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Holistic, trauma-informed adolescent pregnancy prevention and sexual health promotion for female youth experiencing homelessness: Initial outcomes of Wahine Talk

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ABSTRACT

Female youth experiencing homelessness are at high risk for pregnancy due to a host of individual, family, and community-level risk factors. This embedded mixed-method quasi-experimental pilot study examined the initial outcomes of Wahine (woman) Talk, a comprehensive sexual health program delivered by an interdisciplinary team to female youth experiencing homelessness. Wahine Talk includes provision of and connection to basic needs resources, peer mentoring, group based sexual health education, and linkage to and provision of sexual health care. Process and outcome data were collected throughout and for six months after Wahine Talk from a diverse group of 14–22-year-old female youth ($N = 51$) experiencing homelessness. In-depth individual and focus group interview data were collected from providers and youth after Wahine Talk, and analyzed using Template Analysis. Over half (62.7%) of participants were linked to sexual health care during Wahine Talk and birth control usage tripled following the program. Depo-Provera and long acting reversible contraception (LARC) usage, in particular, increased during Wahine Talk (1–19% and 0–25.5%, respectively). Within six months, 31.4% of youth had adopted LARC and 3.9% were using Depo-Provera. Individual and focus group interviews with providers and youth affirm program acceptability and appropriateness.

1. Introduction and background

Nearly half of female young adults experiencing homelessness in the United States (44%) aged 18–25 years are either currently pregnant or parenting (Dworsky, Morton, & Samuels, 2018). This staggering rate of pregnancy is the combined result of high-risk behaviors and being underserved by health care systems and school-based prevention. Compared to their stably housed peers, adolescents experiencing homelessness present with increased instances of engaging in high risk behavior, including initiating sexual intercourse at an earlier age, being more likely to have multiple sexual partners, having lower rates of consistent condom or other contraception use, engaging in sex while intoxicated, and engaging in survival sex (including trading sex for shelter, money, or drugs) (Rotheram-Boris, Parra, Cantwell, Gwadz, & Murphy, 1996). The prevalence of youth experiencing homelessness who engage in survival sex exceeds 20% (Halcón & Lifson, 2004).

Experiences of gender-based violence and other traumatic events are important to understand and address when serving youth experiencing homelessness, who have high rates of victimization, assault, and exploitation (Tyler, Whitbeck, Hoyt, & Cauce, 2004). An estimated 35% of youth experiencing homelessness have been sexually victimized (Tyler et al., 2004). Although more males report having experienced homelessness, young women experiencing homelessness are at increased risk of exposure to violence and trauma such as rape and physical assault (Coates & McKenzie-Mohr, 2010). Among female youth experiencing homelessness, those with a child sexual abuse history have a shorter future time perspective than their non-abused peers (Johnson, Rew, & Kouzekanani, 2006); this understandably may affect their ability to envision and plan for their future, including planning for future pregnancies. A recent, comprehensive, qualitative

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phenomenological study by Begun and colleagues (2019) found that youth experiencing homelessness feel discussion of contraception is "like a different language" and are largely unaware of where and how to access contraception. Yet, considering the significant challenges faced by youth who are both parenting and experiencing homelessness (Aparicio, Rodrigues, Birmingham, & Houser, 2019; Dworsky et al., 2018), it is critical to provide education and support youth in accessing birth control in a sensitive, trauma-informed manner.

1.1. Wahine Talk: holistic, trauma-informed sexual health promotion

1.1.1. Conceptual framework

Given the unique, largely unmet sexual health needs of communities of youth experiencing homelessness, there is compelling justification for development of sexual health intervention designed specifically for youth experiencing homelessness and youth at high risk for experiencing homelessness in order to curb unplanned pregnancy, prevent sexually transmitted infections (STI's), and improve overall sexual health and well-being. Wahine (woman) Talk was designed to help address this gap in social and health care, particularly, in its current iteration, for female adolescent girls and young women experiencing homelessness. Wahine Talk is an incentivized, holistic sexual health program (Aparicio et al., 2018) for youth experiencing homelessness functioning at multiple levels of youths' Social Ecology (McLeroy, Bibeau, Steckler, & Glanz, 1988) in order to enhance their overall sexual health and well-being, improve connectedness with other youth and supportive adults, link them to sexual health care, and help them access and select birth control if they decide to prevent unplanned pregnancy. Wahine Talk is underpinned by principles of Trauma-Informed Care, including safety, transparency and trustworthiness, choice, collaboration and mutuality, and empowerment. Wahine Talk uses a theory-based approach that combines these principles of Trauma-Informed Care with the Transtheoretical Stages of Change Model, and is designed to assess and enhance the youth's readiness to change sexual risk behavior using motivational interviewing techniques (Miller & Rollnick, 2012). The program was designed *with* and *for* youth experiencing homelessness and youth at risk of experiencing homelessness over a two-year period through a community-based participatory action process with shared input and decision-making (Aparicio et al., 2018). The input of youth experiencing homelessness, youth formerly experiencing homelessness, and long-term youth outreach program staff was an integral part of Wahine Talk's initial program design and associated evaluation plan. Then, participant and provider input was elicited weekly during program implementation, allowing for continuous quality improvement, and during in-depth focus groups and individual interviews following program delivery, enabling a youth- and provider-focused analysis of program process and impact. Wahine Talk was designed in the implementation setting for which it was intended (a community-based drop-in center for youth experiencing homelessness) to help anticipate and reduce implementation barriers.

