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Development of a Suicide Prevention Intervention for Sexual and Gender Minority Youth and Young Adults: Rationale, Design, and Evidence of Feasibility and Acceptability

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ABSTRACT

Background: Patient navigation (PN), paired with the safety planning intervention (SPI), may allay mechanisms that theoretically underlie suicide among sexual and gender minorities (SGM). This paper describes (a) the iterative development of a theory-informed PN + SPI intervention (QueerCare) to prevent suicide among at-risk SGM youth and young adults and (b) a case series examining the feasibility and acceptability of study procedures, measures, and QueerCare.

Methods: Seven initial QueerCare modules and a glossary of terms were drafted. Seven participants completed the case series. Feasibility and acceptability over 3 months were examined by triangulating multi-method data.

Results: The study procedures and measures in the at-risk population were feasible and sensitive, provided that remote safety monitoring and parental consent waivers were in place. QueerCare was feasible, helpful, and appropriate based on satisfaction ratings and four emerging themes: matched identity care, internalized barriers, support, and flexibility valued. Two additional modules and guardian materials were created. Suicidal crisis management protocols were continuously refined.

Conclusion: QueerCare was developed as a highly flexible modular intervention to meet the needs of SGM youth and young adults and prevent repeat suicide attempts in this population. Findings indicate study procedures, measures, and QueerCare were feasible and acceptable based on triangulated data.

Trial Registration: This study was registered under [ClinicalTrials.gov](https://clinicaltrials.gov/ct2/show/study/NCT04757649) identifier NCT04757649

Arjan van der Star and Alyson Randall share first authorship.

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1 | Introduction

Sexual and gender minority (SGM) youth and young adults are at a substantially elevated risk of engaging in suicidal behaviors (Blashill et al. 2021a; Institute of Medicine 2011; Miranda-Mendizabal et al. 2017; Haas et al. 2014). Sexual minority adolescents and emerging adults (those identifying as nonexclusively heterosexual or reporting same-gender sexual attraction or behavior) are at 2.26 increased odds for lifetime suicide attempts than their heterosexual counterparts (Miranda-Mendizabal et al. 2017). Gender minority youth (those identifying with a gender different from their birth-assigned sex) also report substantially higher rates than typically observed in the general population, with 45% of young transgender adults reporting suicide attempt(s) (Haas et al. 2014). Yet, no known SGM-specific suicide prevention intervention has been developed and tested, despite the sizeable disparities in suicidal behaviors reported for this population.

To address the need for targeted interventions that address barriers to mental healthcare, a novel suicide prevention intervention for SGM youth and young adults was developed. In the creation of the intervention, two leading models of suicidal behavior were considered. Minority stress theory (Brooks 1981; Hendricks and Testa 2012; Meyer 1995, 2003; Tebbe and Moradi 2016) is the leading theoretical model explaining health disparities, including suicide attempts, among SGM. Minority stress theory posits that in addition to general stressors, SGM individuals also experience distal minority stressors (e.g., prejudice, discrimination, and victimization) and proximal minority stressors (e.g., internalization of stigmatizing messaging, concealment of one's identity, expectations of rejection), the combination of which leads to poorer mental health outcomes and increased risk for suicide attempts compared to their cisgender, heterosexual counterparts. Critically, variables have also been identified that buffer the effects of these stressors on negative mental health outcomes, namely social support (broadly, and specific to other SGM members) and coping skills (Bockting et al. 2013; Detrie and Lease 2007; Hatzenbuehler 2009; Pflum et al. 2015; Russell and Fish 2016).

The second theoretical model considered in the creation of the intervention was the interpersonal theory of suicide (IPTS). The IPTS explains the variance in the pathways from suicidal ideation to suicidal behaviors by incorporating the core tenets of thwarted belongingness (i.e., a negative mental state resulting from an unmet fundamental need for interpersonal connectedness), perceived burdensomeness (i.e., believing that others would be better off if one died), and capability for suicide (i.e., reduced fear of death and an increased tolerance for physical pain; Chu et al. 2017; Joiner 2007; Joiner et al. 2016; Van Orden et al. 2010). The IPTS suggests the interaction of thwarted belongingness, perceived burdensomeness, and capability for suicide places one at an increased risk for suicide attempts. Findings from a meta-analysis by Chu et al. (2017) have supported the theory, reporting significant main and interaction effects of thwarted belongingness, perceived burdensomeness, and capability for suicide on suicide attempts and risk (i.e., attempts in the context of current ideation).

The integration of minority stress theory and IPTS creates a strong conceptual model for understanding suicide risk in SGM youth and young adults. Empirical findings suggest that risk factors identified in the minority stress model and IPTS, with the

latter as conceptual mediating pathways, are correlated and associated with suicidal ideation among SGM young adults (Chang et al. 2021), as well as suicide attempts (Fulginiti et al. 2020). Both models, however, also purport modifiable buffering variables that, if addressed, would theoretically allay suicide attempts, notably social support (both broadly and specifically from other SGM) and coping skills. Minority stress theory, for example, suggests that by increasing social support and coping skills, the association between minority stressors and negative mental health outcomes (e.g., suicide attempts) would be attenuated. The tenet of social support from minority stress theory greatly overlaps with the concept of thwarted belongingness from the IPTS. The IPTS implies that reducing thwarted belongingness (such as fostering interpersonal connectedness) would attenuate the associations between perceived burdensomeness and capability for suicide attempts and risk. In addition, suicide-related coping skills, including internal skills (such as distraction from suicidal thoughts) and external coping skills (such as means restriction) have both been significantly associated with lower suicidal ideation and a lower likelihood of suicide attempts (Stanley et al. 2017; Rainbow et al. 2023). As thwarted belongingness and coping skills are central to explaining why SGM are at heightened risk for suicide, the current study developed a novel suicide prevention intervention targeting these mechanistic pathways through lowering barriers and fostering connections with mental healthcare and community support, by integrating two intervention models to break the purported causal link that underlies suicide in this population.

Two interventions aimed at the identified mechanistic pathways were combined to prevent suicide attempts by increasing coping skills and social support. The first intervention, targeting coping skills, is the safety planning intervention (SPI; Stanley and Brown 2012). The SPI is a brief single-session, empirically tested intervention that reduces suicide attempts by providing individuals with specific actionable steps to take to reduce the likelihood of acting on suicidal urges. The SPI has several steps, including (1) identification of suicidality warning signs; (2) implementation of personal coping strategies; (3) connecting with others to distract from intrusive suicidal ideation; (4) connecting with friends and/or family for support; (5) connecting with mental health professionals; and (6) reducing access to means of completing suicide. In a trial of 1640 adults visiting the emergency room or hospitalized for a suicide-related concern, findings showed a significant reduction in suicidal behaviors in the enhanced SPI with telephone follow-ups group, with 45% fewer suicide attempts compared to the usual care condition (Stanley et al. 2018). However, the SPI, or enhanced SPI, has yet to be tested in an SGM sample.

