

This study measures the unmet needs for informal care and diabetes-related distress status among persons living with T2D in rural communities of Vietnam. To cover these unmet needs for informal care, we recommend the following activities:

1. Apply different communication methods

Education through media could be used to increase patients' knowledge about diabetes management. This method has the advantage of being suitable for countries with developing economies and can be used for a long time, repeatedly in the community. This can be done by:

- Create opportunities to share information and experiences among persons with T2D, such as clubs and training classes in community
- Use posters in commune health stations or district hospitals, which will present examples on how to manage T2D and the importance of having health check-ups done at these facilities

2. Give priority to persons with T2D with high levels of unmet need for informal care

- Give priority to elderly persons with T2D and those being female, living alone, being unemployed, and having poor economic status
- In addition to managing and preventing complications of diabetes, it is necessary to pay attention to and take care of mental health issues among persons with T2D

3. Provide more informal support to patients,

- All persons with T2D who suffer from DRD should receive support aiming at reducing level of DRD. Specific priority should be given to females
- There is a crucial need to compensate for the most common unmet needs of persons with T2D: being accompanied during transport to clinic/hospital and during the visit when seeking for care for diabetes, financial support related to cost of diabetes management, and reminding to engage in physical exercise
- Increase the emotional support via clubs and training classes in community and compensate unmet needs for financial support would reduce the risk of DRD among persons with T2D
- Informal caregivers should offer more support to persons with T2D in terms of transport to health facilities and company when seeking formal care. The support should also include financial support

related to costs of diabetes management, and reminders to engage in physical exercise.

Link to the project's webpage

<https://anthropology.ku.dk/research/research-projects/current-projects/living-together-with-chronic-disease/>

FURTHER CONTACT

Assoc. Prof. Nguyen Duc Thanh
VALID project Vietnam
Thai Binh University of Medicine @ Pharmacy, 373,
Lybon, Thai Binh city, Vietnam.
Email: thanhnd@tbump.edu.vn
Mobile phone number: 0912.357.575

Dr. Bui Thi Huyen Dieu
VALID project Vietnam
Thai Binh University of Medicine @ Pharmacy, 373,
Lybon, Thai Binh city, Vietnam.
Email: dieubth@tbump.edu.vn
Mobile phone number: 0983.731.085

Dr. Khong Thi Diep
VALID project Vietnam
Thai Binh University of Medicine @ Pharmacy, 373,
Lybon, Thai Binh city, Vietnam.
Email: diepkt@tbump.edu.vn
Mobile phone number: 0985.546.327

FUNDING

This work was supported by the Ministry of Foreign Affairs of Denmark (DANIDA), in the framework of the project 'Living Together with Chronic Disease: Informal Support for Diabetes Management in Viet Nam'; File No. 17-M09-KU.

REFERENCES

- WHO (2018), Non-communicable diseases: fact sheet. <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>.
- Meyrowitsch DW, Nielsen J, Bygbjerg IC, et al. Unmet Needs for Informal Care Among People With Type 2 Diabetes in Rural Communities in Vietnam. DOI: <https://doi.org/10.21203/rs.3.rs-138524/v1> (preprints).
- Tine M. Gammeltoft, Bùi Thị Huyền Diệu, Vũ Thị Kim Dung, et al. 2022. Everyday disease diplomacy: An ethnographic study of diabetes self-care in Vietnam. BMC Public Health 22:828.
- D.H.T. Bui, B.X. Nguyen; D.C. Truong; D.W. Meyrowitsch; J. Søndergaard; T. Gammeltoft; I.C. Bygbjerg; J. Nielsen. 2021. Polypharmacy among people living with type 2 diabetes mellitus in rural communes in Vietnam. *PlosOne* 6(4): e0249849.



Project: "Living together with chronic disease: Informal support for diabetes management in Vietnam (VALID)"

Unmet needs for informal care and diabetes-related distress among persons with type-2 diabetes

KEY RESULTS

- The spouse was the most important informal caregiver (62.9%), followed by a daughter or son (28.4%)
- 50% of all persons with type-2 diabetes (T2D) suffered from diabetes-related distress (DRD)
- 32% of the persons with T2D reported at least one type of unmet need for informal support
- The most common unmet needs of informal support were being accompanied during transport to health facilities when seeking formal care (20.5%) and financial support related to diabetes management (18.5%)
- Persons living alone reported the highest occurrence of an overall level of unmet need of informal care, followed by those being poor
Unmet needs for emotional support and unmet needs for financial support increased the risk of DRD 2-3 times.

