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REVIEW

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Suicide Prevention Interventions for Sexual & Gender Minority Youth: An Unmet Need

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Suicide is currently the second leading cause of death in the U.S. among youth ages 10 to 24. Sexual and gender minority (SGM†) youth face heightened risk for suicide and report greater odds of attempting suicide than their heteronormative peers. Contributing factors of experience, which are distinctly different from the experiences of heteronormative youth, place SGM youth at heightened risk for suicide. While interventions aimed at addressing suicide risk factors for all youth are being implemented and many have proven effective in the general population, no evidence-based intervention currently exists to reduce suicide risk within this special population. This perspective article discusses this need and proposes the development of an evidence-based suicide risk reduction intervention tailored to SGM youth. Creating a supportive school climate for SGM youth has been shown to reduce suicide risk and may provide protective effects for all youth while simultaneously meeting the unique needs of SGM youth.

INTRODUCTION

Suicide is the second leading cause of death in the U.S. among youth ages 10 to 24 [1]. From 2009 to 2013, suicide risk behaviors (e.g. seriously considered attempting suicide, made a plan about how they would attempt suicide, attempted suicide or attempted suicide that resulted in injury, poisoning or overdose that had to be treated by a doctor or nurse) increased among high school students across the U.S. [2]. Among youth ages 10 to 24, several groups face heightened risk, particularly those identified as high risk by the National Action Alliance for Suicide Prevention, including lesbian, gay, bisexual, transgender, or questioning (LGBTQ) youth [3] – also known as sexual and gender minority (SGM) youth. Prior research indicates that SGM youth are at higher risk for suicidal ideation and self-harm [4-8]. In a review of nearly three decades of research, Haas et al. found that the odds of attempting suicide for lesbians, gay men, and bisexuals is approximately 2 to 7 times higher than the odds for heterosexuals [9]. Previous reports indicate that half of transgender youth have thought about suicide [10]. Although, more strikingly, recent research indicates that more than 40 percent of transgender young adults report attempting suicide [11]. This perspective article discusses the need to develop an evidence-based suicide risk reduction intervention tailored to addressing the unique needs of SGM youth and proposes a direction for development of such an intervention. I suggest that the time is ripe to capitalize on current funding opportunities to develop and/or to test a suicide risk reduction intervention to assist this underserved population.

NEED FOR A TAILORED INTERVENTION

In public health, interventions are developed to impact knowledge, attitudes, and/or behaviors as either a preventive measure or to mitigate a health issue. In medicine, interventions address common symptoms associated with a health issue, focusing on the biochemical or physiological functioning of one's health. While the public health approach and the biomedical approach each have their merits, developing interventions for mental

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†Abbreviations: SGM, sexual and gender minority, LGBTQ, lesbian, gay, bisexual, transgender or questioning, EBI, evidence-based intervention, GLSEN, Gay, Lesbian, Straight Education Network, SPRC, Suicide Prevention Resource Center, SAMHSA, Substance Abuse and Mental Health Services Administration, NREPP, National Registry of Evidence-based Practices and Programs, CBT, cognitive behavior therapy, NIH, National Institutes of Health.

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health issues can be tricky. Mental health can be influenced by social, environmental, and physical factors. Furthermore, each person's developmental experience is different; therefore, mental health interventions in particular cannot be one-size-fits-all, especially when considering the experiences of SGM youth compared to heteronormative youth.

Additionally, seeking mental health care is already stigmatized. According to a recent, systematic review of the literature, there is a small negative association between stigma and help-seeking behavior for mental health care [12]. While sexual minority youth – specifically LGB youth – indicated higher healthcare utilization [13], many report feeling uncomfortable about being "out" with their healthcare providers [14]. Although evidence-based interventions (EBIs) directed at all youth currently exist to address suicide risk and encourage help-seeking behavior [15], none are tailored to specifically address SGM youth and their unique needs, such as the fear of being unaccepted or mistreated by healthcare providers.

