

Article

Taking Youth Suicide Prevention to the Schools: Pilot Evaluation of School-Based Clinician Outcomes and Perspectives of a Multi-Modal Program Including Post-Training Online Consultations for Management of Ongoing Suicide Risk

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Abstract: School-based youth-specific suicide prevention and early intervention initiatives are presently underdeveloped. The current study conducted a pilot evaluation of a multi-modal suicide prevention training program for school-based social workers, ‘Management of Youth Suicidality Training for Schools’ (MYSTS). The program comprised a two-day workshop and six fortnightly post-workshop webinar online consultations. Participants were 36 social workers (years’ experience $M = 11.23$, $SD = 8.29$) employed by the Department of Education in Tasmania, Australia. Outcomes were self-rated confidence, competence, and knowledge of self-harm in young people, and attitudes toward suicide prevention and suicide-related behaviors. Exploratory quantitative results indicated significant improvements with large effect sizes for participants’ self-reported competence ($d = 1.33$), and confidence ($d = 1.29$) to identify and respond therapeutically to youth suicidality following the workshop. Confidence remained significantly higher than baseline following the online consultations ($d = 0.90$). Qualitative analysis of online supervision consultations indicated key themes of accessibility, communication and information sharing, and clinical management. Participants endorsed the MYSTS package as well-presented, with relevant topics, and effective learning activities. This study highlights the need for continued supervisory or implementation support to practitioners following suicide prevention training initiatives and suggests web-based teleconference technology as a feasible strategy for this. Further evaluation of the MYSTS package, including a suitable comparison or control condition, is indicated.

Keywords: suicide prevention; young people; social workers; school; mixed methods

1. Introduction

Suicide is the leading cause of death among young people aged 15–24, accounting for 38% of deaths in this age group [1]. Estimates of suicide-related behaviors in Australian high-school aged young people suggest that in any 12-month period, 8–10% seriously consider suicide, 6–8% make a plan, and up to 6% may attempt suicide [2]. Given these estimates, it is not surprising that management

of suicide risk is a necessary focus in school settings. Indeed, young people in Australia are more likely to seek help from school staff rather than specialist care providers [3]. In this regard, school social workers may be a primary point of contact for students experiencing thoughts of suicide, which range from non-specific thoughts regarding desirability, to thoughts regarding intent, to actual attempts. Despite this, social workers routinely report minimal or insufficient training for identification and response to youth suicide risk [4,5].

There is evidence to suggest that even among staff with experience in working with suicidal individuals, self-rated perceptions of competency to undertake this work is low [6]. The range of tasks involved in response to suicide risk can be perceived as overwhelming when staff lack training and systemic support or feel ill-equipped to respond with the knowledge that they are acting according to best practice principles. Fear of adverse outcomes and uncertainty in knowing how, and when, to identify and respond to suicide risk can leave workers vulnerable to feelings of incompetence, being overwhelmed, and burnout [7]. Accordingly, training of professionals in identification and response to suicide risk is critical to support individual and whole-of-system responses to vulnerable young people, as well as supporting the resilience and workplace wellbeing of professional staff best placed to identify suicide-related risk among students [8].

1.1. Existing Suicide Prevention Training Programs

There are a number of training packages aimed at building capacity to assess and respond to suicide risk, some of which have been evaluated in research [9]. Referred to as “gatekeeper” training programs, these seek to target frontline workers in positions to identify and respond to suicide risk in their day-to-day contact with service users. Prominent training packages that provide this to the general public include Mental Health First Aid (MHFA; [10]), Applied Suicide Intervention Skills Training (ASIST; [11]), safeTALK [12], and Skills-based Training On suicide Risk Management (STORM; [13]). While these programs are effective in increasing mental health literacy and confidence in asking about suicidality in the general public and in school settings [14–16], limitations remain apparent. Within the majority of such training programs, there is a lack of focus on the unique needs of young people [17]. Though there are select number of initiatives deemed youth-specific, some are programs delivered to youth (e.g., peer gatekeeper programs; [18]), while others incorporate suicidality as one component of broader mental health training (e.g., Youth Mental Health First Aid (YMHFA); [19]). Further, evaluations for YMHFA are sparse and generally have not included longer-term follow-up assessment [20]. For school-based social workers, developmentally appropriate training requires acknowledgement and understanding of student needs, including need for negotiation between school counsellors, social workers, and young people regarding information to be disclosed to caregivers, provision of information, and identification of supports to caregivers.

