Suicide Awareness and Prevention Training for Healthcare Workers

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Notes from the Author

As I reach the culmination of my Doctor of Nursing Practice (DNP) journey, I want to take a moment to express my deepest gratitude to those who have supported me along the way.

To my husband, your unwavering encouragement, patience, and belief in me have been my foundation throughout this journey. Your support during long nights, early mornings, and countless hours of study has meant more than words can express. Thank you for standing by my side and reminding me of my strength when I needed it most.

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Finally, I dedicate this project to the memory of our lost nursing colleague, whose passing served as a heartbreaking reminder of the urgent need for mental health awareness and suicide prevention in healthcare. This work was done in your honor, with the hope that it helps create a culture of support, understanding, and intervention for those who are struggling. Your life and legacy will never be forgotten.

Abstract

Suicide prevention training is critical in healthcare environments, where high levels of stress, emotional exhaustion, and burnout can contribute to mental health challenges among staff. Following the tragic suicide of a Neonatal Intensive Care Unit (NICU) team member in 2022, this project introduced the Question, Persuade, Refer (QPR) suicide prevention training within the NICU. The initiative aimed to equip staff with the knowledge and skills necessary to recognize and respond to individuals at risk for suicide, while also enhancing perceptions of organizational support for staff well-being. Over a two-month period (1/2/2025 to 2/21/2025), 62 NICU staff members completed the training, with pre- and post-assessments measuring changes in suicide prevention knowledge and in intervention confidence or self-efficacy. Results demonstrated significant increases in staff knowledge, and a willingness to engage in suicide prevention conversations, while also improving the perception of organizational support. In light of these outcomes, the hospital has committed to integrating QPR into new employee orientation to promote long-term sustainability. Future recommendations include expanding the training to additional units, leveraging technology to offer virtual training options, and conducting long-term follow-up studies to assess the ongoing impact of QPR. This project highlights the value of embedding suicide prevention training into healthcare settings and offers a scalable approach to strengthening mental health support for frontline healthcare workers.

Keywords: Question, persuade, refer (QPR); suicide prevention; Neonatal intensive care unit (NICU); well-being; organizational support

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Section I. Introduction

The Centers for Disease Control and Prevention (CDC; 2024, para.1) defines suicide as "death caused by self-inflicted injury with the intent to die." While this definition may seem straightforward, it encapsulates a complex issue. Poor physical, mental, and social well-being are linked to higher rates of suicide and self-harm (Erlangsen et al., 2020a; Erlangsen et al., 2020b; Parker et al., 2018). Healthcare workers (HCWs) have a higher suicide rate compared to those in other industries (Olfson et al., 2023). Examining data from the Centers for Disease Control and Prevention National Violent Death Reporting System, Davis et al. (2021) found that between 2007 and 2018, nurses were 18 times more likely to die by suicide than the general population. A study conducted by Mental Health America (2024) between June and September 2020 revealed that among 1,110 healthcare workers surveyed, 93% reported experiencing stress, 86% reported anxiety, 77% expressed frustration, 76% felt exhaustion and burnout, and 75% reported feeling overwhelmed. Additionally, 39% of healthcare workers indicated they did not feel they had sufficient emotional support. Hospitals and health systems play a vital role in suicide prevention among their staff by equipping the workforce with the necessary tools and resources to maintain mental health and well-being (American Hospital Association, 2022). However, many healthcare organizations fall short in offering sufficient support for their employees' overall well-being. By providing adequate support and training, healthcare organizations can cultivate a culture of peer support, reduce the stigma around mental health issues, and improve their healthcare workers' perceptions of employer support.

Background

Suicide remains a significant concern for public health on a global scale, with around 800,000 individuals ending their lives annually (Nam et al., 2022). Among HCWs, who are dedicated to preserving life and promoting wellness, the issue of suicide presents a particularly

intricate and troubling phenomenon. Olfson et al. (2023) conducted a study on a national cohort of over 1.8 million employed adults from 2008 to 2019, revealing that HCWs, including registered nurses (RNs), healthcare support workers, and health technicians, faced a higher risk of suicide compared to non-healthcare workers. Factors contributing to suicide among HCWs, as identified by Dutheil et al. (2019), include high levels of stress from demanding work environments, long hours, and exposure to traumatic events.

Well-being is understood as an assessment of one's quality of life and is typically seen as having multiple dimensions, including both emotional and cognitive aspects (Parker et al., 2018). Both well-being and life satisfaction are central elements of positive psychology. Poor well-being can negatively impact mental, physical, emotional, and psychosocial health. If left unaddressed, it can result in burnout, mental health issues, addiction, and even suicide (Munn et al., 2021). Amongst HCWs, stigma and mental health barriers further compound the challenges they face, discouraging them from seeking help for their own mental well-being due to fears of professional consequences or perceived weakness.

In healthcare organizations, there is often a gap in resources to address the emotional well-being of the workforce (Johnson, 2019). Leaders often do not acknowledge that staff are dealing with traumatic situations and that these stressors impact the mental health of the team. Zohn and Hovis (2023) underscore the urgency of implementing strategies to mitigate this risk. Key strategies include crisis intervention and training HCWs to identify those at risk (Zohn & Hovis, 2023). Preventing suicide among HCWs is essential not only for their personal well-being but also for maintaining the stability of healthcare systems (Chan et al., 2022).

Healthcare workers are exposed to many stressors daily in the workplace. This stress can take a toll. The project site’s administration has identified a critical need for suicide awareness

and prevention training in one of its hospitals. In the past four years, this hospital has experienced the loss of three teammates to suicide, leaving colleagues questioning what more could have been done to prevent these tragic events. Studies show HCWs prefer to speak to a trusted colleague when struggling psychologically (Adnan et al., 2023; Godfrey & Scott, 2021; Schlichthorst et al., 2020). One of the anticipated outcomes of this project was that HCWs would be skilled to identify a peer that may be grappling internally and be able to appropriately intervene.

The well-being of HCWs has become a focus for the Institute for Healthcare Improvement (IHI; Harolds, 2020). In 2014, there was a recommendation to add a fourth aim focused on caregiver wellness, expanding to a quadruple aim. This recommendation arose from increased burnout seen in HCWs as they attempted to meet the triple aim of improving patient experience, enhancing care quality and overall health, and reducing healthcare costs (Grant et al., 2020). Burnout among HCWs has negatively affected progress toward achieving the triple aim (Bachynsky, 2019). Studies have established a relationship between burnout and suicidal ideation in HCWs (Williams et al., 2020). In the United States (US), one in every two RNs experience burnout (Harolds, 2020). Support programs for caregivers can help address the elements of the fourth aim by promoting healthier work environments (Johnson, 2019).

Organizational Needs Statement

A healthcare organization in south-central North Carolina is one of the largest non-profit healthcare systems in the United States. The mission of this organization is to improve health, elevate hope, and advance healing for all. This organization stands by their mission and maintains a strong presence in the communities it serves and invests over $2 billion in community benefits and donates over $3 million to charities annually.

Data including peer support encounters and engagement surveys were examined to determine area(s) of need in this hospital for this well-being intervention. The Neonatal Intensive Care Unit (NICU) team has been the highest utilizer of the peer-to-peer support program. Sixty-two percent (n=74) of all peer support encounters were for NICU staff, with 93% (n=69) of those encounters addressing personal distress. Additionally, a recent engagement survey showed that only 30.1% (n=28) of NICU staff that completed the survey believe the organization cares about their personal health and wellbeing. The target National Healthcare Benchmark at the 50th percentile is 73.2%. The NICU also experienced the tragic loss of a nursing colleague to suicide in 2022. Based on this information, the NICU is an area of opportunity for intervention to improve support and well-being.

The NICU at the project site was a 53-bed unit. The NICU is the regional referral center as a level 4 NICU and cares for the sickest infants in the region. Staff working in intensive care units, such as the NICU, are considered especially vulnerable compared to other healthcare professionals (Favrod et al., 2018). These staff face additional stressors beyond those experienced in other areas, including frequent ethical dilemmas related to patient care and regular exposure to dying patients.

Problem Statement

Many healthcare organizations struggle to provide adequate support systems and resources for their employees (Anderson et al., 2022). Cross Country (n.d.) found that nurses identified mental health resources as an organizational gap. Of the nurses they surveyed, 24% said their workplace offered no mental health resources, 21% said their employer offers support, but it goes unused, and 24% said they were unsure what resources existed.

Given their frontline role in healthcare, it is crucial that HCWs are trained to recognize warning signs of suicide and intervene effectively. Suicide among HCWs is a multifaceted issue influenced by individual, organizational, and systemic factors. By acknowledging the unique challenges faced by healthcare professionals and implementing comprehensive prevention and support strategies, healthcare leaders can cultivate healthier work environments and reduce suicide rates in this vital population. It is imperative that healthcare organizations prioritize the mental health and well-being of their employees, ensuring that those committed to caring for others receive the support and resources they need to thrive. The project site does not offer training to current teammates to assist in recognizing suicidal ideation in peers and/or tactics to intervene.

Purpose Statement

Implementing Question, Persuade, Refer (QPR) gatekeeper training for the NICU staff at the targeted hospital aims to equip the NICU staff with the skills to identify and respond to signs of suicidal ideation. QPR gatekeeper training is evidence-based and teaches participants to identify and respond positively to someone exhibiting suicide warning signs and behaviors (Quinnett, 2007). Upon completing the training program, HCWs would have enhanced knowledge and confidence in recognizing suicide warning signs, engaging in effective conversations with at-risk individuals, and connecting them to appropriate resources. In addition, implementing QPR training in the NICU can increase the staffs' perception of the organization's investment in their health and well-being.

Section II. Evidence

Literature Review

A comprehensive and systematic electronic search across multiple databases was carried out between January 2024 and August 2024. Searches were conducted on MEDLINE, CINAHL, and EBSCO using MeSH terms and keywords related to healthcare worker (HCW) suicide. The search included terms such as ‘suicide and healthcare workers’, ‘suicide and nurses’, ‘well-being and healthcare workers’, and ‘burnout/psychology/emotions/impact on healthcare workers’. Additionally, reference lists of relevant articles identified in the databases were manually reviewed to find other pertinent studies. Language restrictions were applied. Duplicate articles were removed. This search yielded 227 articles. Inclusion and exclusion criterion was then set to limit the resources.

Criteria for inclusion included articles addressing suicide or mental health issues with HCWs, level IV evidence and above, peer-reviewed, as well as a 5-year limit on the research, unless it was a crucial piece of literature. A small number of articles not specifically focused on HCWs were included, as they reviewed evidence-based suicide prevention interventions or provided information on key subgroups with limited representation in healthcare literature. This search yielded 51 articles. These articles were read in their entirety for applicability. Eight of these articles were kept and were inclusive of level IV evidence and above. These research articles include quantitative as well as qualitative and mixed method studies.

