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Bridging inequity gaps in healthcare through tailored support: implementation perspectives of the Social Health Bridge-Building Programme

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Abstract

Background Equity in access to and outcomes from healthcare is a fundamental pillar of universal healthcare systems. However, these systems have not eliminated social inequities in health. Significant socio-economic disparities persist in access to and utilisation of healthcare services, as well as in the quality and outcomes of care. The Social Health Bridge-Building Programme aims to enhance health equity by addressing multi-level barriers to healthcare. In this programme, healthcare student volunteers accompany individuals in a socially vulnerable situation to healthcare appointments, providing support before, during, and after these encounters. This reciprocal arrangement not only enhances the healthcare experience for the individuals involved but also offers student volunteers unique insights into the social determinants of health while fostering the development of essential communication skills. This study explores implementation perspectives of the programme, focusing on those accompanied to appointments.

Methods Individuals accompanied to a healthcare appointment from August 2021 to June 2022 were asked to complete a web-based questionnaire covering socio-demographics, health literacy, physical and mental health, and satisfaction with the support provided. The frequency of accompaniments over six months were collected through telephone calls.

Results A total of 187 users of the programme responded. The Individuals were characterised by short educational attainment, limited social support, unemployment, as well as poor physical and mental health. The majority reported difficulties comprehending health information and engaging with healthcare professionals. Forty percent of the accompaniments were to hospital visits and 23% to GP consultations, with most requesting multiple types of support such as emotional, transportation, communication, and way-finding. Most users (96%) reported that the student-volunteer accommodated their need for support. The additional number of accompaniments over six months ranged from 0 to 21.

Conclusions The programme is successfully implemented for individuals in a socially vulnerable situation and succeeded in the delivery of a tailored programme that adresses the individuals' specific needs and request. High

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satisfaction rates and the positive impact on healthcare experiences highlight the programme's potential to bridge existing inequity gaps in healthcare.

Keywords Inequity, Inequality, Deprivation, Healthcare, Student volunteer, Implementation

Background

Equity in access to and outcome from healthcare is one of the key pillars in universal health systems with tax financed healthcare like those in Canada, the UK, and Scandinavia [1]. Universal healthcare systems, however, have not eliminated social inequity in health, and significant socio-economic disparities are evident in access to and use of the healthcare system, as well as in the quality and outcome of healthcare [2, 3]. Although access to healthcare is not directly tied to income or occupation, as it might be in countries with private healthcare financing, many individuals still encounter difficulties accessing and navigating the healthcare system [4]. Barriers in universal healthcare systems encompass various factors across multiple levels [5]. Main barriers experienced by individuals in a socially vulnerable situation include lack of social support from friends or relatives, insufficient funds for transportation and medications, as well as user-paid healthcare services and low health literacy [5–10]. These challenges are often compounded by socio-economic factors such as lack of education, unstable housing, inadequate income, and precarious employment, which not only create chronic stress but also make it difficult for individuals to prioritise healthcare needs amidst competing life demands [5]. Additional barriers include poor quality in the interaction with healthcare professionals as well as the complexity of the healthcare system organisation and functioning making it difficult to navigate [5, 11, 12].

Given the inequity challenges faced by patients and healthcare systems, it is essential to study programmes that aim to increase social equity in health. In this case, the Social Health Bridge-Building Programme represents a novel approach. The Social Health Bridge-Building Programme was established in Denmark in 2013 by the non-governmental organisation Social Health and extended nationwide in 2023 with headquarters in the five largest university cities. The programme aims to address healthcare inequity by tackling multi-level barriers to healthcare [13]. The intended target population are individuals in a socially vulnerable situation who require support to remember, maintain, or derive better outcome from their healthcare visits [14, 15]. Social vulnerability is defined as the degree to which an individual's or community's overall social circumstances leave them susceptible to further insults (i.e. health or socially related adverse events) [16]. The term "individuals in a vulnerable situation" is employed to emphasise that vulnerability can be transient or persistent, and that its degree can vary depending on the living conditions individuals experience [17]. In the programme, healthcare student volunteers, known as bridge-builders, accompany individuals in a socially vulnerable situation to healthcare appointments. The bridge-builders provide support to individuals before, during, and after health care appointments. Through this engagement, the bridge-builders gain valuable insights into the social determinants of health and develop essential communication skills, thereby strengthening their competencies as future healthcare professionals [14]. Hence, the programme is reciprocal: users gain access to health appointments and students gain access to real life learning, in extracurricular processes [15, 18]. There are several distinct differences between the Social Health Bridge-Building Programme and other existing initiatives to address inequity in health. Unlike many existing initiatives, it is not restricted to the most disadvantaged individuals but rather encompasses a broader demographic, and no formal referral is required. Additionally, the type of support provided is tailored the individual's specific needs and requests [14].

