

The impact of the Disability Allowance on health and quality of life in the Maldives: quasi-experimental study

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Abstract

Background

People with disabilities often experience worse health outcomes, poorer healthcare access and higher health spending compared to people without disabilities. Cash transfer programmes – such as the Disability Allowance in the Maldives – are increasingly being used as a strategy to offset financial barriers to accessing to healthcare, although evidence is lacking on their effectiveness.

Methods

The impact of the Disability Allowance on people with disabilities' health and quality of life was assessed using a quasi-experimental study design with difference-in-difference analysis with propensity score matching. The intervention group were 182 people (aged 2+) who were accepted into the Disability Allowance between July 2017-February 2018. People with disabilities who were not enrolled in the Disability Allowance, identified through a national survey, were used as controls (n = 272). Baseline data collection occurred July 2017-February 2018 (before enrolment in the Disability Allowance), and endline data collection April-July 2019.

Findings:

Receipt of the Disability Allowance was associated with modest improvements in several domains of quality of life (social relationships, psychological health, physical health) and non-significant trends towards decreased health spending and catastrophic health expenditures. It did not reduce the likelihood of experiencing a health problem or improve overall quality of life.

Conclusion

The Disability Allowance provides some improvements in the health and quality of life of persons with disabilities in the Maldives. Other policy interventions are likely needed to maximise the impact of the Disability Allowance, such as increasing availability of and access to assistive products and impairment-related services.

Introduction

People with disabilities – who represent 16% of the global population [1] – face persistent health inequalities, which affect their functioning, quality of life and participation in society [1, 2] and contribute to the 14 year life expectancy gap between people with and without disabilities [3]. They often have an increased need for health services, as most need services related to their impairment and underlying health condition (e.g., rehabilitation or specialist services including for vision, hearing or mental health) in addition to routine health services required by the rest of the population (e.g., primary care, sexual and reproductive health). Their needs for healthcare are further increased by a higher occurrence of a wide range of co-morbidities [4], including cancer [5], obesity [6], malnutrition [7] and chronic conditions [8], which arise from their underlying health condition or impairment as well as due to adverse social determinants of health (e.g. poverty) [9].

Many people with disabilities face unmet healthcare needs or high healthcare spending due to the costs associated with their heightened need for healthcare [9, 10]. These costs include not only the direct costs of paying for health services and products, but also indirect (e.g., transport) and opportunity (e.g., time off work) costs when seeking care. Indirect and opportunity costs may be particularly high for people with disabilities, as impairment-related services are often heavily centralised in urban areas, public transport options are not always accessible and some require other family members to assist them to attend appointments [1, 9]. The combination of these costs presents high financial barriers to accessing needed healthcare. Yet people with disabilities are more likely to be living in poverty [11], and so their capacity to pay is often lower than people without disabilities. Those who are still able to access services frequently face significant, and even impoverishing, healthcare spending [10], limiting the resources they have available to support their well-being in other ways (e.g., better nutrition, community participation).

Ensuring access to required healthcare without financial hardship is central to achieving Universal Health Coverage (UHC) [12]. UHC is recognised as critical for sustainable development, for improving population health as well as reducing poverty and inequality [13, 14]. UHC is also a core component of inclusive social protection systems that support the inclusion of people with disabilities [9]. Cash transfers can be an important tool for reducing the financial burden of seeking healthcare, leading to increased health and healthcare access for recipients. Amongst the general population, systematic reviews from low- and middle-income countries have found strong evidence of positive impacts of cash transfer receipt on nutrition and uptake of health services and some evidence of enhanced health status and quality of life [15, 16].

There is less information about the impact of cash transfers amongst people with disabilities, including on their health outcomes, particularly in low- and middle-income countries [17]. Impacts from general population studies may not be generalisable, as people with disabilities have higher and differing health needs, and face greater barriers to accessing required care. Of the available evidence, a disaggregated analysis of a randomised control trial of the Child Grant Programme in Lesotho found receipt led to modest improvements to health status and access to care amongst recipients with disabilities [18]. Meanwhile, a quasi-experimental study in China found recipients of a disability-targeted cash transfer were less likely to develop new disabilities, more likely to use rehabilitation and medical services and reported less financial hardship in accessing health services than non-recipients with disabilities [19,

20]. Other observational studies on self-reported use and impact of cash transfers have also found that they can help facilitate access to healthcare for recipients with disabilities [21-23].

