Journal of Health Sport and Nursing
Vol 1, No. 2, (2025), 54-64
DOI: https://doi.org/10.26740/jhsn.v1i02.73600
eISSN 3125-1412

SUICIDE PREVENTION PROGRAMS LED BY NURSES: A SCOPING REVIEW OF APPROACHES AND EFFECTIVENESS

Wahyu Dini Candra Susila[1]*, Salwa Nirwanawati[2], Fitrio Deviantony[3], Enggal Hadi Kurniyawan[4], Robby Prihadi Aulia Erlando[5], Caturia Sasti Sulistyana[6]

1-5. Faculty of Nursing, Universitas Jember
6. Departemen of Nursing, Universitas Negeri Surabaya
*Corresponding Author: wahyudinicandra@unej.ac.id

ABSTRACT

Background: Suicide remains a major global cause of death, with nurses positioned as key providers for early detection, risk management, and follow up of individuals at risk. Nurse led programs are increasingly implemented, yet their approaches and effectiveness are dispersed across settings and study designs. **Aim:** To map approaches and effectiveness of nurse led suicide prevention programs and identify gaps for practice and policy. **Setting:** Hospitals, emergency departments, nursing homes, community and educational services, and organizational settings involving nurses and nurse leaders. **Methods:** A scoping review following PRISMA-ScR guidelines was conducted. Literature searches were performed in PubMed, Scopus, Web of Science, and CINAHL, complemented by manual searching. Primary studies published in English within the last five years that evaluated nurse-led suicide prevention interventions and reported educational, behavioral, or clinical outcomes were included. Data was extracted and synthesized narratively. **Results:** Ten studies were included, grouped into nurse led safety planning, brief gatekeeper training, vocational/academic curricula, and organizational interventions. Across studies, programs improved suicide related knowledge, self efficacy, skills, and willingness to intervene among nurses, nursing students, and allied gatekeepers, while a few suggested potentials effects on suicidal behavior. However, most used pre-post designs without controls, small samples, and short follow up. **Conclusion:** Nurse led suicide prevention programs enhance competencies and organizational readiness to respond to suicide risk, but stronger evidence is needed for long term clinical impact.

Keywords: Nurse led, suicide prevention, gatekeeper

Article information:
Received: 2025-06-25 | Revised: 2025-07-30 | Approved: 2025-11-14 | Published: 2025-12-30
©Authors 2025

INTRODUCTION

Suicide remains one of the leading causes of death worldwide, with more than 700,000 people losing their lives each year according to recent data from the World Health Organization (WHO). The suicide rate is considerably higher among young people, representing the third leading cause of death in the 15–29-year age group (WHO, 2025). Each suicide case is estimated to be accompanied by up to 20 suicide attempts, underscoring the urgency of multidimensional prevention efforts and the engagement of the health sector across professions (IASP, 2025).

The World Health Organization emphasizes that no country has been able to significantly reduce suicide rates without a comprehensive national strategy and

evidence based interventions (WHO, 2025). Nurses occupy a crucial position because of their intensive direct contact with patients in health care facilities, including hospitals, emergency departments, community services, and primary care (Riedel et al., 2025). Nurses are not only involved in early detection and therapeutic communication, but also play an active role in risk management, safety planning, patient empowerment, and post-attempt follow up (Chalancon et al., 2025).

The global literature highlights that a wide range of nurse-led suicide prevention interventions have been implemented, including gatekeeper training, empathic communication and education, and the application of safety planning protocols among high-risk groups (Pirkis et al., 2024). However, the effectiveness, implementation challenges, and long-term impact of these programs remain variable, creating the need for a comprehensive review to inform the development of evidence-based nursing policies and practice (Riedel et al., 2025).

This scoping review aims to systematically map the approaches of evidence on the effectiveness and implementation characteristics of nurse-led suicide prevention programs remain fragmented.

Therefore, a comprehensive mapping of existing nurse-led suicide prevention approaches is needed to inform future research, education, and policy development.

METHODS

This study employed a scoping review methodology following the Arksey and O'Malley framework, further informed by recommendations from the Joanna Briggs Institute (JBI) for scoping reviews. Reporting adhered to the PRISMA-ScR guidelines.

Design study: A scoping review approach was adopted. The literature search was conducted in major international indexed databases, including PubMed, Scopus, CINAHL, and Web of Science. The search strategy used combinations of the keywords "nurse-led," "suicide prevention," "gatekeeper training," "safety planning," "intervention," and "review." Additional searching was performed through citation tracking and manual screening.

