

A Social Judgment Theory Approach to Conducting Formative Research in a Social Norms Campaign

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The social norms approach predicts that campaign messages providing true normative information about widely misperceived health behaviors will reduce the gap between distorted perceptions versus actual practices and consequently reduce behaviors based on exaggerated norms. Formative evaluation of messages designed to effectively convey true norms informed by social judgment theory (SJT) should measure the boundaries of the latitudes of acceptance, noncommitment, and rejection for normative information. This study found that these latitudes were significantly different from one another in believability. SJT predicts that a campaign based on a norm falling in the latitude of noncommitment will be likely to be effective. A series of messages using the true norm, which fell within the latitude of noncommitment, were part of a campaign. The gap in perceived versus actual drinking and the difference in perceived number of drinks was reduced, while self-reports of consumption of five or fewer drinks increased significantly.

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Social norms campaigns have been conducted on many college campuses to combat extreme drinking, drug use, smoking, and other risky and harmful behaviors by means of communicating the healthy attitudes and behaviors to the majority of students. The focus of the campaign described here was to reduce high-risk consumption of alcohol. This is important because extreme alcohol use is a serious problem on college campuses, often resulting in negative outcomes such as physical injury to self and others, academic harm, engaging in risky sexual behavior, interpersonal and family conflict, and impaired driving and accidents, among others (Johannessen & Glider, 2003; Linkenbach & Perkins, 2003; Perkins, 2003; Perkins & Craig, 2003).

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The social norms approach (SNA) predicts that providing information about true norms of the occurrence of behaviors that are misestimated will result in less exaggerated misperceptions of norms and, ultimately, leads to a reduction in the harmful or risky behavior. Communication is a key component of an SNA intervention in that messages must be formed, tested, and used in an intensive exposure campaign designed to result in the desired outcomes—a reduction in misperceptions of norms and a reduction in harmful or risky behavior.

Social judgment theory (SJT; Sherif, 1936; Sherif, Sherif, & Nebergall, 1965) is based upon the idea that the effect of a persuasive message on a particular issue depends on the way that the receiver evaluates the position of the message. This suggests that formative research should be conducted as the campaign messages are formed and tested to determine the evaluation of the position relative to the bounds of possible alternatives defined by the extreme positions on the issue. Determining where the actual norms fall in the general latitudes of acceptance, noncommitment, and rejection of the target audience is critical here. Actual norms that fall in the latitude of noncommitment that are used in a campaign should be accepted and retained if they are featured in messages in an SNA campaign, while actual norms that fall in the latitudes of acceptance or rejection are less likely to be accepted or retained due to assimilation and contrast effects, respectively. Hence, it is critical for norms-based health campaigns to determine the latitudes of acceptance, noncommitment, and rejection of the target audience in order to develop persuasive and credible messages.

This study employs the SNA and SJT in formative research designed to determine whether the latitudes of acceptance, noncommitment, and rejection of believability are significantly different from one another. The goal of the formative evaluation was to create a campaign using a message in the latitude of noncommitment, with the aim of ultimately reducing (a) the misperception gap between students' own consumption of alcohol and their projections about others' consumption and (b) the actual number of drinks the average student reported drinking the last time that he or she went out. To this end, SNA will be described briefly, and then the application of SJT principles to formative research that employs a social norm perspective will be used to derive specific hypotheses. A campaign that employed these combined theoretical perspectives in a university community will be described, and outcomes and future directions for this research will be discussed.

Social norms approach and practice

This approach was originally formulated in 1986 (Perkins & Berkowitz, 1986) and has received further elaboration by Berkowitz (1997) and Perkins (1997, 2003), among others. The basic premise is that the majority of the student population engages in healthy behavior with regard to alcohol, drugs, smoking, and other risky activities. However, most of this population is thought to exist in a state of pluralistic ignorance (Berkowitz, 2004; Campo, Cameron, Brossard, & Frazer, 2004) in that the responsible students incorrectly believe that they are in the minority when they are actually in the majority. In other words, the perceived norm for the frequency and

amount of engagement in risky behaviors is much higher than the actual norm. These are descriptive norms as they “refer to beliefs about what is actually done by most others in one’s social group” (Lapinski & Rimal, 2005, p. 130) or “refer to individuals’ beliefs about how widespread a particular behavior is among their referent others” (Rimal & Real, 2003, p. 185). Evidence for misperceptions comes from a variety of studies, 23 of which were included in a meta-analysis that found a significant self-other norm discrepancy in alcohol consumption (Borsari & Carey, 2003).