The second, patient navigation (PN) assists patients with overcoming barriers to healthcare. PN was originally developed to improve receipt and quality of, and reduce delays, in cancer care among minoritized patients and those with fewer resources (Wells et al. 2008). Patient navigators work with the individual patient, the patient's significant others, the healthcare system, and community services to improve adherence to recommended healthcare and healthy behaviors. While a few PN interventions have been developed to assist patients experiencing mental health or developmental conditions, such as serious mental illness (e.g., Tewari et al. 2021; Corrigan et al. 2018, 2017, 2014; Kelly et al. 2014), depression (e.g., Martinez et al. 2022; Silverstein et al. 2017; Diaz-Linhart

et al. 2016), autism spectrum disorder (e.g., DiGiuseppi et al. 2021; Broder-Fingert et al. 2018; Feinberg et al. 2016; Roth et al. 2016), and traumatic brain injuries (e.g., Eliacin et al. 2022; Rosario et al. 2017), no known study has evaluated whether PN can assist patients with reducing suicide risk in any population. PN may reduce suicide among SGM via facilitation and reinforcement of coping skills, providing psychoeducation, providing assistance with overcoming barriers to culturally sensitive, SGM-affirming mental healthcare, and facilitating receipt of SGM community resources and services and engagement with peers.

The present intervention combined the SPI and PN, creating a novel suicide prevention intervention for SGM youth and young adults that works to address the aforementioned mechanisms (i.e., thwarted belongingness and coping skills). The flexible and modular intervention was designed to reduce thwarted belongingness through interactions with the interventionist who helps connect participants to culturally sensitive, SGM-affirming mental healthcare and SGM-specific community support by focusing on addressing barriers to such care and community. The SPI helps participants establish both internal and external coping skills, while continued PN services assist in reinforcing and updating the participants' safety plan when necessary. This novel PN + SPI intervention (i.e., QueerCare) is the first patient navigation intervention designed for suicide prevention and the first theory-driven suicide prevention intervention designed specifically for SGM youth and young adults.

No study to date has comprehensively reported on the challenges associated with implementing research procedures in a suicide prevention intervention trial designed for at-risk SGM youth and young adults. Given the high-risk nature of this population and dearth of research in this area, the feasibility and acceptability of such research procedures and the QueerCare intervention remain important lacunae in the literature. The current paper aims to: (1) describe the iterative process of development of this intervention; and (2) examine feasibility (i.e., successful implementation) and acceptability (i.e., perceived adequacy) of (a) the planned research procedures to evaluate QueerCare and (b) the implementation of QueerCare itself among SGM youth and young adults. Specifically, the paper aims to describe the integration of the SPI and PN, intervention procedures, and the creation and refinement of each module used by the interventionist.

2 | Materials and Methods

2.1 | Initial Intervention Development

QueerCare was developed in collaboration with a twelve-member participatory planning group (PPG; an advisory board consisting of mental health providers, potential program implementers, young SGMs, and community members who interact with or deliver services to people who may benefit from the intervention) using a structured, theory-based approach inspired by Intervention Mapping with iterative cycles of development, feedback, and incorporation of that feedback into new drafts of the study intervention modules (Eldredge et al. 2016). Initially, the Principal Investigators created a matrix of QueerCare

content that served as the initial outline of each module. This matrix included the theoretical constructs that each module would target. Next, the study team reviewed existing modular PN interventions developed by the Principal Investigators and modified existing materials (e.g., participant-facing materials, intervention modules) from these interventions based on the theoretical framework of the intervention (i.e., minority stress theory, IPTS) and the intervention's goals. Specifically, the study team reviewed a breast cancer survivorship PN intervention (Ustjanauskas et al. 2015) and the ¡PrEPárate! HIV prevention PN intervention (Blashill et al. 2021b), two PN programs developed with extensive involvement from patients and community to assist diverse and lower-resourced individuals to obtain high-quality, recommended healthcare in a timely manner. These interventions provided a structure for developing an introductory module, a decision-making module, and an intervention summary and wrap-up module. The introductory module focused on rapport building and establishment of expectations for the intervention prior to delivery of the SPI. Lessons learned from the ¡PrEPárate! HIV prevention PN intervention (Blashill et al. 2021b) led to the development of two modules that focused on identifying and addressing barriers to mental health services and peer community involvement and included both problem-solving and role-playing exercises. Previous work by study team members with the ESTEEM protocol further informed a minority stress psychoeducation module (Pachankis et al. 2019). Lastly, a suicide crisis management module was developed in consultation with an expert on suicide prevention, Dr. Barbara H. Stanley. The resulting initial draft of the intervention consisted of 7 modules administered according to the participant's needs based on clinical intake information and supervisory guidance: (a) introduction to PN and safety planning, (b) psychoeducation on minority stress and how it can lead to self-harm behaviors, (c) assessing and addressing barriers to SGM-affirming mental health services, (d) assessing and addressing barriers to local SGM support resources, (e) supporting decision making, (f) managing suicidal crises and safety, and (g) providing PN intervention review and wrap-up. Each module started with a suicide risk assessment based on the Columbia-Suicide Severity Rating Scale (Posner et al. 2011). Accompanying materials provided to participants were also developed to accompany intervention content delivered in modules, including (1) introductory palm card; (2) suicide risk curve; (3) safety plan template; (4) minority stress handout; (5) problem-solving worksheet; (6) problem-solving handout; (7) to-do list; (8) decision-making worksheet.

In addition to developing the initial intervention modules and associated participant-facing materials, the study team created an internal "QueerCare glossary" and repository of participant resources. The QueerCare glossary provides all study team members with definitions of common terminology related to SGM identities and healthcare, as well as the study of suicide. Beyond simply providing definitions, the QueerCare glossary also provides study staff with knowledge on outdated or offensive terms or phrases to avoid using when interacting with participants (e.g., transgendered, born a boy/girl, committed suicide) to ensure that study staff uses affirming language when interacting with participants. All study staff reviewed this glossary as part of their training. An initial draft of the participant resource repository was created by study staff in collaboration

with the PPG and interventionist to contain crisis hotline numbers, information on SGM-affirming mental health providers and community organizations, as well as information on housing, transportation, and other support services. This repository was later used by the interventionist to help identify appropriate resources for participants (e.g., SGM-affirming mental health providers, community support groups) throughout their participation in QueerCare.

In parallel, the study team also developed initial drafts of study branding and communication materials (e.g., intervention name [QueerCare], recruitment images, logo) which were refined based on feedback from the PPG. This feedback was gathered through a series of meetings and via online surveys distributed to PPG members via email. In addition, the PPG provided feedback on the name of the interventionist (i.e., mental health advocate) as well as images and language used for study recruitment.

2.2 | Patient Navigation Staffing Model

The project team adopted a clinical model of PN staffing for QueerCare (Wells et al. 2022). Considering that participants were at high risk for suicide, the study team determined that the mental health advocate role was best filled by a person with psychology or social work master's training. In the case series, the mental health advocate had graduate education in social work and prior experience providing social work services to children, parents, and families. He had extensive training and experience with motivational interviewing. He identified with an SGM identity and as a person of color, which was not a set requirement for the position. Employed by the Family Health Centers of San Diego, a partnering federally qualified health center (FQHC), the mental health advocate underwent additional virtual clinical training by two clinical psychologists and the project director, including both didactic and experiential training lasting approximately 5 months. Two clinical psychologists provided weekly supervision to the mental health advocate over video conferencing, including a review of the delivery of the intervention. During supervision, participants' needs, the (re-) administration of modules, and connections to mental healthcare services and community support resources were systematically discussed based on intake information derived from the baseline clinical interview and self-report questionnaires, information obtained during intervention sessions and further communication with the participants, and participant preferences.

