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Development of the Life Gatekeeper suicide prevention training programme in China: a Delphi study

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ABSTRACT

Background Youth suicide has been a pressing public mental health concern in China, yet there is a lack of gatekeeper intervention programmes developed locally to prevent suicide among Chinese adolescents.

Aims The current Delphi study was the first step in the systematic development of the Life Gatekeeper programme, the first gatekeeper programme to be developed locally in China that aims to equip teachers and parents with the knowledge, skills and ability to identify and intervene with students at high risk of suicide.

Methods The Delphi method was used to elicit a consensus of experts who were invited to evaluate the importance of training content, the feasibility of the training delivery method, the possibility of achieving the training goals and, finally, the appropriateness of the training materials. Two Delphi rounds were conducted among local experts with diversified professional backgrounds in suicide research and practice. Statements were accepted for inclusion in the adjusted training programme if they were endorsed by at least 80% of the panel.

Results Consensus was achieved on 201 out of 207 statements for inclusion into the adapted guidelines for the gatekeeper programme, with 151 from the original questionnaire and 50 generated from comments of the panel members. These endorsed statements were synthesised to develop the content of the Life Gatekeeper training programme.

Conclusions This Delphi study provided an evidence base for developing the first gatekeeper training programme systematically and locally in China. We hope that the current study can pave the way for more evidence-based suicide prevention programmes in China. Further study is warranted to evaluate the effectiveness of the Life Gatekeeper training programme.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Gatekeeper training programmes have been developed and implemented worldwide with different targeted populations and various aims related to promoting awareness of suicide or increasing intervention skills to support people at risk of suicide.

WHAT THIS STUDY ADDS

⇒ This Delphi study is the first step in developing a gatekeeper training programme tailored to help Chinese teachers and parents to understand and communicate with adolescents potentially at risk of suicide.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ This study could inspire future research on developing evidence-based and effective suicide prevention in China.

INTRODUCTION

Suicide has been a pressing global public health concern and a leading cause of death among young people aged 10–24.[1] Although the overall suicide rate in China has declined significantly in the past few decades due to economic development and improved living standards,[2] the proportion of adolescents at risk of suicide remains concerning. For example, a recent cohort study found that among students aged between 12 and 18, the lifetime prevalence rate of suicidal thoughts ranged from 17.6% to 23.5%, the prevalence rate for suicidal planning ranged from 8.9% to 10.7%, and the prevalence rate of lifetime suicide attempts ranged from 3.4% to 4.6%.[3] Similarly, another study of 12 733 Chinese students aged 9–18 found a striking 38.1% of female and 30.0% of male students reported suicide ideation.[4] However, in contrast, a recent study found a relatively low reported rate of suicide attempts by family members in China, which could suggest that recognising suicidal risks remains a crucial challenge for suicide prevention.[5] The Ministry of Education of the People's Republic of China[6] has recognised the urgent need for promoting mental health services to reduce suicidal risks among Chinese students and advocated a strong collaborative partnership between schools, families and mental health services to improve the ability to intervene in psychological crises among students.

Adolescent suicide not only has a detrimental impact on parents and families of the adolescents but also profoundly affects

their teachers and peers at school.[7–9] These people are called 'gatekeepers', namely those who have primary contact with at-risk students with the potential to identify warning signs and intervene with at-risk students before suicide occurs.[10] Thus, school-based gatekeeper training programmes have been a widely used suicide prevention strategy, aiming to equip teachers, school personnel, parents and peers with the skills to recognise warning signs in students at risk of suicide, to communicate with the latter effectively and to refer them for formal support.[11] A range of gatekeeper programmes have been developed internationally, such as Question, Persuade, Refer (QPR[12 13]) and Applied Suicide Intervention Skills Training (ASIST[14 15]). Key components of such programmes include psychoeducation about suicide, warning signs, reducing stigma and promoting the gatekeeper behaviours of communicating with and referring at-risk students to seek professional support. Overall, current gatekeeper programmes have been found to reduce stigma and increase gatekeepers' knowledge of suicide and self-efficacy to intervene.[16 17] However, the efficacy of gatekeeper programmes in reducing suicidal behaviour and increasing gatekeeper behaviour remains unclear, lacking conclusive evidence.[18 19] Moreover, Burnette *et al*[20] noted a largely unstudied gap between the knowledge, beliefs and skills learned in gatekeeper training and their translation to actual gatekeeper behaviour. Meanwhile, the theory of planned behaviour (TPB[21]) has been proposed to predict the intention to intervene[22 23] and the actual gatekeeper behaviour after gatekeeper training.[24 25] For example, a controlled and longitudinal study of The Alliance Project, which was an experiential gatekeeper training programme, found that the training had a significant impact on the intent to intervene over time.[25] Similarly, another study of QPR also found that the training was effective in all relevant components of TPB, therefore increasing participants' willingness to intervene with those at risk of suicide.[26] While measuring gatekeeper behaviour per se remains a methodological challenge, measuring the intention to intervene is likely to be the next most accurate estimation of the effectiveness of gatekeeper training.

In summary, though evidence-based and effective suicide prevention is urgently needed in response to the pressing public health concern of suicide among adolescents in China, there is a striking paucity of related research. For example, in a recent meta-analysis of campus-based suicide gatekeeper training programmes between 1993 and 2016,[27] nine international studies were identified, and only one was conducted among Chinese university students, while other studies were conducted in middle schools or high schools internationally. Previous research on gatekeeper training programmes among Chinese secondary or high school teachers and parents was qualitative and did not measure the effectiveness of such training.[28 29] To the best of our knowledge, no study on gatekeeper training for parents in China could be found, potentially due to common barriers for families and caregivers getting involved with their children's mental healthcare.[30]

Meanwhile, a recent wave of studies has advocated for applying the socioecological model to suicide prevention strategies,[31 32] thereby recognising the complex nature of suicidal behaviour. This model organises risk and protective factors for suicide into societal, community, relationship and individual levels[33 34] based on Bronfenbrenner's[35] ecological system theory. Culturally sensitive and community-based interventions are needed as cultural contexts impact manifestations and interpretations of distress, as well as stigma or distrust towards seeking support for suicidal behaviour.[36] Hence, a gatekeeper intervention developed locally and systematically has the advantage of being tailored to the distinctive socioecological system in which Chinese school students live, and it could be more adaptive than the direct importation of existing gatekeeper training programmes developed in other countries. For example, sociocultural factors such as extreme individualistic or collectivistic values were associated with high suicidal ideation risk,[37] while Confucian ethics such as filial piety and gender roles have been found to have a complex relationship with suicidal behaviour.[38 39] At the systemic level, it was found that only 35% of Chinese schools in Beijing have qualified mental health counsellors, and 20% of schools did not provide any psychological service; the ratio between psychological service personnel and students was 1:1360.[40] Thus, school counsellors might not always be accessible, and teachers and parents might need further support in finding reliable professional support resources for at-risk students.[41]

The current study will employ the Delphi method to develop an intervention by systematically tapping into the expertise of a group of Chinese researchers and clinicians recognised in the field of suicide intervention.[42] This entails an iterative process of analysing feedback from the experts and revising the proposed content.[43] Previously, this expert consensus method was used in developing mental health first aid guidelines for suicide in China[44] and other mental health interventions.[45 46] However, given the lack of gatekeeper training programmes delivered in Chinese schools and the need to account for relevant ethical issues, sociocultural factors and implementation difficulties (ie, limited resources with high demands), a rigorously designed and systematically developed gatekeeper training specifically tailored to Chinese teachers and parents for supporting adolescents at risk of suicide is much needed. More specifically, the current study aims for Chinese suicide prevention experts to evaluate the importance of the training content, the feasibility of the training delivery methods, the possibility of achieving the training goals and, finally, the appropriateness of the training materials. As a result, this Delphi study will contribute significantly to the formation of the first evidence-based suicide gatekeeper training developed locally in China.

METHODS

The Delphi method

The Delphi technique involves a group of experts making independent ratings of agreement with a series of statements through an iterative, multi-stage process. This systematic approach draws on the expertise of people working in specific areas and is applicable to provide guidance in a particular context. Delphi studies have commonly been used for the content development of mental health training programmes, including culturally appropriate mental health first aid,[47] suicide postvention guidelines for secondary schools,[48] and dos and don'ts in designing school-based awareness programs for suicide prevention.[49]

In this study, the Delphi process was conducted to identify the statements that should be included for the school-based suicide prevention gatekeeper training programme regarding the training content, training delivery form, training goals and training materials. Panel members were invited to review and rate their agreement with a range of initial statements and suggest any relevant information that could be added to each section. Informed consent was obtained from all participants, who were aware of their right to withdraw from the study at any time. Additional statements suggested by panel members in round 1 were included in round 2 for all members to rate. After obtaining the data from round 1, panel members received personalised feedback, including their rating and the overall rating for each item in round 1. Subsequently, they had the opportunity to change or maintain their original rating in round 2 based on this feedback for re-rating items that did not achieve consensus earlier. Panel members were compensated for their time participating in the study. Ethical approval was obtained prior to the start of this study.

Literature review

A literature search was conducted to identify information about the main content of the training programme, and search keywords were determined based on a previous study.[17] The keywords 'school-based', 'curriculum-based', 'suicide prevention', 'suicide education', 'gatekeeper', 'teacher', 'staff', 'parent' and their various synonyms were investigated in the databases of Google Scholar, Web of Science, PubMed and Chinese National Knowledge Infrastructure. Studies on effective elements of gatekeeper training,[50] development and evaluation of gatekeeper programmes[12 51 52] and theoretical models of gatekeeper behaviour[20] were consulted when conceptualising the development of the initial statements.

Questionnaire development and adaptation

The content of the Delphi survey was developed in two phases: first, by reviewing existing literature relevant to school-based gatekeeper training for suicide prevention, and second, by focus group discussion with school counsellors and experts in suicide prevention for practical insights in intervention development before the Delphi study began. The Literacy of Suicide Scale[53] and guidelines from WHO[1] were also consulted in developing these statements. As a result, the contents of the Life Gatekeeper training programme are original, created by the research team members, rather than by direct translation from existing programmes.

Statements for the content of the programme were organised into eight general modules: (1) identifying the urgency of suicide among adolescents and common feelings of persons at risk for suicide, (2) establishing understanding about suicide, (3a) recognising risk factors associated with suicide, (3b) identifying warning signs for suicide; (4) comprehending recommended ways to communicate suicide risk; (5) assessing suicide risk; (6) making a safety plan; (7a—for teachers' training only) instructing teachers how to communicate with parents about their children's suicide risk and find help for them, (7b—for parents' training only) teaching parents how to express support for their children and find resources for help; and, finally, (8) identifying barriers for adolescents when seeking help or receiving assistance from teachers or parents. These eight modules were designed so that in addition to psychoeducation on suicide, some parts of the training also corresponded to the TPB model. For example, in the second module, statements included commonly encountered stigmas and misunderstandings related to suicide in an attempt to improve the attitude of trainees. Furthermore, in order to increase the perceived behavioural control of trainees, the final module pre-empted potential barriers of help-seeking by at-risk adolescents and provided support to teachers and parents. Moreover, statements within the fourth to seventh modules included detailed, step-by-step practical tips on what the trainees should and should not do when communicating with at-risk students, potentially increasing the perceived behavioural control of participants who will attend the training programme.

The first six modules of the programme shared similar components with existing gatekeeper programmes such as ASIST and QPR,[12 15] whereas the latter two sections were locally developed with innovative features of the Life Gatekeeper programme. The teacher-specific and parent-specific modules were developed in response to the call for family–school partnerships in suicide prevention, and the final module, which encourages trainees to discuss potential barriers, was in line with the TPB,[21 25] aiming to promote positive attitudes and increased perceived behavioural control regarding the performance of gatekeeper behaviours.

After that, the research team members set up a working group, including experts in mental health intervention project development and suicide prevention. The working group met regularly to discuss each possible statement extracted from the preliminary content that may be applicable to this training programme. We revised the statements to ensure that they could be understood by teachers and parents who lacked background knowledge of suicide prevention and were suitable for

implementation. After several rounds of discussion and modification, the statements applicable to this intervention programme constituted the initial Delphi study questionnaire.