Criteria for inclusion: The inclusion criteria comprised originals research articles (quantitative, qualitative, or mixed methods) that specifically examined suicide prevention programs or interventions led by nurses. The suicide prevention interventions could be implemented in various settings, including hospitals, emergency departments, community services, educational institutions, or primary care facilities. Eligible studies were required to report at least one of the following outcomes: reductions in suicidal ideation or suicide attempts, improvements in nurse knowledge and competencies, changes in attitudes or self confidence among nursing personnel, or improvements in psychological symptoms related to suicidal ideation.

Search strategy: The databases used were PubMed, Scopus, Web of Science (WOS), and CINAHL, with Google Scholar employed for additional manual searching. The search strategy applied the following keywords: "nurse led" OR "nursing" OR "nurses" AND "suicide prevention" OR "suicide" OR "self-harm" OR "suicidal ideation" OR "suicide attempt" AND "intervention" OR "program" OR "training" OR "gatekeeper" OR "safety

planning". The publication period was limited to the last 5 years, and only primary research articles written in English with full text availability were included. All articles were compiled and selected through a peer reviewed process.

Study selection: The study selection process for this scoping review followed PRISMA ScR standards for transparency and reproducibility, including the stages of deduplication, title and abstract screening, full text assessment, documentation, and finalization of the included articles.**Data extraction:** Data extraction was conducted manually according to the type of primary/original study, including a description of the intervention (type of program gatekeeper, safety planning, psychological, or educational), duration, intensity, main implementer (nurses), and endpoints such as suicidal ideation, suicide attempts, depression, nurses knowledge, attitudes, self-confidence, and cost effectiveness. The researchers jointly reviewed and appraised all included articles.

Quality appraisal: This scoping review demonstrates several methodological strengths. The study follows a structured and transparent process aligned with PRISMA ScR, including clear stages of deduplication, title abstract screening, full text assessment, and documentation of included studies. The search strategy is comprehensive, using multiple major databases (PubMed, Scopus, Web of Science, CINAHL) and supplementary manual searching in Google Scholar, with well defined keywords that combine nursing roles, suicide related outcomes, and intervention types. Inclusion and exclusion criteria are explicitly delineated, focusing on primary research, nurse led or nurse involved suicide prevention interventions, and clearly specified outcomes, which enhances the clarity and reproducibility of the review. Data extraction is conducted manually and systematically, capturing core elements of each intervention (type of program, setting, duration, intensity, primary implementer, and outcomes), and the synthesis organizes findings into coherent thematic domains (types of interventions, effectiveness, gaps, and implications).

Data analysis: Reviewers assess key components including randomization, blinding, reporting, generalizability, outcome relevance, and conflicts of interest.

Figure study flowchart
Figure shows the flowchart to search and selection prosedure of articles.

