The Effect of Anti-Smoking Advertisements on Smoker Identity

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Preface

The main ideas behind my thesis are actually a result of a residence hall hallway conversation I had back in January of 2000 with a few of my residents, a friend and my hall director. While discussing the fact that one of my good friends was trying to quit smoking the subject came up that she was having a difficult time quitting due to the fact that she felt as though she was losing part of herself. She said that she did not feel like herself because she was not smoking, she missed the social aspects of smoking with friends and the excuse to go outside and take a break from whatever she was working on. One of my residents joked, knowing that I was struggling with what I should study for my honors thesis that I should research the effects of smoking on identity. While this was not intended to actually become a topic for me to study, the more I thought about the concept behind it, the more it began to make sense from a developmental standpoint.

For the next year, I kept thinking of the way in which I could approach this as psychological study. About a year later, in January of this year, I began working with Dr. Davis, who agreed to act as my thesis director, on this concept and the direction I wanted to take. As it turned out, quite a sum of research on smoking cessation has recently revolved around this idea that smoking becomes important to the identity and self-concept of a smoker. After much thinking and talking with Dr. Davis, I finally arrived at the topic I discuss and test in my thesis: the extent to which anti-smoking campaigns effect the identity of smokers who view them.

I was excited to begin the research process, but was not prepared for the difficulty I encountered in devising a questionnaire, finding advertisements that seemed suitable to test the hypothesis I proposed, or finding actual smokers to participate in this study. Needless to say, I learned much more about the research process than what I could have anticipated. While I did
not find the results I was looking for in this study, I do not regret trying. Although my results may have been discouraging, this experience has only encouraged me to further pursue my research interests. The conclusions of this study did not support my hypothesis; however, they did not negate them, either. I do not believe that there is nothing to study in this area and I do think that, if given different conditions, there would be something of interest to report. At this point, I consider this thesis to be a springboard from which I may choose to explore this further at a later point in my life.

In addition to providing some background for my thesis, I would also like to thank some people for their help in this process. To begin, I would like to thank my family and friends for all of their support, even though I often refused to speak of my thesis to them due to frustrations I was experiencing. I also want to take this time to thank Jen Beck, who was a resource to me as she helped me recruit the sample of participants that I obtained for use in this study. She helped me willingly and I could not have recruited the number of participants that I did without her. In addition, I would like to thank Dr. Tim Morris, who agreed to read my thesis on very short notice. I truly appreciate his flexibility and willingness to help me with this.

Finally, I am indebted to Dr. Steve Davis who served as my thesis director. He was always very supportive of my endeavor and never once made me feel as though I was in over my head (even though I felt that way most of the time). He took time out of his busy schedule, which was already filled with teaching, grading, speaking with other students, and his own research, to talk with me, go over my ideas and allowed me to express my concerns. He endured much more than I will ever be able to express on paper as a result of my chronic tardiness, busy schedule and frequent “freak outs”. However, no matter how discouraged I felt walking into his office, I always left feeling excited about what I was doing and optimistic as to the possible
results. I am honestly grateful for all of the time he spent with me and on my thesis outside of those meetings.

Again, I was hoping to provide some exciting support for my hypothesis, but I feel as though I have learned such a great deal from conducting the research that the experience actually proved more of an experiment than the actual study. It was an experiment to discover whether or not I really would like to pursue a career in research. The results are proof in the fact that I finished this thesis and still look forward to devising more, better thought out studies using this experience to build from.
Abstract

While many anti-smoking advertisements exist, many of these advertisements focus on attacking the identity of the smoker through describing the smoker as an inferior individual as compared to a nonsmoker. Recent research has found that Smoker Self-Concept (SSC), which refers to the extent to which smoking is integral to the self-concept of the individual, plays an important role in smoking cessation. Lower SSC scores correspond with higher cessation rates. Research regarding reactance was also used, in addition to that regarding SSC, to form the hypothesis that identity attacking anti-smoking campaigns are not effective because the lack of freedom that may be felt by smokers viewing the advertisements results in reactance, which actually causes SSC scores to increase. The Smoker Self-Concept and Abstainer Self-Concept scales are used to measure levels of SSC in reaction to identity attacking, health related or non-smoking related advertisements. The results of this study do not show SSC to be affected by the different advertisements, but previous research by Shadel and Mermelstein (1996) regarding how long an individual has been smoking and SSC score was supported by this study.
Effect of Anti-smoking Advertisements on Smoker Identity

While a variety of anti-smoking advertisements and health information is widely available, the number of new adolescent smokers is still on the rise, even while the number of adult smokers declines (Arciti, Pistone, Persici, Barieri, & Santi, 1995). This is an interesting and important fact to note as it is becoming more evident that late adolescence and early adulthood is the time when the transition from experimentation to regular smoker usually occurs (Henningfield, Michaelides & Sussman, 2000). With the wealth of knowledge and resources available through the media and in the schools, it is interesting that the number of young smokers does not seem to decline. There are many different approaches to the problem of youth smoking, all of which seem to be of little effectiveness. Flay & Phil (1985) noted that one possible reason for this may stem from a failure of conventional anti-smoking programs to address the social and psychological processes that accompany smoking. While, based on the many research articles that address such issues, there seems to be an increase in awareness of the impact of social and psychological processes involved in smoking, more recent smoking programs that employ this awareness have had little more effect than their predecessors that dealt primarily with the health consequences of smoking. Some of the most recent research on smoking has centered on the “smoker identity”, or the extent to which the behavior of smoking actually comes to define the self-concept of the smoker. This identity is adopted by some smokers and may actually predict the onset of smoking experimentation and the progression to regular smoking status. The current study focuses on the effect the perception of media advertisements, used as a means to promote smoking cessation, has on smoker identity.
Health-Related Programs

A large percentage of past smoking programs have focused on the knowledge that convincing smokers of the negative health consequences of continuing the behavior is necessary to promote cessation. It has been found that adolescents who are educated as to the health consequences of smoking lower their cigarette usage for a short time after the program, as opposed to their counterparts who have not received the anti-smoking program (Flay, Hansen, Johnson, Collins, Dent, Dwyer, Grossman, Hockstein, Rauch, Sobel, Sobol, Sussman, & Ulene, 1987). When health professionals contribute to smoking cessation messages and support anti-smoking campaigns with their patients, the outcome has been found to be much more effective in smoking cessation and reduction than when the health professionals were not involved (Arciti, et al, 1995).

