The Social Norms Approach:

Theory, Research,

and Annotated Bibliography

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Preface – The State of Social Norms

Prevention approaches that provide normative feedback are growing by leaps and bounds in popularity and evidence is mounting that these programs can be effective when correctly implemented. As a result there is a need for a comprehensive review of the social norms literature to provide practitioners with an overview of important research, to summarize the evaluation literature regarding its effectiveness, and to address questions and concerns. It is my hope that this review will serve this purpose. I am grateful to the Higher Education Center for Alcohol and Other Drug Prevention for allowing me to revise it annually since 2000 to keep pace with the important changes and developments in this field.

The growing interest in social norms and evidence for its efficacy is indicated by a number of trends. Interventions that correct misperceived social norms are currently being funded by over five Federal agencies and by dozens of State agencies, non-profit organizations, consortia and, less often, by the alcohol beverage industry. Well-implemented social norms programs have received numerous awards, including two model program awards by the Center for Substance Abuse Prevention and many from the U.S. Department of Education. Research about social norms and its effectiveness frequently appears in scholarly journals and other professional publications. The evidence for the social norms approach was summarized in 2002, when, as part of a comprehensive effort to examine college drinking, the National Institute on Alcoholism and Alcohol Abuse (NIAAA) appointed an expert panel of approximately twenty national prevention specialists to make recommendations for the field. Communicating accurate social norms was among the strategies suggested by this panel, which commented in its final report that:

> "Initial results from programs adopting an intensive social norms approach are promising. Several institutions that persistently communicated accurate norms have experienced reductions of up to twenty percent in high-risk drinking over a relatively short period of time…. Together these findings provide strong support for the potential impact of the social norms approach. Although any case report in this literature could be challenged methodologically, the results of each study are remarkably consistent." (NIAAA, p. 13, 2002)

Since the NIAAA report numerous new studies have provided additional evidence for social norms' efficacy. In addition to addressing alcohol use with social norms marketing campaigns other programs have demonstrated the effectiveness of social norms interventions in reducing or preventing cigarette smoking, reducing DWI, changing attitudes associated with rape proclivity in men, and reducing sexual assault. Positive results have been obtained with college and university students, with high school and middle-school populations, and in defined populations such as sorority and fraternity members, athletes, and first-year college students, and with individuals, groups, and communities. More recently, a number of social norms interventions have been evaluated and found to be successful without parallel changes in comparison groups. In

addition, some evaluation research suggests that when programs incorporate social norms as part of a comprehensive intervention using multiple strategies, the social norms component is often one of the important ingredients associated with program effectiveness.

With the growth of the social norms approach, concerns have been expressed about its efficacy in general and with specific populations in particular. Some of these concerns arise from findings that may be attributable to implementation problems such as inadequate exposure to messages, and strategies that are not faithful to the model. Another problem that may mask program success is lack of adequate evaluation. Other concerns are spurred by debates about important issues in the field – for example, whether social norms should be part of a larger package of interventions or whether it can be implemented by itself, and whether campaigns should be directed at more homogeneous sub-groups rather than larger communities. Finally, other criticisms may be based on misinformation about the approach or lack of familiarity with the research evidence. Responses to these concerns are incorporated into the text of this review.

The primary purpose of this paper is to summarize *what* we know about social norms by reviewing the published research literature on the social norms model rather than to provide advice on *how* to conduct an intervention. Advice on implementation strategies and case studies of successful projects can be found by consulting following resources:

- The website of the **National Social Norms Resource Center** (www.socialnorm.org)
- The social norms section of the **Higher Education Center for Alcohol and Other Drug Prevention**'s Website (www.edc.org/hec/),
- **The Report on Social Norms**, a monthly publication from PaperClip Communications (www.socialnormslink.com) that provides research reviews, examples of model programs, and commentaries on current issues,
- **The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors and Clinicians**, the first book on the social norms approach, containing numerous case studies of successful interventions, theoretical issues, and implementation strategies (published in 2003 by Jossey-Bass),
- **The National Conference on the Social Norms Model,** an annual conference that meets each summer to provide an intensive collegial opportunity for researchers, theorists, and practitioners to explore the state of the art of the social norms approach (for information go to www.socialnorm.org), and:
- **The Social Norms Resource Book**, a comprehensive overview of the social norms approach covering implementation strategies for individuals, groups, and communities and topical areas such as alcohol abuse and smoking prevention, sexual assault prevention, and other innovative applications, available from

PaperClip Communications (for information go to: www.socialnormslink.com, www.Paper-Clip.com, or call 866 295-0505).

This August 2004 review differs from its predecessors in a number of ways. The text has been edited for improved readability. Results of over 60 new studies, articles and/or resources have been incorporated, and the annotated bibliography has been updated and expanded. New sections have been added covering types of norms, misperceptions in specific subpopulations (athletics, Greeks, gender and ethnicity), and issues in the evaluation of social norms campaigns. Finally, the scope of the review has been expanded from a focus on college and university social norms interventions to include high school, middle-school, and community settings.

This review adopts guidelines recommended by the Journal of Studies on Alcohol and the Inter-Association Task Force that the term "binge drinking" be avoided and replaced by a more suitable term such as "high-risk" or "dangerous" drinking. For a review of the arguments against the "binge-drinking" term and relevant research see Berkowitz (2003a).

Finally, I hope that this review is helpful and welcome your comments, queries, and suggestions for future revisions.

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Introduction

The social norms approach provides a theory of human behavior that has important implications for health promotion and prevention. It states that our behavior is influenced by incorrect perceptions of how other members of our social groups think and act. For example, an individual may overestimate the permissiveness of peer attitudes and/or behaviors with respect to alcohol, smoking or other drug use, or underestimate the extent to which peers engage in healthy behavior. The theory predicts that overestimations of problem behavior will increase these problem behaviors while underestimations of healthy behaviors will discourage individuals from engaging in them. Thus, correcting misperceptions of group norms is likely to result in decreased problem behavior or increased prevalence of healthy behaviors. These assumptions have been validated by extensive research on teenage and young-adult drinking and cigarette smoking and by interventions to promote safe drinking, tobacco cessation, and safe driving on college campuses and in middle and high schools. Other social norms interventions have been developed to prevent sexual assault, improve academic climate, and reduce prejudicial behavior.

Social norms interventions focus on peer influences, which have a greater impact on individual behavior than biological, personality, familial, religious, cultural and other influences (Berkowitz & Perkins, 1986a; Borsari & Carey, 2001; Kandel, 1985, and Perkins, 2002). An extensive literature has documented the importance of peer influences and normative beliefs on health behaviors of youth. Research suggests that these peer influences are based more on what we think others believe and do (the "*perceived norm*") than on their real beliefs and actions (the "*actual norm.*") This gap between "perceived" and "actual" is referred to as a "misperception" and its effect on behavior provides the basis for the social norms approach. Presenting correct information about peer group norms in a believable fashion is hypothesized to reduce perceived peer pressure and increase the likelihood that individuals will express pre-existing attitudes and beliefs that are health promoting. Thus, providing normative feedback to correct misperceptions of norms is the critical ingredient of the social norms approach.

This review summarizes evidence in support of the social norms approach. It includes individual studies and one meta-analysis (Borsari & Carey, 2003) that document the importance of social norms and peers in influencing behavior, including research documenting the existence of misperceptions, their efficacy in predicting behavior, successful interventions targeting individuals, groups and communities, a brief discussion of unsuccessful efforts and evaluation issues, and examples of applications to other health and social justice issues. It concludes with an annotated bibliography of important resources and an extensive bibliography.

History

The social norms approach was first suggested by H. Wesley Perkins and myself (Perkins and Berkowitz, 1986) in an analysis of student alcohol use patterns. In this study we determined that college students regularly overestimated the extent to which their peers were supportive of permissive drinking behaviors, and we found that this overestimation

predicted how much individuals drank. Our recommendation that prevention efforts focus on providing students with accurate information on peer drinking attitudes and behavior (Perkins & Berkowitz, 1986; Berkowitz & Perkins, 1987a) represented a radical departure from traditional intervention strategies that provided information on abuse and negative consequences and concentrated primarily on the identification, intervention, and treatment of problem users. When drug prevention emphasizes problem behavior without acknowledging the actual healthy norm, it may foster the erroneous belief that drinking problems are worse than is actually the case and inadvertently contribute to the problem it is trying to solve. In contrast, interventions based on social norms theory focus on the healthy attitudes and behavior of the majority and try to increase it, while also using information about healthy norms to guide interventions with abusers. The theory underlying the social norms approach has been elaborated by Berkowitz (1997, 2004) and Perkins (1997, 2003a). In many cases, social norms interventions have been successfully combined with other drug prevention approaches strategies such as policy change and other environmental strategies.

During the period of time that we were developing the social norms approach, Hansen (1993) pointed out that correcting normative beliefs was the critical ingredient in effective multi-component secondary school-based alcohol prevention programs. Michael Haines at Northern Illinois University was the first prevention specialist to apply the theory to college students. He conducted a longitudinal intervention in which reductions in misperceptions were associated with increases in safe drinking and abstaining (Haines, 1996; Haines & Barker, 2003; Haines & Spear, 1996). His work was followed by similar efforts at the University of Arizona (Glider, et. al, 2001; Johannessen & Glider, 2003; Johannessen et. al, 1999), Western Washington University (Fabiano, 2003), Hobart and William Smith Colleges (Perkins & Craig, 2002; 2003a), the University of North Carolina Chapel Hill (Foss et al, 2003; 2004) and other campuses, which achieved significant reductions in high-risk drinking following the promotion of accurate social norms about drinking behavior.

Following initial successes in reducing alcohol use and abuse, social norms interventions were developed at colleges and universities to reduce tobacco use and/or delay its onset (Haines, Barker & Rice, 2003; Hancock et al, 2002; Hancock & Henry, 2003; Linkenbach & Perkins, 2003a). More recently, interventions developed for middle and high school students have succeeded in reducing alcohol and cigarette use and/or delaying the onset of these behaviors (Christensen & Haines, 2004; Haines, Barker & Rice, 2003; and Rice, 2003). Other applications have successfully increased seat-belt usage (Perkins & Linkenbach, 2004), and reduced drinking while driving (Hellstrom, 2004). In addition, social norms interventions have been developed to prevent sexual assault (Bruce, 2002; Hillenbrand-Gunn et al, 2004; Rodriguez, Kulley & Barrow, 2003; White, Williams and Cho, 2003).

Since its inception, the social norms approach has been described variously as the proactive prevention model (Berkowitz, 1997, 1998), social norming (Hunter, 1998), the perceived norms model (Thombs, 2000), norms correction, and the norms challenging model (Farr & Miller, 2003; Peeler, et al 2000). Currently there is an emerging consensus in favor of the term “social norms theory” to describe the underlying theory and “the social norms approach” to describe interventions based on the theory.

Types of Misperceptions

The term "misperception" is used to describe the gap between actual attitudes or behavior, and what people think is true about others' attitudes or behaviors. Thus, a misperception occurs when there is an overestimation or underestimation of the prevalence of attitudes and/or behaviors in a group or population. Individuals may misperceive their social groups or larger social environments in a number of ways that influence their behavior. For example, the majority who engage in healthy behavior may incorrectly believe they are in the minority *(pluralistic ignorance.)* In contrast, the minority of people with unhealthy attitudes and/or behaviors may incorrectly think that they are in the majority (*false consensus).* Finally, an individual may enjoy thinking that her or his behavior is more unique than it really is (*false uniqueness).* Each of these misperceptions operates in a different way and may affect behavior differently. They are each described in more detail below along with evidence that social norms interventions can be effective in correcting them.

Pluralistic Ignorance. This is the most common misperception. It occurs when a majority of individuals falsely assume that most of their peers behave or think differently from them when in fact their attitudes and/or behavior are similar (Miller & McFarland, 1987, 1991; Prentice & Miller, 1996; Toch & Klofas, 1984). For example, most college students drink moderately or not at all but incorrectly assume that other college students drink more than themselves and also more than they do in reality. Pluralistic ignorance encourages individuals to suppress healthy attitudes and behaviors that are falsely thought to be non-conforming and to provide encouragement to engage in the unhealthy behaviors that are seen incorrectly as normative. Prentice and Miller (1996), two of the most influential theorists on pluralistic ignorance noted that:

> The norm simply must be powerful enough to induce people to act in ways that do not correspond to their private thoughts and feelings…Individuals recognize that their own norm-congruent behavior is at variance with their true sentiments, but then do not assume a similar discrepancy in others. Instead, their social perception is guided by what they observe: They infer that the actions of others reflect accurately what they are thinking and feeling. (p.162)

Social norms interventions correct pluralistic ignorance by informing the majority that their behavior is actually more normative and healthy than they think. This normative feedback provides permission to act on values of moderation or non-use by bringing behavior more closely in line with personal attitudes and removes the fear of embarrassment associated with acting in ways that are thought to be different.

False Consensus is the incorrect belief that others are like one-self when in fact they are not (Ross, Greene & House, 1977). For example, heavy drinkers may incorrectly think that most other students are heavy drinkers, or prejudiced individuals may incorrectly believe that they speak for their group. The false consensus misperception functions to maintain an individual's denial that his or her attitudes or behavior are problematic or unusual. Thus, heavy drinkers have a personal motivation for believing in exaggerated drinking norms because this misperception allows them to justify their abusive drinking and deny that there is a problem. For this reason, the false consensus misperception is

described as a "self-serving bias." Studies have found that misperceptions have more influence on the drinking of alcohol abusers than on other drinkers (Kypri & Langley, 2003; Page, Scanlan & Gilbert, 1999; Perkins & Wechsler, 1996) and that abusers misperceive more than others in their group (Agostinelli & Miller, 1994; Pollard, et al, 2000). In one review of the literature, Borsari and Carey (2001) noted that "the more the student perceives others as drinking heavily, or approving of heavy use, the higher personal consumption will be" (p. 402).

Research has documented similar patterns for smoking, with smokers overestimating smoking prevalence more than non-smokers (Sherman et al, 1983; Sussman et al, 1988), and gamblers overestimating gambling and favorable attitudes towards gambling more than non-gamblers (Larimer & Neighbors, 2003). Social norms interventions correct false consensus misperceptions and have been successful in reducing heavy drinking in a number of studies (see later citations).

