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# ARE ANTI-SPIT TOBACCO CAMPAIGNS STRIKING OUT? A SURVEY OF IOWA AND NEBRASKA COLLEGE BASEBALL PLAYERS

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**ABSTRACT**—Anti-spit tobacco information is replete with fear appeals, including firsthand accounts of death and debilitation, to make users aware of the health risks and dangers. Those dangers, however, are well known by baseball players whose association with spit tobacco is historic. A survey of 217 Iowa and Nebraska college players showed that despite their awareness of spit tobacco's dangers, the players use spit tobacco to relax and focus on the field. This study supports other research showing that fear appeals may not be the most appropriate approach for anti-tobacco advertising campaigns. The study suggests that campaigns should promote relaxation and stress reduction techniques as alternatives to spit tobacco.

**Key Words:** advertising, baseball, college, fear appeals, relaxation, spit tobacco

## INTRODUCTION

The American Cancer Society, American Lung Association, and other health agencies have devoted considerable efforts to warning young people about the dangers of smokeless, or spit, tobacco. Those anti-tobacco messages often depend on fear appeals, while detailing the health effects of "dipping" and chewing. Brochures such as the American Cancer Society's *Cold Hard Facts about Dip* (1998) and *If You're Dipping Snuff, You Should Know the Truth* (1987) rely on graphic photographs of cancerous lesions in the mouth and descriptions of the suffering and premature deaths of athletes who dipped or chewed.

Among sports, baseball shares the longest history and closest association with spit tobacco (ST). Current and former major league players are often singled out for their ST use and called upon publicly to bear witness to the dangers (Saraceno 2005). But the core of their messages, as with other anti-ST campaigns, is the threat or dread of illness, physical disfigurement, and death.

Whether fear appeals are effective in curbing use of spit tobacco is still subject to debate (Taflinger 1996). Gauging the responses to such appeals is important in developing anti-ST messages that resonate with particular audiences. Developing those messages calls for an understanding of what needs or roles ST fulfills for people, depending on their social and cultural situations. With that

in mind, this paper proposes that the most effective approach to developing anti-chewing/dipping messages for baseball players can best be determined by learning what motivates players to dip or chew and how they perceive spit tobacco's relationship to their on-field performance and their health.

## LITERATURE REVIEW

Fear appeals have long been stock and trade in information campaigns and advertising. "A fear appeal highlights the risk of harm or other negative consequences of not using the advertised brand or not taking some recommended action" (O'Guinn et al. 2003, 386). Public health campaigns have relied extensively on fear appeals or "on the procedure of punishment—fast driving is followed by crashes; smoking is followed by cancer, etc." (Job 1988, 164).

Baseball and ST share a long history. The first recorded associations between ST and baseball date to the 1840s (National Cancer Institute 1993). Although the threat of tuberculosis thwarted public use of ST at the turn of the 20th century, ball players continued to use ST to keep their mouths moist in dry and dusty ball parks, according to popular myth (Connolly et al. 1992; National Cancer Institute 1993). The first baseball trading cards were

distributed via tobacco products (cigarette packs) in the 1880s, and in 1902 Durham's entry in the North Carolina State Professional Baseball League was named after the town's foremost industry, Bull Durham Tobacco (Newman 1991). For years, cigarettes rivaled chewing tobacco when it came to advertising associated with baseball and use by players. But as the health threat of cigarettes became widely publicized in the 1970s, the popularity of chewing and dipping increased among players (National Cancer Institute 1993).

The risk of death or disfigurement is a crux of many anti-tobacco campaigns, especially as it relates to the dipping or chewing of spit tobacco. Studies have shown that such risks are well founded. Researchers in public health and dentistry concur that ST can lead to cancers of the esophagus, pharynx, and oral cavity, and other health problems (e.g., Wisniewski et al. 1990; Connolly et al. 1992; Greene et al. 1994). Baseball players are especially susceptible to these problems, based on the prevalence of users in the sport and the amount of use (Walsh et al. 1994).

Numerous cases illustrate the toll ST has had on players with a history of use. Former Cubs infielder Steve Fox is among those who have suffered the consequences. Fox developed oral cancer after six years of chewing, and surgeons had to remove half of his tongue (National Cancer Institute 1993). Bill Tuttle, who played in the major leagues for 11 years, became known as "the man without a face" because of the ravages of tobacco-induced oral cancer. California high school baseball coach Bob Leslie suffered similarly and eventually died from his cancer at the age of 31 (Frias 2001).