While these methods have uncovered means of creating programs that will reduce cigarette usage, they have not been proven to provide any long-term effects. Hirschelman and Leventhal (1989) actually found that many smokers who were given messages regarding the health consequences of smoking did not exhibit long-term smoking cessation. While the smokers did, in fact, increase their knowledge of the costs and risks of smoking cigarettes, cessation was only a short-term phenomenon in those smokers who placed the label of "smoker" on himself or herself at the onset of the study.

This research indicates that knowledge of the health consequences of smoking and support by health professionals is important to short-term smoking cessation behaviors. However, it has also been shown that those who identify themselves as smokers have a harder time maintaining those views and not returning to smoking long-term. While short-term effects may lead to long term cessation, this does not seem to be the case with smoking when the
smoker has identified him/herself with the behavior. The fact that these smokers who identified themselves as such only exhibited a short-term effect of increased smoking risk knowledge and cessation behavior, hints that a different approach needs to be attempted in order that other issues regarding the continuation of smoking behavior may be examined.

Social Influences Approach

One of the more popular anti-smoking prevention and cessation program approaches has tried to involve social factors that may influence smoking. The social influences approach designs a program that includes information dealing with the negative aspects of smoking, but additionally includes information regarding ways to avoid risk of smoking, teaches methods of responsible decision-making and discusses ways to resist social influences. Again, this method seems to be effective in the sample after a short period of time. However, for a high-risk group (based on SES, family smoking status, etc.), the long term-effects of this method are shown to be similar to that of the control group (Best, Flay, Towson, Ryan, Perry, Brown, Kersell & D'Avfrnas, 1984).

Other methods have explored the impact of family members as well as peers to help facilitate anti-smoking messages (Halfstad, Aaro & Langmark, 1996; Sussman, Brannon, Flay, Gleason, Senor, Sobol, Hansen, Johnson, 1986; Flay, Hansen, Johnson, Collins, Dent, Dwyer, Grossman, Hockstein, Rauch, Sobel, Sobol, Sussman, & Ulene, 1987). Most of this research is based on previous research that has found that media campaigns are most effective when they stimulate discussion amongst the peer groups and family members. This discussion is thought to further solidify the message of the campaign, which would reduce the risk that the young person would continue/begin smoking.
The social influence means of promoting anti-smoking messages have been used in conjunction with media campaigns, but have proved only marginally successful. In Halfstad, et al (1996), Sussman, et al (1986) and Flay, et al (1987), media advertisement campaigns were used as a means of anti-smoking education. In all three studies, times of media campaigns in the forms of news broadcasts and television specials were given to the parents of students in participating schools. The parents were encouraged to watch the programs with their children as a supplemental tool for an anti-smoking/drug program in the school. In one case, the participants were simply asked if they had discussed the campaign with any of their peers following viewing (Halfstad, et al, 1996).

While both parents and adolescents have said that they thought these methods were appealing, the long-term effects of such programs have not been proven effective. Those participants in these studies who spoke with either a parent or a peer group member were shown to have a higher rate of cessation than the other groups and the control; however, long-term follow-ups did not show this method to have increased cessation rates.

Parental and other familial influences have been shown to play a role in smoking prevention and cessation amongst adolescents; however, peer groups may play an even greater role in the onset and continuation of smoking amongst older adolescents. While initial parental influence may be important to the development of anti-smoking attitudes, it has been proposed that persons with more positive smoking beliefs may choose to live in an environment in which smoking is a central means in socialization. Generally, this proposition posits that those who choose to smoke also choose to be around others who smoke (Ogden & Nicoll, 1997). This may account for the continuation of smoking despite efforts on the part of family members to promote
cessation and negative views on smoking. Peer group influence and smoking related beliefs may account for the continuation of smoking habits.

Based on this information, it can be inferred that those who participate in smoking cessation programs, yet remain in a peer group in which smoking is central may have a harder time maintaining cessation due to the fact that their environment portrays a different image than that which the program advocates. Because one's identity is based in part on those with whom one chooses to surround oneself, the messages conveyed in smoking cessation programs will not be as salient with a person whose peer group smokes as with a person who does not choose to be surrounded by smokers. While smoking cessation programs often look to redefine the beliefs associated with smoking, when a smoker is surrounded by a peer group in which smoking is a characteristic, education efforts can be thwarted due to the lack of identity modification required in smoking cessation.

Fear Appeals

Other research has been done on the consequences of fear appeals as a means of anti-smoking promotion. Fear appeals rely on the idea that people will feel a sense of threat if the behavior is continued, which will result in cessation of that behavior. This differs from programs that provide health related information in that they are designed to evoke a fear response on the part of the individual who views the advertisement. Little evidence for the usefulness of fear appeals was exhibited in early research on this method. Flay and Phil (1985) noted that messages that provided information or used fear appeals were “largely ineffective”. However, Montazeri and McEwen (1997) conducted a study in which participants, which included smokers and non-smokers alike, were asked to rate whether a fear appeal or a message that attacked the behavior of the smoker would be more effective as an anti-smoking message. Results indicated
that the message that induced a fear response was preferred by the participants as the one that would be more effective in causing a smoker to quit. While this study did not examine whether the fear appeal does in fact cause a smoker to be more likely to quit, research has found this to be the case.