Current State of Knowledge

Many articles acknowledge the higher rate of suicide in HCWs and discuss risk factors associated with HCW suicide (Anderson et al., 2022; Chan et al, 2022; Dutheil et al., 2019; Olfson et al., 2023; Zohn & Hovis, 2023). Several articles mentioned the extreme need for healthcare organizations to focus on HCW well-being and suicide prevention (Dutheil et al, 2019, Harolds, 2020; Munn et al., 2021; Nam et al., 2022, Olfson, 2023; Zohn & Hovis, 2023).

Only a few articles discussed research-based interventions to combat the phenomenon of HCW suicide. Strategies mentioned included peer support programs, plans for workforce well-being, destigmatizing help and treatment seeking behaviors, and suicide prevention education programs (American Hospital Association [AHA], 2022; Davidson et al., 2020; Hofsetter & Mayer, 2023; Lange 2023; Nam et al., 2022; Schlichthorst et al., 2020). Almost all articles mentioned a need for further research into interventions to focus on HCW suicide reduction.

Current Approaches to Solving Population Problem(s)

Munn et al., (2021) found that modifying the work environment to decrease stressors for HCWs could positively contribute to well-being and resilience. Sarigül et al., (2023) deduced that improving job satisfaction led to a decrease in suicidal thoughts. These programs often include burnout-reduction strategies such as promoting work-life balance, offering flexible scheduling, and providing mental health days. Mindfulness-based interventions, resilience training, and stress management workshops have been shown to improve HCWs' ability to cope with the demands of their jobs.

In their systematic review, Nam et al. (2022) found that HCWs need psychological interventions available to them in addition to well-being digital technologies to help with mental health. Nam et al. also discussed stigma surrounding mental health as a barrier for HCWs to seek help. Making mental health services accessible and confidential is another critical component of suicide prevention (AHA, 2022). Many HCWs fear that seeking help could jeopardize their careers due to concerns over confidentiality or perceived weakness. To address this, many hospitals have developed Employee Assistance Programs (EAPs) that offer confidential counseling and mental health resources (Doran, 2022).

Anderson et al. (2022) discovered in their systematic review that peer support programs have shown some positive short-term results in mitigating psychological trauma for HCWs. Peer support can be especially effective because it connects HCWs with colleagues who understand the unique challenges of the profession. In their narrative review, Zohn and Hovis (2023) found the COVID-19 pandemic exacerbated suicide risk factors among healthcare workers, emphasizing the urgent need for strategies to mitigate this risk. Critical strategies include crisis intervention and training HCWs to identify those at risk. Many articles discussed the importance of suicide awareness and education of HCWs to decrease the stigma of mental health amongst this population (AHA, 2022, Chan et al., 2022, Dutheil et al., 2019, and Olfson, 2023). Institutions should continue to work on normalizing conversations about mental health, reducing stigma, and fostering a culture where seeking help is viewed as a sign of strength rather than weakness. By creating a supportive, mentally healthy work environment, healthcare organizations can protect the well-being of their workers and, ultimately, their patients. A proactive and compassionate approach is essential to safeguarding the mental health of HCWs and reducing suicide rates in this vulnerable population.

The target organization offers many of the already mentioned approaches to HCW wellbeing. EAP, 24-hour hotline to a live support person, a peer support program, and wellness resources exist in current state. The purpose of this project is to focus on education of suicide awareness and prevention in peers to reduce suicide in HCWs and to improve perception of organizational support of HCW well-being. There was little in the literature to point directly to a preferred suicide prevention education program for HCWs. The AHA (2022) recommended training programs for HCWs to decrease negative stigma surrounding mental health and to improve access to resources or support. The three training examples cited by the AHA (2022)

included Mental Health First Aid, Psychological First Aid, and Question, Persuade, Refer (QPR). Researching interventions in other professions and groups of individuals resulted in recognizing the QPR Gatekeeper program as one of the most widely used and successful suicide prevention training programs in the world.

Evidence to Support the Intervention

Lyon et al. (2024) found that QPR training for university students in health sciences resulted in a statistically significant increase in their knowledge of suicide recognition and prevention. Wood et al. (2022) determined QPR training was effective for participants in both religious and educational settings. Aldrich et al. (2018) and Samuolis et al. (2020) also found a significant increase in knowledge of suicide, self-efficacy to intervene, and the likelihood to intervene when someone is suicidal for QPR participants on college campuses. Gryglewicz et al. (2023) concluded that many community workers had improved suicide prevention attitudes after completing QPR training. QPR training could meet the goal of suicide reduction and support for our HCWs battling on the front lines and struggling with burnout.

QPR is a widely adopted suicide prevention training program designed to equip individuals with the skills needed to identify and intervene when someone is at risk of suicide (QPR Institute, n.d.). Like cardiopulmonary resuscitation (CPR) for physical emergencies, QPR provides a practical, evidence-based approach to mental health crises (Quinnett, 2007). The goal is to reduce suicide rates by teaching people how to recognize warning signs, engage in a supportive dialogue, and refer the individual to professional help. QPR also focuses on reducing the stigma associated with mental health and suicide. By normalizing conversations about mental health and suicide, QPR training helps to create a supportive environment where people feel

more comfortable seeking assistance when they need it. The program follows a simple yet effective model (Quinnett, 2007):

1. Question: Learn to recognize the warning signs of suicide.
2. Persuade: Engage the individual in a conversation about their suicidal thoughts.
3. Refer: Connect the individual to appropriate resources and support services.

The training program consists of a 1-hour, in-person class. Participants will learn about risk factors, protective factors, and how to effectively intervene in a crisis situation. Upon completion of the training, participants are considered QPR certified. After reviewing the evidence and assessing the time commitment and financial expense, the targeted organization chose QPR as the best educational intervention for suicide awareness and prevention for the NICU HCWs.

Evidence-based Practice Framework- Social Support Theory

Cohen and Wills (1985) set out to determine how social support has a positive effect on well-being. Cohen and Wills theorized that stress, social support, and the buffering hypothesis are interconnected concepts that play a crucial role in understanding how individuals cope with life's challenges and stressful situations. The buffering hypothesis is a concept within the field of stress and coping research. It suggests that social support can act as a protective factor, buffering the negative impact of stress on an individual's well-being. In other words, when individuals have strong social support systems, they are better equipped to cope with and mitigate the adverse effects of stress. Social support can serve as a buffer against the negative effects of stress. This means that having a network of supportive relationships can help individuals manage and reduce the impact of stressors on their physical and mental health. The buffering hypothesis suggests that social support can act as a protective shield against the negative impacts of stress.

Having a strong network of supportive relationships can enhance an individual's ability to cope with stressors and maintain overall well-being, highlighting the importance of social connections in times of adversity.

HCW well-being is a challenging issue that is plaguing healthcare organizations across the world (Grant et al., 2020). Poor well-being can negatively impact quality of care and patient safety. Social support theory explores how individuals receive assistance, encouragement, and resources from their social networks, such as friends, family, and communities, and how this support affects their well-being and coping with stress or challenges (Cohen & Wills, 1985).

Social support theory and the HCW well-being are closely related, as social support plays a significant role in understanding and addressing the challenges faced by HCWs (Hupcey, 1998). When HCWs struggle with well-being and suicidal ideation, they are in acute need of social support from their colleagues, supervisors, and healthcare organizations. In this context, social support theory provides a framework for understanding why QPR training can be so effective. By training people to recognize and respond to signs of suicidal ideation, QPR helps strengthen the social safety net and fosters environments where individuals feel supported and cared for. This integration of social support theory within QPR training is key to its success in suicide prevention. Research shows that social support can significantly reduce the risk of suicide by improving emotional resilience, lowering stress, and promoting mental health (Cohen & Wills, 1985). Social networks act as protective factors by offering a sense of belonging and connectedness, which can buffer against feelings of isolation and hopelessness, common contributors to suicidal ideation.

In summary, social support theory stresses the importance of supportive relationships in individuals' lives, and it is particularly relevant in the context of HCW well-being. Social support

theory serves as a foundational concept for understanding the effectiveness of QPR training. By teaching individuals how to provide emotional, instrumental, and informational support to those at risk of suicide, QPR training helps create a network of care within communities. This aligns with the key principles of social support theory, which emphasize the protective role of strong, supportive relationships in preventing mental health crises, including suicide. Recognizing the emotional and psychological needs of HCWs and providing them with appropriate social support can aid in their recovery, reduce stigma surrounding mental health, and contribute to a more resilient healthcare workforce.

Ethical Consideration & Protection of Human Subjects

There were no ethical considerations for this quality improvement project. All HCWs in the NICU had the opportunity to be involved in QPR training if interested. The intervention was equal to all who signed up for the training. There was no potential harm to the target population, nor was anyone in the target population taken advantage of during project implementation.

Approval was granted by the organization for this project and the intervention (see Appendix A). Formal approval process was completed through the University (see Appendix B) and the project site's Institutional Review Board (IRB; see Appendix C). CITI modules were completed and passed.

Section III. Project Design

Project Site and Population

The project was conducted at a nationally ranked children's hospital in the Southeast. It is recognized as one of the leading pediatric facilities in the region. Established in 2007, the hospital is renowned for its comprehensive pediatric care, cutting-edge technology, and family-centered approach. With over 230 beds, it stands as one of the largest children's hospitals in the Southeast. The hospital offers a wide range of specialties, including pediatric cardiology and heart surgery, oncology, neurology, neurosurgery, pediatric surgery, transplant, and neonatology, providing a full spectrum of specialized pediatric care. Employing over 2,000 team members, the hospital is actively engaged in community outreach programs focused on improving pediatric health both locally and beyond. It also participates in clinical research, offering children access to innovative treatments and therapies through clinical trials and partnerships with research institutions.

The hospital is located in a county with a population of over 1.1 million, making it the most populous county in the state (United States Census Bureau, n.d.). This county is a minority-majority community, comprising 45% White, 33% African American, 14% Hispanic or Latino, and 6% Asian residents (Mecklenburg County, North Carolina [MCNC], 2022). The region has a strong economy, driven by sectors like finance, healthcare, education, and technology. Of note, suicide is the second leading cause of death among individuals aged 15-24 in this county (MCNC, 2022).