Toch & Klofas (1984) noted that the strongest and most vocally expressed views in a community are often held by those who engage in false consensus. For example, heavy-drinking individuals have a greater stake in believing in their misperceptions and view themselves as "subculture custodians" or guardians of the truth about their reference group. In this imagined role, they speak out actively against enforcement of policy and interventions to combat abuse. The combination of false consensus and pluralistic ignorance allows these heavy drinking "subculture custodians" to have an influence that is greatly disproportionate to their numbers by strengthening their voice and suppressing the voice of the "silent majority" who may favor policy initiatives and interventions to curb abuse. This creates a "spiral of silence" in which individuals who "perceive their position to be unsupported (even if they constitute the majority) will fall silent, thereby creating the appearance of even less support for the position" (Prentice & Miller, 1996, p.202).

This "spiral of silence" may occur in relation to student reactions to campus policy when the minority in opposition are outspoken because they believe themselves to represent the majority (false consensus) while the majority in support are silent because they believe themselves to be in the minority (pluralistic ignorance). Thus, the application of social norms to policy development can be useful in presenting a community with the true norm that exists in support of various policies and consequences for abuse so that a consensus for action can occur in spite of the denial and objections of those who abuse (DeJong, 2003a; Dunnagan et al, 2003). For example, Prentice and Miller (1996) documented student support for a keg ban at a time when most students perceived their peers as being unsupportive of this policy, and Suls and Green (2003) found that students underestimated other students' concern about irresponsible alcohol use.

False Uniqueness. The phenomenon of *false uniqueness* occurs when individuals who are in the minority assume that the difference between themselves and others is greater than is actually the case (Suls & Wan, 1987). False uniqueness may occur among abstainers, who underestimate the prevalence of abstinence and falsely assume that they are more unique than they really are. When this occurs abstainers may withdraw from participation in the larger community because they see it as more alcohol-oriented than it really is. Social norms interventions that provide information about the actual number of

abstainers and responsible drinkers majority can provide a sense of community for non-drinkers and make it safe to participate more fully in campus life.

In summary, social norms interventions have been found to be effective in changing the behavior of the moderate or occasional-drinking majority *(pluralistic ignorance)* as well as confronting and changing the behavior of the heavy drinking minority *(false consensus)* while maintaining or increasing the number of those who abstain or use infrequently (*false uniqueness.)*

Studies Documenting Misperceptions

False consensus and pluralistic ignorance misperceptions have been documented in over fifty-five published studies. Alcohol use misperceptions have been found in studies with small samples of college students from an individual campus, in larger surveys of individual campus populations, and in multiple campus studies (see Table One for a listing of these studies) and among high school and middle school students.. Some of these studies are discussed in recent reviews by Berkowitz (2004), Perkins (2002, 2003a) and by Borsari and Carey (2001, 2003).

(Insert Table One Here)

Borsari and Carey (2003) describe the evidence for misperceptions using data from 23 studies in a meta-analysis of the influence of misperceptions on behavior. They conducted 102 tests for misperceptions using data from the 23 studies and found that 91% revealed a positive "self-other discrepancy." They concluded that "there appears to be substantial evidence supporting the existence of self-other norm discrepancy in perceptions of alcohol use among college students."

Studies find that misperceptions of alcohol use are held by all members of campus communities including undergraduate and graduate students, faculty and staff, students and student leaders (Berkowitz, 1997, Berkowitz & Perkins, 1986b; University of Michigan, 1993). They have been documented in a statewide sample of young adults both in college and not in college (Linkenbach & Perkins, 2003b), and among middle and high-school students (Beck & Trieman, 1996; Botvin et al, 2001; D'Amico et al, 2001; Haines, Barker & Rice, 2003; Perkins & Craig, 2003b; Rice, 2003; Thombs, et al, 1997). In addition, Thombs et. al. (1997) reported misperceptions about DWI (driving while intoxicated) and RWID (riding with someone who is intoxicated).

Other studies have reported misperceptions about cigarette smoking (Haines, Barker & Rice, 2003; Hancock & Henry, 2003; Linkenbach & Perkins, 2003a; Perkins & Craig, 2003b) and about marijuana and other illegal drug use (Hansen & Graham, 1991; Perkins, 1985; Perkins & Craig, 2003B; Perkins et al, 1999; Pollard et al, 2000; Wolfson, 2000). In addition to alcohol, tobacco and other drugs, misperceptions have been documented about gambling (Larimer & Neighbors, 2003) and bullying behavior (Bigsby, 2002). Misperceptions of homophobia, attitudes about sexual assault, and eating behaviors are reviewed by Berkowitz (2003b) and cited later in this paper. There are also over fifteen studies of pluralistic ignorance documenting misperceptions for topics such as: White's attitudes towards desegregation, participation in gang behavior,

and the extent of student radicalism (see Miller and McFarland, 1991 and Toch & Klofas, 1984 for reviews of this literature). Finally, Kypri and Langley (2003) documented patterns of misperceptions for alcohol use in a sample of New Zealand student that replicates results of social norms research conducted in the United States.

Misperceptions are formed when a minority of individuals are observed engaging in highly visible problem behavior (such as public drunkenness or smoking) and when this extreme behavior is remembered more than responsible behavior that is more common but less visible (Perkins, 1997). These misperceptions are assumed to be normative and may be spread further in "public conversation" by community members who act as "carriers of the misperception," including those who don't engage in the behavior (Perkins, 1997).

Research suggests that the meaning and extent of these misperceptions may vary among individuals with different drinking styles (Pollard, et. al, 2000). While Werch and his colleagues (2000) suggested that correcting misperceptions may have different effects on individuals at different stages of change, Steinman (2003) found that the misperceptions reported by individuals at different stages of change were mostly similar.

There is only one published study that calls into question the existence of misperceptions. Wechsler & Kuo (2000) claimed that students accurately perceive campus norms for drinking. A number of authors have questioned their conclusion, including Borsari and Carey (2003) and DeJong (2000), who point out a number of problems with methodology and definitions.

Thus, with only one exception that has serious methodological flaws, misperceptions have been consistently documented for a variety of behaviors and social contexts and in a variety of student and adult populations and sub-populations in both individual studies and in meta-analyses.

Misperceptions in Specific Sub-populations

Misperceptions have been found to exist in a variety of campus groups including fraternity and sorority members (Baer, 1994; Baer, Stacy & Larimer, 1991; Bonday & Bruce, 2003; Carter & Kahnweiler, 2000; Far & Miller, 2003; Johannessen, 2004; Larimer et al, 2001; Sher et al, 2001; Trockell et al, 2003), athletes (Perkins & Craig, 2004; Thombs, 2000), student leaders (Berkowitz, 1997; Berkowitz & Perkins, 1986b), first-year students (Berkley-Patton et al, 2003) and among members of different ethnic groups (Larimer & Neighbors, 2003; Laird & Venable, 2002) and among students of different religious backgrounds (Perkins 1985, 1987). The research on gender differences in misperception and for fraternities and sororities is summarized below.

Gender differences in misperceptions. Some studies have noted a pattern of gender differences in misperceptions (Agnostinelli & Miller, 1994; Berkowitz & Perkins, 1987b; Borsari & Carey, 2003; Campo et al, 2003; Korcuska & Thombs, 2003; Larimer & Neighbors, 2003; Marks, Graham & Hansen, 1992; Lewis & Neighbors, forthcoming; Prentice & Miller, 1993, 1996; Schroeder & Prentice, 1998), with women in these studies misperceiving more than men. This may be due to the fact that women may be more

influenced by environmental influences than men (Berkowitz & Perkins, 1986a; Berkowitz & Perkins, 1987B; Crandall et al, 2002) or that women may be less involved in the culture of alcohol use and misperceive it more. This explanation is consistent with research suggesting that groups that are less involved in a culture of use will misperceive it more, and may explain why some social norms campaigns have reported a greater impact on women in their earlier phases (Odahowski & Miller, 2000; Usdan, 2003).

Recently a number of researchers have examined the relative influence of misperceptions for same-sex and opposite-sex norms on the drinking of men and women. Korsusha and Thombs (2003) examined the influence of same-sex peer drinking norms and found that they were better predictors of drinking than other variables such as role conflict. In addition same-sex norms for close friends were a stronger predictor of drinking than same-sex norms for "typical students." Lewis and Neighbors (forthcoming) also conducted a study of the influence of same-sex norms and compared their influence with both opposite-sex norms and combined norms. They found that same-sex norms predicted drinking better than combined norms for both men and women, and that opposite-sex norms were not predictive of drinking behavior. They suggested that feedback with combined norms would be most appropriate to use in all campus social norms campaigns (a recommendation also made by Rice, 2001) but that same-sex norms could be used in more targeted campaigns, especially for women.

In another study of gender differences in misperceptions, Suls and Green (2003) documented patterns of misperceptions within each gender, with both men and women reporting that they were less likely to drink and were more concerned about drinking on campus than their same-gender peers. However, some gender differences were found, including that individual men see themselves as having more concern about problem alcohol use than their best male friends and men in general, but as having equal concern to women. Women, on the other hand, saw themselves as more concerned than all reference groups. In addition, alcohol related norms were stronger for men, resulting in a greater reluctance among men (compared with women) to express concern about alcohol use due to fears of embarrassment from violating gender-specific alcohol norms.

Misperceptions among fraternity and sorority members. Bartholow and his colleagues (2003) found that peer drinking norms were more influential in predicting Greek drinking than Greek membership. Misperceptions of fraternity drinking by fraternity members may not be universal, however. Both Larimer et al (1997) and Carter & Kahnweiler (2000) documented misperceptions in general campus populations but reported exceptions for some heavy-drinking Greeks who misperceived their housemates very little or who accurately perceived the heavy drinking of their housemates. Similarly, Borsari and Carey (2003), in a meta-analysis of social norms studies found that misperceptions were smaller in fraternity than in non-fraternity groups. In one multi-campus study, fraternity members misperceived the injunctive norms of other fraternity members but slightly underestimated their actual alcohol use (Trockel et al, 2003). Carter & Kahnweiler (2000) suggested that social norms interventions may not be appropriate in such cases. However, on other campuses where misperceptions have been documented for Greeks and corrected, social norms interventions have been successful (Bonday & Bruce, 2003; Far & Miller, 2003; Johannessen et al, 2003; Larimer et al, 1997).

Social norms interventions that have targeted the alcohol use of specific sub-populations include sororities (Johannessen, 2004), fraternities (Bonday and Baurele, 2003; Larimer et al, 2001), first-year students (Berkley-Patton et al, 2003; Cimini, Page & Trujillo, 2002), and athletes (Perkins & Craig, 2004). Berkley-Patton and her colleagues (2003) documented misperceptions among first year students and found that these misperceptions were more extreme upon entering college than they were after residing on campus for most of the first year. Others have used social norms interventions to address sexual assault, including Hillenbrand-Gunn and her colleagues (2004), who designed a successful high-school group social norms intervention for men, White, William and Cho (2003) implemented a media campaign that successfully reduced sexual assault among deaf and hard-of-hearing students, and Bruce (2002) who developed a sexual assault prevention media campaign directed at men..

Types of Norms

There are different types of norms. One kind of norm refers to attitudes or what people feel is right based on morals or beliefs (*injunctive norms)*. A second type of norm is concerned with behavior, i.e. what people actually do *(descriptive norms)*. Borsari and Carey's 2003 meta-analysis of 23 studies of norms misperceptions (described as "self-other differences") found that misperceptions for injunctive norms were greater than misperceptions for behavioral norms. They also found that injunctive norms were more likely than descriptive norms to predict drinking behavior and negative consequences of drinking. Trockel, Williams and Reis (2003) reached a similar conclusion in an investigation of injunctive and descriptive drinking norms in fraternities, as did Larimer and Neighbors (2003) in a study of misperceptions of gambling norms. While both injunctive and descriptive norms are widely surveyed in social norms efforts, most successful interventions have used descriptive norms. Thus, it is not clear from existing research if one of these norm types would be more likely to change behavior than the other and should therefore be preferred in social norms interventions. Perkins (2003b) has pointed out that even when behavioral norms are permissive, feedback about injunctive norms can be effectively used in social norms interventions because they are usually more conservative than actual behavior

Which Norms Are Salient?

Individuals have friends, are members of groups, live in residence halls on college campuses, and are parts of a larger community. Each of these overlapping groups have norms that may be similar or different, and some or all of these norms may exert an influence on an individual's behavior. Borsari and Carey (2001) reviewed the literature on peer influences and reported that eighteen different targets have been used in social norms research ranging from "your best friend" to "an average student." Thus, one critical issue is to evaluate the saliency of these different norms when designing a social norms intervention. For example, on most campuses students have a general idea of the "average" student and are influenced by this campus norm (Perkins, 2003b) even when the norms of friends and more immediate groups are more influential. In other cases, group identity may supplant campus or community identity, especially if the community is very heterogeneous or diffuse (for example, on a commuter campus).

Among these different targets for norms, it is well-documented that misperceptions increase as social distance increases. Individuals perceive that friends drink more than they do and that students in general drink more than their friends (Baer, 1994; Baer, Stacy & Larimer, 1991; Beck & Treiman, 1996; Borsari & Carey, 2003; Carter & Kahnweiler, 2000; Kypri & Langley, 2003; Thombs, et.al., 1997; Thombs, 2000). Among college students, others in a living unit are thought to drink more than friends but less than students in general, and students who live together tend to develop similar patterns of misperceptions over time (Bourgeois & Bowen, 2001). Similarly, misperceptions are greater in larger high schools (Perkins & Craig, 2003b). Misperceptions thus tend to increase as social distance from the misperceiver increases, but social groups that are "closer" are more influential in shaping behavior. This was the conclusion of Borsari and Carey (2003) in a meta-analysis of social norms studies, in which they found that misperceptions were greater as social distance increased while the influence on behavior of closer or more salient social groups was stronger. A similar conclusion was reached in a study by Korcuska and Thombs (2003) and Lewis and Neighbors (forthcoming) in which perceived norms for close friends were a stronger predictor of alcohol use and/or consequences than drinking norms for "typical students."