Pluralistic ignorance is predicted to encourage the suppression of healthy attitudes and behaviors and to replace them with the unhealthy and risky behaviors that are incorrectly believed to be the norm. Berkowitz (2004) documents that over 20 studies have found that misperceptions are positively associated with higher drinking behavior. The SNA posits that a reduction in misperceptions about descriptive norms should result in a reduction in actual instances of risky behaviors. Six universities that conducted social-norms marketing campaigns reported successfully reducing drinking (Fabiano, 2003; Foss, Deikkman, Bartley, & Goodman, 2004; Glider, Midyett, Mills-Novoa, Johannessen, & Collins, 2001; Haines & Barker, 2003; Jeffrey, Negro, Demond, & Frisone, 2003; Johannessen & Glider, 2003). Not every social-norms marketing campaign has been successful, however (Berkowitz). Several of these failed campaigns might have benefited from the application of SJT to the formative evaluation phase of the campaign.

A basic model of the SNA to prevention is provided by Perkins (2003, p. 11). A baseline measure that identifies actual and misperceived norms is the first step, and this is followed by an intervention with intensive audience exposure to actual norm messages. This intervention should lead to less exaggerated misperceptions of norms and to less harmful or risky behavior.

Linkenbach (2003) further elaborates on the steps that should be taken when producing a social norms campaign. He claims that carrying out a whole campaign to the evaluation stage takes at least a year or more. He notes that message development should focus on the majority norm and should communicate information that is credible and believable to the audience. He also suggests engaging in pilot testing of the message and reports on previous use of focus groups at this stage. SJT can provide the theoretical guidelines that inform formative evaluation and message design, particularly in understanding audience members’ prior attitudes and beliefs (which, according to the theory, determine reactions to persuasive attempts).

Social judgment theory

Social judgement theory (M. Sherif & Hovland, 1961; C. W. Sherif et al., 1965) is based on the premise that the effect of a persuasive message on a particular issue depends on the way that the receiver evaluates the position that the message puts forth (O’Keefe, 1990). C. W. Sherif et al. (1965) claimed that an individual’s attitude toward a particular issue or behavior is not adequately reflected by a single alternative or position among those available. Research in the SJT tradition determines the limits of the position of the receiver “relative to the bounds of possible alternatives

defined by the extreme positions on the issue” (p. 3) in terms of the latitudes of acceptance, noncommitment, and rejection. In SJT, each receiver judges the range of alternatives individually, and then these judgments can be combined “to reflect the consensus, defined by social norms, prevailing among given people” (p. 10). Thus, SJT allows for delineating group patterns that emerge from perceptions of individuals. Additionally, SJT claims that the members of the population in question are also affected by these patterns in much the same way that the SNA does. “The members develop and adopt a variety of practices, customs, traditions, and definitions that mark off latitudes for acceptable attitudes and behavior and for objectionable attitudes and behavior among members in various matters of consequence to the group These shared practices and definitions with their highly evaluative aspects, are the norms of the group” (C. W. Sherif et al., 1965, p. 206).

In order to measure individual and group positions on a particular issue, SJT suggests the construction of an Ordered Alternatives Questionnaire that presents the gamut of possible positions on the issue. Respondents are asked to indicate the positions they find acceptable, unacceptable, or neither acceptable nor unacceptable. From these individual responses, group responses can be calculated that reflect the audience’s latitudes of acceptance, rejection, and noncommitment. The predictions from SJT with regard to the SNA are that maximum perception and behavior change should result from messages that fall into the latitude of noncommitment. Messages that fall into the latitude of acceptance are likely to cause an assimilation effect, whereby messages are seen as being closer to the audience’s position than they really are. Messages that fall into the latitude of rejection are seen as being further away from the audience’s position than they really are due to a contrast effect. Therefore, both are unlikely to be accepted.