This children's hospital is part of a larger healthcare system spanning four states in the Southeast and two in the Midwest. The system operates 67 hospitals and over 1,000 care sites to serve both pediatric and adult patients. One of the largest nonprofit healthcare systems in the country, it is well-regarded for its commitment to patient-centered care, health equity, and medical excellence.

Description of the Setting

Within the children's hospital is a 53-bed level IV NICU that offers the highest level of care for newborns with critical conditions and is equipped to handle extremely premature or critically ill infants. The NICU is a regional referral center and receives neonates and infants needing specialized care from all over the state and surrounding states. The neonatal service line sees almost 21,000 patient days annually and has an average daily census of 85 patients per day between the NICU and its stepdown unit. These patients have an average length of stay around 35 days.

Description of the Population

The target population for this project was NICU HCWs. The NICU employs 182 teammates, consisting of registered nurses, clinical nurse supervisors, and unit secretaries. The average age of the HCWs in the NICU is 36.17 years with an average years of work experience totaling 8.85 years. The team is 98.35% female with 17.71% of these teammates being diverse. The average tenure at the organization is 7.34 years. This unit also tragically experienced the loss of a nursing colleague to suicide in April of 2022.

Project Team

The project team consisted of the project leader, a doctoral prepared registered nurse mentor, a faculty advisor, the neonatal nursing director, NICU nurse manager, a neonatal clinical nurse specialist, and two QPR instructors. The team met regularly to discuss progress, address challenges, and make necessary adjustments to the project. The team also remained in regular contact via email and utilized a shared project management platform.

Project Goals and Outcome Measures

The goal of the project was two-fold. Enhancing suicide awareness and knowledge among NICU HCWs and increasing their confidence or self-efficacy to intervene if they suspect someone is suicidal was the primary goal. In high-stress environments like the NICU, HCWs may encounter colleagues experiencing emotional distress or suicidal ideation. Providing them with suicide prevention training would empower them to recognize warning signs and take appropriate action.

Additionally, a goal was set to improve the NICU HCWs perception of their organization's support of their health and well-being. A survey in April 2024 indicated that only 30.1% of the NICU team positively answered (strongly agree or agree) a survey question that the organization genuinely cared about their health and well-being compared to the National Healthcare benchmark 50th percentile at 73.2%. By normalizing conversations about mental health and suicide prevention through QPR training, the project aimed to foster a supportive work environment, reduce stigma, and promote a stronger culture of well-being.

Description of the Methods and Measurement

Written informed consent was not required. The potential risk of harm or discomfort associated with participation was not anticipated to exceed that of everyday life. Participants' rights were safeguarded by implementing measures to ensure their confidentiality.

The project included the validated, 9-item QPR pre and post training survey (see Appendix D) along with questions about demographic characteristics. This survey measured the participant's knowledge about suicide and gatekeeper self-efficacy. It was an anonymous, voluntary survey and included no pre/post identifiers.

Because QPR was designed to equip individuals with the skills needed to talk directly to suicidal individuals and get them the help they need, participants were asked two specific

questions on the QPR pre and post training survey regarding their perceptions of effectiveness on their confidence to intervene. Specifically, they were asked how likely they were to ask someone about suicide and if they believed asking someone about suicide was appropriate. Answer choices included “always”, “sometimes”, and “never” with “never” being coded as a 1, “sometimes” as a 2, and “always” being coded as a 3. These two self-efficacy items were collapsed into one scale yielding a pre-course score and a post-course score.

Seven items related to suicide knowledge and warning signs were included to examine QPR effectiveness regarding increasing knowledge regarding warning signs. Participants were asked to rate their knowledge in the following areas:

1. Facts concerning suicide
2. How to ask someone about suicide
3. How to get help for someone
4. Information about local resources for help with suicide
5. Level of understanding about suicide and suicide prevention
6. Persuading someone to get help
7. Warning signs of suicide

Answer choices included “high”, “medium”, and “low” with “low” being coded as a 1, “medium” as a 2, and “high” being coded as a 3. These 7 knowledge items were collapsed into one scale to yield a pre and post score.

Additionally, a single-question survey (see Appendix E) was administered electronically to all NICU HCWs in December of 2024 prior to QPR training and again in April of 2025, two months after the QPR gatekeeper training. This survey question included answer choices “strongly agree”, “agree”, “neutral”, “disagree”, and “strongly disagree.” Percent positive

responses were calculated by including only “strongly agree’ or “agree” as positive responses. This voluntary, anonymous survey had no identifiers and aimed to gauge changes to the team’s perception of the organization’s support for their well-being. This follow-up survey was built upon a previous question from an organization-wide engagement survey conducted in April of 2024.

Discussion of the Data Collection Process

Descriptive statistics were used to describe the sample population for QPR gatekeeper training. The validated QPR pre- and post-training survey (see Appendix D) was administered immediately prior to training and directly after training. The survey allowed for comparison of pre- and post-training answers to assess changes in participants’ knowledge of suicide risk factors, warning signs, and intervention strategies. The survey also measured gatekeepers’ self-efficacy in applying the skills learned during the training.

To evaluate shifts in NICU HCWs' perception of the organization’s support, a single question from the workplace engagement survey (see Appendix E), using a 5-point Likert scale, was re-administered in December 2024 (one-month prior to training) and again in April 2025 (two-months post-training). The data was analyzed to show the percentage of positive responses (strongly agree or agree) from NICU HCWs, compared with previous results of 30.1% positive in April of 2024 and only 9.2% positive in December of 2024. The National Healthcare benchmark at the 50th percentile was 73.2%.

Implementation Plan

The implementation plan detailed the steps for conducting suicide awareness and prevention training for NICU HCWs using the QPR Gatekeeper Training. The training was to equip the staff to identify signs of suicidal ideation, approach individuals at risk, and refer them

for appropriate help, enhancing the emotional and psychological support systems within the NICU environment.

The preparation stage consisted of socializing the upcoming training among the NICU team. A presentation was shared at the unit's staff meeting about the project and QPR gatekeeper training in November of 2024. Informational flyers were also designed and placed on the unit that included a quick-response (QR) code for employees to sign up if interested (see Appendix F). Certified QPR gatekeeper trainers were identified, and training was conducted in seven separate sessions to accommodate HCWs on different shifts. The sessions were attended by NICU HCWs in small groups of 15 or less. Each training lasted approximately 65 minutes.

To evaluate the effectiveness of the training, the QPR pre-post survey (see Appendix D) was administered, directly before and after the training. A brief one-question survey (see Appendix E) was administered to the entire NICU HCW team one-month prior to training in December 2024 and again 2-months after the training intervention in April 2025 to assess changes in perception of the organization and its support of their well-being.

Timeline

The timeline for the project was constructed with the input of the project team (see Appendix G). The project commenced in November of 2024 with a presentation to the NICU staff at their staff meeting. Flyers were then distributed to generate interest in the training (see Appendix F). Emails were also sent to all the NICU staff regarding the upcoming training along with dates and times. The QPR gatekeeper training started in January of 2025 and was completed mid-February 2025 with pre-post surveys done at training (see Appendix D). A follow-up survey to all NICU HCWs was administered electronically in December 2024 before training and again

at 2-months post training in April 2025 to assess changes in perception of organizational support (see Appendix E).

Section IV. Results and Findings

This project was designed to address two core objectives: first, to enhance suicide awareness and knowledge among NICU HCWs and increase their confidence in intervening when they suspect a colleague may be at risk; and second, to improve perceptions of the organization's commitment to employee health and well-being. Given the high-stress nature of the NICU environment, HCWs are at heightened risk of emotional strain and may encounter peers experiencing mental health challenges or suicidal ideation. By equipping staff with suicide prevention training, the initiative aimed to build a more informed and responsive workforce capable of recognizing warning signs and taking appropriate action. Concurrently, the project sought to foster a stronger sense of the organization's support for employee health and well-being among NICU staff.

Demographic Profile of QPR Participants

A total of 62 NICU HCWs, representing 34% of the unit's workforce, participated in QPR Gatekeeper Training between January and February 2025. The participant cohort closely reflected the broader NICU demographic profile: 91.9% were female, and the average age was 31.4 years. In terms of racial and ethnic composition, 72.5% identified as Caucasian, 9.6% as African American, and 17.7% as other ethnicities (see Appendix H; Table 1). All participants reported having completed at least some college coursework. Importantly, training sessions were attended across all shifts, ensuring broad representation from various roles within the NICU, including registered nurses, clinical nurse supervisors, and unit secretaries. This diverse attendance contributed to a richer, more inclusive dialogue during the sessions.

Pre- and Post-training Knowledge and Self-efficacy

Survey data was collected at the beginning of each training session and again at the end of each training session. This data revealed notable improvements in participants' knowledge of

suicide prevention and their confidence in intervening. Initially, only 12.7% (n = 55) of responses believed they had a “high” level of knowledge of suicide risk factors and warning signs. After completing the training, this figure rose to 88% (n = 382), reflecting a substantial increase in awareness and understanding (refer to Appendix I; Figures 1 & 2). The average knowledge score increased from 1.81 before training to 2.87 afterward. A paired *t*-test comparing pre- and post-training knowledge scores yielded a *p*-value of less than 0.000008, indicating a statistically significant improvement in participants’ understanding of suicide prevention concepts.

Participants also demonstrated increased self-efficacy in addressing suicide-related concerns. Prior to the training, only 25% (n = 32) felt confident in “always: asking someone about suicidal thoughts or referring them to appropriate resources. This number more than doubled to 65.3% (n = 81) following the training (see Appendix J; Figures 3 & 4), suggesting a marked enhancement in readiness to intervene. The mean self-efficacy score rose from 2.14 to 2.57. Although the paired *t*-test produced a *p*-value of <0.059, just above the conventional threshold for statistical significance, but still indicates a meaningful shift in participants’ confidence levels.

Perception of Organizational Support

To evaluate staff perceptions of organizational support for well-being, a single-item survey was administered at three intervals: April 2024 (baseline), December 2024 (pre-training), and April 2025 (post-training) (see Appendix E). In April 2024, 30.1% (n = 28) of NICU staff agreed that the organization cared about their health and well-being. This dropped sharply to 9.2% (n = 8) by December 2024 (see Appendix K; Table 2), which was likely due to factors such as staffing shortages, burnout, or leadership transitions. However, by April 2025, two months

after the QPR training, positive responses rebounded to 35.1% (n = 34; see Appendix K; Table 2), representing a 25.9-point increase from the pre-training low and a 5-point improvement over the original baseline. This suggests the training may have helped restore and slightly enhance perceptions of organizational care. While modest, this upward trend highlights the potential of targeted interventions to positively influence workplace culture. Sustained improvement will require ongoing communication, psychological safety, and visible leadership support.