Witte and Allen (2000) conducted a meta-analysis of fear appeal research and found that messages with a strong fear appeal, along with an effective response that the smoker can employ to change his/her behavior can promote attitude, intention and behavioral change. In a study composed of adolescents, a small majority indicated that they wanted to quit after seeing a fear appeal message; however, almost half of the smokers showed a defensive response to the fear appeal by stating that they did not feel as though the consequences described would be likely to affect them, rather than a change of intentions (van Wel & Knobbout, 1998). This suggests that the appeal elicited a response that was not in accordance with what the adolescents had previously viewed as the impact of smoking; the appeal caused an incongruity amongst the beliefs the participants held for themselves about smoking and the message portrayed by the fear appeal. Instead of heading the warning, it was instead categorized as “it could not happen to me” or some other form of avoiding the information. This defensive response can be likened to reactance theory, which states that, when placed in a situation in which there is no perceived freedom of choice, a person will choose to do the opposite of what is proposed in order to maintain the freedom that is perceived to be withheld (Brockner & Elkind, 1985). Thus, while it seems that fear appeals may have led to some promising effects, they too are flawed and do not seem to work in all cases of smoking prevention and cessation programs.
Conclusions: Smoking Cessation and Prevention Programs

Many attempts have been made to produce programs that will reduce the prevalence of smoking amongst adolescents and young adults. Much of this research relies on the assumption that smoking is a behavior that can be stopped with the proper education and social support. However, the following research involves the psychological and social factors that lead to the onset and continuation of smoking. Reviewing this literature contributes to the explanation of why previous attempts of smoking cessation programs have not proved effective based on smoker identity, or the extent to which smoking becomes an integral part of the smoker's self-concept.

Third Person Effect

Henrickson (1999) found that a third person effect, or the notion that others are more likely to be influenced by an advertisement or some other stimulus, can taint the views of children’s perceptions of the effectiveness of anti-smoking campaigns. It was found that the participants viewed anti-smoking campaigns as being more effective for themselves than others, but the reverse for pro-smoking campaigns. In general, these participants had a very protective and self-serving view of the impact of both pro-smoking and anti-smoking advertisements. This study notes that while the sample believed the anti-smoking advertisements to be effective for them, previous research does not support this belief (Henrickson, 1999).

This again can be tied in with the view that smoker identity is a cause of smoking continuation. If a smoker does not perceive that they will be influenced by the advertisements that contribute to smoking, then they may ignore signs that they are identifying with the behavior represented. The opposite may be true for anti-smoking campaigns. If those who smoke believe
that an advertisement may be effective for them, but they simply choose to ignore such campaigns at the present time, a stronger sense of the identity of the smoker may develop.

**Smoker Self-Image**

Smoker self-image may be one of the most influential deciding factors in the onset and continuation of smoking in adolescents and young adults. Lynch (1995) described adolescent smoking in terms of personal construct theory. The medicalized model of adolescent smoking, which states that there are specific environmental cues, such as other smokers in their family and peer group, that adolescents respond to at the onset of smoking which causes the behavior, is seen as simplistic. The misuse of this model seems to be a significant problem in the battle against smoking. In contrast, it was found that there is a large amount of variability amongst smokers and that the medical model, which uses cause, effect and diagnosis to explain smoking, was not appropriate for use amongst this population. Lynch (1995), in a study designed to elicit the personal constructs of young people and discover what variations exist between smokers and non-smokers based on interviews, found that smokers in the general media were found to be portrayed as “weak minded” and “below average” when compared with nonsmokers. In addition, nonsmokers tended to have a uniform view of smokers and placed them into specific categories of descriptors which centered around "rebel", "druggy" and "unhealthy" types of words. However, it was also found that smokers themselves were very different and all individuals in the sample did not necessarily adopt many of the stereotypes associated with smoking. These stereotypes, reported by both smokers and non-smokers, did not seem to be true of the portion of the sample that smoked. Those smokers who participated in the study did not necessarily feel that the stereotype of smokers that was generated by the study specifically described them. In general, this finding was attributed to the fact that there was a higher
emphasis on individuality amongst the smokers than amongst the nonsmokers. Those who smoked wanted to remain individualistic, but as part of their peer group of smokers. While they felt they were individuals, they still wanted to maintain their sense of group identity, which was individualistic. Basically, the smokers did not want to be identified by the stereotype they or others held for smokers, but rather a schema they held for themselves, which, in turn, became their true stereotype. Bases on these findings, Lynch hypothesized that anti-smoking campaigns that attack the stereotype of the smoker may, in fact be a validating influence rather than a deterrent because the message validates the individuality by presenting an image of a non-conforming, individualistic smoker, rather than breaking down the link between smoking and individuality.

Part of the process of developing a cohesive self-concept is often based in the process of group identification. As has been noted throughout the research discussed, the extent to which a person is able to identify with the image of a smoker is a strong predictor of the onset and continuation of smoking. Sussman, Simon, Stacy, Dent, Ritt, Kipke, Montgomery, Burton and Flay (1999) specifically studied the relationship between group identification and the onset of smoking and other drug use. Past research has shown that similar smoking background in family, peer group and other demographic variables predict smoking onset. Peer group self-identification, in which an individual perceives him/herself to be an integral part of a specific group of individuals, has also been found to be an important predictor of smoking behavior. This study found that smoker peer group identification alone is a significant correlate of smoking behavior, across a wide demographic array of smokers. In fact, group self-identification to a peer group comprised predominately of smokers was found to account for the highest risk, after controlling for other variables. Because group self-identification amongst smoking peers is such
an important component of self-concept and identity is it little wonder that smoking seems to be so related to self-concept.

Aloise-Young, Hennigan & Graham (1996) found that people who have a similar smoker stereotype and self-image are more prone to begin smoking and stay a smoker than those who have a very dissimilar view of themselves as compared to a smoker stereotype. Those who identify themselves as ‘wild’, for example, are more likely to begin smoking if this is in accordance with the view they hold of smokers. Advertisements only solidify the desire to smoke when they show a similar identity in the advertisement to which the person aspires. Since this process of self-identification is especially important in adolescence and young adulthood, this leads to the implication that smoking is really fulfilling a different need for the young person than for the adult. Aloise-Young & Hennigan (1996) also found that self-consistency and self-enhancement, or trying to become something one is not, are major reasons why so many adolescents and young adults begin and continue to smoke. According to this study, adolescents who viewed themselves similarly to smokers began smoking and it was concluded that this may be due to the fact that the images proposed of smokers were like their own and they “needed” to smoke to keep this consistency. In young people who aspire to become like the stereotype they have of smokers, smoking serves a self-enhancing purpose. By participating in an activity that is associated with the type of person they wish to become, the adolescent may feel as though he/she is closer to attaining that goal.