1.1.2. Program description

Wahine Talk intervenes at individual, interpersonal, and institutional/sexual health care system levels to reach out to youth experiencing homelessness where they are living, bring them into the drop-in center, link them to sexual health care, and improve birth control education, access, and use. Wahine Talk includes four core components offered on an ongoing basis after enrollment: *basic needs and social services*, available on a drop-in and referral basis; *peer mentoring*, delivered in person, via text, and through social media by a staff member in close age proximity to the participants; *sexual health education groups*, offered twice weekly; and *sexual health care*, delivered through the on-site clinic and partnering organizations (see Fig. 1). Youth are provided with bus passes and program "pick-ups" from encampments of individuals and families experiencing homelessness to help reduce transportation barriers to program participation. One of Wahine Talk's unique characteristics is that it is an incentivized health care program using cell phones, which have been identified as a largely untapped mechanism for intervention and research with youth experiencing homelessness (Rice, Lee, & Taitt, 2011). Wahine Talk offers participants smartphones and data boosts on a tiered system to encourage program engagement and participation. At enrollment, all participants receive a basic smartphone to facilitate program engagement and communication with their Peer Mentor (a staff member close in age). Participants receive weekly data boosts (or, if they choose, a Walmart or similar gift card) when they participate in weekly sexual health groups. Youth who elect to adopt Depo-Provera receive an upgraded smartphone and 3-month data package. Youth who adopt LARC (long acting reversible contraception) receive a deluxe smartphone and a year of data. If youth desire to have an upgraded smartphone but do not want to get onto a longer-acting birth control method, the Wahine Talk staff work closely with them to obtain employment at the drop-in center or elsewhere so that they can earn enough money to purchase a phone. Great care is taken throughout the program to ensure youth are not unduly influenced to get onto birth control and, instead, are empowered to make the best choices possible for their own sexual health and well-being. The youth who participate in Wahine Talk are of diverse sexual orientations, and sexual health and well-being is discussed across the range of potential sexual activities with partners across the gender spectrum. Although some Wahine Talk participants are lesbian women or women who have sex with women, there remains a risk for unplanned pregnancy due to either survival sex or rape, making birth control an important option to discuss with participants of diverse sexual orientations.

1.2. Current study

This embedded mixed-method quasi-experimental pilot study was a Phase I clinical trial that assessed the initial feasibility, acceptability, and appropriateness of a new sexual health program for youth experiencing homelessness (Wahine Talk) during its first two implementation cycles and for the six months following implementation with its initial two cohorts (51 participants in total). We sought, first, to explore participant and provider experiences of Wahine Talk. Second, we hypothesized that after Wahine Talk, enrolled youth experiencing homelessness would experience increases in:1. social connectedness and self-esteem; 2. readiness to use birth control; 3. overall adoption of any type of birth control; 4. adoption of Depo-Provera; and 5. adoption of LARC (long-acting reversible contraception). We further hypothesized that at least one third (33%) of enrolled youth experiencing homelessness would be effectively linked to sexual health care during Wahine Talk.

2. Method

2.1. Setting and sample

Prior to beginning the study, the Institutional Review Board at the University of Hawai'i reviewed and approved all procedures and all participants were enrolled via a modified informed consent process (allowing them to consent, themselves, to participation even if under 18 due to a legal ability to consent to all sexual health education and services being offered in the program and, frequently, estrangement from their parent/guardian). An interdisciplinary team delivered Wahine Talk at a youth drop-in center (Youth Outreach; YO!) institutionally linked to a federally-qualified health care center (Waikiki Health). Inclusion criteria were that participants were experiencing homelessness or were at imminent risk for homelessness (e.g., insecurely housed or on frequent runaway status), aged 14–22 years, and biologically female (meaning, included youth of any gender identity or gender expression who had a uterus). (Note: although this program was originally designed for female youth, additional and/or parallel iterations of the program are currently being developed for young men,

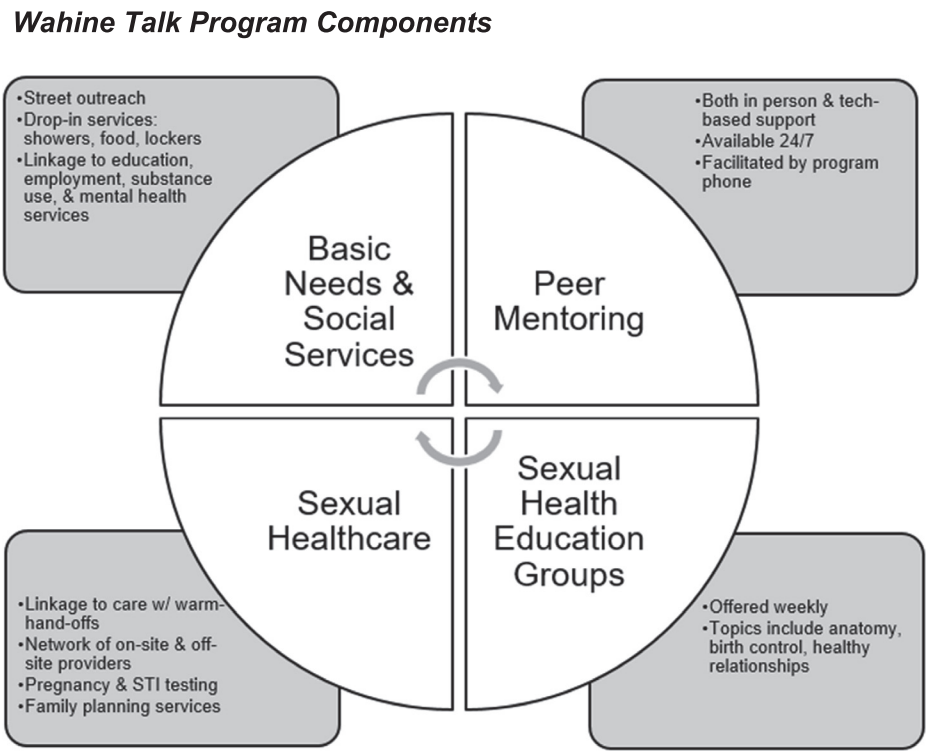

Fig. 1. Wahine talk program components.

transgender youth, and non-binary, gender expansive, two-spirit, and *māhū* ("in the middle") youth experiencing homelessness). Exclusion criteria included being currently pregnant or currently using LARC. Enrolled participants ($N = 51$) were aged 14–22 years ($M = 17.7$, $SD = 2.47$). Participants were of diverse racial and ethnic backgrounds. When grouped categorically, fifty-five percent (55%) of participants identified as multi-racial, 37% identified as Native Hawaiian or other Pacific Islander (often of multiple ethnicities within this racial category), and 2% identified as Caucasian/White. We also allowed for participants to select as many race and ethnicity categories as applied. Forty-three percent (43%) of participants identified as Native Hawaiian. Twenty-eight percent (28%) identified as Micronesian, 20% identified as Chinese, 12% identified as Japanese, and 14% identified as Samoan (all ethnicities are reported in Table 1). Participants were aged, on average, 15.84 years at first sex. Thirty-nine percent (39%) of participants had a prior pregnancy, 22% had ever given birth to a child, 8% had ever had an abortion, and 29% had ever had a miscarriage. Nearly half (43%) of youth had been in foster care at some point during their lives, 18% had been adopted, and 30% had a *hānai* family, by which they meant that they lived with blood-related or fictive kin who cared for them and treated them as if they were a family member. Participant demographics are summarized in Table 1.

