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Suicide Prevention in Social Work Education: How Prepared Are Social Work Students?

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Abstract

The prevalence of suicide suggests social workers will encounter clients at risk for suicide, but research shows social workers receive little to no training on suicide and suicide prevention and feel unprepared to work effectively with clients at risk. Baseline results from a randomized intervention study of the Question, Persuade, and Refer (QPR; Quinnett, 1995) suicide prevention gatekeeper training with 73 advanced MSW student interns show suicide knowledge was average, attitudes about suicide prevention were generally neutral, and use of suicide prevention practice skills was low. These results indicate an opportunity for enhancing student outcomes through training and inform social work education regarding necessary preparation for student interns and new graduates to identify and respond effectively to client suicide risk.
How Prepared are Social Workers to Help Clients at Risk for Suicide: Suicide Prevention in Social Work Education

Every 15.2 minutes a person dies by suicide in the U.S., making suicide the 11th leading cause of death (Centers for Disease Control [CDC], 2008). Suicide does not discriminate; it affects persons of all ages, racial groups, religious beliefs, genders, and educational levels (CDC, 2008). Due to its prevalence in today’s society, the U.S. Surgeon General, Dr. David Satcher, declared suicide to be a major risk to public health (U.S. Public Health Service, 1999) and in 2001, the U.S. Department of Health and Human Services (U.S. DHHS) noted suicide prevention training, for social workers and other human service professionals, as a key strategic initiative in its national strategy for suicide prevention.

The majority of persons who contemplate suicide seek help from a mental health professional within several months prior to their attempt (Goldsmith, Pellmar, Kleinman, & Bunney, 2002; Luoma, Martin, & Pearson, 2002); suggesting that when accurate assessment and appropriate intervention by a professional is provided, suicides can be prevented. Unfortunately, chronic risk factors and acute warning signs of suicide are often missed by mental health professionals, including but not limited to social workers, based in part to the fact that professionals rarely receive formal training and education on the assessment of and response to client suicide risk (Dickinson, Sumner, & Fredrick, 1992; Jacobson, Ting, Saunders, & Harrington, 2004; Feldman & Freedenthal, 2006; Schmitz et al., 2012; Jacobson, Osteen, Jones, & Berman, 2012). Despite this lack of preparation, the likelihood that social workers and other mental health professionals will come in contact with a client at risk for suicide is high (Feldman & Freedenthal, 2006; Jacobson, et al., 2004; Joe & Neidermeier, 2006).
Working with clients at risk for suicide is one of the most challenging clinical tasks for professionals (Deutsch, 1984; Hendin, Haas, Maltsberger, Szanto, & Rabinowicz, 2004). Bongar (2002) refers to clinical work with clients at risk for suicide as an “occupational hazard,” which has the potential to result in adverse effects for the mental health professional, such as compassion fatigue and burnout (Hendin et al., 2004; Jacobson, et al., 2004; Sanders, Jacobson, & Ting, 2005; Ting, Sanders, Jacobson, & Power, 2006). As compared to seasoned professionals, students and interns report higher levels of anxiety regarding working with a suicidal client and feel unprepared to talk with a potentially suicidal client (Kleespies, Deleppo, Gallagher, & Niles., 1999; Knox, Burkard, Jackson, Schaack, & Hess, 2006). Additionally, students or interns, and even seasoned professionals, often report fear of being blamed for client suicidal behavior, which contributes to decreased self-efficacy and professional competence (Chemtob, Hamada, Bauer, Torigoe, & Kinney, 1988; Menninger, 1991; Ting, Sanders, Jacobson, & Power, 2006).

It is critical that social workers have proper knowledge and professional training to identify and respond to client suicide risk. This is particularly important given the fact that social workers staff the majority of community-based mental health services within the U.S.; settings in which clients at risk for suicide often seek help (Farifteh et al., 2002; Manderscheid et al., 2004). Feldman and Freedenthal (2006) conducted a national survey of social workers and found that despite high likelihood of working with a suicidal client (93% of respondents reported working with suicidal clients), more than two-thirds of the respondents (67.4%) indicated that their training for suicide prevention and intervention had been inadequate. Results from a national survey of school social workers completed 10 years prior to Feldman and Freedenthal (2006) supported this need for training, ranking knowledge of suicide and skills as “extremely
important” and “very complex” (Allen-Meares & Dupper, 1998, p. 109). Results from a national study of mental health social workers identified specific skills that social workers were seeking with regard to suicide education, including assessment of suicide risk, treatment, and coping with fatal and nonfatal client suicide behavior (Sanders, Jacobson, & Ting, 2008). Given this need in education and clinical work, social work educators have a responsibility to prepare social workers for this challenging work, but given the fact that only 21.2% of respondents in Feldman and Freedenthal’s (2006) sample reported receiving appropriate formal training as part of their MSW program, there remains an enormous gap between educational needs and actual educational content.