Participant Feedback

Qualitative feedback gathered through post-training surveys further reinforced the positive impact of QPR Gatekeeper Training. Many participants reported increased awareness of suicide prevention strategies and expressed greater confidence in their ability to identify and support at-risk individuals. Comments frequently highlighted the value of the training content and the expertise of the instructors. Several participants expressed appreciation for the opportunity to take part in the program, describing it as informative, empowering, and essential. This feedback reflects a broader cultural shift toward greater openness around mental health and a desire for continued education and institutional support.

Discussion of Major Findings

The results of this project demonstrate a meaningful shift in attitudes, knowledge, and perceptions related to suicide prevention and organizational support within a high-stress clinical setting. Key findings include:

- A 593% relative increase in suicide prevention knowledge, with correct identification of risk factors rising from 12.7% to 88%.
- A 153% relative gain in self-efficacy, with confidence in intervention improving from 25.8% to 65.3%.

- A 281.5% relative improvement in perception of organization's support for employee health and well-being, rising from 9.2% directly before intervention to 35.1% 2 months post intervention.
- A 16.6% relative improvement in perceived organizational support for health and wellbeing year over year (April 2024 to April 2025).
- Qualitative evidence pointing to increased mental health awareness, improved communication, and interest in ongoing support.

In conclusion, the training demonstrated a meaningful impact on both participants' confidence in intervening (self-efficacy) and their knowledge of suicide prevention. However, only the knowledge-related improvements reached statistical significance, likely due to a larger sample size and a more comprehensive set of questions in that section. This indicates that the QPR training was especially effective in deepening participants' understanding of suicide prevention strategies. Additionally, the findings point to a positive shift in how staff perceive the organization's support for their well-being. This reinforces the critical role of consistent and visible organizational backing in cultivating a healthier, more resilient workplace culture. While the progress made is encouraging, sustaining these gains will require continued investment in training, open communication, and long-term support for mental health initiatives.

Alignment with Existing Research and Future Implications

These outcomes are consistent with prior research demonstrating the efficacy of gatekeeper training programs in improving suicide prevention capabilities. Studies by Aldrich et al. (2018), Quinnett (2007), and Samuolis et al. (2020) support the finding that structured education enhances participants' ability to recognize warning signs and respond with greater confidence. Additionally, literature by Gryglewicz et al. (2023), Lyon et al. (2024), and Wood et

al. (2022) emphasizes the need for sustained organizational investment in mental health training to preserve these benefits over time.

Nonetheless, important gaps remain. Few studies have examined the long-term retention of suicide prevention skills or measured the direct impact of gatekeeper training on suicide incidence among healthcare workers themselves. Similarly, while improvements in perceived organizational support are promising, research is limited on how these perceptions influence actual policy changes or resource allocation within healthcare institutions. Addressing these gaps through longitudinal research could provide deeper insight into how suicide prevention training shapes organizational culture and long-term outcomes.

Section V. Interpretation and Implications

Costs and Resource Management

Implementing QPR training for NICU staff required careful allocation of financial and human resources to ensure both sustainability and effectiveness. The primary cost considerations included expenses for training materials, instructor fees, staff compensation, administrative support, and promotional efforts. Training materials, such as standardized manuals, vary in cost depending on the number of participants. Instructor fees are influenced by whether training is conducted by in-house certified staff or external facilitators. In this project, internal team members who had completed the instructor certification course served as trainers, reducing external facilitation costs.

Given the high-demand environment of the NICU, scheduling training sessions without disrupting patient care was essential. This may require overtime pay, shift adjustments, or temporary staff coverage. Additionally, administrative and technological support was needed to coordinate training sessions, track participation, and evaluate program effectiveness. By leveraging student labor, the total budget for this project was $3,880 (see Appendix L). Without this support, costs would have been significantly higher, as substantial time and effort were required for research, development, implementation, and analysis.

To optimize resource management, hospitals can seek funding through grants, sponsorships, or partnerships with mental health organizations to offset financial burdens. Adjusting internal budgets to incorporate training expenses is another viable strategy. Integrating QPR training into existing mandatory staff development programs can streamline implementation, minimizing additional costs while ensuring consistent education. Additionally, certifying select personnel as QPR trainers can reduce recurring expenses related to external facilitators, fostering long-term sustainability.

To maintain patient care continuity, hospitals can implement staggered training schedules, asynchronous learning modules, and shift-based participation. Establishing a robust monitoring and evaluation system can help track participation, assess knowledge retention, and measure the training's impact on staff well-being and patient care, supporting effective resource allocation and program justification.

The Case for QPR Training

Despite the costs and resource requirements, the benefits of QPR Gatekeeper Training for HCWs far outweigh the investment, making it a valuable and necessary initiative for healthcare organizations. Suicide prevention training enhances awareness, builds confidence in intervention, and fosters a supportive workplace culture, which ultimately improves both employee well-being and patient care (Aldrich et al., 2018; Chan et al., 2022; Davidson et al., 2020).

From a financial perspective, failing to address mental health concerns within the healthcare workforce can lead to significant costs. Burnout, depression, and suicide contribute to absenteeism, high turnover rates, and reduced productivity (Zohn & Hovis, 2023). Turnover is costly to healthcare organizations, with the average cost of turnover estimated at $56,300 per Registered Nurse (NSI Nursing Solutions, 2024). By equipping HCWs with the skills to recognize and respond to suicide risk, QPR training can help mitigate these issues, resulting in long-term cost savings through improved staff retention, reduced sick leave, and enhanced workplace morale. Organizations that invest in employee mental health are more likely to sustain a resilient and engaged workforce, positively impacting patient care outcomes.

Beyond financial considerations, there is a strong ethical and professional obligation to support HCWs' mental well-being. High-stress healthcare environments, like the NICU, expose staff to emotional and psychological distress, increasing their risk for burnout and mental health

challenges. QPR training empowers HCWs to support colleagues in distress while also recognizing when they need help themselves. This fosters a culture of openness and reduces the stigma surrounding mental health. Additionally, research strongly supports the effectiveness of gatekeeper training programs in suicide prevention, further reinforcing the value of structured interventions like QPR (Quinnett, 2007).

While some may argue that dedicating time to training could disrupt workflow, the long-term benefits, such as a healthier workforce, improved patient care, and a reduction in crisis-related incidents, far outweigh this concern. To maximize impact, organizations should integrate QPR training into regular professional development programs, ensuring sustainability without excessive resource strain. By prioritizing mental health initiatives, healthcare institutions demonstrate a commitment to their employees' well-being, reinforcing a culture of safety, support, and proactive intervention.

Implications of the Findings

The results of this project provide compelling evidence that QPR Gatekeeper Training can have a substantial and lasting impact on the mental health and well-being of NICU staff. By enhancing staff awareness of suicide risks and improving their confidence in intervention, the training directly addresses the significant emotional toll that working in high-stress, high-intensity environments like the NICU can have on HCWs. NICU staff, often dealing with life-or-death situations, are at heightened risk for burnout, emotional distress, and mental health challenges, which can directly impact patient care (Favrod et al., 2018). The findings from this project demonstrate that providing staff with the tools to recognize the warning signs of suicide and intervene appropriately not only improves their sense of self-efficacy but also fosters a safer,

more supportive work environment. This has the potential to reduce burnout, improve retention, and ultimately lead to better care for patients.

In a broader sense, the successful implementation of QPR training in the NICU demonstrates how structured suicide prevention efforts can be a vital component of employee well-being programs in healthcare settings. It is clear from this project that equipping staff with suicide prevention skills contributes to a positive shift in organizational culture, making mental health discussions more normalized and reducing stigma. By establishing a supportive culture around mental health, the organization is laying the groundwork for long-term improvements in staff resilience and overall health. The findings suggest that integrating mental health support and suicide prevention into everyday practices, especially in high-stress areas like the NICU, has the potential to significantly reduce the risk of suicide among healthcare workers and improve their mental health outcomes.

One of the most significant implications of this project is the positive shift in the perception of organizational support for NICU staff. As demonstrated by the results, QPR training led to a notable improvement in staff perceptions of their organization's commitment to supporting their mental well-being. This shift is critical because a supportive organizational culture has been linked to increased job satisfaction, better employee morale, and improved patient outcomes (Adnan et al., 2023; Sarigül et al., 2023; Zohn & Hovis, 2023). When healthcare workers feel supported by their institution, they are more likely to report higher levels of job satisfaction, remain committed to their roles, and seek help when needed. This training provided staff with tangible tools to address mental health crises and reassured them that their well-being is a priority.

Implications for Patients

Beyond the immediate benefits of reducing burnout and promoting mental health, these changes in perceptions could have long-lasting effects on the overall culture of the NICU and, by extension, the hospital or healthcare institution. With the increasing focus on staff well-being in healthcare organizations, institutions that invest in programs like QPR training send a clear message to their workforce that mental health is a priority. This could lead to further investments in employee health and wellness initiatives, enhancing overall organizational performance. Furthermore, the ripple effects of a positive culture of support could extend beyond staff well-being to patient care. Healthcare workers who feel supported are more likely to deliver compassionate, patient-centered care, which is particularly important in the NICU setting, where families are already dealing with high levels of stress.

Implications for Nursing Practice

QPR Gatekeeper training has significant implications for nursing practice by equipping nurses with essential skills to identify and intervene when they encounter individuals at risk of suicide. Nurses, often at the frontlines of patient care, are uniquely positioned to recognize the signs of emotional distress and suicidal ideation in both patients and colleagues. By integrating QPR training into nursing practice, nurses are empowered to ask direct questions, persuade individuals to seek help, and refer them to appropriate mental health resources. This proactive approach not only enhances patient safety but also fosters a culture of support and openness within healthcare settings. Moreover, QPR training aligns with the ethical responsibilities of nurses to advocate for the well-being of those in their care, contributing to a holistic approach to healthcare that addresses both physical and mental health needs. By incorporating QPR training, nursing practice becomes more comprehensive, promoting early intervention and reducing the stigma surrounding mental health challenges in the healthcare environment.

Impact for Healthcare System(s)

QPR Gatekeeper training can have a significant impact on healthcare systems by equipping HCWs with the tools to recognize, intervene, and provide support for colleagues at risk of suicide. In high-stress environments like hospitals and the NICU, where workers face emotional and psychological challenges, QPR training fosters a culture of mental health awareness and proactive support. This can lead to reduced burnout, improved morale, and better retention of HCWs, ultimately enhancing the quality of patient care. By normalizing conversations about mental health and reducing stigma, QPR creates an environment where employees feel supported and empowered to seek help when needed. The broader impact on the healthcare system includes improved employee well-being, a more resilient workforce, and a shift toward comprehensive mental health care that benefits both staff and patients. As healthcare institutions continue to prioritize mental health initiatives, QPR training can serve as a valuable tool in building a sustainable, supportive workplace culture that contributes to better outcomes across the system.

