than their generic treatment counterparts to have made a quit attempt during the six months following treatment. The authors suggested that culturally sensitive smoking cessation materials together with phone contact can elicit at least short-term cessation attempts. The authors emphasized that personal contact may be the primary factor encouraging participants to attempt cessation.

Recruitment of AAs into Cessation Programs

Not only must cessation intervention itself be culturally relevant, but in order to increase participation of AA smokers in programming, recruitment also must be culturally relevant. Recruitment efforts could contain any number of culturally relevant elements but, again, little research exists beyond suggestions that various certain elements might prove efficacious. The research cited earlier concerning cultural relevance was in reference to health promotion programs themselves and did not address the recruitment processes inherent in many such programs. Elements suggested for recruitment that may be culturally relevant are in many cases identical to those that may work in the programs themselves. Since there is so little research examining recruitment efforts directly, exploration of two related fields of study is appropriate here: the attraction-similarity hypothesis and the more general field of social marketing.

Attraction-Similarity Hypothesis

The Attraction -Similarity Hypothesis, first proposed by Byrne (1961), proposes that a target individual is found by an evaluator to be more likable or more attractive if he

or she has attitudes similar to those of the evaluator. Further, an individual known to have similar attitudes is viewed as being more intelligent, better informed, more moral, and better adjusted than an one whose attitudes are dissimilar. Finally, one with similar attitudes on issues that are important to the evaluator and dissimilar attitudes on issues that are unimportant is evaluated more positively than one for whom the opposite is true. This hypothesis has been the subject of a great deal of research and has been supported in a number of contexts (cf., Grant, 1993; Young, Place, Rinehart, Jury, & Baits, 1997). This hypothesis can be applied also to recruitment for health promotion messages, and, as we have seen, recruiters who are similar in demographic variables are also well received by a target audience. (cf., Kalichman et al., 1993).

Social Marketing

Social marketing is a type of marketing or advertising strategy directed at eliciting socially desirable behaviors. It involves attempting to increase the receptivity and acceptability of ideas or behaviors in a target population and is primarily associated with health problems and health promotion efforts, including cancer awareness, nutrition, safe sex, domestic abuse prevention, and smoking cessation campaigns (Goldberg, Fishbein, & Middlestadt, 1997). The social marketing approach studies characteristics of consumers that may influence their behavior with regard to the marketed program, including consumers' values, customs, attitudes, and culture. Some themes in the AA culture that may be incorporated into marketing efforts directed toward that population include values such as church, family, and community, economic constraints, and ethnic history.

Three elements of social marketing are identified in the literature that can be used to design and implement programs relevant to ethnic minorities: audience orientation,

tailoring, and exchange theory (Flora & Pierson, 1997). Audience orientation involves awareness of audience needs and attention to satisfying those needs. For example, AA smokers may be more successful if family members are involved in their smoking cessation efforts, so programs directed toward this audience might incorporate an educational component for family members. Audience values, including factors influenced by the group's history, are also addressed in this manner. For an intervention or recruitment effort to be successful, it must address and conform in as many ways as possible to the audience needs, values, and customs. It is impossible to design successful recruitment or intervention efforts if ethnicity is ignored or interpreted independent of the cultural context. For example, many AAs are poor, so recruitment efforts emphasizing low cost programs, incorporation of child care, and free transportation may be especially well-received. Further, the program must include culturally-specific ways of viewing health concerns. For example, smoking cessation might not necessarily be a high-priority behavior change for individuals who have worries much greater than the long-term health effects of a particular behavior. It is important, therefore, to emphasize aspects of the target behavior which are especially salient to those individuals, such as potential loss of family members due to smoking-related illness. Finally, the message may be delivered through a number of channels, as discussed earlier in this paper. Examples include churches, community organizations, print media including community newsletters, and radio and television.

Tailoring is the second tenant of social marketing to ethnic minority groups. Here, the emphasis is on designing a program or recruitment effort that is appropriate and relevant to the target group. While it is tempting to view AAs as one ethnic group to

which one specific type of tailored message can be directed, there are in fact often many intragroup differences that necessitate division of the whole into substrata. Variables used to do this include socioeconomic status, educational level, occupation, age, family size, and religious background. Several other variables are important in AA subgroups. These include family structure, degree of assimilation or accommodation to the culture of the majority, use of language, and health beliefs and practices. Once subgroups are identified according to their similarity on these factors, recruitment efforts can be more easily designed and will have a greater chance of reaching the target population.

Exchange theory involves the idea that something of value must be traded between two individuals or groups, both of whom benefit. Based on exchange theory, the audience is invited to provide input and feedback on recruitment and intervention efforts, and thus shape future efforts. There are four elements to exchange theory: product, place, promotion, and price. In health promotion intervention, product involves behavior changes such as taking vitamins, eating healthy food, quitting smoking. An intervention that is culturally relevant requires that the strategies advocated fit within the behavioral repertoire of the audience. For example, setting a quit date in some cultures may be seen as enabling oneself not to be serious about quitting, while it may be preferred in other cultures. Product also involves the perceived credibility of strategies offered, such as behavioral substitution or distraction techniques.

Place involves the ways in which health promotion messages are delivered, including aspects of the deliverer of the message. Since the cultural context of health promotion messages determines how they are perceived, it is important to attend to factors such as how and by whom the message is delivered. For example, a more formal

delivery may be preferred by members of certain cultures while a less formal and more personal message may be better received by others.

Promotion involves familiarity with the audience and a clear definition of the goal of the “marketing” effort. The message should be designed to produce specific behavioral, emotional, or cognitive changes in the audience, but only through outline of specific goals can this be effectively done and the result evaluated.

Individuals adopt or do not adopt new health behaviors for a variety of reasons, including social, behavioral, and psychological reasons. Price refers, then, to the costs or benefits associated with adoption of behaviors, which can be culture-specific. For instance, an AA male giving up smoking may mean the loss of a strong social support network consisting of other AA men.

In summary, social marketing brings a number of concerns to the forefront in health promotion program design, recruitment, and implementation. The overriding message is that it is essential to be as familiar as possible with the target population and to avoid assuming that messages that are well-received by the “majority” culture will address all aspects needed to render them well-received by ethnic minority cultures as well.

Recruitment Success Using Specific Recruiters

Research that has been done on this subject concerns examination of the types of individuals who may serve as the best recruiters for specific target audiences. Typically, individuals used in health promotion messages are either well-known, experts with regard to the health behavior or problem, or are similar to the audience. Audience similarity might include ethnic, age-level, socioeconomic, regional, and/or educational similarity. Since the most effective recruiters appear to be those with whom the audience is most able

to identify, similarity is essential (cf., Kalichman et al., 1993). Also important, however, is the amount of credibility of which the recruiter appears worthy. In this regard, recruiters who are experts in the topic at hand or who have some special experience may be important also. Examples of individuals such as this include physicians providing an anti-smoking message or an Olympic runner advertising running shoes. Recruiters who are visible have also been used frequently, regardless of the experience they may have with the topic. Examples include popular athletes speaking on behalf of fast-food restaurants or against drug use and television actors encouraging safe sex or advertising aspirin products. These individuals appear to be effective as well. Perhaps the most effective recruiter would be one who was similar to the audience in a number of ways, an expert on the topic, and also popular. Few like this exist, however, so the most commonly used recruiters are those who are similar in some respects and are either knowledgeable or popular. Some research has been done using figures such as these in recruitment efforts.

In the study by Resnicow et al. (1997), the authors developed a videotape designed to be culturally relevant in which a well-known, local AA physician presented anti-smoking information. Studies have also been done in which sports figures have posed as message bearers. Caron (1993) performed a study in which college athletes were used as rape-awareness educators for other students on a large college campus. Here, the athletes were popular on campus and were also themselves educated in sexual assault and rape awareness and, as such, posed as both visible and knowledgeable figures. Paskett et al. (1996) examined recruitment of AA into cancer prevention studies using a community spokesperson to attempt to enhance credibility of the study. Using this method was designed to earn trust and make the message more relevant to that population. Examples

of such spokespersons were athletes, media personalities, ministers, and political figures (Paskett, DeGraffinreid, Tatum, & Margitic, 1996).