One exception to this phenomenon appears to be fraternity members, who often think that the drinking of other Greeks is greater than it really is, but who correctly believe that Greeks drink more than non-Greeks (Baer, 1994; Baer, Stacy & Larimer, 1991; Carter & Kahnweiler, 2000; Larimer, et al, 1997).

Both "global" and "local" norms may predict behavior and exert simultaneous influence (Prentice & Miller, 1993) even when they may be of unequal strength. Which norms are "salient" may vary by group and setting. Thus, Thombs (2000) found that athletes on one campus were more influenced by non-athlete norms than athlete norms. In contrast, on campuses with very strong athletic cultures, athlete norms may be more salient than non-athlete norms. In another study on a large heterogeneous campus, Campo et al (2003) found that friends' norms predicted behavior while general student norms did not. This finding is consistent with the observation of Borsari & Carey (2001) that campus norms may be weaker predictors of behavior on very large campuses.

The question of whether closer "local" norms of a group or more distant "global" community norms should be addressed in a particular norms correction initiative is a complex one, and must take into account the culture of the group in question and the context and social ecology of the community. Ideally both can be addressed together through a combination of primary and secondary prevention strategies such as small group norms interventions and community-wide social norms media campaigns. In most cases either general campus-wide campaigns or more local group norms challenging interventions can result in behavior change, although there may be some groups who are resistant to campus-wide interventions. Selecting the most relevant and salient norms for a particular intervention and the appropriate strategy for changing those norms is an important part of the planning process of a social norms intervention. (For a more extensive discussion of this issue see Borsari and Carey, 2003).

Do Misperceptions Predict Behavior?

There are at over twenty published studies in which misperceptions are positively correlated with drinking behavior or predict how individuals drink (Beck & Trieman, 1996; Botvin, et al, 2001; Clapp & McDonnell, 2000; D'Amico et al, 2001; Korcuska & Thombs, 2003; Kypri & Langley, 2003; Lewis & Neighbors, forthcoming; Marks et al, 1992; Mattern & Neighbors, 2004; Page et al, 1999; Perkins, 1985, 1987; Perkins & Wechsler, 1996; Prentice & Miller, 1993; Scher et al, 2001; Steffian, 1999; Thombs, 1999; Thombs et al, 1997; Trockel et al, 2003).

In one literature review, the authors concluded that "perceived normative support of others for drinking consistently predicts personal alcohol use… and to a lesser extent, alcohol-related problems" (Borsari & Carey, 2001). In a number of studies, perceptions of drinking norms were positively associated with drinking behavior. For example,

- Perkins and Wechsler (1996), in a multi-campus study, found that perceptions of campus drinking climate explained more of the variance in drinking behavior than any other variable;

- Clapp and McDonnell (2000) found that perceptions of campus norms predicted drinking behavior and indirectly influenced drinking-related problems;

- In two different studies conducted on the same campus, Perkins (1985, 1987) found that misperceptions predicted alcohol use (Perkins, 1985) and problem use (Perkins, 1987) for students from different religious backgrounds;

- Thombs, Wolcott and Farkash (1997) and Beck and Trieman (1996) found that the best predictors of alcohol use were misperceptions of alcohol use and social climate/context, which both predicted heavy drinking and negative consequences;

- Korcuska and Thombs (2003) found that alcohol use intensity and drinking consequences were positively correlated with perceived norms for both "close friends" and "typical students"; and

- Page, Scanlan and Gilbert (1999) found that overestimations of high-risk drinking were directly correlated with rates of high-risk drinking. Thus, higher rates of high-risk drinking were found among college men who had greater overestimations of its prevalence.

In longitudinal studies examining drinking behavior, perceptions of drinking norms at time one predicted drinking behavior at time two. For example:

- In a longitudinal study of fraternity drinking patterns, Sher et al (2001) found that "perceptions of heavy drinking in the Greek system are largely responsible for the prevalence of heavy drinking among fraternity and sorority members." (p. 50).

- Prentice and Miller (1993) conducted a study of college freshmen and found that men adjusted their drinking over time to fit the misperceived norm, and

- Steffian (1999), in a test of a small group norms intervention, found that misperceptions helped to discriminate between college students who decreased their drinking and those who didn't.

Similarly, in studies of high school and middle school populations, perceptions of norms have accurately predicted behavior change at a later point in time. Thus,

- In a longitudinal study of over 1500 high school students, only perceived intensity of student alcohol use predicted behavior change so that "higher peer perceptions of alcohol use were associated with subsequent escalations of personal drinking" (D'Amico et al, 2001);

- Two years after a multi-component controlled middle school-based intervention to reduce high-risk drinking, accurate perception of peer norms was the only outcome variable associated with continued reductions in high-risk drinking (Botvin, et al, 2001);

- In a prevention program for middle school students, participants' estimates of the prevalence of alcohol use predicted their level of use one year later (Marks, Graham & Hansen 1992); and

- In a literature review of effective school-based prevention programs, Hansen (1985) concluded that "after one year alcohol use was significantly reduced among students who received any of the programs that included a normative beliefs component" while "students who did not receive a normative beliefs component… increased their alcohol use as if no intervention had occurred" (p. 59).

Finally,

- Thombs (1999) tested four different models of driving while intoxicated (DWI) or riding with someone who was intoxicated (RWID), and found that misperceptions for DWI and RWID had the greatest predictive value in explaining both DWI and RWID.

In summary, a substantial body of research suggests that misperceptions exist, that misperceptions are associated with increased drinking and negative consequences from drinking, and that drinking behavior is often best predicted by misperceptions of drinking attitudes/or and behaviors. This includes correlational studies, longitudinal studies, and outcome studies with experimental and control groups. Similar findings have been reported for other problem behaviors, such as gambling (Larimer & Neighbors, 2003).

What Is the Effect of Correcting Misperceptions?
Successful Interventions Utilizing the Social Norms Approach

Social norms theory can be used to develop interventions that focus on the three levels of prevention specified as universal, selective, and indicated (Berkowitz, 1997). These categories, developed by the Institute of Medicine, replace what was formerly called primary, secondary, and tertiary prevention (Kumpfer, 1997). *Universal prevention* is directed at all members of a population without identifying those at risk of abuse. *Selective prevention* is directed at members of a group that is at risk for a behavior. *Indicated prevention* is directed at particular individuals who already display signs of the problem. Interventions at all three levels of prevention can be combined and intersected to create a comprehensive program that is theoretically based and has mutually reinforcing program elements.

Berkowitz (2003b) suggested that there are certain questions that must be answered in order for the social norms model to be applied effectively:

- What misperceptions exist with respect to the attitude or behavior in question?
- Are there over or under-estimations of attitudes and/or behavior?
- What is the meaning and function of misperceptions for individuals and groups?
- Do the majority of individuals in a group or community hold these misperceptions?
- Does the target group function as a group with respect to the behavior in question? That is, are the group norms "salient," and are the individuals in the group an influence on each others' behavior?
- What is the hypothesized effect of these misperceptions?
- What changes are predicted if protective behaviors that already exist in the population are supported and increased?

A variety of successful social norms interventions have been developed that provide answers to these questions and address universal, selective, and indicated prevention. Interventions in each of these categories are reviewed below.

Universal Prevention – Social Norms Marketing Campaigns. A number of college campuses and high schools have successfully reduced drinking by developing community-wide electronic and/or print media campaigns that promote accurate, healthy norms for drinking and non-use. This includes Western Washington University (Fabiano, 2003), the University of Arizona (Glider et al, 2001, Johannessen & Glider, 2003; Johannessen, et al, 1999), Northern Illinois University (Haines, 1996; Haines & Barker, 2003; Haines & Spear, 1996), Hobart and William Smith Colleges (Perkins & Craig, 2002, 2003a), Rowan University (Jeffrey et al, 2003), and the University of North Carolina Chapel Hill (Foss et al, 2003, 2004). These campaigns use social marketing

techniques to deliver messages about social norms and can be described as "*social norms marketing campaigns*." At these schools, a reduction of 20% or more in high-risk drinking rates occurred within two years of initiating a social norms marketing campaign, and in one case resulted in reductions of over 40% after four years. Haines, Barker and Rice (2003) reported similar results for both tobacco and alcohol in social norms marketing campaigns conducted in two Mid-western high schools. These findings were recently replicated in a second high school (Christensen & Haines, 2004; Rice, 2003).

Among the most thorough and comprehensive evaluations of social norms campaigns are those by Perkins and Craig (2002) and Foss and his colleagues (2003, 2004). Perkins and Craig (2002) described an intervention that combined a standard poster campaign with electronic media, an interactive web site, class projects that developed parts of the campaign, and teacher training for curriculum infusion. The intervention began in 1996 at a college with higher than average alcohol use. A number of evaluations were conducted to determine the effectiveness of the campaign. Results included: 1) increases in drinking that normally occur during the freshman year were reduced by 21%; 2) a campus-wide decrease in high-risk drinking during the previous week from 56% to 46%; and 3) successive decreases in alcohol-related arrests over a four-year time period. Corresponding reductions were also found in misperceptions of use, heavy drinking at a party, and negative consequences associated with alcohol use. Surveys conducted at three time periods over a five-year period indicate successive linear decreases in all of these measures over time.

At the University of North Carolina Chapel Hill Foss and his colleagues (2003, 2004) conducted a social norms marketing campaign for first-year students with the theme: "Whether it's Thursday, Friday, or Saturday night, 2 out of 3 UNC students return home with a .00 blood alcohol concentration." A unique feature of the study was that the BAC data was collected using breath samples of students coming home to their residence halls. The program was thoroughly evaluated and at the end of five years, the mean number of drinks on the night of the interview decreased from 5.1 – 4.3, the proportion of drinkers with a BAC above .05% on the night of the interview decreased from 60% to 52%, and the percentage of respondents who could be classified as heavy drinkers on the night of the interview decreased from 14% to 10% (representing an overall decrease of 29%.) By using actual BAC measures, this study addresses concerns raised about social norms campaigns that rely on survey data to document effectiveness because it demonstrates that the reductions in use are not due to potential response bias or the possibility that students are taught by social norms campaigns to answer surveys differently.

Social norms marketing campaigns have also been successful in reducing smoking prevalence and delaying smoking onset. For example, in a seven county campaign directed at 12-17 year olds in Montana, only 10 percent of non-smokers initiated smoking following the campaign, while 17 percent in the control counties began smoking. This represents a 41% difference in the proportion of teens initiating smoking in the intervention counties as compared with those in the rest of the state (Linkenbach & Perkins, 2003A). At the University of Wisconsin at Oskosh, a 29% decrease in smoking rates was achieved from a multi-component intervention including a social norms media campaign, while rates at a control campus did not change significantly (Hancock, et al, 2002). Finally, at Virginia Commonwealth University, use remained stable and

perceptions became more accurate while the number of cigarettes smoked per month at a control campus increased (Hancock et al, 2002; Hancock & Henry, 2003). In addition to providing strong support for the effectiveness of social norms campaigns for smoking reduction, these studies all used comparison groups, thus strengthening the scientific literature in support of the model. In an overview of some of these campaigns, Hancock et al (2002) discussed the differences between smoking and alcohol use behaviors that need to be considered when designing a social norms marketing campaign for smoking.

Finally, Hellstrom (2004) recently reported on a three-year, seven campus study in which DWI was reduced overall by 13% (with one campus reporting a decline of 40%) along with reductions in high-risk use from 36% to 29%.

The website of the Social Norms Center (www.socialnorm.org) presents data from these and other schools documenting substantial reductions in health risk behaviors within one or two years of initiating a social norms marketing campaign. Monographs developed by Haines (1996), Johannesen et al (1999), and Perkins and Craig (2002), chapters by Fabiano (2003) and Linkenbach (2003), and the Social Norms Resource Book (Berkowitz, 2003c) outline the stages of developing a social norms marketing campaign, provide guidelines for creating effective media, and present evaluation data in support of the effectiveness of social norms marketing campaigns.

These results provide strong evidence that the social norms approach can be effectively applied as a universal prevention strategy to reduce high-risk drinking and promote moderate alcohol use, and for smoking to reduce smoking prevalence and delay its onset.

Selective Prevention – Targeted Social Norms Interventions. Targeted interventions focus on members of a particular group, such as first-year students, fraternity and sorority members, athletes, or members of an academic class. Misperceptions of close friends' behavior are highly correlated with personal use, a finding that has led to the development of selective social norms interventions on a number of campuses. In most of these efforts, information about the actual group norms are provided in small interactive group discussions, workshops, or academic classes. Due to their smaller size and more manageable format many of these interventions have been evaluated using randomized assignment to experimental and control groups.

The following successful targeted small group norms interventions have been reported:

- Schroeder & Prentice (1998) designed an intervention for first-year students that randomly assigned participants to one of two discussion groups during their first term. In the *norm-focused condition,* students were given data showing systematic misperceptions of drinking norms on campus and participated in a facilitated discussion about actual norms and the social dynamics of drinking. In the *individual-focused condition,* students participated in a discussion of how to make responsible drinking decisions. In a follow-up questionnaire six months later, students in the norm-focused condition consumed significantly fewer drinks each week than students in the individual-focused condition.

- Washington State University pioneered the development of selective interventions with groups such as athletes, fraternities, sororities, and first-year students (Barnett, et. al, 1996; Far & Miller, 2003; Peeler et al, 2000). WSU's "Small Group Norms Challenging Model" provides group members with feedback about their group's actual and perceived drinking patterns in a 45-minute workshop. Discussion focuses on the nature and causes of misperceptions in a talk show format using slides with data on actual and perceived norms for that group. This approach has produced reductions in drinking among first-year students, Greeks, and athletes who received the intervention and was sustained enough to create campus-wide reductions in drinking over a number of years (Far & Miller, 2003). For example, over a nine-year period, students who drink 5 or more drinks on an occasion decreased from 59% to 30%, and abstainers increased from 12% to 20%.

- Peeler et al (2000) designed an intervention as part of a course at Washington State University in which the experimental group received a class module on drinking norms. At the end of the term, the male students in the experimental group reported significant changes in their perceptions of campus drinking and also reported consuming less alcohol per occasion than students in the control group.