Moreover, training packages often have little to no follow-up guidance and support for the application of models in the real world [9]. Likewise, there are doubts surrounding the impact that training and prevention programs have on actual youth suicidality and behavior [21–24]. This is evident for prevention initiatives that are delivered to youth populations [21,23], and youth-gatekeepers [25]. Equally, long-term outcomes are rarely evaluated or reported [21]. For greater likelihood of applied and prolonged benefit, there is a need for training packages to provide ongoing support (e.g., ongoing consultations) in the skill-acquisition phase. Evidence from implementation science indicates that learning is best consolidated through ongoing processes of consultation or supervision and reflective practice, supported by formal opportunities to apply key concepts in the context of real world challenges [26,27]. Training packages that implement systemic opportunities for continued skill consolidation could prolong or augment short-term learning outcomes and feelings of competence and confidence to respond to youth suicidality.

1.2. The Current Study

To address these limitations, an evidence-based and theory-driven, youth-specific suicide prevention program that offers continued support and is relevant for professionals in school settings has been developed by clinicians, researchers and training specialists at Orygen, and Orygen's Youth Mood Clinic (YMC) in Melbourne, Australia. YMC is part of Orygen's tertiary mental health service providing specialist early intervention to young people 15 to 25 years old experiencing severe and complex youth depression. YMC care is delivered by treating teams made up of a psychological therapist (e.g., a suitably trained clinical psychologist, mental health occupational therapist or mental health nurse), a treating doctor (psychiatric registrar), and consultant psychiatrist. Given suicide risk is a clinic inclusion criterion, YMC clinicians focus much of their practice on the ongoing management of suicide risk. This clinical experience and the associated ongoing management considerations were a key focus of the training program. Entitled 'Management of Youth Suicidality Training for Schools' (MYSTS), the program comprises a two-day, face-to-face workshop in conjunction with innovative ongoing webinar consultation opportunities to provide attendees with sustained pragmatic support. The MYSTS program differs from existing gatekeeper training packages in that content focuses on the continued therapeutic support needs of the young person experiencing suicide risk. Addressing knowledge gaps in the ongoing therapeutic support needs of young people experiencing suicide risk sought to support school-based social workers who commonly manage these types of cases. This element of the MYSTS program (in addition to ongoing web-based consultations) differs from existing gatekeeper programs that tend to focus on responding to a situational crises and referring the young person to acute or emergency services, rather than providing a framework for ongoing management. The Interpersonal Theory of Suicide (IPT; [28]) informed content within the MYSTS program. The theory frames progression of suicidal ideation to suicide behaviors in the context of intra- and interpersonal factors, in this instance, factors applicable to young people (e.g., self-hate, problematic familial care, school issues). These factors inform assessments of risk, intervention planning, and risk documentation practices presented in the workshop. In practice, suicide prevention workshops based on the IPT framework have reported significant gains in self-rated competence and confidence in assessing response to suicide risk [29].

The present study sought to evaluate the implementation of the MYSTS program for school social workers. It specifically examined whether the training was associated with changes between baseline and follow-up in:

- (a) Increased self-reported competence in skills related to managing suicidality in young people;
- (b) Increased confidence in assessing and responding therapeutically to young people presenting with suicide risk;
- (c) Attitudinal changes to suicide prevention and self-harm in youth.

Additional aims were to evaluate the implementation process, including whether ongoing online post-training consultation was feasible to administer and acceptable for attendees, and whether these consultations may be associated with additional improvements in self-reported competence and confidence ratings. Finally, the study sought to qualitatively characterize the key challenges that social workers report in their day-to-day work with suicidal young people.

2. Materials and Methods

2.1. Design

This mixed-method study implemented a single-group pre-test, post-test, and follow-up design to evaluate the MYSTS package and a qualitative design for the webinar consultations.

2.2. Participants

Study participants were school social workers employed by the Department of Education in Tasmania, Australia. All 52 social workers who were enrolled in the training were invited to participate in the evaluation. Those that did not wish to participate in the study were not excluded from the training. There were no study exclusion criteria beyond the inability to provide informed consent. Thirty-six social workers consented to participate in the quantitative study (response rate 69.2%), and 14 of 17 (82%) consultation participants consented to the qualitative portion of the study.

2.3. Measures

Demographic data were obtained from participants at baseline, including gender, age range, years of social work experience, and frequency of interaction with suicidal young people. A range of validated and study-developed questionnaires were assessed pre-workshop, post-workshop, and post-consultation (see below).