2.2. Data collection

Per National Institutes of Health (NIH) definitions, this feasibility study was a Phase I clinical trial, which involved delivery of a new, promising intervention to a small group of people with detailed process and outcome tracking. As such, 51 participants is an appropriate sample size for planned descriptive analyses and for Wahine Talk's phase of intervention development (National Institutes of Health, n.d). Participants were enrolled in Wahine Talk during two implementation cycles. The first cycle ($N = 20$) ran from November 2016 to March 2017 and the second cycle ($N = 31$) ran from July 2017 to March 2018. All youth participants were invited to complete a pre-test/baseline individual interview, post-test quantitative and qualitative individual interview, and post-test qualitative focus group. Wahine Talk's providers (Peer Mentor, Health Educator, Medical Provider, and Program Manager) each completed a weekly report on outreach activities and participants' service utilization, and participated in either a focus group or individual qualitative interview, depending upon their availability, at the conclusion of each implementation cycle.

We assessed rates of linkage to sexual health care; changes in social connectedness (Social Connectedness Scale, Lee & Robbins, 1995), self-esteem (Rosenberg Self-Esteem Scale, 1965), and readiness to use birth control (5 point project-developed scale based on the stages of change model [Prochaska & Velicer, 1997]); adoption of Depo-Provera or LARC; and incidence of pregnancy via participant self-report and/or clinic records. Fifty-one ($N = 51$) youth experiencing homelessness enrolled in the study on a rolling basis over two implementation periods; of these, clinic records were available for 32 participants who were successfully linked to care and 25 participants who completed both the pre- and post-test measure. Service utilization data (i.e., component dosage) were available for all 51 participants. Clinic-reported follow-up data on Depo-Provera use, LARC use, and pregnancy were then assessed at three months and at six months post-Wahine Talk. Youth participants received a total compensation of $80 for their participation in the three points of data collection (baseline/pre-test individual interview, post-test individual interview, and post-test focus group), which totaled approximately three to four hours of time. The amount of participant compensation was set considering minimum wage for the time spent completing the measures, traveling to and from the youth drop-in center for data collection, transportation costs, and (for parenting youth) childcare costs.

2.3. Data analysis

To analyze quantitative service utilization (dosage) data, we counted how often youth participated in each component. For services offered weekly (basic needs services and sexual health education groups), we examined this usage relative to how many weeks they were enrolled in Wahine Talk. We then compared self-esteem and social

Table 1
Youth participant demographics.

Variable	N	% of sample	Mean (SD)	Range
Age			17.71 (2.47)	14–22 years
Race (categorical)				
Native Hawaiian and Other Pacific Islander	19	37%		
Multi-Racial	28	55%		
White/Caucasian	1	2%		
Race and Ethnicity (all)				
Black/African American	3	6%		
Chinese	10	20%		
Hispanic	11	22%		
Japanese	6	12%		
Korean	0	0%		
Micronesian	14	28%		
Native Hawaiian	22	43%		
Other Asian	0	0%		
Other Pacific Islander	7	14%		
Samoan	7	14%		
Tongan	1	2%		
White/Caucasian	5	10%		
Age at first sex			15.84	11–20 years
Participant had a prior pregnancy	20	39%		0–7 pregnancies
Participant had a prior miscarriage	15	29%		0–6 miscarriages
Participant had a prior abortion	4	8%		0–2 abortions
Participant had a prior live birth	11	22%		0–2 births
Birth Family				
Size of birth family			6.28 (2.87)	1–16 people
Years of school birth mother completed			9.80 (2.61)	1–13 years
Years of school birth father completed			10.2 (2.56)	4–13 years
Hānai Family				
Has a *hānai* family	15	30%		
Age joined *hānai* family			10.71 (4.61)	1–19 years
Size of *hānai* family			10.73 (6.88)	5–25 people
Years of school *hānai* mother completed			10.73 (3.86)	4–18 years
Years of school *hānai* father completed			11.54 (3.33)	8–18 years
Adopted Family				
Was adopted	9	18%		
Age adopted			4.28 (4.63)	0–13 years
Size of adopted family			6.33 (2.12)	3–9 people
Years of school adopted mother completed			10 (3.46)	4–16 years
Foster Care				
History of foster care	22	43%		
Age entered foster care			8.41 (5.10)	1–17 years
Currently has a resource family	5	10%		
Years lived with resource family			7.80 (6.69)	2–15 years
Size of resource family			5.60 (2.30)	4–9 people
Years of school resource mother completed			11.4 (4.90)	8–18 years of school
Years of school resource father completed			12.00 (4.18)	8–18 years of school

connectedness scores at pre- and post-test for those youth who participated in both data collection activities. Of note, there were no differences at baseline in social connectedness or self-esteem scores between youth who did and did not complete the post-test. In-depth interviews and focus groups with $n = 25$ youth participants and $n = 7$ providers were audio-recorded and audio files were naturalistically transcribed. Transcripts were reviewed by the research team for accuracy prior to analysis. All qualitative data were analyzed in NVivo 12 using Template Analysis (Crabtree & Miller, 1999), which is a type of Thematic Analysis. First, we prepared a group codebook that was organized by anticipated themes. Second, we coded each transcript line by line, refining the codebook as needed after each interview to ensure participants' experiences were being accurately captured. Third, we examined the coded data for patterns of convergence and divergence across interviews. Finally, we compiled final themes and subthemes. Each interview was coded by a primary coder, who met with the project's lead investigator for peer debriefing sessions. Throughout, we maintained a research journal with detailed research memos to track analysis decisions and emergent findings. Findings were reported back to Wahine Talk providers for feedback and refinement prior to submission for publication.

