RESEARCH REPORTS

Satisfaction of Caretakers towards Government's Home Visit Program for Bedridden Patients in Greater Male', Maldives: A descriptive study

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ABSTRACT *The home visit program for bedridden patients, implemented by the Government of Maldives, has been operating without undergoing any evaluation since its inception in 2015.. The objective of the study was to assess the satisfaction level of caretakers towards the government's home visit program for bedridden patients. A descriptive study was carried out from February to July 2022 for all the registered bedridden patients at the main urban primary health care centres in the Greater Male' region of the Maldives. 123 caretakers were interviewed using a 49-item research instrument. The most common caretaker of bedridden patients were the offspring of the patients (67%). Only 10% of the bedridden patients were taken care of by hired caretakers. The majority (78%) of the caretakers of bedridden patients were not trained. The median score for the overall satisfaction on the home visit program and for the services provided by the program were found to be high at 10 out of 10 (IQR: 2) and 11 out of 14 (IQR: 7). However, the median score for the satisfaction on procedures and training conducted during the program was low at 2 out of 12 (IQR: 6) and 5 out of 10 (IQR: 8). The study found that caretakers appreciate the overall program, and were satisfied with the services such as drug prescription services, general consultations and examinations. However, the satisfaction level was very low on the procedures conducted during the home visits and the training programs provided for the caretakers.*

Keywords: Caretakers, patient satisfaction, bedridden patients, home-visit program, Greater Male'.

Introduction

With the demographical and epidemiological transitions, the elderly population in the South East Asia Region is expected to increase from 9% in 2017 to 22% in 2050 (WHO, 2019) and the need for long-term care (LTC) has become vital. The LTC sector is largely informal and continues to rely on family or home care. Home

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care service availability has substantially increased globally and has consequently resulted in a longer life expectancy for home-based patients (Florea et al., 2019).

With longer life expectancies coupled with increasing incidence of chronic disabilities, WHO has called the governments to formulate long-term care policies for the aged. It has also advocated countries to map the current situation in long-term care services as a baseline for countries to take an informed action with regard to the unmet need, type, and quality of existing services (WHO, 2019). The Government of Maldives initiated its home visit program for fully bedridden, 65 years and above-aged patients in 2015. The program was introduced as per government policy to address the provision of quality home-based care for the elderly in the Greater Male region (MOGF, 2018).

The satisfaction of the family is essential to the success of home care support services. Exploring the satisfaction of caretakers can assist healthcare facilities to provide good quality care and improve the relationship between healthcare providers and caretakers (Singer et al., 2019). Hence the aim of this study was to explore the profile of bedridden patients and their caretakers and to assess the satisfaction of caretakers towards the home visit program provided by the Maldivian government.

Literature Review

This literature review acknowledges the lack of specific local data and the limitations of overseas literature in explaining the situation. Family members, particularly spouses and daughters, play a crucial role in providing care for elderly individuals (Rodríguez et al., 2012); hence, this review highlights the importance of family caretaker and home visits in improving the quality of life for bedridden patients.

The literature on demographic characteristics of caretakers reveals that they are primarily unemployed women and family members, particularly children or spouses of the patients. Caretakers in the age groups of 51 to 60 years and 41 to 50 years are the most prevalent (Wei et al., 2011). Women constitute the majority of caretakers (Prasad & Rani, 2007), with a significant proportion being daughters or spouses (Rodríguez et al., 2012). Wei et al. (2011) also reported from Taiwan that caregiving experience and educational background vary, but overall, caretakers tend to have a high school, vocational school, or college qualification. Additionally, caretakers generally express satisfaction with the home care services team, perceiving them as providing appropriate healthcare support and building their self-confidence in administering care to the patients (Al-Khashan et al., 2011).

Several studies, such as those conducted by Al-Khashan et al. (2011) and Wei et al. (2011), have highlighted the preference for convenience and accessibility of homecare services among caretakers of elderly patients. However, Rodriguez et al. (2012) found a lower preference for homecare services among caretakers. In terms of illness characteristics, pressure ulcers (Puri, 2004) and recurrent urinary tract infections (Greenwood, 2009) are common among bedridden patients. The average duration of illness and homecare service utilization varies, with most patients receiving care for a period of 3 to 12 months. Overall, homecare services are highly valued by caretakers for their ability to cater to the needs of elderly

patients in a familiar and comfortable environment (Al-Khashan et al., 2011).