Sustainability

While the findings of this project are promising, the sustainability of these effects depends on continuous support, periodic training, and a commitment to integrating mental health resources into regular practices. For QPR training to continue to have a meaningful impact on the NICU staff's mental health, the organization must view it as an ongoing process rather than a one-time event. Periodic refresher courses, ongoing mental health resources, and a commitment to reducing stigma in the workplace will help reinforce the lessons learned during the training and ensure its lasting impact.

The success of QPR training in the NICU could serve as a model for other high-stress healthcare environments, demonstrating the broader applicability of suicide prevention training in diverse settings. By replicating this initiative across other departments or healthcare institutions, organizations could see a widespread improvement in the mental health and well-being of HCWs, contributing to a culture of prevention and proactive support. Furthermore, expanding training to involve more staff members, including leadership, could help further integrate suicide prevention efforts into organizational practices, ensuring that mental health support is deeply embedded within the institutional framework.

Dissemination Plan

For dissemination of the QPR project, a strategic focus was placed on reaching both nursing and broader healthcare platforms to maximize impact on suicide prevention and mental health awareness among healthcare workers. A key venue was the Magnet Conference, the largest nursing conference in the United States, which took place in October 2025. An abstract had been submitted at the end of 2024 in alignment with the project's anticipated completion. This conference provided a valuable opportunity for exposure, professional networking, and peer feedback.

The project was also submitted to the Children's Hospital Association (CHA) Leadership Conference held in November 2025, with the abstract submitted in June 2025. Interest in the project had already been expressed by Chief Nursing Officers from other children's hospitals, and a request had been made to present the findings at a CHA Chief Nurse Forum, either in person or virtually.

Local dissemination efforts included a presentation at the College of Nursing at East Carolina University in July 2025. This event provided an opportunity to engage academic faculty

and students in discussions around suicide prevention and mental health awareness for HCWs. Additionally, the project findings were shared at the implementation site later that month. Presentations were delivered to key organizational leaders and stakeholders to support ongoing education and potential integration into practice.

Section VI. Conclusion

Limitations and Facilitators

One of the primary limitations for the QPR project in the NICU was leadership turnover. In healthcare settings, especially in specialized units like the NICU, leadership changes can create instability, disrupt the continuity of initiatives, and present challenges in maintaining consistent engagement with staff. During this project, the NICU nurse manager left the organization in late December 2024, with an interim manager placed and recruitment efforts initiated. In March 2025, the NICU director transitioned to another organization, and a known and experienced senior nurse leader was appointed as their permanent replacement. These leadership changes resulted in a reduction of leadership support for the project, as the new leaders had not been involved in its planning or implementation. Moreover, leadership turnover can create uncertainty among frontline HCWs which may have affected the number of staff who opted into the QPR training and possibly diminished their sense of organizational support.

Another limitation was the time constraints inherent in the NICU environment. The staff often work under high stress with demanding schedules, making it difficult to allocate time for training. The need to balance patient care with professional development can create competing priorities, which likely limited attendance at the training sessions.

Despite these limitations, there were several facilitators that contributed to the success of the QPR project. One of the most significant facilitators was the involvement of former NICU nurses as instructors. These instructors, who were well-known to the staff, brought invaluable firsthand experience of the NICU environment. Their knowledge and rapport with the team allowed them to tailor the training to address the specific challenges and stresses of the NICU setting. The presence of two instructors who understood the unique emotional and psychological demands of working in the NICU made the QPR training more relatable and effective, helping staff feel more comfortable discussing and addressing mental health concerns. The instructors

also used their experience to address potential barriers within the NICU culture, fostering a safe and supportive environment for staff engagement.

The support from these experienced NICU professionals created a sense of trust and buy-in among the current staff. When team members recognized that the training was being led by individuals' familiar with their work environment, they were more likely to view the project as relevant and valuable to their professional development and mental well-being. This sense of shared experience likely contributed to higher participation and engagement in the QPR project.

Another key facilitator was the instructors' flexibility in offering classes at various times throughout the day. This scheduling approach allowed for better coverage across all shifts, ensuring more staff had access to the training. In particular, the inclusion of sessions for the night shift team was especially valuable, given the unit's 24-hour operations.

Additionally, the NICU team had experienced the loss of a teammate to suicide in 2022, an event that deeply affected the staff. Many of the colleague's closest work friends remain employed in the NICU and serve as champions for caregiver well-being. This shared experience of loss contributed to the NICU's high readiness for the QPR intervention, as staff were already sensitized to the importance of mental health support.

In summary, while leadership turnover in the NICU posed challenges to the continuity and effectiveness of the QPR project, the involvement of experienced former NICU nurses as instructors proved to be a strong facilitator. Their ability to understand and relate to the unique needs of the NICU staff helped create a supportive, engaging training environment and contributed to the overall success of the project.

Recommendations for Others

Based on the experiences and outcomes of implementing the QPR project in the NICU, there are several recommendations for others who may seek to replicate this project in similar healthcare or organizational settings. These recommendations address the limitations, facilitators, scalability, sustainability, and long-term systemic impact, and provide guidance on how to maximize the success of future implementations.

To foster a resilient and supported workforce, it is essential that all staff have clear knowledge of and access to the emotional support resources already available within the organization. Leaders should actively promote these resources, such as the Employee Assistance Program (EAP), behavioral health helplines, and peer support networks through regular communication, visible signage, and integration into onboarding and team meetings (Cross Country, n.d.). Creating a culture where emotional well-being is prioritized not only enhances psychological safety but also empowers staff to seek help proactively. By ensuring visibility and normalizing the use of these services, we reinforce our commitment to the holistic well-being of every team member.

One of the key challenges faced during this project was leadership turnover, which can undermine the continuity of initiatives. Leadership support is essential for the success of QPR, ensuring that resources are allocated, and long-term engagement is maintained. Research has shown that executive and clinical leadership buy-in increases the likelihood that mental health initiatives will be integrated into standard organizational practices (Shanafelt et al., 2017). When replicating the project, it is crucial to involve leaders early in the process and ensure their ongoing commitment. In settings where leadership turnover is anticipated, establishing a succession plan that includes a commitment to the initiative can help sustain momentum.

Additionally, identifying a group of champions who can take ownership of the project during leadership transitions will help maintain its continuity.

Another important factor for success is partnering with internal experts, such as former NICU nurses who understand the specific challenges and needs of the staff. Peer-led education increases participant trust and engagement, especially when instructors share similar experiences or backgrounds with their audience (Samuolis et al., 2020; Quinnett, 2007). These instructors can bridge the gap between theoretical training and practical realities, fostering trust and ensuring the training resonates with the team. Recruiting instructors who are relatable to the target audience and who have experience in the specific work environment is key to driving engagement and enhancing the effectiveness of the training (Quinnett, 2007).

Flexibility in training delivery is another critical success factor. Staff working in clinical settings often have variable schedules and experience high levels of fatigue and burnout. Offering training across multiple shifts, including nights and weekends, and providing in-person, virtual, or hybrid options can significantly increase participation (Srinivasan et al., 2021). Modular formats, such as shorter, spaced-out sessions rather than long workshops, can also improve cognitive retention while reducing the burden on staff.

Incorporating trauma-informed approaches into the QPR training is vital, especially in high-stress environments like the NICU, where staff may experience emotional and psychological stress related to patient care and personal loss. Trauma-informed training fosters emotional safety, avoids re-traumatization, and empowers participants to engage meaningfully in the learning process (Isobel, 2021). Training should be designed to be supportive, non-judgmental, and provide a safe space for staff to express concerns and build emotional resilience. This is particularly important for staff who have experienced personal loss, as in the case of a

colleague's suicide. Sensitivity to these experiences will enhance engagement and ensure that staff feel supported throughout the training.

For broader impact, the QPR model should be designed for scalability. A train-the-trainer approach has been shown to be effective for expanding program reach while maintaining content fidelity (Quinnett, 2007). Training a core group of facilitators allows organizations to cascade training across departments. Additionally, tailoring the program to address the unique stressors of specific clinical areas, such as emergency departments or intensive care units, ensures the content remains relevant and engaging.

For the project to have a lasting impact, it must be integrated into the organization's culture. Embedding QPR into new staff orientations, making it a part of regular continuing education, and securing leadership support for ongoing implementation are critical to ensuring sustainability (Grant et al., 2020). It is also important to secure long-term funding or resources to continue offering training sessions and developing instructors. Creating systems for regular refresher courses or follow-up sessions will keep QPR as part of the ongoing professional development of staff.

To measure the success of the QPR project, it is essential to track both immediate and long-term outcomes. Data on participation rates, changes in staff attitudes towards mental health, and the impact on suicide prevention and intervention within the unit will help assess the program's effectiveness. Continuous feedback from participants is also important for identifying areas for improvement and refining the project based on changing needs.

Finally, cultivating a systemic culture of psychological safety and well-being is critical to the long-term success of suicide prevention efforts. Reducing mental health stigma and normalizing help-seeking behaviors have been linked to improved morale, retention, and team

dynamics (Henderson et al. 2014; Munn et al., 2021). Organizations should integrate QPR training into broader wellness strategies, promote open dialogue about emotional health, and recognize individuals and teams who exemplify mental health advocacy.

In conclusion, those seeking to replicate the QPR project should prioritize stable leadership, strong partnerships with internal experts, flexible training delivery, and the integration of trauma-informed approaches. Scalability and sustainability should be core considerations to ensure the project can grow and remain effective over time. By measuring outcomes and creating systemic changes within the organization, QPR training can have a long-lasting impact, improve staff well-being and contribute to a supportive and resilient healthcare environment. By following these recommendations, organizations can successfully implement and sustain the QPR project, ultimately benefiting both the workforce and the patients they serve.

Recommendations Further Study

The QPR project has yielded valuable insights into suicide prevention and mental health support within the NICU setting. However, there are numerous opportunities for expanding and refining the project to further enhance its impact. Expanding the QPR project to other healthcare settings is a logical next step. Given the high-stress nature of healthcare environments like emergency departments, oncology, and trauma units, similar challenges such as burnout, compassion fatigue, and trauma exposure make these settings ideal for QPR replication. By tailoring QPR training to meet the specific needs of these units, we can assess its effectiveness and potential for scalability across different healthcare environments. This could provide valuable data on how well QPR can be adapted to various specialized settings.

