

# Exploring Stakeholder Perceptions of Peer Support Initiatives in the Management of Type 2 Diabetes Mellitus in Low- and Middle-Income Countries: An Online Survey Study

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Background

Type 2 diabetes mellitus (T2DM) is a major global health concern due to its high prevalence and severe complications [1]. Effective management requires continuous glucose monitoring, medication adherence, and lifestyle changes, which can be challenging, especially in resource-limited settings [2]. Limited access to care and education makes self-management difficult. Peer support has shown promise in improving T2DM self-management by fostering shared experiences and social connectedness [3]. It enhances medication adherence, lifestyle changes, and emotional well-being, helping patients navigate healthcare systems [4,5]. While effective in high-income countries [6], its impact in low- and middle-income countries (LMICs) remains underexplored.

Our previous scoping review [7] highlighted inconsistencies in defining and applying peer support in LMICs, affecting its effectiveness at the community level. Moreover, integrating peer support into existing healthcare systems and ensuring sustainability remains unclear [7]. Addressing these gaps is essential for optimizing its implementation in resource-constrained settings.

Understanding stakeholders' awareness, experiences, and readiness—including healthcare providers, policymakers, and patients—is crucial for success. The World Heart Federation's Roadmap for cardiovascular disease prevention in T2DM emphasizes the importance of patient-centered approaches like peer support [8,9]. However, practical implementation in LMICs remains underexplored.

This study assesses stakeholder awareness and perceptions of peer support programs for T2DM management, identifying barriers and readiness for implementation in LMICs.

Methods

Study Design

A cross-sectional online survey with branching logic was distributed to stakeholders in LMICs, using the World Bank definition [10]. Stakeholders included macro (ministries of health, private sector, national diabetes/cardiac associations), meso (regional health organizations, hospitals, clinics), and micro levels (physicians, healthcare workers, patients) [11]. The study followed CHERRIES for reporting [12].

Survey Development

No validated questionnaire met our study's needs, so a self-administered English questionnaire was developed. It covered: (i) awareness of peer support, (ii) barriers to implementation, and (iii) readiness for adoption. Response formats included Likert scales (5-Strongly agree to 1-Strongly disagree), multiple-choice, and free-text fields. Readiness was assessed using an 8-question checklist, adapted from the SELFIE framework [13].

Administration & Sampling

The survey, hosted on Qualtrics™, was piloted for clarity. Participants, recruited via WHF networks and snowball sampling, received email invitations. The survey ran from June 1 to December 15, 2023.

Data Analysis & Ethics

Incomplete responses (<80%) were excluded. Quantitative data were analyzed in STATA 17, Python 3, and Excel; qualitative data underwent thematic analysis. IRB approval was waived as no identifiable data were collected.

Results

69 respondents completed the survey. Due to branching logic and attrition, 53 (77%) surveys had complete responses. Responses were received from 25 different countries, with the highest representation from Kenya (n=9, 13.0%), followed by Brazil (n=7, 10.1%) and Albania, Botswana, Malawi, Nepal, and Uganda (n=4, 5.8%) depicted in **Fig 1**. There were 11, 36, and 22 respondents from the low, low middle, and high middle-income countries, respectively. The number of respondents from the respective countries and the country's income level, classified based on the World Bank data [10], **Fig 1**.

Most respondents were medical doctors (physicians) (n=35, 50.7%), as shown in **Fig 2**. The majority of respondents were from tertiary healthcare facilities (n=27, 39.1%), which include central hospitals, universities, and specialized hospitals. Respondents were categorized by healthcare facility type: tertiary (central hospitals, universities, specialized hospitals), secondary (regional referral, provincial, regional, and district hospitals), primary (primary healthcare centers, health posts, dispensaries), and private (private hospitals, nursing homes, clinics, and faith-based institutions).