2.3.1. Self-Efficacy and Confidence

Participant self-efficacy and confidence (e.g., Suicide Management Self-Assessment; SMS) was assessed using an altered version of a previously developed questionnaire by Lamis and colleagues [30]. This resulted in a 10-item Self-efficacy and Confidence questionnaire which used 5-point Likert scales ranging from one (strongly disagree; not at all prepared; not at all confident) to five (strongly agree; extremely prepared; extremely confident) assessing (i) ability to recognize and respond to suicide risk (e.g., *I know how to respond when I am concerned about a student who may be suicidal*), (ii) sense of preparedness to identify and refer a student at-risk of suicide (e.g., *How prepared do you feel you are to identify a student at risk of suicide?*), and (iii) overall confidence in these abilities (e.g., *Overall, how confident are you in your ability to identify and refer a student at risk for suicide?*). For the present study, two items assessing teacher attitudes were excluded (as the present sample were not employed in a teaching capacity), and three specific confidence items were added: (i) *Overall, how confident are you in your ability to manage the risk associated with a student at risk for suicide?*; (ii) *Overall, how confident are you in your ability to provide brief interventions to students at risk for suicide?*; and (iii) *Overall, how confident are you in your ability to develop a safety plan?* A subscale score was calculated for recognizing and responding (four items), preparedness (two items), and confidence (four items), along with a total score. Lamis [30] reported the internal consistency of the self-efficacy/confidence domains as $\alpha = 0.89$. In the present study, mean α coefficients over the three time points for SMS domains were 0.70 for the recognizing domain, 0.77 for the preparedness domain, 0.77 for the confidence domain, and 0.87 for the SMS total score.

2.3.2. Competence

The Suicide Competency Assessment Form (SCAF; [31]) measured self-rated competency in managing suicide risk. The SCAF has 10 items addressing key competencies compiled from expert sources in the management of suicide risk, including knowledge about suicide, ability to assess risk, and developing treatment plans (e.g., *Know and elicit evidence-based risk and protective factors*). Each competency is rated on a four-point Likert scale rating from one (incapable) to four (advanced competence). A total competence score was calculated using these 10 items. There is evidence that the scale has excellent internal consistency ($\alpha = 0.93$) and good construct validity [6,32]. In the present study, the mean α coefficient over the three time points for the SCAF was 0.88.

2.3.3. Training Feedback

A study-developed questionnaire assessed participant evaluation of the two-day workshop, regarding the presentations, trainers, activities, learning outcomes, and content topics. A total of 17 items (see Table 4) were rated on a 5-point Likert scale ranging from one (none of the time, strongly

disagree, not useful) to five (all of the time, strongly agree, very useful). A second study-developed questionnaire assessed participant feedback for the consultation sessions with an additional 10 items (see Table 4). Items are rated on a five-point Likert scale ranging from one (none of the time) to five (all of the time).

2.4. Procedure

Consenting participants responded to a set of questionnaires before the training program (T1), immediately after the program (T2) and up to two weeks following their last webinar consultation (T3). At T1 and T2, questionnaires were distributed in paper form and returned by participants to a box, ensuring investigators were unable to determine the identity of any individual respondent. At T3, data were collected using an online questionnaire platform as in-person collection was not feasible. Data were matched across time using unique self-generated participant codes. Webinar consultations were audio and video recorded using a web conference platform and recordings were transcribed verbatim. Ethics approval for the study was attained from the University of Melbourne (HREC ID:1852858) and the Department of Education, Tasmania (2019–22). Training occurred in May 2019 (which coincided with data collection at T1 and T2). The webinar consultations occurred between July and September 2019, and T3 data collection occurred in October 2019.

2.5. The Program

The MYSTS program comprised a two-day training workshop and six fortnightly follow-up webinar consultation sessions, offered as an integrated package with a focus on building skills in responding to suicidal young people. The training was developed by experienced clinicians from YMC and Orygen training, with extensive practice and knowledge of working with young people. They were not involved in the data analysis or interpretation in this article.

2.5.1. Workshops

The MYSTS program developed from a need to provide school-based clinicians with skills in the management of ongoing suicide risk. The face-to-face training explored six modules to assist social workers in responding therapeutically to young people with suicide risk. Workshop content was drawn from IPTS [28,33], recent research of suicidality in young people [34–36], and evidence-based models of suicide safety planning [37]. The workshop also incorporated elements targeting assessment and response to suicide risk undertaken by Pisani and colleagues [9], such as the Assessment and Management of Suicide Risk (AMSR) model [38], and the Chronological Assessment of Suicide Events (CASE; [39]). The six modules were covered across themed days (Day 1—Understanding What’s Going On; Day 2—Responding Therapeutically). The four modules presented on Day 1 covered: (i) introduction and theoretical background, a module which aimed to consolidate knowledge related to empirically supported components of effective suicide prevention intervention, (ii) suicide risk assessment, where there was a focus on understanding key dynamic and static risk factors and protective factors relevant to suicide prevention, (iii) chronology of risk, where there was particular emphasis on longitudinal risk assessment, (iv) and case formulation, including interactive discussion of vignettes of young people presenting with various severity levels of suicidality to consolidate skills in comprehensive case formulation of risk. The two modules presented on Day 2 addressed (v) therapeutic safety planning, and associated technology (e.g., apps) for supporting this process, and (vi) working with systems, where participants are introduced to concepts of working systemically in managing ongoing suicide risk, including a focus on informational and support needs that caregivers of young people with ongoing suicide ideation may have, as well as working alongside community-based organizations to ensure case coordination and appropriate support.