Studies by Al-Khashan et al. (2011), Singer et al. (2019), and Prasad & Rani (2007) consistently reported high levels of satisfaction among caretakers towards providing homecare for elderly patients. However, Park (2008) found lower satisfaction rates among family caretakers in Korea. Additionally, Megan et al. (2020) reported higher satisfaction among caretakers for elderly patients with severe dementia compared to those with mild to moderate dementia. Satisfaction with physicians and nursing care varied across studies, with some reporting higher satisfaction towards physicians (Sulmasy et al., 2002) and others reporting higher satisfaction towards nursing care (Miyashita et al., 2008). Overall, caretakers expressed satisfaction with both physician and nursing care, including bedside manners, common courtesy, communication skills, clinical and technical skills, and concern for the patient as an individual. While satisfaction with nursing care was slightly lower than physician care, it remained high among caretakers (Prasad & Rani, 2007; Kokorelias et al., 2019).

Caretakers generally expressed satisfaction with the care provided by primary care centres (Rodríguez et al., 2012) while reporting lower satisfaction with vocational therapy and physiotherapy services (Al-Khashan et al., 2011). They were satisfied with patient-related procedures but had concerns about certain procedures like ambulance arrangements and emergency room referrals (Al-Khashan et al., 2011). Overall, communication and information exchange between clinicians and caretakers were areas of lower satisfaction; however, caretakers were generally satisfied with psychosocial care (Vogel et al., 2019). These findings highlight the importance of addressing specific areas of concern to improve caretakers' satisfaction with home visit services.

Several factors were identified as influencing caretakers' satisfaction, which include the type and duration of illness, frequency of home visits, age, gender, and the caretaker's role and relationship to the patient (Al-Khashan et al., 2011).

According to a study conducted by Al-Khashan et al. in 2011, older age of care takers, being female, and receiving more frequent home visits are factors that contribute positively to the satisfaction of caregivers.

Primary caretakers over the age of 30 and those with lower educational levels tend to be more satisfied with home healthcare services (Wei et al., 2011). Manskow et al. (2014) highlighted the significance of effective and transparent communication during the evaluation process, emphasizing its role in positively impacting caregiver satisfaction. Conversely, they noted that poor communication negatively influences caretaker satisfaction. Overall, caretakers who are spouses or daughters of the patient perceive caregiving as a rewarding experience, which can contribute to their satisfaction with patient care (Megan et al., 2020).

In the local context, home visit service provided by Dhamanaveshi and Hulhumale Hospital in the Greater Male' area of Maldives offers vital healthcare to bedridden or mobility-limited elderly patients. Launched in 2015 and administered in collaboration with the Ministry of Gender and Family (MOGF, 2018), the program serves the densely populated Male' region. Routine visits occur twice a week, providing services such as consultations, catheter and tube management, blood sample collection, prescriptions, nutritional counselling, and patient care education. As no official evaluations or research were conducted to evaluate the caretaker satisfaction for program enhancements, this study aims to fill that gap by

examining the satisfaction of caretakers towards government's home visit program for bedridden patients in Greater Male' region of the Maldives.

Methodology

A quantitative descriptive study was carried out from February to July 2022 of all the registered bedridden patients at the two main urban primary health care centres (namely Dhamanaveshi and Public Health Unit of Hulhumale Hospital) run by the government in the Greater Male' region of the Maldives. Families are required to register the patient through the Ministry of Gender and Families' and the home visit program is conducted in collaboration with the Ministry of Health Maldives. At the time of the study, Dhamanaveshi and Hulhumale Hospital catered for 37 and 30 registered clients respectively. The registered caretaker and one additional caretaker were interviewed at their homes where the bedridden patient was stationed.