2.3 | Development of QueerCare Tracking Systems

Additional document templates were developed to assist with the delivery of the intervention, based on modified versions from the Patient Navigation Research Program and ¡PrEPárate! HIV prevention PN intervention (Katz et al. 2014; Blashill et al. 2021a, 2021b). These documents included encounter logs, progress notes, and mental health advocate supervision notes. Each template provided scoring guidance or rubrics, supplemented by a separate standard operating procedure outlining further instructions on intervention delivery tracking and

documentation, as well as how to encrypt and store the intervention data. These documents and procedures were central to the systematic and continuous evaluation of participants' needs and mental health advocate's action, tracking participants' progress and suicide risk, and to the facilitation of mental health advocate supervision.

2.4 | Case Series Procedures

A case series was carried out during the COVID-19 pandemic (i.e., May to October 2021); thus, all assessment and intervention procedures were adapted to be completed remotely (i.e., over telephone and video conferencing). The study was advertised using social media, and healthcare providers at the FQHC referred patients to the study from their own clinical panels. Based on an initial online screener response and a full telephone screen, eligible participants met the following criteria: (1) 15 to 29 years of age; (2) identified as gay, lesbian, bisexual, asexual, or another nonexclusively heterosexual identity and/or reported same-gender romantic attraction and/or past-year same-gender sexual behavior, and/or identify as transgender, genderqueer, nonbinary, or another nonexclusively cisgender identity; (3) resided in San Diego County, California; (4) spoke English; (5) were willing and able to provide informed consent; (6) reported past two-week suicidal ideation; (7) reported a lifetime history of actual or interrupted suicide attempt(s). No individuals met the exclusion criterion of current intention to immediately act on a suicide plan (i.e., within 10 days). Eligibility based on suicidal ideation and the history of any actual or interrupted suicide attempts was measured using the Columbia-Suicide Severity Rating Scale (C-SSRS; Posner et al. 2011). All screened individuals received information on local/national suicide crisis hotlines, including the Trevor Project, which specializes in suicide prevention for SGM youth and young adults.

Nine eligible participants (see Table 1) underwent a baseline assessment and were enrolled in a three-month intervention phase. Seven participants ($M_{\text{age}} = 24.6$ years; Range: 16, 29; see also Table 1) completed a three-month follow-up assessment and provided feedback on the intervention and study procedures during an additional key informant interview. During each assessment, participants completed a clinical interview administered by doctoral students in clinical psychology and self-report surveys using the Qualtrics survey platform. The study team initially aspired to, but was not able to, access participants' medical records to assess uptake in mental healthcare services utilization during the intervention period.

Study procedures of the case series were approved by the San Diego State University IRB (Protocol No. HS-2020-0076). All participants provided written informed consent prior to the telephone screening and baseline assessment. Given the sensitivities around concealed identities and behaviors in the study population (DiClemente et al. 2010; Mustanski 2011; D'Amico and Julien 2012; Jelsma et al. 2012; Fisher et al. 2016), a waiver for parental consent for minor participants was obtained from the IRB. The study was approved and monitored by the NIMH's Data and Safety Monitoring Board.

TABLE 1 | Sample characteristics at baseline.

	Total sample (N=9)	Study completers (N=7)
	n (%)	n (%)
Age group		
Minor (<18 years old)	2 (22%)	1 (14%)
Adult (18 years or older)	7 (78%)	6 (86%)
Gender identity		
Cisgender male	2 (22%)	2 (29%)
Cisgender female	2 (22%)	2 (29%)
Transgender male/ masculine	1 (11%)	0 (0%)
Transgender female/ feminine	1 (11%)	1 (14%)
Non-binary	1 (11%)	1 (14%)
Genderqueer	1 (11%)	1 (14%)
Gender fluid	1 (11%)	0 (0%)
Sexual orientation		
Gay/lesbian	3 (33%)	3 (43%)
Bisexual	5 (56%)	3 (43%)
Pansexual	1 (11%)	1 (14%)
Racial identity		
White/caucasian	3 (33%)	3 (43%)
Asian American	3 (33%)	2 (29%)
Mixed racial identity	1 (11%)	1 (14%)
Other racial identity	2 (22%)	1 (14%)
Hispanic ethnicity		
Hispanic origin	3 (33%)	2 (29%)
Non-hispanic origin	6 (67%)	5 (71%)
Highest educational attainment		
Less than high school	1 (11%)	0 (0%)
High school or GED	2 (22%)	2 (29%)
Some college	4 (44%)	3 (43%)
Graduate/professional	1 (11%)	1 (14%)
College graduate	1 (11%)	1 (14%)
Employment status		
Employed full-time (≥ 30 h per week)	3 (33%)	3 (43%)
Employed part-time (< 30 h per week)	1 (11%)	1 (14%)
Unemployed/disabled	2 (22%)	1 (14%)
Student	3 (33%)	2 (29%)

(Continues)

TABLE 1 | (Continued)

	Total sample (N=9)	Study completers (N=7)
	n (%)	n (%)
Individual annual gross income		
Less than 6000 USD	5 (55%)	3 (43%)
6000 to 11,999 USD	0 (0%)	0 (0%)
12,000 to 17,999 USD	0 (0%)	0 (0%)
18,000 to 23,999 USD	1 (11%)	1 (14%)
24,000 to 29,999 USD	2 (22%)	2 (29%)
30,000 to 59,999 USD	1 (11%)	1 (14%)
60,000 USD or more	0 (0%)	0 (0%)
Experienced recent unstable housing at baseline	1 (11%)	1 (14%)
Connected with regular healthcare provider at baseline	9 (100%)	7 (100%)
Connected with regular therapist at baseline	5 (55%)	4 (57%)
Connected with regular psychiatrist at baseline	9 (100%)	7 (100%)

2.5 | QueerCare Delivery and Refinement

After completing a baseline assessment, participants received the first intervention session. During this initial meeting, a mental health advocate provided all participants with the introductory PN module (which included the SPI). After the first PN session, participants were contacted using their preferred method (via phone, videoconferencing, text and/or email) with the goal of meeting once per week for three months. Similar to other PN interventions (Wells et al. 2008), QueerCare is a flexible, modular intervention; thus, the frequency of intervention contacts and modules delivered varied based on the participant's needs and risk for suicide as established during intervention sessions, further communication with the participant, and mental health advocate supervision.

2.6 | Qualitative Data

Throughout the case series, feedback on the intervention and associated materials was collected from qualitative mental health advocate feedback, study feasibility notes, along with the key informant interviews.

2.6.1 | Mental Health Advocate Feedback

Mental health advocate feedback was collected through informal feedback (e.g., discussions during team operations meetings)

formally documented in study meeting minutes throughout the case series, as well as through feedback on the intervention modules and associated graphics (i.e., what worked, what did not work, suggestions for improvement) provided by the mental health advocate upon the end of his tenure as a mental health advocate (i.e., exit from the study team).

2.6.2 | Feasibility Notes

During the implementation of the study, study team members recorded qualitative notes using a Google Doc on feasibility, acceptability, and other challenges and lessons learned throughout the case series. These notes were analyzed to identify the most pivotal issues that the study team encountered while designing procedures, carrying out the study, implementing QueerCare, and interacting with participants.

2.6.3 | Key Informant Interviews

Semi-structured key informant interviews were conducted virtually during the three-month follow-up assessment, lasted approximately half an hour on average ($M = 32.3$ min; Range: 17.2, 45.1), and were facilitated by five trained doctoral students in clinical psychology. The interview guide was informed by the theoretical framework of acceptability (TFA; Sekhon et al. 2017) that consists of seven component acceptability constructs: affective attitude, burden, perceived effectiveness, ethicality, intervention coherence, opportunity costs, and self-efficacy to assess acceptability. Interviews were audio recorded and transcribed verbatim by trained research assistants.