- Steffian (1999) assigned college men to either a normative education group (experimental group) or a traditional alcohol education program (control group). The experimental group participated in a group consensus exercise in which the group made predictions about campus drinking norms and then were presented with actual data, evidence of their own misperceptions, and a discussion of social norms theory. The control group watched a film on the physiological effects of alcohol. The author reported that "Participants in the normative education groups demonstrated more accurate perceptions of campus drinking norms and a significant reduction in the consequences of alcohol use while those in the control group did not. Changes in normative perception were among the strongest contributors to a function discriminating between those who decreased their drinking and those who did not."

- Bonday & Bruce (2003) adapted the small group norms challenging model to develop a normative feedback intervention for fraternities at the University of Virginia. They reported a decrease in negative consequences of fraternity member drinking after the intervention, although actual drinking rates did not change.

- Hillenbrand-Gunn and her colleagues at the University of Missouri-Columbia (2004) developed a three-session intervention on acquaintance rape for high school boys that incorporated local social norms. The workshop resulted in more accurate perceptions and decreases in rape supportive attitudes that were maintained at a one-month follow-up.

Another way of delivering social norms messages to groups is through the use of interactive peer theater. Scripts for such performances are available from BACCHUS (2002) or can be developed locally. For example:

- At the University of Albany, social norms data were integrated into interactive scenarios presented to students in a freshman seminar class (Cimini, Page & Trujillo, 2002). Students in the control condition were enrolled in the same class but received an academic lecture on substance abuse instead. Students in the theater intervention reported a significant decrease in frequency of use, DWI, and regretted behavior, and an increase in the incidence of protective behaviors in comparison with the control group. The intervention group also reported a reduction in high-risk drinking rates while these rates increased in the control group.

Other selective interventions have utilized focused media campaigns directed at a particular group of students in combination with other strategies:

- The University of Virginia designed a targeted social norms marketing campaign for first-year students by placing posters in bathroom stalls in first-year residence halls. In its first year (1999-2000) the campaign was successful in reducing the drinking of women and non-fraternity men but not fraternity men (Ohahowski & Miller, 2000). In the next two years of the campaign, which also incorporated environmental management strategies, these improvements continued and the drinking of fraternity men also improved (Bauerle, Burwell & Turner, 2002). Thus, over a period of three years, the number of drinks per week for first-years went down from 3 drinks a week to 1, the median number of drinks per week for fraternity first-year men went down from 15 to 7, and the percentage of abstainers went up from 35% to 49%. In a subsequent presentation of this data, Bauerle (2003) reported that the campaign was expanded to the entire campus and that negative consequences for first-year students continued to trend downwards. These results serve as an important reminder that social norms campaigns may not affect all groups equally (especially at first) and that sustained effort is required over a period of years to normalize improvements and extend them to all students.

- At Rochester Institute of Technology, a social norms marketing campaign was developed for deaf and hard-of-hearing students to reduce the incidence of sexual assault (White, Williams, & Cho, 2003). In this intervention, a campus-wide social norms marketing campaign to prevent sexual assault that had been offered to all students (including deaf and hard-of-hearing) was re-designed to tailor it to the culture and communication styles of deaf and hard-of-hearing students. While the all-campus campaign did not have an effect on deaf and hard-of-hearing students, the tailored campaign was successful in changing attitudes and perceptions, and resulted in fewer sexual assaults.

- At the University of Arizona (Johannessen, 2004) a targeted social norms campaign was developed for sorority members focusing on the ethic of caring among women and providing feedback about actual drinking norms and attitudes. As a result of the campaign, significant decreases in high-risk drinking were

reported on a number of measures while sorority drinking remained the same on a control campus.

- Mattern and Neighbors (2004) randomly assigned students in a residence hall to an experimental condition in which participants were given normative feedback through a variety of channels, and a control condition. They found that corrected perceptions were associated with decreases in the quantity and frequency of drinking among students in the experimental group. In addition, a smaller group of students whose misperceptions increased during the campaign reported higher use, providing strong support for the assumptions of the social norms approach

- In a project sponsored by the Kansas Health Foundation (Berkley-Patton et al, 2003), first-year students received a social norms intervention that resulted in significantly decreased drinking rates for first year students when rates of use for the summer before college were compared with spring term drinking.

These examples provide strong support for the effectiveness of selective social norms interventions directed at particular groups of at-risk individuals when used alone or in combination with other strategies. Targeted social norms interventions such as these may be more effective when the normative data are tailored to the group in question and when they are presented in more extended, interactive formats. As noted earlier, it is extremely important to determine the most salient and relevant influences on the target group before designing an intervention to make sure that the norms being corrected are influential. These influences may differ by gender and membership in groups such as athletics and fraternities or sororities and may vary by campus. When offered in the context of a campus-wide media campaign, the two interventions should be designed so that they are compatible with each other.

Indicated Prevention – Individualized Social Norms Interventions. Normative data about drinking can be presented to high-risk drinkers and abusers as part of individual counseling interventions. These interventions are theoretically sound because abusers tend to adhere strongly to misperceptions that serve to rationalize their abuse (i.e. see the section on "false consensus.") Sharing normative data in a motivational interviewing format is a non-judgmental way to create cognitive dissonance in heavy drinkers and catalyze change.

The most well-known and scientifically supported individualized intervention that includes a norms correction component has been developed by Alan Marlatt and his colleagues at the University of Washington (Dimeff, et. al. 1999). The Alcohol Skills Training Program (ASTP) uses an eight-session motivational interviewing approach based on stages of change theory to provide heavy drinkers with non-judgmental feedback about their drinking. Data collected prior to the interview are used to provide comparisons between the individual's drinking and actual rates of peers' drinking on campus. This information presents heavy drinkers with the fact that their drinking is much more extreme than that of peers on a variety of measures. ASTP has been condensed into both a one-hour intervention (BASICS) and a correspondence course in which subjects use a manual. All three interventions have been successful in reducing

drinking at follow-ups as long as 1-2 years (Dimeff, et. al. 1999; Larimer & Cronce, 2002), including with high-risk drinkers (Murphy et al 2001).

Agostinelli, Brown & Miller (1995) were able to produce similar reductions in drinking by mailing participants personalized graphic feedback following their completion of a mailed survey. Similar results were found in a larger population study, in which a normative feedback pamphlet was mailed to over 6,000 households. In a follow-up general population survey a month later, respondents from households receiving the normative feedback reported significantly lower alcohol use than controls (Cunningham et al. 2001). Mailed feedback was also successful in correcting perceptions and reducing drinking in a study of high-risk college drinkers (Collins et al, 2002). These finding have been replicated in other samples, including one conducted in a workplace where reductions in consumption were documented for heavy drinkers following normative feedback without any increase in drinking on the part of non-drinkers (Walters & Woodall, 2003). Neighbors, Larimer & Lewis (2004) found similar results using computerized normative feedback with alcohol consumption remaining lower at three and six month follow-up assessments. Finally, Agostinelli and her colleagues (forthcoming) found that heavy drinkers were more likely to acknowledge that they had a drinking problem when they learned as a result of the intervention that their own drinking quantity was above the norm.

"Check-Up to Go" or CHUG is another widely used tool for providing personalized individual feedback about drinking. In it's original paper-and-pencil version, it has produced drinking reductions in three controlled clinical trails (Walters, 2000) and is now available on the web at www.e-chug.com.

These results are extremely promising because they are efficient and cost-effective, produce measurable results, and can be combined with other social norms interventions. For example, both Western Washington University (Fabiano, 2003) and the University of Washington (Larimer, et al, 2001) have successfully combined universal interventions with indicated interventions providing specific information about campus drinking norms to individual high-risk drinkers.

In addition to individual personalized feedback, high-risk drinkers and smokers also may be influenced by campus-wide media campaigns. For example, Perkins and Craig (2002) reported four-fold reductions in the typical increase in high-risk drinking among first-year students and a 21% reduction in weekly heavy drinking among students in general at a small private college in the Northeast. Pryor (2001) reported a decrease from 20% to 13% from 1999-2000 in the number of students drinking ten or more drinks at a sitting at a different small Northeastern college. Similarly, a social norms marketing campaign at University of Wisconsin at Oshkosh directed at smokers with the theme "96% of smokers want to quit before graduating" resulted in a 29% decrease in smoking rates in one year. As noted earlier, social norms interventions at Washington State University (Far & Miller, 2003), The University of North Carolina Chapel Hill (Foss et al 2003, 2004) and the University of Virginia (Bauerle, 2003) have also been successful in reducing high-risk drinking.

In summary, norms corrections interventions with heavy drinkers are theoretically sound and can be effective both in individual contexts as part of a motivational interviewing strategy, through computerized or mailed feedback, or as part of community-wide media campaigns.

Social Norms Interventions with Multiple Levels of Prevention

The social norms approach can be used to provide a guiding framework for interventions that are universal, targeted, and indicated to create synergy between these levels of prevention. For example, the University of Arizona combined a universal social norms marketing intervention and other environmental management interventions with a moderation skills program for high-risk drinkers and a targeted campaign directed at sorority members (Glider et al, 2001; Johannessen, 2004; Johannessen & Glider, 2003; Johannessen et al, 1999). Efforts were made to educate stakeholders who were likely to be "carriers of the misperception" about the goals and purposes of the intervention by providing specialized training and developing literature specifically designed for faculty and staff. Interventions utilizing normative feedback were also integrated into environmental management strategies that were successful in reducing problems at the University of Arizona's annual homecoming event (Johannesssen et al, 2001)

In a well-designed intervention at the University of Washington, Larimer and colleagues (2001) combined selective and indicated prevention by providing normative feedback about drinking to individual fraternity members and their whole houses. Participants were assessed during their pledge year and one year later. The intervention and resulted in significant reductions in alcohol use and peak BAC when compared with fraternity members in the control condition.

These examples suggest that it is possible to combine social norms interventions at all levels of prevention to create a comprehensive change environment with mutually-reinforcing, synergistic messages delivered through a variety of channels to a variety of audiences.

Such programs are comprehensive, relevant, intensive, and promote positive messages, characteristics that are components of effective prevention programs (Berkowitz, 1997). This integrated approach is more likely to succeed than the common practice of developing multiple individual interventions that are not compatible or programmatically linked and that are often inconsistent with each other.

Norms Correction as Part of A Multi-Component Intervention

A number of community-wide and school-based comprehensive interventions have incorporated norms correction into classroom or workshop activities that fall within one of the levels of prevention specified above. Because the social norms component is only one of multiple interventions used, it is not always possible to evaluate its impact specifically. In these cases, revealing accurate norms to participants may have served as a catalyst to increase their receptivity to other program components, such as skill-training, information, and strengthening resiliency.

For example, a comprehensive middle-school intervention with a norms correction component that had previously been effective among white students was offered in a minority inner-city school. The experimental group demonstrated high-risk drinking rates over 50% lower than the control group in follow-up assessments. Two years after the intervention, corrected perceptions remained correlated with reductions in high-risk drinking (Botvin et al, 2001.) In a similar example for smoking, norms correction strategies were incorporated into a multi-component intervention to reduce smoking among high-school students that resulted in a rate of 14% of students smoking weekly in comparison with 24% in the control group (Perry et al, 1992).

Similar findings have been reported in more comprehensive literature reviews. For example, Hingson & Howland (2002) reviewed comprehensive community interventions to address alcohol, cigarettes, other drugs, and cardiovascular health and suggested that norms correction strategies may be particularly appropriate for adolescents and young adults. And in separate analyses of successful alcohol prevention programs in middle and high schools, both Hanson (1993) and Clemens and Thombs (2004) concluded that normative feedback was the critical ingredient accounting for the success of these programs.

Finally, Dunnagan and colleagues (2003) proposed a theoretical model for reducing underage drinking that combined environmental management, decision-balance, and norms correction to demonstrate the efficacy of using multiple models and evaluation techniques synergistically to formulate public policy.

These studies suggest that social norms activities can effectively be included in comprehensive interventions that are multi-faceted and incorporate a variety of compatible strategies.

When Social Norms Interventions Are Unsuccessful

As interventions based on the social norms model become more prevalent, there are more examples of unsuccessful interventions. This is natural as the field evolves and grows and is especially likely in light of the many ways in which the implementation and evaluation process can be flawed.

Berkowitz (2003c), Haines (1996), Johannesesen (1999), and Linkenbach (2003) provide a detailed overview of the phases of implementing a social norms media campaign, which Fabiano (1999) has condensed into six stages:

- assessment (collection of data),
- selection of the normative message
- testing the message with the target group
- selecting the normative delivery strategy
- dosage of the message

- evaluation of the effectiveness of the message.

Mistakes can occur at any of these stages. For example, participants are likely to question initially the validity of survey data because of misperceptions they hold, but will rethink their assumptions if the data are reliable and presented in an open manner. In contrast, unreliable or confusing survey data may be rejected and in the end undermine the campaign and reinforce misperceptions. In addition, media that are confusing or unappealing, presented by unreliable sources, or not presented in sufficient doses will not have an impact. Key stakeholders can also undermine campaigns through negative comments and criticisms or by sharing their own misperceptions. The following examples illustrate some of these reasons for campaign failure.

Werch et al (2000) outlined an unsuccessful campaign in which social norms messages were sent through the mail to a small sample of freshmen. Three "greeting cards" with normative data were sent in the fall term and a follow-up phone call was conducted in the spring term. This campaign may have failed because the campaign was only conducted over a one-month period, which may not have been long enough, the messages were not focus grouped with students in advance and they may not have been persuasive, and the target subjects were exposed to campus-wide misperceptions that may have undermined the campaign's messages.

Clapp, Russell and DeJong (2001) reported on a failed social norms media campaign in which students did not understand the message, the message and image were incongruent, and the image overpowered the message. In this campaign the image (a student throwing up) was inconsistent with the normative data provided, and students were more likely to remember the image than the data.

Granfield (2002) provided a case study of a well-designed social norms media campaign that did not achieve expected outcomes because the message source was not believable to students. The campaign took place on a campus with a strong fraternity presence at a time when fraternities felt that they were under attack by the administration. Due to this feeling students rejected the social norms messages because the campaign was felt to be part of an administration-led effort to undermine fraternities.

These findings suggest that when social norms campaigns are unsuccessful it is important to assess what went wrong and why, rather than to assume that the approach itself is flawed.