Amos, Gray, Currie and Elton (1997) instructed participants, which consisted of adolescent smokers and non-smokers, to rate themselves on a number of characteristics that were developed based on attributes of smoking and nonsmoking images taken from magazines. Many participants in the study exhibited a strong connection between the image associated with
smoking and drug use. The participants who smoked seemed to feel that drugs and tobacco played a significant role in their self-image. These findings suggest that past prevention efforts have not been effective based on a limited understanding of the importance of smoking and drugs in developing and maintaining a strong and acceptable self-image. While smoking cessation efforts may have reinforced nonsmoking amongst people who don’t smoke and would have been unlikely to begin in the first place, they may have been reinforcing the smoker self-image and thus proved highly ineffective to those who actually need the programs.

One of the main points that is persistent in the literature is the fact that smokers tend to view themselves as a group and assign certain characteristics to themselves such as “independent”. One study found that these certain personality traits, such as antisocial personality characteristics, impulsivity and sensation seeking, predicted a decrease in health behaviors (such as eating well, exercising, wearing a seatbelt, etc.). This gives further evidence that there is a particular type of person who engages in and continues on with a behavior such as smoking (Chassin, Presson & Sherman, 1989).

Lloyd, Lucas and Fernbach (1997) suggested that smokers pose the greatest problem when designing anti-smoking programs because they tend to view smoking as a means of developing an adult identity and tend to ignore the “deviant” image portrayed in the media. In general, the adolescent smokers tend to view smoking as less of deviant image, and more of an independent image, which can be seen as being in accordance to what Chassin, Presson and Sherman (1987) found. This study focused on the perceptions of adolescent girls on smoker and nonsmoker identity. When asked to rate both themselves and the image of smokers, using predetermined adjectives to describe themselves and the images of smokers, the smokers were significantly more likely to rate the smoking image in a more positive light and disregard
negative items than were nonsmokers. This suggests that smokers generally have a more positive view of smoking than nonsmokers do. This could be due in part to their identification with the behavior.

While media images seem to play a role in the perception of smoking, it seems that older adolescents and young adults have a predisposed ambivalent attitude toward smoking. While many people feel that smoking is a health risk, many smokers feel as though it could also be a sign of maturity and independence. In general, when the smoker portrayed in an advertisement is seen to be similar to the person viewing the advertisement, the overall message is seen as being much more positive. This may be based on this ambivalent attitude that young adults seem to have toward smoking, due to the idea that those who have little opinion of smoking may choose to have a more positive opinion due to a lack of negative informational bias (Gray, Amos & Currie, 1996).

Reactance

Brockner & Elkind's (1985) work with reactance and self-esteem provided evidence for the idea that when a person feels as though there is no choice available for them in a given situation, reactance occurs and they are less likely to adhere to the advice given in an advertisement. This has implication for anti-smoking messages. Reactance theory contends that, when faced with a message that promotes an idea that does not comply with the individual’s belief system, the individual may choose to do the opposite of what the message says in order to retain this freedom that may be perceived to be lost due to a lack of alternative options. Because one is placed in a situation where an anti-smoking message is presented, one might feel a perceived loss of freedom and produce a reactance response of not changing his/her behavior specifically for the reason that there is a threat to freedom of choice. While other researchers
(Nail, Leeuwen & Powell, 1996) have found that reactance may be instigated based on concerns about self-presentation exhibited toward others in reaction to the stimulus, it is still important to note that any time a perceived loss of freedom exists, the possibility for reactance does as well.

Research that has been centered on warning labels for television violence has come to similar conclusions. In the "Forbidden Fruit Theory" reactance is exhibited because the warning labels are seen as an act of censorship and this in turn increases motivation to view the censored material (Bushman & Stack, 1996). This can be applied to smoking the same manner. When a smoker feels as though he/she is being censored from participating in a practice he/she has become accustomed to, then this may, in fact increase the likelihood that the smoker will continue with the behavior.

Social response theory is another body of work that is related to reactance and is applicable to the notion of smoking. Nail (1986) has published a large body of work on this topic and its applicability to different scenarios. Social response theory argues that conformity and independence and a number of related concepts such as anticonformity, which is a response that may be elicited when an individual refuses to conform to norms, influence one's decisions and attitudes (Nail, 1986). Nail and Van Leeuwen (1993) analyzed the effectiveness and applicability of the diamond model of social response. In this model, the two dimensions, the net conformity dimension and the independence dimension, interact when a person is faced with a decision to either agree or disagree with a stimulus. Net conformity refers to the extent to which an individual is likely to conform. The independence dimension is determined by the extent to which and individual may deviate from the norms and opinions of those around them to what extent they are influenced by outside factors. When net conformity is high and independence is low, the participant is more likely to agree with the stimulus than if net conformity is low and
independence is high. This model is applicable in a variety of ways and can be one lens through which to view this concept of reactance. This model has been used in the past to show that participants will anti-conform in order to reestablish a lost sense of freedom and to maintain their individuality. Obviously, this model of viewing anti-conformity explains some of the reasoning behind why a smoker may not conform to the messages laid out by anti-smoking advertisements by providing a means by which the thinking of an individual and personality differences would account for either compliance or noncompliance to an anti-smoking advertisement.

Another concept discussed in greater detail by Nail and Ruch (1992) is the idea of self-anticonformity. This term basically posits that people will actually not conform to their own ideas when they feel that others will perceive them in an ilregard. This has some interesting implications for anti-smoking campaigns that wish to change the smokers' minds. If the mind is changed, but a self-anticonformity schema is taken on, the advertisements could be even less effective than the already are, due to the fact that the smoker does not want his/her peer group to perceive him/her in a negative manner.

Present Study

The present study seeks to integrate the above concepts of smoking prevention, smoker self-image and reactance. Because of the importance of smoking to the identity of the person, it is logical to assume that anti-smoking advertisements that attack the identity of the smoker will incite reactance in response to the stimulus as it seems to deprive the smoker of a freedom that has become deeply imbedded as part of their social and personal identity. In turn, it would seem that reactance would increase the level of Smoker Self-Concept (SSC). In order to analyze this effect, Shadel and Mermelstein's (1996) measures of Smoker Self-Concept and Abstainer Self-Concept (ASC) will be used.
Shadel and Mermelstein (1996) developed measures of Smoker Self-Concept and Abstainer Self-Concept for use in a clinical setting with patients in smoking cessation programs. Their study focused on the self-concept and how it related to smoking cessation efforts. The hopes of their study were founded in the idea that if the SSC changes, the attitude about smoking would change and this would lead to cessation. A smoker self-concept was defined as “a current self-schema, which is made up of smokers’ knowledge of their smoking habits and descriptors, which differentiate them from nonsmokers”. It was reported that a high smoker self-concept leads to higher susceptibility to smoking cues (such as others smoking, state dependent smoking behavior, etc) a higher likelihood to smoke and increased urges to smoke.