Panel formation

Panel members were invited to participate in this study if they were specialists with relevant suicide prevention or intervention experience. The experts were individually invited if they met any of the following inclusion criteria:

- a member of the Crisis Intervention Committee of the Chinese Association for Mental Health
- a psychiatrist/psychotherapist working in medical institutions for more than 5 years with clinical experience in suicide intervention
- a professor engaged in teaching and psychology research (psychological crisis intervention) in a college or university
- a school counsellor who regularly counselled students and was involved in suicide crisis management
- a crisis line operator with more than 5 years of working experience in answering calls and managing a crisis hotline

Data collection and analysis

At the beginning of each round of the Delphi study, an online link for participation in the survey was sent to all of the experts on the list. One week later, the experts who had not completed the questionnaire received an email reminder. Each round of the study lasted for 2 weeks; responses that exceeded the time limit were not collected or included in the data analysis. A flowchart of panel member recruitment, engagement and number of statements for each Delphi round is shown in figure 1.

Panel members completed two rounds of questionnaires using the web-based survey platform Wenjuanxing. They were informed that their participation in the Delphi study would lead to the development of a gatekeeper training programme for suicide prevention that was culturally and contextually appropriate for teachers and parents in China.

The structured questionnaire used to collect expert feedback consisted of five sections: training content, training methods, achieving the training objectives, training materials, and general comments. For the round 1 and round 2 questionnaires, panel members were instructed to rate each statement according to one aspect of the criteria on a 5-point Likert scale, including

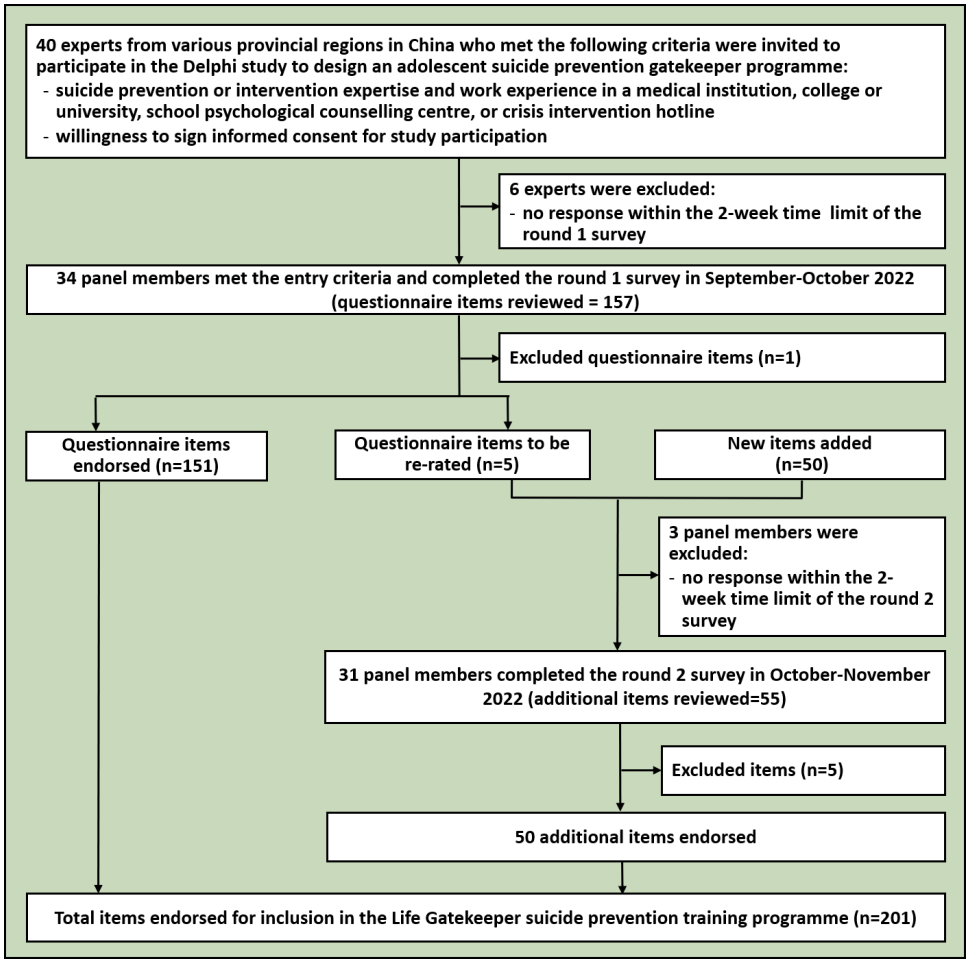

Figure 1 Overview of panel recruitment and the two-round Delphi process.

the importance of the training content, the feasibility of the training method, the achievement of the training objectives, and the appropriateness of the training materials. For example, in the training content section, the instruction before the items to be assessed was, 'Please rate the importance of including the content of the following items in the training programme'; options included 1=least important, 2=unimportant, 3=unsure/depends, 4=important and 5=essential. In the training methods and the achieving the training objectives sections, the instruction before the items was, 'Please rate the following training methods/achieving the following training objectives according to their feasibility'; options included 1=not at all feasible, 2=not feasible, 3=unsure/depends, 4=feasible and 5=completely feasible. In the section 'training materials', options included 1=not at all appropriate, 2=not appropriate, 3=unsure/depends, 4=appropriate and 5=completely appropriate.

In addition to the statements and rating scales, there were three open-ended questions at the end of the above four sections during the round 1 questionnaire. (1) 'Do you think it is necessary to add other items or content in this section? Please provide your suggestions for supplementation.' (2) 'Which items in this section do you think are inappropriate or need to be modified? Please provide your suggestions for modification.' (3) 'What other suggestions do you have for this section?'. In the fifth section, there were three different open-ended questions. 'In general, how likely do you think this intervention will cause harm to the trainees? Please explain what you think may cause harm during the intervention and provide suggestions for how you think such harm could be reduced'; 'Overall, what additional content or intervention techniques do you think are needed for this intervention to help trained teachers or parents develop a better understanding of suicide intervention and apply the gatekeeper behaviour techniques?'; 'In order to design a localised intervention, we used data from relevant national studies, designed cases that fit the local context, conducted interviews with crisis intervention hotline workers and psychologists in China, and emphasised the need for home and school cooperation when protecting children at risk of suicide. Do you think these can meet the criteria for a localised intervention? If not sufficient, what other modifications could we make to strengthen the localisation of this intervention?'. Open-question responses were then discussed among the authors to generate new statements.

After each round, responses were analysed to calculate the percentage of the panel who rated an item as 4 or 5. According to previous similar studies,[44 54] the criteria for consensus were defined as 80% or more of the panels scoring an item as necessary (≥4). Statements that were endorsed by 80% or more of the panel members were included in the training guide immediately. Statements rated by 70%–79% of the panel members as necessary were re-evaluated in the following round. Statements that were rated by less than 70% of the panel members as necessary were immediately excluded.

Following round 1, all panel members were provided with a summary report that included a comparison of their own ratings against the overall response for each item. In the round 2 questionnaire, panel members were asked to re-rate statements which were endorsed by 70%–79% of panel members and to rate the new statements created from the open-ended questions from round 1 for inclusion in the training programme.

RESULTS

Expert panel information

In round 1, 34 of the 40 invited potential expert panel members agreed to participate in the study and completed the survey. Thirty-one of them participated in round 2 (retention rate=91%). The mean (standard deviation (SD)) ages of experts participating in round 1 and round 2 were 42.4 (8.5) and 41.5 (8.2) years, respectively, and the mean (SD) years of suicide prevention and intervention working experience were 13.7 (8.1) and 12.7 (7.2), respectively. There was no significant difference in age (t=0.43, p=0.670) or duration of suicide prevention and intervention working experience (t=0.52, p=0.610) between experts who completed two rounds of Delphi versus those who only completed one round of the questionnaire. All panel members were currently working in China and were recruited from 13 provincial regions, including Beijing (35%), Hubei (15%), Hunan, Shanxi (Central provinces), Jilin, Liaoning, Inner Mongolia, and Tianjin (Northern provinces), Shanghai, Zhejiang, and Shandong (Eastern provinces), and Fujian and Guangdong (Southern provinces). The composition of participants represented various professional backgrounds. Most of them were school or university teachers (38.2%), psychiatrists (35.3%), psychotherapists (26.5%), psychological counsellors (23.5%), academics (26.5%) and hotline operators (17.6%); see table 1 for more details.

Endorsed statements

Figure 1 shows the number of statements to be endorsed, re-rated, rejected and newly added in each Delphi round. Of the 157 items included in the first round, 151 were endorsed, one was excluded and five needed to be re-rated (see online supplemental table 1 for statements and their ratings in round 1). All of the 50 new statements developed from panel members' comments collected through the round 1 survey were endorsed in the round 2 rating process. Of the 55 statements included in round 2, all of the five re-rated statements were rejected and excluded (see online supplemental table 2 for statements and their ratings in round 2). After two survey rounds, 201 of the 207 statements assessed by the expert panel were endorsed for final inclusion in the gatekeeper training programme (see online supplemental table 3 for a full list of these included statements).

Examples of the new statements generated according to the open-ended text comments after each section are shown in online supplemental table 4. Table 2 shows

Table 1 Characteristics of participants (N=34)

Item	Category	n	%
Age (years)	20–30	3	8.8
	31–40	14	41.2
	41–50	11	32.4
	51–60	6	17.6
Gender	Men	15	44.1
	Women	19	55.9
Education	College	1	2.9
	Bachelor's degree	7	20.6
	Master's degree	9	26.5
	Doctorate	17	50.0
Occupation*	Psychiatrists	12	35.3
	Psychotherapists	9	26.5
	Psychological counsellors	8	23.5
	Researchers/academics	9	26.5
	Teachers	13	38.2
	Hotline operators	6	17.6
Years of experience in suicide prevention and intervention	1–5	6	17.6
	6–10	7	20.6
	11–15	8	23.5
	16–20	10	29.4
	21–25	0	0.0
	26–30	1	2.9
	>30	2	5.9

*Including 13 participants with multiple occupations.

examples of statements endorsed for inclusion in the training programme.

According to the results of two rounds of the Delphi questionnaire, we revised the training programme's content. The first section was used for content development based on the importance of each section and specific items to be included in the programme. The second section was used to adjust the delivery methods of the training. According to the survey results, four initial training methods, such as video display (both animated videos and those by real actors), group discussion and role-play were endorsed and included, as well as adding the training format of an online question and answer (Q&A) session. The third section was used to confirm the experts' evaluation of whether the existing training content could achieve the desired objectives. In this part, all of the six original items were highly endorsed by the panellists, and there were no new suggestions. For example, the majority of experts (97.1%) agreed that presenting statistics, common misconceptions, risk factors and warning signs related to suicide in the form of animated videos is feasible for enhancing trainees' ability to understand and retain the relevant information. Based on the results, survey consensus on the feasibility of the proposed training method to meet the objectives was reached, increasing confidence that the intervention will be effective in achieving its goals. The fourth section was used to evaluate the form and content framework of the training materials. The final form of training materials was the same as the original version, including standardised intervention videos, manuals, appendices, training presentations and materials for at-risk students and parents. Six specific statements explained the purpose of the various training materials in detail. For example, one statement says, 'The manual is an exercise booklet for use during training in which trainees can take notes, follow the prompts for group discussions or role plays, and refer to examples of role-play exercises.' Two items added information about post-training testing and available online materials. All of the items were endorsed by the panel members and consensus was achieved.

In the fifth section, at the end of the questionnaire, panel members were asked to indicate their overall evaluation of the training programme, whether they considered the programme to be culturally suitable for local use, and if they foresaw any potential harmful effects. According to their comments, new items were generated to modify the existing training form and content the overall prerequisites, and the ways of providing the training programme. Among the 34 experts participating in the round 1 survey, 27 (79.4%) chose the option that the intervention would not cause any harm at all or was unlikely to cause harm, while six experts were uncertain and an expert chose the option that it is likely to cause harm to trainees. Based on the suggestions, two items synthesised for reducing harm to trainees were included. The informed consent form highlights that the training is voluntary and that teachers or parents with previous trauma experience or who perceive death as a taboo topic could choose whether to attend the training or not. Also, if during the training any teacher or parent feels uncomfortable, they can leave at any time. Twenty-five of the 34 (73.5%) experts considered the intervention sufficient to meet localisation standards. Three new items were generated and adopted, including conducting interviews with parents and students, surveying parents from different backgrounds and adding resources about referrals in the training materials.