3. Results

Study results are organized below by component dosage, psychosocial and sexual health outcomes, and themes in youth and providers' experiences of Wahine Talk's structure, delivery, and facilitation of interpersonal relationships, as well as opportunities for enhancing the program when delivered in the future. Key results are summarized in Fig. 2.

3.1. Component dosage

Participants had access to four core categories of services through Wahine Talk: basic needs and social services; peer mentoring; sexual health education groups; and sexual health care.

3.1.1. Basic needs and social services

Basic needs services (such as a safe drop-in center, shower, locker, meals, and laundry) and social services (such as referral to educational

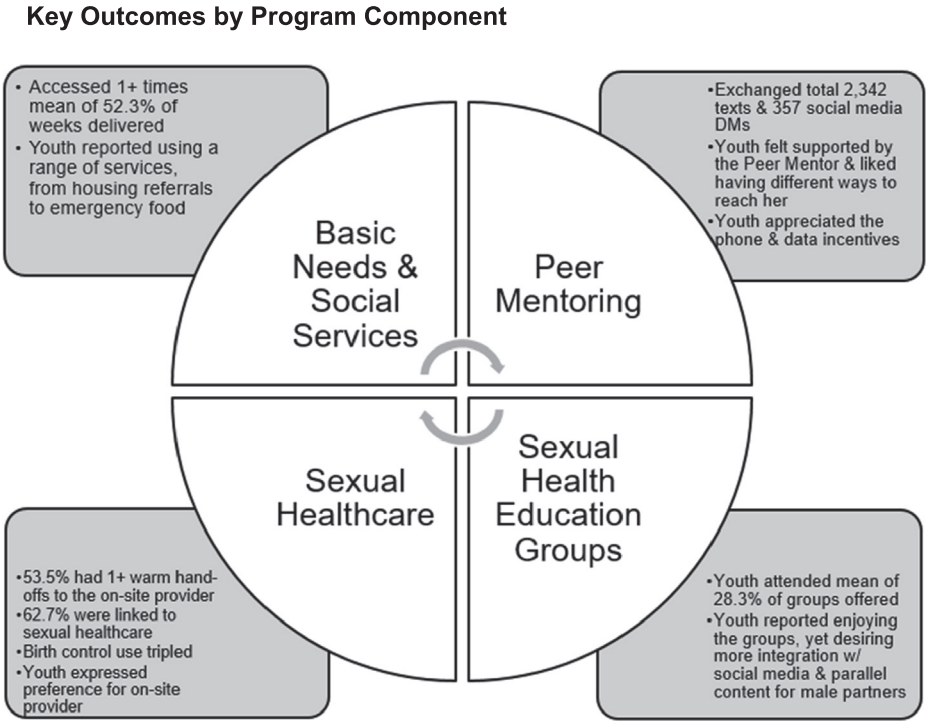

Fig. 2. Key outcomes by program component.

supports, mental health services, and substance use services) were the most frequently utilized component. Participants accessed basic needs and social services at least once per week for approximately half of weeks enrolled in Wahine Talk (52.4% of weeks enrolled; 7.8 weeks in cohort 1 and 8.5 weeks in cohort 2).

3.1.2. Peer mentoring

Text messaging was the most popular off-site way for youth to engage with their Peer Mentor. Participants exchanged a total of 2342 text messages with Peer Mentor over the two implementation cycles of Wahine Talk, averaging 26.35 peer mentoring texts per participant in cohort 1 and 45.4 texts per participant in cohort 2. (Of note, the second implementation cycle ran for twice the length of the first implementation cycle.) In addition, participants exchanged a total of 357 direct messages via Facebook Messenger or Instagram with the Peer Mentor, averaging 14.6 direct messages in cohort 1 and 0.9 in cohort 2. Of the regular Instagram posts created (posted approximately twice per week), each received 0 to 4 likes and 4 posts each received one comment.

3.1.3. Sexual health education groups

Weekly, Wahine Talk's Health Educator led sexual health education groups; if needed, content was made up on an individual basis or offered during the next cycle of groups. Participants attended a mean of 27.6% (4.7 groups) in cohort 1 and 29% (2.9 groups) in cohort 2 of groups offered while they were enrolled.

3.1.4. Sexual health care

Wahine Talk's Medical Provider delivered sexual health care in an on-site clinic. Some youth also received care from community partner clinics (e.g., Planned Parenthood). Approximately half of the participants received a warm hand-off to Wahine Talk's Medical Provider (65% in cohort 1 and 42% in cohort 2); often, more than one warm hand-off was required to successfully link youth to care. A warm hand-off includes the referring staff member (Peer Mentor, Health Educator, or Program Manager) assessing a participant's interest in meeting with the Medical Provider, discussing any concerns, and answering any questions. If interested, the referring staff member then accompanies the youth to meet with the Medical Provider, usually for a "pre-appointment" introduction and informal discussion first, after which the youth can decide whether or not she would like to schedule a more formal clinic appointment. Sexual health care was the program component used by the largest percentage of participants: 62.7% of participants were successfully linked to care and seen by Wahine Talk's Medical Provider or an off-site sexual health care provider across the two cohorts (60% in cohort 1 and 65% in cohort 2). During delivery of sexual health care, approximately one quarter of youth had a pregnancy consultation (25% percent of participants in cohort 1 and 22.6% in cohort 2).

3.2. Initial psychosocial and sexual health outcomes

3.2.1. Pre- to post-test social connectedness, self-esteem, readiness to use birth control, readiness to use Depo-Provera, readiness to use LARC, and birth control uptake

Wahine Talk participants did not experience statistically significant changes in either cohort in social connectedness or self-esteem, as measured by standardized measures (though see qualitative results below that suggest otherwise for some participants). Participants' self-reported readiness to use any type of birth control increased significantly from pre- to post-test (t 4.9, df 10, $p < .001$). Participants' self-reported readiness to use Depo-Provera and their readiness to utilize LARC also increased, although the change was trending on statistical significance and was *not* statistically significant. It is possible this effect would be detected with a larger sample size. Self-reported use of any type of birth control tripled from less than a fifth at pre-test to over half of Wahine Talk participants at post-test (n = 8, 15.7% at pre-test, to n = 26, 51% at post-test). At the end of the implementation periods, per clinic records, nearly half of Wahine Talk participants were utilizing some type of longer-acting contraceptive, including Depo-Provera (n = 10, 19.6%) or LARC (n = 14, 27.5%).