The ASC was viewed as a measure of the possible, nonsmoking self. Because this study dealt with smokers, it was hypothesized that the ASC would never be greater than the SSC because of the SSC’s availability during the cessation process. In other words, while the participant was participating in the study, the SSC would always be a factor based on the simple fact that their identity as a smoker was constantly being called to attention through the cessation program.

In the validation study, it was hypothesized that smokers who entered treatment with high Abstainer Self-concept (ASC) and low Smoker Self-concept (SSC) would be most likely to successfully complete the program. This concept was validated by the fact that the interaction between the ASC and SSC, in the predicted combination of lower SSC and higher ASC, was the main predictor of successful cessation. Neither of the two by themselves was a significant predictor of later smoking status. However, it is interesting to note that participants who entered into the study with a high SSC and a high ASC were the least likely to successfully abstain at the end of the study. Both of these finding suggest that it is possible to have two concurrent and
conflicting views of oneself. It was concluded that this combination of conflicting views causes
more division and less likelihood to take on a strictly high ASC due to the fact that this particular
self-concept was high at the beginning of treatment, and, therefore, efforts to raise the ASC,
while lowering the SSC were thwarted. When one view is practiced, it overpowers the other and
translates into continued behavior.

The Smoker Self-Concept and the Abstainer Self-Concept scales were employed in a
follow up study by Shadel, Mermelstein and Borrelli (1996) that looked at the long-term changes
in the scores of the scales for those who took part in a clinically based smoking cessation
program. Those who were included in this study were categorized as either post-treatment
smokers (those who took part in the program, but continued to smoke) or abstainers (those who
took part in the program and succeeded in quitting). Overall, it was found that abstainers only
increased their ASC. It was suggested that more experience as a non-smoker solidified the ASC.
It was also found the SSC of the abstainers decreased over time. However, post-treatment
smokers, after an initial decrease in SSC were found to not only regain to their original levels,
but also showed gains in their SSC. Additionally, post-treatment smokers’ ASC scores did not
increase over time. This was attributed to the assumption that repeated efforts to quit seem to
heighten the perceived need of smoking as an effort to maintain balance in personal self-concept.
When an individual repeatedly tries to quit smoking and fails, this goes on to show the person
that smoking is really a central part of their identity and not something that can be changed.
Previous research has supported this assumption in a study by Friestad and Rise (1998) that
found that participants who had tried to quit smoking perceived themselves as more addicted
than smokers without prior quit attempts. The second study proves the long-term predictive
validity of the measures of SSC and ASC and provides further insight into possible treatment
approaches by expanding the base of knowledge required to market the anti-smoking message to smokers.

It is hypothesized, based on this information, that anti-smoking messages that attack the identity of the smoker will actually increase SSC due to reactance and possibly decrease the likelihood of cessation. Additionally, it is hypothesized that an image depicting the health outcomes of long-term smoking will have a greater effect on SSC than either the identity attacking stimulus or an advertisement that does not address smoking.

Method

Participants

Forty-six white/European-American smokers attending a private, religiously affiliated Midwestern college (36 women and 10 men, age $M = 19.6$ years) were recruited through enrollment in an introductory level psychology course, by recruitment in residence halls, or at the campus cafeteria. The students recruited through the introductory psychology course received course credit for their participation. All other students were not compensated for their participation and participated on a voluntary basis. Students in all recruitment scenarios were asked if they considered themselves to be smokers and if so, if they would be interested in completing a short survey assessing their attitudes about advertising campaigns. Of those who claimed to be smokers, only one refused to participate; however, it was reported to the experimenter that a large number of known smokers denied smoking when asked. The participants in the study ranged in the years they had been smoking from less than one month to more than four years, with 43.5%, the largest percentage, of participants smoking between two and four years. In addition, the highest percentage of participants, 43.7%, smoked between two and ten cigarettes per day. All participants signed a consent form stating that they understood
the study, that they understood that they did not need to answer all questions asked, that they could discontinue the study at any time, and that all individual information would be kept confidential. In addition, participants who were interested in the outcome of the study were asked to give an email address to which the final study would be sent.

Materials and Measures

Each participant randomly received one of three advertisements designed to convince the audience to not engage in a specific behavior. Two of the advertisements were anti-smoking advertisements and served as experimental conditions. The third advertisement was an anti-drug advertisement and served as the control condition. This advertisement consisted of a picture of a club-type atmosphere with the message printed on top of the picture. The message described a situation in which a woman lost her son to an overdose of the drug ecstasy. It speaks of the dangers of using the drug, despite the popular conception that it is not dangerous.

A health-related anti-smoking message (health advertisement) was the condition in which the health risks associated with smoking are conveyed. This advertisement featured the popular cartoon figure, “Joe Camel”, in the hospital and hooked up to an IV. The words “Joe Chemo” label the picture with a warning at the bottom of the page reading “The Surgeon General warns that smoking a frequent cause of wasted potential and fatal regret”.

The identity advertisement was used at the identity attacking condition. This advertisement features a young man dressed in a jacket, tie and short, black pants smoking multiple cigarettes as well as holding several other cigarettes in his pocket and behind his ear. The words “Utter Fool” are printed next to the picture in a style that is similar to another popular cigarette advertisement. Again, a warning is placed at the bottom of the page that says: “Surgeon
General's Warning: Smoking causes lung cancer, heart disease, emphysema and may complicate pregnancy” (See Appendix A for advertisements).

All of the advertisements used were obtained from Internet sites that focused on anti-smoking and anti-drug messages. None of the advertisements used are under copyright laws and were given to public use for educational purposes.