2.7 | Quantitative Data

2.7.1 | Recruitment and Retention

Statistics on recruitment reach and response were derived from Meta's advertisement management tool, as well as based on survey response and completion numbers in Qualtrics. Data on reasons for ineligibility and study withdrawal were collected and systematically recorded in tracking systems. The logged reason for ineligibility during telephone screening was based on the first reason to terminate the telephone screen.

2.7.2 | Satisfaction With Interpersonal Relationship With Mental Health Advocate

Participants' satisfaction with the interpersonal relationship with their mental health advocate was measured using the Patient Satisfaction with Interpersonal Relationship with Navigator (PSN-I; Jean-Pierre et al. 2012) at the three-month follow-up assessment. This scale uses a five-point Likert scale from 1 = "Strongly disagree" to 5 = "Strongly agree" across eight items that are summed into a total satisfaction score with a possible range from 9 to 45, with higher scores indicating higher satisfaction.

2.7.3 | Satisfaction With Mental Health Advocate Services

Participants' satisfaction with the PN services received during the intervention period was measured using the self-report Client Satisfaction Questionnaire (CSQ-8) with 8 items across several content domains, such as quality, quantity, and outcome of the service (Larsen et al. 1979) during the three-month follow-up assessment. To assess satisfaction across these domains, the CSQ-8 uses four-point Likert scales, for instance, from 1 = "Poor" to 4 = "Excellent," but with response options depending on the question for each item. A total possible sum score ranged from 8 to 32, which can be interpreted across three levels: low (8–20), medium (21–26), and high (27–32; Larsen et al. 1979).

2.7.4 | Thwarted Belongingness

The degree of thwarted belongingness was measured using the self-report Interpersonal Needs Questionnaire-15 (Hill et al. 2015) during the baseline and three-month follow-up assessments, averaging responses pertaining to the thwarted belongingness nine-item subscale (e.g., These days, I rarely interact with people who care about me) that used a seven-point Likert scale from 1 = "Not at all true for me" to 7 = "Very true for me." Reverse-scored items were recoded. Total possible summed scores ranged from 9 to 63, with higher scores indicating higher levels of thwarted belongingness.

2.7.5 | Suicide-Related Coping Skills

The level of suicide-related coping skills was measured with the self-report Suicide-Related Coping Scale (Stanley et al. 2017) during the baseline and three-month follow-up assessments. Items use a five-point Likert scale ranging from 0 = "Strongly disagree" to 4 = "Strongly agree" and were summed across two subscales after reverse scoring of the negatively phrased items. A seven-item subscale for internal coping skills (e.g., "I cannot do anything to control my suicidal thoughts") ranged from 0 to 28, with higher scores indicating increased internal coping skills. A seven-item subscale for external coping skills (e.g., "I feel that I have no one to turn to when I am feeling suicidal") ranged from 0 to 28, with higher scores indicating increased external coping skills.

2.7.6 | Suicidality

Past-three-month suicidality was measured using the clinical assessor-administered Columbia-Suicide Severity Rating Scale (C-SSRS; Posner et al. 2011) during the three-month follow-up assessment. Suicidality severity was operationalized using the suicide severity scale of the C-SSRS that uses 10 ordinal categories starting with five categories of suicidal ideation (i.e., (1) passive ideation or (2) active ideation, (3) with method, (4) with some intent, (5) with intent and plan) followed by five categories of suicidal behaviors (i.e., (6) preparatory acts, (7) aborted attempt, (8) interrupted attempt, (9) actual attempt, or (10) suicide), increasing in severity. The presence or absence of any suicidal behaviors were also scored separately.

2.8 | Analysis

In this study, feasibility was defined as whether the study procedures and QueerCare can be successfully implemented as planned (including aspects such as participant recruitment, eligibility, procedures, and suitability of outcomes; Eldridge et al. 2016; Proctor et al. 2011; Arain et al. 2010), whereas acceptability was defined as the perception that the study procedures and QueerCare are agreeable, palatable, or satisfactory based on anticipated and experienced cognitive and emotional responses to them (Sekhon et al. 2017; Proctor et al. 2011). We used a multi-method approach in which we triangulated qualitative and quantitative data on feasibility and acceptability. We conducted a thematic-content analysis of the qualitative data, identifying emergent themes from the key informant interviews and main lessons learned from the unstructured review of mental health advocate feedback and feasibility notes, and integrated these into the context of the quantitative data on feasibility and acceptability (e.g., advertisement reach, screening results, participant withdrawal, loss to follow-up, and participant satisfaction). As part of the quantitative feasibility data, we also examined the suitability of measures and targets in their initial ability to be preliminarily engaged by QueerCare. These outcome measures include scales on thwarted belongingness, suicide-related coping skills, suicidality severity, and the presence of suicidal behaviors. Given the limited sample size, we *qualitized* quantitative data, describing general trends as sums and percentages (Nzabonimpa 2018; Love and Corr 2022), in addition to reporting Cohen's *d* effect sizes for longitudinal data for the target mechanisms and summary statistics on central tendency for the satisfaction data. Given the limited sample size, no statistical tests were performed on the quantitative data.

Key informant interview transcripts were analyzed using a rapid qualitative analysis (RQA) approach (Gale et al. 2019; Hamilton 2020). We identified neutral domain names that corresponded to each interview question and TFA construct, entered into a summary template. The RQA team included three doctoral students (two clinical psychology, one public health) and used an iterative approach, initially summarizing and discussing one transcript and making note of any areas of confusion (e.g., domain names not clear, missing domains, inability to find data) to ensure consistency in their analyses. Then, the RQA team used an inductive, consensus coding approach with both descriptive and in vivo methods to derive preliminary codes from three summary sheets. This process was repeated three times to identify emergent codes and refine existing codes, until no new codes emerged. Using thematic content analysis, we coalesced similar codes into broader themes cutting across the TFA constructs and five consistently identified content domains from the summary sheets (e.g., overall experience, psychoeducation module on minority stress, program length, frequency, and resources), and quantified the general feedback given on various aspects of the program.

2.9 | Refinement of QueerCare

Modifications to QueerCare were made in collaboration with the PPG during and following the case series. The final version of module topics, brief description, and rationale for including

them in QueerCare are outlined in Table 2. Module modifications made based on PPG and case series feedback are described below in the results and summarized in Table 3.

3 | Results

At the baseline assessment, the sample included two individuals under 18 years of age (minors), five participants identifying with a gender minority identity, and seven participants identifying as a person of color (see Table 1). All participants identified with a sexual minority identity. One minor and one adult participant (both identifying with a gender minority identity and as a person of color) withdrew from the study, resulting in a sample of seven participants who completed all assessments. Reasons for withdrawal were that some of the intervention content made them feel anxious outside of the study ($N=1$) and they no longer had time to participate ($N=1$).