INTRODUCTION

Chronic non-communicable diseases (NCDs) are now the leading cause of disease and death globally, killing 41 million persons every year. Cardiovascular diseases account for most NCD-related deaths worldwide (17.9 million annually), followed by cancers (9.0 million), respiratory diseases (3.9 million), and diabetes (1.6 million). In Vietnam, there are more than 3.5 million persons with diabetes, and this number is estimated to increase to 6.1 million persons by 2040.

For persons living with NCDs, informal care offered by e.g. spouse, children, other relatives, or neighbors, is of crucial importance for self-management of disease and thereby for quality of life among those with disease and their families.

Diabetes self-management can work as an essential component in daily decision-making process concerning, diet, physical activity, and medications. In this context, social interactions and support from informal caregivers can play a vital role among persons living with the disease, and this type of care can potentially reduce DRD, improve blood sugar control and thereby improve quality of life.

Diabetes-related distress (DRD) refers to an emotional state of being negatively affected by one's diabetes, resulting in feelings of frustration and stress. DRD is not a diagnosis but can turn into depression if persisting over time.

The vast majority of studies on informal care and its importance for self-management of diabetes, including effects on DRD, have been carried out in high-income countries. Very few studies have assessed the needs of informal care of relevance for self-management expressed by the persons with T2D themselves in low- and lower-middle-income countries (LMICs) undergoing rapid changes in patterns of disease.

The present study is part of an interdisciplinary research project "Living together with chronic disease: Informal support for diabetes management in Vietnam" (VALID), which collaborates closely with the Vietnamese-Danish Strategic Sector Cooperation (SSC) project.

The aims of the study are:

1. To identify the most important informal caregivers among persons with T2D in rural communities of Vietnam

2. To measure the proportion of persons with T2D who suffered from DRD
3. To measure the relationship between unmet needs for informal care and DRD

METHODOLOGY

From two rural districts in Thai Binh Province, Vietnam, 806 persons with T2D from eight selected rural communes accepted an invitation to answer questions about themselves, their life with T2D and their most important informal caregivers.

Information on unmet needs for informal care was based on a combination of questions regarding transport to clinic or hospital, purchase and preparation of appropriate food, support to take medication for T2D, support to engage in physical exercise, emotional support, and financial support of importance for self-management of diabetes.

Information on DRD was based on questions regarding negative thoughts related to a life with diabetes, including fear, depression, and worries related to complications.

Other questions addressed physical and mental health status and socioeconomic status, including age, gender, living conditions, educational level, and poverty status.

STUDY RESULTS

Demographic characteristics

Among 806 persons with T2D aged ≥ 40 years, most were in the age group 60-69 years, followed by those aged 70 years or more (Table 1).

8.4% of the persons with T2D were currently living alone, and 36.7% were farmers.

Table 1. Age distribution of persons with T2D

Age	n (%)
40-49	42 (5.2)
50-59	161 (20.0)
60-69	357 (44.3)
≥ 70	246 (30.5)

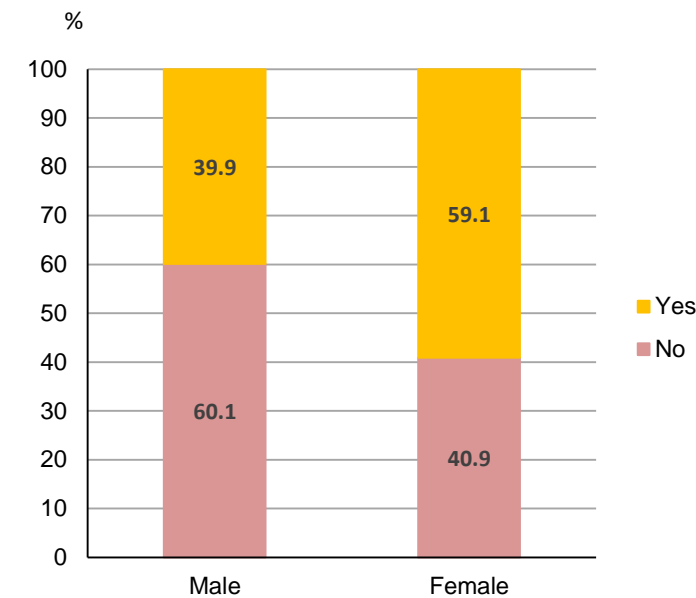
Most important informal caregivers

A spouse was reported as the most common informal caregiver (62.9%) followed by a daughter or son (28.4%) (Figure 1). Among single, divorced, and separated persons, a son or daughter was reported as the most common important informal caregiver (67.7%) followed by another relative (25.8%).