More evidence is needed on the impact of cash transfers on health and quality of life of people with disabilities in low- and middle-income countries with different underlying health financing structures and social, economic, geographic and other contextual factors. Consequently, this study presents findings from a quasi-experimental impact evaluation of the Disability Allowance in the Maldives focusing on if the monthly cash transfer resulted in changes to these outcomes.

Study context: the Disability Allowance and Maldivian health system

It is estimated that 6.8% of the Maldivian population has a disability [24]. People with disabilities and their households are more likely to be living in poverty and face exclusion from work, education and social life compared to people without disabilities [24].

The 2010 Disability Act established the Disability Allowance in the Maldives, which seeks to “*provide financial support to the disabled and enable them to have equal opportunities in the society as others*” [25]. The programme is managed by the National Social Protection Agency (NSPA). At the time of this study, the Disability Allowance provided MVR 2,000 [US\$130] per month and was non-contributory, non-means tested and non-conditional. The Disability Allowance is restricted to Maldivian citizens and considers people with disabilities as those with a “*...long term physical, psychological, sensory or mental illness facing difficulty in participating in community activities to the same level as others...*” [25]. Disability is assessed through a medical assessment, and if deemed needed, a functional assessment. It is estimated that 25.6% of Maldivian citizens with disabilities are receiving the Disability Allowance, with coverage higher among men, children and young adults, people living outside of the capital Malé and people in the lowest two income quartiles [26].

The Maldives also has a national health financing scheme, *Husnuvaa aasandha* (“*Aasandha*”) for all Maldivian citizens. *Aasandha* covers both in-patient and out-patient care across a range of services (including many forms of rehabilitation), as well as emergency transport and most medications. There are no caps on spending against eligible services and services in the public sector are free at point of use. Additionally, NSPA runs a programme called Medical Welfare where people can apply for subsidisation of direct and indirect (e.g., travel) healthcare costs for products and services not covered through *Aasandha*. Importantly, assistive devices purchase and repair are available through Medical Welfare, and people with disabilities are supposed to be referred for assessment when enrolling in the Disability Allowance [26].

Availability of healthcare services is a noted challenge for seeking healthcare in the Maldives, as many services are concentrated in the capital (Malé) [27]. Around a third of the Maldivian population of 540,000 lives in Malé, with the remaining residing across over 186 inhabited islands [28, 29]. Traveling abroad to seek healthcare is also common, as some services are not available at all in the Maldives (e.g., specialist cancer care). *Aasandha* covers travel and direct medical healthcare from some contracted providers in India and Sri Lanka. However out-of-pocket spending on overseas medical treatment is still high amongst the general population [30].

The Maldives is therefore an interesting setting to explore the impact of a cash transfer on people with disabilities’ health and well-being. The Maldives has a relatively comprehensive national health financing system, which covers direct costs for most services in public facilities. However, concentration of services in the capital – particularly for impairment-related and other specialist healthcare which people with disabilities are more likely to need [31] – create high opportunity and indirect costs for health-seeking. The Disability Allowance in the Maldives is also one of the largest disability-targeted cash transfers in an LMIC setting [32], and so could have a meaningful impact at addressing costs of seeking care, while also improving health and well-being in other ways.

Theory of change

Receipt of the Disability Allowance could lead to improved health and well-being through several mechanisms (Figure 1). Importantly, access to required healthcare and other services needed to support health, functioning, and well-being could increase through the reduction of financial barriers (i.e., the Disability Allowance increases capacity to pay; Medical Welfare subsidizes non-*Aasandha* covered health services and products). Further, the additional income from the Disability Allowance can lead to other investments that support people with disabilities’ health and well-being, including improved nutrition, increased social participation and reduced exposure to health risks (e.g., decreased need to engage in unsafe work, adapting homes to make safer).

The potential mechanism of impact of the Disability Allowance on healthcare spending is less clear. On one hand, healthcare spending could increase as people with disabilities have increased capacity to pay for needed services. On the other, healthcare spending could decrease, particularly in the long-term, as health and well-being improve. For example, earlier access to needed healthcare can prevent further functional decline or development of new health conditions.

Methods

This study used a quasi-experimental design using difference-in-difference analysis with propensity score matching.

Participants

The intervention group was people who newly enrolled in the Disability Allowance after baseline. A control group was formed of people with disabilities who were not enrolled in the Disability Allowance at any point between baseline and endline.

Intervention group selection: People (aged 2+) who were accepted into the Disability Allowance between July 2017-February 2018 were recruited to the study and interviewed before they received the first payment. Lists of newly accepted respondents were provided by NSPA.