Furthermore, marked differences exist between heteronormative and SGM youth that increase the risk among SGM youth for suicide. SGM youth and emerging adults have unique sociocultural experiences that contribute to health issues which remain underserved. For instance, SGM youth experience bullying at higher rates than heteronormative youth. While about 20 percent of all youth report experiencing bullying [16], about 75 percent of SGM youth report experiencing bullying [17]. Additionally, SGM youth more frequently report feeling less supported by their school or communities than heteronormative youth [17]. Further exploration of the "support is vital" theme revealed in a previous study [18] led to a recent publication that identifies the value of support by school personnel [19]. The lowest points in the participants' experiences were when they felt unsupported, and this was when they were the most depressed, began cutting, contemplated or attempted suicide [18,19].

These are some of the contributing factors of experience that occur during adolescent development, which are distinctly different from the experiences of heteronormative youth, that place SGM youth at heightened risk for suicide. These experiences are the types of factors that need to be considered when adapting and testing a suicide risk reduction intervention that meets the needs of SGM youth. The view that tailoring suicide risk reduction interventions to SGM youth is unnecessary discounts the differing experiences of SGM youth during development as a result of interaction with a heteronormative society.

RISK FACTORS FOR SUICIDE AMONG SGM YOUTH

General and SGM-specific risk factors each contribute to the likelihood of suicidal ideation and self-harm in SGM youth, which may account for the higher risk of these phenomena occurring in this population [20]. While SGM youth are at higher risk for suicidal behavior, some sub-groups of SGM youth are at particular risk and remain underserved, such as those who are homeless and runaway, those living in foster care, and/or those involved in the juvenile justice system [21]. Although all youth in these settings are vulnerable, many SGM youth experience multiple risk factors and have fewer supports than other youth [21]. Russell and Toomey [22] found that risk of suicide attempts is largely limited to adolescence among sexual minority males, but other work [23] suggests that SGM youth continue to be at risk of suicide beyond early developmental periods as disparities in suicidality persist into young adulthood among individuals with non-heteronormative identities.

A review of studies on adolescent health, risk behavior, and sexual orientation revealed that the initiation of some risk behaviors for suicide before age 13 was correlated with LGB identity [24]. One study [25] reported that many SGM youth – LGB youth in particular – make their first suicide attempt before disclosing their identity. A study of non-heterosexual adults found that the age for first disclosure occurs as young as age 10 [26]. These findings suggest that suicide prevention for SGM youth should begin early in pubertal development and continue throughout adolescence as this is a pivotal time of growth and identity development. Because SGM individuals often become aware of their non-heteronormative identities at very young ages, it is important to direct some suicide prevention interventions at younger adolescents – and even at their parents – to decrease suicide risk behaviors and to help prepare youth who are considering disclosing their identity to their parents with appropriate coping strategies.

Meyer predicts that minority stress processes, which are related to prejudice and stigma against SGM youth, are significant risks that could be related to suicide ideation and attempts [27,28]. For example, early openness about sexual orientation and being identified as non-heterosexual by parents has been shown to increase the risk of suicide attempts in non-heterosexual youth [29]. Meyer et al. [30] suggest that this phenomenon may be due to family rejection often experienced after disclosure of non-heteronormative identity. Family rejection is linked to increased risk of suicide attempts [31]. Alternatively, family acceptance is associated with greater self-esteem, social support, and better general health status and has been shown to be protective against suicidal ideation and behaviors [32].

In addition to the impact of family rejection, bullying has been shown to be significantly associated with higher scores of depressive symptomatology and with an increased risk of suicidal ideation and self-harm (i.e. cutting) among SGM youth [20,33]. Over 74 percent of SGM youth surveyed by the Gay, Lesbian, Straight Education Network (GLSEN) for the 2013 National School Climate Survey reported being verbally harassed at school in the past year for their sexual orientation and over half (55.2 percent) for their gender expression, and many felt unsafe