These stories serve as fodder for anti-tobacco campaigns and become the focus of collateral materials such as brochures, audiovisual productions, and news releases used on an ongoing basis by organizations such as the American Dental Association, American Cancer Society, and the National Spit Tobacco Education Association. Such content, along with photos of oral sores, leukoplakia, and jawless users, constitute the "fear" approach used by anti-tobacco organizations. The effectiveness of such appeals, while commonly used in anti-tobacco campaign materials, has been questioned by numerous researchers. Richard Taflinger of Washington State University says that "a danger can arise from using fear appeals. If the images presented are too weak there is little reaction other than discomfort. . . . On the other hand, if the images are too strong, the audience may feel that such a situation could never happen to them" (Taflinger 1996, 4).

Dejong and Wallack (1999) said fear appeals may be useful when the target audience has little knowledge or

information of possible risks or threats to their well being. But fear appeals can "backfire if the public dismisses them as unrealistic exaggerations, which can make the problem behavior even more resistant to change" (Dejong and Wallack 1999, 157). Taflinger (1996) said fear appeals are less effective for younger audiences. He says that for fear appeals to work, "the audience has to have a sense of future mortality" (4).

There may be other reasons fear appeals are not effective. Job (1988) said if the supposedly catastrophic consequences of the health-threatening behavior do not occur, this "may lead to quasi-logical support for the denial type of response which alleviates any existing fear" (166). In addition, messages that focus on negative consequences of personal actions "may be particularly ineffective in stopping behaviors which are themselves anxiety reducing since the message may elicit the unwanted behavior, e.g., reaching for a cigarette or a drink" (Job 1988, 165).

A Canadian study of smokers' reactions to advertising supports Job's assertion. The study found that individuals reacted more positively and paid closer attention to ads that encouraged them to quit. The ads stressing the gravity of the health consequences of smoking (which the authors called "tombstone ads") were viewed as credible by the smokers, but in some cases the ads actually encouraged the behavior it was demonizing. A woman participant reported that the ads made her feel so nervous that she craved a cigarette (Social Marketing Network 2003). The smokers resented being "bullied" into quitting smoking. "They already knew that smoking was bad for them. However, since many of them wanted to quit but were finding it hard to do so, they expressed great interest in the [ads] which dealt with the difficulties of quitting." Such a finding intimates, as Job (1988) does, that health awareness advertising that uses fear appeals misses the mark.

"Health promotion may be better viewed as the increasing of healthy alternative behaviors, however. Rather than promoting messages like 'don't smoke' or 'don't drink and drive,' we need to promote messages like 'do this specific behavior' where the behavior offered is a set of skills for refusing cigarette or alcohol, or for getting a ride with someone else instead of driving [when drunk]" (Job 1988, 165).

In a critical analysis of fear appeals in social marketing, scholars pointed to strategic and ethical concerns as they suggested reasons why more recent campaigns have turned away from fear to alternatives (Hastings et al. 2004). In an extensive review of fear appeal studies, they found primary weaknesses to be the limited length and scope of research conducted primarily in laboratory settings with students.

So the question to marketers is, "Can fear appeals change behavior in the sophisticated and overcrowded clutter of the real-world communications environment?" (Hastings et al. 2004, 963).

Although Job (1988) cited the need for more studies on alternatives to fear appeals in health promotion campaigns, there has been scant research on tactics for making anti-spit tobacco media campaigns more effective. However, several studies have explored the incidence of and attitudes toward ST use among high school and college baseball players and the effectiveness of certain clinical interventions in cessation of ST use (e.g., Connolly et al. 1988; Cummings et al. 1989; Ernster et al. 1990; Wisniewski et al. 1990; Gingiss and Gottlieb 1991; Sinusas et al. 1992; Robertson et al. 1995).

Those studies have shown that chewing and dipping have long been popular, not just with baseball players but also with the general population. Snuff use increased in the United States during the 1980s and 1990s (Robertson et al. 1995), and the overall number of smokeless tobacco users rose from almost 7 million in 1995 (Centers for Disease Control 1995) to 9.6 million in 1998 (Mathias 2001).