Diabetes-related distress

Half (50.0%) of all persons with T2D suffered from DRD. The prevalence of DRD among females was significantly higher than males (Figure 1).

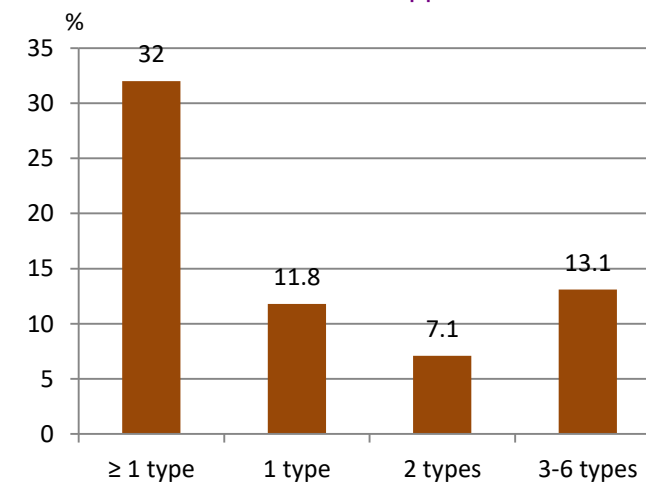
Figure 1. Prevalence of DRD among males and females



Unmet need for informal support

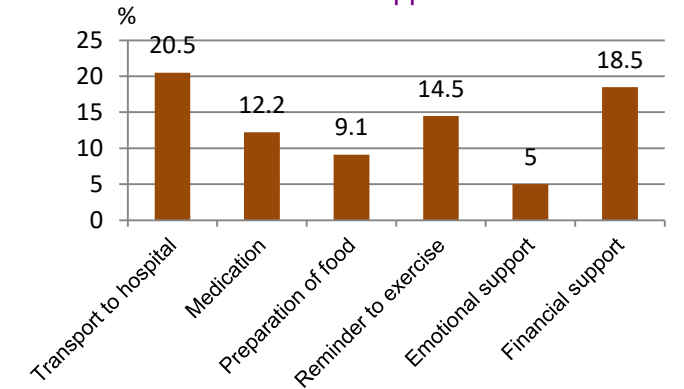
Findings from the study showed that 32.0% of persons with T2D reported at least one type of unmet need for informal support (Figure 2)

Figure 2. Number of reported types of unmet needs for informal support



The most common unmet need of the persons with T2D was being accompanied with/by transport to clinic/hospital and during visits when seeking for the care of diabetes (20.5%), followed by the unmet need for financial support related to costs of diabetes management (18.5%) and the unmet need for reminding to engage in physical exercise (14.5%), see Figure 3.

Figure 3. Prevalence of reported unmet needs for informal support



Characteristics associated with unmet need

Compared to living with other persons, those with T2D who lived alone had the highest risk of an overall level of unmet need of informal care. This was followed by those being poor as compared to being wealthy and those being unemployed as compared to being retired (Table 3).

Table 3. Associations between characteristics and overall level of unmet need

Characteristics	Odds ratio
Living arrangement	
Living alone vs. living with others	4.41
Economic situation of household	
Poor vs. wealthy	3.79
Occupation	
Unemployed vs. retired	2.85
Self-reported physical health status	
Poor vs. good	2.31

Higher odds of having DRD were observed if the persons with T2D reported an unmet need for emotional support or financial support (OR = 2.59 and 1.63, respectively)

CONCLUSION

Half of all persons with T2D suffered from DRD

There is an urgent need to improve health and reduce the level of DRD among those who live with T2D in rural communities of Vietnam

When asked, many persons with T2D specifically expressed a need for care from their relatives concerning transport to health facilities and company when seeking formal care, financial support related to costs of diabetes self-management, and reminders to engage in physical exercise.