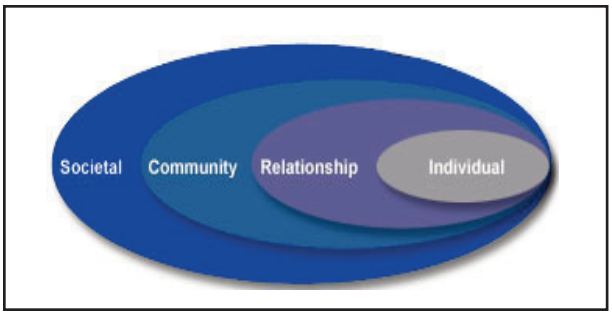

Figure 1. The Levels of Influence on Suicide Prevention using the Socio-Ecological Model (Dahlberg & Krug, 2002) [63]

at school because of their sexual orientation (55.5 percent) or gender expression (37.8 percent) [17]. Victimization of SGM youth has been shown to be a predictor of suicidal ideation and a strong predictor of self-harm [20]. Low social support was associated with suicidal ideation, and childhood gender nonconformity and prospective hopelessness were associated with self-harm [20]. Thus, research has shown the problematic mental health effects of bullying and its related factors among SGM youth.

SOLUTIONS TO ADDRESS RISK FACTORS AMONG SGM YOUTH

Anti-bullying and nondiscrimination policies have been implemented across the U.S. as a beneficial primary prevention step, as anti-bullying policies can help reduce risk of being bullied [34]. Inclusive anti-bullying policies (meaning they are inclusive of SGM youth by enumerating sexual orientation and gender identity as protected characteristics) have demonstrated a protective effect on the mental health of SGM youth and reduced their risk for suicide attempts [35], but EBIs to reduce the risk for suicide are still needed as tackling any public health issue takes a multi-level approach [36].

As stated previously, EBIs to reduce suicide risk that are tailored to SGM youth are not currently available. Although a few EBIs address suicide risk among the general population of youth, such as the *Lifelines*™ *Curriculum* [15] or the *Sources of Strength* program [15], the Suicide Prevention Resource Center (SPRC)'s Best Practices Registry for Suicide Prevention has no SGM-specific program named as best practice based on documented outcomes, and Substance Abuse and Mental Health Services Administration's (SAMHSA) National Registry of Evidence-Based Programs & Practices (NREPP) has no suicide prevention interventions targeting SGM populations [37]. Russell [38] has indicated that there are no published studies of the efficacy of suicide prevention programs for SGM youth. Since SGM youth are at higher risk for suicidal behavior, "it is imperative that programs that address this population be developed, implemented, and evaluated" [21].

PROPOSED THEORETICAL FRAMEWORK FOR PREVENTION

Prevention requires understanding the factors that influence suicide. The Centers for Disease Control and Prevention (CDC) uses a four-level social-ecological model to better understand issues and the effect of potential prevention strategies [39]. This model considers the complex interplay between multiple levels of influence, including individual, relationship, community, and societal factors [39]. (See figure 1.) This model allows us to understand the range of factors that put individuals at risk for suicide or protect them from experiencing suicide. The overlapping rings in the model illustrate how factors at one level influence factors at another level [39]. Besides helping to clarifying these factors, the model also suggests that in order to prevent suicide, it is necessary to act across multiple levels of the model simultaneously. This approach is more likely to sustain prevention efforts over time than any single intervention [39].

CURRENT APPROACHES TO SUICIDE PREVENTION

Several types of suicide prevention programs have been developed for use in the general population, though none are specific to SGM individuals. Using the social-ecological model [39] as a framework for examination of suicide prevention programs being developed and implemented, there have been interventions developed and implemented at each of the levels of influence. Let's begin by looking at the prevention programs that have been implemented at the community level. Community-based prevention programs target the general public, focusing on environmental change or sociocultural factors unique to certain populations. Common community-level approaches to suicide prevention include providing hotlines, implementing public awareness campaigns, regulating access to lethal means such as firearms, and creating media standards to avoid sensationalizing suicide [30,40,41]. In order for such suicide prevention approaches to be effective, early identification and intervention are often recommended; thus, education of both the public and health care providers is important so that risks for suicide can be identified in time for an intervention to have a measurable impact [30,42]. Additionally, mass media campaigns and promotion of suicide prevention hotlines are two of the most publicized and researched community-level approaches currently, yet the research on these approaches to suicide prevention has been focused mostly on adult populations [41]. Efficacy of these approaches among youth and particularly among SGM youth needs exploration.

When thinking about settings in which to target youth in particular, school-based interventions and mental health management are effective prevention methods for youth at risk for suicide [21]. These types of interventions can be considered as being implemented at the community level while also incorporating relationships that exist at the in-

terpersonal level of the social-ecological model. School-based prevention programs tend to focus on identifying at-risk youth and connect them with resources, such as peer support, school-wide screening, gatekeeper training, and learning healthy coping skills [30,40,42-44].