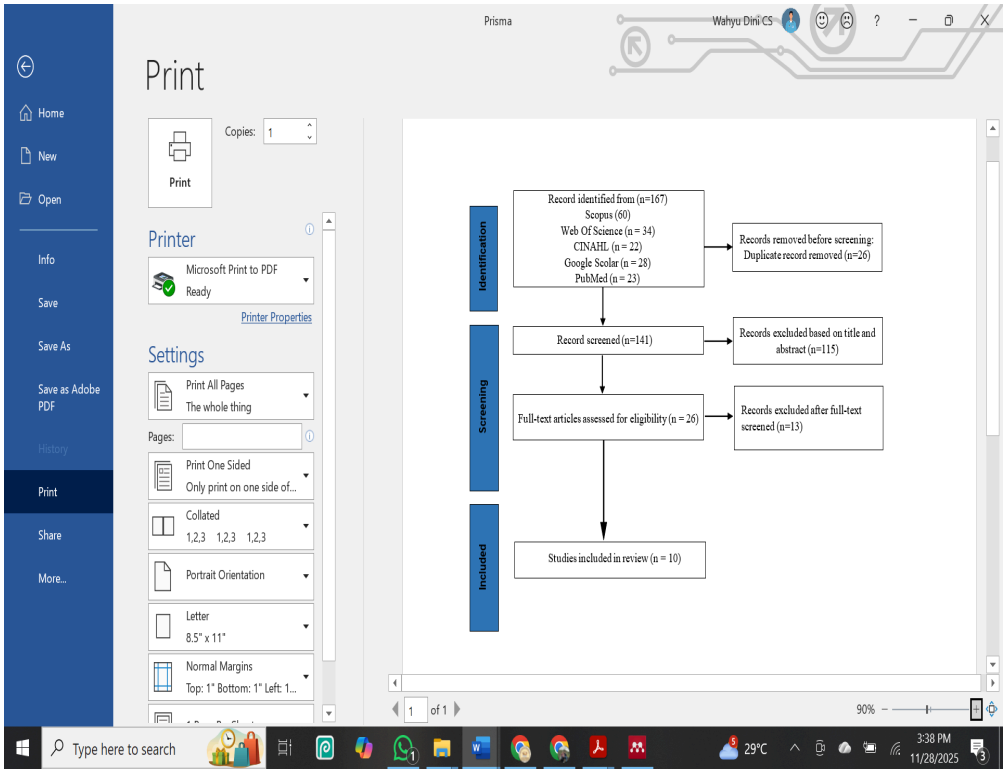


Figure 1 Prisma Scr Guidelines

RESULTS

Hasil tinjauan literatur menggambarkan spektrum program pencegahan bunuh diri yang melibatkan perawat di berbagai setting (IGD, rumah sakit umum, panti wreda, komunitas, vokasi keperawatan, pemimpin keperawatan, hingga guru/tenaga non perawat yang berperan sebagai gatekeeper) di rinci sebagai berikut.

Table 1 Result Finding

No	Author	Title (Original)	Measurement	Subject	Determinant Result
1	(Chalancon et al., 2025)	Implementing a nurse led safety planning intervention in emergency departments to prevent suicide reattempts: a stepped wedge randomized controlled trial protocol (French multicentre randomized controlled trial with a stepped wedge design)	Suicidal behavior (suicide reattempt or death by suicide) at 6 months	Adults (≥18 years) presenting to the emergency department after a suicide attempt (including interrupted/aborted attempts).	A Safety Planning Intervention (SPI) developed and delivered by nurses before patient discharge. A 40% reduction in suicidal behavior (reattempts plus suicide deaths) at 6-month follow-up after the intervention.

2	(Khadka et al., 2025)	Effectiveness of suicide prevention gatekeeper training in nurses at a tertiary health care center in Nepal	Self efficacy, attitude toward suicide	Nursing staff	Suicide gatekeeper training program
3	(Demesmaeker et al., 2023)	Assessment of a Suicide Prevention Gatekeeper Training Program for Nursing Home Staff	Suicide attempts	Nursing staff	Program suicide gatekeeper
4	(Ganaprakasam et al., 2024)	Empowering Malaysian Indian School Guidance and Counseling Teachers: Gatekeeper Training Impact on Suicide Prevention Knowledge, Attitudes, and Practices	Suicide Prevention Knowledg Attitude Toward Suicide Prevention e,	Teachers	Knowledge increased significantly, and attitudes became more positive toward suicide prevention.
5	(Wakai et al., 2020)	Suicide Prevention Skills, Confidence, and Training: Results from the Zero Suicide Workforce Survey of Behavioral Health Staff	Suicide Prevention Skills, Confidence in Suicide Prevention	Hospital Staff	Improved abilities and skills in managing suicide
6	(Jensen et al., 2025)	The impact of suicide prevention training for nursing assistant students: Knowledge and willingness to intervene	knowledge about suicide	Nursing students	Knowledge, perceived behavioral control, and intention to intervene.
7	(Noronha et al., 2023)	Effectiveness of Gatekeeper Training Program (GTP) on awareness, attitude, mental help seeking intention and gatekeeper behavior among Koraga tribe: A study protocol	Mental Health Knowledge, Mental Help Seeking Intention	General population aged 18–60 years	Gatekeeper Training Program (GTP): workshop 2 hari

8	(James, 2025)	Supporting Nurse Leaders to Recognize and Intervene in Team Members' Suicidality	Suicide Prevention Knowledge	Nurse leaders	Improved leadership capacity for suicide prevention
9	(Boone, 2025)	Executive Summary: Staff Education Project Reducing Burnout Through Mindfulness Education	Burnout to suicide ideation	Nurses	Stress management awareness
10	(Hashimoto et al., 2021)	Effectiveness of suicide prevention gatekeeper training for university teachers in Japan	Suicide Intervention Response	Teachers	Suicide prevention competencies

DISCUSSION

In general, the ten articles show that nurses can be involved in suicide prevention in three major roles: as direct implementers of clinical interventions (for example, safety planning in emergency departments), as primary participants in gatekeeper training, and as leaders or facilitators of an organizational culture that is attentive to suicide risk. Chalancon et al. developed PROTECT, a multicenter stepped wedge cluster trial protocol in French emergency departments, in which emergency nurses are trained and deliver a Safety Planning Intervention (SPI) to patients after a suicide attempt as an adjunct to usual care. Khadka et al. in Nepal evaluated a two hours gatekeeper training for 72 nurses in a tertiary hospital and found significant improvements in nurse self efficacy and attitudes toward suicide prevention following the training.