The training was delivered by co-facilitators from Orygen, from the training program and from the specialist clinical program (YMC). Module delivery was utilized with an adult learning approach [40,41],

including delivery of didactic content, role play, video teaching material, and interactive opportunities for discussion of key material.

2.5.2. Webinar Consultations

Following the delivery of the MYSTS workshop, attendees had the opportunity to undertake six teleconference group consultation sessions, run by the program facilitators and clinical psychologists. There were two consultation groups (Mondays and Wednesdays), totaling 12 consultations. These consultations were offered on the basis of evidence indicating that meaningful changes in practice require ongoing support beyond training in order to be sustainable [26,27]. The consultation sessions were designed to specifically address challenges that social workers experience in implementing best practice principles in their day to day work, as well as to provide a forum to consolidate and build upon learnings from the initial training package. The consultations were semi-structured as 60-min sessions involving 1–2 de-identified case presentations, followed by facilitated discussion for each case. The consultations were guided by prompts on a de-identified case review form (completed by the presenting participants) which included key questions for consideration, summary of the young person's circumstances, risk assessment undertaken, key service providers, and any other relevant information. Each attendee had the opportunity to present to the group at least once. The sixth consultation session focused on a general group-based reflective practice exercise regarding learnings to date and identification of ongoing areas for skill and practice development.

2.6. Data Analysis

Demographic and training feedback data were examined using descriptive statistics including means, standard deviations and frequencies. Linear mixed models assessed changes in participant outcomes across baseline (T1), post-workshop (T2), and post-consultation (T3) phases. Mixed models offer a superior method for handling missing data in longitudinal designs [42], and were employed due to missing participant data at T3 (response rate 52%). Participant scores for competence, confidence, knowledge, and attitudes were treated as dependent variables in separate models. Time (T1, T2, T3) was the independent variable in each model. This technique estimated models with five parameters and five levels—a fixed intercept (one level), a fixed time effect (three levels), a random intercept (one level), and a residual parameter. Random intercepts were included in all models to account for non-independence between participant's repeated scores, proving better fit models as indicated by Akaike's Information Criteria (AIC) scores. Post-hoc pairwise comparisons were inspected to identify differences between time points. Cohen's *d* was calculated as an effect size utilizing estimated marginal means and standard errors and interpreted as 0.2 = small, 0.5 = medium, and 0.8 = large.

Thematic analysis was undertaken on the qualitative transcripts to characterize the main topics discussed through the consultations and identify key challenges that social workers report in their work with young people experiencing suicidal ideation. The analysis followed the six stages outlined by Braun and Clarke [43]; (1) the first author familiarized themselves with the data and generated initial codes, (2) they then assigned preliminary codes in order to describe the content, (3) searching for patterns in the initial codes across the different interviews was undertaken, (4) then a review of the themes was completed, (5) theme names and definitions were developed, and (6) the report was produced including identifying extract examples of exemplar quotes.

3. Results

3.1. Quantitative Analysis

Of the 36 social workers that participated in the quantitative study, 33 provided data at time one, 30 provided data at time two, and 17 provided data at time three. Baseline demographics for the 33 participants are displayed in Table 1. There were no significant differences on demographic

or outcome variables between participants who provided data at time three and those who did not complete time three.

Table 1. Baseline demographics.

Age, % (n)	
21–30 years	24.2% (8)
31–40 years	42.5% (14)
40+ years	33.3% (11)
Gender, % (n)	
Male	9.1% (3)
Female	90.9% (30)
Experience as social worker	
Years (M(SD))	11.23 (8.29)
Range (years)	0.5–30
Frequency seeing YP with suicide, % (n)	
Daily	18.2% (6)
Weekly	24.2% (8)
Monthly	54.6% (18)
Once or twice a year	3.0% (1)
Less than once a year/never	0% (0)

Changes in participant outcomes between T1, T2, and T3 are displayed in Table 2. Significant main effects for time (e.g., improvements following training) were found for the competence (SCAF) and confidence (SMS) subscales and total scores. Pairwise comparisons indicated that confidence scores post-program and post-consultation were significantly higher than baseline confidence (all subscales and total score). Effect size estimates for total confidence were large (T2–T1, $d = 1.29$; T3–T1, $d = 0.90$). Competence scores were significantly higher post-workshop compared to baseline ($d = 1.33$). Competence scores were significantly higher at post-workshop compared to post-consultation.