To guide a wider implementation, it is imperative to gain in-depth knowledge of the user demographics, support needs, and expectations. The aim of this study was to explore the implementation perspectives of the Social Health Bridge-Building programme, focusing on the individuals accompanied to healthcare appointments. Specifically, it examined for whom the intervention was implemented and what was implemented.

Methods

Programme resources, activities, and outputs

A detailed description including the programme theory of the Social Health Bridge-Building Programme has been unfolded in detail in a previous publication [14]. Briefly, the programme consists of four key components:

1) Operation of an Advisory Hotline

The Advisory Hotline is staffed by professional coordinators with expertise in social work, communication, relationship-building, and/or healthcare education. The primary objective of the Advisory Hotline is to connect individuals in need of support with a bridge-builder.

- Contact Establishment: Contact is usually established either by the individual in need or by someone close to them, such as a social worker, caregiver, or relative, reaching out to the hotline.
- Matching Process: Coordinators match individuals with bridge-builders based on bridge-builder availability on specific days, ensuring flexibility and responsiveness.
- Support for Bridge-Builders: The hotline provides thorough briefings prior to, and debriefings following, each accompaniment.

2) Accompaniment to Healthcare Appointments

Bridge-builders, who are volunteer healthcare students (e.g., future doctors, nurses, or psychologists), provide support before, during, and after healthcare appointments.

- Pre-Accompaniment Meeting: The bridge-builder meets the individual at a location of their choice (e.g., residence, nursing facility, shelter) to discuss expectations and requirements.
- Transportation and Support: They accompany the individual to the appointment using public or private transport, participate in or wait during the appointment as requested, and accompany them home afterward.
- Post-Accompaniment Discussion: If requested, the bridge-builder discusses the appointment and provides additional support.
- Engagement Structure: Bridge-builders are assigned on an appointment-by-appointment basis depending on their availability rather than being paired with a single individual over time. Engagements may be one-time or span multiple appointments based on the individual's needs.

3) Recruitment, Training, and Supervision of Bridge-Builders

To become a bridge-builder, healthcare students must complete a 20-hour training course.

- Training content: The course covers social determinants of health, communication, and boundary setting.
- Supervision: Ongoing supervision is provided to ensure bridge-builders feel supported in their roles.

4) Advocacy for Social Equity in Healthcare

The programme also engages in lobbying efforts to promote social equity in healthcare, addressing structural barriers and advocating for systemic change.

Design and study population

The findings are derived from cross-sectional survey data. The study design draws inspiration from the British Medical Research Council's guidelines for conducting process evaluations of complex interventions, with a specific focus on implementation aspects such as reach, fidelity, and dose [19]. 'Reach' aims to establish a user profile based on sociodemographic and clinical characteristics. Fidelity categorised into, 'Content', and 'Outcome', pertains to the quality of the intervention and whether the programme was executed as intended. In our study, fidelity seeks to explore the types of healthcare appointments and support requested by users. Moreover, fidelity aims to explore the extent to which the bridge-builder accommodated the users' support needs. Dose was defined as the number of accompaniments provided during a six-month period to investigate the frequency of accompaniments.

Data and analysis

All individuals attending a healthcare appointment with accompaniment were asked to complete a web-based questionnaire using a tablet provided by the bridge-builder. This questionnaire was administered after the healthcare appointment and included questions on socio-demographic factors, health literacy, stress, loneliness, and self-rated health. Additionally, specific questions were designed to evaluate the support provided by the bridge-builder. Upon request, the bridge-builder offered assistance with reading and understanding the questionnaire. The number of additional accompaniments over a six-month period was collected by a bridge-builder through telephone calls. Educational attainment was divided into three categories based on the Danish Nomenclature (DUN): Short (0–10 years), Medium (11–14 years), and High (15 + years) [20]. Health literacy was evaluated using two sub-scales from the Health Literacy Questionnaire (HLQ): 'Understanding health information well enough to know what to do' and 'Actively engaging with healthcare providers'. These sub-scales, previously translated and validated for use in a Danish context, comprised five items each, scored on a scale ranging from 1 = very difficult to 4 = very easy. Binary variables were created for each scale, identifying individuals with scores ≤ 2 as experiencing difficulty understanding health information or engaging actively with healthcare providers [21]. Perceived stress was assessed using the 10-item