The implication of SJT for the SNA is that formative research should be conducted to determine the audience’s latitudes of acceptance, rejection, and noncommitment for the particular social norms that will form the content of the messages with which the audience will be saturated. Messages that fall within the latitude of noncommitment should result in perception and behavior change, whereas messages that fall in the latitude of acceptance are less likely to be accepted due to assimilation effects. Messages in the latitude of rejection should not result in perception or behavior change due to contrast effects. Further evidence for this claim comes from Thombs, Dotterer, Olds, Sharp, and Raub (2004) who note that their SNA campaign failed because the majority of students did not find the statistics used in the campaign to be credible, and from Granfield (2002) who found that a campaign failed due to the fact that students rejected the message because they did not trust the source. In both cases, campaigns failed because the social norms messages were not believable or credible and thus were rejected.

Hypotheses

The SNA suggests creating campaign messages that correct the perceived descriptive norm for risky behavior using the actual norm in the messages. SJT logic adds

another component to campaign message design. An evaluation of the position of the message, in this case believability of the actual norm, in terms of the range of acceptability, rejection, or noncommitment is critical at the formative research stage. This range should center on the latitude of acceptance and spread from there in both directions such that

H1: The believability of the message in the latitude of acceptance should be significantly higher than the believability of the message in the latitude of noncommitment.

H2: The believability of the message in the latitude of noncommitment should be significantly higher than the believability of the message in the latitude of rejection.

A campaign that uses a message that is in the audience's latitude of noncommitment should result in attitude and behavior change.

Method

Baseline measurement

In the fall 2004, a web-based survey ($N = 1,302$) was conducted with students at Michigan State University (MSU). The Office of Student Services drew a representative sample of undergraduate students for the survey. The demographic characteristics of the sample closely matched MSU's undergraduate population: The proportion of males was 47% in the sample versus 46% in the population, the distribution by year in school was identical (26% freshmen, 22% sophomore, 25% junior, and 27% senior), and the average age was 20.2 years in the sample versus 20.3 years among MSU undergraduates at large. The ethnic comparisons were also similar: Caucasian (84% sample vs. 82% MSU), African American (6% vs. 8%), Hispanic (3% vs. 3%), Native American (1% vs. 1%), and Asian Pacific Islander (6% vs. 6%).

Results of the survey revealed that 64% of the respondents reported drinking five or fewer drinks the last time they partied, while the perception was that 49% of typical students drank five or fewer drinks.¹ The mean number of drinks reported was 5.3 ($SD = 4.2$), but the perception was that the typical student drank an average of 5.9 ($SD = 2.6$) drinks per occasion, $t(1111) = 5.06$, $p = .0001$.² Thus, the gap in perceptions and actual behavior was an overestimation difference of 15%,³ or a statistically significant .6 gap in mean number of drinks.

Formative research using SJT

An ordered alternatives scale was created to assess the latitudes of acceptance, rejection, and noncommitment with regard to the believability of various percentages of students who drink five or fewer drinks when they party. Nine questions were posed as alternatives; respondents were asked to respond to the following stem for each percentage for 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, and 90%: "Please indicate whether you find the statement to be very believable, somewhat believable, or not believable at all. The percentage of MSU students who typically drink five or

fewer drinks when they party is _____.” A score of 1 corresponded to *very believable*, while a score of 2 corresponded to *somewhat believable*, and a score of 3 indicated *not believable at all*. Table 1 provides the means and standard deviations of believability scores for all variables in the study.

Latitude of Acceptance

The latitude of acceptance was centered on the statement “The percentage of MSU students who typically drink five or fewer drinks when they party is 50%.” This was deemed as the anchor point of the ordered alternatives scale. The mean believability score for the latitude of acceptance was 1.72 ($SD = 0.61$).

Latitude of Noncommitment

The latitude of noncommitment moved outward from the latitude of acceptance two increments in each direction so that 70% and 60% comprised the interval at the higher end, and 40% and 30% comprised the interval at the lower end. The mean believability score for the latitude of noncommitment was 1.87 ($SD = 0.38$).

Latitude of Rejection

The latitude of rejection moved outward from the latitude of noncommitment two increments in each direction so that 90% and 80% (at the higher end) and 20% and 10% (at the lower end) were contained within it. The mean believability score for the latitude of rejection was 2.3 ($SD = 0.43$).