The target population of the study were the caretakers of the 67 bedridden patients. The sampling frame was the lists of registered bedridden patients and their caretakers at Hulhumale Hospital and Dhamanaveshi. There was a total of 134 caretakers (2 per patient), out of them 123 caretakers were available during the study period. A sample of 102 caretakers participated in the study. One or more caretakers were included in the study to get a broader perspective of the home visit program delivered at different times of the day while the patient was taken care of by different people. The caretakers who were mentally or physically challenged and those who were unable to give consent due to any reason or were unable to understand the local language Dhivehi, or English, were excluded from the study.

The 49-item research instrument was developed based mainly on open-access validated questionnaires (Guerriere et al., 2013; Al-Khashan et al., 2011). Items were added to fit the Maldivian context collecting information about the patient and his/her condition, caretakers' demographics and satisfaction on the seven services provided in the program, six items on the procedures conducted, and five areas of training programs provided indicators highlighting the overall satisfaction on the program. Content validation of the instrument was conducted by an expert group consisting of members from the Ministry of Gender and Family, Dhamanaveshi and the Maldives National University and it was pretested for ease of administration. Data was collected by trained public health professionals from Dhamanaveshi. Cronbach's Alpha on the scaled variables calculated from the pretested data among participants showed 0.82. Satisfaction of services, procedures and training programs provided by the program was measured on a 3-point Likert scale (Not satisfied = 0, Somewhat Satisfied = 1 and Satisfied = 2). Satisfaction towards services, procedures and training (18 items) was calculated by summing the response scores (scores ranging from 0 to 36). These were categorized as shown in Table 1. An overall satisfaction towards the whole program was calculated using a 5-item scale (score ranging from 0 to 10) and were dichotomously grouped as shown in Table 1.

Table 1
Satisfaction Scale

Satisfaction scale on services, procedures and training programs	Score
Low	0 - 12
Moderate	13 - 24
High	>25
Satisfaction scale for Overall Program	**Score**
Not Satisfied	0 - 5
Satisfied	6 - 10

The data was analyzed using Microsoft Excel 2013 and Statistical Package for the Social Sciences (SPSS version 21.0). Descriptive statistics and cross-tabulations were conducted and presented in frequencies, percentages, component bar graphs, radar graphs and tables. Chi-square tests with a significance level of 0.05 were used to interpret the characteristics of the patients and the caretakers by their satisfaction level. Data was checked for its clarity, completeness, accuracy, missed values and unlikely responses.

Results

Characteristics of the bedridden patients by satisfaction level

The response rate of the study was high at 92% where only 11 caretakers were not available. The age of the bedridden patients registered for the program ranged from 65 to 99 years, with a mean age of 81.4 (SD: 8.02). The modal age observed among the bedridden patients was 82 years. Table 2 demonstrates that most of the bedridden patients were females (79%). However, the proportion of satisfied responses was slightly higher among male patients as compared to female patients (92.3% versus 80.4%). While the majority of the patients do not live with their families (67%), many of them have been receiving home visit services for less than one year (37%) and one to three years (33%). The most common caretaker of bedridden patients was the offspring of the patients (67%) and only 10% of the bedridden patients were taken care of by hired caretakers.

More than half of the bedridden patients were diagnosed with cerebrovascular diseases (57%), followed by cardiovascular (11%), endocrine (11%), respiratory (7%) and other diseases excluding the afore mentioned diseases (13%). Eighty-five percent of the patients in the home visit program were fully bedridden and 84% were on more than three medicines. The majority of the bedridden patients were on nappies (78%). The proportion of bedridden patients with bedsores was 19% and those on Ryle's tube was 28%.

The frequency of the monthly home visits and the duration of illness was found to have statistical significance in the satisfaction level, where satisfaction was higher when the frequency of the monthly home visits was higher (p value: 0.024) and when the illness duration increases (p value: 0.06).