3.1 | Feasibility and Acceptability of Study Procedures

In terms of recruitment capability, it was feasible to recruit a diverse sample within the planned two months; 14,555 individuals were reached through social media advertisements, of whom 100 filled out a brief online screen. One additional person completed the screen after a direct referral from a member of the investigative team. From those screened positive who left contact details, 22 individuals underwent a full telephone eligibility screen, with three expressing no interest in the study (based on lack of time or unknown reasons) and 10 individuals who were deemed ineligible (based on lack of current suicidal ideation or lifetime suicidal behaviors). Nine individuals were eligible at the telephone screen and were enrolled in the research study at baseline. The strategy resulted in the rapid recruitment of a diverse sample, despite challenges related to changes in social media platform policies restricting targeted advertising for minors that took effect towards the end of the recruitment period.

While study procedures were found to be lengthy by participants (and were subsequently shortened), all participants stated in the key informant interviews that the process of participating in the study was generally easy. In particular, the telephone screening call was perceived by all participants as “easy/straightforward,” and two participants stated that the caring staff made the process even easier. In contrast, the baseline assessment that was immediately followed by the first intervention session to administer the SPI, was found to be “too long” by three participants (i.e., these appointments included both the baseline assessment and first intervention session and generally lasted between 4 and 5 h), where one indicated they “hated [the] surveys,” and another noted the sessions were “awkward, but assessors were nice.”

Through the review of the feasibility notes, the investigative team noted the complexity and infeasibility of collecting medical record data, particularly for minors in the absence of parental consent, given the large number of health systems available across San Diego County and the fact that participants could seek care from more than one system, clinic, or private practice. As a result, the adapted Cornell Services Index (Sirey et al. 2005)

was used by the clinical assessors to assess health services utilization, while sections on insurance coverage and connections to providers were moved to the self-report survey to shorten the major study assessments. In addition, implementing a study

during the COVID-19 pandemic that actively recruits from an at-risk population required the development of extensive remote safety protocols and precautions across all virtual touchpoints with (prospective) participants in remote physical spaces and

TABLE 2 | Overview of final QueerCare intervention modules.

Module	Construct	Content	Participant-facing materials
1. Introduction to patient navigation and administration of SPI	Identify early warning signs Suicide-related coping skills Restrict access to means	Conducting a patient navigation intake assessment Explaining the navigation intervention and the role of the navigator Administering the SPI	Introductory palm card Suicide risk curve Safety plan
2. Psychoeducation on minority stress and how it can lead to self-harm behaviors	Minority stress (e.g., internalized homophobia, internalized transphobia) Perceived burdensomeness	Introducing minority stressors Exploring the influence of minority stressors on participants' day-to-day lives Identifying how minority stress triggers risk of self-harm Identifying sources of resiliency	Minority stress handout
3. Psychoeducation on mental illness and experienced symptomatology to motivate seeking SGM-affirming mental health services	Access to mental health services	Sharing high-level psychiatric diagnostic information from the baseline clinical interview on symptom profile Discussing next steps in facilitating SGM-affirming mental healthcare (e.g., getting a mental health provider, discussing rapport with current provider)	
4. Assessing and addressing barriers to SGM-affirming mental health services	Access to mental health services Thwarted belongingness Suicide-related coping skills (e.g., reaching out to others)	Systematically assessing barriers to SGM-affirming mental health services on an ongoing basis (i.e., insurance, transportation, unsure how to find a provider, substance use, violence victimization) and generating possible solutions Providing information about SGM-affirming mental health services and assisting participant with identifying one or more services that best meets their needs Developing resources to address specific barriers to mental healthcare Identifying and implementing actions to assist the participant in implementing barrier-reducing strategies Assessing whether action(s) reduced barrier(s) Problem-solving for seeking affirming mental healthcare and generating possible solutions Role-playing activities for practicing communication with others	Problem-solving worksheet Problem-solving handout To-do List
5. Assessing and addressing barriers to local SGM support resources	Access to community support Minority stress (e.g., concealment, rejection sensitivity) Thwarted belongingness	Systematically assessing barriers to SGM-specific support resources on an ongoing basis (i.e., financial, transportation, unsure how to find resources, substance use, violence victimization) and generating possible solutions Providing SGM-specific or community support resources and assisting participant with identifying resources that best meet their needs Developing resources to address specific barriers Identifying and implementing actions to assist the participant in implementing barrier-reducing strategies Assessing whether action(s) reduced barrier(s) Problem-solving for seeking SGM support resources and generating possible solutions. Role-playing activities for practicing communication	Problem-solving worksheet Problem-solving handout To-do List

(Continues)

TABLE 2 | (Continued)

Module	Construct	Content	Participant-facing materials
6. Decision-making support	Suicide-related coping skills Means restriction Access to mental health services Access to community support Minority stress (e.g., concealment, rejection sensitivity) Thwarted belongingness	Completing decisional balance activity for seeking SGM-affirming mental health services and SGM support resources Participating in motivational enhancement and goal setting for seeking SGM-affirming mental health services and SGM support resources	Decision-making worksheet
7. Check-in & safety plan review	Suicide-related coping skills Means restriction Access to mental health services Access to community support Minority stress (e.g., concealment, rejection sensitivity) Thwarted belongingness	Checking in with the participant to assess minority stress, coping, social support, access to mental health services, access to community resources, and safety Reviewing, reinforcing, and updating the SPI including means restriction	Safety plan
8. Suicidal crisis management	Suicide-related coping skills Means restriction Access to mental health services	Assessing the participant's suicide risk (i.e., emergency/acute, high, moderate, or no known risk) Reviewing and reinforcing the participant's safety plan Providing other patient navigation services if warranted Providing emergency services if necessary Assisting participants in obtaining a higher level of mental healthcare if necessary	Safety plan
9. Patient navigation intervention review and wrap-up	Suicide-related coping skills Means restriction	Reinforcing lessons learned during the intervention related to minority stress and its impact on risk of self-harm Reviewing, reinforcing, and updating the coping strategies plan in the SPI Reviewing, reinforcing, and updating the means restriction plan in the SPI Identifying problems that may occur in the future and generating solutions for seeking help and support	Safety plan

Abbreviations: SGM, sexual and gender minority; SPI, safety planning intervention.

across all concerning types of reported suicidal ideation and behaviors (e.g., the development of new intent, a new plan, or reporting of any new behaviors). The complexity of measuring suicidality and administering the C-SSRS proved challenging, with the need for consistent and reliable conduct across measure administrators. This resulted in multiple consults with the C-SSRS developers, as well as the development of detailed C-SSRS scoring guidelines for the purpose of the study.

3.2 | QueerCare Refinement During the Case Series

Refinement of the QueerCare intervention during the case series included the creation of a new module. The new module created during the case series was a “check-in,” intervention maintenance, and safety plan review for participants who needed less support and less frequent contact with their mental health advocate (i.e., Module 7). This module was designed based on mental health advocate feedback; the case series mental health advocate worked with some participants who had completed the first six of the original modules and did not need to be re-administered any of the modules at that

time (e.g., due to already being connected with SGM-affirming mental healthcare and community support and not having any current safety concerns) and the mental health advocate was not sure how to continue to help the participant. Therefore, this new module was created during the case series to continue to build resilience through checking in with the participant to assess ongoing minority stress, coping, social support, access to mental health services, access to community resources, safety, and possible new goals, as well as to review, reinforce, and update the participant's safety plan, including means restriction, or re-administer other modules.