The incidence of use has climbed dramatically among baseball players, especially those in the college and professional ranks. Several studies in the late 1980s and early 1990s showed that the number of minor and major league players who "dipped" or "chewed" ranged from 34% to 66% of those surveyed (Connolly et al. 1988; Cummings et al. 1989; Ernster et al. 1990; Sinusas et al. 1992; Ernster et al. 1993). The incidence was just as high among college players, more than half of whom dipped or chewed, according to two studies (Gingiss and Gottlieb 1991; Walsh et al. 1994). Many of those players reported starting their use in high school. Ernster et al. (1990) found that the median age at which their major and minor league subjects began chewing or dipping was 18, which was also the average age of initiation for the professional players, according to another study (Sinusas et al. 1992).

It appears that high school is a time of experimentation with smokeless tobacco, considering a study of 511 high school baseball players in New York and New Jersey. Results showed that 7.4% were current users, although 44% of the Caucasian and 23% of the African American players had tried smokeless tobacco (Wisniewski et al. 1990). One of the greatest concerns associated with use among high school youth is the lack of awareness of the dangers of chewing and dipping. In the study by Wisniewski et al. (1990), more than half the athletes "had never seen nor heard about any harmful effects concerned with

smokeless tobacco usage" (12). Wichmann and Martin (1994) contend that "young people don't regard tobacco as a drug" (108). Their observation is supported by the Centers for Disease Control (2002), which estimates that only 40% of youth think smokeless tobacco is harmful.

Users also underestimate the addictive power of smokeless tobacco. In a study of 14 players in a cessation program, only one remained abstinent after 22 months (Sinusas and Coroso 1993). Almost 20% of the major league players using smokeless tobacco in another study felt they could not stop their use, and one-third of them, knowing they had oral health problems, continued to use smokeless tobacco (Connolly et al. 1988). One study found that nicotine patches eased withdrawal symptoms but did not affect long-term abstinence rates (Mathias 2001). But another study of professional players found that extensive counseling and intervention may have an effect on abstinence rates (Greene et al. 1994).

Despite the extent of this previous research, there remains a knowledge gap regarding how players perceive ST's role in their on-field performance and ST's effect on their approach to the game. This research could help to determine the best approach in shaping communication programs and materials geared to help baseball players cease their use of ST. Such findings can also contribute to the research literature on reasons why players begin using spit tobacco and why they continue. Additionally, surveying baseball players and coaches about their use of and attitudes toward ST will also be useful to health officials and practitioners in assessing the extent of the problem.

## METHODOLOGY

The research instrument consisted of a mail survey of Nebraska college baseball players and coaches to assess the following: incidence of ST use, factors that initiate and sustain use, frequency of use, type of spit tobacco used, cessation attempts, and demographic information. Part of the instrument consisted of a five-point Likert scale to measure players' understanding and awareness of ST-related health problems and their perceptions of ST's effect on their performance.

Each coach was contacted via phone to seek his team's participation in the survey. Follow-up letters were mailed to the coaches to confirm participation and dates for administration, collection, and return of the surveys. Surveys and specific instructions were mailed to coaches of each college team for distribution to players. Self-addressed stamped envelopes were included for the coaches to return the surveys. The survey provided quantitative results in

the form of descriptive statistics. Data were analyzed via SPSSX computer software.

## RESULTS

Surveys were sent to seven college baseball teams from 2003 to 2005. Six were Nebraska teams: Bellevue University, Dana College, University of Nebraska at Kearney, University of Nebraska–Lincoln, University of Nebraska at Omaha, and Wayne State College. One team was from Iowa: Iowa Western Community College. The researchers collected data from 217 players. More than 90% of the players were Caucasian, 6% Latino, and 1% African American. The average age of the respondents was 21.

Almost 36% (78 of the 217 players) reported that they currently chewed or dipped, and almost 12% were former users. Dipping refers to the placement of finely ground tobacco (sometimes referred to as “snuff”) between the lower gum and lip or cheek, while chewing is the mastication of shredded tobacco. The average age at which the current users started chewing/dipping was 16. Of the players who chewed/dipped, more than 80% did so year round, with the rest using spit tobacco only during the baseball season. Almost 72% reported chewing or dipping at least once a day and 90% did so at least three times weekly. More than one-third of the users reported that another player or coach introduced them to ST.