Table 2

Characteristics of the bedridden patients by satisfaction level

	Satisfied		Not Satisfied		Total		P-value
	N	%	N	%	N	Column %	
Gender							0.24
Male	24	92.3	2	7.7	26	21.1	
Female	78	80.4	19	19.6	97	78.9	
Main Caretaker of the Patient							0.146
Hired Caretaker	11	91.7	1	8.3	12	9.8	
Son or daughter	65	78.3	18	21.7	83	67.5	
Other family member	26	92.9	2	7.1	28	22.8	
Lives with family							0.619
Yes	33	80.5	8	19.5	41	33.3	
No	69	84.1	13	15.9	82	66.7	
Diagnosed Condition							0.152
Cerebrovascular	60	85.7	10	14.3	70	56.9	
Cardiovascular	13	92.9	1	7.1	14	11.4	
Respiratory	6	66.7	3	33.3	9	7.3	
Endocrine	9	64.3	5	35.7	14	11.4	
Others (Dyslipidemia, CKD, Cancer etc.)	14	87.5	2	12.5	16	13.0	
Period receiving home visit service							0.158
Less than 1 year	36	80.0	9	20.0	45	36.6	
1-3 years	30	75.0	10	25.0	40	32.5	
4-5 years	16	88.9	2	11.1	18	14.6	
6 or more years	20	100.0	0	0.0	20	16.3	
Mobility of the Patient							0.381
Able to move alone	4	66.7	2	33.3	6	4.9	
Mobile with support	12	92.3	1	7.7	13	10.6	
Fully bedridden	86	82.7	18	17.3	104	84.6	
Frequency of monthly home visits							0.024
Once or less than once per month	36	72.0	14	28.0	50	40.7	
2 times per month	61	89.7	7	10.3	68	55.3	
3 or more times per month	5	100.0	0	0.0	5	4.1	
Medicine Usage							0.122
Not on medication at present	4	100.0	0	0.0	4	3.3	
1-2 drugs at present	12	80.0	3	20.0	15	12.2	
3 or more drugs at present	86	83.5	17	16.5	103	83.7	
Duration of Illness							0.059

Less than one year	18	78.3	6	21.7	24	19.5	
1-3 years	23	74.2	8	25.8	31	25.2	
4-5 years	25	89.3	3	10.7	28	22.8	
6 and more years	36	90.0	4	10.0	40	32.5	
Patient on Nappy							0.604
Yes	81	84.4	15	15.6	96	78.0	
No	21	76.9	6	23.1	27	22.0	
Patient on Ryle's Tube							0.586
Yes	28	80.0	7	20.0	35	28.5	
No	74	84.1	14	15.9	88	71.5	
Patient on Foley›s catheter							0.18
Yes	16	66.7	8	33.3	24	19.5	
No	86	86.9	13	13.1	99	80.5	
Patient with Bedsores							0.964
Yes	19	82.6	4	17.4	23	18.7	
No	83	83.0	17	17.0	100	81.3	

* Pearson Chi square, 2 sided significance

Characteristics of the caretakers of bedridden patients by satisfaction level

As observed in table 3, the majority of the caretakers were females (69%), married (75%), employed (59%) and had attained a higher qualification than the basic level of education (60%). Most of the bedridden patients were taken care of by their sons or daughters (57%) while only 4% of the bedridden patients were taken care of by a maid. The majority of the caretakers of bedridden patients were not trained (78%). The preferred place of caring for the bedridden patients was their own home (93%).

Table 3

Characteristics of the caretakers by satisfaction level

	Satisfied		**Not Satisfied**		**Total**		**P-value**
	N	**%**	**N**	**%**	**N**	**Column %**	
Gender							0.24
Male	34	33.3	4	19.0	38	31	
Female	68	66.7	17	81.0	85	69	
Preferred place of care							0.573
Home	93	91.2	21	100.0	114	93	
Hospital or Health facility	6	5.9	0	0.0	6	5	
Others	3	2.0	0	0.0	4	3	
Trained Caretaker							0.31