Part of professional preparation to work with clients at risk for suicide includes knowledge about suicide and suicide prevention. Specifically, preparatory knowledge should include topics such as suicide chronic risk factors, acute warning signs, protective factors, and case management options (Pisani, Cross, & Gould, 2011; Quinnett, 1995; Sanders, et al., 2008). Herron, Ticehurst, Appleby, Perry, and Cordingley (2001) suggested negative attitudes about working with clients at risk for suicide can decrease clinicians’ desire to seek training to work with these at-risk clients. Therefore, improving clinicians’ attitudes about suicide and suicide prevention, in addition to improving their confidence regarding their ability to assess and respond to clients at risk for suicide, should contribute to better client outcomes with regard to suicide risk management and possible engagement in additional training through continuing professional education as new evidence-based practices emerge within the field (Chan, Chien, & Tso, 2009; Gibb, Beautrais, & Surgenor, 2010; McAllister, Billett, Moyle, & Zimmer-Gembeck, 2009).
Research on clinical practice outcomes with clients at risk for suicide suggest the presence of relationships between knowledge, attitudes, and behaviors (Pompili, Girardi, Ruberto, Kotzalidis, & Tatarelli, 2005; Chan et al. 2009; Pisani, Cross, & Gould, 2011; Jacobson, et al., 2012), and yet the exact nature of these relationships is not well defined, nor are findings relating these three concepts consistent across the literature. Most of the literature on suicide training looks at direct effects of training on knowledge, attitudes, and practice behaviors, but not the interactions between each or how these interactions may influence each other over time (Jacobson, et al., 2012; Chagnon, Houle, Marcoux, & Renaud, 2008). For example, Jacobson, et al. (2012) reported improved attitudes toward clients at risk for suicide, confidence to work with clients at risk, and behaviors following suicide prevention training. Oordt, Jobes, Fonseca, and Schmidt (2009) reported that professionals’ knowledge about suicide increased after training, which was related to desired practice behaviors; however, increased knowledge and behaviors were not correlated with improved attitudes.

Relationships between knowledge, attitudes and behaviors within social work specifically have not been well researched (Carpenter, 2011). In a literature review conducted within related fields of sociology and psychology, Chaiklin (2011) reported that improved attitudes toward vulnerable populations, in addition to improved confidence to practice were not always associated with practice behaviors. Postmus, McMahon, Warrener, and Macri (2011) studied effects of training on social work students’ attitudes, behaviors and work with survivors of violence and found that while training led to improved attitudes and behaviors toward survivors, these observed improvements were not strongly related to the training. Again, studies in social work and related human service fields have suggested that training can lead to improved
knowledge, attitudes, and behaviors, but the relationships between such constructs have not been well researched (Carpenter, 2011; Chaiklin, 2011).

This article reports the baseline results from a randomized intervention study of the Question, Persuade, and Refer (QPR; Quinnett, 1995) suicide prevention gatekeeper training with a sample of advanced student interns pursuing their Masters of Social Work (MSW) degree at a large Mid-Atlantic public university. The specific research questions answered by the current study are:

1) How knowledgeable are MSW students about client suicide and suicide prevention regarding risk factors, acute warning signs, risk formulation and response, and institutional resources?

2) What are MSW students’ attitudes about suicide prevention and what are their levels of self-perceived efficacy or reluctance to work with clients at risk for suicide?

3) Practice with Clients at Risk for Suicide:
   a) Are MSW students currently working with clients at risk for suicide within their advanced field placements?
   b) Among students who work with clients at risk for suicide in their field placements, how often do they engage in recommended suicide prevention interventions including suicide risk assessment, risk formulation, case management, and use of safety protocols and referral resources?