Control group selection: The control group was identified from a nationally representative, population-based survey. The methods for this survey have been described in full elsewhere [24]. In brief, 5,363 people aged 2 years and older were screened for disability using a two-stage sampling strategy that involved probability proportionate to size followed by modified compact segment sampling [33]. Disability was measured using Washington Group Short Set Enhanced (ages 18+) and the Washington Group-UNICEF Child Functioning modules (ages 2-17) [34, 35] along with additional questions designed to align the study definition of disability with Disability Allowance eligibility criteria. All people recruited to the survey were Maldivian citizens and so eligible for the Disability Allowance and other national programmes (e.g., *Aasandha*) that could affect the parallel trend assumption. To be considered as having a disability, respondents had to meet at least one of the following criteria.

- Screened positive to the Washington Group Extended Set or Child Functioning Module using the threshold of “a lot of difficulty”. For anxiety and depression questions, adults (age 18 or older) had to report experiencing symptoms of anxiety/depression “daily” with an intensity described as “a lot”, while children had to report daily symptoms (ages 5-17). Additionally, to align to the Disability Allowance criteria, these symptoms of anxiety and depression also had to lead to self-reported impacts in at least one of the following: maintaining relationships, socialising with others, finding and maintaining a job, schooling or household work.
- Reported a health condition that would make them eligible for the Disability Allowance but may not be captured by the Washington Group question sets, including autistic spectrum disorder or a psychosocial impairment (e.g., bipolar disorder, schizophrenia).

Individuals originally identified for the control group who became enrolled in the Disability Allowance between baseline and endline were reclassified as being part of the intervention group. People with disabilities already enrolled in the Disability Allowance at baseline were excluded.

Sample size calculation

The primary outcome of the impact evaluation was change in per capita expenditure (PCE), which has been assessed in another paper [36]. The sample size was based on the assumption of an average annual PCE for households with members without disabilities at baseline of US\$6,670, and by assuming that PCE for households with members with disabilities would be 18% lower (baseline PCE US\$5,336) [37].

It was not expected that real PCE would change among households without members with disabilities (i.e. differences between baseline and follow-up PCE, adjusting for inflation, is \$0). Receipt of the Disability Allowance provided an additional US\$1,560 per year and average household size in the Maldives is 5.5 members, leading to an anticipated a change in PCE for households without members with disabilities of US\$283. The standard deviation for change in PCE is not known, and so a range of estimates of differences in PCE were explored (\$200-36) for a power of 80% and 90% and with 95% confidence ($\alpha=0.05$). With these parameters, it was determined that a sample size of 200 people would be sufficient to detect a difference of US\$280 dollars between baseline and follow-up, with 80% power, even if the standard deviation for the difference is high.

Data collection

Baseline data collection took place between July 2017-February 2018, while endline data collection was conducted between April-July 2019. Data was mostly collected in-person at participants’ homes, although phone interviews were also used. Data was captured electronically and uploaded to an encrypted server using Open Data Kit. The survey included questions on the disability status of all household members (aged 2+), household expenditures, and the selected individual's information on their quality of life, health, and access to health services (see Supplemental File 1 for questionnaire).

Outcome indicators

The selection of outcome indicators was determined through the co-production of a theory of change with the implementing agency NSPA [26].

These indicators include:

- **Quality of life** (for people aged 18 years and older): WHOQOL-BREF score, both overall and by domain (overall health rating, physical health, psychological health, social relationships, environment) [38].
- **Likelihood of experiencing a negative health event:** reported that the individual experienced a serious health problem in the last 12 months.
- **Per capita household health expenditures:** includes reported spending on health services and products, including for assistive devices and other impairment-related services and products. Endline health expenditures were adjusted inflation (2019 values). The top 1% of all values were winsorised.
- **Catastrophic health spending:** Healthcare spending in previous month is equal or greater to either 10% (threshold 1) or 25% (threshold 2) of household monthly total consumption expenditures.

Analysis

Difference-in-difference analysis with propensity score matching was used to compare health and quality of life outcomes between the intervention group and the control group. Associations between characteristics at baseline and receiving the Disability Allowance amongst people with disabilities were estimated through t-tests. Sociodemographic characteristics that were significantly associated with Disability Allowance receipt at baseline were used to

calculate propensity scores for matching. Difference-in-difference was used with Kernel matching on the propensity score using the Stata command *diff* [39]. The percent bias was used to examine the balance of key sociodemographic covariate before and after propensity score matching.