Assibey-Mensah (1997) published an important study in which AA youth perception of role models was examined. Here, it was found that athletes and other sports figures were overwhelmingly the top choice of role model for AA male youth. Basketball players specifically were chosen as favorite role models for older children, and football and baseball players were the second choice in terms of athletes. Movie and television celebrities were the second most popular role model. Interestingly, none of the participants chose an educator as his role model. When asked about their choices, the youth defined a role model as a popular character in sports or entertainment, whom they watch on television or go to see at the ballpark or other public place. The author accounted for the overwhelming choice of male role models by pointing to the fact that a large percentage of the participants regularly attended or watched male sporting events. He also explained the lack of interest in academicians as role models by the lack of information on the role of AA males in academia. He also pointed out that, in many cases, figures that as the adolescent sees in the media have more contact with him/her than many family members or other type of figure (e.g., academician). He concluded that popular role models, then, would typically be visible.

Response of AA and EA Consumers to AA and EA Models

There are few studies examining audience response to a model of different ethnicity, and many of the studies that do exist were performed in the 1970s, when the social climate and attitudes toward ethnic minorities, especially AAs, were at least

somewhat different than they are currently. Nevertheless, advertising has been slow to incorporate ethnic minorities, and though few ethnic minorities were depicted in the 1970s, they are currently still depicted at a disproportionately low rate relative to the proportion of the population for which they account. This may be true especially for health promotion messages, in which EA physicians and other physician-types such as scientists and researchers, may be more commonly depicted. So, while the proportion of ethnic minorities in the population is growing, media is not necessarily accommodating that growth and thus consumers are still not accustomed to seeing individuals of minority status in the positions of expertise and authority that is necessarily given to models in advertisements. So, while the following research was performed nearly 30 years ago and some findings are clearly not applicable to conditions today, portions of its findings may remain valid.

One such study investigated EA consumer responses to AA models as measured by purchases of products represented by AA models (Bush, Gwinner, & Solomon, 1974). The goal of this study was to determine whether AA models impacted EA consumer sales response. The authors hypothesized that EA consumers would have a different response to promotional materials represented by (1) EA models, (2) AA models, and (3) both EA and AA models conjointly ("integrated"). The experimenters placed prop-up ads in grocery stores next to stacks of the product being advertised and measured the proportion of customers who purchased the product displayed in relation to the number of customers who walked near the display but did not purchase the product. Observations were gathered for 13,433 EA customers, and results indicated that there were in fact no differences in purchase of the product depending upon the race of the promoter. The

authors concluded, therefore, that race of the model did not impact sales promotion and that separate sales campaigns directed at EA and AA consumers may be unnecessary. If these results were to apply to health promotion as well as product promotion, it would mean that race of the recruiter is unimportant in consumer response to (or “buying of”) health promotion messages and subsequent action in accordance with them.

Another study examined EA consumers’ responses to AA models depicted in advertisements (Muse, 1971). In this study, participants were college students and were divided into two groups, where one group was asked to rank advertisements with EA models and the other was asked to rank advertisements with AA models. When their rankings were compared, it was found that the overall rankings were similar, though there was some variation of rankings across categories of products advertised. For vodka and beer, there were no differences in rankings of the models, however, for cigarettes, the advertisements using AA models was ranked more favorably than that using EA models. Advertisements in which EAs served as models in feminine product ads were rated more favorably than those in which AAs served as models for the same product. Characteristics of the audience were also examined. It was found that Jewish participants rated advertisements using AAs more favorably, while those in the “other religion” category (e.g., non-Jewish, non-Catholic, and non-Protestant) ranked the ads using EA models more favorably. The author concludes that advertisements using AA models are seen as favorably as those using EA models, at least by college students. The author accounted for the ranking differences in products by proposing that perhaps participants were more comfortable seeing a EA model advertise more personal products (e.g., feminine products). It was suggested that either EA or AA models could be used in advertisements

targeting audiences of both ethnic group rather than developing two different ad campaigns, one using AA models and the other using EA models. It was also suggested that, to the extent that using AA models did not alienate a EA audience, doing so might be seen as more favorable to AA audience members.

A similar paper noted the possibility for what they term “white backlash,” in which EA consumers may respond poorly to ads in which AAs play a major part (Schlinger & Plummer, 1972). Also considered was the possibility that AA consumers themselves may have a negative response to those ads. The authors reasoned that AA consumers, especially those in middle and high socioeconomic groups, may identify more with EAs and see them as a reference for buying behavior. If this is true, AA models in ads may be no more effective, and even less effective, than EA models for AA consumers. The aim of the study was to measure reactions of AA and EA consumers to all-AA and all-EA cast versions of a television commercial, which differed from previous research in that models were shown live rather than in printed ads and in that participants were adult women rather than college students. The authors reported that EA participants found the EA cast commercial to be more professional, more sophisticated, and better developed than the AA cast commercial. However, no differences were found between the commercials on variables involving characters, the message, or the product, which the authors had conceptualized to be measures of a commercial’s effectiveness.

AA participants, however, reacted more favorably to the commercial containing the AA cast. Participants expressed more identification and empathy with that cast than did the EA participants, and AA participants described the AA cast as being more appealing and more similar to their own families. AA participants also rated the AA cast

commercial as being more “enthusiastic, entertaining, imaginative, beautiful, and memorable,” than the EA cast commercial, which they rated as being flat and “unchanging throughout,” (Schlinger & Plummer, 1972, pg. 152). One reason for this particular reaction to the AA cast commercial may be that so few commercials depicted AA models so that for one to finally do so may have been perceived as “imaginative, beautiful, memorable,” and the like. The AA participants reported being influenced to buy the advertised brand significantly more by the AA cast commercial than by the EA cast commercial. This is important in that it implies that AA models would be more effective in influencing purchasing behaviors of AA consumers. Perhaps the same would be true of influencing health-related behaviors. The authors concluded that commercial casts containing AAs were more meaningful and more influential to AA consumers than to EA consumers but that the presence of AAs in the cast did not influence EA consumers greatly.

Another study investigated the attitudes of EA consumers to “integrated advertising,” that which contains both EA and AA models (Stafford, Birdwell, & Van Tassel, 1970). This study compared response of EA male and female consumers to ads containing (1) only EA models and (2) both AA and EA models together in the same ad (“integrated” ads). Measures were taken using verbal report and pupil size changes from a baseline after being shown ads. Results indicated that generally there was no negative response to the ads. Participants, however, did respond negatively to one of the ads shown (automobile ad), but analysis of variance was not done, and thus it was not clear whether that was a function of the inclusion of AA models or whether it was in response to some aspect of the product itself. The authors concluded that response to ads may be a

function of several variables, including race of the models, aspects of the product itself, individual consumer differences, and the appeal of the advertisement itself. They concluded, however, that EA consumers seem indifferent to integrated ads that are well-conceived and well-done. While this paper attempts to examine a critical issue, and one of potential importance in directing advertising, it does not appear that the study was conducted in a manner matching our current criteria for empirical soundness, and analyses were not done to determine the exact nature of the results. With this in mind, it is important to interpret these conclusions with caution.

EA response to integrated advertising was explored in another study (Cagley & Cardozo, 1970). As in similar papers, these authors tested EA consumer attitudes toward ads containing AA models. They tested the hypothesis that EAs who held more prejudicial views of AAs would evaluate ads with EA models more favorably than those with both EA and AA models or those with AA models only. Participants were EA males and females who were shown printed advertisements of AA models only, EA models only, both EA and AA models, and controls with no models at all. It was found that participants holding less prejudicial attitudes evaluated ads that were integrated, those with AA models, and those with EA models all similarly. Participants with more prejudicial attitudes, however, evaluated ads with AA models less favorably than those with EA models. The authors conclude that knowledge of the audience may aid in developing advertisements that will be well-received and that integration of ads may cause some advertisers to risk loss of effectiveness in the EA market.