4) Are there relationships between MSW students’ knowledge about suicide and suicide prevention, attitudes toward suicide prevention, and practice behaviors within their field placements?
Method

Sample

The study sample consisted of advanced (advanced standing or second year) MSW students at a large School of Social Work located within the mid-Atlantic region. A list of all current, advanced MSW students ($N=417$) was obtained from the school’s Office of Field Education, and from this list, a random sample of 112 students was selected. Inclusion criteria included current student enrollment in good status with the University, and students had to be enrolled in their advanced (or second year) field placement at the time of the study. Only those students who were randomly selected ($N=112$) from the list of all advanced MSW students were invited to participate in the study. The decision to randomly select 112 students was based on both a power analysis and available resources. Using G*Power software (v. 3.0.10), it was determined that the minimum sample size needed to achieve 80% statistical power for detecting a medium effect size was 74 participants. The researchers increased this initial estimate number by 50% to 112 students, anticipating a 60-70% response rate. Although it would have been possible to increase the sample size based on program enrollment, limited financial resources were available for conducting the training and carrying out the study.

Seventy-three students consented to participate and completed the online survey (65% response rate). The majority of respondents were female (94.5%) and Caucasian (67.1%). Students ranged in age from 21 to 55 years old ($M=30.6$). Approximately one-fourth (27.4%) of the respondents entered the MSW program as advanced-standing students. The University differentiates between clinical field placements (i.e. providing counseling services face-to-face) and Management, Administration, and Community Organizing (MACO) field placements (i.e.
providing macro-level social work services). The majority of students in the present study reported being enrolled in an advanced clinical field placement (86.1%), with the remaining 13.9% identifying their field placement as MACO.

Although it is not possible to discern if non-respondents were different from respondents, the demographic characteristics of participating students were generally representative of the overall currently enrolled, advanced MSW student body based on program statistics. In comparison to the overall MSW student body, the study sample had a lower percentage of males, a higher percentage of Caucasians, proportionally more clinical students, and an overrepresentation of advanced standing students. However, tests of differences in proportions were not statistically significant (p>.05) for any of these variables. A summary of descriptive statistics for the sample compared to the broader MSW program is provided in Table 1.

[Insert Table 1]

Measures

The complete survey was created by the researchers using existing survey items and standardized measures, as well as author developed content. Wyman et al.'s (2008) evaluation study of the QPR gatekeeper training for teachers and other professionals working with youth, was used as a model for development of the survey measures. Wyman et al.’s (2008) survey included several different constructs with short measures for each construct. Each of the measures included in the present study is described in the following paragraphs. An overview of all measures is provided in Table 2 and includes response formats, scoring protocols, and reliability estimates.

*Knowledge about suicide and suicide prevention*
Knowledge of suicide and suicide prevention was measured using 3 standardized scales and a measure created by the authors. Knowledge of suicide prevention was measured using the standardized 14-item measure, *Knowledge of Suicide Warning Signs and Intervention Behaviors*, developed by the QPR Institute and modified for use in studies of suicide prevention in school settings (Wyman et al., 2008). The individual questions measure declarative knowledge or knowledge that is factual. Content validity is supported through review by an expert panel (Wyman et al., 2008). The researchers created a *Risk Factor List* asking students to list as many suicide chronic risk factors and acute warning signs as possible. Scoring was based on criteria established by the U.S. Centers for Disease Control (2010) and the U.S. DHHS (2001). Responses were independently coded and scored by two members of the research team to increase accuracy.

Perceived knowledge, defined as how the student assesses his or her level of knowledge about what to do and role in detecting and helping a suicidal client was assessed using the *Self-Evaluation of Suicide Prevention Knowledge* (Wyman, et al., 2008). With permission from the scale developer, the researchers modified specific questions so that they are appropriate for use within various social work field placement settings. The *Knowledge of Institutional Resources for Suicidal Clients* (Wyman et al., 2008) assessed the participant’s awareness of printed materials, referral resources, and policies related to suicide prevention within the social work agency.

*Attitudes about suicide and suicide prevention*

Four standardized scales were used to measure students’ attitudes toward suicide and suicide prevention. The *Attitudes to Suicide Prevention* scale (ASP; Herron et al., 2001) has been
Suicide prevention was used in prior research to study attitudes and stigma about suicide prevention (Brunero, Smith, Bates, & Fairbrother, 2008; Herron et al., 2001). Self-efficacy and perceived ability to utilize suicide prevention skills were measured using several rating scales modified from Wyman et al. (2008). The Perceived Preparedness for Gatekeeper Role measured students’ self-assessment of preparedness to perform suicide prevention activities. Ability to perform suicide prevention activities was measured using the Efficacy to Perform Gatekeeper Role. Reluctance to work with clients at risk for suicide was measured using the Reluctance to Engage with Suicidal Clients scale.