The main analysis used age groups (<18 years, 18-64 years, 65+ years), gender, location of residence (Malé vs other atolls) and disability/functional limitation domains (psychosocial, intellectual/cognitive/developmental, sensory, physical) as variables in the propensity score matching. As a sensitivity analysis, a total score was generated by summing each of the domains of the CFM or Washington Group question sets (no difficulty=0, some difficulty=1, a lot of difficulty=2, cannot do=3; presence of anxiety or depression =1) over the maximum possible score for each of the three tools (CF for 2-4 year olds, CFM for 5-17 years, Short Set Enhanced for ages 18+).

Washington Group/CFM scores were missing from 13% of the intervention group at baseline and so their scores were imputed using the median score for the intervention group.

Ethical considerations

Ethical approval for this study was granted by the London School of Hygiene & Tropical Medicine, the Maldives National Bureau of Statistics and the health research committee at the Maldives Ministry of Health. All participants provided informed consent (written or recorded oral). A caregiver provided consent and answered on behalf of children under 18 (age of consent in the Maldives) and adults with severe difficulties communicating or understanding with available accommodations (e.g., sign language interpretation).

Results

Description of the study sample

At baseline there were 187 intervention and 272 control subjects. Loss to follow-up was 23.6%, so that at follow-up there were 141 intervention and 206 control subjects (Table 1). Frequency of loss to follow up was similar between the intervention and control group (22.5% vs 24.3% respectively). Pre-matching, the intervention group differed from the control group on characteristics such as age group, gender, location of residence and disability type/domain of functional limitation. Post matching, the percent bias was reduced to 25% for all these characteristics.

Table 1. Baseline characteristics of the study sample, pre- and post-matching

	Unmatched			Matched		
	Intervention (n=182)	Control (n=272)	% bias	Intervention (n=182)	Control (n=243)	% bias
Age group						
Children (<18 years)	33.0%	13.2%	48.0	33.0%	25.4%	18.5
Working age (18-64)	45.6%	55.1%	-18.9	45.6%	49.1%	-6.9
Older adults (65+)	21.4%	31.7%	-23.4	21.4%	25.6%	-9.4
Female (%)	63.2%	36.9%	54.3	63.2%	56.5%	13.7
Lives in Malé (%)	26.4%	43.9%	-37.3	26.4%	28.2%	-4.0
Disability/functional limitation domain^b						
Physical						
Sensory	42.9%	52.3%	-18.9	42.9%	45.6%	-5.5
Intellectual/cognitive	26.9%	33.1%	-13.5	26.9%	30.4%	-7.7
Mental health	44.0%	24.0%	42.9	44.0%	38.9%	-10.8
	14.3%	23.7%	-24.1	14.3%	15.2%	-2.5

Statistically significant difference compared to Group 1: *p<0.05, **p<0.01, ***p<0.001; ^a Amongst people aged 18+; ^b Domains are not mutually exclusive

Impact of Disability Allowance

All domains of quality of life saw trends towards improvement associated with receipt of the Disability Allowance, although these impacts were small in magnitude (Table 2). Receipt of the Disability Allowance was associated with improvements in the social relationships sub-domain (increase of 10.1 points, p=0.02), and weakly associated with improvements in the physical health (increase of 6.6 points, p=0.10), psychological health (increase of 7.3 points, p=0.07) sub-domains and overall health rating (increase of 6.7 points, p=0.13).

Table 2. Impact of the Disability Allowance on quality of life (scores 0-100), adults 18+ (matched analysis)

		Intervention Group		Control Group	
		N	Value	N	Value
Quality of life overall score	Baseline mean	87	52.2	148	59.8
	Endline mean	87	54.5	148	61.5
	Impact estimate (SE)				2.0 (4.4)
	P-value				0.88
	R^2				0.03
Overall health rating	Baseline mean	87	49.4	148	50.8
	Endline mean	87	56.3	148	51.0
	Impact estimate				6.7 (4.4)
	P-value				0.13
	R^2				0.01
Physical health	Baseline mean	87	37.1	148	49.0
	Endline mean	87	42.6	148	47.9
	Impact estimate (SE)				6.6 (4.1)
	P-value				0.10
	R^2				0.04
Psychological health	Baseline mean	87	54.1	148	63.3
	Endline mean	87	56.1	148	58.0
	Impact estimate (SE)				7.3 (4.0)
	P-value				0.07
	R^2				0.03
Social relationships	Baseline mean	87	69.1	148	81.4
	Endline mean	87	67.3	148	69.4
	Impact estimate (SE)				10.2 (4.3)
	P-value				0.02
	R^2				0.05
Environment	Baseline mean	87	52.6	148	59.2
	Endline mean	87	50.1	148	56.5
	Impact estimate				0.2 (3.2)
	P-value				0.95
	R^2				0.04