3.2.2. Follow-up to six months Depo-Provera uptake, LARC uptake, and pregnancy

At three months post-Wahine Talk, two youth (3.9%) were using Depo-Provera and 15 youth (29.4%) were using a LARC. At six months post-Wahine Talk, Depo-Provera usage remained stable at 3.9% and LARC usage increased slightly to 31.4% of the sample. Four youth became pregnant (7.8% of sample) either during Wahine Talk or within six months of the end of the program; of these, two pregnancies were carried to term and two pregnancies were terminated. Three of the four pregnancies were reported by the youth to be unplanned. One pregnancy was planned.

3.3. Qualitative themes

3.3.1. Theme one: delivery structure

Youth and provider participants shared aspects of Wahine Talk's delivery structure that worked well and other aspects that were challenging related to several key areas, including balancing participant autonomy with setting necessary boundaries, the location and availability of sexual health care, and having structured group session times. Participant autonomy played a key role in the implementation of Wahine Talk. Providers allowed participants to make decisions on their own so that *"they [didn't] feel like they [were] being told what to do."* This approach, however, required providers to set *"boundaries"* and remind participants frequently that although *"I'm here for you,"* they are still obligated to report information that may be perceived as worrisome (such as safety-related information), if shared.

The location of the clinic and availability of the Medical Provider also proved important. Wahine Talk staff reported that participants "*a lotta times, [had an] outta sight, outta mind"* mentality related to health care. It was sometimes challenging for youth to make the transition into the clinic and away from the TV and other activities occurring at the youth drop-in center. The Wahine Talk team worked to encourage youth to first meet the on-site Medical Provider through a warm hand-off. Once that relationship had begun to be established, youth were much more likely to want to participate in sexual and other health care. In order to expand the availability of sexual health services since the on-site Medical Provider's time was limited, Wahine Talk staff also helped the youth access other local clinics. Although this allowed the youth to be seen more quickly by a sexual health care provider, youth were unable to have the "pre-appointment" warm hand-off/informal meeting with the outside clinic providers. In addition, not all outside clinic staff were accustomed to working with young women experiencing homelessness. As one Wahine Talk provider stated, *"with these girls, trust is everything, and because we had to take them to different clinics, [the girls were], like, really standoffish [and would say], 'Uh, I don't wanna go anymore,' …The [outside clinic] staff, honestly, were really rude to them."* Although Wahine Talk serves as a *"warm hub,"* staff have little control over what participants experience outside of the youth drop-in center when visiting other clinics.

Lastly, having specific sexual health education group session times could be challenging when youth are balancing a great many demands on their time. On some weeks, only one person came to the group sessions. This made it challenging for providers to deliver an interactive curriculum as it "*becomes more like a teacher and student [relationship], as opposed to a group where everybody is learning together."* Providers were forced to *"stay on [their] toes,"* because *"you never know what you're gonna get."* Several participants explained that either the day or time that group sessions were offered did not work well due to prior commitments, such as work responsibilities. One participant proposed that, in the future, *"maybe changing the day or having more exte[nded] times"* would work well. Further, on occasion, participants with clashing personalities attended group on the same day, which also posed challenges. Providers had to proactively ensure that the environment remained safe and allowed for a successful group session. Providers attributed this challenge to having an open-enrollment/rolling admission program structure. Along with police-led sweeps of encampments where people experiencing homelessness live, which dismantled youths' temporary homes, poor peer interpersonal relationships among some participants affected participation in the Wahine Talk sexual health education groups. Fortunately, because one-on-one sessions were encouraged whenever desired (in addition to text and social media-based communication), staff had other opportunities to deliver similar sexual health education content in a flexible manner that was responsive to each participants' preferences.

3.3.2. Theme two: delivering Wahine Talk

Participants' were generally very appreciative of the services that they were able to access as a participant in Wahine Talk. Few expressed neutral or negative feelings regarding the basic needs services available at the youth drop-in center. For the peer mentoring and in-person sexual health education groups, youth expressed varied levels of participation and topics of interest. Other key components of Wahine Talk included sexual health care services and program incentives. Of note, perspectives on program incentives were different between participants and some of the program providers, so these results are reported separately below.

3.3.3. Delivering Wahine Talk: basic needs and social services

Provision of basic needs services proved a critical component of Wahine Talk, and social service referrals provided by Wahine Talk staff to outside resources enabled participants to meet their basic needs. For example, as one participant shared, she was able to rent a house without having *"to come out of pocket"* after being connected to the Section 8 housing program by Wahine Talk staff. Participants shared that the youth drop-in center provided a stable place for mail delivery, food, a hot shower, menstrual pads, and needed baby clothes for participants' children. When prompted, most participants struggled to find anything that was *not* helpful about the basic needs services received through Wahine Talk. As one participant expressed, *"when you don't have certain things in place, this really helps."* Another participant shared that *"if [the drop-in center] ends, I don't know where else to go. Like, I can run out of food – run out of my EBT [food stamps]. I [can] still come here, I [can] still grab food for my whole family."* In terms of desired areas of program change, participants expressed wanting more individual time with staff due to their many needs, although understood that *"[staff] only have so many hours,"* to devote to each participant. Some of the youth expressed a wariness about being at the drop-in center because they generally "*don't like being around a bunch of people."* Other youth suggested providing childcare in order to participate in the GED class offered at the drop-in center.

3.3.4. Delivering Wahine Talk: peer mentoring

Peer mentoring occurred both in person and through the use of social media, phone calls, and texting. Participants reported preferring different modes of reaching the Peer Mentor. Those who used Facebook and Instagram felt the posts were generally helpful and provided "good advice about safe relationships." One participant suggested the possibility that "*once a week you have to be on [social media] to, like, participate in a group discussion"* that reinforces the topics discussed during sexual health education groups. Several participants enjoyed receiving text messages from staff because they received the correct answer to sexual health-related questions right away, and the content shared through text messages served as a *"reminder that things could be worse."* Participants who elected not to use social media as a method to receive peer mentoring felt indifferent about it being a component of Wahine Talk. These participants simply preferred to connect with the Peer Mentor in other ways.