The questionnaire used in the study was comprised of introductory questions regarding the participants' perception of the advertisement and the Smoker Self Concept Scale and the Abstainer Self Concept Scale (Shadel & Mermelstein, 1996) and a variety of other demographic and attitude based questions developed by the experimenter. The SSC and ASC scales consisted of statements (five and four respectively) that the participant was asked to agree or disagree with on a ten-point Likert scale ranging from one (strongly agree) to ten (strongly disagree). Both scales showed significant levels of reliability in this study. The Smoker Self-Concept Scale had an Alpha of 0.86. The Abstainer Self-Concept Scale had an Alpha of 0.84. Both scales had been validated in previous studies conducted by the developers of the scales, though measuring the ASC and SSC in individuals in a clinically based smoking cessation program and tracking their cessation and/or non-cessation based on the scores (Shadel, Mermelstein, & Borrelli, 1996).

The remainder of the items asked the participants to provide information regarding how long they had been smoking, how much they smoked, number of family and friends who smoked, whether or not their family friends offered them cigarettes, wanted them to quit, etc. In addition, four questions asked them to respond to items based on their attitude toward smoking. These items dealt with the health consequences of smoking, relaxing properties of smoking,
whether smoking is a social behavior and other’s reactions to their smoking habits (See Appendix B for questionnaire and SSC and ASC scales).

The questions regarding the SSC and ASC scales as well as the other questions were compiled into a six-page packet that the participants received after signing the consent form. The first page consisted of directions instructing the participants on how to complete the packet. The second page was the advertisement the participant was to view for ten seconds, followed by a page of questions regarding the participants’ perceptions of the advertisement. The fourth page consisted of the SSC and ASC scales, followed immediately by the other items previously described. The last items continued through the sixth page.

Procedure

Questionnaire administration took place over the course of two weeks. Random assignment to each of the three conditions was used. As previously described, the participants were recruited through various means, but all administration took place in a similar manner. After a brief description of the study, participants were asked to sign a consent form, asking any questions before signing the form. After signing the consent form, the participants were handed the packet and asked to read the directions carefully. Participants were also instructed to answer all questions honestly and if any problems arose in the interpretation of the questions, they were to answer the questions to the best of their ability and answer what they perceived the question to be asking. The directions on the first page instructed the participant to look at the advertisement on the following page for a period of ten seconds and then to proceed to answer the questions on the following pages. Following the completion of the questionnaire, the participants were asked to read a debriefing, outlining the purpose of the study and providing more information regarding the design of the study than was previously described. In addition, any participant who wished
to know the outcome of the study was asked to provide an email address and were told when they could expect to receive the completed study.

The procedure of this study was specifically designed so that participants would be able to come and leave relatively quickly. Due to this, the majority of instruction was printed out for the participants to read. Any questions were answered and oral instructions were also given briefly. Participants were able to begin when they arrived, and leave when they were done. Because of this flexible procedure, participants would come and leave at will and may have been starting while another was in the middle of filling out the questionnaire. This did not seem to pose a problem with either the administration or the actual completion of the questionnaire.

Scoring

The SSC and ASC scales were scored based on the rating each participant gave to the statements on the scales. A composite score of SSC and ASC was given based on the sum of the ratings given to each statement on the scale. The scores on the SSC scale could range from 5 (very low SSC) to 50 (very high SSC). The scores on the ASC scale could range from 4 (very low ASC) and 40 (very high ASC).

Results

The main hypothesis that SSC would increase with exposure to the identity-attacking stimulus was not supported. The SSC scores of the group that viewed the health related advertisement versus the identity attacking advertisement and the non-smoking related advertisement did not prove significantly different.

Using ANOVA, it was determined that SSC (M=23.07, SD=10.94 for the control condition, M=20.33, SD=8.27 for the health condition and M=20.71, SD=11.63 for the identity condition) did not differ significantly by group, F(2, 46) = .294. In addition, there were no
significant differences in ASC by group (M=28.86, SD=7.96 for Control Group, M=26.80, SD=9.45 for Health Group, and M=28.82, SD=9.45 for Identity Group), F(2, 46) = .258.

A four-step hierarchical multiple regression equation was used to measure the extent to which the group predicted SSC after controlling for other variables. At each step in the regression equation, variables were excluded to determine which variables were associated with the change in score. In step one, age and gender were entered into the regression equation. These variables did not significantly predict SSC, ΔR² = .02. In step two, How Much and How Long smoked was added into the equation. This did produce a significant overall change in R², ΔR² = .18, p ≤ .05. In addition, it was found that How Long smoked was a significant individual predictor of SSC, β.enter = .35, p ≤ .05. In step three of the regression equation, contrast variables of the control group vs. the health and identity attacking conditions and the health condition vs. both the control and identity attacking conditions were added to the equation. The ΔR² value was not found to be significant for this step, but the total value approached significance, R² = .24, p ≤ .10. In the final step, all interactions between age, gender, how long smoked and how much smoked were added, but none of these proved significant to the prediction of SSC, ΔR² = .23, p ≤ .05. (See Table 1).

Further correlational data showed that how long a participant had been smoking was significantly correlated with SSC (r (46) = .31, p ≤ .05). In addition, how much a participant smoked and the number of friends who smoked were also significantly correlated with SSC (r (46) = .407, p ≤ .01, and r (46) = .397, p ≤ .01, respectively).

Group differences were found amongst the three conditions based on the answers to the questions regarding the participants’ perceptions of the advertisements. How persuasive the participant felt the advertisement to be was found to be significantly different based on group,
In addition, the extent to which the participant felt the advertisement would influence his/her behavior, was also found to be significantly different by group, $F(2, 45) = 6.29, p \leq .01$. Correlational analysis showed that both items were correlated with group, $r(46) = -.43, p \leq .01$, and $r(46) = -.59, p \leq .01$, respectively. The correlation shows that those who viewed the control condition were more likely to deem the advertisement persuasive and thought it would affect their behavior more than those who viewed the identity attacking advertisement. In addition, both perception questions were found to be correlated with group, $r(46) = .39, p \leq .01$, and $r(46) = .30, p \leq .05$, respectively. Those who saw the identity-attacking stimulus were more likely to feel as though the advertisement was less persuasive and less likely to change their behavior than the other groups. Thus, while the SSC was not changed based on group, the group did have an impact on how persuasive the participant felt the advertisement to be and on whether the participant felt the advertisement would influence his/her behavior.