A different type of study was done in the context of applicants and interviewers for a job (Mullins, 1982). Here, the impact of applicant race, applicant quality, and racial

attitudes of interviewers on ratings given applicants was studied. Participants were EA students of business administration who were shown videotapes of simulated job interviews where the applicant was a high quality and low quality applicant of EA and AA ethnic heritage. A measure of participant racial prejudice was also taken. It was found that the low quality applicant of AA heritage was rated more favorably than the low quality applicant of EA heritage, but that when both applicants were of high quality, both EA and AA received similar ratings. Further, more prejudiced participants were found to be more likely to give more favorable ratings to AA applicants than were less prejudiced participants. This finding might be explained by participants over-compensating for their prejudices and rating applicants too far in the opposite direction of their true feelings as a way to gain or maintain social desirability. The authors suggest that further research is needed to clarify the relationship between racial attitudes and hiring practices and that these be studied unobtrusively if possible.

Conformity and Ethnicity

Related to this last topic is a body of literature examining the nature of AAs and EAs to conform to and be persuaded by members of their own or other ethnic groups. Most of these studies were done in the 1970s, but many of the findings and implications of those results may still hold true today. A vast majority of such studies found that AAs showed more conforming behavior than EAs, and that EAs conformed more to EA peers and authority than to AA peers and authority. AAs, on the other hand, tended to conform less to their own ethnic group and more to the existing minority group. (Schneider, 1970; Sistrunk, 1971; Mock & Tuddenham, 1971; & Cantor, 1975). The implications of these

findings may be important for any type of recruitment efforts targeting AA populations, if it seems as though they still hold true. For health promotion efforts, these findings suggest that using an EA recruiter may result in higher rates of AA participation, especially if the recruiter is viewed as an authority (e.g., knowledgeable or expert). These points will be addressed later in this paper, following reporting and interpretation of the results.

Purpose of This Study

Recruitment is a complicated process and many factors within a single recruiting effort may influence one's decision to participate in a health promotion intervention. The purpose of this study was to investigate the effect of recruiter (model) characteristics on EA and AA smokers' perception of an anti-smoking message. Model characteristics examined were Model Race and Model Community Status. Race was defined as AA or EA, and Model Community Status was defined as athlete or university faculty member, where athletes were fairly highly visible and faculty presented themselves as experts in the area of smoking cessation. Models were an AA athlete, EA athlete, AA university faculty member, and EA university faculty member.

Smoker perceptions of the anti-smoking message were measured via ten questionnaire items inquiring about their perceptions of the model, the message presented, and the smoking cessation program that was proposed by the model. Based on the findings in the literature, we hypothesized that (1) EA participants would rate EA models more favorably than AA models; (2) AA participants would rate AA models more favorably than EA models; and (3) the faculty models would be rated more favorably than

the athlete models.

Methods

Participants

Participants were 40 AA males, 13 AA females, 14 EA males, and 10 EA females, with a mean age of 26.7 years. They were unpaid volunteers drawn from churches, colleges, community groups, local businesses, and a state penal facility. Inclusion criteria consisted of self-reported smoking, at a minimum of 5 cigarettes per day for at least 12 months. The study used cigarette smoking only, due to the lack of knowledge regarding the differences in physiological and psychological addiction among various forms of tobacco use.

Participants were excluded from data analysis due to non-smoking status, non-reporting of race or reporting of race other than AA or EA, and on the basis of missing data on questionnaires referring to the videotapes (e.g., skipping a question or arriving late to the testing and missing a videotape).

Measures

One self-administered paper-and-pencil questionnaire was used for each of four videotapes. The questionnaire was composed of ten items (see Table 1). Items inquired about the degree of enjoyment and attention the video elicited (Items 1 and 2); the degree of trust participants had in the model (Item 4); the degree of expertise in the area of smoking cessation and understanding of participants' needs the models showed (Items 5 and 6); the helpfulness and persuasiveness of the information (Items 3 & 7); the effectiveness of the program and of the model (Items 8 and 9), and the likelihood that participants would join a similar program (Item 10). Responses to these items were

constructed on a Likert-type scale with possible responses ranging from 1 (most positive response) to 7 (most negative response).

A second questionnaire designed to obtain demographic information was also included (Appendix B). This instrument was composed of 15 items inquiring about participants' sex, race, age, smoking status (whether they smoke), number of cigarettes smoked daily, years of education, and use of other forms of tobacco. Further, an item was included inquiring about the number of household smokers and number of times participants have tried to quit smoking, and current state of health. The questionnaire was a slightly modified version of an instrument developed at the Department of Psychology at the University of Memphis for use in a similar study.

Each videotape was approximately three minutes long and depicted one male model. Models were an AA athlete, a EA athlete, an AA faculty member, and a EA faculty member. Models were unpaid volunteers. Each was chosen on the basis of his visibility or expertise, athletic or academic position, and race. The AA athlete was a starting player for the University of Memphis basketball team, and the EA athlete was a starting player for the University of Memphis football team. Both athletes were undergraduates in the Athletic Department at the University of Memphis, and were younger than the faculty, who were on faculty at the University of Memphis Department of Psychology. Models were male due only to the lack of visible female athletes in this Memphis community and desire for gender of all models to be uniform. Therefore, male athletes and female faculty or a combination thereof were not used.

Scripts for the videos were constructed by the experimenter, who modified scripts used in a previous study of ethnicity, athleticism, and perceived expertise with regard to

smoking cessation. The introduction given by the athletes differed from the introduction given by the faculty (Appendix C). All models delivered a self-introduction followed by a statement of intent to discuss cigarette smoking. The athletes stated that they were concerned about the harmful effects of smoking, and the faculty claimed smoking as a central research interest and cited a number of years experience researching, teaching, and writing about smoking. The body of the script, however, was identical across all models.

The body of the script contained four paragraphs: (a) outline of the health risks associated with smoking; (b) discussion of the fact that death due to smoking-related illness often translates to the loss of loved ones; (c) emphasis on the fact that, though it is difficult to quit, it is not impossible; and (d) thanks to the participants for listening and urging of them to join the stop-smoking program. It is important to note here that the goal of the study was not to recruit participants but to examine factors affecting recruitment when a hypothetical program is proposed.

During the filming of the videotape, the script was displayed on an overhead projector to ensure ease and standardization of delivery and to eliminate the need for memorization. In order to maintain standardization of delivery, the models were instructed to speak slowly and clearly and to look into the camera at all times. Efforts were made to make the delivery as natural and as conversational as possible. Each video was filmed on a separate tape, and the tapes were counterbalanced into sixteen presentation sequences to control for order effects, and each group of participants was randomly assigned to one sequence.

Procedure

Administrators of local churches, colleges, community groups, businesses, and a state penal institution were asked to support the study by allowing access to groups of potential participants within their organizations. Those who agreed were provided with an outline of the study together with a sample questionnaire in order to facilitate their understanding of the project. Participants were tested in a group setting, and efforts were made to render each testing environment comfortable and interrupted. Groups consisted of approximately five to 25 participants. The introduction and instructions were standardized and read to each group. In order to explain the similarity between the tapes, participants were told that one purpose of the study was to test the finding that subtle differences in content of a health promotion message may affect the way it is perceived. After the instructions were read, informed consent forms were distributed, which participants were asked to date and sign (see Appendix A). After the first video was shown, questionnaires and pencils were handed out, and participants were instructed to initial that questionnaire and each of questionnaires that followed for data entry purposes. They were assured that confidentiality would be maintained and that their initials would be used strictly to collate their questionnaires. Before participants began to complete the questionnaire, the experimenter demonstrated the correct use of the 7-point scale, clarified rating criteria, and asked for questions. After collection of the first questionnaire, the second video was shown, followed by completion of the second questionnaire, and so on until completion of the fourth questionnaire, upon which participants were debriefed.