Demesmaeker et al. assessed a gatekeeper training program for nursing home staff, with nurses as a key part of the target group, and documented increased knowledge and confidence to act in response to suicide risk among older adults (Demesmaeker et al., 2023). Jensen et al. analyzed the impact of suicide prevention training on nursing assistant students and reported significant gains in knowledge about suicide and willingness to intervene after exposure to a structured training package (Jensen et al., 2025). James and Boone focus on nursing staff as the “targets” of intervention rather than solely as implementers; James developed a program to support nurse leaders in recognizing and responding to suicidality among team members, while Boone designed a staff education project to reduce burnout through mindfulness based training that also addresses aspects of suicide prevention (James, 2025). Staff training for suicide prevention is quite effective and represents a promising approach (Rentzoulis et al., 2025; Solin et al., 2021; Ubido & Scott-samuel, 2014).

Types of Intervention Approaches

The intervention approaches identified in the included articles can be grouped into four categories: (1) nurse-led clinical safety planning, (2) brief gatekeeper training, (3)

vocational/academic training curricula, and (4) organizational interventions targeting nursing staff or nurse leaders. PROTECT represents the clinical safety planning approach; emergency department nurses deliver a structured Safety Planning Intervention (SPI) before patient discharge with the aim of reducing repeat suicidal behavior within six months (Chalancon et al., 2025). Several studies describe brief gatekeeper training with relatively short duration (approximately 2–3 hours up to several sessions), emphasizing the recognition of warning signs, effective communication, and referral pathways (Demesmaeker et al., 2023; Ganaprakasam et al., 2024; Khadka et al., 2025; Nakagawa et al., 2025; Noronha et al., 2023).

Jensen et al. integrated suicide prevention into the vocational curriculum for nursing assistant students, using knowledge based modules (the Revised Facts on Suicide Quiz) and the Willingness to Intervene Against Suicide instrument, thereby positioning suicide prevention as a core competency for future nursing personnel (Jensen et al., 2025). Wakai et al., through the Zero Suicide Workforce survey, showed that exposure to suicide prevention training was associated with increased skills and confidence among behavioral health staff (including nurses) in managing suicide risk. James and Boone add an organizational dimension: James focuses programs on nurse leaders to address suicide risk among staff, while Boone designs an educational intervention incorporating mindfulness to reduce burnout linked to suicide risk among nursing personn (Boone, 2025; James, 2025; Jensen et al., 2025).

Effectiveness and Impact of the Programs

Intervention studies consistently report improvements in knowledge, self efficacy, and skills relevant to suicide prevention among nurses and related personnel. The evidence shows a large effect on nurses self efficacy to engage in suicide prevention following gatekeeper training, although changes in attitudes are more modest, indicating the need for repeated and more in depth interventions to shift attitudes (Khadka et al., 2025). Jensen et al. found significant increases in knowledge scores and willingness to intervene among nursing assistant students after training, highlighting that even brief interventions can have a substantial impact when they use standardized materials. The findings of Demesmaeker et al. and Ganaprakasam et al. are consistent, demonstrating increased knowledge and readiness among teachers/counselors and nursing home staff (who work alongside nurses) to act as gatekeepers in the face of suicide risk. Organizational interventions reported by James and Boone do not always document direct reductions in suicide incidence, but they show improvements in leadership awareness, implementation of support strategies, and reductions in burnout symptoms, which are theoretically linked to reduced suicide risk among nurses (Demesmaeker et al., 2023; Ganaprakasam et al., 2024; Jensen et al., 2025).

Gaps and Implications

In practice, nursing requires program models that integrate several key components: (1) evidence-based gatekeeper training with repeated evaluation, (2) standardized, nurse led clinical safety planning at crisis points such as emergency departments, (3) vocational curricula and continuing education on suicide prevention for all levels of nursing personnel, and (4) organizational interventions that explicitly target

suicide prevention among nursing staff themselves. Future research should include more controlled trials that assess long term clinical outcomes (repeat suicide attempts, suicide related hospitalizations, and mortality) and examine program adaptations across diverse cultural contexts, including low and middle-income countries where nurses carry a high workload but access to mental health services remains limited. Studies need to be evaluated over a longer period to more accurately assess their effectiveness (Kingi-uluave et al., 2025; Torok et al., 2019; Yonemoto et al., 2019).