Moreover, there is potential to extend the QPR project to other high-stress occupations outside the healthcare industry, such as law enforcement, firefighting, and education. These

sectors, which often deal with trauma and emotional challenges, could benefit from QPR's focused approach to suicide prevention and fostering supportive conversations. Conducting studies to assess the transferability of QPR to these sectors could help broaden the scope of the project, while also providing valuable insights into how to adapt the training for different populations. For instance, school systems, especially in high-crisis areas, could greatly benefit from such training to equip educators and school staff with the skills to support students' mental health and intervene early.

The QPR project also revealed some gaps in service that warrant further exploration. Although the training was effective for frontline healthcare workers, there was a noticeable gap in support for leadership and administrative roles. These individuals often have a significant impact on staff well-being but may not be adequately equipped with the tools to support their teams. Further research could focus on developing a QPR model specifically designed for healthcare leaders, empowering them to foster a mentally healthy work environment at the organizational level. Additionally, there is a need for sustained mental health support after the initial training. Research into follow-up sessions, refresher courses, or "booster" trainings could explore how periodic reinforcements of mental health awareness could be integrated into healthcare settings to ensure the long-term effectiveness of the QPR model.

Another area for future study would be assessing the long-term impact and sustainability of QPR training. While initial results were positive, the true impact of suicide prevention programs often takes years to manifest. Longitudinal studies tracking staff well-being, attitudes toward mental health, and suicide prevention outcomes would provide invaluable insights into how QPR influences long-term changes. In addition, comparing the cost-effectiveness of QPR against the costs associated with turnover, absenteeism, and burnout could make a compelling

case for integrating QPR as a permanent part of healthcare organizations' employee assistance programs.

Continuous improvement of the QPR model based on staff feedback is another avenue for further study. Gathering both qualitative and quantitative data from participants will help refine the training to better meet the needs of HCWs. For instance, staff feedback on the format, delivery style, and content relevance could guide adjustments to the training, such as adding more interactive components or tailoring it for specific professional roles like physicians or nurses.

Exploring technological integration is another area to consider. With the growing acceptance of remote work and virtual learning, investigating how QPR training could be delivered virtually or through hybrid models could increase accessibility, particularly for healthcare workers in rural or underserved areas. Comparing the effectiveness of online training to in-person sessions in terms of engagement, information retention, and behavioral outcomes would help develop a more scalable and adaptable model.

Finally, a critical area for further research is the long-term, systemic impact of the QPR project on organizational culture. While the project was positively received in the short term, further studies could investigate how QPR training influences broader organizational change, such as reducing stigma around mental health, improving team dynamics, and fostering a culture of care. HCW turnover is also a metric that could be monitored in response to QPR training. Measuring the effects of QPR on leadership behaviors and overall staff morale could provide important insights into how mental health initiatives can contribute to a healthier work environment in the long run.

In conclusion, the QPR project offers considerable potential for expansion and refinement. Replicating it in other healthcare settings, broadening its scope to diverse populations, and addressing gaps in leadership support and sustained mental health resources will enhance its effectiveness. Additionally, exploring long-term outcomes, scalability, and technological integration could help adapt the QPR model for wider application. Pursuing these avenues for further research will ultimately improve mental health support for healthcare workers and those in other high-stress professions, contributing to a more supportive and resilient workforce.

Final Thoughts

In conclusion, the findings of this project underscore the vital role that suicide prevention training plays in the health and wellness of NICU staff. Not only did the project significantly improve staff awareness and confidence in suicide intervention, but it also fostered a shift in organizational culture, creating a more supportive and open environment for discussing mental health. By continuing to invest in suicide prevention training and expanding its reach across the healthcare workforce, institutions can help create a sustainable, long-term impact on both employee well-being and patient care. As the evidence continues to grow, the broader healthcare system can look to programs like QPR as a powerful tool for improving mental health outcomes, supporting staff resilience, and ultimately enhancing the quality of care provided to patients.

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Appendix A

Organization Site Letter of Support

7/8/2024

To East Carolina University College of Nursing:

We a [redacted] have reviewed Alisa Dent's DNP Project Proposal "Suicide Awareness and Prevention Training for Healthcare Workers in the NICU." Mrs. Alisa Dent has organizational support and approval to conduct their Doctor of Nursing Practice student project within our institution. Our organization's liaison, or project champion, for the project is Diana Sutton, Chief Nursing Officer at Atrium Health Levine Children's Beverly Knight Olson Children's Hospital.

We understand that the timeframe for this project is from the date of this letter through July 2025. Implementation at the project site will occur August 19, 2024, through July 1, 2025 unless otherwise negotiated. We understand that for Mrs. Alisa Dent to achieve completion of the DNP program, dissemination of the project is required by the University and will include a public presentation related to the project and submission to the ECU digital repository, The ScholarShip. In addition, we understand that ECU College of Nursing encourages students completing exemplary scholarship to develop a manuscript for publication, but that is not a requirement. Our organization understands and agrees that the student will not use our organization's name in the formal project paper or any subsequent posters, presentations, or publications.

Our organization has deemed this project as a quality improvement initiative. Our organization is aware that this project will be processed first through our organizational approval process and then through the ECU College of Nursing process, which may include a formal review through University and Medical Center Institutional Review Board of East Carolina University (UMCIRB), if needed. Our organization does have an Institutional Review Board (IRB). We are aware that in the absence of an organizational IRB, the project will be submitted through the ECU College of Nursing review process which may include UMCIRB review if needed.

Thank you,

[redacted]

t

Appendix B

East Carolina University Approval

Based on your responses, the project appears to constitute QI and/or Program Evaluation and IRB review is not required because, in accordance with federal regulations, your project does not constitute research as defined under 45 CFR 46.102(d). If the project results are disseminated, they should be characterized as QI and/or Program Evaluation findings. Finally, if the project changes in any way that might affect the intent or design, please complete this self-certification again to ensure that IRB review is still not required. Click the button below to view a printable version of this form to save with your files, as it serves as documentation that IRB review is not required for this project. 9/6/2024

Appendix C

Site IRB Approval

[redacted]

Office of Research
Institutional Review Board

MEMORANDUM

To: Kathy Shaffer
[redacted]

From: Jeannie Sekils, Senior Protocol Analyst
Institutional Review Board

Date: 10/21/2024

Subject: Not Human Subjects Research: IRB00121091
Suicide Awareness and prevention for healthcare workers

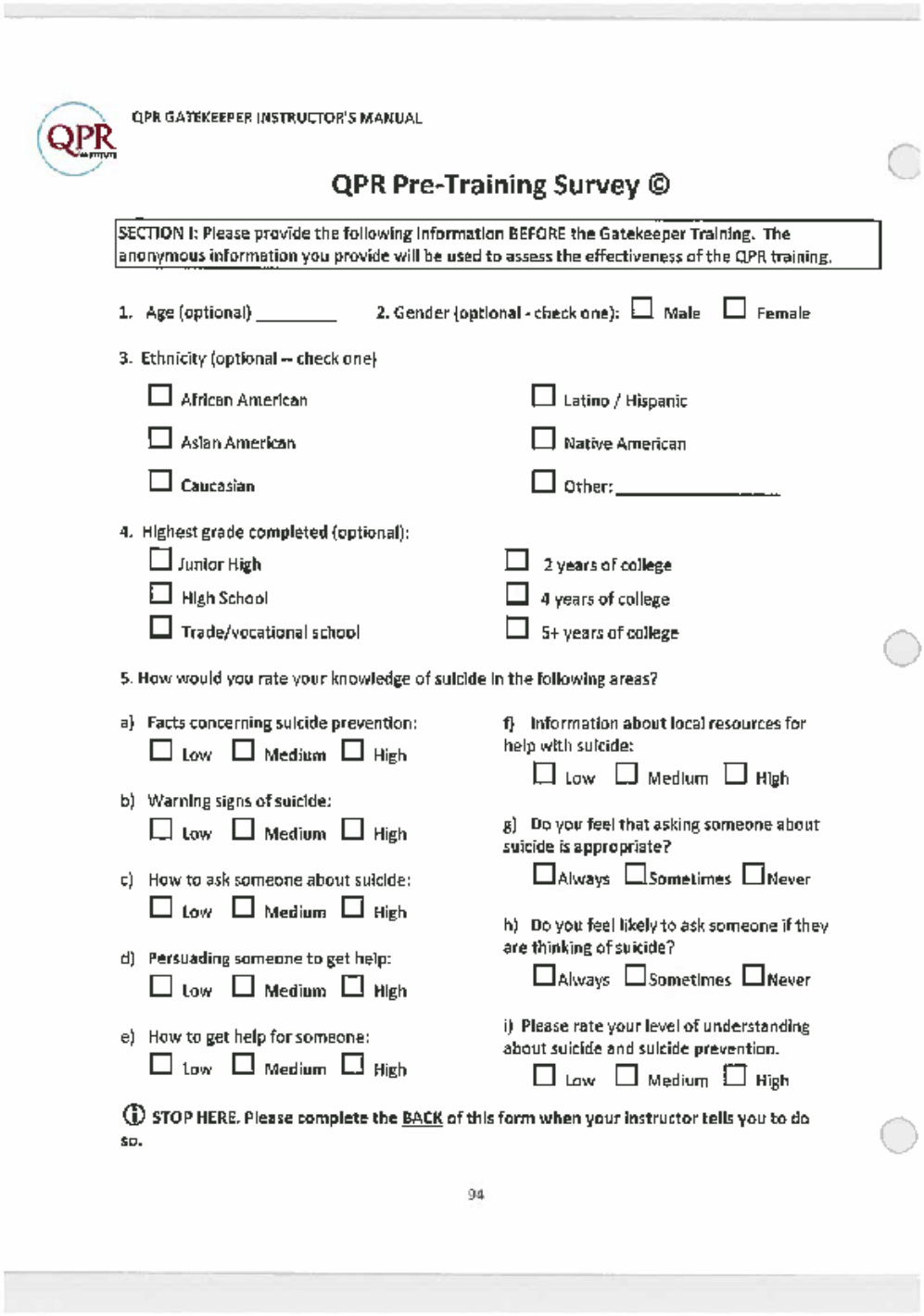
The [redacted] Institutional Review Board has reviewed your protocol and determined that it does not meet the federal definition of research involving human subject research as outlined in the federal regulations 45 CFR 46. 45 CFR 46.102(f) defines human subjects as "a living individual about whom an investigator (whether professional or student) conducting research obtains (1) data through intervention or interaction with the individual, or (2) identifiable private information."