Results

The objective of the current study was to examine the effect of Participant Race, Model Race, and Model Status on AA and EA smokers' perceptions of an anti-smoking message. Demographic data for the sample were analyzed using independent samples t-tests, and questionnaire data were analyzed using a 2 x 2 x 2 multivariate analysis of variance (MANOVA), with one between subjects factor (Participant Race) and three within subjects factors (Model Race, Model Status, and Questionnaire Item). The MANOVA was done in order to determine whether there was any overall significance with respect to the four videos as a whole, without taking each individual questionnaire item into account. When appropriate, in order to examine each question individually, a repeated measures analysis of variance (ANOVA) was done. Here, there was one between subjects factor (Participant Race), and two within subjects factors (Model Race and Model Status). On both the MANOVA and the ANOVA, Participant Race, Model Race, and Model Status served as the independent variables, and participant response to the videos, as measured by 10 questionnaire variables, served as the dependent variable. There were two levels of Participant Race (AA and EA), two levels of Model Race (AA and EA), and two levels of Model Status (university athlete and university faculty member). Analyses were conducted to determine the main effects and interaction effects of those factors on participants' perceptions of the message presented along the 10 dimensions listed in Table 1.

In the following pages, differences between the AA and EA samples will be described, and descriptive information with regard to all participants as a whole will be provided given the failure to find significant differences. The data yielded by the main

instrument in this study will then be presented, focusing on discussion and interpretation of the interaction effects found in the MANOVA, followed by discussion of the of main effects and interaction effects found in the ANOVA. Results yielded by the Tukey Method of Multiple Comparisons following the ANOVA will be discussed, and interpretations of all findings will be included.

Sample Characteristics

The demographic and smoking habits characteristics of the sample are presented in Table 2. No significant difference between the AA and EA participants on any of the following variables were revealed by t-tests: age, income, number of cigarettes smoked per day, number of previous quit attempts, readiness to quit, other forms of tobacco used, number of smokers in the household, current state of health, hours of television watched per day, hours of sports television or radio per day, recognition of the basketball player, following University of Memphis football, and following University of Memphis basketball. There were, however, two significant differences between the groups. The first was with regard to years of education, where EA participants had significantly greater years education than AA participants ($t[75] = p < -2.111, p < .038$). There were also significant difference with regard to recognition of the football player by each of the groups. The t-test indicated that 62.3% of the AA participants recognized the football player, while only 29.9% of the EAs recognized him ($t[69] = -3.64, p < .001$).

Participants were asked whether they recognized the athletes used as models because familiarity with those sports figures could influence their reaction to the videotapes. When asked about recognizing the athletes 54.1% of those who responded

indicated that they recognized the football player, and 18.4% reported that they recognized the basketball player. When asked whether they were University of Memphis football fans, 63.5% indicated that they were not a fan, 32.4% indicated “Yes, but not regularly,” and 4.1% indicated “Yes, I’m a real fan.” When asked about being a University of Memphis basketball fan, 40.3% reported not being a fan, 22.1% indicated “Yes, but not regularly,” and 37.7% indicated “Yes, I’m a real fan.”

When participants were asked about their current stage of readiness to quit, 32.9% reported not thinking about quitting at that time, 23.7% reported thinking about quitting at that time, and 43.4% reported thinking about quitting and being ready to attempt cessation within six months. Participants seemed generally physically healthy, with 88% suffering no serious illness. Eight percent indicated suffering from a respiratory disease, 2.7% indicated suffering from another chronic non-terminal disease, and 1.3% indicated suffering from a terminal illness. Participants indicated watching a mean of 3.1 hours of television per day, watching or listening to 2.5 hours of sports television or radio per day.

Questionnaire Data: MANOVA

In order to determine whether there was any overall significance within the model, without regard to the individual questionnaire items, a MANOVA was conducted (see Table 3). In so doing, we hoped to determine the effect of the independent variables (Participant Race, Model Race, Model Status, and Questionnaire Item) on the dependent variable as a whole (participant response to models), without taking into account each of its levels separately (each of the 10 questionnaire items for each model). Prior to the MANOVA, a reliability analysis was conducted in order to determine the correlation

coefficient of the questionnaire items on each of the four videotapes (see Table 3). Results showed that the questionnaire items were significantly correlated, indicating that they each likely measure a related theme. Since we found strong correlation between the questionnaire items, we continued with the objective of performing a MANOVA to determine whether the Participant Race, Model Race, Model Status, and Questionnaire Item had any impact, as main effects or within interactions, on participant response to models as a whole (without regard to each of the 10 questionnaire items separately). Table 3 provides an outline of the following results.

Main Effects

Analyses revealed a significant main effect for Model Race ($F[1, 75] = 18.77$, $p < .000$), and for Questionnaire Item ($F[1, 75] = 6.14$, $p < .000$). The main effect for Model Race may be due to participants responding to some questionnaire items more positively or negatively depending upon the model's race. The main effect for Questionnaire Item may indicate that, regardless of the model's race, some questions produced more positive responses than others, even though the reliability analysis indicated that the questionnaire items were significantly correlated. These results should be interpreted with caution, since both these factors are involved in significant interactions with other variables in further analyses, rendering interpretation of these variables by themselves less meaningful.

Two-Way Interactions

There was a significant interaction between Model Race and Questionnaire Item ($F[1,75] = 2.88$, $p < .002$), indicating that participants rated AA and EA models differently depending on the questionnaire item. The MANOVA also revealed a significant interaction of Participant Race by Model Race ($F[1, 75] = 4.76$, $p < .032$), indicating that

AA participants rated AA and EA models differently than EA participants did. This interaction is graphically depicted in Figure 1. Post Hoc Tukey Multiple Comparison tests indicated that EA participants rated the EA model significantly more positively than they rated the AA model. Further, the AA models were rated significantly less positively by EA participants than by AA participants. Interestingly, there was no significant difference in AA participants' ratings of AA and EA models. Neither was there significance in the AA participant ratings EA models and EA participant ratings of EA models.

There was also a significant interaction between Participant Race and Model Status ($F[1,75] = 4.78, p < .032$), indicating that AA participants rated the athletes and faculty differently than the EA participants did. Since both Participant Race and Model Status are involved in a significant interaction with Questionnaire Item, it is important to use caution in interpreting the two-way Participant Race x Model Status interaction. Due to the three-way interaction involving these variables and Questionnaire Item, interpretation will be discussed in the context of the ANOVAs conducted to determine the effect of the interaction on each questionnaire item. Examining the ANOVA results will allow us to determine the effect of Participant Race and Model Status on each questionnaire item.

Three-Way Interactions

There was a significant interaction between Participant Race, Model Race, and Questionnaire Item ($F[1,75] = 2.60, p < .006$), indicating that that AA and EA participants answered the questionnaire items significantly differently for models depending upon the model's race.

Four-Way Interaction

The four-way interaction (Participant Race x Model Race x Model Status x Questionnaire Item) was non-significant.

Follow-Up to MANOVA

Even though the MANOVA revealed a significant Participant Race x Model Race interaction, we will not use ANOVAs to interpret it, since that interaction was not dependent on Questionnaire item. Also shown in the MANOVA was a Model Race x Questionnaire Item interaction. The MANOVA also revealed a significant interaction for Model Race by Questionnaire item, so ANOVAs were done by questionnaire item to determine the effect of Model Race on each question. The ANOVAs did not reveal any significant differences, indicating that the model's race alone had no differential effect on the way participants answered the questions. The significance found for this variable in the MANOVA is likely due to variability in AA and EA participants' responses per question, but ANOVAs indicate that there is no pattern to this variability in responding.

However, the MANOVA did reveal a significant Participant Race x Model Status x Questionnaire Item interaction, and thus an ANOVA was conducted to better understand the effect of Participant Race x Model Status on each questionnaire item. The ANOVA results are presented in Table 4. presented in Table 4. The ANOVA indicated that Participant Race and Model Status interacted significantly for two of the 10 questionnaire items. These were the items were Trust and Needs (see Table 1 for full questionnaire items). *Post Hoc* analyses indicated that AA participants rated the athletes as significantly more trustworthy than the EA participants rated the athletes. Further,

analyses indicated that EA participants rated the faculty as being significantly more trustworthy than the athletes, while the AA participants rated the athletes and faculty similarly for this variable (Figure 2). For the Needs variable, the *post hoc* test revealed that AA participants rated the athletes as understanding their needs significantly better than EA participants rated these models. Further, the EA participants rated the faculty as understanding their needs significantly better than the athletes (Figure 3). Together, these results indicate that EA participants were influenced by model status to a greater degree than AA participants. For both variables, the EA participants rated the faculty significantly more positively than the athletes. The AA participants, however, rated the athletes more positively than the EA participants did, but did not rate the athletes significantly more positively than the faculty.