Suicide prevention efforts can also be implemented at the individual level. Because depression is a factor in many suicide attempts and deaths, clinical prevention programs of at-risk individuals focus on mental health treatment and on providing follow-up care for people who have attempted suicide [30,42]. Research shows that many people who attempt suicide do not seek or receive treatment before the attempt, but about half of those who attempt suicide do seek some kind of treatment [30,45,46]. In general, non-heterosexual individuals have higher rates of seeking treatment than heterosexuals [13]. Nonetheless, high rates of service utilization among non-heterosexuals are unfortunately followed by high rates of suicide attempts [30]. One explanation for this discrepancy proposes that SGM individuals receive unsatisfactory or unhelpful treatment [47].

While considering clinical interventions, research has shown cognitive behavior therapy (CBT) to be effective at treating depression [48] and suicide ideation [49,50] in the general population of adolescents [51]. Cognitive behavior therapy has also shown promise in bettering self-esteem, which can prevent the development of adolescent depression [52,53].

FACTORS ADDRESSED BY CURRENT APPROACHES TO SUICIDE PREVENTION

Certain factors have been identified as being associated with suicide risk. Based on a previous review of the literature on suicide prevention strategies, physician education in depression recognition and treatment, as well as restricting access to lethal means, were found to be effective [42]. A decade later, the call by Mann et al. to assess other interventions (i.e. public education, screening programs and media education) for efficacy [42] has only been partially met.

Additionally, evidence suggests that suicide prevention programs can be effective in diminishing risk factors and in building protective factors, yet few such programs specifically address risk and protective factors relevant to SGM youth [21]. In a non-clinical setting, health promotion programs – regardless of whether they serve all youth or specifically SGM youth – may not explicitly address suicide prevention, but they may effectively reduce suicidal behavior by increasing protective factors, such as *connecting youth with supportive adults* [21], or by reducing risk factors, such as *preventing violence and harassment* [21]. The SPRC suggests that SGM youth-serving agencies can partner with statewide suicide prevention groups to improve their level of expertise in suicide prevention and to ensure that suicide risk among SGM youth is adequately addressed [21].

Furthermore, research suggests that incorporating affirmative practice into any approach for suicide prevention may be beneficial [54]. Affirmative practice enhances existing treatment models and consequently can be incorporated into a variety of intervention models and within individual, family, and group work [55]. Affirmative practice has, at its core, the belief and recognition that SGM identities are equally positive human experiences and expressions compared to heterosexual and cisgender identities [55,56]. As suggested by Austin and Craig, using "an affirming practice approach that validates youths' identities, experiences, and self truths is critical for SGM youth who are inundated with messages to the contrary" [54, p.3]. This approach should be applied to suicide prevention programs delivered in either clinical or non-clinical settings.

CURRENT SUICIDE PREVENTION APPROACHES TAILORED TO SGM YOUTH

At the national level, The Trevor Project operates the nation's only 24-hour toll-free suicide prevention helpline for SGM youth (1-866-4-U-TREVOR) [10]. The Trevor Project (like other SGM youth-serving sites/organizations) promotes inclusivity and even offers suicide prevention programs, but these programs have not yet been evaluated for efficacy. Thus, the need for an evidence-based program for suicide prevention among SGM youth remains.

PROMISING SUICIDE PREVENTION APPROACHES THAT NEED ADAPTATION FOR SGM YOUTH

According to a report by the SPRC, there are three key venues that provide services to youth that can make vital differences in the lives of SGM youth – schools, mental health and social services, and health care services [21]. Increasing safety and inclusion for SGM youth can be achieved by not only having knowledgeable and culturally competent staff, but by creating an environment that "supports safety and inclusion comprehensively" through LGBT-inclusive policy [21]. This suggests a need for a multi-faceted approach, including: improving cultural sensitivity, supporting inclusive policies, improving collection of adequate and appropriate data on SGM youth to better monitor the issue of suicide risk, and building social support for SGM youth [21]. Even with the adoption of this multi-faceted approach, communities do not currently have access to suicide prevention EBIs for SGM youth.