3.3.5. Delivering Wahine Talk: sexual health education groups

During the weekly in-person sexual health education groups, participants felt as though they could be open, and that the topics were

"fun" and relatable. The only topic that led to some reservation was male genitalia. As one participant explained, *"I don't want to learn about the boy parts - even though I do [sexual] stuff - it's weird to learn about guys when you're a girl."* Nonetheless, participants felt that they learned a great deal because program staff were engaging and helped to explain concepts *"on a level that [we] could understand, not just on a computer and stuff."* To facilitate being open, providers sometimes shared their personal experiences, which was an effective way to connect with the youth. As one participant explained, there was a time when many program participants did not want to answer a question posed during a group session, *"and one of the [staff] was like 'well this happened [in her own life],' and then everybody was 'okay' and opened up."* Some participants wished the program had more group sessions and group activities.

3.3.6. Delivering Wahine Talk: sexual health care

Participants appreciated having the space to explore all of their birth control options, and, as a result, some chose to adopt birth control. As one participant explained, birth control has *"given me, like, a better future, so if there was no Wahine Talk, I would have had more than one kid. We'd struggle."* Among those who chose to get on birth control, several reported being in pain at times and struggled to manage side-effects such as cramping and nausea. However, some participants viewed the side-effects as more manageable than having another child, so they chose to remain on birth control. The only health care topic discussed negatively was the timing of pregnancy prevention in their lives. One participant who had given birth to two children prior to entering the program felt that getting the information was *"a little too late"* and wished she had found Wahine Talk earlier.

3.3.7. Delivering Wahine Talk: incentives – participants' perspective

Participants enjoyed receiving *"killer incentives,"* particularly the bus passes and Walmart gift cards as they *"motivated*" the young women to attend before they had gotten to really learn about the program. Participants also appreciated that they did not have to pay for their birth control, and noted that receiving a cell phone enabled contact with family members, and helped when looking for jobs because it provided potential employers a direct method of contact. Several agreed that Wahine Talk participants *"should be grateful for what they get."* For some, however, maintaining a cell phone proved challenging, particularly for those participants who elected to receive gift card incentives rather than data boosts when they participated in the weekly sexual health education groups. Other participants who rarely attended group shared, *"they gave us phones, but then you have to pay for your own data after that"* if you choose not to attend sexual health education groups, which was frustrating. Other participants felt as though the incentives were too generous, sharing that the phones are *"too much. They [are] already giving us the birth control, so why [do we also get a phone]."* Accepting the cell phone, for this participant, felt like *"taking advantage"* of the program.

3.3.8. Delivering Wahine Talk: incentives – providers' perspective

Wahine Talk providers similarly viewed the program incentives positively in terms of how they facilitated program engagement. They shared valuing that gift cards enabled the participants to buy needed supplies such as diapers and food. Phones, most notably, allowed providers to *"get in contact with [participants] at any time that [we] needed."* One provider highlighted that even without data, participants were able to find locations with free WiFi and send direct messages to program staff through Facebook Messenger or Instagram. Cell phones also enabled provider-participant relationship building. As one provider stated, *'I've seen some really, really fast bonds develop because, I think, of that more intensive communication that they're able to have with the phone."* Some of the providers expressed concern that adoption of longer acting types of birth control (Depo-Provera and LARC) was incentivized and suggested other incentive structures, discussed further below.

3.4. Theme three: interpersonal relationships

3.4.1. Interpersonal relationships: participant-provider

Many participants were able to build positive relationships with Wahine Talk staff, viewing them as people who they could talk to and who are *"there if you ever needed [them]."* Positive interpersonal relationships enabled participants to learn from one another and their peers. As explained by one participant when discussing the sexual health education groups, *"I don't have sisters and my mom is distant in my life, so it was kinda cool to talk about that kind of stuff with somebody that I could, like, open up to."* Not only did participants feel comfortable and accepted, they also appreciated *"knowing everybody's opinions about the topic"* being discussed, and believed that *"it's good to hear from other people [staff members and youth participants], because everybody has different advice."*

Providers described similarly close relationships with the participants. They shared that they actively worked to build these relationships by remaining in constant communication with the participants and being mindful of how they talk to them in a way *"as to not to make them feel dumb"*, or youth would just *"tune [us] out."* As explained by one provider, *"we're always checking up on them. Even though it may be irritating at first, they eventually love that, and they get mad if we don't talk to them."* Being present and available for participants, whether or not it was related to sexual health, built trust. Being trusted, in turn *"opened up a lot of doors for other things, like education and housing – it's just being that person that they go to."*

Despite primarily positive provider-participant relationships, participants noted that providers sometimes *"over-explained"* concepts. As shared by one participant, *"sometimes [providers] think they're breaking it down, but they're making it longer for us to, like, not understand."* Participants also wished they had more individual time with staff who often *"have a lot on their plate."* Some young women struggled with their male partners' interference with their time at Wahine Talk. As one provider explained, *"[they] had to deal with a lot of crazy boyfriends, who would always lurk,"* which would distract the participant. In these instances, providers felt as though they would *"lose control"* of the session. Lastly, it was more challenging for providers who were not from Hawai'i to initially connect with participants as they were often teased by participants. Providers, however, remained persistent in their attempts to gain participant trust, and *"eventually [they come to trust you because] you're always there for them, and that's what matters most."*

3.4.2. Interpersonal relationships: participant-participant

Wahine Talk providers observed that youth participants from the first implementation cycle of Wahine Talk naturally assisted with recruiting participants for cycle 2 by sharing *"what they're gonna learn."* Within each cycle, participants shared that they generally liked their peers. In the few instances where Wahine Talk participants did not get along with one another, providers noted that *"personal conflict"* resulted in participants choosing not to come to the youth drop-in center because they *"didn't feel it was a safe place."* Similarly, providers noted that *"teenage drama"* sometimes occurred in the group sexual health education sessions, which was challenging to navigate when the groups were small and *"[participants] didn't know each other; it was kind of awkward."*