Yes	15	14.7	5	23.8	20	16	
No	80	78.4	16	76.2	96	78	
Don't know	7	6.9	0	0.0	7	6	
Monthly Income of Caretaker							0.722
Less than 7000Rf	36	35.3	10	47.6	46	37	
7000 - 10000Rf	21	20.6	3	14.3	24	20	
11000 - 15000Rf	20	19.6	3	14.3	23	19	
More than 15,000Rf	25	24.5	5	23.8	30	24	
Main occupation of Caretaker							0.816
Unemployed	41	40.2	9	42.9	50	41	
Civil service	26	25.5	4	19.0	30	24	
Private sector	17	16.7	5	23.8	22	18	
Others	18	17.6	3	14.3	21	17	
Education level of Caretaker							0.721
Basic	39	38.2	10	47.6	49	40	
Secondary/Higher secondary	25	24.5	2	9.5	27	22	
Certificate	14	13.7	2	9.5	16	13	
Diploma	9	8.8	3	14.3	12	10	
Degree	9	8.8	3	14.3	12	10	
Masters	5	4.9	1	4.8	6	5	
PhD	1	1.0	0	0.0	1	1	
Marital status of Caretaker							0.298
Single	14	13.7	2	9.5	16	13	
Married	77	75.5	15	71.4	92	75	
Divorced	4	3.9	3	14.3	7	6	
Widowed	7	6.9	1	4.8	8	7	
Caretaker›s Relationship with patient							0.254
Son/Daughter	53	52.0	17	81.0	70	57	
Husband /Wife	11	10.8	1	4.8	12	10	
Maid	4	3.9	1	4.8	5	4	
Aunt/Uncle	2	2.0	1	4.8	3	2	
Siblings	1	1.0	0	0.0	1	1	
Son or Daughter in law	15	14.7	0	0.0	15	12	
Granddaughter/Grandsons	8	7.8	0	0.0	8	7	
Others	8	7.8	1	4.8	9	7	

* Pearson Chi square, 2 sided significance

Satisfaction level of caretakers towards the Home Visit Program

Services Provided: The level of satisfaction on the service indicators were high as per Figure 1, ranging from 41% to 74%. Most caretakers were satisfied with the drug prescription services, general consultation and general examination services provided in the home visit program.

Procedures Conducted: Caretakers' satisfaction with procedures conducted during the program was low (see Figure 1), ranging from 18% to 26%. Catheter changing frequency and quality were the procedures where most caretakers displayed dissatisfaction.

Training programs: Training provided during the home visits showed low proportions in satisfaction (see Figure 1) , ranging from 24% to 38%.

Overall Program: The proportion of caretakers' satisfaction towards the overall program including the clinical and technical skill of the staff, common courtesy, communications, bedside manners and concern for the patient was found to be high ranging from 69% to 83% (see Figure 1).