For U.S. schools, particularly middle schools, junior highs, and high schools, a suicide prevention program has yet to be adapted and evaluated for efficacy to meet the unique needs of SGM youth. SAMHSA's National Registry of Evidence-based Programs and Practices (NREPP) is a great place to start to select a program for schools, such as *Kognito At-Risk for High School Educators* or the

Table 1: List of Suicide Risk Reduction Interventions from SAMHSA's National Registry of Evidence-based Programs and Practices (NREPP) [15]

Intervention Title	Outcomes Assessed	Intervention Title cont'd	Outcomes Assessed cont'd
American Indian Life Skills Development/ Zuni Life Skills Development	Hopelessness Suicide prevention skills	LEADS: For Youth (Linking Education and Awareness of Depression and Suicide)	Knowledge of depression and suicide Perceptions of depression and suicide Knowledge of suicide prevention resources
CAST (Coping And Support Training)	Suicide risk factors Severity of depression symptoms Feelings of hopelessness Anxiety Anger Drug involvement Sense of personal control Problem-solving/coping skills	Lifelines Curriculum	Knowledge about suicide Attitudes about suicide and suicide intervention Attitudes about seeking adult help Attitudes about keeping a friend's suicide thoughts a secret
Dynamic Deconstructive Psychotherapy	Symptoms of borderline personality disorder Depression Parasuicide behaviors Heavy drinking	Mental Health First Aid	Recognition of schizophrenia and depression symptoms Knowledge of mental health support and treatment resources Attitudes about social distance from individuals with mental health problems Confidence in providing help, and provision of help, to an individual with mental health problems Mental health
Emergency Department Means Restriction Education	Access to medications that can be used in an overdose suicide attempt Access to firearms	Model Adolescent Suicide Prevention Program (MASPP)	Suicide attempts Suicide gestures
Emergency Room Intervention for Adolescent Females	Adolescent symptoms of depression Adolescent suicidal ideation Maternal symptoms of depression Maternal attitudes toward treatment Treatment adherence	Prevention of Suicide in Primary Care Elderly: Collaborative Trial (PROSPECT)	Depression Suicidal ideation Mortality rate
Family Intervention for Suicide Prevention (FISP)	Linkage to outpatient mental health treatment services	QPR Gatekeeper Training for Suicide Prevention	Knowledge about suicide Gatekeeper self-efficacy Knowledge of suicide prevention resources Gatekeeper skills Diffusion of gatekeeper training information
Kognito At-Risk for College Students	Preparedness to recognize fellow students in psychological distress Preparedness to approach fellow students in psychological distress Preparedness to refer fellow students in psychological distress Likelihood of approaching and referring fellow students exhibiting signs of psychological distress Willingness to seek mental health counseling for self	Reconnecting Youth: A Peer Group Approach to Building Life Skills	Drug involvement Mental health risk and protective factors Suicide risk behaviors School performance
Kognito At-Risk for High School Educators	Preparedness to recognize, approach, and refer students exhibiting signs of psychological distress Likelihood of approaching and referring students exhibiting signs of psychological distress	SOS Signs of Suicide	Suicide attempts Knowledge of depression and suicide Attitudes toward depression and suicide
		Sources of Strength	Attitudes about seeking adult help for distress Knowledge of adult help for suicidal youth Rejection of codes of silence Referrals for distressed peers Maladaptive coping attitudes
Kognito Family of Heroes	Confidence in one's ability to help students exhibiting signs of psychological distress Preparedness to recognize signs of postdeployment stress Preparedness to discuss concern with veteran and motivate him or her to seek help at a VA hospital or Vet center Self-efficacy in motivating veteran to seek help at a VA hospital or Vet center Intention to approach veteran to discuss concerns Intention to mention the VA as a helpful resource	United States Air Force Suicide Prevention Program	Suicide prevention

Lifelines Curriculum [15], but researchers and practitioners will need to collaborate with school personnel and SGM students to adapt and to test the program to be effective when working with SGM youth.