3.4.3. Interpersonal relationships: provider-provider

Providers supported one another, both when interacting with participants, and when growing as a professional. As providers explained, they helped one another *"hone their motivational interviewing skills."* Further, they expressed that being able to constantly communicate was critical for quality program implementation. Providers noted that the job can be *"very draining, and very difficult situations happen sometimes"* so it is important that they can give each other a day off or time away when needed. Additionally, during staff transitions, providers shared that they would "*kinda vouch for the new folks,"* and participants would

feel as though *"if [the staff member we know already] trusts them, you know, then they're okay."*

3.5. Theme four: looking to the future

Providers proposed future efforts to involve male youth who are homeless or at risk of homelessness. One participant proposed group sessions offered to couples, or a program similar to Wahine Talk, but specifically for young men who are homeless. Providers also proposed the need for a program with the same incentives as Wahine Talk, but one that focuses on employment, where phones are used by youth to schedule interviews. Providers highlighted the need for more clinic days, noting that clinic appointments should ideally be offered every day that the drop-in center is open. Finally, providers suggested using a different incentive structure wherein participants receive a phone upgrade not for adopting Depo-Provera or LARC, but rather for participation in program activities, such as attending a certain number of groups, getting signed up for insurance, and having a one-on-one conversation with providers about birth control.

4. Discussion

This study sought to explore the experiences of female youth experiencing homelessness receiving and program providers delivering Wahine (woman) Talk, a newly developed sexual health program for female youth experiencing homelessness, to assess program feasibility, acceptability, and appropriateness. We also sought to examine changes in youths' social connectedness, self-esteem, readiness to use birth control, actual birth control use, and linkage to sexual health care after participation in Wahine Talk. Study findings suggest Wahine Talk is feasible to deliver, is appropriate for female youth experiencing homelessness, and is acceptable to female youth experiencing homelessness. Compared to rates prior to entering the program, youth participating in Wahine Talk experienced increased readiness to utilize birth control, actual birth control usage, and linkage to care. Of note, four youth (7.8%) became pregnant during or within six months after Wahine Talk, which can be compared to local rates of 44.6% of homeless female youth having ever had a child, with likely higher rates of pregnancy overall (Yuan, Stern, Gauci, & Liu, 2018). One of these pregnancies was planned after a clearly expressed desire to become pregnant throughout the program; the other three were unplanned. Wahine Talk seeks to enhance youth's sexual health and well-being, and regularly affirms youth choice. When an enrolled young woman becomes pregnant in Wahine Talk, she receives supportive counseling from the Medical Provider about her options for continuation or discontinuation of the pregnancy, and the appropriate medical and psychosocial referrals based on her choice.

LARC was clearly the most stable type of birth control selected by youth participants, circumventing problems with missed Depo-Provera delivery windows. The 31.4% LARC usage rate among Wahine Talk participants at six months post-intervention far exceeds that of the general U.S. population, wherein 5.8% of sexually active teens (15–19 years old) have ever used LARC (Abma & Martinez, 2017). For some youth, Depo-Provera may serve as a bridge to LARC; many of those Wahine Talk participants who selected LARC chose to adopt Depo-Provera first. As such, careful follow-up is indicated prior to the period of time when young women's next Depo-Provera shot is due to be delivered as this is when youth may be willing to consider a longer-term option and decide to transition from Depo-Provera to LARC. Youth in Wahine Talk engage in a thoughtful process of initial program engagement and trust building prior to considering their birth control options and making a decision (Kachingwe et al., 2019).

These findings add to a growing body of literature examining how to effectively address the unmet sexual health needs of youth experiencing homelessness through effective outreach, engagement, and delivery of multi-level trauma-informed social and health care. Prior community-engaged research with youth experiencing homelessness suggests sexual health programs serving them should include female-focused intervention (Rew, Chambers, & Kulkarni, 2002), address ambivalence related to pregnancy and relationships (Tucker et al., 2012), work to bolster youth's self-esteem (Tevendale, Lightfoot, & Slocum, 2009), and include access to a mentor (Tevendale et al., 2009). Youth experiencing homelessness have shared that any sexual health program should include respect at its core, supplementing existing knowledge with information about long-term effects of STI's and providing specific and concrete examples rather than generalizations when delivering program content (Rew et al., 2002). Wahine Talk includes all of these suggested components.

4.1. Study limitations and strengths

This study has several limitations. It was conducted within a specific geographic area; as such, program impacts could vary in other places and with other populations. Wahine Talk was delivered to female youth, so findings cannot be extended to young men, transmen, transwomen, or non-binary youth experiencing homelessness – all critical populations of need for attuned sexual health intervention. Although program utilization data were available for all participants and clinic data were available for the majority of participants, nearly half of participants did not complete the individual post-test interview, which included questions about readiness to use birth control and use of birth control, due to no longer coming to the youth drop-in center. Fortunately, many of these young women had engaged in clinic services so that there were medical outcomes to report. It is possible there were additional young women who became pregnant during the study, but could not be located. It is also possible that there were additional young women who adopted birth control that could not be located. Although difficulty with follow-up is inherent in transient populations such as youth experiencing homelessness, we believe that these measurement concerns should not in themselves limit our willingness to test programs being implemented in this largely invisible community adversely affected by a great many social determinants of health. This study is the first of its kind to test an incentivized sexual health care program with female youth experiencing homelessness and is an important contribution to the literature on attuned sexual and reproductive health intervention.