DISCUSSION

Main findings

This is the first Delphi study conducted as part of developing a school-based suicide gatekeeper programme systematically and locally designed in China. Overall, expert consensus was achieved on the training content, the feasibility of training delivery method, the possibility of achieving training goals and the appropriateness of training materials. Findings from this study provide a preliminary evidence base for the systematic development of the Life Gatekeeper programme, a timely initiative given the continued lack of localised school-based

Table 2 Examples of expert-endorsed items and their agreement percentages

	Ratings (%)
Section I. The evaluation of the training content from experts	
Trainees will identify children at risk of suicide as early as possible by being taught suicide-related risk factors and early warning signs.	100.0
Trainees will practise how to hold conversations about suicide during role plays and will get timely feedback from peers to help them feel more competent when talking about suicide in actual situations.	100.0
Trainees will learn how to directly assess the suicidal risks of children by practising how to ask about suicidal thoughts, plans, tools and methods.	100.0
Section II. The feasibility of the training methods	
Trainees will watch animated psycho-educational videos, with some videos synthesised from various clips.	91.2
Section III. The feasibility of achieving the training objectives	
Trainees will be presented statistics, common misconceptions, risk factors and warning signs related to suicide in video format to strengthen their understanding and retention of relevant information.	97.1
Section IV. The suitability of training materials	
Trainees will be issued standardised training materials (ie, intervention videos, manuals, appendices, training presentations and materials for children and parents) to facilitate comprehension and ongoing learning of this intervention.	100.0
Section V. General remarks	
Trainers should survey parents from different backgrounds about their perceptions of suicide prevention in schools, their willingness to participate in the training and any potential barriers that might prevent them from joining the training.	96.8

suicide prevention development in China. Eight modules ranging from improving suicide literacy to pragmatic techniques of gatekeeper behaviour were established, and delivery methods of the gatekeeper training programme included both animated and role-play demonstration videos, group discussion and triad role-play.

When developing statements for the current study, research literature from English and Chinese databases were consulted. Thus, we drew inspiration from various sources: evidence-based international gatekeeper programmes (eg, ref 16 55), Chinese literature that provided insights on sociocultural factors relevant to the development of a localised gatekeeper training programme in China, and national guidelines for suicide prevention created by the Chinese government. Sometimes modifications of Western protocols were necessary. For example, existing gatekeeper training programmes such as ASIST or QPR commonly require gatekeepers to refer at-risk students to school counsellors for support.[12 15] However, this might not be feasible in China due to the current limited availability of mental health professionals within schools, especially in rural areas.[56 57] As such, it is inevitable that Chinese school teachers must undertake some responsibilities of school counsellor when acting as gatekeepers by learning how to communicate with at-risk students in an empathic and compassionate way, to explain the principle of confidentiality regarding disclosure of the suicide risk, and then to collaboratively develop a safety plan with them. They also need to communicate with parents effectively and support them in seeking timely medical support for the vulnerable student.

To optimally equip teachers with the necessary knowledge and skills for these challenging tasks and to empower them to perform gatekeeper duties, statements included in this Delphi study reflected the thorough consideration and nuanced design of the Life Gatekeeper programme. The programme content included detailed information about suicide risk assessment, templates for questions and safety plans, grounding techniques that could help students to calm down if they feel overwhelmed by emotions during conversation, and communication skills with parents. Moreover, this Delphi study also established the benefits of providing a variety of training materials, such as the training manual that has instructions on the training procedure and note-taking space that encourages engagement, an appendix that contains key information for training exercises and references for actual intervention, leaflets that contain psychoeducational information specifically for at-risk students or their parents, and a one-page summary of local and national crisis services and hospitals with mental health services. Furthermore, consensus was reached by experts that triad role-play consisting of a teacher, an at-risk student and an observer could be helpful for trainees to practise communication skills; previous research has shown that the observer role of watching others praticising skills facilitates further learning. [58] Lastly, as agreed upon and advised by panel members, at the end of the training, a Q & A session will be offered by experienced clinicians to address any unanswered questions, thereby further empowering trainees by increasing their confidence in applying gatekeeper skills.

Thirty-four panellists completed the initial consensus round and 31 completed the second round, yielding a high retention rate (91.2%); both rounds had more than 23 experts. Thus, it is likely that the results produced will remain stable over time.[59] Moreover, the current Delphi study benefited from diverse backgrounds of expert panel members as they were recruited from several provinces across the country and had divergent roles (eg, researchers, clinicians or crisis frontline workers), educational levels and years of suicide prevention expertise. Their endorsed statements reflected consensus achieved from a multidimensional understanding of the topic, thus, increasing the generalisability of the findings.

Compared with existing gatekeeper training programmes, a module unique to the Life Gatekeeper programme is the teacher-training on how to communicate with parents about their child's suicidal risk. As mentioned previously, the Ministry of Education of the People's Republic of China[6] has emphasised the school–family partnership in crisis intervention for students with suicidal risk. It has specifically stated that schools should assist parents in promptly seeking professional support for at-risk students. This strategy has been supported by Chinese researchers, for the psychological crisis experienced by an adolescent potentially reflects a larger, systemic problem in their ecological system wherein school teachers and parents play essential roles in protecting the child's safety and supporting recovery.[60] For example, the Delphi study statement 'Teachers should communicate and update parents regularly about their children's safety and what help the family may need' was endorsed by 97.1% of the panel experts.

Considering that parents may experience strong emotional reactions of fear, overwhelm, anger, helplessness and worry when informed of their child's suicidal risk,[61] Chinese teachers may be challenged to deliver the message in a safe, contained way to upset parents. (In Western countries such messages are likely to be delivered by school counsellors who are trained to manage difficult feelings). Thus, to support teachers in their role of gatekeepers and decrease their perception of this challenge as a barrier to taking action, we included statements of 'When communicating with parents about their child's suicide risk, teachers need to focus on parents' emotions and inform them that suicide is largely preventable to keep them from becoming overly anxious' and 'Teachers should talk to parents about the support available at school and the medical resources they can utilise in order to help alleviate excessive worry' as guidance for teachers when communicating with parents. Both of these statements were endorsed by 100% of the panel members. Furthermore, since youth suicidality has been found to be associated with family factors such as lack of parental warmth,[62] impaired family functioning,[63] perceived authoritarian parenting and negative family climate,[64] during the Life Gatekeeper training programme, teachers will also practise explaining to parents appropriate approaches for communicating with their at-risk child.

Additionally, panel members achieved consensus on all the statements regarding the parents' version of training. Statements in this section were about what and how parents should communicate with their children about their suicidal risks and how they should seek further support from schools, hospitals and local resources on behalf of their children. Furthermore, based on the feedback from experts, a statement of life education—'Parents need to educate their children about life and encourage them to discuss the value of life together'—was added in the second round, and it was endorsed by 93.5% of panel members. Indeed, it has been found that having meaning and purpose in life significantly impacts attitudes towards suicide among university students.[65]

Limitations

The feasibility of the Life Gatekeeper programme as perceived by school teachers, parents, at-risk adolescents and their peers has yet to be assessed due to practical challenges in identifying and recruiting participants. Furthermore, the sustainability and efficacy of a suicide intervention programme for adolescents may be affected by staff turnover and insufficient training time.[66] Intensive training may help enhance intervention skills and produce a positive impact, but the appropriate frequency of delivering this gatekeeper training remains unclear (ie, whether it should only be delivered once or multiple times with booster sessions). Further investigation is warranted to evaluate the effectiveness of the Life Gatekeeper training programme in evoking gatekeeper behaviour after it has been delivered to school teachers and parents, emphasing the need for follow-up measures to investigate the long-term effectiveness of this prevention strategy.

Study implications

This Delphi study provides an evidence basis for further development of the Life Gatekeeper programme (eg, feasibility or randomised controlled trial studies). The originality of the study, starting from the conceptual stage of designing initial statements, has been demonstrated, for example, by considering the limited resources available to teachers and parents to support students at risk of suicide in China. In addition, some statements that reached consensus in this study could also be used for developing other types of suicide prevention programmes (eg, psychoeducational programmes) or similar gatekeeper programmes for other at-risk populations, such as for older adults living in rural areas of China.[67] Furthermore, since suicide risk is often associated with mental illness,[68] future research could also focus on early identification and intervention programmes for mental disorders, such as depression,[69] for upstream suicide prevention.

CONCLUSION

This Delphi study provides an evidence-based foundation for the systematic, contextualised development of the Life Gatekeeper suicide gatekeeper training programme that

empowers Chinese teachers and parents to identify and communicate with adolescents at risk of suicide. We hope the current study can pave the way for further evidence-based suicide prevention programmes in China, for they are much needed given the pressing concern of youth suicide within the country.

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Table 1. Statements in the questionnaire of Round 1 (n=157) and their endorsement rates (n of panel members=34)

	Statements in English	Ratings (%)
Statement order	**Part I.The evaluation of training content by experts (Please rate the importance of the following content)**	
	(a) The importance of each module (Note: The Life Gatekeeper training program has eight modules, and following statements summarise content of each modules respectively. Please rate the importance of including each module in the training)	
1	1. By presenting case studies and data related to suicidal risks could allow trainees to pay attention to the severity of suicide risks among adolescents, and primarily to clarify common misconceptions related to suicide.	97.1
2	2. By explaining the stigma associated with suicide to trainees, it helps them to understand what prevents children at risk of suicide from seeking help.	100.0
3	3. Help trainees to develop accurate understanding of suicide by contrasting common misconceptions versus facts about suicide.	100.0
4	4.Help trainees to identify children at risk of suicide as early as possible by explaining suicide-related risk factors and early warning signs.	100.0
5	5. Trainees will practice how to hold conversations bout suicide, and they will get timely feedback from peers during role play, which will help them feel more competent when talking about suicide in the future.	100.0
6	6. By practise asking about suicidal thoughts, plans, tools, and methods, trainees will learn how to assess children's suicidal risks.	100.0
7	7. Trainees will learn about protective factors of suicide, such as children's support systems, as well as other risk factors of suicide (such as self-harm and suicide attempt history, etc.), so that they can assess more comprehensively about suicidal risks.	100.0
8	8. Trainees will learn how to collaboratively develop a safety plan with children to keep them stay safe when they experience strong suicidal ideation, and also learn to provide referral advice and encouragement for help-seeking.	100.0
9	9. (a) Teachers will learn how to communicate with parents about suicidal risks of their children, therefore increase teacher's self-efficacy in intervening.	100.0

Table 1

10	9. (b) Parents will learn how to show support for their children, and how to proactively find help-seeking resources for their children.	97.1
11	10. In group discussions, trainees will discuss other barriers that may prevent children from seeking help, or barriers that stops them to provide intervention, and alson discuss how to overcome these obstacles.	94.1
	(b) The importance of specific items (following items constitute content in the training program, please rate the importance of including these items in the training program). Teachers and parents of students should learn from the intervention program:	
	(1) The severity of suicide among adolescents, and common feelings of a suicidal person	
12	1. Relevant research data on suicidal behaviors (i.e., suicidal ideation, suicide planning, and suicide attempts) of adolescents in China, and thus realize the seriousness of adolescent suicide.	88.2
13	2. People with suicidal thoughts may feel unloved and not having any purpose in their existence.	91.2
14	3. People with suicidal thoughts often feel their world is nothing but pain and darkness, that there is no one to save them, but only loneliness and helplessness instead.	97.1
15	4. People with suicidal thoughts may feel that they can take any physical or psychological pain no more, and that taking their own life is the only way out.	94.1
16	5. People with suicidal thoughts are likely to feel that there is no hope of things or themselves getting better in the future, which in turns makes them feel hopeless.	97.1
17	6. People with suicidal thoughts may experience feelings of loneliness and helplessness.	100.0
18	7. People who have suicidal thoughts may feel like a burden to those around them.	97.1
	(2) Establish a correct understanding of suicide	
19	1. Suicide is not about making a fuss, being selfish, or weak.	100.0
20	2. Suicide does not mean to threaten others with lives, it is not an act of grandstanding, or to attract attention.	85.3