The survey showed that users are well aware of the dangers of ST use. On a five-point Likert scale item (strongly disagree = 1; disagree = 2; undecided = 3; agree = 4; and strongly agree = 5), almost 98% of the self-professed users agreed or strongly agreed (overall,  $M = 4.684$ ) that chewing/dipping causes oral cancer and gum disease.

Slightly more than half (54%) the ST users agreed on a Likert scale item that they would have no trouble quitting, yet 85% reported that they attempted to quit but were unsuccessful. Their average length of abstinence was four months. Opinions about the ability to “kick the habit,” however, varied with the age at which the player started using ST, the player’s frequency of use, and the number of years the player used ST.

A Spearman’s rho correlation showed that the older a player started chewing/dipping, the more likely he was to agree that quitting would not be a problem ( $N = 75$ ,  $p(.374) = .001$ ). There was also a correlation between a player’s frequency of use and his perceptions of the ease of quitting. The less frequently a player chewed or dipped, the more apt he was to agree that quitting would not be dif-

ficult ( $N = 76$ ,  $p(-.634) < .001$ ). That finding was backed by an independent samples t-test showing a significant difference in feelings about quitting between those who used once a day ( $M = 3.072$ ,  $SD = 1.119$ ) and those who used three times a week ( $M = 4.769$ ,  $SD = .438$ ,  $t(66) = -5.341$ ,  $p < .001$ ). The former group ( $N = 55$ ) tended to be undecided about whether quitting would be difficult compared to the less frequent users ( $N = 13$ ) who strongly agreed that they would have no problem stopping.

A Spearman’s rho correlation between the number of years a player has chewed/dipped and Likert scale responses on quitting ST showed a significant and inverse relationship ( $N = 74$ ,  $p(-.477) < .001$ ). The less time a player has been chewing/dipping, the more strongly he agreed that quitting would not be a problem.

Those who used only chewing tobacco ( $N = 6$ ) also strongly agreed that quitting would not be difficult, a feeling that was not as strong among those who only dipped ( $N = 26$ ). A t-test showed a significant difference on that Likert scale item between strictly chewers ( $M = 4.833$ ,  $SD = .4082$ ) and dippers ( $M = 2.961$ ,  $SD = 1.182$ ,  $t(30) = 3.784$ ,  $p = .001$ ).

Many players see ST as an aid to relaxation. Almost 74% of the self-professed ST users agreed or strongly agreed that chewing/dipping help them relax, and players cited ST’s taste, its role in helping them to focus, and its calming effect as the most significant reasons for their use. A Spearman’s rho showed that the higher the frequency of use by a player, the more apt the player was to agree that chewing and dipping helped him relax ( $N = 76$ ,  $p(-.231) < .05$ ).

Despite players’ views of ST as a relaxant, they don’t feel that ST makes them perform better on the field. Almost 70% of the users disagreed with a Likert scale item that dipping and chewing enhanced performance on the ball field. Players most likely to agree that ST use did enhance performance were those who use ST the most frequently (at least once a day), according to a Spearman’s rho ( $N = 76$ ,  $p(-.328) = .004$ ).

## DISCUSSION AND CONCLUSIONS

The survey uncovers three general trends: (1) players are aware of the health risks of ST; (2) players do not feel they would have trouble quitting chewing or dipping; and (3) players see ST as a way to relax and focus on the field.

More specifically, the heaviest users of ST view their use as unhealthy but as an important aid in keeping them relaxed and focused for play. Major league players echo those sentiments. Boston Red Sox pitcher Curt Schilling,

who has tried but been unsuccessful in quitting ST, said his main reason for using is to help him relax. New York Yankees pitcher Randy Johnson also uses ST as a "stress reducer" (Saraceno 2005).

"I hear baseball players say, 'I've got to have it. I've got to have it,'" said former major league player and NBC commentator Joe Garagiola. "They think that they really need it" (pers. comm. 2003).

Many players in this survey, however, feel they can do without it. Those tended to be the lightest and most infrequent ST users and those who had not been chewing or dipping as long. The players who only chewed tobacco (and did not dip) were also more confident in their ability to quit, compared with those who only dipped.

The heaviest ST users and those who had chewed/dipped the longest were not so sure about the ease of quitting. Some realized the addictive nature of ST and cited that addiction as a significant reason for continuing to use. Better evidence for ST's addictive power is that 85% of respondents had attempted to quit, but none were successful.