Behaviors related to suicide prevention

Behaviors related to suicide prevention were assessed using descriptive statistics and four standardized measures. MSW students were asked a series of questions related to their experiences working with clients at their field placements. Questions assessing the frequency of direct service with clients including asking students the average number of individuals, couples or families, and groups they worked with on average, per week, as well as the average number of hours per week spent providing direct client services. Exposure to clients at risk for suicide was measured by asking students to indicate the number of times they thought a client’s behavior might indicate she or he was considering suicide.

Standardized measures of suicide prevention behaviors were categorized by asking clients about suicide, making appropriate referrals, and using recommended gatekeeper behaviors (Wyman et al., 2008). The researchers used the Asking Clients about Suicide in Response to Warning Signs scale, the Asking Depressed Clients about Suicide scale, the
Appropriate Referral of a Suicidal Client scale, and the Use of Gatekeeper Behaviors with Suicidal Clients scale related to safety protocols (Wyman et al., 2008).

[Insert Table 2]

Procedures

This article reports baseline results from an ongoing longitudinal randomized intervention trial of the Question, Persuade, and Refer (QPR; Quinnett, 1995) suicide prevention gatekeeper training. After receiving approval from the University Institutional Review Board, the researchers began advertising the study approximately 1 month prior to enrollment. Pre-recruitment advertisement consisted of informational postcards being mailed to all students meeting the eligibility criteria, an informational poster displayed in the school lobby, and notices posted in the school’s electronic newsletter/bulletin. These pre-recruitment activities were intended to raise awareness of the pending study and to encourage students to check their university email accounts to see if they were randomly selected for participation. Statistical power analysis, anticipated response rate, and availability of financial resources were used to determine the number of students to be randomly selected from the overall program enrollment of advanced students. Students who were randomly selected to participate were emailed by the Principal Investigator with instructions regarding reviewing the informed consent and participating in the study. Reminder emails were sent every 2 to 3 days over the course of the 2 week enrollment period. Additionally, faculty at the school were asked to announce the study in their advanced courses and to encourage students to check their university email to see if they were selected for participation; similar reminders were also posted in the school’s electronic daily bulletin. Students who consented to participate received a confirmation email with a web
link to the online consent letter and an online survey. PASW statistics software (v. 18.0.0, 2009) was used for analysis of study data. Only one case had missing data and it was deleted from the final data analyses.

Results

Knowledge about suicide and suicide prevention

Percentage of correct answers on the Knowledge of Suicide Warning Signs and Intervention Behaviors scale ranged from 50%-100%, with a mean of 77.4% (SD=11.4%), indicating that on average, students were able to correctly answer approximately three-fourths of the knowledge questions. Scores for the Risk Factors List ranged from 2-11 points (M=5.64, SD=1.85) out of possible maximum score of 25. Scores for Self-Evaluation of Suicide Prevention Knowledge ranged from 1.33-6.33 on a 7-point scale with higher scores indicating greater perceived knowledge. The mean (3.59, SD=1.19) fell at the mid-point of the scale. Observed scores for the Knowledge of Institutional Resources for Suicidal Clients scale covered the full 0-1 range, but the mean (.39, SD=.04) was low and fell below the scale midpoint. Descriptive statistics for measures of knowledge about suicide and suicide prevention are summarized in Table 3.

Attitudes about suicide and suicide prevention

Possible mean scores on the Attitudes to Suicide Prevention scale range from 1-5, and the mean for the current sample was 3.05 (SD=.03), indicating that the typical response was in the neutral to moderately positive range. Perceived preparedness was measured using three subscales, each with a potential range of scores from 1 to 7; higher scores suggested increased levels of preparedness. Mean scores were 3.43 (SD=1.33) for Perceived Preparedness for
Gatekeeper Role, 4.48 (SD=.88) for Efficacy to Perform Gatekeeper Role, and 2.42 (SD=.62) for Reluctance to Engage with Suicidal Clients. These results suggest that although students’ rated their self-perceived efficacy as positive, preparedness fell in the neutral range and reluctance was high. Descriptive statistics for attitudes about suicide prevention are summarized in Table 3.