Perceived Stress Scale (PSS), with items rated on a five-point scale. Respondents were categorised as having high stress levels if their PSS score was 18 or above [22]. Loneliness was measured using the Three-Item Loneliness Scale (T-ILS), with items scored on a scale ranging from 3 to 9. Participants were classified based on their total score into categories: <5 = no or mild, 5–6 = moderate, and ≥ 7 = severe loneliness [23]. General health was evaluated using a single item question from the Short Form 12 Health Survey (SF-12), dichotomised into poor (1–2) and good (3–5) health [24]. Questions regarding the support provided by the bridge-builder consisted of five queries, rated on a five-point Likert scale: 1) 'To what extent did the bridge-builder accommodate your need for support?', 2) 'To what extent did you have a good relationship with the bridge-builder?', 3) 'To what extent was the bridge-builder well prepared for the assignment?', 4) 'To what extent did the bridge-builder support your communication with the healthcare professional?', and 5) 'To what extent has the bridge builder changed your overall experiences with the healthcare system?' Statistical analyses were conducted using STATA version 16.1. Categorical data were presented as n (%) and continuous data were reported as mean and standard deviation [SD], or median and percentiles according to their distribution.

Results

Reach

The study population comprised all individuals who had been accompanied to a healthcare appointment by a bridge-builder in one of five Danish cities from August 2021 to June 2022. The survey was completed by 187 individuals, response rate 53%. The most frequent reason for non-response were inability to fill out the questionaire due to cognitive challenges, language barriers or exhaustion (Fig. 1). At the time of survey completion, 59% were 'first time users' whereas the remaining 41% previously had been accompanied to a health care appointment by a bridge-builder. The largets amount of individuals (41%) were from the city of Aarhus, while 23% and 22% were recruted from Copenhagen and Aalborg respectively. 12% were from Odense and only 3% were from Fredericia.

Table 1 presents socio-demographic characteristics and health indicators. The majority (78%) lived alone, and 50% had 'completed elementary school' as their highest level of education. The age ranged from early 20 to late 80's with a mean age of 56 years.

Furthermore, 89% of respondents within the working-age group (25–66 years) were not part of the labour marked. Most of the respondents reported poor health status, where 64% reported poor general health, 63% reported high stress levels, and 45% experienced severe loneliness. Regarding health literacy, the mean score for the sub-scale 'understanding health information' was 2.54 (95% CI: 2.45–2.62), with 27% (95% CI: 19%-31%) reporting a low score (≤ 2). For the sub-scale 'actively engaging with healthcare providers', the mean score was 2.69 (95% CI: 2.59–2.78), with 25% (95% CI: 19%-31%) reporting a low score. Among the respondents who reported higher educational attainment, 90% of the individuals lived alone, compared to 75% of those with lower or moderate educational levels. In addition, 51% of individuals with higher education experienced severe loneliness, compared to 43% among those with lower or moderate educational levels (data not shown).