Intensive campaign 2004–2005

During the fall 2004 to spring 2005 period, an intensive social norms campaign was continued, which began in 2003, to reduce unhealthy alcohol consumption on campus. The campaign ran nine messages with the phrase “most (63%) drink zero to five when they party” embedded in the overall ad. Five of these ads appeared

Table 1 Believability Means and Standard Deviations for All Variables

Variable	<i>M</i>	<i>SD</i>	<i>N</i>
10%	2.03	0.95	1,284
20%	1.96	0.92	1,283
30%	1.78	0.79	1,299
40%	1.71	0.65	1,302
50%	1.72	0.61	1,321
60%	1.84	0.65	1,332
70%	2.13	0.71	1,315
80%	2.49	0.68	1,325
90%	2.68	0.60	1,315
Latitude of acceptance	1.72	0.61	1,321
Latitude of noncommitment	1.87	0.38	1,100
Latitude of rejection	2.30	0.43	1,102

Note: The lower the score, the greater the believability. Range for all variables is 1–3.

in the school newspaper, three on posters with a run of 600 each that were widely distributed on campus, and one in a newsmagazine produced for orientation and summer school students (with a distribution of 10,000). In addition, 11 more messages were produced during this time with the phrase "most students drink moderately or not at all." Five appeared in the school newspaper, three on posters with a run of 600 each, two on table tents that were placed in the cafeteria, and one in the newsmagazine mentioned above.

The April 2005 survey instrument displayed reproductions of 12 of these messages and measured amount of exposure during the previous 3 months. In total, 95% of students saw at least one message, and reported seeing a median of 5.1 different ads, posters, or table tents during the campaign period. Factoring in the average frequency of seeing each message 2.8 times, the typical student reported 14.2 exposures to campaign messages.

Results

Hypothesis 1 predicted that the believability of the latitude of acceptance would be significantly higher than that of the latitude of noncommitment. The results of a *t* test revealed that the mean level of believability of the latitude of acceptance ($M = 1.72$, $SD = 0.61$) was significantly higher than that of the latitude of noncommitment ($M = 1.87$, $SD = 0.38$), $t(1,095) = -10.7$, $p = .0001$.

Hypothesis 2 predicted that the believability of the latitude of noncommitment would be significantly higher than that of the latitude of rejection. The results of a *t* test revealed that the mean level of believability of the latitude of noncommitment ($M = 1.87$, $SD = 0.38$) was significantly higher than that of the latitude of rejection ($M = 2.3$, $SD = 0.43$), $t(1,085) = -26.8$, $p = .0001$. Thus, support was found for both hypotheses and indicated that believability is not a linear function of the percentage of students who engage in a behavior, but instead is highest in the latitude of acceptance and spreads out from that point in both directions through the latitudes of noncommitment and rejection.

As a result of calculations of the spring 2005 web-based survey results ($N = 1,073$), 68.4% reported that they drank five or fewer drinks, while the mean perception was that 58.5% of other students drank five or fewer drinks.³ The mean number of drinks reported was 4.5 ($SD = 3.9$), but perception was that students drank an average of 4.9 ($SD = 1.9$) drinks per occasion, $t(1,058) = 3.55$, $p = .0001$. Thus, the gap in perceptions and actual behavior was an overestimation difference of 9.9% or a statistically significant .4 gap in mean number of drinks.

These results support the previous predictions because, as a result of an SNA campaign based upon SJT, perception of the percentage of typical students who drank five or fewer drinks increased from 49% in the fall of 2004 to 59% in the spring of 2005, $\chi^2(1, N = 2,346) = 23.4$, $p = .0001$. The results also support the previous predictions in that behavior changed from 64% of the student population reporting five or fewer drinks in fall 2004 to 68% in spring 2005, $\chi^2(1, N = 2,346) = 4.2$,

$p = .04$. The mean number of drinks reported went from 5.3 ($SD = 4.2$) in 2004 to 4.5 ($SD = 3.9$) in 2005, $t(2305) = -4.77$, $p = .0001$. In addition, the gap between perceived and actual number of drinks went from an overestimation of 13.5% in fall 2004 to a 9.9% in spring 2005³, and from a .6 ($SD = 6.3$) gap in mean number of drinks to a .4 ($SD = 3.3$), $t(1996) = -.99$, $p = .32$ (*ns*), gap in mean number of drinks during that time period.