Unsuccessful interventions and philosophical/theoretical disagreements have led some to question the overall validity and effectiveness of social norms. Thus, critics have raised concerns about unsuccessful interventions, provided theoretical disagreements about the assumptions of the social norms approach, questioned the compatibility of norms correction campaigns with the underlying mission of higher education, and debated definitions of high-risk drinking. Berkowitz (2002) has provided an extensive response to each of these concerns, suggesting that some may be based on misunderstandings and overgeneralizations about the implications of failed interventions, while others reflect important theoretical and methodological issues that need to be addressed as part of the

evolution of the model. In the same article, Rice (2002) reviewed common questions and concerns based on methodological issues.

Issues in the Evaluation of Social Norms Interventions

Prevention approaches that are evidence-based need to be carefully evaluated to determine their effectiveness. In the case of social norms interventions, it is hypothesized that correction of misperceptions translate into behavior change. Kilmer and Cronce (2003) discussed issues in the evaluation of social norms campaigns and noted the importance of designing surveys that capture anticipated changes, the need to evaluate message impact in addition to message exposure, and the value of assessing differential campaign impact on population sub-groups in addition to global change. Finally they noted that categorical measures of change may not reveal other important effects of a campaign. For instance, an exclusive focus on the total percentage of students drinking "0-4" can mask beneficial changes that occur within the 0-4 group after a campaign. Perkins (2004) has also outlined evaluation challenges including the problem of overlooking campaign successes through insufficient data analysis.

Evaluations and the conclusions based on them can be compromised when the premises of the evaluation are not theoretically sound. For example, assumptions can be made about the underlying theory of social norms that are incorrect, inappropriate measures may be used to evaluate change, or evaluators may neglect to assess the fidelity of the intervention to the model. In each of these cases, an evaluator may conclude that a particular intervention or the model itself is not effective when in fact the evaluation itself has been compromised by these factors. A number of recent evaluations of social norms campaigns share one or more of these problems.

In once recent study, for example, Campo and her colleagues (2003) found that drinking behavior was related to perceptions of friends drinking but not to campus norms. They concluded that because campus norms were not salient to the students in their sample that social norms theory was based on inaccurate premises. Yet their finding of saliency for perceptions of friends' norms in fact supports the theory and serves as a reminder that different norms may be salient for different groups or on different campuses. In addition, their sample was primarily comprised of students living off-campus, who may have differed from on-campus students in terms of the saliency of campus norms.

In another study, Licciardone (2004) analyzed data from 57 campuses and constructed a measure to assess the degree of misperception of alcohol use on each campus. Using this measure he found that campuses with more accurate perceptions had more drinking than campuses with less accurate perceptions, leading him to conclude that the results contradicted social norms theory. However this conclusion is not accurate for a number of reasons. First, the misperception measure used was flawed because it was derived by creating averages of drinking behavior and misperception for each campus. This would not create a reliable measure because the degree of misperception can vary among students and for particular campus sub-groups which will result misleading averages. Second, the measure assumed that it is possible to eliminate misperceptions altogether, something that Borsari and Carey (2001) have suggested is not theoretically possible. In fact, if a social norms campaign was effective the misperceptions might still exist. Third,

the study evaluated data from only one particular point in time without assessing if social norms interventions were utilized. For these reasons it is not appropriate to assume that "the misperceptions ration may be taken as a surrogate measure of the potential effectiveness of overall social norms programming on each campus" (p. 242).

Clapp and his colleagues (2003) conducted a social norms marketing campaign in a residence hall while another residence hall served as a control group. At the end of the six week intervention, misperceptions were reduced but there were no significant effects or counterintuitive effects on drinking, leading the authors to conclude that the campaign had "failed." Yet an analysis of data provided in the article shows that while drinking increased in both groups during the course of the campaign, the increase was much less in the experimental group, which also reported drinking less per occasion. Thus, it may in fact be that the campaign was having a positive effect but was not conducted for a long enough period of time to show significant results. In addition, it is not clear if the normative feedback provided in this study was strong enough to counteract participant exposure to misperceptions elsewhere on campus that the campaign did not try to correct. For example, Mattern and Neighbors (2004) successfully reduced drinking rates using a similar research design but with stronger and more frequent normative feedback.

Finally, Wechsler and his colleagues (2003) conducted a much-publicized national study which he described as evaluating the effectiveness of social norms campaigns. He concluded that it did "not provide evidence for the effectiveness of social norms campaigns." The study has been widely criticized for methodological problems that include poor sample sizes, no assessment of the quality of the campaigns conducted, and a weak definition of the experimental group (see for example, Berkowitz, 2003d, DeJong, 2003b, Haines, 2003, and Perkins and Linkenbach, 2003).

In summary, the studies reviewed point to the importance of ensuring that evaluations are based on valid theoretical premises and determining whether measures of effectiveness and sample selection are appropriate.

Social Norms Interventions for Other Health Issues and Social Justice Issues

Many of the normative influences that affect alcohol and tobacco use are also operative for a wide variety of other health and social justice issues, including sexual assault and violence, disordered eating and body image disturbance, academic climate, and prejudicial behaviors. An article by Berkowitz (2003b) suggested that social norms efforts be used to address these problems, reviewed research documenting misperceptions for different health and social justice issues, and provided examples of innovative programs. These interventions include a social norms interventions designed to prevent sexual assault (Bruce, 2002' Hillenbrand-Gunn et al, 2004; White, Williams, & Cho, 2003), and a homophobia prevention workshop that incorporates a small group norms challenging activity (Smolinsky, 2002). Heterosexual individuals were found to overestimate the homophobia of their peers in two studies (Bowen & Bourgeois, 2001; Dubuque et al 2002). In two other studies, the primary factor influencing men's willingness to intervene to prevent sexual assault was men's perception of other men's willingness to intervene (Fabiano et al, 2003; Stein & Barnett, 2004). These findings are consistent with other research suggesting that perceived social norms can influence

whether or not individuals' express prejudicial beliefs to others (Crandall et al, 2002). Berkowitz (2003b) suggested that these misperceptions might discourage individuals who are uncomfortable with prejudicial remarks from speaking out against these comments.

In preliminary studies, predictions based on social norms theory have been confirmed for beliefs about masculinity and gender appropriate behavior, body ideal, how often people pray, the prevalence of bullying behavior, and honesty in paying taxes. For example, Gottfried (2002) found that men misperceived other men's beliefs about how men should behave, with men overestimating the extent to which other men hold stereotypical beliefs about masculinity. Greater disparities between men's perceptions of themselves and of other men were correlated with lower self-esteem. The results of this study parallel findings of research conducted with young boys and girls, who both expressed interest in playing with stereotypically "boy" and "girl" toys but perceived other members of their gender to be only interested in same-gender appropriate toys (Prentice & Miller, 1996). And, in a study of misperception of bullying behavior in an elementary school setting, Bigsby (2002) found that both students and their parents overestimated the amount of bullying behavior that occurred.

In a study of body image women significantly overestimated the degree of thinness that male and female peers considered as ideal. These overestimations were positively correlated with measures of body dissatisfaction, disturbed eating, and concern with appearance (Kusch, 2002). Hancock (2003) documented misperceptions of prayer. She reported that individuals who pray underestimated the prevalence of praying among their peers, and suggested that this misperception may cause individuals to reduce or hide prayer behavior in academic environments. Finally, Wenzel (2001) documented taxpayer misperceptions of willingness to be honest on income tax forms (i.e., most people thought that others were less honest than themselves) and found that correcting these misperceptions increased honesty in the reporting of some deductions.

With respect to academic success, a pilot project at Ball State University documented misperceptions indicating that students perceived their peers to be less academically motivated than themselves on a variety of variables. The "Academic Success Norming Campaign" corrected these misperceptions with the goal of encouraging behaviors that are associated with academic success and retention (Abhold, Hall & Serini, 1999).

Finally, Linkenbach, Perkins, and DeJong (2003) documented misperceptions among parents regarding parenting attitudes and behaviors such as how often parents talk with children about alcohol use and family rules, and discussed how correction of these misperceptions can be utilized to strengthen effective parenting.

Although these projects are preliminary and have not yet produced strong outcome data, they suggest the applicability of the social norms approach to a broad range of behaviors related to health, social justice, and fostering community.

Conclusions and Recommendations

The effectiveness of prevention approaches addressing misperceived social norms have been validated in numerous research studies and in campus and school interventions since

they were first proposed by H. Wesley Perkins and myself in 1986. Programs designed to reduce alcohol and tobacco use have been implemented successfully at all levels of prevention using a variety of media and presentation techniques. Despite these successes there are a number of challenges facing the prevention field at present as we continue to develop new and improved social norms interventions. These include the following:

- how to meaningfully integrate universal, selective, and indicated social norms interventions in a synergistic, mutually reinforcing manner;

- how to effectively combine social norms interventions at all three levels of prevention with other strategies such as policy enforcement and other environmental strategies;

- to determine whether tailored social norms interventions based on gender, ethnicity and other group identities are appropriate and effective;

- to evaluate the relative salience of different normative targets for different populations, such as attitudinal and behavioral norms;

- to utilize our knowledge about successful social norms interventions to address other problems such as sexual assault, social justice issues, eating behaviors, academic climate, prejudicial behavior, and issues of spirituality, and adapt the model accordingly;

- to develop standardized evaluation criteria to ensure that social norms interventions are evaluated appropriately and thoroughly;

- to learn from unsuccessful interventions to develop an inventory of common mistakes, problems, and implementation failures; and

- to develop a set of conditions and criteria for successful implementation.

The social norms approach provides an excellent example of how theory- and research-driven interventions can be designed, implemented and evaluated to successfully address health problems. The model incorporates recent understandings about the important role of the environment in prevention, the nature and impact of peer influence, the need for interventions that are tailored to their audience, and the design of comprehensive environments that can foster change. We look forward to new successes and innovative applications of this approach in the years to come.

Note: Please contact the author if you have information about a social norms intervention or study that you would like to see included in a future revision of this paper.

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Table One – Campus Studies Documenting Misperceptions of Alcohol

Individual Studies (Small Samples, n < 500)

Baer, 1994
Baer, Stacy & Larimer, 1991
Baer & Carney, 1993
Bourgeios & Bowen, 2001
Carter & Kahnweiler, 2000
Clapp & McDonnell 2000
Clapp et al, 2003
Collins et al, 2002
Lewis & Neighbors, forthcoming
Ott & Haertlein, 2002
Peeler et al, 2000
Prentice & Miller, 1993
Schroeder & Prentice, 1998
Sher et al 2001
Steffian, 1999
Thombs, 2000

Individual Studies Large (Large Samples)

Agostinelli & Miller, 1994
Agostinelli, Brown & Miller 1995
Barnett et. al. 1996
Berkley-Patton et al, 2003
Burrell, 1992
Campo et al 2003
Fabiano, 2003
Glider et al, 2001
Gomberg et al, 2001
Foss et al, 2003
Haines & Spear, 1996
Jeffrey et. al. 2003
Korcuska & Thombs, 2003
Kypri & Langley, 2003
Page, Scanlan & Gilbert, 1999
Suls & Green, 2003
Thombs, 1999
Thombs et. al. 1997
Perkins, 1985, 1987
Perkins & Berkowitz, 1986
Perkins & Craig, 2003a
Werch et. al, 2000

Multi-Campus Studies

Perkins et. al., 1999
Pollard et al, 2000
Perkins & Wechsler, 1996
Trockel et al, 2003

Appendix
Annotated Bibliography of the Social Norms Literature

This annotated bibliography provides brief summaries of notable resources for social norms theory, case studies and implementation issues, other applications, and significant research

Theory and Overview

Berkowitz, AD (2004). *An Overview of the Social Norms Approach.* To be published as Chapter 13 in L Lederman, L Stewart, F Goodhart and L Laitman: Changing the Culture of College Drinking: A Socially Situated Prevention Campaign, Hampton Press. An overview of the history of the social norms approach, research in support of the model, successful campaigns, and challenges to effectiveness. Available from www.alanberkowitz.com.

Berkowitz, AD (2002) *Responding to the Critics: Answers to Common Questions and Concerns About the Social Norms Approach.* The Report on Social Norms: Working Paper #7. Little Falls, NJ: PaperClip Communications. Answers to commonly asked questions and criticisms about the social norms approach, including theory, methodological issues, and reasons for program failure.

Berkowitz, AD (1997) *From Reactive to Proactive Prevention: Promoting an Ecology of Health on Campus*. In P. Clayton Rivers and Elise R. Shore (Eds) Substance Abuse on Campus: A Handbook for College and University Personnel. Westport, CT: Greenwood Press. This chapter presents an overview of social norms theory in the context of other approaches to drug prevention, reviews relevant research, and presents examples of primary, secondary and tertiary interventions in the form of case studies.

Borsari, BB & Carey, KB (2001). *Peer Influences on College Drinking: A Review of the Research*. Journal of Substance Abuse, 13:391-424. In this article, Borsari and Carey provide a comprehensive overview of the literature on social norms and summarize different theories and mechanisms of peer influence.

Borsari, BB & Carey, KB (2003). *Descriptive and Injunctive Norms in College Drinking: A Meta-Analytic Integration*. Journal of Studies on Alcohol, 64:331-341. The authors conducted a meta-analysis of 23 different studies that documented misperceptions and evaluated the efficacy of social norms interventions in different populations. They review a number of important theoretical and measurement issues facing the field.

Linkenbach, J (2001). *Cultural Cataracts: Identifying and Correcting Misperceptions in the Media*. The Report on Social Norms: Working Paper #1. Little Falls, NJ. PaperClip Communications. An overview of how the media fosters misperceptions of health and other behaviors and the effects of these media distortions. Strategies are provided for recognizing and correcting them.

Miller, DT & McFarland, C (1991). *When Social Comparison Goes Awry: The Case of Pluralistic Ignorance*. Chapter 11 in Suls, J & Wills, T (Eds) Social Comparison: Contemporary Theory and Research, Hillsdale, NJ: Erlbaum. An excellent overview of the theory of "pluralistic ignorance" and citations of earlier work in this area.