Discussion

This study was designed to answer our questions addressing participants' views of popular and expert models of the same and opposite race. The large, overall question we sought to answer was: Was there any overall difference in participants' general ratings of the models based on Participant Race, Model Race, Model Status, or Questionnaire Item as a whole, without regard to individual questionnaire item? Further, we wished to determine whether, with respect to each of the 10 individual questionnaire items, (1) Did EA participants rate AA and EA models differently in individual ? (2) Did AA participants rate AA and EA models differently? (3) Are AA models rated differently by AA and EA participants? (4) Are EA models rated differently by AA and EA participants?

The MANOVA was useful in determining whether there was difference in the ways in participants' ratings of the models based on Participant Race, Model Race, Model Status, or even Questionnaire Item. ANOVAs were done, based on the MANOVA findings, to determine within which questionnaire items the significant interactions existed. Initially, we determined that the questionnaire had a high degree of internal validity, indicating that the questions were measuring a similar construct and produced a similar response pattern in the sample. Following that, the MANOVA showed a Participant Race x Model Race interaction, without regard to questionnaire item, suggesting that, across all 10 questions, EA models were rated more positively than AA models by EA participants. Also, AA models were rated significantly more positively by AA participants than by EA participants. It is important to note here that there was no statistical difference in AA participants' ratings of AA and EA models.

We also found that Participant Race and Model Status produced a significant interaction, but this interaction was influenced by Questionnaire Item and was measured by only two questions, Trust and Needs. These results indicate that only for these two items do AA and EA participants rate the athlete models differently than the faculty models. These results, however, are consistent in that EA participants rated the faculty significantly more positively than the athletes and that the EA participants rate the athletes significantly less positively than the AA rate the athletes.

Overall, we found that, generally, EA participants rated AA models less positively than AA participants rated those (AA) models, suggesting that EA participants feel that the AA model would be less effective than the EA model. Also, generally, faculty were rated more positively than athletes, suggesting that the more knowledgeable recruiter, rather than the popular one, would be more effective. Overall, these data indicate that AA models produce differential effects for a EA audience but not for an AA audience. In other words, for EA models, the race of the audience members is important, whereas for AA models, race of the audience members is not as crucial. Based on these data, we suspect that AA models would be much less successful with EA smokers and slightly more successful with AA smokers, whereas EA models would be successful with both audiences. This implies that it is best for the model to be chosen to be consistent with the race of the target audience if the target audience is solely EA. If the target audience is solely AA, the most effective model would be an AA model, and if the audience is mixed, a EA model would be the best choice.

Relationship of Current Findings to the Literature

The findings we showed here are generally consistent with what the literature has shown. Most striking is the similarity to the conformity and social persuasion studies cited in the Introduction section of this manuscript (Schneider, 1970; Sistrunk, 1971; Mock & Tuddenham, 1971; Cantor, 1975). In each of these studies, AA participants were shown to conform more to EA peers and authority figures than EA participants did. In the current study, the lack of differentiation by AA participants to AA and EA models was striking. In the majority of analyses, AA participants rated AA and EA models so similarly that there was no statistically significant difference. This is also striking in that the EA participants were found to differ markedly in that they consistently rated EA models more positively than AA models. These results could be viewed in the context of conformity or persuasion, such that AA participants could be said to have been persuaded equally by AA and EA models. However, one potential sign of social progress may be that AA participants did not favor EA models. In fact, there was a slight favoring in many cases of the AA model, though this was never statistically significant.

Much of the literature has discussed cultural relevance of health promotion programs, suggesting several factors that could be adjusted to render recruitment efforts more applicable to specific cultural groups. Some of the elements are language and idioms used, recruiter, setting, clothing worn, and emphasis on factors valued in the target culture, such as community and family are in the AA American culture (Crews, 1994; Ahluwalia, 1996; Stevenson & Davis, 1994; Resnicow et al., 1997). The literature has repeatedly shown the success of recruiting efforts using these methods both in smoking cessation efforts and in HIV/AIDS awareness programs (Sussman et al., 1995; Lopes et

al., 1995; Kalichman et al., 1993). These studies show that, following exposure to health promotion messages delivered in a culturally relevant context versus a generic context, individuals exposed to the culturally relevant message are more likely to change their health behavior, even for extended periods of time. In the current study, we did not see significant promise that the AA might adhere to the health promotion behavior suggested, lending support to the idea that changing behavior of specific groups may require much more than simply introducing the message via an ethnically-similar individual. In fact, not only is the similarity with which AAs rated AA and EA models striking, but, from a different angle, the lack of favor for the individual of their ethnic background is equally striking. This lack of favor may be seen as a failure on the part of the recruiting effort to provide the audience with material with which they can identify and ally. Perhaps similar ethnicity is not enough to evoke such favoritism, especially in light of what seems to be a pre-existing, and evidently long-standing, social pressure to conform to the majority group.

One reason for this conformity may be that EA have traditionally held positions of authority, positions which few AA have had the opportunity to acquire. This may also be especially true in health-related fields such as medicine or psychology. Even today, there are few AA Americans in these areas. On the other hand, EAs may not be accustomed to viewing AAs in positions of importance with regard to health promotion, so they may be more biased against them in such positions, viewing them as less expert, less understanding of culturally-related needs, less convincing, and less effective than AA smokers viewed them. This may be one explanation for the low ratings EA participants gave the AA models in the current study.

Finally, the literature with regard to consumer behavior and marketing to ethnic minorities is relevant in the context of our findings. This literature, also performed in the 1960s and 1970s, found that, generally, race of a product-promoter was relatively unimportant in consumer buying behavior (Bush, Gwinner, & Solomon, 1974; Muse, 1971; Stafford, Birdwell, & Van Tassel, 1970). In other words, EA consumers were found to be as likely to purchase products advertised by AA individuals as they were to buy from EA advertisers. This held true for AA consumers as well. In examining our EA participants' behavior, this is inconstant with our findings, however it is consistent with our findings regarding the AA participants. Reasons for this discrepancy may be geographical differences in the participant populations, where Southern EAs may be more conservative and prone to bias than EAs in other regions of the country, and perhaps social desirability on the part of the participants whose data was collected in the 1970s.

Study Limitations

There were several limitations inherent in this study. As mentioned, the data was conducted in the Mid-Southern United States, where EAs may be more biased toward their own cultural group and biased against other cultural populations. Further, in this area of the country, AAs may be more willing to trust EAs who are in positions of power, perhaps because it may be more common for EAs to be in such positions there. Our findings, therefore, may apply only in this area.

The faculty in the videos stated that they were from the "University of Memphis Department of Psychology," which could have presented a confound if participants reacted negatively to the idea of psychology, perhaps holding some distrust of the field

and thus the models. Even if this were the case, however, it is not relevant with regard to all 10 dimensions tested, since the faculty were generally rated more positively than the athletes.

Other limitations include the imbalance in male and female participants and AA and EA participants as well as the minimal number of cigarettes required for inclusion. Though five cigarettes per day were required for inclusion in the study, the mean number smoked per day was 16.5, which is actually typical for AA smokers (Crews, 1994). Regardless, the findings may have been stronger had the percentage of males and females and the smoking rate been equal.

Finally, the athlete-model videos may have presented a confound, as one athlete was a basketball player and the other a football player, and participants were not necessarily fans of these sports. Results indicated that a significantly greater number of participants recognized the basketball player than the football player, and that a large percentage of the subject pool did not describe themselves as fans of either sport. Certainly, use of more popular figures would have been desirable, but our access to these types of individuals was limited.