Table 1

21	3. Stigma about suicide can prevent at risk children from seeking help, as it causes fear of being discriminated against, not being understood, or being accused (for disclosing).	100.0
22	4. Stigma related suicide may prevent people to understand and help at-risk children.	100.0
23	5. Even if you cannot completely empathize with children's pain and thoughts, you would also try to listen to them empathically and caringly about the pain that they are going through.	100.0
24	6. Talking directly about suicide does not implant the idea into children's mind, nor does it prompt children to attempt suicide. Instead, it will help children reconsider their decisions, thereby prevents suicide.	100.0
25	7. People talking about suicide may be seeking help or support, rather than just mentioning it.	100.0
26	8. The occurrence of suicide is not without warning, as children may show some unusual behavior before suicide, which may be a warning sign - they hope someone could notice these signals and help them.	100.0
27	9. Most suicides are preventable, and if relevant risk factors and early warning signs can be identified timely, there is an opportunity to prevent and stop tragedies from happening.	97.1
28	10. Thoughts of suicide may recur, but they are not permanent.	97.1
29	11. Suicide can be divided into chronic, planned suicide, versus relatively acute, impulsive suicide.	91.2
30	12. Chronic, planned suicide is mainly triggered by problems that remain unresolved for a long time, such as negative self-evaluation and build up of negative emotions.	85.3
31	13. Impulsive suicide is mainly triggered by negative emotions at the moment, such as a strong negative emotional shock.	88.2
32	14. Some children may want to use suicide as a way to end their suffering or solve their current dilemma, rather than really wanting to end their lives.	94.1
33	15. Mental disorders, especially depression, are important risk factors for suicide, thus treatment of mental disorders is an important strategy for suicide prevention.	94.1
34	16. Children will become reluctant to seek help if we respond to their disclosure related to suicide with denial or accusations.	100.0
	(3a) Risk factors associated with suicide	

Table 1

35	1. Depression, anxiety, or other psychiatric disorders are personal factors that increase the risk of suicide.	97.1
36	2. Suicide attempts or past self-harm experiences are personal factors that increase suicide risk.	97.1
37	3. Females have more suicidal ideation and suicide attempts than males, whereas males are more likely to commit fatal suicidal attempts and die by suicide.	73.5
38	4. Suffering from long-term physical illness or physical disabilities are personal factors that increase the risk of suicide.	82.4
39	5. High impulsivity and aggressiveness are personal factors that increase suicide risk.	88.2
40	6. Substance abuse is a personal factor that increases suicide risk.	85.3
41	7. Lack of social support is a personal factor that increases suicide risk.	97.1
42	8. Juvenile delinquency is a personal factor that increases suicide risk.	73.5
43	9. Experiences of domestic violence or other forms of abuse is a family factor that increases suicide risk.	91.2
44	10. Parents' gambling, alcoholism, or criminal behavior are family factors that increase suicide risk.	82.4
45	11. Negative life events, such as parental divorce, the death of an important family member, and being a left behind child are family factors that increase the risk of suicide.	88.2
46	12. Parental suicidal history is a family factor that increases suicide risk.	91.2
47	13. Family atmosphere with high control and low warmth, and poor parent-child relationship are the family factors that increase the risk of suicide.	94.1
48	14. School bullying, isolation, and poor interpersonal relationships are school factors that increase the risk of suicide.	97.1
49	15. Excessive academic pressure and anxiety before exams are school factors that increase the risk of suicide.	79.4

Table 1

50	16. A recent suicide that took place at school is a school factor that increases suicide risk.	91.2
51	17. Inappropriate media coverage of suicide is a social factor that increases suicide risk.	82.4
52	18. Suicide games on the Internet, suicide communities on social media, etc., are social factors that increase the risk of suicide.	91.2
	(3b) Identify the warning signs of suicide	
53	1. Warning signs are imminent and noticeable indicators that at-risk individuals show.	97.1
54	2. Children discussing suicide-related topics with those around them is a warning sign of suicide.	97.1
55	3. If children disclose thoughts of death and wishes to disappear, and say negative things such as 'I am a burden. If I leave, others will be better off', 'There is nothing worth staying for in this world', etc., or mention suicidal thoughts in their homework, then these are warning signs of suicide.	100.0
56	4. Saying goodbye to people around them for no reason, such as making a will, giving away property, telling others to take care, etc., are warning signs of suicide.	100.0
57	5. Being in extreme depressive mood, immersed in sadness, and loss of usual enthusiasm and interest are warning signs of suicide.	94.1
58	6. Abnormal behavior and emotions, such as short temper, frustration, irritability or loss of control, frequent conflicts with others, or avoidance of staying with others, etc., are warning signs of suicide.	88.2
59	7. Abnormal changes in life, such as grades plummeting for no reason, unable to concentrate, poor memory, abnormal sleep and diet patterns, etc., are warning signs of suicide.	88.2
60	8. Disclosures of self-blame, guilt, and shame are warning signs of suicide.	97.1
61	9. Feelings of being in pain, hopeless, and helpless are warning signs of suicide.	100.0
62	10. Attending to suicide-related information is a warning sign of suicide.	100.0

Table 1

63	11. Researching and talking about methods of suicide are warning signs of suicide.	100.0
64	12. Self harm behaviour, such as strangulation marks on the neck, or knife-cut wounds on the wrist, is a warning sign of suicide.	100.0
65	13. Children recently talk about suicidal thoughts, plans, or actions, even through joking or other covert means, is a warning sign of suicide.	100.0
	(4) The correct way to communicate suicide risk	
66	1. It is better to talk to children about suicide in a quiet, undisturbed space, as this will better protect their confidentiality, and reduce their concerns when speaking out.	100.0
67	2. You can start the conversation with the warning signs you notice, and encourage children to discuss difficulties or chronic stress they may be experiencing, thus to understand their emotions and suicidal thoughts.	100.0
68	3. When children talk about going through painful events recently, parents or teachers can ask what changes have occurred in their mood or life, and whether they have suicidal thoughts because of it.	100.0
69	4. If you notice children show abnormal behaviors (such as grades drop and mood changes), you should take the initiative to chat with them to understand what happened so as to identify any emotional distress and suicide risk in a timely manner.	100.0
70	5. When communicating with children, try to understand the emotional pain that they are going through by putting yourself into their shoes.	100.0
71	6. When children reveal their suicidal tendencies, do not criticize or accuse them, and do not provoke or encourage their children to act on these thoughts.	97.1
72	7. When you notice children show warning signs, you should ask them directly if they have suicidal thoughts instead of beating around the bush or using ambiguous words.	97.1
73	8. Do not ask questions that imply a negative answer, such as 'You are just saying it, you don't really want to die, do you?' or 'You are not going to do something stupid, are you?', because this will stop children from opening up to you.	100.0
74	9. Do not attempt to 'diagnose' them with mental illness because of their suicidal thoughts, such as labelling their suicidal thoughts as 'crazy' or 'sick'.	100.0
75	10. When communicating with children, it is necessary to remain calm and patient, and do not deny, minimise or ignore their painful feelings, or appear indifferent, contempt, or interrupt their talk.	100.0

Table 1

76	11. Instead of saying superficial phrases like 'Cheer up', 'You've got everything', or 'Don't worry about it', or prompting children to get rid of suicidal thoughts as soon as possible, you should acknowledge and try to understand the pain that children are going through right now.	100.0
77	12. Do not use phrases like 'dramatic' or 'thinking nonsense' to criticise or accuse children, because this will make them feel rejected and not understood, thus shutting themselves down and stop asking for help.	100.0
78	13. When children are talking about their pain, parents or teachers should not compare their own or others' similar experiences, and thus deny the student's feelings of pain.	100.0
79	14. In addition to verbal support, parents or teachers can also show respect and understanding via non-verbal signs when children are talking, such as maintaining eye contact, nodding appropriately to express affirmation, and maintaining a relaxed body posture.	100.0
80	15. If conflict arises when communicating with children , firstly take deep breaths to calm yourself down, to avoid venting your anger or frustration.	97.1
81	16. Do not stop children from expressing their feelings by crying etc.	100.0
82	17. Do not argue with children about the right or wrong of suicide, do not threaten them, or make them feel guilty in order to prevent suicide.	100.0
83	18. When children become emotional, parents or teachers should teach them some simple emotional grounding techniques.	97.1
84	19. When children become emotional, parents or teachers should stay with them patiently and show that they care.	100.0
85	20. Outlining step-by-step guides and specific sentences in the training manual can help parents or teachers to feel confident when talking about suicide risk with children.	100.0
	(5) Assess suicide risk	
86	1.Assess children's suicide risk by knowing details about whether children have suicidal thoughts and severity of these thoughts, namely whether thoughts have led to suicide plans, intended methods, or tools preparation.	100.0
87	2.If children have made detailed suicide plans and intend to act on the plans in the near future, they may be at a higher risk.	100.0
88	3.It is important to ask children if they have previous experience of attempting suicide or harming themselves.	100.0

Table 1

89	4.If we want to get a full picture of children's current situations, it is necessary to understand other suicide risk factors, such as emotional state, relationship with family, and whether they have experienced any significant life events recently.	100.0
90	5.It is necessary to ask children about reasons that sustain their will to live, namely to understand their support system on the one hand, and to remind the child of the reasons for staying alive on the other hand.	100.0
91	6.After knowing that children have suicidal thoughts, it is important to ask them when and under what circumstances do such thoughts occur, and how often do they occur.	91.2
	(6) Make a safety plan	
92	1.When discussing and making a safety plan with children, you can ask them to write down following ways to help themselves on the card, which they can take out to remind themselves when they are feeling distressed or wanting to hurt themselves.	100.0
93	2.Discuss with your child what they can do to cope with their feelings and distract themselves when they become distress, such as exercising, shouting out, or listening to music, in order to prevent suicidal behaviour.	100.0
94	3.Discuss with children people that could help them when they are most upset and have the strongest desire to hurt themselves, and help them to strengthen their social support system, and finally encourage them to seek help from these people when they want to end their lives.	100.0
95	4.Discuss with children that when they are in crisis, they can seek help from family, their peers, teachers, or friends in a timely manner, so to help them see that there are many people caring about them and willing to help them.	100.0
96	5.Discuss with children that when they are in crisis, they can seek help from resources, such as school counseling (if possible), medical services, or crisis lines, and record their emergency contact and he information of crisis services on a card.	100.0
97	6.Discuss with children how to safely place tools that might be used to kill or hurt themselves, such as handing sharp objects over to a trustworthy adult, thereby to help them avoid acting on thoughts of harming themselves.	100.0
98	7.Learn about local resources that can help children from emergency suicidal behavior, such as medical, fire, and police services.	100.0
99	8.When children mention that they harm themselves (e.g. cutting themselves) when feeling distressed, then discuss with them about using safer alternatives instead, such as pinching something soft.	94.1

Table 1

100	9.Discuss with children the importance of having someone stay with them 24/7 to keep them safe, when they are in crisis or are having intense suicidal thoughts.	100.0
101	10.Discuss with children about safer ways to distract themselves when their suicidal thoughts are at its peak, such as calling crisis helpline, or asking family and friends for help.	97.1
102	11.Discuss with children that they need to stay away from dangerous places (such as rooftops, bridges, or train tracks) and try to stay in a safe environment (such as at home or with family and friends) when their suicidal thoughts are at its peak.	100.0
103	12.Make a copy of this safety plan and give it to children's guardian after gaining their permission to do so.	100.0
	(7a – For Teacher's Training Only) Teachers should communicate with parents about their chidren's suicide risk and find help for them	
104	1.When children are at high suicidal risk, teachers should stay with them and alert corresponding school officials to work together to ensure the student's safety, and contact their parents promptly.	97.1
105	2.If children ask teachers to keep their suicide risk confidential, teachers should tell the student that they will have to inform schools and parents of their suicide risk in order to keep the student safe, and that everyone will work to support them through the difficult time together.	100.0
106	3.Teachers can discuss with the children which guardian they choose to share about their suicide risk, and what details they do not want to others to know.	100.0
107	4.Teachers can explain to the children that telling parents about these suicide risks is not about snitching or adding burdens to their family.	97.1
108	5.Teachers need to provide psychoeducation related to suicide to parents, which can be aided by using the 'Booklet for Parents'.	97.1
109	6.When communicating with parents about their children's suicide risk, teachers need to keep an eye on parents' mood, and inform them that suicide is largely preventable, to prevent parents from feeling overwhelmed.	100.0
110	7.Teachers should introduce to parents about available support at school and medical services they can turn to in order to help alleviate overwhelming anxiety.	100.0
111	8.Teachers should remind parents to remain calm and listen patiently when their children are disclosing distressing feelings and thoughts, and remind parents not to be blame, scold, or refuse to acknowledge their children's suicidal thoughts or emotional distress.	100.0
112	9.Teachers should remind parents to take a cooperative rather than commanding approach when discussing solutions with their children about what kind of support they would like to receive from their families.	100.0