In addition to creating a new module, Module 2 (i.e., psychoeducation on minority stress and how it can lead to self-harm behaviors) was modified after a participant withdrew due to unspecified anxiety after receiving Modules 1 and 2. Provided that Module 2 discusses sensitive topics (e.g., discrimination, victimization) that may temporarily induce feelings of distress, including anxiety, the study team decided to modify this module in collaboration with PPG feedback to help alleviate possible distress brought up by Module 2. This was done by changing the module language to normalize the experience of minority stress with participants, as well as including mood improvement

TABLE 3 | Overview of evolution of QueerCare intervention modules across study phases.

	Module								
	1	2	3	4	5	6	7	8	9
Introduction & SPI		Psychoeducation on minority stress	Psychoeducation on psychopathology	Barriers to mental healthcare	Barriers to community resources	Decision making support	Check-in & safety plan review	Suicidal crisis management	Intervention wrap-up
Original	X	*		*	*	*		*	*
During Case Series		Modified					*	Modified	
After Cases Series			*					Modified	

Note: X indicates required intervention content and * indicates optional intervention content, per participant needs; modules may be repeated as necessary.

exercises, a new safety review (if indicated), and additional language to highlight that resources will be further discussed in future sessions that can help connect them to SGM-affirming care and community resources. In addition, given that some of these concepts (e.g., microaggressions) may be difficult for younger participants to understand, the language of the module was further simplified based on PPG feedback for the final version of QueerCare Module 2.

Further participant and PPG feedback also resulted in the development of guardian and/or caregiver-facing materials describing the study and intervention, particularly aimed at self-consenting minor participants who wanted to engage and inform their caregivers about study participation and the intervention but who did not at first. Different versions of materials were developed that could assist participants in disclosing certain but not all aspects (i.e., sexual orientation, gender identity, mental health challenges, suicidal ideation, and/or suicidal behaviors) related to the study, its eligibility criteria, the intervention, and its focus.

The study team continuously refined the Suicidal Crisis Management module (Module 8) during the case series. Important changes included updating the risk triaging and risk labeling so that the risk level for participants with a suicide plan and/or intent who cannot guarantee their safety for 24h was changed from high to acute. The actions for the mental health advocate to take for participants deemed at high or acute risk (i.e., those who report suicidal ideation with intent and/or a suicide plan) were reordered so that access to means is assessed as the first step.

3.3 | Feasibility and Acceptability of QueerCare

General content analysis of the key informant interviews and the analysis of the feasibility notes suggested that QueerCare was feasible to implement, even in the context of the COVID-19 pandemic where all sessions were virtual. During the case series, a need for additional information brochures was identified to assist participants in explaining the scope and goals of the study and intervention to significant others, parents, or guardians, without unintentionally disclosing participants' sexual and/or gender minority identity.

Further analysis of qualitative data demonstrated the feasibility and acceptability of QueerCare, based on four themes cutting across the TFA constructs and/or the general content domains: (1) Matched Identity Care, (2) Internalized Barriers, (3) Support, and (4) Flexibility Valued. The themes represented key facilitators and barriers to intervention adoption by study participants.

3.3.1 | Theme 1: Matched Identity Care

Matched Identity Care (e.g., having a mental health advocate who identifies with a SGM identity or as a person of color matching participants' identities) cut across three constructs of the TFA and two content domains. Within the TFA constructs of Affective Attitudes, Perceived Effectiveness, and Self-Efficacy,

participants indicated that it was helpful to have a queer person as their mental health advocate. One participant stated that it was “nice to have [the mental health advocate be] on the same page” and that they “felt supported having someone who understood me.” Another participant indicated that it was easy to participate in the program because it was “made by Queer groups, for Queer people.” Within the content domains of Overall Experience and the psychoeducation module on minority stress, participants stated it was empowering to have someone from the SGM community as their mental health advocate and specifically mentioned that “minority stress can be difficult to speak [about] with nonminorities; so, having a place that was validating, was important.”

3.3.2 | Theme 2: Internalized Barriers

Internalized Barriers (e.g., difficulty in program participation due to internalized barriers) were seen across two TFA constructs. Within the TFA construct of Burden, participants found it difficult to participate in the program because “suicide is difficult to talk about.” And while no aspects of the program were offensive, “content could be heavy.” Similarly, the theme of internalized barriers that were addressed through additional support provided in the program was emerging within the TFA construct of Self-Efficacy, exemplified by the following quote:

It was really helpful that the people running the program sent a lot of reminders and made sure to keep in touch with me, because it is really difficult for me sometimes to remember to follow through with things.

3.3.3 | Theme 3: Support

Support was a theme that was identified across three TFA constructs: (1) Intervention Coherence, (2) Affective Attitude, and (3) Self-Efficacy. Participants felt that their mental health advocate was supposed to provide them with support and resources; more than half of the participants reported the intervention to be supportive and “loved” that it focused on improving lives, especially for the SGM community. The supportive mental health advocate also made participation easier. Most participants (i.e., $N=6$ [86%]) found the overall program to be helpful, especially with scheduling mental health-related appointments, sharing ideas, and finding resources. A participant indicated they “felt cared for when someone was researching resources.”

These findings were further supported by quantitative data. At the three-month follow-up assessment, participants' satisfaction with the interpersonal relationship with their mental health advocate was high ($M=42.3$; Range: 33, 45). Similarly, at the three-month follow-up assessment, the majority of participants (i.e., $N=6$ [86%]) also reported satisfaction scores for the services received from their mental health advocate that fell within the high range, resulting in high levels of satisfaction within the sample ($M=28.4$; Range: 23, 32).

3.3.4 | Theme 4: Flexibility Valued

Flexibility Valued was the final theme that emerged from thematic content analysis and was highlighted across two TFA constructs and three content domains. Across the TFA constructs of Self-Efficacy and Opportunity Cost, some participants stated that the virtual format made it easier to participate; however, one participant indicated that they felt restricted in discussing sensitive topics when there was a family member present in an adjacent room during their sessions with the mental health advocate. Across the content domains of Length, Frequency, and Resources, participants' responses varied: some indicating that the program length was adequate while others wanted it to be longer. Most participants found the frequency to be acceptable, although one participant preferred bi-weekly meetings versus weekly meetings. Regarding resources provided, participants appreciated that resources were “catered” to them.

3.3.5 | Feasibility of Target Engagement Measures

Feasibility, acceptability, and suitability of the selected target mechanisms measures were evaluated. Quantitative data highlighted that most participants reported measurable initial improvements in the purported target mechanisms scores (i.e., thwarted belongingness, internal, and external suicide-related coping skills), as well as the intended outcome of the intervention (i.e., preventing new suicidal behaviors). Over half of the participants saw improvements in their thwarted belongingness scores (i.e., $N=4$ [57%]; Figure 1a), internal suicide-related coping skills (i.e., $N=5$ [71%]; Figure 1b), and external suicide-related coping skills (i.e., $N=5$ [71%]; Figure 1c) scores throughout the study. Five participants (71%) saw an improvement in at least one of three target outcomes. Over the three-month follow-up period, a medium effect size for thwarted belongingness (Cohen's $d=-0.47$; 95% CI: $-1.97, 1.04$), a medium-to-large effect size for internal suicide-related coping skills (Cohen's $d=0.72$; 95% CI: $-0.81, 2.24$), and a large effect size for external suicide-related coping skills (Cohen's $d=1.14$; 95% CI: $-0.46, 2.74$) were observed. During the three-month intervention period, suicidality severity remained within the suicidal ideation portion of the C-SSRS severity scale with no new suicidal behaviors reported during the follow-up period. With regard to the most severe past-three-month suicidal ideation at the follow-up assessment, participants most commonly reported non-specific active suicidal thoughts (category 2; $N=3$ [43%]), while others reported passive suicidal thoughts (category 1; $N=1$ [14%]) or active suicidal ideation with any methods without intent to act (category 3; $N=1$ [14%]), with some intent to act, without specific plan (category 4; $N=1$ [14%]), and with specific plan and intent (category 5; $N=1$ [14%]).