Perkins, HW (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. Newton, MA: The Higher Education Center for Alcohol and Other Drug Prevention. A comprehensive overview of the theory and assumptions of the social norms approach which concludes with implications for prevention programmers.

Prentice, DA & Miller, DT (1997). *Pluralistic Ignorance and the Perpetuation of Social Norms by Unwitting Actors*. In: Advances in Experimental Social Psychology, 28:161-209. An overview of the authors' extensive research on pluralistic ignorance along with theoretical explanations of how it operates in a variety of settings and for a variety of issues.

Case Studies and Implementation Strategies

Berkowitz, AD, Ed (2003c). The Social Norms Resource Book. This handbook provides a comprehensive overview of the social norms approach including theory, implementation strategies, and case studies of individual, group, and campus interventions with sections on alcohol, tobacco, sexual assault, and other issues. Available from www.socialnormslink.com or www.Paper-Clip.com, or call 866 295-0505.

Craig, D (2002). "The Truth About Teen Alcohol Use 101" – A Social Norms Video for High Schools. Discover Films. This 25-minute video presents students at a high-school reacting to a social norms media campaign and sharing how it is empowering for responsible and non-users. In a recent review it was described as "an excellent overall introduction to the basic concepts of a social norms approach that can be beneficial to multiple audiences in a high school setting (Langford, Peterson & Stone, 2004). Available from 888 649-6453 or at www.discover-films.com.

Fabiano, P & Lederman, LC (2002). *Top Ten Misperceptions of Focus Group Research.* The Report on Social Norms: Working Paper #3. Little Falls, NJ. PaperClip Communications. An introduction to the role of focus groups in generating and evaluating media for social norms campaigns, and answers to some common misconceptions about them.

Haines, MP (1996). A Social Norms Approach to Preventing Binge Drinking at Colleges and Universities. Newton, MA: The Higher Education Center for Alcohol and Other Drug Prevention. (Available at www.edc.org/hec). A thorough presentation of the steps taken at Northern Illinois University to implement a comprehensive social norms marketing campaign.

Illinois Higher Education Center. (2003). Resources on the Small Group Norms Challenging Model. The website of the IHEC contains a variety of valuable resources for implementing the small group norms challenging model, including a comprehensive manual, sample consent forms and surveys, and a facilitation guide with overheads. Go to: www.illinoishec.org.

Johannessen, KJ, Collins, C, Mills-Novoa, BM & Glider, P (1999) A Practical Guide to Alcohol Abuse Prevention: A Campus Case Study in Implementing Social Norms and Environmental Management Approaches. The University of Arizona Health Service, www.health.arizona.edu. An excellent guide to the development of social norms media and for combining social norms marketing campaigns with other individual and environmental interventions. Available from www.edc.org/hec or www.socialnorms.CampusHealth.net.

Linkenbach, J, Berkowitz, A, Cornish, J, Fabiano, P, Haines, M, Johannessen, K, Perkins, HW, Rice, R. (2002). The Main Frame: Strategies for Generating Social Norms Media. Available from www.mostofus.org or www.socialnorm.org and www.edc.org/hec. This is a practical guide to writing media stories about social norms interventions, along with guidelines and talking points for interacting with the media to shift the "frame" of the discussion to positive, health-promoting behaviors.

Perkins, HW (2003). (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass. This book on the social norms model contains case studies of successful social norms interventions at a variety of colleges and universities for smoking and alcohol, including both social norms media campaigns and small group interventions. Successful campaigns with high school and adolescent populations are also provided. Guidelines for effective implementation are provided in a number of the chapters (see www.socialnorm.org for a Table of Contents and Larimer, 2003 for a review)

Perkins. HW & Craig, DA (2003). A Multi-faceted Social Norms Approach to Reduce High-Risk Drinking: Lessons from Hobart and William Smith Colleges. Newton, MA: The Higher Education Center for Alcohol and Other Drug Prevention. (Available at www.edc.org/hec). One of the most comprehensive evaluations of a social norms media campaign, presenting evaluation data collected over a five-year period demonstrating changes on a number of dimensions of behavior.

Research

Borsari, BB and Carey, KB (2001 and 2003). See entries under "Theory."

Perkins, HW (2002). *Social Norms and the Prevention of Alcohol Misuse in Collegiate Contexts*. Journal of Studies on Alcohol, Supplement 14:164-172. A review of the literature on the effects of norms on drinking behavior. Research on parental, faculty, resident advisors and peer norms are reviewed, with the conclusion that peer norms are the strongest influence on student drinking. A brief overview of the social norms approach is presented.

Perkins, HW and Berkowitz, AD (1986). *Perceiving the Community Norms of Alcohol Use Among Students: Some Research Implications for Campus Alcohol Education Programming.* International Journal of the Addictions, 21(9/10): 961-976. This is the original study providing data for student misperceptions of attitudes towards alcohol, along with a discussion of the effects of these misperceptions.

Perkins, HW, Meilman, PW, Leichliter, JS, Cashin, MA & Presley, CA (1999) *Misperceptions of the Norms for the Frequency of Alcohol and Other Drug Use on College Campuses*. Journal of American College Health, 47:253-258. Reviews data documenting the prevalence of misperceptions of alcohol and other drug use in all sizes and types of schools, and in all regions of the country.

Perkins, HW, and Wechsler, H (1996). *Variation in Perceived College Drinking Norms and Its Impact on Alcohol Abuse: A Nationwide Study.* Journal of Drug Issues, 26(4):961-974. An analysis of Harvard's College Alcohol Study data set documenting the importance of misperceptions in predicting alcohol abuse, especially for heavy users.

Scher, K, Bartholow, BD & Nanda, S (2001). *Short- and Long-Term Effects of Fraternity and Sorority Membership on Heavy Drinking: A Social Norms Perspective*. Psychology of Addictive Behaviors, 15:42-51. An excellent longitudinal study examining the alcohol use of Greek members during and after college. Greeks consistently drank more than non-Greeks during the college years but Greek status did not predict post-college drinking levels. Variations in Greek drinking during the four years of college were predicted by perceived peer norms for alcohol use among Greeks.

Toch, H & Klofas, J (1984). *Pluralistic Ignorance, Revisited*. GM Stephenson and JH Davis (Eds), Progress in Applied Social Psychology, Volume 2. New York: Wiley & Sons. An excellent review of studies of pluralistic ignorance from 1935-1982 in a variety of settings with important theoretical and research implications for social norms practitioners.

Individualized Normative Feedback

Dimeff, L, Baerk J, Kvilahan, D & Marlatt, AG. (1999). Brief Alcohol Screening and Intervention for College Students: A Harm Reduction Approach (BASICS). NY: Guilford Press. A thorough overview of the excellent research conducted at the University of Washington on harm-reduction interventions for abusers and a curriculum for implementing the model.

Walters, S (2000). *In Praise of Feedback: An Effective Intervention for College Students Who Are Heavy Drinkers*. Journal of American College Health, 48:235-238. "Check-Up to Go" or CHUG is a widely used tool for providing personalized individual feedback about drinking. In its original paper-and-pencil version it has produced drinking reductions in three controlled clinical trails. It is now available on the web. Contact Doug Van Sickle (vansickl@mail.sdsu.edu) or Scott Walters (scott.walters@utsouthwestern.edu).

Applications to Other Health and Social Justice Issues

Berkowitz, AD (2003). *Applications of Social Norms Theory to Other Health and Social Justice Issues*. Chapter 16, H. Wesley Perkins, Ed. The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass. Explores applications of social norms theory to sexual assault prevention for men, eating disorders, and bystander behavior with respect to second hand effects of high-risk drinking and prejudicial behavior.

Bruce, S (2002). *The "A Man" Campaign: Marketing Social Norms to Men to Prevent Sexual Assault*. The Report on Social Norms: Working Paper #5, Little Falls, NJ: PaperClip Communications. A case study of a social norms media campaign to address men's role in preventing sexual assault. An overview of the campaign and the process used to develop media is provided.

Dubuque, E, Ciano-Boyce, C & Shelley-Sireci, L (2002). *Measuring Misperceptions of Homophobia on Campus*. and Smolinsky, T (2002). *What Do We Really Think? A Group Exercise to Increase Hetersexual Ally Behavior*. In: The Report on Social Norms: Working Paper #4, Little Falls, NJ: PaperClip Communications. A study documenting misperceptions of homophobia, and a model workshop in which evidence of these misperceptions are used to foster heterosexual ally behavior.

White, J, Williams, LV and Cho, D (2003). *A Social Norms Intervention to Reduce Coercive Behaviors among Deaf and Hard-of-Hearing College Students.* In The Report on Social Norms: Working Paper #9. Little Falls, NJ, PaperClip Communications. A sexual assault prevention social norms media campaign tailored to the culture of Deaf and Hard-of-Hearing students was successful in reducing the incidence of sexual assault in this population.

BIBLIOGRAPHY

Abhold, J, Hall, L. & Serini, SA. (1999). Harnessing the Power of Success in Higher Education: Towards a New Model of Academic Success, Presented at the Second International, Interdisciplinary Public Relations Research Conference, University of Maryland, June 19-20.

Agostinelli et al (forthcoming). Alcohol Problem Recognition as a Function of Own and Other's Perceived Drinking. Addictive Behaviors,

Agnostinelli, G & Miller, WR (1994). Drinking and Thinking: How Does Personal Drinking Affect Judgements of Prevalence and Risk? Journal of Studies on Alcohol, 55:327-337.

Agostinelli, G, Brown, JM & Miller, WR (1995). Effects of Normative Feedback on Consumption Among Heavy Drinking College Students. Journal of Drug Education, 25(1): 31-40.

Bacchus (2002). Customized Health Education Materials, BACCHUS Midwest, Minneapolis, MN (available from dhellstrom@qwest.net).

Baer, JS (1994). Effects of College Residence on Perceived Norms for Alcohol Consumption: An Examination of the First Year of College. Psychology of Addictive Behaviors, 8:43-50.

Baer, JS & Carney, MM (1993). Biases in the Perceptions of the Consequences of Alcohol Use Among College Students. Journal of Studies on Alcohol, 54:54-60.

Baer, JS, Stacy, A & Larimer, M (1991). Biases in the Perception of Drinking Norms Among College Students. Journal of Studies on Alcohol, 52(6):580-586.

Barnett, LA, Far, JM, Maus, AL & Miller, JA (1996). Changing Perceptions of Peer Norms as a Drinking Reduction Program for College Students. Journal of Alcohol and Drug Education. 41(2): 39-61

Bartholow, BD, Sher, KJ & Krull, JL (2003). Changes in Heavy Drinking Over the Third Decade of Life as a Function of Fraternity and Sorority Involvement: A Prospective, Multilevel Analysis. Health Psychology, 22(6): 616-626.

Bauerle, J (2003). The University of Virginia's Social Norms Marketing Campaign. The Report on Social Norms: Working Paper #11. P. 3, Little Falls, NJ: PaperClip Communications.

Bauerle, J, Burwell, C., Turner, JC (2002). Social Norms Marketing at the University of Virginia. Presented at the Annual Meeting of the American College Health Association, May 23, Washington, D.C.

Beck, KH & Treiman, KA (1996). The Relationship of Social Context of Drinking, Perceived Social Norms, and Parental Influence to Various Drinking Patterns of Adolescents. Addictive Behaviors, 21(5):633-644.

Berkley-Patton, JY, Prosser, EC, McCluskey-Fawcett, KA & C Towns. A Social Norms Approach to Reducing Alcohol Consumption Among College Freshmen. NASPA Journal, 40(4):24-37.

Berkowitz, AD (2004). An Overview of the Social Norms Approach. Chapter 13 in L Lederman, L Stewart, F Goodhart and L Laitman: Changing the Culture of College Drinking: A Socially Situated Prevention Campaign, Hampton Press.

Berkowitz, AD (2003a). How Should We Talk About Student Drinking and What Should We Do About It? About Campus, May/June: 16-22

Berkowitz, AD (2003b). Applications of Social Norms Theory to Other Health and Social Justice Issues. Chapter 16 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

Berkowitz, AD (2003c). Editor, The Social Norms Resource Book, Little Falls, NJ: PaperClip Communications.
Berkowitz, AD (2003d). Recent Research: A Review of "Perception and Reality" The Report on Social Norms, 3(1).

Berkowitz, AD (2002). Responding to the Critics: Answers to Common Questions and Concerns About the Social Norms Approach. The Report on Social Norms: Working Paper #7. Little Falls, NJ: PaperClip Communications.

Berkowitz, AD (1998). "The Proactive Prevention Model: Helping Students Translate Healthy Beliefs into Healthy Actions." About Campus, September/October 1998, p. 26-27.

Berkowitz, AD (1997). From Reactive to Proactive Prevention: Promoting an Ecology of Health on Campus. Chapter 6 in P.C. Rivers and E. Shore (Eds.): A Handbook on Substance Abuse for College and University Personnel, Westport, CT: Greenwood Press.

Berkowitz, AD & Perkins, HW (1987a). Current Issues in Effective Alcohol Education Programming. In Joan Sherwood (Ed): Alcohol Policies and Practices on College and University Campuses, p 69-85, Columbus, OH: National Association of Student Personnel Administrators Monograph Series.

Berkowitz, AD & Perkins, HW (1987b). Recent Research on Gender Differences in Collegiate Alcohol Use. Journal of American College Health, 36:123-129.

Berkowitz, AD & Perkins, HW (1986A). Problem Drinking Among College Students: A Review of Recent Research. Journal of American College Health, 35:21-28.

Berkowitz, AD & Perkins, HW (1986B). Resident Advisors as Role Models: A Comparison of Drinking Patterns of Resident Advisors and Their Peers. Journal of College Student Personnel, 27(2):146-153.

Bigsby, MJ (2002). Seeing Eye to Eye? Comparing Students' and Parents' Perceptions of Bullying Behavior. School Social Work Journal, 27(1):37-57.

Bonday, M & Bruce, S (2003). Small Group Norms Interventions with Greeks at the University of Virginia. The Report on Social Norms, Volume 3, #3, Little Falls, NJ, Paper-Clip Communications.

Borsari B & Carey, KB (2003). Descriptive and Injunctive Norms in College Drinking: A Meta-analytic Integration. Journal of Studies on Alcohol, 64:331-341.