Table 1

113	10.Teachers should explain the child's safety plan to parents, and ask parents to take the student to seek support from formal medical services in a timely manner.	100.0
114	11.Teachers should communicate and update parents regularly about their children's safety, and to explore what help the family may need.	97.1
115	12.Teachers should find out about their own school's protocol in crisis intervention regarding how to respond to children at risk of suicide and how to make referrals. If the school does not have a relevant protocol for crisis intervention, teachers should urge appropriate school officials to establish one as soon as possible.	97.1
	(7b - For Parent training only) Parents should express support to their children and find resources for help	
116	1.Parents should express that they are willing to support and help their children, such as 'no matter what difficulties and setbacks you are facing, we are your biggest support and you can rely on us, let's find out a solution together', 'we are in this with you and we like to face all this together with you, you are not alone to fight this', etc.	100.0
117	2.Parents should emphasize to their children how important they are to their family, in order to reinforce protective factors and increase children's desire to stay alive.	91.2
118	3.Parents should soothe difficult feelings that their children might have, and help them to be aware that there are more people caring about them and willing to help them.	97.1
119	4.Parents need to know people that their children value and who can help their children, so as to build a support network to help their children cope against risk of suicide.	94.1
120	5.Parents can invite people that their children trust to visit their children, to have positive interactions, to listen to their children, and to support children to participate in activities that are good for physical and mental development (such as sports, socialization, skill building, etc.).	88.2
121	6.During communication, parents should try to encourage their children to build up hopes for the future, for example by exploring their child's wishes, making a wish list, and to help them achieve their wishes.	88.2
122	7.Parents should understand that their child is likely to need professional help if they have suicidal thoughts, so parents need to take their kid to seek help in a timely manner.	100.0

Table 1

123	8.Parents should pay attention to changes in their child's mood, and if there is a significant change compared to the past, then low mood and anxiety, then they should not hesitate to take the child to hospital in case of the problem deteriorates, otherwise it could lead to dreaded consequences.	100.0
124	9.When children have clear suicidal thoughts and plans, parents should not leave them alone, and need to remove dangerous objects around them that can be used for suicide, such as drugs, sharp objects (such as knives, scissors), ropes, and pesticides.	100.0
125	10.Parents need to proactively communicate with schools, hospitals, and other support services about their children's suicide risk, and also ask teachers to be aware of their child's emotional state.	100.0
126	11.Local medical, fire, and police services could support and respond to any immediate danger that children might post to themselves, therefore parents should learn about these available local resources that they can turn to in advance.	88.2
127	12.Parents should negotiate with school, property managing services of their homes and other relevant services about restricting their children's access to rooftops and high levels without supervision, in order to prevent the risk of their children jumping from high places.	94.1
	(8) In addition to aforementioned stigma and morbidity, other barriers that prevent children from seeking help, or prevent teachers or parents from providing help	
128	1.A high degree of self-reliance may discourage children at risk of suicide from seeking help because they may feel that no one can help them other than themselves.	82.4
129	2.Children may choose not to seek help because they feel they are not ill enough to seek professional help, or they do not believe that treatment will be effective.	88.2
130	3.Strong feelings of despair, pessimism, and meaninglessness may prevent children from seeking help.	100.0
131	4.Having a mental illness may be the reason to stop individuals at risk for suicide from seeking help.	94.1
132	5.The more severe the suicidal ideation is, the more reluctant the individual is to seek help.	79.4
133	6.The lack of information about resources that can offer help is a practical reason that prevents individuals from seeking help.	85.3
134	7.The lack of social support systems (e.g., people to talk to) is a practical reason that prevents individuals from seeking help.	97.1

Table 1

135	8.Having no time to go to seek medical support is a practical reason that prevents individuals from seeking help.	61.8
136	9..Fear of not being able to afford treatment is a practical reason that prevents individuals from seeking help.	70.6
137	10.The concern that talking about suicide will increase the risk of it is a practical factor that may stop a trainee from providing support.	94.1
138	11.The concern of not knowing how to cope with or communicate the risk of suicide may be a practical factor that stops trainees from providing support.	97.1
	Part II.Feasibility of Training Methods	
	We will deliver training via the following methods, please rate the feasibility of each of them.	
139	Watching videos (psychoeducation via animation and video synthesised from different clips)	91.2
140	Watching videos (communication skills demonstrated by real people)	97.1
141	Group discussion	97.1
142	Role play	94.1
	Part III.Feasibility of achieving the training objectives	
	you are invited to rate the feasibility of achieving the following training objectives	
143	1.Statistics, common misconceptions, risk factors, and warning signs related to suicide are presented in the form of videos, and this strengthens trainees' understanding and memory of relevant information.	97.1
144	2.Group discussions after watching videos enables trainees to reflect and talk about videos, therefore to improve their understanding and attitude towards suicide prevention.	100.0
145	3.Role play allows trainees to take turns to play the roles of the intervenor, the child, and the feedback giver, practice relevant intervention techniques and discuss any problems that arise during the exercise in a timely manner.	94.1

Table 1

146	4.Role play allows trainees to take turns to play the roles of being the gatekeeper/at-risk child/observer, thereby practise relevant internvention skills, and they can reflect on questions arise from the role play in a timely manner.	94.1
147	5.This intervention intends to be a two-day offline training that provides ample opportunity for trainees to practice gatekeeper skills, thereby help to identify and refer children at risk of suicide.	88.2
148	6.In order to sustain the length of time that trainees masters the skills and knowledge, booster exercises should be carried out at the end of three months to consolidate their memory of what they have learned previously.	97.1
	Part IV. Suitability of training materials	
	please rate the suitability of the following training materials	
149	1.This intervention will provide standardized training materials (i.e., intervention videos, manuals, appendices, training presentations, and materials for children and parents) to facilitate the generalization and ongoing learning of this intervention.	100.0
150	2.Intervention videos are the main training material which will present content related to suicide, and show the intervention skills needed when talking about suicide.	94.1
151	3.The '*Manual* is an exercise booklet for use during training which trainees can use to take notes, to follow the prompts for group discussions or role plays, and refer to case examples of role play exercises.	100.0
152	4.The *Appendices* serve both as reference material used during the training, which provides referencing materials for group exercises during training, or repeat use after the training (including misconceptions and facts related to suicide, suicide-related risk factors and warning signs, etc.).	100.0
153	5.The *Training Presentation* (PPT) is an outline for researchers to use and cue different sections thoroughout the training.	100.0
154	6.The *Booklet for Parents* includes statistics on suicide, its severity, the correct way to communicate at-risk children, and a summary of resources for seeking help, and it can be used by teachers as an aid when communicating to parents about their child's risk of suicide.	100.0
155	7.The *Booklet for Children* consists of various symptoms that children might experience when they are at risk of suicide, explanations of causes of suicide risk, tips for soothing their feelings, and resources for seeking help. This booklet can support parents or teachers for psychoeducation with children when talking about suicide.	97.1

Table 1

156	8.At the end of the training, teachers need to pass a test to obtain the certificate, which could improve their self-efficacy about intervention.	100.0
157	9.Relevant intervention videos and training materials will be available online after the training, so that trainees can review intervention materials whenever they need to reinforce their skills and refresh knowledge.	100.0

Table 2

Table 2. Statements in the questionnaire of Round 2 (n=55) and their endorsement rates (n of panel members=31)		
	Statements in English	
Statement order	**Part I.The Evaluation of training content by experts (Please rate the importance of the following content)**	
	(a) Additional overall training topics (Please rate the importance of including the following new content in the training)	
1	1. Trainees should learn about the significance of preventing adolescent suicide at the national level. For example, the Ministry of Education has publicly stated that it is necessary to improve teachers' ability to identify and intervene children and adolescents' mental health problems through training, and emphasize the collaboration between school and family on this matter.	90.3
2	2. Trainees should read through available local mental health service resources and crisis helplines listed on the training materials, and practice how to use these resources to refer at-risk children during training.	100.0
3	3. Trainees will practice how to cooperate with relevant departments of schools (such as security department, principal's office, head of year, school counsellor etc.) after identifying children at high risk of suicide.	96.8
	(b) The importance of specific items (the following items are all specific content in the training program, please rate the importance of including these items in the training program). Teachers and parents of students should learn from the intervention program:	
	(1) The severity of suicide among adolescents, and common feelings of a suicidal person	
4	1. People with suicidal thoughts tend to attribute their pain and problems to themselves being not good enough, incompetent, or as their problems, without realising that they may be their feelings are affected by psychological problems.	96.8
5	2. People with suicidal thoughts often feel their feelings are not understood by others around them , therefore they may be afraid to open up to others about their thoughts and feelings.	100.0
6	3. People with suicidal thoughts may feel discriminated against and despised for having suicidal thoughts.	93.5
7	4. People with suicidal thoughts may feel wronged or not understood, and might express grievance and anger through suicide.	90.3

Table 2

8	5. Suicidal thoughts have intricate psychosocial roots.	96.8
	(2) Establish a correct understanding of suicide	
9	1. Suicide may be a thought that arises when a person has encountered difficulties that they struggle to find a solution for.	93.5
10	2. When deciding between life and death, most people would hesitate and debate about which to choose, and this is the crucial time period for early identification and intervention.	96.8
	(3a) Risk factors associated with suicide	
11	1. Low self-esteem is a personal factor that increases the risk of suicide.	87.1
12	2. Non-suicidal self-injury is a personal factor that increases the risk of suicide.	87.1
13	3. Stress caused by end of a relationship or by negative interpersonal relationships is a personal factor that increases the risk of suicide.	93.5
	(Re-rated) 3. Females have more suicidal ideation and suicide attempts than males, while males are more likely to commit fatal suicidal behaviors and die by suicide than females.	48.4
	(Re-rated) 8. Juvenile delinquency is a personal factor that increases suicide risk.	54.8
	(Re-rated) 15. Excessive academic pressure and anxiety before exams are school factors that increase the risk of suicide.	71.0
	(3b) Identify the warning signs of suicide	
14	1. Warning signs, which should be signals of recent or imminent suicidal behavior, are not equivalent to factors that increase the risk of suicide.	80.6
15	2. Leaving messages about suicidal thoughts on social media such as Moments of WeChat or Weibo, or search for suicide methods in Baidu (or other search engines) are early warning signs of suicide.	100.0
16	3. Meeting up with others online or offline with the intention to end their own life is a warning sign of suicide.	100.0

Table 2

17	4. If children start to read books about suicide or with the theme of life and death, or their painting or essays imply related negative thoughts is a warning sign of suicide.	96.8
18	5. If children had previously prepared tools for suicide or attempted suicide, whether it is actively terminated or passively terminated, physically injured or uninjured, it is a high-risk warning sign of suicide.	100.0
19	6. A weak social support system and a recent major setback are warning signs of suicide.	96.8
	(4) The correct way to communicate suicide risk	
20	1. Before talking about suicide, it is important to ensure that the child is in a stable emotional state, and that the communication is conducted in a safe place.	100.0
	(5) Assess suicide risk	
21	1. Assessing suicide risk is a continuous and dynamic process, that needs to take into consideration the severity of the child's current risk of suicide (e.g., suicidal ideation, planning, or preparation), previous factors that trigger or prevent suicidal behavior, previous psychiatric diagnoses, and psychosocial status.	100.0
22	2. When assessing children's suicide risk, trainees should ask whether the child was seen by a psychiatrist, and receive a clear diagnosis of mental illness.	93.5
23	3. Ask children what problems they will not have to face or solve after their suicide? Would they resort to suicide if they had other means to resolve the problem?	93.5
24	4. Ask whether the child has attempted suicide before, any relevant behavior, timing, method and motivation, etc.	100.0
	(6) Make a safety plan	
25	1. By helping children recall the resources that have helped them stop suicide (i.e., their own positive coping style and support from others), could help them reflect on how they have successfully dealt with the suicide crisis, as well as help to strengthen these protective factors in time.	100.0
26	2. Trainees should encourage children to write down these protective factors, reasons that keep them alive on a safety plan card.	100.0