Working with clients who are suicidal

The majority of students (86.3%) reported providing some type of direct client service in their field placement. A significant difference was found in the proportion of students providing direct client services between Clinical and MACO students, with 97% (n=60) of Clinical students providing direct client services at the field placement compared to 20% (n=2) of MACO students (χ²=42.44, p<.001). Of these 62 students, two-thirds (65.3%) reported seeing 4 or more individual clients weekly, 60% indicated they provided services to at least one couple or family weekly, and more than half (52.5%) led or co-led at least one group weekly. The amount of time spent providing direct client services ranged from 1-28 hours weekly with a mean of 9 hours. Approximately 40% of all students (n=29) indicated they had encountered at least one client at their current field placement whose behavior suggested she or he was considering suicide, and 13.7% (n=10) of all students indicated they had encountered multiple clients exhibiting suicidal risk behaviors.

Suicide prevention behaviors

Asking Clients about Suicide in Response to Warning Signs and Asking Depressed Clients about Suicide scales are scored on a 1-5 scale with higher values indicating behavior that is more frequent. Mean scores for Asking Clients about Suicide in Response to Warning Signs (M=2.14,
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SD=1.29) and Asking Depressed Clients about Suicide (M=2.22, SD=1.39) both fell below the scale midpoint indicating less frequent behavior.

Responses to the Appropriate Referral of a Suicidal Client questions indicated that only 22.2% (n=16) of all students reported making a referral for a suicidal client in the past 6 months; however, this response increases to 55% for the subsample of students who believed they had encountered a client at risk for suicide at their field placement. The average score for the Use of Gatekeeper Behaviors with Suicidal Clients scale was low (M=2.28, SD=1.53), but increased when students who believed they had encountered a client at risk for suicide were reviewed as a separate subsample (M=3.48, SD=1.19). Descriptive statistics for suicide prevention behaviors for all students are summarized in Table 3.

[Insert Table 3]

Relationships between measures of knowledge, attitudes, and behaviors

Bivariate correlation analyses were used to estimate relationships between each of the 11 measures. Results are summarized in Table 3 and include r-values for the bivariate correlation and p-values for statistical significance.

Correlations between knowledge and attitudes

Scores for declarative knowledge based the Knowledge of Suicide Warning Signs and Intervention Behaviors scale were moderately correlated (Cohen, 1988) with each of the measures of attitudes (p<.05). Self-Evaluation of Suicide Prevention Knowledge was moderately correlated with declarative knowledge and the three scales measuring attitudes about the student’s self-rated readiness to perform several gatekeeper roles (p<.05), but not for general
attitudes about suicide prevention. For the remaining knowledge-based measures, statistically significant, moderate correlations were found with either one or two of the measures of attitudes. For each relationship, greater knowledge was associated with more positive attitudes.

Correlations between knowledge and behaviors

Declarative knowledge, as measured by the Knowledge of Suicide Warning Signs and Intervention Behaviors was not correlated with any behavioral measures ($p>.05$). However, perceived knowledge of suicide prevention measured using the Self-Evaluation of Suicide Prevention Knowledge scale was moderately (Cohen, 1988) correlated with all four of the measures of prevention behavior ($p<.05$). Large correlations were found between Knowledge of Institutional Resources and behavioral measures, with the exception of asking depressed clients about suicide. Making referrals was the only behavior correlated with scores from the Risk Factor List. For each relationship, greater knowledge was associated with greater engagement of clinical behaviors.

Correlations between behaviors and attitudes

Relationships between measures of attitudes and measures of behaviors varied widely. Statistically significant, moderate (Cohen, 1988) correlations were found between Perceived Preparedness for Gatekeeper Role and all four behavioral measures ($p<.05$). Efficacy to Perform Gatekeeper Role was moderately correlated with engagement behaviors such as asking potentially at-risk clients about suicide and using gatekeeper behaviors ($p<.05$), but not with making referrals. Attitudes to Suicide Prevention and Reluctance to Engage with Suicidal Clients were not correlated with any behavioral measures ($p>.05$).
This exploratory study yielded important information about MSW students’ knowledge, attitudes, and behaviors regarding suicide prevention and intervention. Overall, students demonstrated average-to-low scores for knowledge of suicide and suicide prevention. Declarative knowledge of suicide was average (77%), leaving much room for improvement, whereas ratings of self-perceived knowledge were generally positive. The need for additional education was further revealed in students’ minimal ability to list suicide risk factors or knowledge of institutional resources.