CONCLUSION

The ten studies reviewed indicate that suicide prevention programs led by, or heavily involving, nurses can enhance the knowledge, skills, and confidence of nurses and related personnel in recognizing, assessing, and responding to suicide risk across various care settings. The findings of this scoping review underscore that investing in evidence-based gatekeeper training, integrating suicide prevention content into nursing education and continuing professional development, implementing nurse led safety planning, and providing support programs for nursing leaders and staff are key strategies to strengthen the role of nurses in suicide prevention. For policymakers and health care managers, these results support the need for institutional and national policies that explicitly position nurses as central actors within suicide prevention service networks, accompanied by adequate resource allocation, supervision, and protection of nurse mental health.

The majority of the included studies still rely on pre-post designs without control groups, involve relatively small samples, and often report only short term outcomes, which limits the ability to draw firm causal inferences regarding reductions in suicidal behavior. Future research should prioritize controlled or quasi-experimental designs, incorporate longer follow-up periods, and report nurse-specific outcomes to better delineate the unique contribution of nursing to suicide prevention. Strengthening the methodological rigor of future studies is essential to inform policy and large-scale implementation.

ACKNOWLEDGMENTS

The authors would like to acknowledge and express their gratitude to the researchers and practitioners in nursing and suicide prevention whose scientific work has provided an essential foundation for the evidence mapping presented in this article.

AUTHORS CONTRIBUTION

Wahyu Dini Candra Susila made the primary contribution to the development of the scoping review design, formulation of the research question, development of the search strategy, article selection, data extraction, thematic analysis, and drafting of the initial manuscript. Salwa Nirwanawati contributed to validating the search strategy, supporting the article selection and data extraction processes, and critically revising the introduction and methods sections. Fitrio Deviantony contributed to appraising the methodological quality of the included articles, assisted with the analysis and synthesis of the findings, and revised the results section. Enggal Hadi Kurniyawan contributed to the interpretation of the findings, strengthening the clinical perspective and implications for

nursing practice, and drafting the discussion section. Robby Prihadi Aulia Erlando contributed to aligning the manuscript with the journal's author guidelines, checking citations and the reference list, and conducting the final language editing. Caturia Sasti Sulistyana contributed to the final review of the manuscript, provided conceptual input to the conclusions and recommendations, and approved the final version of the manuscript. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work.

REFERENCES

Boone, S. M. (2025). *Executive Summary : Staff Education Project Reducing Burnout Walden University*.

Chalancon, B., Haesebaert, J., Vacher, A., Vieux, M., Simon, L., Subtil, F., Colin, C., Poulet, E., Leaune, E., Associates, I., Scientific, E., & Committee, N. (2025). *Implementing a nurse-led safety planning intervention in emergency departments to prevent suicide reattempts : a stepped- wedge randomized controlled trial protocol (French multicentre randomized controlled trial with a stepped-wedge design)*.

Demesmaeker, Alice, Baelde, Nicolas, Amad, Ali, Roche, Jean, Playe, Marie, Vaiva, Guillaume, Amariei, Alina, Blervaque, Wanda, Defebvre, Marguerite Marie, Caron, Brigitte, Puisieux, Francois, & Plancke, Laurent. (2023). Assessment of a Suicide Prevention Gatekeeper Training Program for Nursing Home Staff. *Journal of Geriatric Psychiatry and Neurology*, *36*(4), 309–315. https://doi.org/10.1177/08919887221149142

Ganaprakasam, C., Muniandy, T., & Humayra, S. (2024). *Original Article Empowering Malaysian Indian School Guidance And Counseling Teachers : Gatekeeper Training Impact On Suicide Prevention Knowledge , Attitudes , And Practices*. *2*(2), 116–123.