Table 2

27	3. If children show a high level of suicide risk, send them to professional medical services for immediate assessment and inpatient treatment to ensure their safety.	100.0
28	4. Trainees should encourage children to record emergency contacts, help-seeking resources, or security cards in a portable notebook, screen saver, and notes on their phones etc. , whichever is accessible to them.	96.8
	(7a – For Teacher's Training Only) Teachers should communicate with parents about their chidren's suicide risk and find help for them	
29	1.Teachers should identify children at risk of suicide, inform parents and school authorities in a timely manner, assist parents in referring their children to medical services for treatment, and restrict children's access to dangerous tools on school premises.	100.0
30	2.Teachers should work with staff from other departments of the school, such as matrons and security staff, to work together to ensure the safety of children at risk of suicide.	96.8
31	3.When communicating with parents about their children's risk of suicide, teachers should focus on emotion state of parents, and inform them that suicide is largely preventable. This will prevent them from becoming excessively anxious.	96.8
	(7b - For Parent training only) Parents should express support to their children and find resources for help	
32	1.Parents need to support their children in working together to resolve acute stressful events.	96.8
33	2.Parents need to educate their children about life and encourage them to discuss the value of life together.	93.5
34	3.Parents need to be in good state themselves to be competent in caring for their children,therefore they also need to pay attention to their own emotional needs, and learn to utilise internal and external resources to help themselves.	100.0
35	4.Parents should pay attention to changes in their children's emotional states, so that if their children's mood changes considerably, such as low mood or anxiety, parents should not hesitate in taking them to the psychological clinic of a regulated general hospital, or a specific psychiatric hospital to prevent the condition deteriorates and causes irreversible damage.	100.0
	(8) In addition to aforementioned stigma and morbidity, other barriers that prevent children from seeking help, or prevent teachers or parents from providing help	
36	1.The concerns of inappropriate assessment or fear of breaking the child's trust maybe practical reasons that prevent trainees from offering help.	93.5

Table 2

37	2.The stigma of mental illness and misconceptions about the side effects of psychiatric drugs may be practical reasons that prevent trainees from providing help.	93.5
38	3.Lack of legal awareness, or unclear boundaries of responsibilities and rights in intervention work may be realistic factors that prevent trainees from offering help.	83.9
39	4.The fear that they will not be able to response appropriately to individuals at risk of suicide is a practical reason that may prevent trainees from offering help.	90.3
40	5.The scarcity of mental health resources is a practical reason that prevents individuals from seeking help.	80.6
	(Re-rated) 5.The more severe the suicidal ideation is, the more reluctant the individual is to seek help.	54.8
	(Re-rated) 9.Fear of not being able to afford treatment is a practical reason that prevents individuals from seeking help.	61.3
	Part II.Feasibility of Training Methods	
	Feasibility of training methods (please rate the feasibility of the following additional training methods) We will be using the following methods of training in our intervention, and you are asked to rate the feasibility of delivering the intervention through these training methods:	
41	1.The training should end with an online Question and Answer session with a crisis intervention specialist.	93.5
	PartⅤ.General Remarks	
	1.recommendations for reducing harm (the following entries are based on those added by experts in the first round of consensus on reducing harm to trainees in this intervention; please rate the importance of including these recommendations in the intervention).	
42	1.1 The training is voluntary and will be detailed in the Informed Consent Form prior to training, therefore teachers or parents with previous experience of trauma or who feel taboo towards death can choose whether or not to attend.	87.1
43	1.2 During the training, any teacher or parent who feels uncomfortable can leave the training anytime.	87.1

Table 2

	2. Additional intervention content or techniques (the following entries are revised entries based on the expert recommendations from the first round of consensus that intervention or techniques should be added, and you are asked to rate the importance of attributing these recommendations to the intervention).	
44	2.1 The training should allow trainees to learn and practice how to obtain a person's promise of not acting on suicidal behavior.	83.9
45	2.2 The training should allow trainee teachers to learn and practice skills of communicating with parents, especially those parents who are reluctant to admit that their child are struggling psychologically.	100.0
46	2.3 The training will include a section of self-care for trainees.	93.5
47	2.4 The training should allow trainees to practice helping students at risk of suicide to find effective social support resources.	100.0
	3. Suggested modifications to enhance localization (the following entries were added based on the first round of consensus, where experts suggested better adapting this intervention to local needs, and you were asked to rate the importance of attributing these suggestions to the intervention).	
48	3.1 During the research and development training phase, interviews need to be conducted with parents and at-risk students to explore their actual needs.	96.8
49	3.2 When training parents, parents from different backgrounds should be surveyed about their perceptions of suicide prevention in schools and their willingness or barriers to participating in the training.	96.8
50	3.3 Training materials should include some resources available for referrals.	100.0

Table 3

Table 3. full list of included statements in the gatekeeper training (n=201)	
	Statements in English
Statement order	**Part I.The evaluation of the training content from experts (Please rate the importance of the following content)**
	(a) The importance of each chapter (Note: The Life Gatekeeper training program has eight sections on different topics. The following is the content of each chapter, respectively. Please rate the importance of including the content of each chapter in the training)
1	1. By presenting case studies and data related to suicidal risks could allow trainees to pay attention to the severity of suicide risks among adolescents, and primarily to clarify common misconceptions related to suicide.
2	2. By explaining the stigma associated with suicide to trainees, it helps them to understand what prevents children at risk of suicide from seeking help.
3	3. Help trainees to develop accurate understanding of suicide by contrasting common misconceptions versus facts about suicide.
4	4.Help trainees to identify children at risk of suicide as early as possible by explaining suicide-related risk factors and early warning signs.
5	5. Trainees will practice how to hold conversations bout suicide, and they will get timely feedback from peers during role play, which will help them feel more competent when talking about suicide in the future.
6	6. By practise asking about suicidal thoughts, plans, tools, and methods, trainees will learn how to assess children's suicidal risks.
7	7. Trainees will learn about protective factors of suicide, such as children's support systems, as well as other risk factors of suicide (such as self-harm and suicide attempt history, etc.), so that they can assess more comprehensively about suicidal risks.
8	8. Trainees will learn how to collaboratively develop a safety plan with children to keep them stay safe when they experience strong suicidal ideation, and also learn to provide referral advice and encouragement for help-seeking.
9	9. (a) Teachers will learn how to communicate with parents about suicidal risks of their children, therefore increase teacher's self-efficacy in intervening.

Table 3

10	9. (b) Parents will learn how to show support for their children, and how to proactively find help-seeking resources for their children.
11	10. In group discussions, trainees will discuss other barriers that may prevent children from seeking help, or barriers that stops them to provide intervention, and alson discuss how to overcome these obstacles.
12	11. Trainees should learn about the significance of preventing adolescent suicide at the national level. For example, the Ministry of Education has publicly stated that it is necessary to improve teachers' ability to identify and intervene children and adolescents' mental health problems through training, and emphasize the collaboration between school and family on this matter.
13	12. Trainees should read through available local mental health service resources and crisis helplines listed on the training materials, and practice how to use these resources to refer at-risk children during training.
14	13. Trainees will practice how to cooperate with relevant departments of schools (such as security department, principal's office, head of year, school counsellor etc.) after identifying children at high risk of suicide.
	(b) The importance of specific items (the following items are all specific content in the training program, please rate the importance of including these items in the training program). Teachers and parents of students should learn from the intervention program:
	(1) The severity of suicide among adolescents, and common feelings of a suicidal person
15	1. Relevant research data on suicidal behaviors (i.e., suicidal ideation, suicide planning, and suicide attempts) of adolescents in China, and thus realize the seriousness of adolescent suicide.
16	2. People with suicidal thoughts may feel unloved and not having any purpose in their existence.
17	3. People with suicidal thoughts often feel their world is nothing but pain and darkness, that there is no one to save them, but only loneliness and helplessness instead.
18	4. People with suicidal thoughts may feel that they can take any physical or psychological pain no more, and that taking their own life is the only way out.
19	5. People with suicidal thoughts are likely to feel that there is no hope of things or themselves getting better in the future, which in turns makes them feel hopeless.
20	6. People with suicidal thoughts may experience feelings of loneliness and helplessness.

Table 3

21	7. People who have suicidal thoughts may feel like a burden to those around them.
22	8. People with suicidal thoughts tend to attribute their pain and problems to themselves being not good enough, incompetent, or as their problems, without realising that they may be their feelings are affected by psychological problems.
23	9. People with suicidal thoughts often feel their feelings are not understood by others around them , therefore they may be afraid to open up to others about their thoughts and feelings.
24	10. People with suicidal thoughts may feel discriminated against and despised for having suicidal thoughts.
25	11. People with suicidal thoughts may feel wronged or not understood, and might express grievance and anger through suicide.
26	12. Suicidal thoughts have intricate psychosocial roots.
	(2) Establish a correct understanding of suicide
27	1. Suicide is not about making a fuss, being selfish, or weak.
28	2. Suicide does not mean to threaten others with lives, it is not an act of grandstanding, or to attract attention.
29	3. Stigma about suicide can prevent at risk children from seeking help, as it causes fear of being discriminated against, not being understood, or being accused (for disclosing).
30	4. Stigma related suicide may prevent people to understand and help at-risk children.
31	5. Even if you cannot completely empathize with children's pain and thoughts, you would also try to listen to them empathically and caringly about the pain that they are going through.
32	6. Talking directly about suicide does not implant the idea into children's mind, nor does it prompt children to attempt suicide. Instead, it will help children reconsider their decisions, thereby prevents suicide.
33	7. People talking about suicide may be seeking help or support, rather than just mentioning it.
34	8. The occurrence of suicide is not without warning, as children may show some unusual behavior before suicide, which may be a warning sign - they hope someone could notice these signals and help them.

Table 3

35	9. Most suicides are preventable, and if relevant risk factors and early warning signs can be identified timely, there is an opportunity to prevent and stop tragedies from happening.
36	10. Thoughts of suicide may recur, but they are not permanent.
37	11. Suicide can be divided into chronic, planned suicide, versus relatively acute, impulsive suicide.
38	12. Chronic, planned suicide is mainly triggered by problems that remain unresolved for a long time, such as negative self-evaluation and build up of negative emotions.
39	13. Impulsive suicide is mainly triggered by negative emotions at the moment, such as a strong negative emotional shock.
40	14. Some children may want to use suicide as a way to end their suffering or solve their current dilemma, rather than really wanting to end their lives.
41	15. Mental disorders, especially depression, are important risk factors for suicide, thus treatment of mental disorders is an important strategy for suicide prevention.
42	16. Children will become reluctant to seek help if we respond to their disclosure related to suicide with denial or accusations.
43	17. Suicide may be a thought that arises when a person has encountered difficulties that they struggle to find a solution for.
44	18. When deciding between life and death, most people would hesitate and debate about which to choose, and this is the crucial time period for early identification and intervention.
	(3a) Risk factors associated with suicide
45	1. Depression, anxiety, or other psychiatric disorders are personal factors that increase the risk of suicide.
46	2. Suicide attempts or past self-harm experiences are personal factors that increase suicide risk.
47	4. Suffering from long-term physical illness or physical disabilities are personal factors that increase the risk of suicide.
48	5. High impulsivity and aggressiveness are personal factors that increase suicide risk.