Table 2. Linear mixed model estimated marginal means, standard errors, main effects, and post-hoc comparisons.

Variable	N	Descriptive Statistics			Time Effect <i>F, p</i>	Pairwise Comparisons (MD, <i>p</i>)		
		T1 EMM (SE)	T2 EMM (SE)	T3 EMM (SE)		T1-T2	T1-T3	T2-T3
SMS Recog. & Respond.	16–33	14.25 (0.36)	16.59 (0.38)	15.66 (0.50)	13.89, <0.001	–2.34, <0.001	–1.40, 0.014	0.94, 0.106
SMS Preparedness	16–33	6.91 (0.21)	8.03 (0.21)	7.68 (0.26)	19.54, <0.001	–1.12, <0.001	–0.78, 0.001	0.35, 0.157
SMS Confidence	16–33	14.33 (0.33)	16.38 (0.34)	15.83 (0.44)	17.21, <0.001	–2.05, <0.001	–1.49, 0.002	0.52, 0.240
SMS Total Confidence	16–33	35.50 (0.76)	41.02 (0.78)	39.17 (0.97)	28.70, <0.001	–5.52, <0.001	–3.67, <0.001	1.85, 0.062
SCAF	16–33	29.45 (0.73)	34.95 (0.76)	31.28 (0.97)	22.62, <0.001	–5.50, <0.001	–1.83, 0.076	3.67, 0.001

Note. Bolded *p* values indicates significance at the $p < 0.05$ level.

3.2. Qualitative Analysis

Transcripts were available from eight (67%) of twelve consultations provided, as four consults did not directly discuss suicidality or did not have sufficient attendance. There were 14 consenting participants that attended at least one online consultation. On average, there were four attendees in each consultation (excluding the trainer), with attendance ranging from one to seven participants. Six

of the consultations presented cases of suicidality in young people, with the remainder focusing on indicated prevention approaches. Three overarching themes were identified from the consultation transcripts: (i) accessibility to support the young person, (ii) communication and information sharing, and (iii) clinical management, with subthemes of conflict, risk management, and social worker competence concerns. These are presented below, with example quotations provided in Table 3.

Table 3. Qualitative themes and example participant quotations.

Theme	Exemplar Quote
Accessibility to support the young person	<ul style="list-style-type: none"> • “So there’s lots of things that, lots of things happening right now, and I don’t know that I’m going to be able to do anything until then, ‘til they’re back, and that’s next term.” (P1, C8) • “He’d talk about how important it was for him to be at school. But then I guess the drug use then became the overriding issue that would- so he would then become homeless which would mean he’d be unable to come to school” (P3, C2) • “It’s really open. When I talk to this student it’s just sort of like, “Okay, where’s that at now?” He can reflect back to that knife incident. The parents, well, I can speak to them, because I’ve talked to them about monitoring him and reducing his accessibility to things like knives and stuff like that.” (P6, C2) • “I wasn’t really sure how much we’d be seeing him at school or not and so that was something that was in my mind to link him in with external services” (P4, C4)
Communication and information sharing	<ul style="list-style-type: none"> • “The other school I work at there’s a lot of non-engaged parents and won’t want to talk about or will not talk about things like that” (P5, C7) • “So I’ve been telling dad about his suicidal thoughts and worries around his safety and (the young person) was very happy with that so he was like, “Yep, no, that’s fine.” (P4, C4) • “There’s just no real accurate information as to what’s actually going on, it’s just really frustrating” (P3, C2) • “I’ve done ones [safety plans] before for a lot younger than her, but with just pictures, and something like that could be useful for her.” (P6, C6)
Clinical Management	
Risk factors and conflict	<ul style="list-style-type: none"> • “The drug and alcohol I suppose misuse, is really impacting on him. So he’s really I suppose self-medicating and he’s used, these are his words, he says it makes him feel a lot better and it makes it easier to cope” (P4, C4) • “I think even though child safety can help, I think also if they have to intervene further and potentially remove, that will increase risk” (P6, C6) • “She [mum] is kind of thinking it is the schools problem, because of this bullying, which she says her daughter is being bullied. But yet she is, the student is actually, and she admitted to me the other day she instigates the nasty things and then people say nasty things back to her. But Mom sees it as a school issue.” (P5, C1)
Social worker competence concern	<ul style="list-style-type: none"> • “It’s one of those situations where it’s like, you don’t know if that’s just his situation and so he’s kind of hiding out somewhere, or whether you need to be of more concern” (P3, C2) • “It just, I’m not really sure. I think should I have done more, putting other things that were really important aside, or should I have just said no, I don’t have time to deal with this properly. I don’t know. Left me feeling a bit like I haven’t done enough.” (P1, C3)

Note. Participant (P), Consultation number (C).