Discussion

This investigation demonstrates the utility of applying SJT to message design in SNA campaigns based on the assumption that changes in latitudes will produce changes in attitudes. This approach identifies the latitude of noncommitment that facilitates audience response to message claims and alerts designers to the rejection latitudes that may undermine the impact of messages. Social-norms based campaigns in the alcohol domain have met with a mixture of success and failure, and one key factor is resistance by students who regard the messages as low in believability (Granfield, 2002; Thombs et al., 2004).

Social norms approach campaigns are iterative in that survey data collected from a population at one point in time, such as the prevalence of responsible drinking, are disseminated to the population via a feedback loop, and the resultant changes in perceptions contribute to behavior changes that are tracked in subsequent surveys.

Analysis of trends in actual drinking detected in the fall 2004 survey not only indicated that a substantial majority consumed five or fewer drinks but also revealed the emergence of a majority of 57% reporting that they consumed four or fewer drinks. The refocusing on the maximum of four drinks rather than five drinks highlights the iterative process in an SNA intervention. As drinking patterns decline, there is a strategic opportunity for adjusting the quantitative threshold of the normative figures presented in messages in order to shift perceptions and consumption in a downward direction.

Before implementing a revised campaign claim of four or fewer drinks, it was important to determine audience receptivity to prospective percentage figures. Thus, the 2005 spring survey repeated the formative research process applying SJT principles to the four-drink threshold. In this new version of the formative evaluation process, the measure referred to “[t]he percentage of MSU students that typically drink four or fewer drinks when they party is _____,” and again the array of percentages ranged from 10% to 90%. The four or fewer results show a basic pattern that is similar to the five or fewer data reported in this paper that were gathered previously. Because the SNA specifies that a majority should practice a behavior, assessment of sub-50% figures is not relevant for purposes of formative evaluation.

Rather than declaring victory, at one level of success, continual efforts must be made to hold this attained baseline and perhaps lower it further. The next phase of the campaign in fall 2005 will feature messages with the new four or fewer norm. The SJT evidence provides a basis for expecting that a figure of 57% (which falls at one outer

boundary of the latitude of acceptance close to the latitude of noncommitment) might be believable and thus can be effective in moving perceptions. However, 57% is a less compelling normative percentage than the 68% used in the “five or fewer” messages in previous campaign phases. A key message design decision involves the most effective mode of portraying this modest majority: whether the message should prominently highlight the 57% figure or should feature a verbal label such as “most” or “majority” (perhaps with the 57% cited as evidence in smaller print). To determine the optimal presentation strategy, pretesting is a useful tool in this situation. Multiple versions of the message will be created, manipulating the prominence of the verbal and quantitative content. Message evaluation measures will be taken with a small sample of students, including items such as “informative,” “believable,” “understandable,” “memorable,” and “persuasive.” This form of pretesting sheds light on the strengths and weaknesses of the style and substance of messages to be placed in the mass media.

Limitations

This research determined that the latitudes of acceptance, noncommitment, and rejection were significantly different from one another in terms of believability. However, a true test of SJT was not undertaken in the subsequent campaign. A message from the latitude of noncommitment was presented multiple times over the course of a school year, but no evidence exists as to whether this is superior to a series of messages that were drawn from the latitudes of acceptance or rejection. The basic message that was used did result in lowered misperceptions and higher percentages of students who drink less, but no actual knowledge of the superiority of this approach to using a message in the latitude of acceptance or rejection was found. The subsequent campaign using the four or fewer message will be interesting in that this number is actually in the audience’s latitude of acceptance but close to the latitude of noncommitment. Comparisons of misperceptions corrected and increases in moderate drinking from each campaign will be informative with regard to the SJT approach undertaken here.