3.4 | QueerCare Refinement After the Case Series

A second additional module, Module 3 (i.e., psychoeducation on mental illness and experienced symptomatology to motivate seeking SGM-affirming mental health services), was created after the case series for the final version of QueerCare. The study team discussed options to provide participants with information

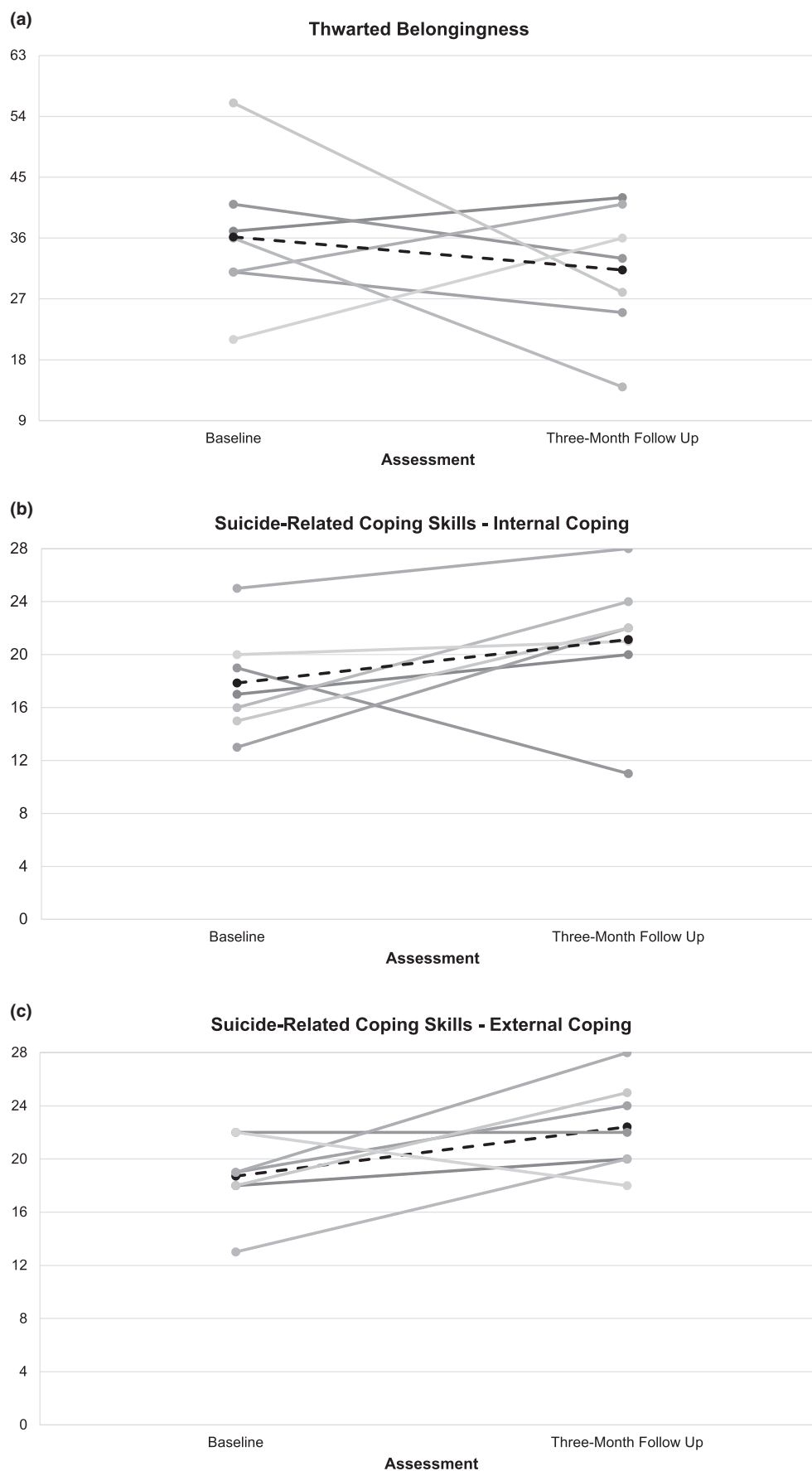


FIGURE 1 | (a–c) Individual-level and sample-mean longitudinal mechanistic data on thwarted belongingness, and internal and external suicide-related coping skills. Solid lines connect individual-level observed data. Dotted lines connect sample assessment means.

from the study assessments (i.e., feedback from diagnostic clinical interviews and self-report surveys) to motivate participants to seek SGM-affirming and appropriate mental healthcare. These discussions were initiated after the study received release of information requests to provide the participants' mental health provider (e.g., therapist, psychiatrist) with study assessment data where the possibility was raised for participants to view these data. The study team first consulted with San Diego State University IRB about providing participants with feedback on psychiatric symptoms they endorsed during the clinical interviews and/or self-report surveys. After receiving guidance from the IRB, the study team obtained direct feedback from participants (via key informant interviews) about whether they would like to receive such information. Overall, participants expressed that they would like to receive feedback from study assessments; as a result, the study team created a module (that participants can separately consent to) for the final version of QueerCare where participants are provided psychoeducation on mental illness and experienced symptomatology to ultimately motivate seeking SGM-affirming mental health services. In this module, participants who elect to receive this information are provided with broad symptom profile information, not any specific psychiatric diagnoses, given the research nature of the data.

Module 8 was further updated in line with a study-wide safety protocol redesign for reasons of readability and usability after the case series, based on feasibility feedback. While the content of the protocol remained largely unchanged, the formatting was revised to make the risk-specific actions less verbose, with short actionable headers and clearer detailed descriptions to facilitate prompt safety management by the mental health advocate.

4 | Discussion

This paper aimed to describe the development of a novel theory-driven patient navigation and safety planning intervention designed to reduce suicide attempts among SGM youth and young adults at risk for repeat suicide attempts and to examine the feasibility and acceptability of the research procedures to evaluate QueerCare and the intervention itself. No known effective suicide prevention interventions exist for SGM youth and young adults at risk for repeat suicide attempts that focus on identifying and overcoming barriers to mental healthcare and community engagement. Given the theoretical foundation based on the IPTS and the minority stress model and the SGM-affirming, personalizable, and need-based nature of QueerCare, the intervention holds promise to address the unmet need in the prevention of suicide in this vulnerable population. The initial development of the intervention was informed by PPG feedback and later refined using an iterative process based on PPG, case series participant, and mental health advocate feedback.

To create the initial intervention, we modified elements from previous PN interventions and added additional content based on lessons learned from the implementation of these interventions, as well as from interventions focused on experiences of minority stress. Using an iterative approach, we integrated feedback from stakeholders, participants, and a mental health advocate at various time points to ultimately design a flexible, nine-module (primarily video conferencing-based) PN + SPI

intervention. The final QueerCare intervention can be administered in any order, outside of Module 1 (i.e., introduction to PN and administration of the SPI) as the first module, and any modules can be re-administered according to individual participants' needs based on clinical intake information and supervisory guidance.