Hashimoto, N., Takeda, H., Fujii, Y., Suzuki, Y., & Kato, T. A. (2021). Effectiveness of suicide prevention gatekeeper training for university teachers in Japan. *Asian Journal of Psychiatry*, *60*(April), 102661. https://doi.org/10.1016/j.ajp.2021.102661

IASP. (2025). New WHO Suicide Data Reaffirms Urgent Need for Global Prevention Efforts. *International Asociation Of Suicide Prevention*. https://www.iasp.info/2025/06/02/who-suicide-data/

James, K. E. (2025). *Supporting Nurse Leaders to Recognize and Intervene in Team Members ' Suicidality*. 631–642. https://doi.org/10.1111/jnu.70006

Jensen, M. V., Bojen, S., & Frandsen, A. (2025). *The impact of suicide prevention training for nursing assistant students : Knowledge and willingness to intervene*. 1–14. https://doi.org/10.1371/journal.pone.0323169

Khadka, R., Rana, M., Shakya, S., Singh, A., & Yadav, S. (2025). *Effectiveness of suicide prevention gatekeeper training in nurses at a tertiary health care center in Nepal*.

Kingi-uluave, D., Taufa, N., Tuesday, R., Cargo, T., Merry, S., Hetrick, S., Taufa, N., Tuesday, R., Cargo, T., Merry, S., Hetrick, S., Review, A., Reviews, S., Kingi-uluave, D., Taufa, N.,

Tuesday, R., Cargo, T., Stasiak, K., Merry, S., & Hetrick, S. (2025). Archives of Suicide Research A Review of Systematic Reviews : Gatekeeper Training for Suicide Prevention with a Focus on Effectiveness and Findings A Review of Systematic Reviews : Gatekeeper Training for Suicide Prevention with a Focus on Effectiveness and Findings. *Archives of Suicide Research*, *29*(2), 329–346. https://doi.org/10.1080/13811118.2024.2358411

Nakagawa, T., Narita, T., & Katsumata, Y. (2025). [Practice and evaluation of the suicide prevention gatekeeper training program incorporating dialogue]. *[Nihon koshu eisei zasshi] Japanese journal of public health*, *72*(1), 32–41. https://doi.org/10.11236/jph.24-023

Noronha, F. S., Jose, T. T., George, A., & George, L. S. (2023). *Effectiveness of Gatekeeper Training Program (GTP) on awareness , attitude , mental help seeking intention and gatekeeper behavior among Koraga tribe : A study protocol [version 2 ; peer review : 2 approved]*. 1–16.

Pirkis, J., Dandona, R., Silverman, M., Khan, M., & Hawton, K. (2024). Series A Public Health Approach to Suicide Prevention 1 Preventing suicide : a public health approach to a global problem. *The Lancet Public Health*, *9*(10), e787–e795. https://doi.org/10.1016/S2468-2667(24)00149-X

Rentzoulis, J., Gilmore, A., Saheb, R., & Reis, A. C. (2025). *Suicide prevention training for allied health professionals within healthcare environments : A scoping review*. https://doi.org/10.1371/journal.pone.0326738

Riedel, A., Feinauer, S., Jacob, E., Haug, P. M., Klotz, K., & Heidenreich, T. (2025). *Nurses ' roles and responsibilities in suicide prevention : a scoping review*.

Solin, P., Tamminen, N., & Partonen, T. (2021). Suicide prevention training : self-perceived competence among primary healthcare professionals. *Scandinavian Journal of Primary Health Care*, *39*(3), 332–338. https://doi.org/10.1080/02813432.2021.1958462

Torok, M., Calear, A. L., Smart, A., Nicolopoulos, A., & Wong, Q. (2019). Preventing adolescent suicide : A systematic review of the effectiveness and change mechanisms of suicide prevention gatekeeping training programs for teachers and parents. *Journal of Adolescence*, *73*(August 2018), 100–112. https://doi.org/10.1016/j.adolescence.2019.04.005

Ubido, J., & Scott-samuel, A. (2014). *Rapid Evidence Review Series Suicide Prevention Training*. *99*.

Wakai, S., Schilling, E. A., Jr, R. H. A., Blair, E. W., Bourbeau, J., Duarte, A., Durst, L. S., Graham, P., Hubbard, N., Hughey, K., Weidner, D., & Welsh, A. (2020). *Suicide prevention skills , confidence and training : Results from the Zero Suicide Workforce Survey of behavioral health care professionals*. https://doi.org/10.1177/2050312120933152

WHO. (2025). *Suicide*. https://www.who.int/news-room/fact-sheets/detail/suicide

Yonemoto, N., Kawashima, Y., Endo, K., & Yamada, M. (2019). Gatekeeper training for

suicidal behaviors: A systematic review. *Journal of Affective Disorders*, *246*, 506–514. https://doi.org/https://doi.org/10.1016/j.jad.2018.12.052