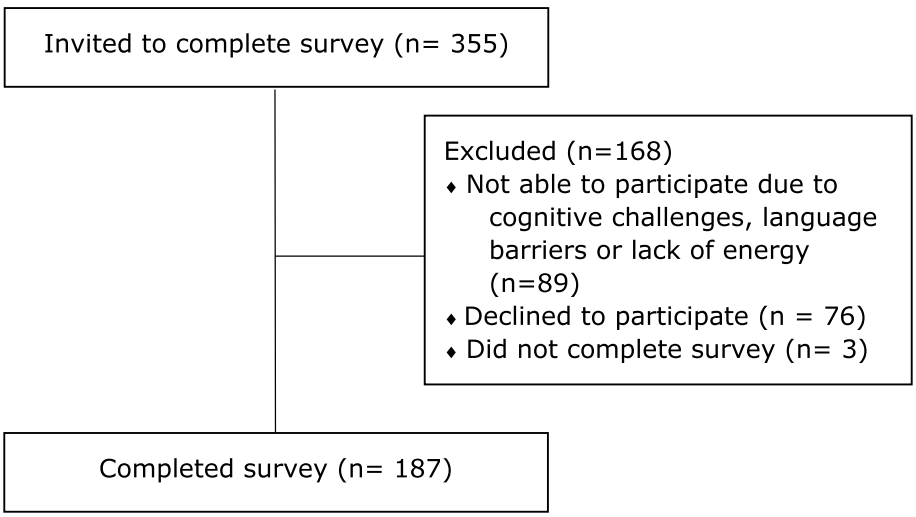

Fig. 1 Flow-chart of inclusion and exclusion of respondents

Table 1 Socio-demographic characteristics and health indicators of the study population

Characteristics	All ($n=187$) Number (%) or Mean [SD]
Women	111 (59%)
Age, years	56 [16]
Living alone	145 (78%)
No children	95 (51%)
Educational level	
Short	93 (50%)
Medium	59 (31%)
Long	35 (19%)
Out of labour market[a], yes	105 (89%)
Social benefits, yes	173 (93%)
Poor general health	119 (64%)
Missing	1 (0.5%)
High stress score	117 (63%)
Missing	4 (2%)
Loneliness	
None or mild	50 (27%)
Moderate	49 (26%)
Severe	84 (45%)
Missing	4 (2%)
Health literacy	
Difficulties understanding health information	50 (27%)
Difficulties actively engaging with healthcare providers	46 (25%)

[a] Only includes individuals within the working-age group (25–66 years) ($n=118$)

Health literacy item scores for each item of the two health literacy subscales are presented in Fig. 2 and in the additional file. The proportion of individuals who found the items on the sub-scales difficult or very difficult varied from 39 to 56%. More than 50% reported difficulties in item A1: 'Confidently fill in medical forms correctly', item A3: 'Read and understand written health information' and item A4: Read and understand information on medication labels.

Fidelity—content

The majority of individuals (71%) learned about the Social Health Bridge-Building Programme through health care providers (social workers or healthcare workers at shelters, nursing homes, or institutions). In 10% of cases, individuals became aware of the programme through hospital staff, while 4% were informed by family or friends. The remaining individuals (15%) learned about the programme through outreach efforts by the organisation Social Health or through other NGO-driven activities.

A total of 90 bridge-builders were involved in the accompaiment of the 187 individuals to healthcare appointments. 84% of the bridge-builders were women. The bridge-builders were 19–46 years old (median 23) at baseline.

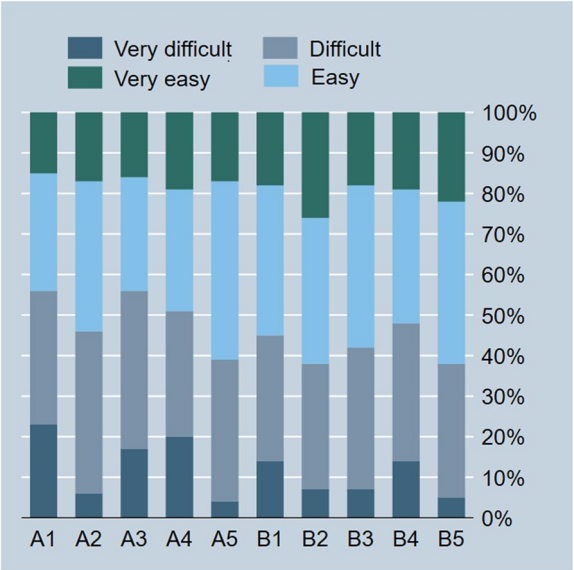

Fig. 2 Proportion of individuals who found the items on the sub-scale 'Understanding health information' (A1-A5) and 'Actively engaging with healthcare providers' (B1-B5) easy, very easy, difficult or very difficult

Users were accompanied to a range of appointments, primarily hospital appointments (40%) (Fig. 3), followed by visits to general practitinoner (23%). The category 'Other' encompassed accompaiments to COVID-19 test