On college or university campuses, *Kognito At-Risk for College Students* is an evidence-based training that teaches peers and resident assistants to provide support to students or peers who may be exhibiting signs of depression, anxiety, substance abuse, and suicidal ideation [15]. Fortunately, we are close to having something for this subgroup of college-age SGM youth. *LGBTQ on Campus*, a program developed by the Trevor Project in partnership with Kognito Interactive, is undergoing evaluation at this time [57]. This type of peer gatekeeping program may be an effective suicide prevention intervention with non-heterosexual youth because youth often first confide their problems to peers [58], and for many non-heterosexual youth, a gay or lesbian friend may be the most important person in their lives [24].

Whether in schools or in the community, "gatekeepers" are individuals who have contact with youth and are trained to recognize at-risk youth and refer them to services. Gatekeepers ought to be knowledgeable of the risk for suicidal behavior among SGM youth, know particular issues for these youth, and develop cultural effectiveness to appropriately serve them [21]. Gatekeepers and staff of SGM youth serving agencies, screening programs, and crisis lines need to be aware of SGM-inclusive service providers to use for referrals [21]. Incorporating gatekeeper training may be a beneficial part of an effective suicide prevention program particularly for one delivered at the school or community level. For instance, *Question, Persuade and Refer (QPR) Gatekeeper Training* is an evidence-based educational program that teaches the warning signs of suicide risk and how to respond [15]. This intervention also needs to be adapted and tested for effectiveness when working specifically with SGM youth.

For use in mental health and social services, as stated previously, CBT has shown efficacy in treating suicide risk [48-53]. Newly published work reports on the method of using community-engaged research to adapt CBT with an affirmative approach for use with SGM youth [54]. Although a pilot study to test the feasibility and efficacy of this adapted intervention is still underway, their initial focus groups identified three themes that were critical to affirmative work with SGM youth: "the interplay between cultural norms, gender norms, sexual orientation, and gender identity; the complex role of religious community within the lives of SGM youth; and considerations of extended family and cultural community as youth navigate their SGM identities" [54]. These findings highlight the need to consider the unique sociocultural context of SGM youth when adapting suicide risk reduction and prevention interventions.

For health care services, it is important for providers to recognize they are in a position to respond to suicidal risk behavior in SGM youth even if these youth do not readily offer information during appointments about risk factors such as depression or substance use. This suggests that providers may have to ask more questions or ask the questions in different ways to solicit information to identify such risk factors. Unfortunately, many SGM individuals report substandard care, hostile treatment or even denials of health care by providers [59]. SGM youth have reported poor experiences with clinical care and have indicated desiring simply "competence, cleanliness, respect, and honesty" along with valuing a provider who has knowledge of SGM health issues and demonstrates cultural sensitivity [14]. *Prevention of Suicide in Primary Care Elderly: Collaborative Trial (PROSPECT)* is an evidence-based intervention focused on prevention suicide among older primary care patients [15]. This program is the only one available through NREPP that has been developed for the primary care setting but it would have to undergo several modifications to be adapted to SGM youth and then tested for efficacy. In addition, a couple of EBIs do exist for delivery in emergency departments but these also need adaptation and testing for application in SGM youth populations. (See Table 1 for a list of evidence-based suicide risk reduction interventions found on NREPP.)

RECOMMENDED SUICIDE PREVENTION INTERVENTIONS FOR SGM YOUTH

Taking into consideration the different interventions currently available that target various factors, there is support for school-based approaches to suicide prevention that simultaneously promote protective factors and reduce risk factors for suicide among SGM youth [21]. Hatzenbuehler et al. [60] and Saewyc et al. [61] report reduced risk among LGB students for suicide ideation, attempts and discrimination experienced when schools have a protective school climate which includes provisions such as having enumerated anti-bullying policies and Gay-Straight Alliances (GSAs). These approaches do not look like interventions in the clinical sense nor are they behavior change interventions that intervene at the individual or interpersonal level where behaviorists traditionally seek to change behaviors. Instead the approaches that show promise consistently in preventing suicide among SGM youth are implemented at the community level and require measures that incorporate systems-level (or societal-level) change. (See Figure 1).