Table 3

49	6. Substance abuse is a personal factor that increases suicide risk.
50	7. Lack of social support is a personal factor that increases suicide risk.
51	9. Experiences of domestic violence or other forms of abuse is a family factor that increases suicide risk.
52	10. Parents' gambling, alcoholism, or criminal behavior are family factors that increase suicide risk.
53	11. Negative life events, such as parental divorce, the death of an important family member, and being a left behind child are family factors that increase the risk of suicide.
54	12. Parental suicidal history is a family factor that increases suicide risk.
55	13. Family atmosphere with high control and low warmth, and poor parent-child relationship are the family factors that increase the risk of suicide.
56	14. School bullying, isolation, and poor interpersonal relationships are school factors that increase the risk of suicide.
57	16. A recent suicide that took place at school is a school factor that increases suicide risk.
58	17. Inappropriate media coverage of suicide is a social factor that increases suicide risk.
59	18. Suicide games on the Internet, suicide communities on social media, etc., are social factors that increase the risk of suicide.
60	19. Low self-esteem is a personal factor that increases the risk of suicide.
61	20. Non-suicidal self-injury is a personal factor that increases the risk of suicide.
62	21. Stress caused by end of a relationship or by negative interpersonal relationships is a personal factor that increases the risk of suicide.
	(3b) Identify the warning signs of suicide

Table 3

63	1. Warning signs are imminent and noticeable indicators that at-risk individuals show.
64	2. Children discussing suicide-related topics with those around them is a warning sign of suicide.
65	3. If children disclose thoughts of death and wishes to disappear, and say negative things such as 'I am a burden. If I leave, others will be better off', 'There is nothing worth staying for in this world', etc., or mention suicidal thoughts in their homework, then these are warning signs of suicide.
66	4. Saying goodbye to people around them for no reason, such as making a will, giving away property, telling others to take care, etc., are warning signs of suicide.
67	5. Being in extreme depressive mood, immersed in sadness, and loss of usual enthusiasm and interest are warning signs of suicide.
68	6. Abnormal behavior and emotions, such as short temper, frustration, irritability or loss of control, frequent conflicts with others, or avoidance of staying with others, etc., are warning signs of suicide.
69	7. Abnormal changes in life, such as grades plummeting for no reason, unable to concentrate, poor memory, abnormal sleep and diet patterns, etc., are warning signs of suicide.
70	8. Disclosures of self-blame, guilt, and shame are warning signs of suicide.
71	9. Feelings of being in pain, hopeless, and helpless are warning signs of suicide.
72	10. Attending to suicide-related information is a warning sign of suicide.
73	11. Researching and talking about methods of suicide are warning signs of suicide.
74	12. Self harm behaviour, such as strangulation marks on the neck, or knife-cut wounds on the wrist, is a warning sign of suicide.
75	13. Children recently talk about suicidal thoughts, plans, or actions, even through joking or other covert means, is a warning sign of suicide.
76	14. Warning signs, which should be signals of recent or imminent suicidal behavior, are not equivalent to factors that increase the risk of suicide.

Table 3

77	15. Leaving messages about suicidal thoughts on social media such as Moments of WeChat or Weibo, or search for suicide methods in Baidu (or other search engines) are early warning signs of suicide.
78	16. Meeting up with others online or offline with the intention to end their own life is a warning sign of suicide.
79	17. If children start to read books about suicide or with the theme of life and death, or their painting or essays imply related negative thoughts is a warning sign of suicide.
80	18. If children had previously prepared tools for suicide or attempted suicide , whether it is actively terminated or passively terminated, physically injured or uninjured, it is a high-risk warning sign of suicide.
81	19. A weak social support system and a recent major setback are warning signs of suicide.
	(4) The correct way to communicate suicide risk
82	1. It is better to talk to children about suicide in a quiet, undisturbed space, as this will better protect their confidentiality, and reduce their concerns when speaking out.
83	2. You can start the conversation with the warning signs you notice, and encourage children to discuss difficulties or chronic stress they may be experiencing, thus to understand their emotions and suicidal thoughts.
84	3. When children talk about going through painful events recently, parents or teachers can ask what changes have occurred in their mood or life, and whether they have suicidal thoughts because of it.
85	4. If you notice children show abnormal behaviors (such as grades drop and mood changes), you should take the initiative to chat with them to understand what happened so as to identify any emotional distress and suicide risk in a timely manner.
86	5. When communicating with children, try to understand the emotional pain that they are going through by putting yourself into their shoes.
87	6. When children reveal their suicidal tendencies, do not criticize or accuse them, and do not provoke or encourage their children to act on these thoughts.
88	7. When you notice children show warning signs, you should ask them directly if they have suicidal thoughts instead of beating around the bush or using ambiguous words.
89	8. Don't ask questions that imply a negative answer, such as 'You are just saying it, you don't really want to die, do you?' or 'You are not going to do something stupid, are you?', because this will stop children from opening up to you.
90	9. Don't attempt to 'diagnose' them with mental illness because of their suicidal thoughts, such as labelling their suicidal thoughts as 'crazy' or 'sick'.

Table 3

91	10. When communicating with children, it is necessary to remain calm and patient, and do not deny, minimise or ignore their painful feelings, or appear indifferent, contempt, or interrupt their talk.
92	11. Instead of saying superficial phrases like 'Cheer up', 'You've got everything', or 'Don't worry about it', or prompting children to get rid of suicidal thoughts as soon as possible, you should acknowledge and try to understand the pain that children are going through right now.
93	12. Do not use phrases like 'dramatic' or 'thinking nonsense' to criticise or accuse children, because this will make them feel rejected and not understood, thus shutting themselves down and stop asking for help.
94	13. When children are talking about their pain, parents or teachers should not compare their own or others' similar experiences, and thus deny the student's feelings of pain.
95	14. In addition to verbal support, parents or teachers can also show respect and understanding via non-verbal signs when children are talking, such as maintaining eye contact, nodding appropriately to express affirmation, and maintaining a relaxed body posture.
96	15. If conflict arises when communicating with children , firstly take deep breaths to calm yourself down, to avoid venting your anger or frustration.
97	16. Do not stop children from expressing their feelings by crying etc.
98	17. Do not argue with children about the right or wrong of suicide, do not threaten them, or make them feel guilty in order to prevent suicide.
99	18. When children become emotional, parents or teachers should teach them some simple emotional grounding techniques.
100	19. When children become emotional, parents or teachers should stay with them patiently and show that they care.
101	20. Outlining step-by-step guides and specific sentences in the training manual can help parents or teachers to feel confident when talking about suicide risk with children.
102	21. Before talking about suicide, it is important to ensure that the child is in a stable emotional state, and that the communication is conducted in a safe place.
	(5) Assess suicide risk
103	1.Assess children's suicide risk by knowing details about whether children have suicidal thoughts and severity of these thoughts, namely whether thoughts have led to suicide plans, intended methods, or tools preparation.

Table 3

104	2.If children have made detailed suicide plans and intend to act on the plans in the near future, they may be at a higher risk.
105	3.It is important to ask children if they have previous experience of attempting suicide or harming themselves.
106	4.If we want to get a full picture of children's current situations, it is necessary to understand other suicide risk factors, such as emotional state, relationship with family, and whether they have experienced any significant life events recently.
107	5.It is necessary to ask children about reasons that sustain their will to live, namely to understand their support system on the one hand, and to remind the child of the reasons for staying alive on the other hand.
108	6.After knowing that children have suicidal thoughts, it is important to ask them when and under what circumstances do such thoughts occur, and how often do they occur.
109	7. Assessing suicide risk is a continuous and dynamic process, that needs to take into consideration the severity of the child's current risk of suicide (e.g., suicidal ideation, planning, or preparation), previous factors that trigger or prevent suicidal behavior, previous psychiatric diagnoses, and psychosocial status.
110	8. When assessing children's suicide risk, trainees should ask whether the child was seen by a psychiatrist, and receive a clear diagnosis of mental illness.
111	9. Ask children what problems they will not have to face or solve after their suicide? Would they resort to suicide if they had other means to resolve the problem?
112	10. Ask whether the child has attempted suicide before, any relevant behavior, timing, method and motivation, etc.
	(6) Make a safety plan
113	1.When discussing and making a safety plan with children, you can ask them to write down following ways to help themselves on the card, which they can take out to remind themselves when they are feeling distressed or wanting to hurt themselves.
114	2.Discuss with your child what they can do to cope with their feelings and distract themselves when they become distress, such as exercising, shouting out, or listening to music, in order to prevent suicidal behaviour.
115	3.Discuss with children people that could help them when they are most upset and have the strongest desire to hurt themselves, and help them to strengthen their social support system, and finally encourage them to seek help from these people when they want to end their lives.

Table 3

116	4.Discuss with children that when they are in crisis, they can seek help from family, their peers, teachers, or friends in a timely manner, so to help them see that there are many people caring about them and willing to help them.
117	5.Discuss with children that when they are in crisis, they can seek help from resources, such as school counseling (if possible), medical services, or crisis lines, and record their emergency contact and he information of crisis services on a card.
118	6.Discuss with children how to safely place tools that might be used to kill or hurt themselves, such as handing sharp objects over to a trustworthy adult, thereby to help them avoid acting on thoughts of harming themselves.
119	7.Learn about local resources that can help children from emergency suicidal behavior, such as medical, fire, and police services.
120	8.When children mention that they harm themselves (e.g. cutting themselves) when feeling distressed, then discuss with them about using safer alternatives instead, such as pinching something soft.
121	9.Discuss with children the importance of having someone stay with them 24/7 to keep them safe, when they are in crisis or are having intense suicidal thoughts.
122	10.Discuss with children about safer ways to distract themselves when their suicidal thoughts are at its peak, such as calling crisis helpline, or asking family and friends for help.
123	11.Discuss with children that they need to stay away from dangerous places (such as rooftops, bridges, or train tracks) and try to stay in a safe environment (such as at home or with family and friends) when their suicidal thoughts are at its peak.
124	12.Make a copy of this safety plan and give it to children's guardian after gaining their permission to do so.
125	13. By helping children recall the resources that have helped them stop suicide (i.e., their own positive coping style and support from others), could help them reflect on how they have successfully dealt with the suicide crisis, as well as help to strengthen these protective factors in time.
126	14. Trainees should encourage children to write down these protective factors, reasons that keep them alive on a safety plan card.
127	15. If children show a high level of suicide risk, send them to professional medical services for immediate assessment and inpatient treatment to ensure their safety.
128	16. Trainees should encourage children to record emergency contacts, help-seeking resources, or security cards in a portable notebook, screen saver, and notes on their phones etc. , whichever is accessible to them.
	(7a – For Teacher's Training Only) Teachers should communicate with parents about their chidren's suicide risk and find help for them

Table 3

129	1.When children are at high suicidal risk, teachers should stay with them and alert corresponding school officials to work together to ensure the student's safety, and contact their parents promptly.
130	2.If children ask teachers to keep their suicide risk confidential, teachers should tell the student that they will have to inform schools and parents of their suicide risk in order to keep the student safe, and that everyone will work to support them through the difficult time together.
131	3.Teachers can discuss with the children which guardian they choose to share about their suicide risk, and what details they do not want to others to know.
132	4.Teachers can explain to the children that telling parents about these suicide risks is not about snitching or adding burdens to their family.
133	5.Teachers need to provide psychoeducation related to suicide to parents, which can be aided by using the 'Booklet for Parents'.
134	6.When communicating with parents about their children's suicide risk, teachers need to keep an eye on parents' mood, and inform them that suicide is largely preventable, to prevent parents from feeling overwhelmed.
135	7.Teachers should introduce to parents about available support at school and medical services they can turn to in order to help alleviate overwhelming anxiety.
136	8.Teachers should remind parents to remain calm and listen patiently when their children are disclosing distressing feelings and thoughts, and remind parents not to be blame, scold, or refuse to acknowledge their children's suicidal thoughts or emotional distress.
137	9.Teachers should remind parents to take a cooperative rather than commanding approach when discussing solutions with their children about what kind of support they would like to receive from their families.
138	10.Teachers should explain the child's safety plan to parents, and ask parents to take the student to seek support from formal medical services in a timely manner.
139	11.Teachers should communicate and update parents regularly about their children's safety, and to explore what help the family may need.
140	12.Teachers should find out about their own school's protocol in crisis intervention regarding how to respond to children at risk of suicide and how to make referrals. If the school does not have a relevant protocol for crisis intervention, teachers should urge appropriate school officials to establish one as soon as possible.