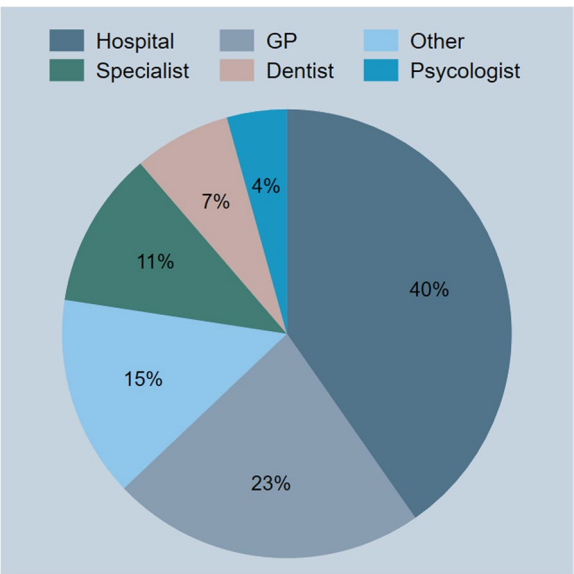

Fig. 3 Type of healthcare appointments

or vaccination centers (5%), rehabilitation services (1%) and physiotherapy clinics (3%).

The type of support requested by the individuals is visualised in Fig. 4. A total of 127/187 (68%) requested more than one type of support. The most commen request was emotional support (72%) followed by support with transportation (37%), communication (37%) and support for way-finding (33%).

Fidelity – outcome

A total of 96% reported that the bridge-builder accommodated their needs for support in relation to the healthcare appointment to a high or moderate extent. Additionally, 94% reported that the bridge-builder was well-prepared for the meeting, and 97% reported having a good relationship with the bridge-builder. Furthermore, 73% reported that the bridge-builder supported their communication with the healthcare professional, while 50% reported that the accompaniment by the bridge-builder had altered their overall experience with the healthcare system.

Dose

Information on dose, collected through telephone calls was available from 94 indviduals (50%). During a six-months period, 41% (39/94) individuals had no additional accompaniements, 36% (34) had one to five, and 11% (10) had six to ten additional accompaiments. A total of 11% (10) individuals were acompanied to healthcare appoinments more than 10 times, with the maximum of 21 accompaniments.

Discussion

This survey-based study offers valuable insights into key implementation aspects of the Social Health Bridge-Building Programme. By establishing a user profile based on sociodemographic and clinical characteristics, the study enhances our understanding of the extent to which the programme has reached its intended target population. Additionally, the study examined the quality of the intervention and assessed whether the programme was executed as intended.

When comparing the data from the users of the programme with representative surveys of the Danish population, it is evident that the profile of the users significantly differs from the general Danish population across several demographic and health-related parameters. Notably, there are stark contrasts in educational attainment, with 50% of our study population reporting elementary school as their highest level of education, compared to just 16% in the Danish National Surveys. Similarly, a significantly higher proportion of our study population live alone (78% vs. 35%). Furthermore, our population report markedly poorer general health (64% vs. 17%), higher stress levels (63% vs. 29%), and more severe loneliness (45% vs. 12%) than the general population [25]. Additionally, the prevalence of difficulty with health literacy-related items among our respondents