Discussion

The present study did not support the hypothesis that increased SSC would result from exposure to the identity-attacking stimulus. In fact, no significant differences were found between any of the conditions. However, SSC was correlated with how long the participant had been smoking. While this was not hypothesized in this current study, it does support previous research by Shadel and Mermelstein (1996) which found that the longer someone smoked, the higher the SSC score. Another interesting finding is that there was a significant difference based on group when comparing the participants' perceptions of the advertisement. In the control group, the advertisement was found to be highly persuasive and likely to influence the participants' behavior. However, the identity attacking and health related advertisements were
found to be ineffective and the participants did not feel as though this advertisement would be likely to influence their behavior.

Despite the fact that the results did not seem to indicate the proposed hypothesis, there are still some comments that may be made regarding the outcome of this study. To begin, this study did report a similar finding to that of previous research in regard to the length of time participants had spent smoking and its relationship to SSC. This fact adds to the basis of belief that the longer one smokes, the more the behavior becomes part of the self-concept of the individual. This information leaves the anti-smoking community in a position where anti-smoking messages and programs can be structured around this knowledge by targeting specific advertisements toward long term smokers. It may be possible to break down the SSC of long-term smokers by providing alternate identities with which to associate as opposed to denigrating the image of smokers as the smoker may see them. While identity attacking anti-smoking advertisements have not been shown to provide any basis to believe that reactance can explain their relative ineffectiveness, it is important to take the knowledge of the effect of long-term smoking on the identity of the individual into consideration when developing a program or campaign. It does seem that health professionals have tried to take this into consideration by using identity-attacking advertisements throughout mass media in order to direct non-smokers and smokers alike away from smoking based on showing an image of a person that most people would not like to be.

It is important to note that, while SSC did not increase as hypothesized, it did not significantly decrease as compared to the control condition, either. If the advertisements would work as they seem to be designed to, it would be logical to assume that SSC would have to decrease in order to be effective. The lack of directionality, suggests that these advertisements
have no significant effect on SSC. Because SSC is a predictor of future cessation success, the ideal situation would exist if the advertisement would have some sort of effect on SSC or ASC. Neither was shown to either increase or decrease as a result of the advertisement. While this study may not have controlled for all variables in the correct manner to make the assumption that there is no effect of the advertisements on SSC and ASC, further research is needed to conclude that these advertisements are effective.

It is possible that SSC was not affected for a number of reasons in the current study. To begin, the small sample size in addition to a high amount of variability amongst the scores did not allow the results of the study to be significant. If higher participant numbers could have been obtained, the results may have shown some sort of significant direction in scores of SSC. While if a clear direction may have been present if the connection was salient, it is difficult to make the assumption that there is no directionality present due to the lack of participants.

In addition, a large number of known smokers denied smoking, which may cause some concerns regarding generalizability. It is possible that the majority of smokers who chose not to participate did so based on their views of anti-smoking advertisements. Their lack of participation may indicate that the reactance proposed is a factor in this process. By refusing to even participate in a study targeting smokers, they are in fact, not complying with the perceived threat of being targeted as a group. In addition, if those who refuse to participate are part of some group of smokers who are less likely to participate, their lack of participation may skew the sample to include only those with personalities that would allow themselves to complete the study.

In addition, certain limitations of the study may have lead to the lack of clear conclusions. For one, the identity-attacking stimulus did not specifically target the smoker. In
many advertisements, the smoker is specifically the target of the identity-attacking message (i.e. scenarios involving degradation of a smoker). In the currently used stimulus, a clear picture of the “Fool” was used. If the participant did not identify with the smoker depicted in the advertisement, he/she may not have found this advertisement particularly offensive to his/her own identity, but only the identity of the person in the image presented. If a stimulus was used that targeted the individual viewing the advertisement, or if the advertisement were to target someone with whom the individual could strongly identify, perhaps by matching age, sex, and other demographic variables, the participant may feel more attacked, and therefore reactance could come into play.

Another reason why the current study may not have been the most accurate measure of SSC after seeing an advertisement is because only a short exposure time was endured. If the stimulus (or multiple versions of identity attacking advertisements) would have been presented over a longer period of time, the participant may have had more time to formulate the reactance that was hypothesized.

As Shadel and Mermelstein (1996) noted, the more individualistic approach of assessing the needs of the smoker in facilitating this change in self-concept, is integral in the process of smoking cessation. While anti-smoking advertisements have the dual purpose of both preventing smoking behavior in those who are currently not smoking or simply experimenting, and inciting cessation motivations in those who currently smoke, it is proposed that this knowledge of SSC and its impact on smoking cessation be taken into consideration, by designing advertisement campaigns that appeal to large numbers of smokers and possibly designing advertisements that specifically target smokers with various levels of SSC.
Suggestions for further research include utilizing longer periods of exposure and possible repeated trials of similar advertisements to maximize the effect of the advertising campaigns and to simulate the manner in which most people receive the information disseminated to the public. When advertisements are used, the public often views them multiple times. This study relied on the short-term effects of a relatively short period of exposure. To make this concept more realistic and applicable to general media use, repeated exposures to similar advertisements may be necessary.

The extent to which the current anti-smoking methods are effective. Because the advertisement was not deemed to be a possible influencing factor in future behavior by the participants, it could be that the advertisements are not effective. Although the participants may not be entirely cognizant of the efficacy of the advertisements, they did not feel as though they were being persuaded. Although the SSC may not have been effected based on the exposure to the advertisement in this study, it could be proposed that smoking behavior would actually increase as a direct effect of the survey. The experimenter noted that a number of participants mentioned wanted a cigarette upon completion of the survey. While this was not a goal of the current study, future research could examine the smoking habits immediately following viewing an identity attacking anti-smoking advertisement.