Future Directions

Based on the findings of this study, future research should first address the issue of generalizability of results to other regions of United States. Further, similar studies might replicate this study using different types of models, including more popular models, medical doctors, models of various ages, or female models. Importantly, this research should be replicated using not only a variety of models, but also a variety of other

culturally-relevant elements, as discussed earlier in this paper. These might include setting, language used, and values portrayed. This type of research should certainly also be replicated with various strata of the AA population, including individuals of various socioeconomic model status, educational levels, occupations, ages, and the like. Further, it could be replicated with individuals of other ethnic groups, including individuals of Hispanic ethnicity or Native American ethnicity, who also have a high smoking prevalence. Most important, however, is that these results be used to design smoking cessation recruitment efforts and programs that are more culturally focused and culturally relevant, and that new research findings and suggestions from group participants be incorporated, with the goal of designing the most effective programs possible.

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APPENDICES

Appendix A

Informed Consent Form

Participant Consent Form

Please read the following materials carefully.

- (1) Purpose of This Study. This study tests the finding that subtle differences in the delivery of a health-promotion message may affect the way it is perceived. The study is being completed in partial fulfillment of the requirements for the Master of Science degree in psychology at the University of Memphis. If you wish, you will be able to receive a summary of the results of the study at its completion.

- (2) Procedures to Be Used. You will be asked to take approximately 45 minutes to watch four (4) videotapes and fill out a total of five (5) questionnaires. The questionnaires include two types of questions.
 - (a) Your opinions about each of the four (4) videotapes you saw.
 - (b) Your demographic background (e.g., gender, age, education) and habits (e.g., your tobacco use, hours of television you watch per week).

- (3) Risks to You. There are no known or foreseeable risks involved in this study.

- (4) After Your Questionnaires Are Collected. The answers you provide on each questionnaire will be confidential. That means that no one besides the researcher will have access to your answers. This consent form will be filed separately from your completed questionnaires. You will be asked to initial each questionnaire you complete only for the purpose of data entry. The results of the questionnaires will be reported in averages, so your answers will never be reported alone.

Please read the statements below carefully. They describe your rights and responsibilities as a participant in this research project.

I understand that I do not have to participate in this research project, and if I choose not to participate, I will not be penalized in any way. I understand that if I choose to participate, I can withdraw at any time.

I understand that by signing this form, I willingly consent to participate in this study. All of my questions have been answered and I am encouraged to ask any questions that I may have concerning this study in the future. If I have any questions, I can call Laura Carter at 678-4320.

Signature of Participant

Date Signed

Appendix B

Demographic Questionnaire

Initials: _____

(1) Your gender: _____ Male _____ Female

(2) Your age (in years): _____

(3) Your race: _____ African American _____ Caucasian
_____ Other, specify _____

(4) Please circle the number of years of school you have completed.

5 6 7 8 / 9 10 11 12 / 13 14 15 16+
Grade High College
School School

(5) Your total income per year (**after** taxes): _____

(Note: all responses are confidential & we ask this question only to make sure we are helping those with the most need. You needn't answer this question if it would bother you.)

(6) Do you smoke cigarettes? _____ Yes _____ No (If no, please skip to question 7)

(a) How many cigarettes do you smoke per day? _____

(b) How many years have you smoked? _____

(c) How many times within the past year have you seriously attempted to quit?

0 _____ 1 _____ 2 or more _____

(d) Which of the three statements below best fits you? (check one)

_____ "I'm not thinking about stopping smoking at this time."

_____ "I'm thinking about stopping smoking at this time."

_____ "I'm thinking about stopping smoking and I'm ready to try to stop smoking within the next six months."

(7) What other forms of tobacco do you use regularly?

None _____ Pipe _____ Cigar _____

Chewing tobacco _____ Other _____

(8) How many people in your household smoke cigarettes,
including you (if you smoke)? _____

(9) Please check the state of your current health.

_____ Generally healthy

_____ Suffering from a respiratory disease (i.e. asthma, emphysema, chronic
bronchitis)**

**Is your condition: Mild _____ Moderate _____ Severe _____

_____ Suffering from a chronic disease (i.e. diabetes, non-terminal)

_____ Suffering from a terminal illness (i.e. cancer)

_____ Other

(10) About how many hours of television do you watch per day?

_____ None

_____ Less than one hour

_____ 1-3 hours

_____ 4-6 hours

_____ 7-10 hours

_____ 11 or more hours

(11) How many magazines do you subscribe to or read regularly? _____

Are they (your man check more than one):

- News magazines (Time, Newsweek)
- Sports magazines (Sports Illustrated, Golf)
- Women's interest magazines (Cosmopolitan, Mademoiselle)
- Home and gardening magazines (Southern Living)
- Special interest magazines (American Heritage)
- Other _____
- I do not subscribe to/read any magazines regularly

(12) How many hours of sports television or radio to watch or listen to per day?

- None
- Less than one hour
- 1-3 hours
- 4-6 hours
- 7 or more hours

(13) In the two videos depicting the University of Memphis athletes, did you recognize the basketball player upon seeing him or hearing his name?

- Yes
- No

Did you recognize the football player upon seeing him or hearing his name?

- Yes
- No

(14) Do you follow University of Memphis football?

_____ No

_____ Yes, but not regularly

_____ Yes, I'm a real fan

(15) Do you follow University of Memphis basketball?

_____ No

_____ Yes, but not regularly

_____ Yes, I'm a real fan

Thank You!

Appendix C

Athlete and Faculty Scripts

Introduction: Athlete Script

Hi! I'm, _____, and I play for the University of Memphis Tiger Basketball/Football Team. I'd like to talk with you today about something that's affecting you right now: cigarette smoking. As a basketball/football player, I'm very involved in keeping up my health and encouraging others on the team to do the same. Cigarette smoking is a concern to me because I have seen its harmful effects on otherwise healthy people I care about.

Introduction: Ph.D. Script

Hi! I'm Doctor _____ from the University of Memphis Department of Psychology. I'd like to talk with you about something that's affecting you right now: cigarette smoking. Smoking is a topic that makes up a large part of my professional career. I've spent years researching, teaching, publishing articles and books on smoking, and even meeting with people like you who want to stop smoking. Because of this, I know both the difficulty you are facing in quitting but also the consequences of not quitting.

Body: Shared by athletes and faculty

Did you know that 2 out of 5 smokers dies from complications of smoking? Smoking takes more than 7 years off your life, and more than 350,000 people die every year because of smoking-related illness, such as heart disease, cancer, and emphysema.

Not to mention how expensive it is. If you smoke one pack a day, you'll save \$700 a year by quitting!

I know I'm throwing a lot of statistics at you. But, these aren't JUST numbers. They are your friends, your family, your co-workers, and someday it could be you. It's easy to say 15 years from now doesn't matter, but what if that's the year your son graduates from college, or the year your granddaughter is born? Is it really worth it to toss away happy, health future years with each cigarette you smoke?

I realize how difficult it is to quit, but it's NOT impossible. Millions of people have done it, and so can you. But you MUST give it a chance. The Prevention Center at the University of Memphis has developed a free Stop-Smoking Program. I've checked this program out, and it works. It's helping people like us quit as we speak. I want the program to help you, too.

Thanks for listening. Please make the decision to live longer and join the program today.