3.2.1. Accessibility to Support the Young Person

The school-based social workers reported systemic and contextual challenges regarding accessibility to young people when they were expressing suicidality. Factors that decreased accessibility were the social worker’s availability (e.g., limited contact hours and large client list), the school calendar, and comorbid or secondary issues (e.g., suspension from school, drug use and homelessness).

Alternatively, there were instances where accessibility increased during periods of suicide risk. This was associated with caregiver engagement and support (including psychoeducation to caregivers regarding risk management beyond school settings) and positive relationships between the young person and social worker or other school staff. Social workers also recognized the importance of linking young people with external supports during periods when accessibility to them was limited.

3.2.2. Communication and Information Sharing

Consultation participants noted several challenges related to gathering and sharing information about youth suicidality with appropriate contacts. These included communicating with disengaged parents or caregivers, lack of information sharing systems or practices, liaising between multiple service providers or individuals connected to the young person, and locating/identifying pertinent information to inform decision making. Social workers were also conscious of young people's preferences and confidentiality when it was necessary to share information. There were additional challenges communicating therapeutically with young people in a way that was suitable for the young person's age and abilities. Specifically, there was a perceived need to alter tools to be youth-specific, including safety plans or risk models, and gather information necessary for efficient therapeutic response.

3.2.3. Clinical Management

Risk Factors and Conflict

Social workers frequently identified potential factors that could be simultaneously helpful or harmful to young people experiencing thoughts of suicide (e.g., involvement with protective services, marijuana use). Social conflict, bullying, and peer relationships were common precipitating or perpetuating factors identified, though affected young people could be both victims of and perpetrators for these behaviors. There were also challenges associated with conflicting needs, guidelines, and expectations across multiple individuals and systems, including the child protection system. Moreover, the needs of the school could conflict with the needs of the young person, and expectations of the parent or caregiver could differ from those of the social worker. Lastly, it was common for conflicting information to arise between accounts provided by various parties involved in the young person's care.

Social Worker Competence Concerns

Consultation participants voiced some uncertainty regarding the support they provided to young people reporting suicidal thoughts or behaviors, specifically, how concerned they should be and whether they had provided sufficient care. This was exacerbated when young people's suicidality or risk-state was ongoing or worsening, or following a suicide attempt.

3.3. Process Evaluation and Training Feedback

Overall, the process evaluation indicated implementation success as assessed by the three following process questions. *Was the training program implemented as intended?* The training program was implemented as planned, with participants attending a 2-day training program and a series of post-training consultations facilitated. *What characteristics of the project or its implementation enabled or hindered project goals?* While the study team had initially anticipated all participants would engage with the post-training consultations, this did not occur. A total of 14 of 36 consenting participants attended the post-training consultations. We surveyed training participants regarding the best days and times and sought to match the consultation sessions to availability. This meant that sessions were offered at the end of the working day when students had left the campus. This time was not convenient for all participants due to other commitments. *How suitable were the resource materials and activities for the training participants?* As shown in Table 4, training feedback for the workshops and consultations was overwhelmingly positive. For the workshops, all means and medians were equal to or greater than four, indicating that participants felt the training was well presented, with

relevant topics, knowledgeable trainers, and effective activities. In particular, workshop feedback on the five-point response scales indicated that the utilized learning activities were an effective way to learn ($M = 4.13$) and were closely related to the session topics ($M = 4.60$), with trainers making good use of examples ($M = 4.60$), and knowing the subject matter well ($M = 4.87$).

Table 4. Workshop and consultation feedback item means, standard deviations, and medians.