Borsari B, & Carey, KB (2001). Peer Influences on College Drinking: A Review of the Research. Journal of Substance Abuse, 13:391-424.

Botvin, GJ et al. (2001). Preventing Binge Drinking During Early Adolescence: One- and Two-Year Follow-Up of a School-Based Preventive Intervention. Psychology of Addictive Behaviors, 15:360-365.

Bourgeois, MJ & Bowen, A (2001). Self-Organization of Alcohol-Related Attitudes and Beliefs in a Campus Housing Complex: An Initial Investigation. Health Psychology, 20(6):1-4.

Bowen, AM & Bourgeois, MJ (2001). Attitudes Towards Lesbian, Gay, and Bisexual College Students: The Contribution of Pluralistic Ignorance, Dynamic Social Impact, and Contact Theories. Journal of American College Health, 50(2):91-96.

Bruce, S (2002). The "A Man" Campaign: Marketing Social Norms to Men to Prevent Sexual Assault. The Report on Social Norms: Working Paper #5, Little Falls, NJ: PaperClip Communications

Burrell, LF (1992). Student Perceptions of Alcohol Consumption. Journal of Alcohol and Drug Education, 62(3):107-113

Campo, S, Brossard, D, Frazer, MS, Marchell, T, Lewis, D & Talbot, J et al (2003). Are Social Norms Campaigns Really Magic Bullets? Assessing the Effects of Students Misperceptions on Drinking Behavior. Health Communication, 15(4):481-497.

Carter, CA & Kahnweiler, WM (2000). The Efficacy of the Social Norms Approach to Substance Abuse Prevention Applied to Fraternity Men. Journal of American College Health, 49: 66-71.

Christensen, S & Haines, M (2003). Communities Use A Social Norms Approach to Reduce Teen Alcohol and Tobacco Use: Two Case Studies. In "Selected Abstracts from the 2004 National Conference on the Social Norms Model." The Report on Social Norms: Working Paper #14, Little Falls, NJ: PaperClip Communications.

Cimini, MD, Page, JC & Trujillo, D. (2002). Using Peer Theater to Deliver Social Norms Information: The Middle Earth Players Program. The Report on Social Norms: Working Paper #8, 2(1). Little Falls, NJ: PaperClip Communications.

Clapp, JD, Lange, JE, Russell,C, Shillington, A & Voas, RB (2003). A Failed Social Marketing Campaign. Journal of Studies on Alcohol, 64:409-414.

Clapp, JD & McDonnell, AL (2000). The Relationship of Perceptions of Alcohol Promotion and Peer Drinking Norms to Alcohol Problems Reported by College Students. Journal of College Student Development, 41(1):20-26

Clapp, JD, Russell, C & DeJong, W (2001). Done 4 Did Zip: Evaluating a Failed Social Norms Marketing Campaign. Presented at the Fourth National Conference on the Social Norms Model. Anaheim, CA, July 18-20.

Clemens, H & Thombs, D (2004). Is Normative Feedback the "Active Ingredient" of Effective, Universal School-Based Prevention Programs? The Report on Social Norms, Volume 3(5)

Collins, SE, Carey, KB & Sliwinsky, MJ (2002). Mailed Personal Normative Feedback as a Brief Intervention for At-Risk College Drinkers. Journal of Studies on Alcohol, 63:559-567.

Crandall, CS, Eshleman, A & O'Brien, L (2002). Social Norms and the Expression of Prejudice: The Struggle for Internalization. Journal of Personality and Social Psychology, 82(3):359-378.

Craig, D (2002). The Truth About Teen Alcohol Use 101. Discover Films. www.discover-films.com or 888 649-6453

Cunningham, JA, Wild TC, Bondy, SJ, & Lin, E (2001). Impact of Normative Feedback on Problem Drinkers: A Small-Area Population Study. Journal of Studies on Alcohol, 62(2):228-233.

D'Amico, EJ, et. al. (2001). Progression Into and Out of Binge Drinking Among High School Students. Psychology of Addictive Behaviors, 15:341-349.

DeJong, W (2003a). A Social Norms Approach to Building Campus Support for Policy Change. Chapter 9 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

DeJong, W (2003b). An Interview with William DeJong. The Report on Social Norms, Volume 3,(1).

DeJong, W (2000). Report to the field: The case of the missing misperception. HECNews (On-Line News Service). (October 13) Washington, DC: U.S. Department of Education, Higher Education Center for Alcohol and Other Drug Prevention.

Dimeff, L, Baerk J, Kvilahan, D & Marlatt, AG (1999). Brief Alcohol Screening and Intervention for College Students: A Harm Reduction Approach (BASICS). NY: Guilford Press.

Dubuque, E, Ciano-Boyce, C & Shelley-Sireci, L (2002). Measuring Misperceptions of Homophobia on Campus. The Report on Social Norms: Working Paper #4, Little Falls, NJ: PaperClip Communications.

Dunnagan, T, Hayes, G, Linkenbach, J & Shatwell, P (2003). Developing Theoretical and Environmental Policy for Underage Drinking. American Journal of Health and Behavior. 27(5):508-523.

Fabiano, P (2003). Applying the Social Norms Model to Universal and Indicated Alcohol Interventions at Western Washington University. Chapter 5 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

Fabiano, P (1999). Learning Lessons and asking Questions about College Social Norms Campaigns. Presentation given at Second The National Conference on the Social Norms Model: Science Based Prevention, Big Sky, MT, July 29.

Fabiano, P, Perkins, HW, Berkowitz, AB, Linkenbach, J & Stark, C (2004). Engaging Men as Social Justice Allies in Ending Violence Against Women: Evidence for a Social Norms Approach. Journal of American College Health, 52(3):105-112.

Fabiano, P & Lederman, LC (2002). Top Ten Misperceptions of Focus Groups Research. The Report on Social Norms: Working Paper #3, Little Falls, NJ: PaperClip Communications.

Far, J & Miller, J (2003). The Small Group Norms Challenging Model: Social Norms Interventions with Targeted High Risk Groups. Chapter 7 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass.

Foss, R Deikkman, S, Bartley, C & Goodman, A (2004). Social Norms Program Reduces Measured and Self-Reported Drinkinng at UNC-CH. The Report on Social Norms: Working Paper #14, Little Falls, NJ, PaperClip Communications.

Foss, R, Deikman, S, Goodman, A & Bartley, C (2003). Enhancing a Norms Program to Reduce High-Risk Drinking Among First Year Students. University of North Carolina Chapel Hill. Downloaded from www.hsrc.unc.edu/pressrelease/collegealcohol.htm.

Glider, P., Midyett, S., Mills-Novoa, B., Johannessen, K and 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(2), 207-220.

Gomberg, L, Schneider, SK & DeJong, W (2001). Evaluation of a Social Norms Marketing Campaign to Reduce High-Risk Drinking at the University of Mississippi. American Journal of Drug and Alcohol Abuse, 27(2):375-389.

Gottfried, MGS (2002). Perceptions of Others' Masculinity Beliefs: Conforming to a False Norm?, Presented at the 110th Conference of the American Psychological Association, August 22-25, Chicago.

Granfield, R (2002). Can You Believe It? Assessing the Credibility of a Social Norms Campaign. The Report on Social Norms: Working Paper #2, Little Falls, NJ: Paper-Clip Communications.

Haines, MP (2003). "Social Norms is Effective: Wechsler Study Flawed." Available from the website of the National Social Norms Resource Center: www.socialnorm.org.

Haines, MP (1996). A Social Norms Approach to Preventing Binge Drinking at Colleges and Universities, Newton, MA: The Higher Education Center for Alcohol and Other Drug Prevention.

Haines, MP & Barker, GP (2003). The NIU Experiment: A Case Study of the Social Norms Approach. Chapter 2 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

Haines, MP, Barker, GP & Rice, R (2003). Using Social Norms to Reduce Alcohol and Tobacco Use in Two Midwestern High Schools. Chapter 14 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

Haines, MP & Spear, SF (1996). Changing the Perception of the Norm: A Strategy to Decrease Binge Drinking Among College Students. Journal of American College Health, 45: 134-140.

Hancock, L (2003). Social Norms and Prayer. The Report on Social Norms, Volume 2(3)

Hancock, L & Henry, N (2003). Perceptions, Norms and Tobacco Use in College Residence Hall Freshmen: Evaluation of a Social Norms Marketing Intervention. Chapter 8 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

Hancock, L, Abhold, J, Gascoigne, J & Altekruse M. (2002). Applying Social Norms Marketing to Tobacco Cessation and Prevention: Lessons Learned from Three Campaigns. The Report on Social Norms: Working Paper #6, Little Falls, NJ, PaperClip Communications.

Hansen, WB (1993). School-Based Alcohol Prevention Programs. Alcohol Research and Health, 17(1): 54-60.

Hansen, WB & Graham, JW (1991). Preventing Alcohol, Marijuana, and Cigarette Use among Adolescents: Peer Pressure Resistance Training versus Establishing Conservative Norms. Preventive Medicine, 20:414-430.

Hellstrom, D (2004). State of Minnesota Department of Public Safety Project: The Prevention Collaborative's Positive Social Norming Campaign. The Report on Social Norms: Working Paper #7, Little Falls, NJ, PaperClip Communications.

Hillenbrand-Gunn, TL, Heppner, MJ, Mauch, PA & Park, Hyun-Joo (2004). Acquaintance Rape and Male High School Students: Can a Social Norms Intervention Change Attitudes and Perceived Norms? Paper presented at the Annual Convention of the American Psychological Association (August, 2004), Honolulu, Hawaii.

Hingson, RW & Howland, J (2002). Comprehensive Community Interventions to Promote Health: Implications for College-Age Drinking Problems. Journal of Studies on Alcohol, Supplement 14:226-239.

Hunter, D (1998). Taking Control: A Student Initiative. The Peer Educator: Social Norming – Trusting the Truth. 21(1), Denver: Bacchus/Gamma

Illinois Higher Education Center (2003). Resources on the Small Group Norms Challenging Model. Available from www.illinoishec.org

Jeffrey, LR, Negro, P, Demond, M & Frisone, JD (2003). The Rowan University Social Norms Project. Chapter 6 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

Johannessen, K (2004). Reducing High-Risk Drinking in Sorority Women Using a Social Norms Appproach. The Report on Social Norms: Working Paper #14, Little Falls, NJ, Paper-Clip Communications.

Johannessen, K & Glider, P (2003). The University of Arizona's Campus Health Social Norms Media Campaign. Chapter 4 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

Johannessen, K, Glider, P, Collins, C, Hueston, H & DeJong, W. et al (2001). Preventing Alcohol-Related Problems at the University of Arizona's Homecoming: An Environmental Management Case Study. American Journal of Drug and Alcohol Abuse, 27(3):587-597.

Johannessen, KJ, Collins, C, Mills-Novoa, BM & Glider, P (1999). A Practical Guide to Alcohol Abuse Prevention: A Campus Case Study in Implementing Social Norms and Environmental Management Approaches. Available from The Higher Education Center for Alcohol and Other Drug Prevention (www.edc.org/hec) or www.socialnorms.CampusHealth.net.

Kandel, DB (1985). On Processes of Peer Influences in Adolescent Drug Use: A Developmental Perspective. Advances in Alcohol and Substance Use, 4:139-163.

Kilmer, JR & Cronce, JM (2003). Do Your Data Do You Justice? Evaluating Social Norms Interventions. The Report on Social Norms, Volume 2(7).

Korcuska, JS & Thombs, DL (2003). Gender Role Conflicts and Sex-Specific Drinking Norms: Relationships to Alcohol Use in Undergraduate Women and Men. Journal of College Student Development, 44(2):204-215.

Kumpfer, K (1997). What Works in the Prevention of Drug Abuse: Individual, School and Family Aproaches. Page 69-106 in: Youth Substance Abuse Prevention Initiative: Resource Papers. Rockville, MD: Substance Abuse and Mental Health Services Administration, US Department of Health and Human Services.

Kusch, J (2002). Test of A Social Norms Approach to Understanding Disordered Eating Practices in College Women, Dissertation Submitted to the Department of Psychology, Washington State University, Pullman, WA.

Kypri, K & JD Langley (2003). Perceived Social Norms and their Relation to University Student Drinking. Journal of Studies on Alcohol, 64:829-834.

Laird, T & Venable, R (2003). A Theoretical View of Social Norms with Campus Drinking at a Historically Black College. In "Recent Presentations on Social Norms at Annual Meetings of Professional Associations: 2002-2003." The Report on Social Norms: Working Paper #10, Little Falls, NJ, PaperClip Communications.

Langford, L, Peterson, D & Stone, L (2004). A Review of "The Truth About Teen Alcohol Use 101" – A Social Norms Video for High Schools." The Report on Social Norms, Volume 3, #5, Little Falls, NJ, Paper-Clip Communications.

Larimer, M (2003). A Review of The Social Norms Approach to Preventing School and College Age Substance Abuse. The Report on Social Norms: Working Paper #12, Little Falls, NJ, PaperClip Communications.

Larimer, ME & Neighbors, C (2003). Normative Misperception and the Impact of Descriptive and Injunctive Norms on College Student Gambling. Psychology of Addictive Behaviors, 17(3):225-243.

Larimer, ME & Cronce, JM (2002). Identification, Prevention and Treatment: A Review of Individual-Focused Strategies to Reduce Problematic Alcohol Consumption by College Students. Journal of Studies on Alcohol, Supplement 14:148-163.

Larimer, ME, Turner, AP, Anderson, BK, Fader, J, Kilmer, JR, Palmer, RS & Cronce, JM (2001). Evaluating a Brief Alcohol Intervention with Fraternities. Journal of Studies on Alcohol,, 62: 370-380.

Larimer, ME, Irvine, D, Kilmer, J & Marlatt, GA (1997). College Drinking and the Greek System: Examining the Role of Perceived Norms for High-Risk Behavior. Journal of College Student Development, 38(6):587-598

Lewis, MA and Neighbors, C (forthcoming). Gender-Specific Misperceptions of College Student Drinking Norms. Psychology of Addictive Behaviors,

Licciardone, JC (2003). Perceptions of Drinking and Related Findings from the Nationwide Campuses Study. Journal of American College Health, 51(6):238-245.