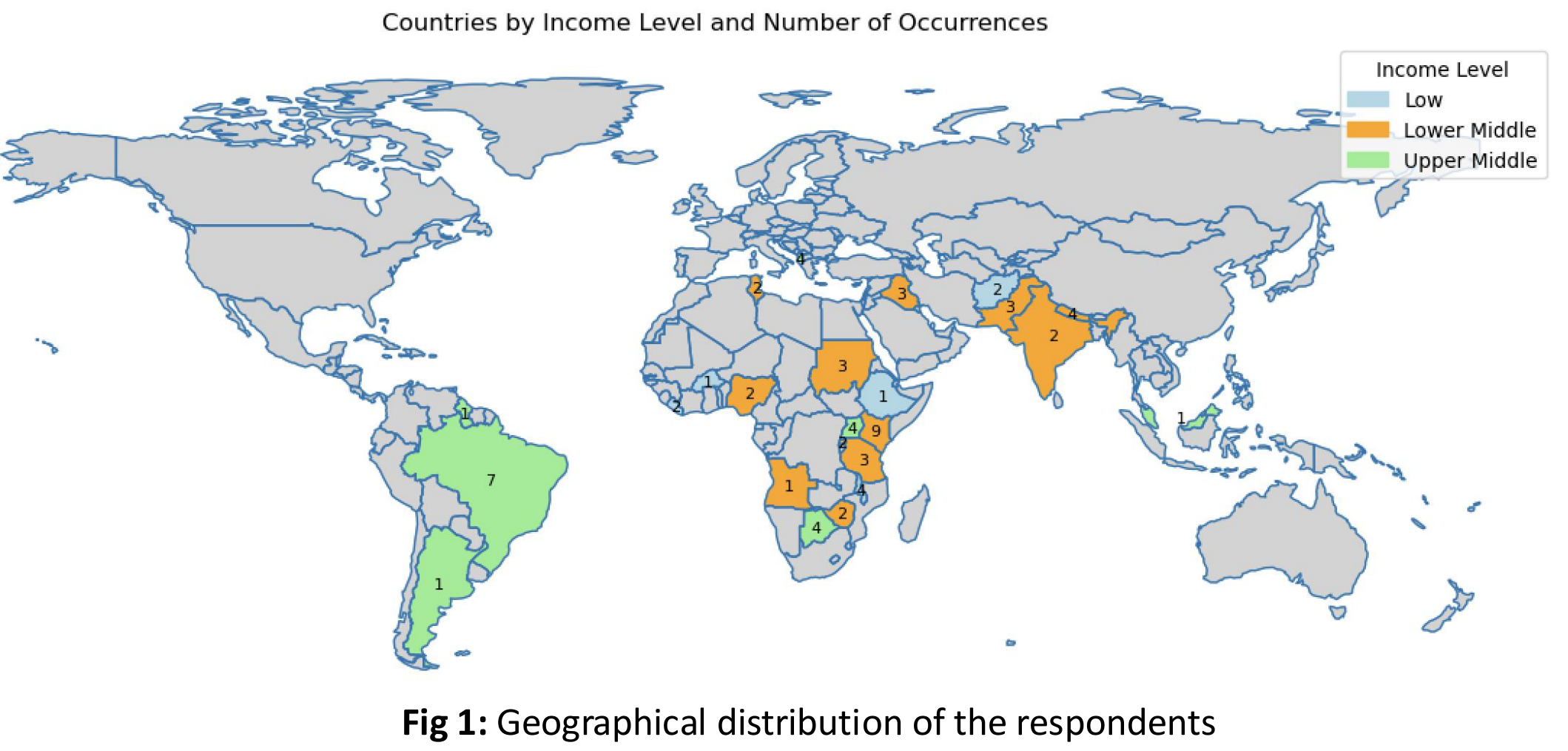


Fig 1: Geographical distribution of the respondents

Item	Themes (examples)	
How would you define peer support in your own words?	Mutual support and understanding (e.g.: patient-to-patient support)	14
	Emotional support and self-help (e.g.: sharing personal experience for support)	5
	Community advocacy and rights (e.g.: social support network)	5
	Experiential knowledge sharing (e.g.: shared experience support)	4

Table 1. Thematic content analysis of stakeholder responses on peer definition in T2DM peer support initiative