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

DATE: 11-19-98

IRB #: AS-99-020

Proposal Title: FACTORS INFLUENCING THE RECRUITMENT OF AFRICAN AMERICAN SMOKERS INTO SMOKING CESSATION PROGRAMS: THE ROLE OF RECRUITERS' ETHNICITY AND COMMUNITY STATUS

Principal Investigator(s): Frank L. Collins, Laura C. Carter

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

Signature:



Date: November 19, 1998

Carol Olson, Director of University Research Compliance
cc: Laura C. Carter

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

Table 1
Questionnaire Variables

Question Number	Question	Label	Designed to Measure
1	Overall, how much did you enjoy watching the video?	Enjoyment	Participant enjoyment
2	How well did the video hold your attention?	Attention	Attention-holding capacity of the video
3	How helpful was the information the person in the video gave you about joining a stop-smoking program?	Helpfulness	Helpfulness of information
4	How much do you feel you can trust the person in the video?	Trust	Trustworthiness of model
5	Are the people who made this video experts in helping people quit smoking?	Expertise	Expertise of video-makers
6	How well do the people who made this video understand the needs of smokers in your ethnic group?	Needs	Understanding of participant needs
7	Would what the person said on the video convince you to join their stop-smoking program?	Convince	Ability to convince
8	From what you know so far, how effective do you think this program would be in helping people stop smoking?	Program Effectiveness	Effectiveness of program
9	If the person in the video came to your work, church, or school and offered this stop-smoking program, how effective do you think the person would be in convincing people to join the program?	Model Effectiveness	Effectiveness of model
10	If the people who made this video were to offer a free stop-smoking program at your work, church, or school how likely would you be to join it?	Enrollment	Likelihood of enrollment

Table 2

Participant Demographic Characteristics and Smoking Habits

Variable	AA Participants		EA Participants		Composite		T	P
	Mean	Std. Dev	Mean	Std. Dev	Mean			
Age	27.5	12.2	25.7	9.6	26.6		.613	.542
Annual income	\$23,091	47,094	\$21,955	16,488	\$22,524		.078	.939
Years education	11.4	2.4	12.5	1.8	11.93		-2.111	.038*
Number of cigarettes smoked per day	15.7	9.9	18.6	8.6	17.2		-1.216	.228
Number of previous quit attempts	1.8	.9	1.5	.8	1.66		1.109	.271
Years smoked	10.3	10.4	10.1	8.3	10.23		.083	.934
Number of smokers in household	1.7	1.0	2.3	1.4	1.98		-1.844	.069

*Significant at $\alpha = .05$

Table 3

Reliability Analysis of Items on Four Videotapes

Videotape	Alpha
1 (AA Athlete)	.9536
2 (EA Athlete)	.9501
3 (AA Faculty)	.9535
4 (EA Faculty)	.9355

MANOVA: Main Effects and Interaction Effects for Questionnaire as a Whole

Independent Variable(s)	F	p
Between Subjects Factor		
Participant Race	1.76	.189
Within Subjects Factors		
Model Race	18.77	.000*
Model Status	1.61	.209
Questionnaire Item	6.14	.000*
Participant Race x Model Race	4.76	.032*
Participant Race x Model Status	4.78	.032*
Participant Race x Questionnaire Item	.68	.727
Model Race x Model Status	.40	.528
Model Race x Questionnaire Item	2.88	.002*
Model Status x Questionnaire Item	.45	.909
Participant Race x Model Race x Model Status	.58	.447
Participant Race x Model Race x Questionnaire Item	.96	.474
Participant Race x Model Status x Questionnaire Item	2.60	.006*
Model Race x Model Status x Questionnaire Item	.42	.923
Participant Race x Model Race x Model Status x Questionnaire Item	.69	.719

* Significant at $\alpha = .05$

Table 4

ANOVA: Interaction Effects for Participant Race x Model Status on Each Questionnaire Item

Dimension	F	p
Enjoyment	.07	.793
Attention	.83	.366
Helpfulness	.90	.347
Trust	6.49	.013*
Expertise	2.86	.095
Needs	4.08	.047*
Convince	2.79	.099
Program Effectiveness	2.50	.118
Model Effectiveness	2.86	.095
Enrollment	2.48	.119

* Significant at $\alpha = .05$

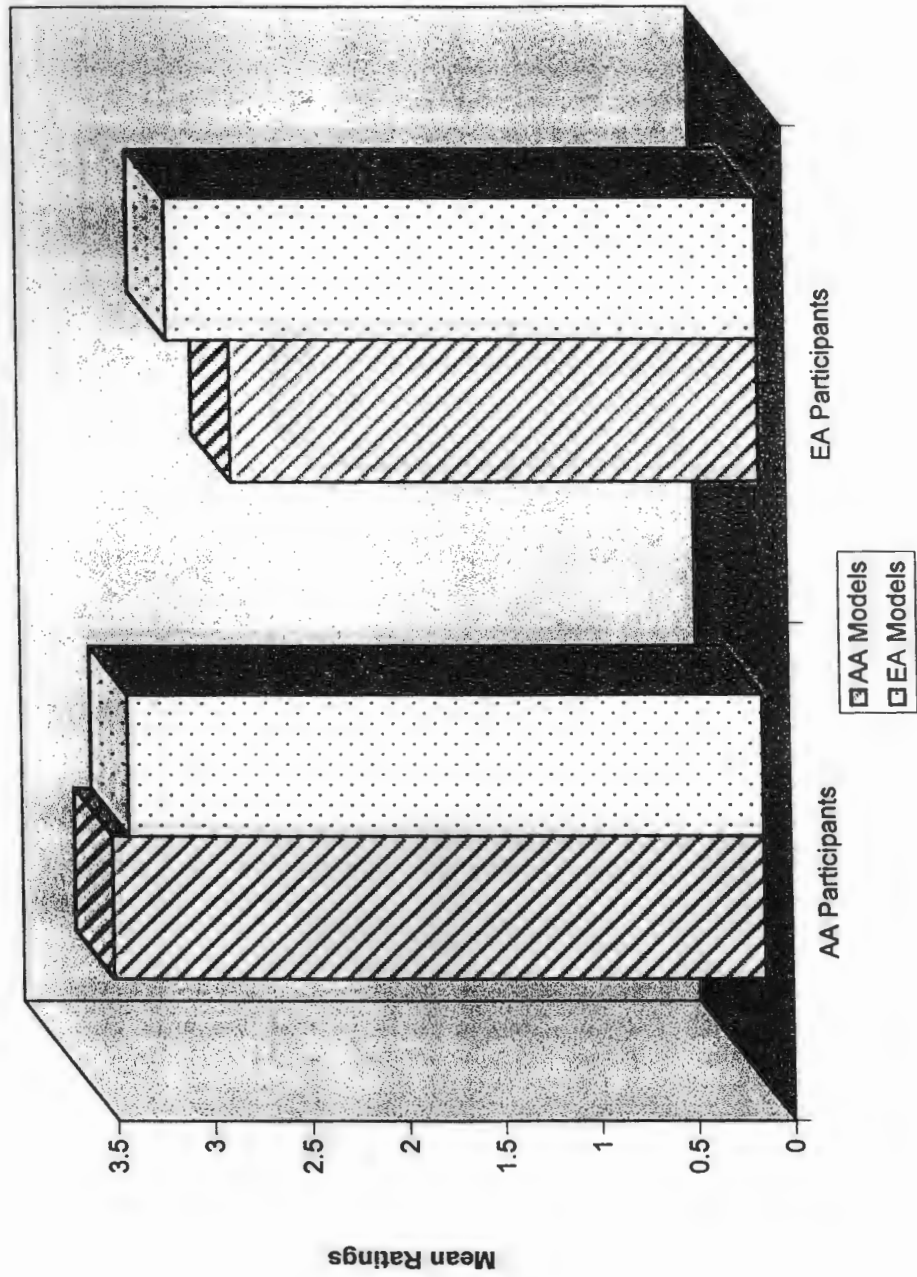
Figure Captions

Figure 1. Graph depicting the interaction effect of Participant Race x Model Race.