Linkenbach, J (2003). The Montana Model: Development and Overview of a Seven-Step Process for Implementing Macro-Level Social Norms Campaigns. Chapter 11 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

Linkenbach, J (2001). Cultural Cataracts: Identifying and Correcting Misperceptions in the Media. The Report on Social Norms: Working Paper #1, Little Falls, NJ, PaperClip Communications.

Linkenbach, J., Berkowitz, A., Cornish, J., Fabiano, P., Haines, M., Johannessen, K., Perkins, H. W., Rice, R (2002) The Main Frame:Strategies for Generating Social Norms News. A PDF Document available at www.mostofus.org.

Linkenbach, J & Perkins, HW (2003A). Most of Us Are Tobacco Free: An Eight-Month Social Norms Campaign Reducing Youth Initiation of Smoking in Montana. Chapter 13 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

Linkenbach, J & Perkins, HW (2003B). Misperceptions of Peer Alcohol Norms in a Statewide Survey of Young Adults. Chapter 10 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

Linkenbach, J, Perkins, HW & DeJong, W (2003). Parent's Perceptions of Parenting Norms: Using the Social Norms Approach to Reinforce Effective Parenting. Chapter 15 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass

Marks, G, Graham, JW & Hansen, WB (1992). Social Projection and Social Conformity in Adolescent Alcohol Use: A Longitudinal Analysis. Personality and Social Psychology Bulletin, 18(1):96-101.

Mattern, JM & Neighbors, C (2004). Social Norms Campaigns: Examining the Relationship Between Changes in Perceived Norms and Changes in Drinking Levels. Journal of Studies on Alcohol, 64(5):489-493.

Miller, DT & McFarland, C (1987). Pluralistic Ignorance: When Similarity is Interpreted as Dissimilarity. Journal of Personality and Social Psychology, 53(2):298-305.

Miller, DT & McFarland, C (1991). When Social Comparison Goes Awry: The Case of Pluralistic Ignorance. Chapter 11 in Suls, J & Wills, T (Eds) Social Comparison: Contemporary Theory and Research, Hillsdale, NJ: Erlbaum.

Murphy, JG et al (2001). Relative Efficacy of a Brief Motivational Intervention for College Student Drinkers. Psychology of Addictive Behaviors, 15(4):373-379.

Neighbors, C, ME Larimer, & ,Lewis, MA (2004). Targeting Misperceptions of Descriptive Drinking Norms: Efficacy of a Computer Delivered Personalized Normative Feedback Intervention. Journal of Consulting and Clinical Psychology, 72(3):434-447..

NIAAA (2002). How to Reduce High Risk College Drinking: Use Proven Strategies, Fill Research Gaps. Final Report of the Panel on Prevention and Treatment, Task Force of the National Advisory Council on Alcohol Abuse and Alcoholism. Washington, DC, National Institutes of Health.

Odahowski, MO & Miller, CM (2000). Results of the 2000 Health Promotion Survey on the Class of 2003. Office of Health Promotion. Charlottesville: University of Virginia. (Available from: http://www.virginia.edu/studenthealth/hp/norms/showmethedata.html)

Ott, CH & Haertlein, C (2002). Social Norms Marketing: A Prevention Strategy to Decrease High-Risk Drinking Among College Students. The Nursing Clinics of North America, 37:351-364.

Page, RM, Scanlan, A & Gilbert, L (1999). Relationship of the Estimation of Binge-Drinking Among College Students and Personal Participation in Binge Drinking: Implications for Health Education and Promotion. Health Education, 30:98-103.

Peeler, CM, Far, J, Miller, J & Brigham, T (2000). An Analysis of the Effects of a Program to Reduce Heavy Drinking Among College Students. Journal of Alcohol and Drug Education, 45: 39-54.

Perkins, HW (2004). Getting Social Norms Results by Improving Implementation and Assessment. The Report on Social Norms, 3(9)5.

Perkins, HW (2003a). The Emergence and Evolution of the Social Norms Approach to Substance Abuse Prevention. Chapter 1 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass.

Perkins, HW (2003b). The Promise and Challenge of Future Work on the Social Norms Model. Chapter 17 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass.

Perkins, HW (2002). Social Norms and the Prevention of Alcohol Misuse in Collegiate Contexts. Journal of Studies on Alcohol, Supplement 14:164-172.

Perkins, HW (1997) College Student Misperceptions of Alcohol and Other Drug Use Norms Among Peers. In: Designing Alcohol and Other Drug Prevention Programs in Higher Education: Bringing Theory Into Practice, (P. 177-206). Newton, MA: The Higher Education Center for Alcohol and Other Drug Prevention.

Perkins, HW (1987). Parental Religion and Alcohol Use Problems as Intergenerational Predictors of Problem Drinking Among College Youth. Journal for the Scientific Study of Religion, 26(3):340-357.

Perkins, HW (1985). Religious Traditions, Parents, and Peers as Determinants of Alcohol and Drug Use Among College Students. Review of Religious Research, 27(1):15-31.

Perkins, HW and Berkowitz, AD (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, HW & Craig, DA (2004). Most Valuable Players – Using Social Norms to Target Athletes as a High-Risk Sub-Population. The Report on Social Norms: Working Paper #12, Little Falls, NJ, PaperClip Communications.

Perkins, HW & Craig, DA (2003a). The Hobart and William Smith Colleges Experiment: A Synergistic Social Norms Approach Using Print, Electronic Media and Curriculum Infusion to Reduce Collegiate Problem Drinking. Chapter 3 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass.

Perkins, HW & Craig, DA (2003b). The Imaginary Lives of Peers: Patterns of Substance Use and Misperceptions of Norms Among Secondary School Students. Chapter 12 in HW Perkins (Ed). The Social Norms Approach to Preventing School and College Age Substance Abuse: A Handbook for Educators, Counselors, Clinicians, San Francisco, Jossey-Bass.

Perkins. HW & Craig, DA (2002). A Multi-faceted Social Norms Approach to Reduce High-Risk Drinking: Lessons from Hobart and William Smith Colleges. Newton, MA: The Higher Education Center for Alcohol and Other Drug Prevention. (Also available at www.edc.org/hec).

Perkins, HW & Linkenbach, J (2004). Most of Us Wear Seatbelts: The Process and Outcomes of a Three-Year Statewide Adult Seatbelt Campaign. The Report on Social Norms: Working Paper #14, Little Falls, NJ, Paper-Clip Communications.

Perkins HW & Linkenbach, J (2003). Harvard Study of Social Norms Deserves an "F" Grade for Flawed Research Design. Available from the website of the National Social Norms Resource Center: www.socialnorm.org.

Perkins, HW, Meilman, PW, Leichliter, JS, Cashin, MA & Presley, CA (1999) Misperceptions of the Norms for the Frequency of Alcohol and Other Drug Use on College Campuses. Journal of American College Health, 47:253-258.

Perkins, HW & Wechsler, H (1996). Variation in Perceived College Drinking Norms and Its Impact on Alcohol Abuse: A Nationwide Study. Journal of Drug Issues, 26(4):961-974.

Perry, CL, Kelder, SH, Murray, DM & Knut-Inge, K (1992). Communitywide Smoking Prevention: Long-Term Outcomes of the Minnesota Heart Health Program and the Class of 1989 Study. American Journal of Public Health. 82(9):1210-1216.

Pollard, JW, Freeman, JE, Ziegler, DA, Hersman, MN & Goss, CW (2000). Predictions of Normative Drug Use by College Students: False Consensus, False Uniqueness, or Just Plain Accuracy? Journal of College Student Psychotherapy, 14(3): 5-12.

Prentice, DA & Miller, DT (1996) Pluralistic Ignorance and The Perpetuation of Social Norms by Unwitting Actors. Advances in Experimental Social Psychology, 28:161-209.

Prentice, DA & Miller, DT (1993). Pluralistic Ignorance and Alcohol Use on Campus: Some Consequences of Misperceiving the Social Norm. Journal of Personality and Social Psychology, 64(2)243-256.

Pryor, J (2001) Effective Evaluation and Research Tools and Techniques for Your Social Norms Campaign. Presented at the Fourth National Conference on the Social Norms Model. Anaheim, CA, July 18-20.

Rice, R (2003). An Overview of the 2003 National Conference on the Social Norms Model. The Report on Social Norms: Working Paper # 7, p.3, Little Falls, NJ: PaperClip Communications.

Rice, R (2002). Some Notes on Methodological and Other Issues. In A. Berkowitz: Responding to the Critics: Answers to Some Common Questions and Concerns about the Social Norms Approach. The Report on Social Norms: Working Paper # 13 , Little Falls, NJ: PaperClip Communications.

Rice, R (2001). The Fourth Annual National Conference on the Social Norms Model. The Report on Social Norms, 1(1):6.

Rodrieguez, R, Kulley, J & Barrow. J (2003). A SGNM Intervention for Men to Prevent Sexual Assault. The Report on Social Norms, 3(3):3.

Ross, L, Greene, D & House, P (1977). The "False Consensus Effect": An Egocentric Bias in Social Perception and Attribution Processes. Journal of Experimental Social Psychology. 13: 279-301.

Schroeder, CM & Prentice, DA (1998). Exposing Pluralistic Ignorance to Reduce Alcohol Use Among College Students. Journal of Applied Social Psychology, 28: 2150-2180.

Sher, K, Bartholow, BD & Nanda, S (2001). Short- and Long-Term Effects of Fraternity and Sorority Membership on Heavy Drinking: A Social Norms Perspective. Psychology of Addictive Behaviors, 15:42-51

Sherman, SJ, Presson, C, Chassin, L, Corty,E & Olshavsky, R (1983). The False Consensus Effect in Estimates of Smoking Prevalence: Underlying Mechanisms. Personality and Social Psychology Bulletin, 9(2):197-207.

Smolinsky, T (2002). What Do We Really Think? A Group Exercise to Increase Heterosexual Ally Behavior. The Report on Social Norms: Working Paper #4, Volume 1, Little Falls, NJ: PaperClip Communications.

Steffian, G (1999). Correction of Normative Misperceptions: An Alcohol Abuse Prevention Program. Journal of Drug Education, 29(2):115-138.

Stein, JL & JA Barnett (2004). Male College Students' Willingness to Prevent Rape: The Impact of Personal Attitudes, Referent Group Norms, and Peer Educators. Presented at the Seventh Annual National Social Norms Conference, Chicago, IL, July 21-23, 2004.

Steinman, KJ (2003). College Students' Early Cessation From Episodic Heavy Drinking: Prevalence and Correlates. Journal of American College Health, 51(5):197-204.

Suls, J & Green, P (2003). Pluralistic Ignorance and College Student Perceptions of Gender-Specific Alcohol Norms. Health Psychology, 22(5):479-486.

Suls, J & Wan, CK (1987). In Search of the False-Uniqueness Phenomenon: Fear and Estimates of Social Consensus. The Journal of Personality and Social Psychology. 52:211-217.

Sussman, S, Dent, CW, Mestel-Rauch, J, Johnson,CA, Hansen, WB & Flay, BR (1988). Adolescent Nonsmokers, Triers and Regular Smokers' Estimates of Cigarette Smoking and Prevalence: When Do Overestimations Occur and by Whom? Journal of Applied Social Psychology. 18(7):537-551.

Toch, H & Klofas, J (1984). Pluralistic Ignorance, Revisited. In GM Stephenson and JH Davis (Eds), Progress in Applied Social Psychology, Vol 2, New York: Wiley.

Thombs, DL (1999). Alcohol and Motor Vehicle Use: Profiles of Drivers and Passengers. American Journal of Health and Behavior, 23:13-24.

Thombs, DL (2000). A Test of the Perceived Norms Model to Explain Drinking Patterns Among University Student Athletes. Journal of American College Health, 49: 75-83.

Thombs, DL, Wolcott, BJ & Farkash, LGE (1997). Social Context, Perceived Norms and Drinking Behavior in Young People. Journal of Substance Abuse, 9:257-267.

Trockel, M, Williams, S & Reis, J (2003). Considerations for More Effective Social Norms Based Alcohol Education on Campus: An Analysis of Different Theoretical Conceptualizations in Predicting Drinking Among Fraternity Men. Journal of Studies on Alcohol, 64:550-59.

University of Michigan (1993). University of Michigan Survey Regarding Alcohol and Other Drugs. UM Initiative on Alcohol and Other Drugs, Ann Arbor, MI.

Usdan, S (2003). From the Field: "After Hours" at Mississippi State. The Report on Social Norms, 2(3).

Walters, ST & ,Woodall, WG (2003). Mailed Feedback Reduces Consumption Among Moderate Drinkers Who are Employed. Prevention Science, 4(4):287-294.

Walters, ST (2000). In Praise of Feedback: An Effective Intervention for College Students Who are Heavy Drinkers. Journal of American College Health, 48:235-238.

Wechsler, H, Nelson,T, Lee, JE, Seibring,M, Lewis,C & Keeling, R (2003). Perception and Reality: A National Evaluation of Social Norms Marketing Interventions to Reduce College Students' Heavy Alcohol Use. Journal of Studies on Alcohol, 64:484-494.

Wechsler, H & Kuo, M (2000). College Students Define Binge Drinking and Estimate Its Prevalence: Results of a National Survey. Journal of American College Health, 49: 57-64

Wenzel, M (2001). Misperceptions of Social Norms About Tax Compliance, Working Paper #7 (A Prestudy) and Working Paper #8 (A Field Experiment), Centre for Tax System Integrity, Australian National University.

Werch, CCE, Pappas, DM, Carlson, JM, DiClemente, CC, Chally, PS & Sinder, JA (2000). Results of a Social Norm Intervention to Prevent Binge Drinking Among First-Year Residential College Students. Journal of American College Health, 49: 85-92.

White, J, Williams, LV and Cho, D (2003). A Social Norms Intervention to Reduce Coercive Behaviors among Deaf and Hard-of-Hearing College Students. The Report on Social Norms:Working Paper #9, Volume 2(4). Little Falls, NJ, PaperClip Communications.

Wolfson, S (2000). Student's Estimates of the Prevalence of Drug Use: Evidence for a False Consensus Effect. Psychology of Addictive Behaviors, 14(3):295-298.