Again, the results of this study did not show a direct effect of any of the advertisements on SSC. However, future research still needs to be done to provide support for the results found in this study.
References


Table 1
Hierarchical Multiple Regression Equations Predicting Smoker Self-Concept (N = 46)

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>( \beta_{\text{enter}} )</th>
<th>( \beta_{\text{final}} )</th>
<th>( \Delta R^2 ) step</th>
<th>( R^2 ) total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Age</td>
<td>.14</td>
<td>.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>-.04</td>
<td>-.04</td>
<td>.02</td>
<td>.02</td>
</tr>
<tr>
<td>Step 2</td>
<td>How Long smoked</td>
<td>.35*</td>
<td>.34*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>How Much smoked</td>
<td>.14</td>
<td>.22</td>
<td>.18*</td>
<td>.20*</td>
</tr>
<tr>
<td>Step 3</td>
<td>Contrast 1 (control vs. both other conditions)</td>
<td>.15</td>
<td>.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contrast 2 (health vs. both other conditions)</td>
<td>-.10</td>
<td>-.10</td>
<td>.04</td>
<td>.24t</td>
</tr>
<tr>
<td>Step 4</td>
<td>8 interactions of contrast variables with age, gender, how long smoked and how much smoked</td>
<td>--</td>
<td>--</td>
<td>.23</td>
<td>.47t</td>
</tr>
</tbody>
</table>

Note: N = 46. * p ≤ .05, t p ≤ .10. \( \beta_{\text{enter}} \) represents beta values of variables as they first enter regression equations, while \( \beta_{\text{final}} \) represents beta values of variables in the final regression equation (Step 3).
Appendix A

Identity Attacking Advertisement

SURGEON GENERAL'S WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, And May Complicate Pregnancy.
Health Related Advertisement
"I donated my son Joe's brain for research. He was a drug addict. His friends said he did a lot of Ecstasy. This was the first human brain research they had done for Ecstasy damage. Kids think Ecstasy's a harmless drug. It's not. They're risking long-term damage. Memory loss, Depression. No wonder. Ecstasy releases a spurt of serotonin - a chemical in the brain that makes you naturally feel good. Ecstasy abuse can deplete your serotonin, and the brain may take forever to recover. This is what they found in Joe's case.

-Tinker Loper, mother of a son who died from a drug overdose

The truth about taking Ecstasy is that it can have dangerous consequences. Don't be fooled. And find out more at www.theantidrug.com or call 1-800-788-2800.

TRUTH.
THE ANTI-DRUG

Office of National Drug Control Policy

Non-Smoking Related Advertisement
Appendix B

Please look at the advertisement on the following page for 10 seconds. Then turn the page and answer the questions that follow regarding what you have viewed.

As a smoker we are interested in how you perceive the advertisement you have just viewed. Please answer the following questions regarding that advertisement and then proceed to the next page.

Have you seen this advertisement before today?
A) Yes
B) No

Do you feel this is a persuasive advertisement?
A) Very persuasive
B) Somewhat persuasive
C) Not persuasive

Are you likely to remember this advertisement?
A) Very likely
B) Somewhat likely
C) Not likely

Would this advertisement be likely to affect your behavior?
A) Very likely
B) Somewhat likely
C) Not likely
On a scale of 1 to 10 (1 being “strongly disagree” and 10 being “strongly agree”) rate each of the statements below according to how much you feel it describes you (circle the appropriate number).

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking is part of my self-image *</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
<tr>
<td>Smoking is part of my daily life. *</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
<tr>
<td>Smoking is part of “who I am.” *</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
<tr>
<td>Smoking is part of my personality. *</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
<tr>
<td>Others view smoking as part of my personality. *</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
<tr>
<td>I am able to see myself as a non-smoker. †</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
<tr>
<td>It is easy to imagine myself as a non-smoker. †</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
<tr>
<td>Not smoking is “like me.” †</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
<tr>
<td>I am comfortable with the idea of being a non-smoker. †</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
</tbody>
</table>

* Item in the Smoker Self-Concept Scale
† Item in the Abstainer Self-Concept Scale


General Questions:

How long have you been smoking?

A) Less than a month
B) 1 month or more, but less than 6 months
C) 6 months or more, but less than 1 year
D) 1 year or more, but less than 2 years
E) 2 years or more, but less than 4 years
F) More than 4 years

How much do you currently smoke?

a) 1 cigarette per day
b) 2-10 cigarettes per day
c) 11-20 cigarettes per day
d) 21-30 cigarettes per day
e) more than 30 cigarettes per day
How many people in your immediate family smoke?
   a) Almost none
   b) Fewer than half
   c) Half
   d) More than half
   e) Almost all

How many of your friends smoke?
   a) Almost none
   b) Fewer than half
   c) Half
   d) More than half
   e) Almost all

Rate each of the statements below in regard to how much you agree/disagree with it.

Smoking is bad for my health.
   a) Strongly agree
   b) Agree
   c) No opinion
   d) Disagree
   e) Strongly disagree

Smoking helps me to relax.
   a) Strongly agree
   b) Agree
   c) No opinion
   d) Disagree
   e) Strongly disagree

My friends and family often offer me cigarettes.
   a) Strongly agree
   b) Agree
   c) No opinion
   d) Disagree
   e) Strongly disagree

Smoking helps me to be more social.
   a) Strongly agree
   b) Agree
   c) No opinion
   d) Disagree
   e) Strongly disagree
Smoking causes people to react in a negative way toward me.
   a) Strongly agree
   b) Agree
   c) No opinion
   d) Disagree
   e) Strongly disagree

My friends and family try to get me to quit smoking.
   a) Strongly agree
   b) Agree
   c) No opinion
   d) Disagree
   e) Strongly disagree

How many hours a week do you spend watching television?
   a) less than 1
   b) 1 hour or more, but less than 4
   c) 4 hours or more, but less than 10
   d) 10 hours or more, but less than 15
   e) 15 hours or more, but less than 20
   f) more than 20

How often do you read magazines?
   a) Less than 4 times per year
   b) 4 times a year or more, but less than once a month
   c) Once a month or more, but less than once a week
   d) Once a week or more, but not daily
   e) daily

What is your gender?
   A) Male
   B) Female

What is your Age? _____

With which of these ethnicities do you most strongly identify?
   A) African-American
   B) Asian-American
   C) Hispanic/Latino - American
   D) White/ European-American
   E) Other
What term do you expect to graduate (circle term and write in year)?

FA  200__

WI  200__

SP  200__