The information you are receiving is not individually identifiable. In recent guidance published by the Office of Human Research Protections (OHRP) on the Guidance on Research Involving Coded Private Information or Biological Specimens, OHRP emphasizes the importance on what is being obtained by the investigator and states "If investigators are not obtaining either data through intervention or interaction with living individuals, or identifiable private information, then the research activity does not involve human subjects."

[redacted]

Appendix D

QPR Pre/Post Training Survey



QPR GATEKEEPER INSTRUCTOR'S MANUAL

QPR Pre-Training Survey ©

SECTION I: Please provide the following information BEFORE the Gatekeeper Training. The anonymous information you provide will be used to assess the effectiveness of the QPR training.

1. Age (optional) _____ 2. Gender (optional - check one): ☐ Male ☐ Female

3. Ethnicity (optional -- check one)

☐ African American ☐ Latino / Hispanic

☐ Asian American ☐ Native American

☐ Caucasian ☐ Other: _____

4. Highest grade completed (optional):

☐ Junior High ☐ 2 years of college

☐ High School ☐ 4 years of college

☐ Trade/vocational school ☐ 5+ years of college

5. How would you rate your knowledge of suicide in the following areas?

a) Facts concerning suicide prevention:
☐ Low ☐ Medium ☐ High

b) Warning signs of suicide:
☐ Low ☐ Medium ☐ High

c) How to ask someone about suicide:
☐ Low ☐ Medium ☐ High

d) Persuading someone to get help:
☐ Low ☐ Medium ☐ High

e) How to get help for someone:
☐ Low ☐ Medium ☐ High

f) Information about local resources for help with suicide:
☐ Low ☐ Medium ☐ High

g) Do you feel that asking someone about suicide is appropriate?
☐ Always ☐ Sometimes ☐ Never

h) Do you feel likely to ask someone if they are thinking of suicide?
☐ Always ☐ Sometimes ☐ Never

i) Please rate your level of understanding about suicide and suicide prevention.
☐ Low ☐ Medium ☐ High

ⓘ **STOP HERE. Please complete the BACK of this form when your instructor tells you to do so.**

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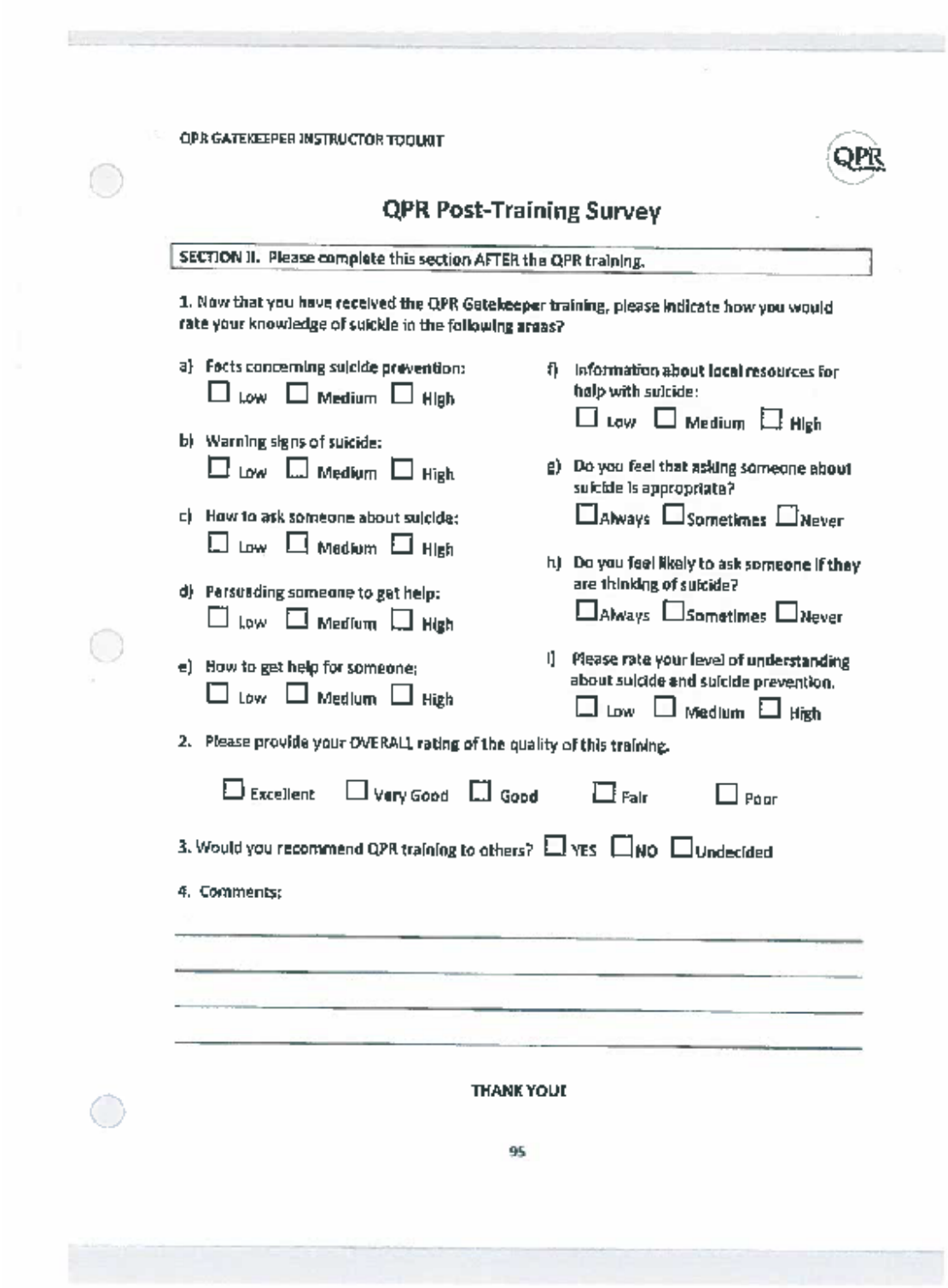
Appendix D

QPR Pre/Post Training Survey



QPR GATEKEEPER INSTRUCTOR TOOLKIT

QPR

QPR Post-Training Survey

SECTION II. Please complete this section AFTER the QPR training.

1. Now that you have received the QPR Gatekeeper training, please indicate how you would rate your knowledge of suicide in the following areas?

a) Facts concerning suicide prevention:
☐ Low ☐ Medium ☐ High

b) Warning signs of suicide:
☐ Low ☐ Medium ☐ High

c) How to ask someone about suicide:
☐ Low ☐ Medium ☐ High

d) Persuading someone to get help:
☐ Low ☐ Medium ☐ High

e) How to get help for someone:
☐ Low ☐ Medium ☐ High

f) Information about local resources for help with suicide:
☐ Low ☐ Medium ☐ High

g) Do you feel that asking someone about suicide is appropriate?
☐ Always ☐ Sometimes ☐ Never

h) Do you feel likely to ask someone if they are thinking of suicide?
☐ Always ☐ Sometimes ☐ Never

i) Please rate your level of understanding about suicide and suicide prevention.
☐ Low ☐ Medium ☐ High

2. Please provide your OVERALL rating of the quality of this training.

☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

3. Would you recommend QPR training to others? ☐ YES ☐ NO ☐ Undecided

4. Comments:

_____

_____

_____

_____

THANK YOU!

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Appendix E

Follow-up HCW Perception Survey

This organization cares about my health and wellbeing

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Appendix F

Intervention Flyer

Appendix G

Project Timeline

Date	Event
Nov-Dec 2024	**Recruit NICU HCWs to participate in QPR gatekeeper training- voluntary participation**
Dec 2024	**Administer survey to entire NICU HCW team on Perceptyx engagement question: This organization cares about my health and wellbeing using 5-point Likert scale**
Jan-Feb 2025	**Train volunteer NICU HCWs QPR gatekeeper training with pre/post knowledge survey**
April 2025	**Re-survey entire NICU HCW team (not just QPR trained) on Perceptyx engagement question: This organization cares about my health and wellbeing using 5-point Likert scale**

Appendix H

Table 1

Demographics of QPR Participants

Person	Age	Gender	Ethnicity	Highest grade completed
1	33	Female	Caucasian	5+ years of college
2	29	Female	Caucasian	4 years of college
3	31	Female	Asian American	5+ years of college
4	26	Female	Caucasian	4 years of college
5	34	Female	Caucasian	4 years of college
6	30	Female	Caucasian	5+ years of college
7	No answer	Female	No answer	4 years of college
8	30	Female	Caucasian	5+ years of college
9	29	Female	African American	4 years of college
10	27	Female	Native American	5+ years of college
11	24	Female	Hispanic	4 years of college
12	29	Female	Hispanic	4 years of college
13	28	Female	Caucasian	4 years of college
14	No answer	Female	Caucasian	4 years of college
15	38	Female	Caucasian	4 years of college
16	35	Female	Caucasian	4 years of college
17	22	Male	African American	4 years of college
18	32	Female	Caucasian	4 years of college
19	26	Female	Caucasian	4 years of college
20	25	Female	Caucasian	5+ years of college
21	23	Female	Caucasian	4 years of college
22	23	Female	African American	4 years of college
23	25	Female	Caucasian	4 years of college
24	No answer	Female	African American	4 years of college
25	44	Female	Caucasian	5+ years of college
26	38	Female	Caucasian	4 years of college
27	28	Female	Asian	5+ years of college
28	34	Female	Caucasian	4 years of college
29	43	Female	Caucasian	2 years of college
30	27	Female	Caucasian	4 years of college
31	29	Female	Caucasian	4 years of college
32	27	Female	Caucasian	4 years of college
33	No answer	Female	Hispanic	5+ years of college
34	27	Female	Caucasian	4 years of college
35	23	Female	Caucasian	2 years of college
36	28	Female	Caucasian	5+ years of college
37	No answer	Female	Caucasian	4 years of college
38	59	Female	Caucasian	4 years of college
39	No answer	No answer	Caucasian	4 years of college
40	24	Female	Caucasian	2 years of college
41	30	Female	Caucasian	2 years of college
42	49	Female	Caucasian	2 years of college
43	35	Female	Caucasian	4 years of college