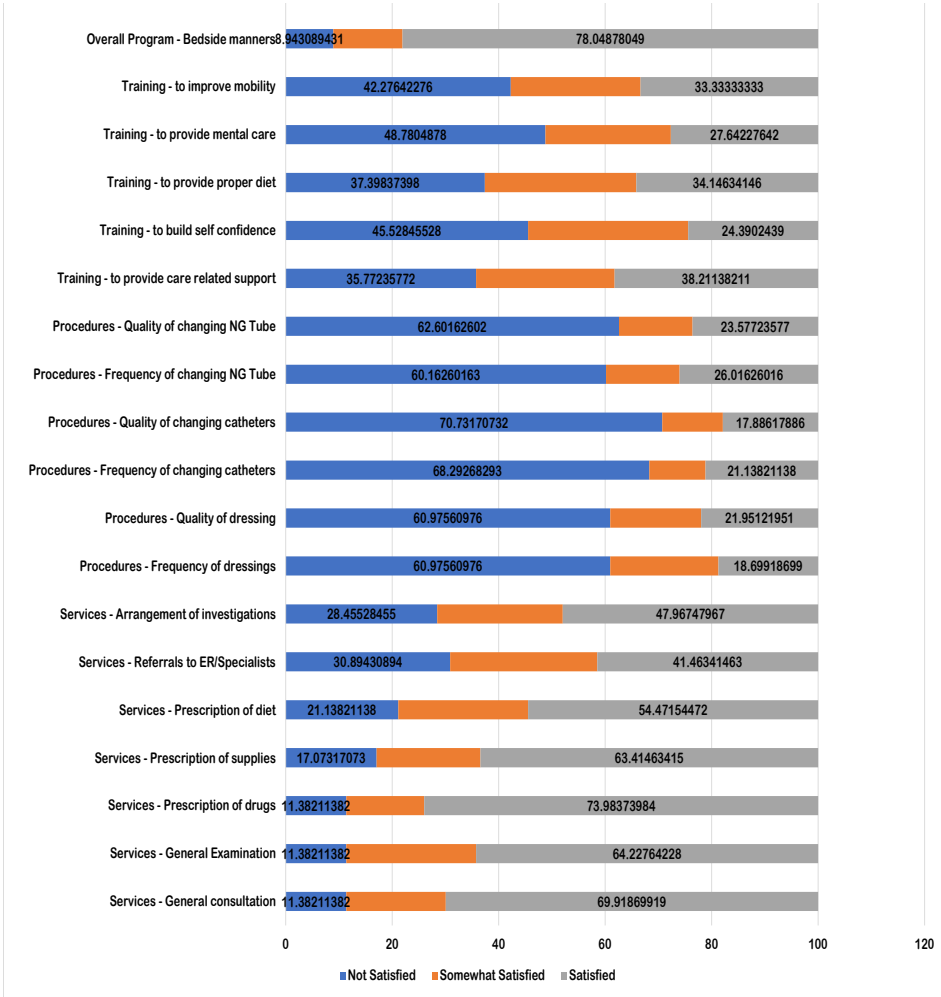

Figure 1. Satisfaction with the Services, Procedures and Training conducted during the Home Visit

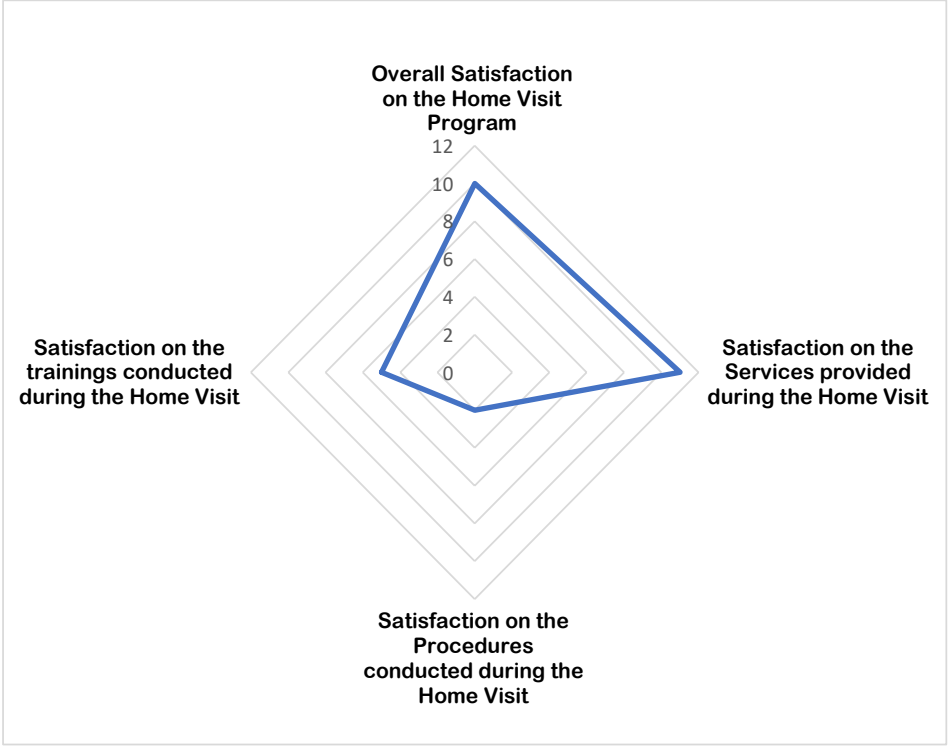

Figure 2. Median Satisfaction score

The median satisfaction score in the four dimensions of caretakers' satisfaction

The median score as described in Figure 2, for the overall satisfaction with the home visit program and for the services provided by the program was found to be high at 10 out of 10 (IQR: 2) and 11 out of 14 (IQR: 7). However, the median score for the overall satisfaction on procedures and training conducted during the program was low at 2 out of 12 (IQR: 6) and 5 out of 10 (IQR: 8).