Attitudes about suicide prevention were generally in the low-positive to low-negative range, which also suggests that suicide prevention and intervention training for social work interns should be improved. Unfortunately, approximately 35% of students (n=25) reported attitudes about suicide prevention on the ATSP scale that were scored below the neutral scale midpoint (i.e., more negative), suggesting that social work students surveyed in the present study did not want to personally provide services to clients at risk for suicide or did not believe that social workers in general should do more in the field of suicide prevention. In a related study, Feldman and Freedenthal (2006) reported that roughly 25% of social workers surveyed across the country indicated they felt the study of suicide was not important in graduate social work training.

Scores for the different measures of use of recommended clinical behaviors for suicide prevention and intervention fell at or below the scales’ midpoints. Even after limiting the sample to those students who reported having encountered a client at risk for suicide, only scores on the Use of Gatekeeper Behaviors moved into the above average range. Knowing that the use of
clinical behaviors is associated with some attitudes and knowledge of suicide prevention suggests one way of increasing behaviors through knowledge and social work curriculum, but it does not adequately identify causal mechanisms.

Whereas declarative knowledge was correlated to attitudes in the present study, it did not equate to practice behaviors recommended in the suicide field; however, students’ self-evaluation of suicide prevention knowledge was significantly associated with practice behaviors. This finding alone raises the question about the nature of knowledge and the relationship between actual knowledge and rating of self-perceived knowledge. Given that these two measures of knowledge were correlated in the present study, it isn’t immediately clear as to why there would be different relationships with behaviors.

These same two knowledge measures, Knowledge of Suicide Warning Signs and Intervention Behaviors and Self-Evaluation of Suicide Prevention Knowledge, had significant correlations with measures of attitude, especially the three measures of “self”. Students’ attitudes about taking on the gatekeeper role were more positive as declarative and perceived knowledge increased. Previous research has established that negative attitudes toward suicide prevention can negatively affect the efficacy of suicide prevention interventions with clients (Bailey, 1994; Duberstein et al., 1995; Herron, et al., 2001; Pompili et al., 2005). In the current study, students’ attitudes about assuming a gatekeeper role were associated with engagement in appropriate clinical behaviors, although no relationship was found between behaviors and general attitudes about suicide as measured by the ATSP; therefore, it is critical that social work educators enhance training to improve students’ attitudes and subsequent intervention skills specifically related to suicide and suicide prevention.
The constellation of relationships between knowledge, attitudes, and behaviors, as measured in the current study, isn’t completely clear. However, there appears to be a core model within the findings that incorporates self-evaluation of knowledge, efficacy, preparedness, and behaviors. Specifically, measures of “self” were associated with increased suicide prevention behaviors in that greater evaluation of one’s knowledge, efficacy, and preparedness correlate with engagement in behavior. One potential explanation for these finding is that the attitudinal measures regarding “self” are tapping into other constructs such as confidence, potentially revealing a model in which knowledge increases confidence, and confidence increases behavior. In this model, attitudes may be operating as a mediator of the relationship between knowledge and practice. This emergent model may provide a useful framework for thinking about the relationships between knowledge, attitudes, and behaviors in future research and to inform social work educators how best to prepare students to work with clients at risk for suicide. Whereas negative attitudes about suicide prevention are concerning because they may interfere with social workers’ abilities and capacity to work effectively with clients who are at risk for suicide, their attitudes may in fact be amenable to change by supporting students’ improvement in perceived knowledge and skills (Gask, Dixon, Morriss, Appleby, & Green, 2006; Pisani, Cross, & Gould, 2011; Taylor, Hawton, Fortune & Kapur, 2009).

Strengths and Limitations

The current study has several strengths and limitations to consider. First, given the limited amount of research on suicide prevention and intervention in social work (Feldman & Freedenthal, 2006; Jacobson, et al., 2004; Joe & Neidermeier, 2006), this study contributes to the growing body of needed literature in this area. Additionally, this is the only current identified study that addresses knowledge, attitudes, and behaviors for suicide prevention and intervention.
among social work students. The use of established and validated standardized measures of knowledge, attitudes, and behaviors is an additional strength of the study. Finally, the use of a random sampling strategy was an important component of the study to be confident that results represent those of the broader student body.