Research by Saewyc et al. [61] further demonstrates that heterosexual boys as well as LGB students have reduced odds of suicidal ideation or attempts when schools had longer established anti-bullying policies protecting SGM youth and GSAs. This finding indicates promising suicide prevention benefits for all students when sociocultural changes are implemented in schools. Although promising, this research is not without its limits. These

Table 2: The Suicide Prevention Resource Center's Recommendations for Suicide Prevention Programs Serving SGM Youth [21]

Suicide prevention programs can increase their capacity to serve the specific needs of SGM youth by taking the following steps: [21, p.43]
• Providing information about SGM youths' risk of suicidal behavior to the staff of case-finding programs, including gatekeepers, crisis line staff, and screening program staff
• Including information about SGM youths' risk of suicidal behavior in school-based and public awareness material
• Identifying SGM-inclusive services and providers to use for referrals of youth from screening programs, crisis lines, or gatekeepers
• Including SGM youth in program development and evaluation
• Developing peer-based support programs
• Including life skills training and programs to reduce risk behaviors on the topic of coping with stress and discrimination
• Supporting parents or guardians and other family members of SGM youth
• Emphasizing protective factors relevant to SGM youth

studies by Hatzenbuehler et al. [60] and Saewyc et al. [61] are only inclusive of sexual minority youth; therefore research on suicide risk reduction and/or on the protective effects of supportive school climates needs to include youth with minority gender identities as well.

When assessing a school's climate, generally a supportive or protective school climate is identified when a school performs the following: 1.) offers a GSA and/or safe space for SGM youth; 2.) provides curricula on health information relevant to SGM youth; 3.) prohibits harassment/bullying/discrimination based on sexual orientation or gender identity; 4.) encourages staff to attend trainings on how to create supportive environments for SGM youth; and 5.) facilitates access to health care providers off school property who will provide health care or other services specifically for SGM youth [60]. This description of a protective school climate is supported by the work of GLSEN on the protective effects of positive school climates for SGM youth [17] and it is echoed by the SPRC in their recommendations for suicide prevention programs targeting SGM youth [21]. (See Table 2 for the list of recommendations.)

Additionally – and perhaps most notably – an intervention that incorporates these recommendations into schools, and thereby promotes a positive and protective school climate, addresses the needs of SGM youth who are "out" and addresses the needs of youth who have not yet identified and/or disclosed their SGM status. Further research on the development and testing of suicide prevention programs may demonstrate effectiveness for all youth, regardless of identity, if these recommendations are incorporated. The most encouraging feature of implementing school-based policies and practices that promote a supportive school climate is the potential for pervasive protective effects. A suicide prevention intervention that creates a supportive school climate for SGM youth, may protect all youth [61] while addressing some of the unique contributing factors of experience that have been shown to put SGM youth at heightened risk for suicide.

CONCLUSIONS AND OUTLOOK

The authors of SPRC's special report on suicide risk and prevention among SGM youth recommend that researchers pursue the following:

Use evaluation results, surveillance data, and research conclusions to develop evidence-based programs to build protective factors and to prevent suicide among SGM youth; undertake large-scale epidemiological studies that include complex measures of sexual orientation and gender identity and include research on discrimination and mental illness; include SGM youth in research development and evaluation; in developing programs, emphasize protective factors for SGM youth; develop research projects and funding for research on risk and protective factors for suicidal behavior for youth generally and for SGM youth specifically and work with program staff to encourage getting research results into program design [21, p.44].

The programs mentioned previously as promising approaches to suicide prevention for SGM youth [60,61] effectively address one or more of SPRC's recommendations but more research studies – particularly large-scale epidemiological studies as well as projects focusing on program design – are needed.

In order to conduct a project involving development, adaptation and testing of an intervention to reduce the risk of suicide among SGM youth, any researcher needs funding. The National Institutes of Health (NIH) released a parent announcement in May 2015 that encourages research on the health of SGM populations [62]. The funding announcement seeks research that describes the biological, clinical, behavioral, and social processes that affect the health and development of SGM populations and that leads to the development of acceptable and appropriate health interventions that will enhance health and development of these populations [62].

The groundwork has been laid to develop appropriate suicide risk reduction interventions and the call to action has been declared to address the unique factors experienced by SGM youth. The time is ripe to capitalize on current funding opportunities and to be at the forefront of

developing an evidence-based intervention tailored to the needs of SGM youth.

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