Workshop Feedback		
<i>n</i> = 30	<i>M</i> (<i>SD</i>)	<i>Median</i>
Presentation Components ^a	4.65 (0.36)	4.67
Things have been explained well in the session	4.63 (0.49)	5
The reasons why topics are taught are clear	4.67 (0.48)	5
New ideas were introduced at an understandable rate	4.67 (0.48)	5
Activity components ^a	4.37 (0.51)	4.5
The activity components were an effective way to learn	4.13 (0.63)	4
The activities are well-related to the session topics	4.60 (0.56)	5
Trainer ^a	4.61 (0.40)	4.67
Made good use of examples and illustrations	4.60 (0.56)	5
Presented material in an interesting way	4.37 (0.61)	4
Seems to know their subject matter well	4.87 (0.35)	5
Participants learning ^b	4.45 (0.49)	4.5
Gained good understanding of subject matter	4.67 (0.48)	5
More motivated about the topic	4.40 (0.62)	4
Developed skills needed in my professional role	4.43 (0.57)	4
Developed interest in these topics	4.30 (0.65)	4
Topics ^c	4.52 (0.41)	4.6
Suicide risk assessment	4.77 (0.63)	5
Therapeutic safety planning	4.77 (0.50)	5
Case formulation	4.63 (0.61)	5
Brief interventions	4.23 (0.68)	4
Working with systems	4.20 (0.76)	4
Consultation feedback		
<i>n</i> = 11	<i>M</i> (<i>SD</i>)	<i>Median</i>
Consults were useful in supporting my practice ^a	3.91 (0.83)	4
Consults assisted in consolidating risk management skills ^a	4.27 (0.79)	4
Presentation of case studies format was useful for me ^a	3.91 (0.83)	4
Unsure how to implement learning in practice (RC) ^a	4.27 (0.47)	4
More motivated about these topics ^a	3.91 (1.04)	4
Developed skills needed in my professional role ^a	4.18 (0.60)	4
Consults have led to changes in my practice ^a	3.82 (0.87)	4
Case presentation format was not useful to me (RC) ^a	4.45 (0.69)	5
Intend to implement learning from consults in practice ^a	4.27 (0.65)	4
Facilitator led the sessions in a helpful way ^a	4.45 (0.69)	5

Note. ^a = 1, none of the time; 2, little of the time; 3, half of the time; 4, most of the time; 5, all of the time. ^b = 1, strongly disagree; 2, disagree; 3, neither agree nor disagree; 4, agree; 5, strongly agree. ^c = 1, not useful; 5, very useful. RC = reverse coded.

For the consultations, 60% of the means and medians were equal to or greater than four (the remaining 40% reported means of three), indicating that while still useful, the consultations were less well received than the in-person workshop. Feedback on the consultations indicated they were useful in consolidating suicide risk management skills ($M = 4.27$) and that the consultation facilitators led the sessions in a helpful way ($M = 4.45$), though participants provided lower ratings related to the consultations leading to practice changes ($M = 3.82$) and usefulness in supporting practice ($M = 3.91$). Nonetheless, all medians were equal to or greater than four for the consultations, and the overall feasibility of training workshop implementation was established with all participants attending over the two days and the post-training consultations facilitated as planned. Implementation fidelity was considered from a number of perspectives. In terms of dosage, we considered the attendance across the

two days of face-to-face training to be the minimum dosage required, and all participants participated to at least this extent. We considered the feedback results presented in Table 4 as indicators of the training quality as rated by participants.

4. Discussion

This study evaluated changes to self-rated competence, confidence, and knowledge regarding therapeutic response to youth suicidality in a sample of school social workers who attended a targeted training program. The study also aimed to qualitatively identify key themes and challenges that are faced by school social workers post-training in implementing practice change and their ability to respond therapeutically to suicidality. The addition of long-term online consultation support provided an innovative opportunity for skill consolidation and collaborative learning.

4.1. Key Findings

The linear mixed model analyses indicated significant improvements over time for social workers' self-rated confidence and competence to respond to suicidality in young people. The online sessions consolidated social workers' confidence across all subscales, indicating that participants felt more confident in their ability to recognize and respond to youth suicidality, to refer at-risk students, to provide brief therapeutic interventions, and to develop collaborative safety plans with young people. Encouragingly, effect size estimates for changes from baseline to post-workshop and post-consultation were both large. These results build upon findings from previous gate-keeper trainings that report short- to moderate-term improvements in confidence and competence across a range of health professionals, community groups, and school staff [14,15,44–46].

Nuanced attitudes, themes and challenges emerged through qualitative analysis of consultation transcripts. The three major themes echo the complexities that social workers face and manage when working with young people in schools, including management of competing tasks, maintaining rapport, protecting confidentiality, involving caregivers, and, at the core, ensuring the young person's safety [36]. The first theme of accessibility revealed factors that increased and decreased social workers' ability to support young people expressing suicidal thoughts, intentions or behaviors. Future initiatives should seek to incorporate content focused on minimization of barriers to support where applicable, for instance, helping schools to explore alternatives to suspension and boosting avenues for linking young people to external supports during school holidays. Promoting such interpersonal protective factors (e.g., school attendance) will likely benefit feelings of thwarted belongingness in young people (see IPTS; [28]).