Discussion

Dhamanaveshi and Hulhumale Hospital initiated home visit services as part of a major public health program in collaboration with the Ministry of Gender and Family in 2015 (MOGF, 2018) to provide long-term healthcare for elderly patients above 65 years of age, who are either completely bedridden or have limited mobility. The services provided through these home visits include general consultation, Foley's catheter removal and insertion, Ryle's tube removal and insertion, blood sample collection, prescribing drugs, nutritional counselling, training of caretakers on general care of the patients including cleaning, bathing, oral care, wound care,

wound dressing, catheter care and provision of necessary documentation in case of deployment of special furnishings such as hospital bed, wheelchairs and airbeds.

As the results have depicted, the overall satisfaction towards the program was high and a very high proportion of caretakers were satisfied with the services such as drug prescription services, general consultation and general examination services provided during the home visit program. This is consistent with studies done in many countries such as Canada, Saudi Arabia and India where the caretakers had higher levels of satisfaction towards homecare for elderly patients (Singer et al., 2019; Al-Khashan et al., 2011; Prasad & Rani, 2007). The majority of the caretakers were reportedly found satisfied with services related to both the physician and nursing care provided by the home-based program which is consistent with a Japanese study (Miyashita et al., 2008). Contrarily, some studies suggest that satisfaction with physician's care was reported to be higher than nursing care among caretakers (Sulmasy et al., 2002; Welch, 2010), whereas some suggest higher satisfaction from nursing care (Manskow et al., 2018). As reported in this study a high proportion of caretakers were satisfied with the bedside manners of physicians. Similarly, it was reported by other studies that a great majority (89.5%) of the caretakers were satisfied with the bedside manners of the physicians, whereas slightly lower than above (72.6%) of the caretakers were satisfied with the bedside manners of nurses (Kokorelias et al., 2019). Almost the same level of higher overall satisfaction was noted towards the Home visit program in Male'. This finding is similar to what was reported in Canadian studies where 80% of the study participants were satisfied with the primary healthcare team and the healthcare system as a result of the primary healthcare program (Vogel et al., 2019; Ploeg et al., 2019).

The results of this study also reported that the majority of the bedridden patients in Greater Male' are looked after by their families and prefer to be taken care of at their homes. This is consistent with other studies in similar contexts (Welch, 2010; Rodríguez et al., 2012). It was clear from the results that many of the caretakers were found to have only a basic education level and were not trained to take care of their bedridden patient relatives. Performing this complicated task without prior training with limited resources or skills makes their satisfaction one of the main quality indices for healthcare and related services (Hwang et al., 2014), which was seen to be affected by certain factors including demographics such as age, gender and income of the caretakers. Also, frequent home visiting and the length of illness were factors that influenced caretakers' satisfaction in Male' and it was also reported similarly in other parts of the world according to Al-Khashan et al. (2011).

This study further revealed that there are areas where the training of caretakers needs improvement in performing both routine and specialized tasks, such as patient positioning and tube feeding. In addition, enhancements are needed in their proficiency when it comes to procedures like changing Foley's catheters and Ryle's tubes. Conclusion

This study has revealed that similar to other countries in the South East Asia region, elderly bedridden patients in the Maldives are mostly taken care of by their families and preferably in their homes. However, many are not trained to take care of their bedridden patient relatives. Hence, the government's home visit program is an important public health initiative. The study found that caretakers appreciate the overall program, and were satisfied with the services such as drug

prescription services, general consultations and examinations. However, the satisfaction level was very low on the procedures conducted during the home visits and the provision of training for the caretakers. Further exploration of the home visit program is recommended to improve the quality of services provided to the bed-ridden patients through in-depth qualitative studies.

Conflict of interest

No potential conflict of interest was reported by the author except that the author conducting this research as Principal Investigator is part of Dhamanaveshi's home visit team and is responsible for providing home visit care to the registered bedridden patients of Dhamanaveshi; hence, was not involved in any data collection nor directly contacted the relatives of the bedridden patients during the research time period. The caretakers of the bedridden patients were assured that their participation will not affect the care of their bedridden relative or any home visit program activities in any form.

Ethical Considerations

The study was approved by the Maldives National Health Research Council (Ref No: NHRC/2022/07) and the Maldives National University Research Ethics Committee (Ref No: RE/2022/B-03). Administrative approval to collect data from bedridden patients was sought from Dhamanaveshi and Hulhumale Hospital. All participants provided written informed consent for all interviews and the publication of the findings.

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