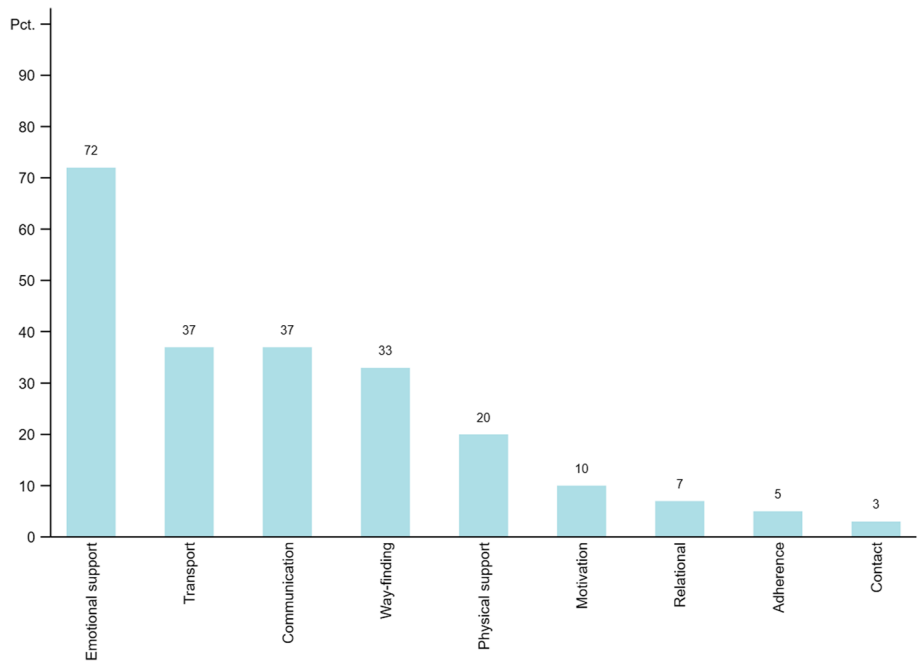

Fig. 4 Type of support or assistance requested for the healthcare appointment. Individuals could require several types of support

ranges from 39 to 56%, compared to just 8–20% in the broader Danish population [21].

In summary, users of the Social Health Bridge-Building Programme are characterised by low educational attainment, and/or limited social support, unemployment, poor physical and mental health, and difficulties in comprehending health information and interacting with healthcare professionals. It is important to highlight that the response rate in our study was 53%, and it is likely that non-respondents represent an even more socially deprived population, as non-response was associated with cognitive and language barriers. Therefore, the profile of the users closely aligns with the intended target population -individuals in a socially vulnerable situation who require support and guidance in navigating the healthcare system. This suggests that the programme has been successfully implemented among the intended target group.

Our findings further illuminate the demographic complexity of the programme users, specifically highlighting the characteristics of those in a socially vulnerable situation. While most of the study population had short educational attainment, 20% possessed higher education levels. Educational attainment is a frequently used indicator of socioeconomic position; however, it does not fully encapsulate the multifaceted nature of social vulnerability [26]. Interestingly, 90% of the individuals with higher education lived alone, compared to 75% of those with lower or moderate educational levels. Furthermore, 51% of individuals with higher education experienced severe loneliness, compared to 43% among those with lower or moderate educational levels. These findings underscore that social vulnerability manifests in various forms. Some individuals face vulnerability due to educational, economic or housing conditions, while others are affected due to social isolation and lack of social support [27]. These findings align with qualitative studies of the programme, which revealed relational vulnerability among the users of the programme [18]. The findings support the inclusive practice of the Social Health Bridge-Building programme, which does not require referrals or specific inclusion criteria, but is open to anyone seeking support. This approach ensures that diverse forms of social vulnerability are addressed.

According to the programme theory outlined in a previous paper, the bridge-builders act as health literacy mediators by 1) providing support and motivating the individual to become more active in the appointment, 2) providing support with way-finding to the appointment as well as support with communication during appointment, and 3) providing support after the appointment with processing, understanding and evaluating the information provided during the appointment [14]. Our survey shows that, the most frequent requests for support were emotional support (72%), transport (37%), communication (37%) and wayfinding (33%). These findings aligns with the results from a qualitative study on the function of bridge-builders being emotional support, wayfinding, and as-if-relatives [18]. When asked about the quality of the support provided by the bridge-builder, more than 95% reported that the bridge-builder to some or a high degree accomodated their needs for support, and that they had a good relationship with the bridge-builder. This further indicates that the bridge-builders full-filled their role as health literacy-mediators.

Implications for policy and practice

Addressing social inequality in healthcare requires a multifaceted approach that targets both immediate needs and systemic barriers. Programmes like the Social Health Bridge-Building Programme provide valuable insights for policy and practice, demonstrating how direct support and advocacy can effectively mitigate healthcare inequities.

At the individual level, initiatives offering accompaniment and support during healthcare encounters empower individuals to navigate the healthcare system more effectively. By engaging future health professionals in providing this support, as practised in the Social Health Bridge-Building Programme, these initiatives not only address immediate access challenges but also enhance future health professional's' understanding of the lived realities of individuals in a socially vulnerable situation [18]. Engaging with individuals holistically—beyond their diagnoses—helps future health professionals cultivate deeper empathy, reduce stigma, and develop critical communication, relational, and observations skills [18, 28–30]. These competencies are essential for fostering equitable relationships and ensuring that care delivery is tailored to the diverse needs of patients. At the system level, addressing healthcare inequities necessitates cultivating an organisational culture that prioritises health literacy responsiveness [31]. This includes equipping both current and future healthcare professionals with the tools to identify and respond to the patients social resources and needs. The Social Health Bridge-Building Programme focuses on training health professionals to identify systemic barriers and advocate for policy changes [14].