Peer pressure or conformity to keep using ST, which Cooper et al. (2003) acknowledged as one reason players may start, was not apparent in this study. Only about one-third of the players said they had been introduced to ST by a player or coach, and that usually happened in high school and well before they joined the college ranks. The extent to which coaches or baseball officials encourage players to quit is also unclear. Three coaches reported that they briefly discussed the problem with players at the beginning of the season and that organizations such as the National Collegiate Athletic Association (NCAA) prohibit ST use during games, but no coach reported that he tried to inhibit his players from using ST (Coach John Manganaro, Wayne State College, pers. comm. 2004; Coach Mike Evans, Bellevue University, pers. comm. 2005; Coach Ed Servais, Creighton University, pers. comm. 2005).

The literature details several types of cessation programs, such as that by the National Spit Tobacco Education Program, but that program, like others, uses fear appeals "to educate athletes and the general public about the addictive properties of spit, or smokeless, tobacco and the risk users have of contracting oral cancer" (Samber 1998, 1). Some ST cessation programs are patterned after smoking cessation programs and involve the use of nicotine gum or nicotine patches (Wichmann and Martin 1994), while others recommend that fear appeals be underscored by having authority figures, especially physicians, relay the dangers of ST use (Greene et al. 1994).

Wichmann and Martin (1994) argue that the first step in a cessation plan is to identify why the athlete wants

to quit. The results from the current study, however, indicate that a more appropriate first step is to determine why players use ST and what purposes it serves. One of the primary purposes, according to results from the 78 users in this study, is to relax and reduce stress. Except for suggestions of deep breathing and exercise (such as in the National Cancer Institute's 1993 cessation program booklet), cessation programs historically have not focused on the adoption of beneficial behaviors and practices as a substitute for tobacco use. Stress reduction has not been a major focus of such programs, so the current study begs the question: Would promoting various stress reduction techniques (such as biofeedback, deep breathing, imagery, etc.) as substitutes for ST be more effective in cessation programs than promoting the dangers and health consequences of ST?

That inquiry is not new. Job (1988) cautioned that "the tendency to view health promotion as the removal of unhealthy behavior should be resisted in favor of viewing health promotion as the promotion (shaping and reinforcement) of healthy alternative behaviors" (166-67). Before such resistance, research is needed to determine how alternative behaviors should be introduced and embedded in a cessation program and how those behaviors should be portrayed and promoted via publications, audiovisual materials, and online content. This study indicates that one of the main reasons that players use ST is to achieve a state of mind and level of relaxation that will allow them to perform better. At the very least, these results show that, based on the number of respondents who have tried to quit ST, players may be willing to abandon ST use in favor of relaxation and stress reduction methods. These results also clearly show that players are well aware of the health consequences of ST use, with the implications that fear appeals do not serve as a significant motivation to quit.

The current study is only a beginning to understanding the dynamics of ST use among college baseball players. The addictive nature of ST must always be taken into account when explaining the use of such products. But there may be other factors that undergird tendencies toward addiction, and there are numerous questions that remain unanswered, such as: Are there significant differences in ST use among players based on their playing positions? To what extent do coaches and assistant coaches chew or dip? Do coaches have any ideas on why their players use ST? In what way(s) do players use ST in relation to other "routines" they adopt or follow to prepare mentally for games? Have NCAA sanctions against ST had any effect on use by players? More studies using larger samples and drawing from a larger geographic area are needed

to provide answers and to gain a deeper understanding of why players use ST.

This study is a first step and offers a profile of diverse college baseball programs, from those affiliated with the National Association of Intercollegiate Athletics (NAIA) to an NCAA Division I school, from a junior college to a Big 12 university. The study serves as a solid foundation for expanding knowledge about the relationship between ST and college baseball players.

Research on the use of fear appeals in information campaigns is plentiful, but studies on the use of such appeals in anti-ST campaigns targeted to baseball players are scant. Even scarcer are studies on the use of stress reduction or relaxation techniques by baseball players as behavioral alternatives to ST use. The findings from this study illustrate the need for more research on the effectiveness of each method (fear appeals, behavioral alternatives) in anti-ST campaigns and the need for research comparing those methods.

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