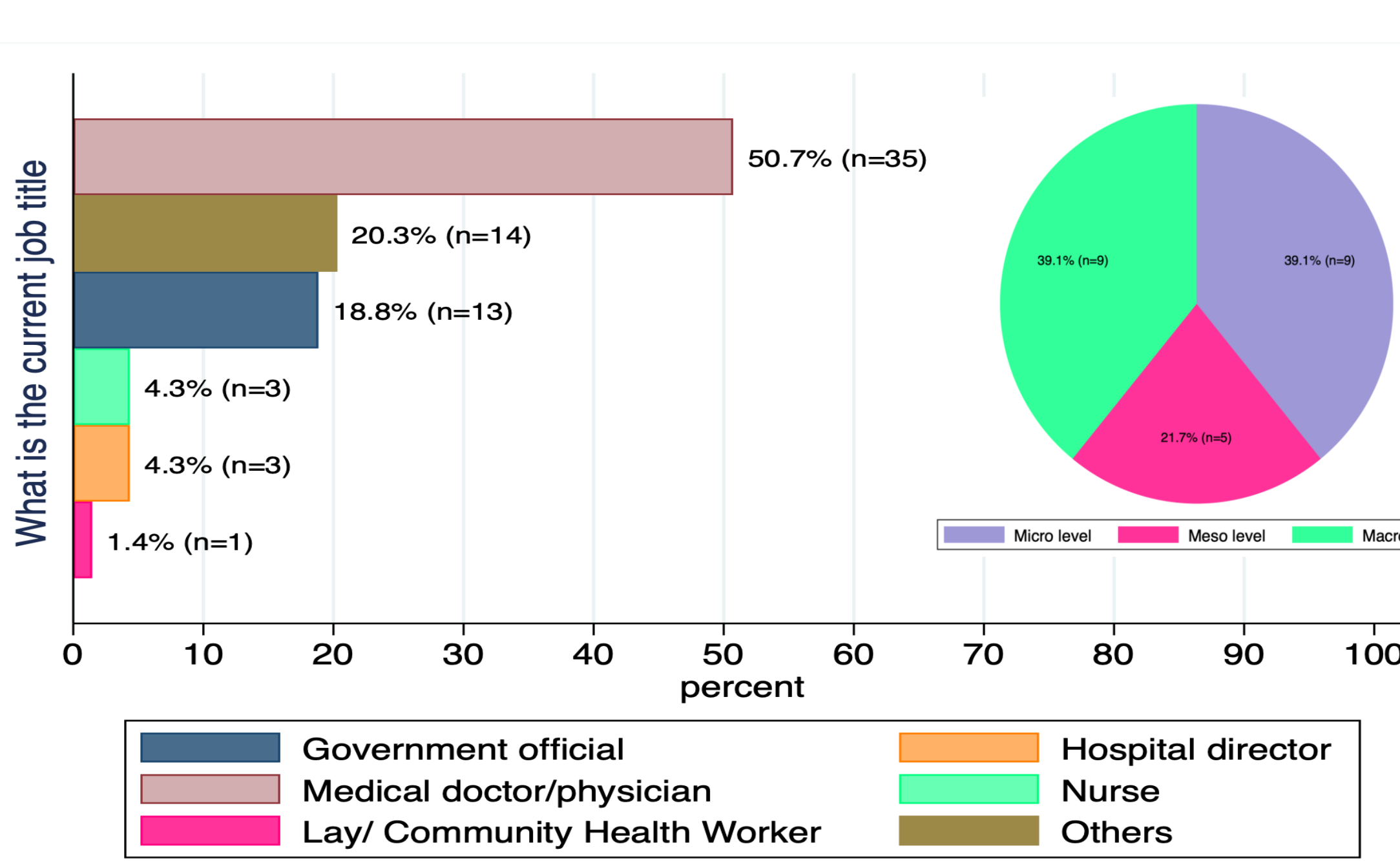


Fig 2: Current job of the respondents and Type of healthcare facility

Awareness of peer support initiatives

The majority of respondents (n=39/69, 56.5%) were aware of peer support initiatives. Among these (n=38, excluding one incomplete response), most (n=23/38, 59%) were familiar with peer support initiatives aimed at T2DM management. Of the 23 respondents familiar with peer support in T2DM, most were at the macro level (n=9; 39.1%) and micro levels (n=9; 39.1%). A smaller proportion (n=5; 21.8%) belonged to the meso level.

In response to the multiple-choice question, 'Who are the 'peers' in peer support initiatives in the management of T2DM?' (n=18, 78.3%) Of the 23 respondents, it was indicated that other patients were involved as peers. Group peer support was most frequently utilized, with (n=20, 86.9%) of 23 respondents indicating its use. Analysis of open-ended responses revealed respondents' varied interpretations of peer support, which included mutual support and understanding, providing emotional support and self-help, advocating for community rights, and sharing experiential knowledge depicted in **Table 1**.

Readiness perception of key stakeholders toward T2DM peer support initiatives

There was a high level of readiness among local leadership in their willingness to implement peer support, with 11 respondents (20.8%) indicating that they 'strongly agreed' and 16 (30.2%) indicating that they 'somewhat agree.' This led to a high mean readiness score of 3.4 ± 1.2. There was also high perceived readiness for the allocation of time and materials necessary for implementation, 8 (15.1%) respondents 'strongly agree' and 7 (13.2%) 'somewhat agree,' resulting in a high mean readiness score of 2.7 ± 1.4. Stakeholders expressed confidence in the planning for the sustainability of the initiative, with 8 (15.1%) respondents 'strongly agree' and 8 (15.1%) 'somewhat agree,' reflected in a high mean readiness score of 2.7 ± 1.4. Overall, the high level of readiness was determined using a weighted mean of 2.5 along with the 95% confidence interval (CI) as the shaded part depicted in Fig 3.