By embedding these principles into education and practice, healthcare systems can more effectively address the complex needs of individuals in a socially vulnerable situation and ensure that social inequalities are systematically challenged in all interactions within the healthcare system.'

Implications for research

This study focuses on the immediate impact of the Social Health Bridge-Building Programme on individuals in need of support. However, further research is needed to explore the programme's long-term impact on both bridge-builders and the healthcare system. Future studies should investigate how experiential learning about social determinants of health influences healthcare professionals' practice and decision-making over time. Moreover, while this programme addresses individual barriers to healthcare access, additional research should examine how systemic factors can be mitigated or eliminated through policy reforms and organisational changes. Such research could inform the development of complementary interventions that tackle root causes of inequity.

Strengths and limitations

There are several strengths and limitations to consider in this study. Conducting research in this field and within this particular study population presents substantial challenges. First, the volunteer-based nature of the programme results in a lack of detailed records or registries for individuals who utilise the services. Additionally, involving socially vulnerable individuals who encounter difficulties navigating the healthcare system is both challenging and raises ethical concerns. For instance, recruiting participants for research through questionnaires can be particularly difficult when working with individuals in vulnerable situations. Consequently, data collection required significant effort from both the bridge-builders and the respondents. It is well-documented that socially vulnerable populations are significantly underrepresented in research due to various barriers [32, 33]. However, this study succeeded in amplifying the voices of those who are often unheard. We believe this success is largely attributed to the pragmatic approach to data collection. Specifically, the questionnaire was administered by the bridge-builders in person, rather than through postal or email surveys, and the bridge-builders provided assistance to individuals in understanding and responding to the survey questions when needed. Nevertheless, these pragmatic methods come with inherent limitations. For instance, the assistance from a bridge-builder in understanding and responding to the survey may have introduced bias into the results, particularly concerning satisfaction with the bridge-builder, as expressing dissatisfaction could have been challenging in their presence. As such, these findings should be interpreted with caution. Another strength of the study was the use of validated questionnaires, specifically the same questionnaire batteries employed in nationwide Danish surveys. This approach facilitates comparisons with the general Danish population.

Conclusion

In conclusion, this study underscores the significance of the Social Health Bridge-Building Programme in addressing health equity by targeting individuals facing multifaceted barriers to healthcare. The programme is successfully implemented for individuals in a socially vulnerable situation, and succeeded in the delivery of a tailored intervention that adresses the individuals' specific needs and request. The varied types of support requested by users, coupled with the flexible and responsive nature of the bridge-builder accompaniment, underscore the programme's adaptability to diverse user needs. The reported high satisfaction rates and the notable impact on individuals' healthcare experiences highlight the programme's potential to bridge existing inequity gaps in healthcare. These insights provide valuable learning to guide wider implementation of such programmes, suggesting the importance of tailored support mechanisms and comprehensive approaches to address the complex needs of individuals in a socially vulnerable situation. However, further research is warranted to assess the sustained impact of the programme over time and to refine strategies for enhancing its scalability and effectiveness in promoting health equity.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12913-025-12359-8.

Supplementary Material 1.

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Authors' contributions

GV contributed to the paper in conceptualization, formal analysis and interpretation of the data, and writing of the original draft. CVN contributed to the paper in conceptualization, funding acquisition, supervision and writing and editing. TM, CVN, MT and LGO contributed to the paper in conceptualization, supervision and writing and editing. All authors read and approved the final manuscript.

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Data availability

The datasets generated and/or analysed during this study are not publicly available due to GDPR (General Data Protection Regulation) requirements, which govern the handling and protection of personal data within the European Union.

Declarations

Ethics approval and consent to participate

This study was conducted in accordance with the principles of the Declaration of Helsinki. The project was approved by The Danish Data Protection Agency (referencenumber: 1–16-02–203-21). According to Danish legislation, investigations based on questionnaire data and/or registry data do not require approval from the Scientific Ethics Committee (§14 para. 2). All participants received information regarding the purpose of the study and provided informed consent to participate.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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