4.2. Implications and conclusion

Study findings suggest that Wahine Talk is feasible to deliver, acceptable to and appropriate for youth experiencing homelessness, and demonstrates initial efficacy to improve readiness to utilize birth control and linkage to sexual health care, increase actual birth control usage, and prevent adolescent pregnancy among female youth experiencing homelessness and those at-risk for homelessness. Although Wahine Talk was developed to be implemented in any drop-in center for female youth experiencing homelessness (with possible application to other youth-serving settings), it may be beneficial to explore cultural tailoring to different communities being served using several tailoring strategies. These could include strategies aimed at tailoring Wahine Talk for local promotional appeal and socio-cultural relevance; attending to peripheral, evidential, and linguistic needs; and employing a constituent-involved approach (Tofaeono et al., In Press). We also recommend Wahine Talk be adapted for working with youth experiencing homelessness of diverse gender identities to expand upon our existing program; although inclusive and affirming of diverse sexual orientations, the program as currently offered is focused on young females experiencing homelessness. Given the heavy overrepresentation of lesbian, bisexual, gay, transgender, and queer/questioning (LGBTQ) youth among youth who are experiencing homelessness, we must disrupt cis- and heteronormativity in sexual and reproductive health education and care. Future research may benefit from some of the program delivery

and research methods described in this manuscript, including flexibility in how sexual health education content is delivered (i.e., not only through group education, but individual one-on-one sessions and via social media, text, and phone calls); use of motivational interviewing to enhance sexual health among youth experiencing homelessness; leveraging youth-valued incentives with multiple purposes (program engagement, peer and family connection, employment, adoption of target behaviors); rich qualitative and quantitative data collected from both participants and providers; and planned use of clinic data to supplement anticipated loss to follow-up. In summary, Wahine Talk is a promising program that should continue to be tested through a community-engaged/participatory action approach.

Conflict of interest statement

The authors have no conflicts to report.

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References

Abma, J. C., & Martinez, G. M. (2017). *Sexual activity and contraceptive use among teenagers in the United States, 2011-2015. National Health Statistics Reports*. Hyattsville, MD: National Center for Health Statistics.

Aparicio, E. M., Rodrigues, E., Birmingham, A., & Houser, C. (2019). Dual experiences of teenage parenting and homelessness among Native Hawaiian youth: A critical interpretative phenomenological analysis. *Child and Family Social Work, 24*, 330–339.

Aparicio, E. M., Phillips, D. R., Okimoto, T., Cabral, M. P., Houser, C., & Anderson, K. (2018). Youth and provider perspectives of Wahine Talk: A holistic teen pregnancy prevention program developed with and for homeless youth. *Children and Youth Services Review, 93*, 467–473.

Begun, S., Combs, K. M., Torrie, M., & Bender, K. (2019). "It seems kinda like a different language to us": Homeless youths' attitudes and experiences pertaining to condoms and contraceptives. *Social Work in Health Care, 58*(3), 237–257.

Coates, J., & McKenzie-Mohr, S. (2010). Out of the frying pan, into the fire: Trauma in the lives of homeless youth prior to and during homelessness. *Journal of Sociology and Social Welfare, 37*, 65–96.

Crabtree, B. F., & Miller, W. L. (Eds.). (1999). *Doing qualitative research*. Thousand Oaks, CA: Sage Publications.

Dworsky, A., Morton, M. H., & Samuels, G. M. (2018). *Missed opportunities: Pregnant and parenting youth experiencing homelessness in the America.* Chicago, IL: Chapin Hall at the University of Chicago.

Halcón, L. L., & Lifson, A. R. (2004). Prevalence and predictors of sexual risks among homeless youth. *Journal of Youth and Adolescence, 33*(1), 71–80.

Johnson, R. J., Rew, L., & Kouzekanani, K. (2006). Gender differences in victimized homeless adolescents. *Adolescence, 41*(161), 39.

Kachingwe, O. N., Anderson, K., Houser, C., Fleishman, J., Novick, J., Phillips, D. R., & Aparicio, E. M. (2019). "She was there through the whole process:" Exploring how homeless youth access and select birth control. *Children and Youth Services Review, 101*, 277–284.

Lee, R. M., & Robbins, S. B. (1995). Measuring belongingness: The social connectedness and social assurance scales. *Journal of Counseling Psychology, 42*(2), 232–241.

McLeroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly, 15*(4), 351–377.

Miller, W. R., & Rollnick, S. (2013). *Motivational interviewing: Helping people change, 3rd edition* (3rd ed.). New York, NY: Guilford Press.

National Institutes of Health. (n.d.). NIH clinical research trials and you. Retrieved from https://www.nih.gov/health-information/nih-clinical-research-trials-you/basics.

Prochaska, J. O., & Velicer, W. F. (1997). The transtheoretical model of health behavior change. *American Journal of Health Promotion, 12*(1), 38–48.

Rew, L., Chambers, K. B., & Kulkarni, S. (2002). Planning a sexual health promotion intervention with homeless adolescents. *Nursing Research, 51*(3), 168–174.

Rice, E., Lee, A., & Taitt, S. (2011). Cell phone use among homeless youth: Potential for new health interventions and research. *Journal of Urban Health, 88*(6), 1175–1182.

Rosenberg, M. (1965). *Society and the Adolescent Self-Image.* Princeton, NJ: Princeton University Press.

Rotheram-Boris, M. J., Parra, M., Cantwell, C., Gwadz, M., & Murphy, D. A. (1996). Runaway and homeless youths. In R. J. DiClemente, W. B. Hansen, & L. E. Poton (Eds.). *Handbook of Adolescent Health Risk Behavior*. New York: Plenum Press.

Tevendale, H. D., Lightfoot, M., & Slocum, S. L. (2009). Individual and environmental protective factors for risky sexual behavior among homeless youth: An exploration of gender differences. *AIDS and Behavior, 13*(1), 154.

Tofaeono, V., Ka'opua, L.S.,Terada, T., Taliloa-Vai Purcell, R.A., Sy, A., Aoelua-Fanene, S., Cassel, K....Tofaeono, V.W. (In Press). Research capacity strengthening in American Samoa. Fa'avaeina le fa'atelega o le tomai sa'ili'ili i Amerika Samoa. British Journal of Social Work.

Tucker, J. S., Ryan, G. W., Golinelli, D., Ewing, B., Wenzel, S. L., Kennedy, D. P., ... Zhou, A. (2012). Substance use and other risk factors for unprotected sex: Results from an event-based study of homeless youth. *AIDS and Behavior, 16*(6), 1699–1707.

Tyler, K. A., Whitbeck, L. B., Hoyt, D. R., & Cauce, A. (2004). Risk factors for sexual victimization among male and female homeless and runaway youth. *Journal of Interpersonal Violence, 19*(5), 503–520.

Yuan, S., Stern, I. R., Gauci, K. T., & Liu, L. (2018). *Street youth study.* Honolulu, HI: University of Hawai'i, Center on the Family.