Other limitations are possible fatigue from answering a series of nine questions about believability for each percentage from 10% to 90% and the fact that changes in perceptions and behavior could be due to maturation over the course of the school year. The fall 2005 campaign will provide data that should speak to this issue. In addition, normative influence might not occur uniformly across the whole population. Future research should identify the groups with which students most strongly identify and assess and target the norms, perceptions, and behaviors of those groups. It is important to note again that SJT was conceptualized and tested at the individual level. Here we apply it to the larger group level under the assumption that normative perceptions provide a link between beliefs at the individual level and norms at the collective level. Finally, the ongoing nature of the campaign might have had a cumulative effect beyond the campaign segment that is reported here. It is also likely that some of the effects reported in this paper are due to synergistic effects of

previous campaign efforts. The primary objective of this paper, however, was not to demonstrate campaign effects (for which it would be important to isolate effects attributable to just our campaign); rather, our purpose was to determine how prior beliefs affect the credibility of intervention messages. For this reason, we do not consider the presence of other intervention efforts at MSU to constitute a source of significant contamination of effects reported in this paper.

Future research

The type of norm examined in this study is typically labeled as a “descriptive” norm, focusing on the quantity or frequency of drinking behavior in the student population. The model can readily be extended to similar descriptions of drinking-related behavior, such as protective norms (e.g., prevalence of actions taken to minimize the consequences of high-risk consumption). The application of social judgment concepts and instrumentation may also be appropriate for “injunctive” norms, which have been increasingly appearing in communication campaigns.

Injunctive norms are perceived social pressures or guidelines associated with attitudinal disapproval or approval of one’s behavior by a family or peer group or by the wider community. There are indications that the misperception gap between actual and perceived injunctive norms is greater than for descriptive norms (Borsari & Carey, 2003). Thus, this is a promising arena for norms correction via communication campaigns, provided that the presentation of injunctive normative evidence is believable. The same SJT measurement technique can be implemented during the development of messages in this type of campaign.

The boundaries of latitudes vary over time, across populations, and between types of norms. Due to fluctuations from one year to the next or student body differences from campus to campus, it is valuable to collect customized SJT data using the ordered alternative instrument during the formative stage of campaign design. Current local information is helpful in the development of basic message strategies and in the execution of key copy points to be presented in stimulus materials. With strategic adjustments during preproduction evaluation and refinements during pretesting, there is an increased likelihood that social norm campaigns will achieve greater impact.

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Notes

- 1 Computation of percentage figures for five or fewer (or four or fewer) drinks throughout the paper includes those who drink from zero to five (or zero to four) drinks.

- 2 Computation of average number of drinks reported throughout the paper excludes nondrinkers.
- 3 The measure of number of drinks consumed is dichotomized to calculate the percentage of the overall sample who themselves consumed five or fewer drinks. To measure the perceived proportion of other MSU students who consume five or fewer drinks, individual respondents estimated a percentage figure ranging from 0% to 100%; this distribution is represented by a mean percentage. Thus, there is no statistical test to compare these two descriptive statistics (in the case of five or fewer comparisons, a sample-wide consumption proportion of 64% vs. a mean perception of 49% based on individual percent estimates).