44	No answer	No answer	Caucasian	No answer
45	No answer	No answer	African American	4 years of college
46	42	Female	Caucasian	4 years of college
47	No answer	No answer	No answer	No answer
48	45	Female	Caucasian	4 years of college
49	No answer	Female	Caucasian	4 years of college
50	32	Female	Caucasian	5+ years of college
51	No answer	Female	Caucasian	4 years of college
52	39	Female	Hispanic	2 years of college
53	No answer	Female	Caucasian	4 years of college
54	26	Female	Caucasian	4 years of college
55	23	Female	Caucasian	4 years of college
56	52	Female	Caucasian	4 years of college
57	24	Female	Caucasian	4 years of college
58	No answer	Female	Caucasian	5+ years of college
59	26	Female	No answer	5+ years of college
60	25	Female	Other	4 years of college
61	29	Female	Caucasian	5+ years of college
62	No answer	Female	Caucasian	4 years of college

Note. Demographics of 62 QPR gatekeeper training participants

*14 participants declined to answer age

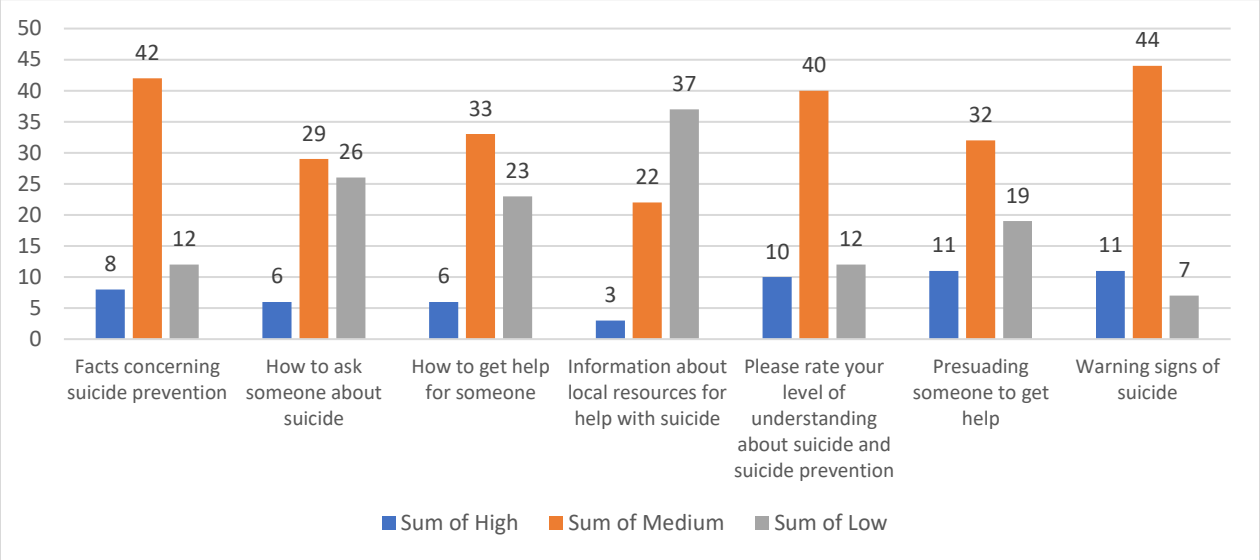
Appendix I

Pre/Post QPR Survey Data

Knowledge

Figure 1

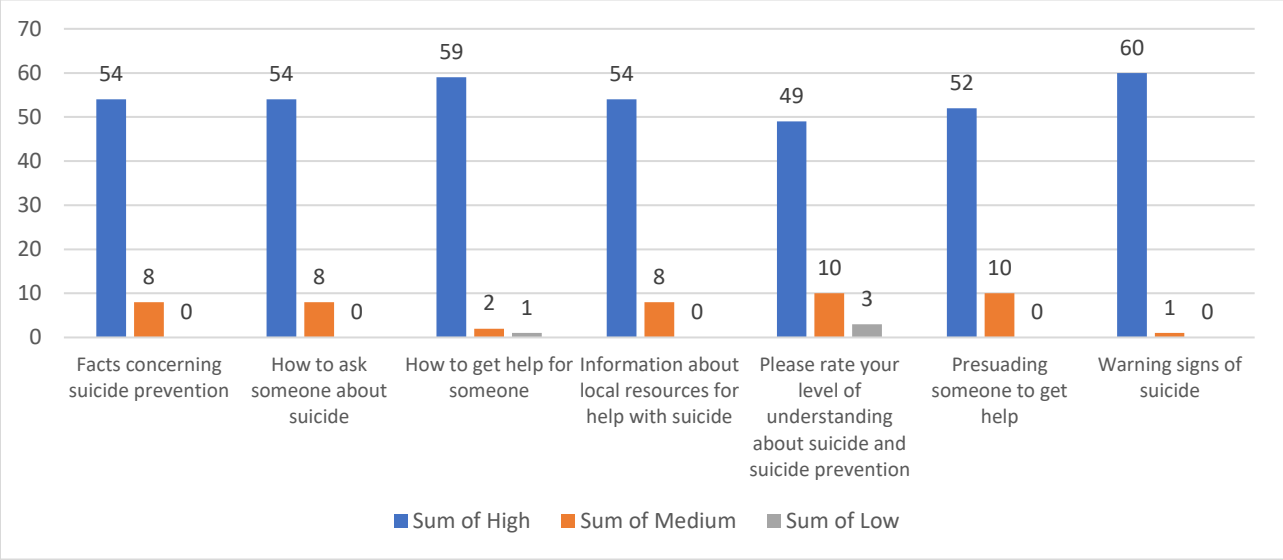
Pre Course Data



Note. Pre QPR gatekeeper training knowledge scores.

Figure 2

Post Course Data



Note. Post QPR gatekeeper training knowledge scores.

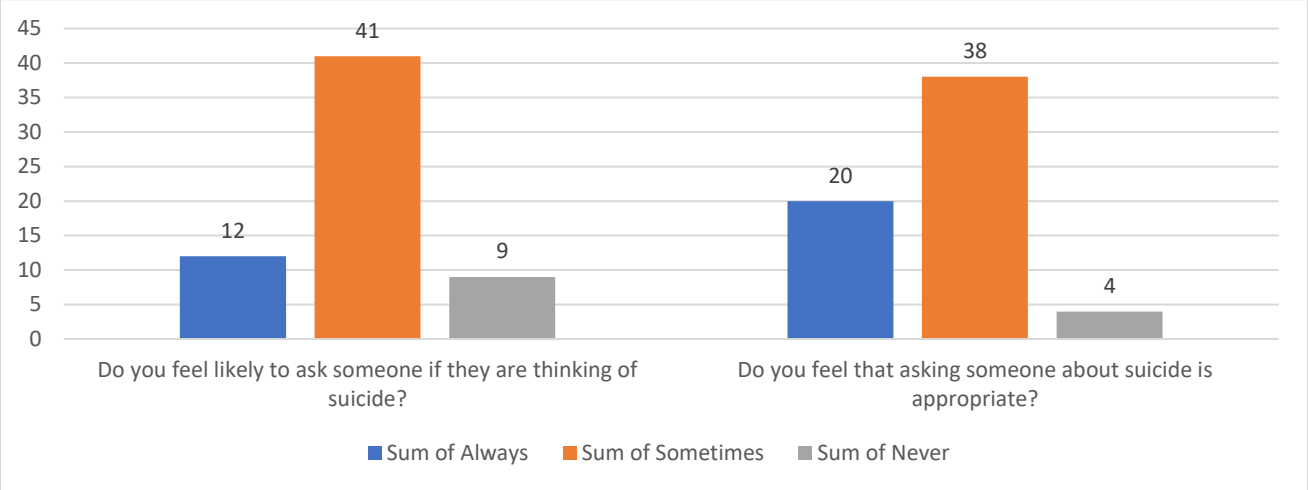
Appendix J

Pre/Post QPR Survey Data

Self-efficacy

Figure 3

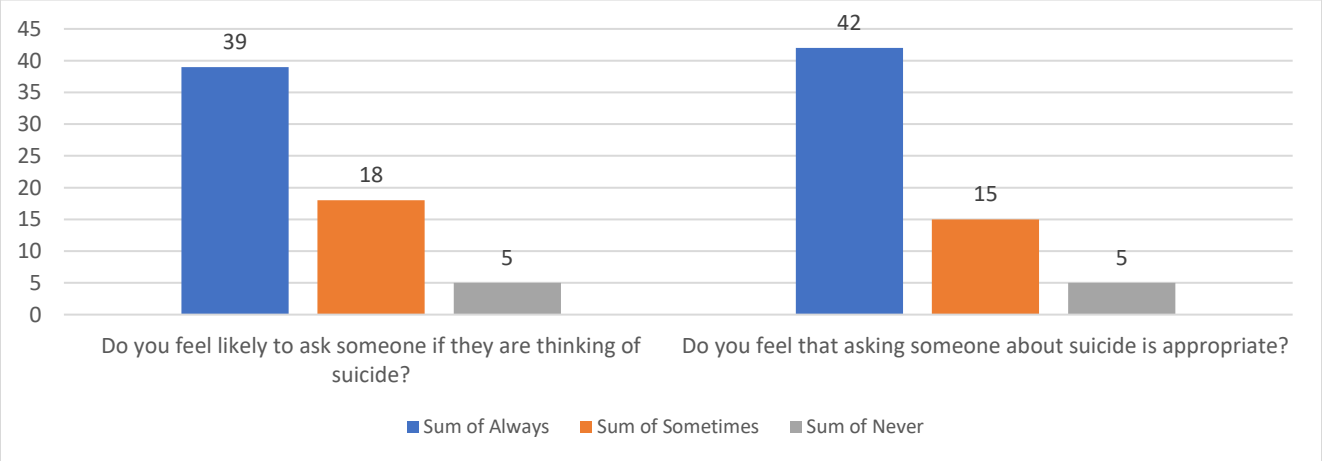
Pre Course Data



Note. Pre QPR gatekeeper training self-efficacy scores.

Figure 4

Post Course Data



Note. Post QPR gatekeeper training self-efficacy scores.

Appendix K

Organizational Support

Table 2

This organization cares about my health and wellbeing			
Data points	**Positive Response (%)**	**Positive Response (n)**	**Response Rate (%)**
Pre-Data 1- April 2024	**30.1**	**28**	**51 (n=93)**
Pre-Data 2- December 2024	**9.2**	**8**	**48 (n=87)**
Post-Data- April 2025	**35.1**	**34**	**53 (n=97)**

Note. Pre-data 1, Pre-data 2, and Post-data on perception of organizational support.

Appendix L

Budget

QPR Budget			
ITEM	**Quantity**	**Cost**	**Total**
Trainer Certification Fees	**2**	**$595**	**1190**
QPR Materials for participants	**2 packs of 50**	**$75**	**150**
Advertising posters for classes	**4**	**$15**	**60**
Participant cost (avg per hour)	**62**	**$40**	**2480**
			$3,880