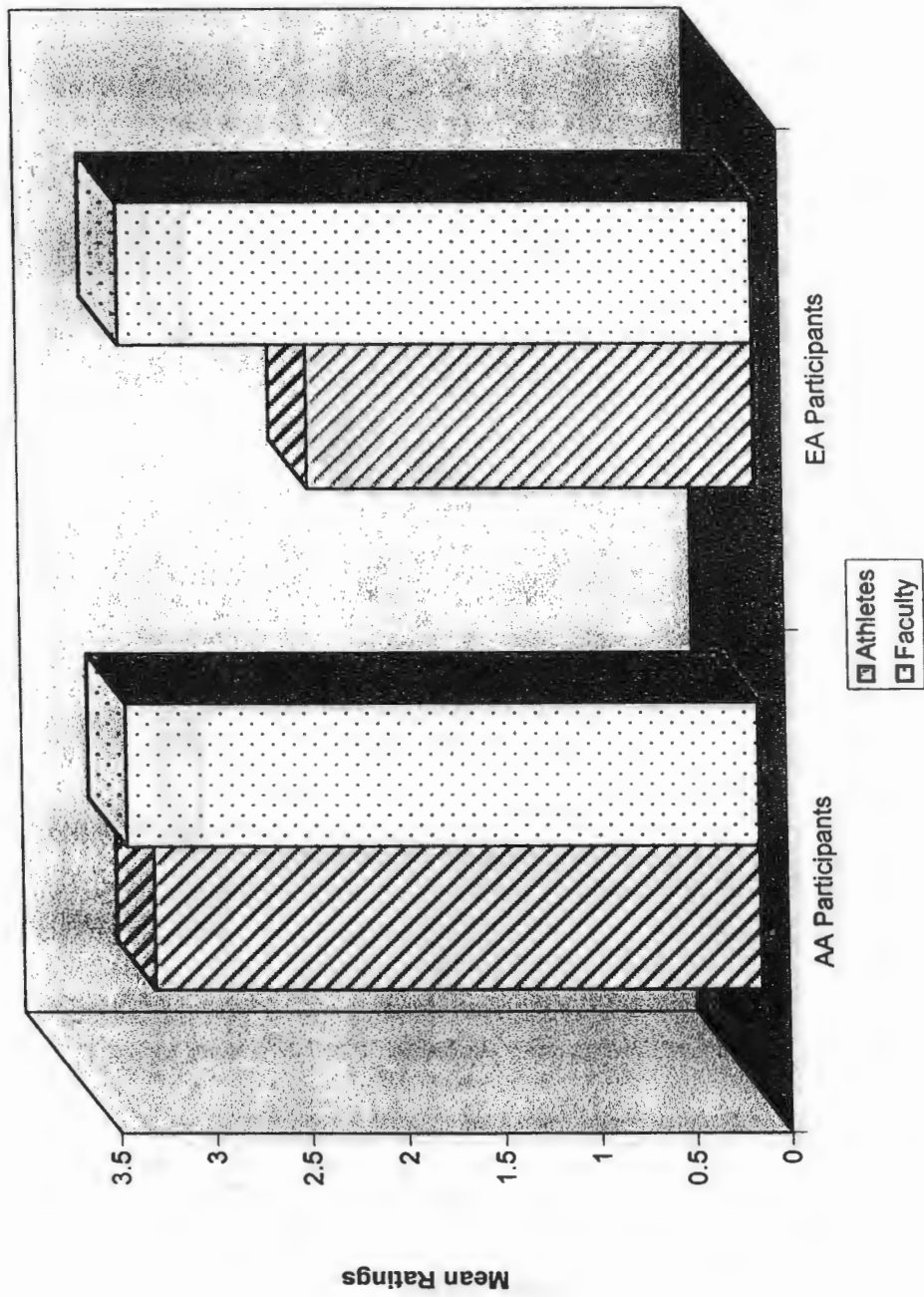
Figure 2. Graph depicting the interaction effect of Participant Race x Model Status on the Trust questionnaire item.

Figure 3. Graph depicting the interaction effect of Participant Race x Model Status on the Needs questionnaire item.

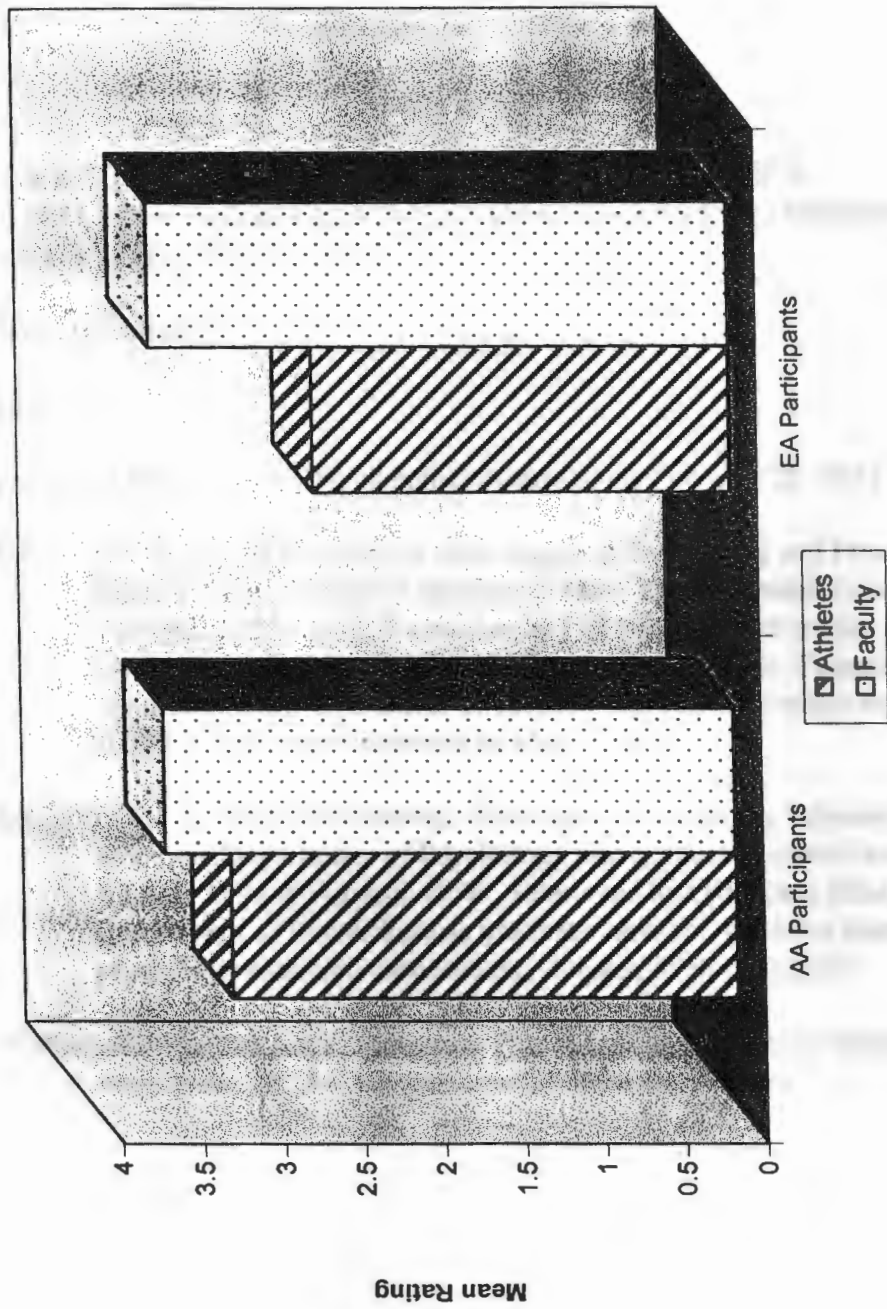
Participant Race x Model Race



Participant Race x Model Status: Trust



Participant Race x Model Status: Needs



VITA

Laura Carter

Candidate for the Degree of

Master of Science

Thesis: RECRUITER AND PARTICIPANT CHARACTERISTICS
INFLUENCING RECRUITMENT OF SMOKERS INTO SMOKING
CESSATION PROGRAMS

Major Field: Psychology

Biographical:

Personal Data: Born in Philadelphia, Pennsylvania February 25, 1972.

Education: Received Bachelor of Arts degree in Psychology and French from Ripon College, Ripon, Wisconsin in May, 1994; attended University of Memphis in Memphis, Tennessee and obtained course credits in psychology between August, 1994 and August, 1996. Completed the requirements for the Master of Science degree with a major in Psychology at Oklahoma State University in May, 1999.

Experience: Raised in Wauwatosa, Wisconsin; employed by University of Memphis Department of Psychology as a graduate research assistant, August, 1995 to August, 1996. Employed by Oklahoma State University Department of Psychology as graduate assistant, graduate instructor, and psychology assistant, respectively, August, 1996 to present.

Professional Memberships: American Psychological Association student affiliate, Association for the Advancement of Behavior Therapy.