References

- Berkowitz, A. D. (1997). From reactive to proactive prevention: Promoting an ecology of health on campus. In P. C. Rivers & E. Shore (Eds.), *Substance abuse on campus: A handbook on substance abuse for college and university personnel* (pp. 120–139). Westport, CT: Greenwood Press.
- Berkowitz, A. D. (2004). The social norms approach: *Theory, research, and annotated bibliography*. Retrieved June 23, 2005, from <http://www.edc.org/hec/socialnorms>
- Borsari, B., & Carey, K. B. (2003). Descriptive and injunctive norms in college drinking: A meta-analytic integration. *Journal of Studies on Alcohol*, *6*, 331–341.
- Campo, S., Cameron, K. A., Brossard, D., & Frazer, S. (2004). Social norms and expectancy violation theories: Assessing the effectiveness of health communication campaigns. *Communication Monographs*, *71*, 448–470.
- Fabiano, P. M. (2003). Applying the social norms model to universal and indicated alcohol interventions at Western Washington University. In H. W. Perkins (Ed.), *The social norms approach to preventing school and college age substance abuse* (pp. 83–99). San Francisco: Jossey-Bass.
- Foss, R., Deikkman, S., Bartley, C., & Goodman, A. (2004). *Social norms program reduces measured and self-reported drinking at UNC-CH* (The Report on Social Norms: Working Paper No. 14). Little Falls, NJ: Paper-Clip Communications.
- Glider, P., Midyett, S., Mills-Novoa, B., Johannessen, K., & Collins, C. (2001). Challenging the collegiate rite of passage: A campus-wide social marketing media campaign to reduce binge drinking. *Journal of Drug Education*, *31*, 207–220.
- Granfield, R. (2002). *Can you believe it? Assessing the credibility of a social norms campaign* (The Report on Social Norms: Working Paper No. 2). Little Falls, NJ: Paper-Clip Communications.
- Haines, M. P., & Barker, G. P. (2003). The NIU experiment: A case study of the social norms approach. In H. W. Perkins (Ed.), *The social norms approach to preventing school and college age substance abuse* (pp. 21–34). San Francisco: Jossey-Bass.
- Jeffrey, L. R., Negro, P., Demond, M., & Frisone, J. D. (2003). The Rowan University Social Norms Project. In H. W. Perkins (Ed.), *The social norms approach to preventing school and college age substance abuse* (pp. 100–110). San Francisco: Jossey-Bass.
- Johannessen, K. J., & Glider, P. (2003). The University of Arizona's campus health social norms media campaign. In H. W. Perkins (Ed.), *The social norms approach to preventing school and college age substance abuse* (pp. 65–82). San Francisco: Jossey-Bass.

- Lapinski, M. K., & Rimal, R. N. (2005). An explication of social norms. *Communication Theory*, 15(2), 127–147.
- Linkenbach, J. (2003). The Montana model: Development and overview of a seven-step process for implementing macro-level social norms campaigns. In H. W. Perkins (Ed.), *The social norms approach to preventing school and college age substance abuse* (pp. 182–205). San Francisco: Jossey-Bass.
- Linkenbach, J., & Perkins, H. W. (2003). Misperceptions of peer alcohol norms in a statewide survey of young adults. In H. W. Perkins (Ed.), *The social norms approach to preventing school and college age substance abuse* (pp. 173–181). San Francisco: Jossey-Bass.
- O’Keefe, D. J. (1990). *Persuasion: Theory and research*. Newbury Park, CA: Sage.
- Perkins, H. W. (1997). College student misperceptions of alcohol and other drug norms among peers: Exploring causes, consequences, and implications for prevention programs. In *Designing alcohol and other drug prevention programs in higher education: Bringing theory into practice* (pp. 177–206). Newton, MA: The Higher Education Center for Alcohol and Other Drug Prevention, U.S. Department of Education.
- Perkins, H. W. (2003). The emergence and evolution of the social norms approach to substance abuse prevention. In H. W. Perkins (Ed.), *The social norms approach to preventing school and college age substance abuse* (pp. 3–17). San Francisco: Jossey-Bass.
- Perkins, H. W., & Berkowitz, A. D. (1986). Perceiving the community norms of alcohol use among students: Some research implications for campus alcohol education programming. *International Journal of the Addictions*, 21, 961–976.
- Perkins, H. W., & Craig, D. W. (2003). The Hobart and William Smith Colleges experiment: A synergistic social norms approach using print, electronic media, and curriculum infusion to reduce collegiate problem drinking. In H. W. Perkins (Ed.), *The social norms approach to preventing school and college age substance abuse* (pp. 35–64). San Francisco: Jossey-Bass.
- Rimal, R. N., & Real, K. (2003). Understanding the influence of perceived norms on behaviors. *Communication Theory*, 13, 184–203.
- Sherif, C. W., Sherif, M., & Nebergall, R. E. (1965). *Attitudes and attitude change: The social judgment-involvement approach*. Philadelphia: W. B. Saunders.
- Sherif, M. (1936). *The psychology of social norms*. New York: Harper.
- Sherif, M., & Hovland, C. I. (1961). *Social judgment: Assimilation and contrast effects in communication and attitude change*. New Haven, CT: Yale University Press.
- Thombs, D. L., Dotterer, S., Olds, R. S., Sharp, K. E., & Raub, C. G. (2004). A close look at why one social norms campaign did not reduce student drinking. *Journal of American College Health*, 53(Sep/Oct), 61–68.