PPG feedback was key to several important decisions related to the study (e.g., name of the interventionist and intervention, refinement of Module 2), and participant/mental health advocate feedback (formal and informal) was crucial for identifying changes to improve the modules and for the development of two additional modules. PPG and participant feedback further informed the development of guardian-facing materials aimed to assist self-consenting participants in disclosing any aspect of the study to their loved ones. The PPG and participant feedback during various stages of intervention development resulted in a community-informed and iterative development process. This process ensures that the final QueerCare intervention is affirming, culturally sensitive, flexible, and personalizable in meeting the needs of SGM youth and young adults at risk for repeat suicide attempts.

While PN originated in cancer care (Freeman et al. 1995; Freeman and Rodriguez 2011), the intervention model has recently also been extended to mental healthcare (Knesek and Hemphill 2020) and applied in several studies (e.g., Tewari et al. 2021; Malla et al. 2019; Diaz-Linhart et al. 2016; Linkins et al. 2011; Anderson and Larke 2009). Based on this model, mental health patient navigators strive to help patients find appropriate and affirming mental health services, identify and address barriers to these services, assist in navigating the fragmentation of care, as well as provide additional social and emotional support that might be missing from SGM youth's caregivers or peers. Similar to QueerCare, existing mental health PN interventions reported in the literature have focused on assessment tasks (e.g., collaborative needs assessment, assess socioeconomic needs, screen clients for psychopathology), care coordination (e.g., refer and connect clients to care, follow-up on client care), providing supportive care (e.g., provide emotional and social support), providing psychoeducation (e.g., educate clients on mental healthcare and psychopathology), providing health and risk monitoring, as well as facilitating social integration (Tewari et al. 2021; Malla et al. 2019; Diaz-Linhart et al. 2016; Linkins et al. 2011; Anderson and Larke 2009). However, no known application of PN has been applied to suicide prevention, either in general or SGM populations, and no known application of the SPI has been tested in an SGM sample.

Findings from the case series highlighted satisfactory feasibility and acceptability of the study procedures planned and designed to evaluate QueerCare. Some study procedures, including the study assessments, were perceived as lengthy but otherwise easy and straightforward. Results further showed that it is feasible to recruit from a population that is at elevated risk for repeat suicide attempts, that is young and includes minors, and that may conceal their SGM identity, mental health challenges, and/or suicidal behavior. Feasibility findings revealed the need for elaborate remote safety procedures and monitoring, the need for a waiver of parental consent, the need for additional intervention materials for voluntarily involving a significant other, and the

difficulty of collecting medical record data across various health systems in the absence of parental consent. The need for waiving parental consent and the related sensitivities are in line with earlier reports in the literature that have highlighted the ability for minors to self-consent and how guardian permissions may prevent the most vulnerable from participating due to fears of disclosure of their sexual orientation or gender identity (Fisher et al. 2016; DiClemente et al. 2010; Mustanski 2011; D'Amico and Julien 2012; Jelsma et al. 2012). These findings may further inform a roadmap for future suicide prevention studies in at-risk SGM youth and young adults.

Triangulation of qualitative and quantitative data also showed satisfactory feasibility and acceptability of QueerCare. The flexibility of the intervention was particularly valued considering the COVID-19 pandemic, with virtual remote sessions generally making it easier for participants to engage and holding important lessons for postpandemic implementations of the intervention (i.e., keeping remote options available to participants). Acceptability findings highlighted that, overall, participants perceived the intervention as helpful and appropriate, especially given the participants' shared identities with their mental health advocate, as also found pivotal in other PN interventions (Blashill et al. 2021b; Wells et al. 2011), received instrumental and emotional support, and valued the flexibility of the intervention design. While challenges related to talking about mental health and periods of reduced capacity to engage remained, participants marked high satisfaction with the services provided by their mental health advocate, as well as the interpersonal relationship with their mental health advocate, similar to findings from prior larger cancer care studies (Jean-Pierre et al. 2012; Chu and Lecciones 2021). Results were further complemented by notions of perceived effectiveness of the intervention and the initial ability of the selected measures to detect preliminarily target engagement by QueerCare. For the key theory-based target mechanisms, over two-thirds of the participants saw an improvement in any score (i.e., lower thwarted belongingness, increased internal or external suicide-related coping skills). Critically, participants also did not report any new suicidal behaviors throughout the intervention period.

Many of the lessons and findings from the current study have been used to further adapt the study procedures and QueerCare. Given the feedback on the length of the initial appointment, the baseline assessment and SPI session were decoupled and further reduced in length. Per feasibility findings, additional guardian-facing information sheets were developed for self-consenting participants who desired to disclose aspects of their study participation to others. These adaptations were made in advance of the launch of a randomized controlled trial ($N = 170$) to evaluate the preliminary efficacy of QueerCare (i.e., preventing suicide attempts) and the engagement of the theory-based mechanistic targets (NCT05669976) when compared to the SPI intervention alone.

In terms of limitations, the present intervention focuses on SGM youth and young adults in restricted geography (i.e., San Diego County), and therefore results may not be generalizable to other structural contexts. While our findings may also not be generalizable to the larger population of SGM youth and young adults due to the limited sample size, the strong use of theoretical

frameworks together with our multi-method approach in triangulating qualitative and quantitative data are strengths of our study. Yet, these findings should be interpreted with caution. A limitation of the study was the single interventionist approach, coupled with a limited sample size similar to other case series, that prevented the assessment of inter-interventionist variability in intervention delivery. While we aimed to reach saturation in our thematic analysis, certain responses were unable to be determined due to the nature of the interview (e.g., question not asked; question tied into another domain or skipped; technical difficulties creating inaudible transcriptions) that may have resulted in missing content or themes. Finally, we note that we conducted an unstructured review of the feasibility notes and mental health advocate feedback, rather than a traditional analysis.

In summary, development of QueerCare resulted in a nine-module, highly flexible intervention to meet individual needs, to address barriers to mental healthcare and peer community, as well as to target theoretically informed mechanisms underlying suicide attempts among SGM youth and young adults. The theory-based and community-informed development approach aided in producing an affirming, personalizable, and efficacious intervention designed to meet the needs of SGM youth and young adults and prevent suicide attempts in this population. Findings from this iterative study showed that the study procedures to evaluate QueerCare and the novel intervention itself were generally feasible and acceptable. Important lessons from the case series have further informed future iterations of the intervention and study procedures. As the first-known suicide prevention intervention specifically developed for SGM youth and young adults at established risk for suicide, QueerCare holds promise to allay key mechanisms that underly suicide in this population and to be a key tool to prevent premature morbidity and mortality and reduce health inequity in a vulnerable population, a fundamental public health goal. Subsequent pilot phases should further assess the feasibility and acceptability of the refined intervention and its preliminary efficacy to prevent suicide among at-risk SGM youth and young adults.

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Ethics Statement

This study was regulated, approved, and monitored by the San Diego State University Institutional Review Board (protocol HS-2020-0076) and the National Institute of Mental Health Data and Safety Monitoring Board.

Consent

All study participants provided written informed consent prior to enrollment into the study.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The quantitative data that support the findings of this study used in the preparation of this manuscript will be available from the National Institute of Mental Health (NIMH) Data Archive (NDA), under collection C3509. NDA is a collaborative informatics system created by the National Institutes of Health to provide a national resource to support and accelerate research in mental health. Dataset identifier (once released): <https://doi.org/10.15154/pmn6-4s58>.

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