In addition to the strengths, there are several limitations to consider. Despite the use of random sampling and a strong response rate (65%), specific characteristics of non-participants are unknown and their responses, had they been collected, might differ from students who agreed to participate. Second, although the study sample is generally representative of the student body of the MSW program included in the study, generalizability to students in other MSW programs is not possible. The results presented here are based on cross-sectional data, and therefore do not answer questions about how knowledge, attitudes, and behaviors change over time and in relationship to each other.

Conclusion

Results from this study add to the social work literature in addition to general suicide prevention on how knowledge, attitudes and skills may be related. The integral role of mental health professionals, and more specifically, the role of social workers, in preventing client suicide has been extensively documented, along with the need to train social workers and other mental health professionals to assess and respond to client suicide risk (Pisani et al., 2011; U.S. DHHS, 2001). As the largest number of providers of mental health services in the U.S. (Weissman et. al, 2006), it is imperative that social workers have the skills, knowledge, attitudes or self-efficacy, and resources needed to work effectively with clients at risk for suicide. Based on the results of this exploratory study, it is clear that additional training and/or integration of knowledge with skills-based training in the MSW curriculum is needed. What is not clear from
the results is whether or not there is a discernible causal model linking knowledge and attitudes to behaviors. The cross-sectional data are helpful in identifying potential relationships and therefore begin to inform curriculum content, but they do not inform the underlying developmental processes of changes in knowledge, attitudes, and behaviors. Future research on relationships among these three constructs should include not only longitudinal designs, but also testing mediation models.

Pisani et al. (2011) recommend that future research in the area of training for mental health professionals in suicide focus on “the factors that influence the implementation of knowledge, attitudes and skills gained in workshops.” (p. 272). One such factor may be intentionality for behavior change. Webb and Sheeran (2006) conducted a meta-analysis of studies looking at the relationship between intentions to change behavior and actual behavior. Although limited in the types of behaviors examined (i.e., did not include professional behaviors), the results indicated that moderate-to-large changes in intention were associated with small-to-moderate changes in behavior. Supporting evidence specifically focused on mental and physical health professionals was found by the authors (Jacobson, et al., 2012) in their evaluation of the Recognizing and Responding to Suicide Risk (RRSR) training. Following the completion of the training, participants were asked about their intentions to use several clinical behaviors within their professional practice setting. Among those individuals who indicated an intent to use RRSR training skills, actual use of skills ranged from 47%-91% ($M=74\%, \ SD=15\%$) at the four month follow-up. Cecil (2005) tested two strategies for teaching behavior modification skills to MSW students and found similar results. Although attitudes about the applicability and utility of behavior modification techniques did not change, both knowledge and skills did increase as well as the intention to incorporate behavior modification skills into practice (Cecil, 2005). The
current study did not include measures of intention, but this is highly recommended for inclusion within future studies, as this variable may help further discern the underlying processes.

Several suicide prevention trainings have been developed and implemented with professional and para-professional populations. A review of such programs and program outcomes, when available, can be reviewed in Pisani’s et al (2011) review of suicide prevention workshops. While many training programs exist, none were developed specifically for social workers. The importance of social workers being trained to assess and respond to client suicide risk in diverse social service settings is paramount. As mentioned in the introduction to this article, this study is part of a larger randomized control study (Jacobson, et al., 2012) designed to assess outcomes related to social work interns’ knowledge, attitudes and skills over time and after completing the Question, Persuade, and Refer (QPR) suicide gatekeeper training (Quinnett, 1995). As social workers are continually relied on throughout the mental health field and broader community to work with individuals at risk for suicide and their family members, social work educators should be aware of best-practices for training social workers on suicide prevention. Now 10 years after social workers were initially mentioned as part of the solution to suicide and training social workers and other helping professionals was noted as a key to success to implement the National Strategy for Suicide Prevention (U.S. DHHS, 2001), social work education needs to critically evaluate what has been done to reduce suicide and areas in which work is still needed.
References


PASW Statistics. (July 30, 2009). PASW statistics 18 (Release 18.0.0) [computer software]. IBM.