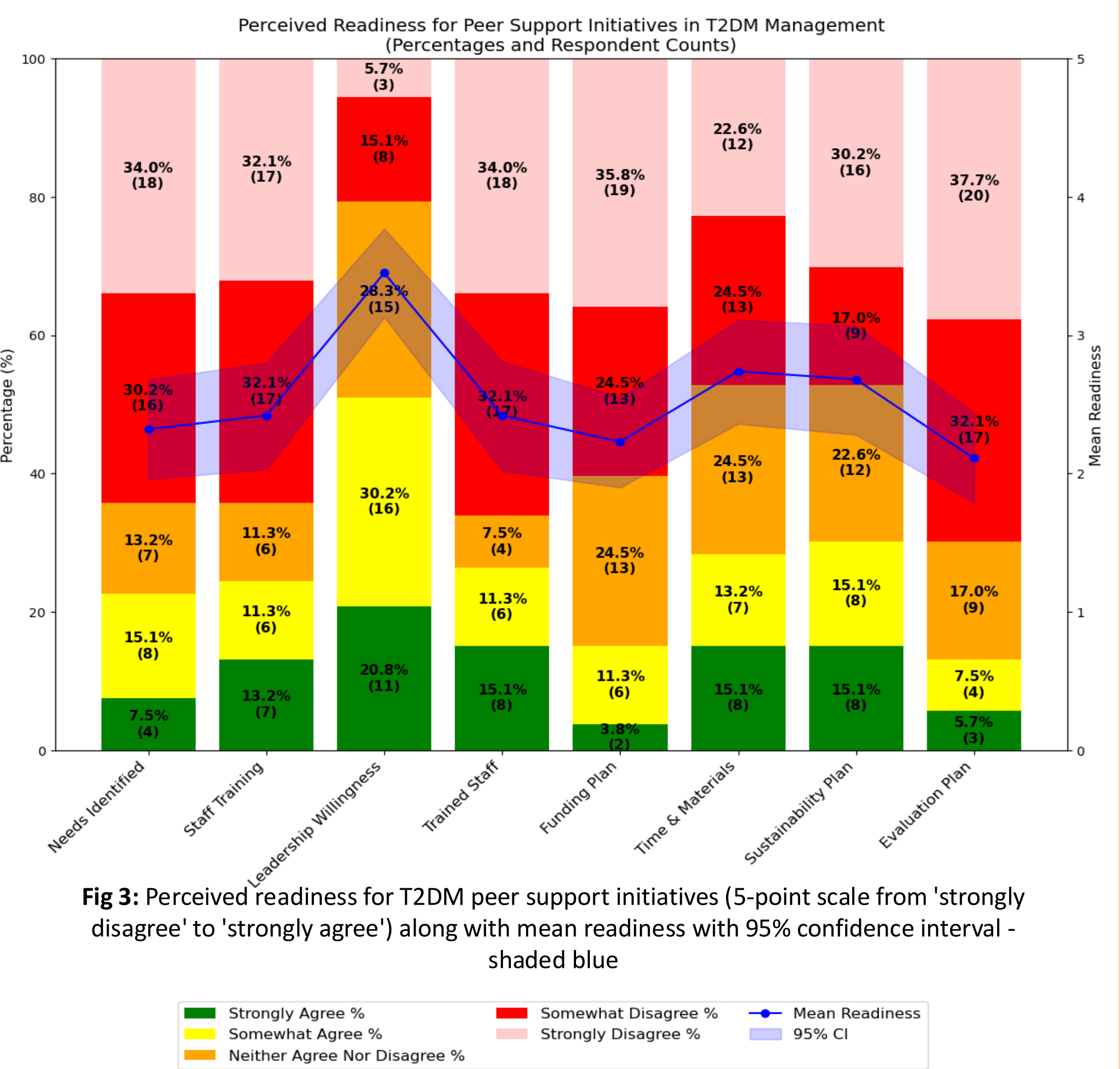


Fig 3: Perceived readiness for T2DM peer support initiatives (5-point scale from 'strongly disagree' to 'strongly agree') along with mean readiness with 95% confidence interval - shaded blue

Conclusions

There is minimal data on peer support programs for T2DM in LMICs. These peer support programs exist, though they may be based primarily at tertiary care facilities using a group peer support model. Integrating peer support into formal healthcare systems has been shown to improve disease management and quality of life, primarily through mutual emotional and practical support. However, expanding these programs is challenged primarily by limited resources and funding. While tertiary care centers are suited to develop these programs, it is also essential to decentralize them to rural and community settings. There is still much work to be done in this crucial aspect of T2DM care for patients living in LMICs. Some high-impact areas for future research include testing effective models for peer support, determining optimal training of lay persons providing peer support, and costing analyses for integrating peer support into the health system compared to usual care. In building peer support networks, health systems not only improve the medical but also the psychosocial well-being of individuals living with T2DM.