Table 3

141	13.Teachers should identify children at risk of suicide, inform parents and school authorities in a timely manner, assist parents in referring their children to medical services for treatment, and restrict children's access to dangerous tools on school premises.
142	14.Teachers should work with staff from other departments of the school, such as matrons and security staff, to work together to ensure the safety of children at risk of suicide.
143	15.When communicating with parents about their children's risk of suicide, teachers should focus on emotion state of parents, and inform them that suicide is largely preventable. This will prevent them from becoming excessively anxious.
	(7b - For Parent training only) Parents should express support to their children and find resources for help
144	1.Parents should express that they are willing to support and help their children, such as 'no matter what difficulties and setbacks you are facing, we are your biggest support and you can rely on us, let's find out a solution together', 'we are in this with you and we like to face all this together with you, you are not alone to fight this', etc.
145	2.Parents should emphasize to their children how important they are to their family, in order to reinforce protective factors and increase children's desire to stay alive.
146	3.Parents should soothe difficult feelings that their children might have, and help them to be aware that there are more people caring about them and willing to help them.
147	4.Parents need to know people that their children value and who can help their children, so as to build a support network to help their children cope against risk of suicide.
148	5.Parents can invite people that their children trust to visit their children, to have positive interactions, to listen to their children, and to support children to participate in activities that are good for physical and mental development (such as sports, socialization, skill building, etc.).
149	6.During communication, parents should try to encourage their children to build up hopes for the future, for example by exploring their child's wishes, making a wish list, and to help them achieve their wishes.
150	7.Parents should understand that their child is likely to need professional help if they have suicidal thoughts, so parents need to take their kid to seek help in a timely manner.

Table 3

151	8.Parents should pay attention to changes in their child's mood, and if there is a significant change compared to the past, then low mood and anxiety, then they should not hesitate to take the child to hospital in case of the problem deteriorates, otherwise it could lead to dreaded consequences.
152	9.When children have clear suicidal thoughts and plans, parents should not leave them alone, and need to remove dangerous objects around them that can be used for suicide, such as drugs, sharp objects (such as knives, scissors), ropes, and pesticides.
153	10.Parents need to proactively communicate with schools, hospitals, and other support services about their children's suicide risk, and also ask teachers to be aware of their child's emotional state.
154	11.Local medical, fire, and police services could support and respond to any immediate danger that children might post to themselves, therefore parents should learn about these available local resources that they can turn to in advance.
155	12.Parents should negotiate with school, property managing services of their homes and other relevant services about restricting their children's access to rooftops and high levels without supervision, in order to prevent the risk of their children jumping from high places.
156	13.Parents need to support their children in working together to resolve acute stressful events.
157	14.Parents need to educate their children about life and encourage them to discuss the value of life together.
158	15.Parents need to be in good state themselves to be competent in caring for their children,therefore they also need to pay attention to their own emotional needs, and learn to utilise internal and external resources to help themselves.
159	16.Parents should pay attention to changes in their children's emotional states, so that if their children's mood changes considerably, such as low mood or anxiety, parents should not hesitate in taking them to the psychological clinic of a regulated general hospital, or a specific psychiatric hospital to prevent the condition deteriorates and causes irreversible damage.
	(8) In addition to aforementioned stigma and morbidity, other barriers that prevent children from seeking help, or prevent teachers or parents from providing help
160	1.A high degree of self-reliance may discourage children at risk of suicide from seeking help because they may feel that no one can help them other than themselves.
161	2.Children may choose not to seek help because they feel they are not ill enough to seek professional help, or they do not believe that treatment will be effective.

Table 3

162	3.Strong feelings of despair, pessimism, and meaninglessness may prevent children from seeking help.
163	4.Having a mental illness may be the reason to stop individuals at risk for suicide from seeking help.
164	6.The lack of information about resources that can offer help is a practical reason that prevents individuals from seeking help.
165	7.The lack of social support systems (e.g., people to talk to) is a practical reason that prevents individuals from seeking help.
166	10.The concern that talking about suicide will increase the risk of it is a practical factor that may stop a trainee from providing support.
167	11.The concern of not knowing how to cope with or communicate the risk of suicide may be a practical factor that stops trainees from providing support.
168	12.The concerns of inappropriate assessment or fear of breaking the child's trust maybe practical reasons that prevent trainees from offering help.
169	13.The stigma of mental illness and misconceptions about the side effects of psychiatric drugs may be practical reasons that prevent trainees from providing help.
170	14.Lack of legal awareness, or unclear boundaries of responsibilities and rights in intervention work may be realistic factors that prevent trainees from offering help.
171	15.The fear that they will not be able to response appropriately to individuals at risk of suicide is a practical reason that may prevent trainees from offering help.
172	16.The scarcity of mental health resources is a practical reason that prevents individuals from seeking help.
	Part II.Feasibility of Training Methods
173	1.Watching videos (psychoeducation via animation and video synthesised from different clips)
174	2.Watching videos (communication skills demonstrated by real people)
175	3.Group discussion

Table 3

176	4.Role play
177	5.The training should end with an online Question and Answer session with a crisis intervention specialist.
	Part III.Feasibility of achieving the training objectives
178	1.Statistics, common misconceptions, risk factors, and warning signs related to suicide are presented in the form of videos, and this strengthens trainees' understanding and memory of relevant information.
179	2.Group discussions after watching videos enables trainees to reflect and talk about videos, therefore to improve their understanding and attitude towards suicide prevention.
180	3.Role play allows trainees to take turns to play the roles of the intervenor, the child, and the feedback giver, practice relevant intervention techniques and discuss any problems that arise during the exercise in a timely manner.
181	4.Role play allows trainees to take turns to play the roles of being the gatekeeper/at-risk child/observer, thereby practise relevant internvention skills, and they can reflect on questions arise from the role play in a timely manner.
182	5.This intervention intends to be a two-day offline training that provides ample opportunity for trainees to practice gatekeeper skills, thereby help to identify and refer children at risk of suicide.
183	6.In order to sustain the length of time that trainees masters the skills and knowledge, booster exercises should be carried out at the end of three months to consolidate their memory of what they have learned previously.
	Part IV. Suitability of training materials
184	1.This intervention will provide standardized training materials (i.e., intervention videos, manuals, appendices, training presentations, and materials for children and parents) to facilitate the generalization and ongoing learning of this intervention.
185	2.Intervention videos are the main training material which will present content related to suicide, and show the intervention skills needed when talking about suicide.
186	3.The '*Manual* is an exercise booklet for use during training which trainees can use to take notes, to follow the prompts for group discussions or role plays, and refer to case examples of role play exercises.
187	4.The *Appendices* serve both as reference material used during the training, which provides referencing materials for group exercises during training, or repeat use after the training (including misconceptions and facts related to suicide, suicide-related risk factors and warning signs, etc.).

Table 3

188	5.The *Training Presentation* (PPT) is an outline for researchers to use and cue different sections thoroughout the training.
189	6.The *Booklet for Parents* includes statistics on suicide, its severity, the correct way to communicate at-risk children, and a summary of resources for seeking help, and it can be used by teachers as an aid when communicating to parents about their child's risk of suicide.
190	7.The *Booklet for Children* consists of various symptoms that children might experience when they are at risk of suicide, explanations of causes of suicide risk, tips for soothing their feelings, and resources for seeking help. This booklet can support parents or teachers for psychoeducation with children when talking about suicide.
191	8.At the end of the training, teachers need to pass a test to obtain the certificate, which could improve their self-efficacy about intervention.
192	9.Relevant intervention videos and training materials will be available online after the training, so that trainees can review intervention materials whenever they need to reinforce their skills and refresh knowledge.
	PartⅤ.General Remarks
	1.recommendations for reducing harm (the following entries are based on those added by experts in the first round of consensus on reducing harm to trainees in this intervention; please rate the importance of including these recommendations in the intervention).
193	1.1 The training is voluntary and will be detailed in the Informed Consent Form prior to training, therefore teachers or parents with previous experience of trauma or who feel taboo towards death can choose whether or not to attend.
194	1.2 During the training, any teacher or parent who feels uncomfortable can leave the training anytime.
	2. Additional intervention content or techniques (the following entries are revised entries based on the expert recommendations from the first round of consensus that intervention or techniques should be added, and you are asked to rate the importance of attributing these recommendations to the intervention).
195	2.1 The training should allow trainees to learn and practice how to obtain a person's promise of not acting on suicidal behavior.
196	2.2 The training should allow trainee teachers to learn and practice skills of communicating with parents, especially those parents who are reluctant to admit that their child are struggling psychologically.

Table 3

197	2.3 The training will include a section of self-care for trainees.
198	2.4 The training should allow trainees to practice helping students at risk of suicide to find effective social support resources.
	3. Suggested modifications to enhance localization (the following entries were added based on the first round of consensus, where experts suggested better adapting this intervention to local needs, and you were asked to rate the importance of attributing these suggestions to the intervention).
199	3.1 During the research and development training phase, interviews need to be conducted with parents and at-risk students to explore their actual needs.
200	3.2 When training parents, parents from different backgrounds should be surveyed about their perceptions of suicide prevention in schools and their willingness or barriers to participating in the training.
201	3.3 Training materials should include some resources available for referrals.

Supplementary Table 4. Example of new items generated from suggestions that endorsed by the panel

Part I. The evaluation of training content by experts	
(a) Additional overall training topics	Trainees should learn about the significance of preventing adolescent suicide at the national level. For example, the Ministry of Education has publicly stated that it is necessary to improve teachers' ability to identify and intervene with children and adolescents' mental health problems through training, and emphasize the collaboration between school and family on this matter.
(1) The severity of suicide among adolescents and common feelings of a suicidal person	People with suicidal thoughts tend to attribute their pain and problems to themselves being not good enough, incompetent, or as their problems, without realizing that they may be their feelings are affected by psychological problems.
(2) Establish an accurate understanding of suicide	When deciding between life and death, most people would hesitate about which to choose, and this is the crucial time period for early identification and intervention.
(3a) Risk factors associated with suicide	Stress caused by the end of a relationship or by negative interpersonal relationships is a personal factor that increases the risk of suicide.
(3b) Identify the warning signs of suicide	If children had previously prepared tools for suicide or attempted suicide, whether it is actively terminated or passively terminated, physically injured or uninjured, it is a high-risk warning sign for suicide.

(4) Accurate ways of communicating suicide risk	Before talking about suicide, it is important to ensure that the child is in a stable emotional state, and that communication is conducted in a safe place.
(5) Assess suicide risk	Assessing suicide risk is a continuous and dynamic process, that needs to take into consideration the severity of the child's current risk of suicide (e.g., suicidal ideation, planning, or preparation), previous factors that trigger or prevent suicidal behavior, previous psychiatric diagnoses, and psychosocial status.
(6) Make a safety plan	Helping children recall the resources that have helped them stop suicide (i.e., their own positive coping style and support from others), could help them reflect on how they have successfully dealt with the suicide crisis, as well as help to strengthen these protective factors in time.
(7a – For Teacher's Training Only) Teachers communicate with parents about their children's suicide risk and find help for them	Teachers should identify children at risk of suicide, inform parents and school authorities in a timely manner, assist parents in referring their children to medical services for treatment, and restrict children's access to dangerous tools on school premises.
(7b - For Parent training only) Parents express support to their children and find resources for help	Parents need to be in a good state themselves to be competent in caring for their children, therefore they also need to pay attention to their own emotional needs, and learn to utilize internal and external resources to help themselves.

(8) In addition to aforementioned stigma and morbidity, other barriers that prevent children from seeking help, or prevent teachers or parents from providing help	The concerns of inappropriate assessment or fear of breaking the child's trust may be practical reasons that prevent trainees from offering help.
Part II. Feasibility of Training Methods	
The training should end with an online Question and Answer session with a crisis intervention specialist.	
Part V. General Remarks	
Recommendations for reducing harm	During the training, any teacher or parent who feels uncomfortable can leave the training anytime.
Additional intervention content or techniques	The training should allow trainee teachers to learn and practice skills of communicating with parents, especially those parents who are reluctant to admit that their child are struggling psychologically.
Suggested modifications to enhance localization	Training materials should include some resources available for referrals.