The second theme, communication and information sharing, highlighted an array of challenges concerning gathering relevant and timely information to aid therapeutic response, and communicating with caregivers, school staff, external systems, and the young person. These findings impart a need for standardized information sharing practices in schools and targeted training content offering advice to engage unresponsive caregivers (e.g., consistent outreach, communicating their importance as caregivers; [47]). Undoubtedly, engaging parents and caregivers is paramount in supporting young people at risk of suicide [48]. Thirdly, the clinical management theme reflected challenges social workers encountered when faced with complex or conflicting risk-factors, role expectations, needs, and guidelines (e.g., school, organizational, legal). This reflects preceding qualitative literature whereby school staff (social workers, teachers, counsellors, nurses, and administrators) indicated differing role expectations and practices regarding suicide prevention [49]. Setting clear expectations in collaboration with schools, caregivers, and systems is fundamental to alleviating potential conflict situations that impact a social worker's ability to care for young people with suicide risk. Further, it may have been the case that social workers' competence beliefs were vulnerable to doubt during high-risk situations, including chronic risk-states or following a suicide attempt. Leveraging techniques that increase self-efficacy and competence beliefs at these high-risk times are critical to supporting social workers' wellbeing, in turn enabling better care for young people. Alternatively, dealing with high-risk clinical

situations (especially in the context of limited access to clinical colleagues or supports) is likely to be challenging and stressful, and the experience of having a student attempt suicide, or experience ongoing suicidality, may precipitate school-based clinicians to re-examine their perceived competence and effectiveness. To better explore these processes, future research should look to objectively assess competence gains rather than depending on practitioner competence ratings post-training.

In the present consultations, social workers presented cases of chronic suicide risk and crisis situations, highlighting the necessity for training packages to equip participants with skills to identify and respond to the spectrum of suicidality. This was a key element of this training package and should be entrenched into future initiatives to better suit the needs of school social workers and other professional frontline staff. Contextualizing suicide prevention in young people as part of a holistic system of care, where collaborative involvement and engagement is garnered from multiple systems and individuals, will broaden the scope to effectively support young people [50], while encouraging collaboration between frontline and support staff, family, and systems will enable more targeted support to the individual.

4.2. Limitations

This study was limited by the somewhat low opt-in response rate post-consultation; however, mixed-model techniques were implemented to minimize the statistical impact of missing participant data. The pre-post, self-report design and the attrition rate also limit interpretation and the generalizability of findings; however, results were complemented with qualitative findings. That said, the qualitative analysis undertaken does not convey whether these points were universally held by most participants or a minority. More fine-grained qualitative research is therefore required. Participants voiced few limitations of the consultation sessions, though they reported some technological barriers regarding initial troubles accessing the teleconference links or experiencing audio or video malfunctions. An additional consultation barrier was scheduling, as some participants were unable to electronically attend certain sessions, or would join a session late. Further, not all consultation sessions directly discussed a case of youth suicidality. Despite a high baseline rate of exposure to service users with suicidality (97% monthly, weekly or daily), some consultation participants reported they did not have a relevant case they could present to the group.

While training feedback was largely positive, it may have been subject to ceiling effects. Given that the present design did not include pre-post within subjects (or controlled between subjects) comparisons, the positive feedback obtained may not necessarily translate into improved knowledge or clinical practice. Related to this, there was no formal assessment of program fidelity, and this should be an important focus of subsequent research. It is recognized that school-based social workers are not the only mental health practitioners who work in school settings. While the present training program appeared beneficial for social workers, further evaluation is required to determine if the program would benefit other disciplines. There is also a need to provide training and support to other school staff (e.g., teachers, administration staff) who may experience student disclosure of suicidality. Hence, a modified version of the MYSTS training package may be needed for non-clinical school staff. As not all training participants consented to the consultation sessions, further research is required to determine reasons for this, such as issues with scheduling, or if other participant differences may have biased the results. From a measurement perspective, future research should incorporate objective measures of competence (e.g., video-recorded sessions) and the subdomains on the measure of Self-Efficacy and Confidence should be considered provisional, requiring statistical validation in a larger sample. The current design is unable to answer the question of whether the additional work of providing consultation calls resulted in improved application of suicide prevention skills over time, improved knowledge over the longer term, or reduced suicide attempts or ideation in the student population. A more rigorous evaluation of the MYSTS program, including a suitable comparison group (e.g., wait-list control or cluster randomized control trial) should be undertaken, with consideration of random sampling. Randomizing participants to receive post-training consultation calls would enable

the effects of this innovative approach to be determined. Adherence was not formally measured in this study and is an important issue that we intend to investigate in future research.

5. Conclusions

This study suggests that the MYSTS workshop and follow-up consultations were effective for increasing school social workers' confidence and self-reported competence to respond to young people presenting with suicidality. Innovative online support via teleconference may have helped to consolidate confidence and reduce worry attitudes regarding suicidality in young people. Qualitative analysis revealed an array of challenges that social workers experience when supporting young people expressing suicidality. These themes highlight a need for greater collaborative engagement from schools, caregivers, and external systems to support care of young people. To better support school social workers, suicide prevention training should focus beyond crisis management and seek to develop long-term support strategies to enable skill consolidation.

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