The Disability Allowance did not have an attributable impact on the likelihood of experiencing a negative health event in the last 12 months (Table 3). There were non-significant trends towards decreased monthly per capita household health spending (US\$15.30) and reduced catastrophic health spending (US\$5.20).

Table 3. Impact of the Disability Allowance on health and health spending (matched analysis)

		Intervention Group		Control Group	
		N	Value	N	Value
Experienced a negative health event (%)	Baseline mean	136	29.4	182	16.8
	Endline mean	136	30.9	182	17.6
	Impact estimate				0.7 (6.7)
	P-value				0.92
	R ²				0.02
Catastrophic health spending – 10% level (%)	Baseline mean (SE)	132	25.8	176	16.6
	Endline mean (SE)	132	22.7	176	22.7
	Impact estimate (SE)				-9.1 (6.7)
	P-value				0.17
	R ²				0.01
Catastrophic health spending – 25% level (%)	Baseline mean (SE)	132	11.4	176	5.7
	Endline mean (SE)	132	10.6	176	10.1
	Impact estimate				-5.2 (4.7)
	P-value				0.27
	R ²				0.01
Monthly health spending (USD)	Baseline mean	132	35.4	176	21.0
	Endline mean	132	22.7	176	23.6
	Impact estimate (SE)				-15.3 (10.8)
	P-value				0.16
	R ²				0.01

The sensitivity analysis found similar results as the main analysis. The additional of the Washington Group-CFM total score reduced the area of common support, leading to smaller sample sizes and less powered analyses. The direction of trends however remained unchanged. The strength of association with measures of quality of life reduced somewhat, but increased slightly for measures of healthcare spending. For example, the Disability Allowance was associated with a decrease in catastrophic health expenditures at the 10% threshold (decrease in likelihood of 11.1pp, p=0.05) and non-significant trends towards decreased monthly per capita health spending and catastrophic health expenditures at the 25% threshold.

Discussion

Overall, this study found a modest impact of the Disability Allowance in the Maldives on several health and quality of life outcomes. Specifically, the Disability Allowance improved recipients' quality of life in the sub-domain for social relationships and showed weakly significant improvements physical and psychological health. Receipt of the Disability Allowance generally did not significantly impact health spending, although there was a reduction in catastrophic health spending (10% level) in the sensitivity analysis.

Other impact evaluations [18–20] and observational studies [21–23] have also found positive impacts of cash transfers on the health of people with disabilities. For example, a cluster-randomised control trial in Lesotho of the Child Grant Programme found that people with disabilities in recipient households experienced improvements in self-rated health, and this impact was differential compared to recipients without disabilities [18]. Meanwhile, receipt of a disability-targeted cash transfer in China was protective against developing additional disabilities [20]. Observational studies similarly have found that recipients self-report that cash transfer receipt had led to improvements in their health and access to needed healthcare in settings such as South Africa, Nepal and Kenya [40].

Evidence of cash transfers on broader quality of life amongst people with disabilities is more limited. A few observational studies, such as from Bangladesh and India, have noted that people with disabilities report having greater self-confidence and feeling more empowered to participate in the community after receiving a cash transfer [41]. Findings from general population studies have found receipt of cash transfers amongst women can increase their autonomy and decision-making power within households [42]. Such trends could explain the observed impact of the Disability Allowance on the social relationships sub-domain, as well as psychological health.

This analysis mostly found no significant impact on healthcare spending tied to receipt of the Disability Allowance, although the sensitivity analysis revealed a decrease in catastrophic health expenditures. In Lesotho, households with members with disabilities who received the Child Grant Programme reported a significant and differential increase – rather than decrease - in health expenditures compared to both control households with members with disabilities and recipient households without members with disabilities [18]. Observational studies from settings such as South Africa, Nepal, Vietnam and Ghana noted that

cash transfers have been used to help people with disabilities access required healthcare [21–23], while a quasi-experimental study from China reported that receipt of a disability-targeted cash transfer reduced financial barriers in accessing rehabilitation and medical services [19, 20]. In these studies, it is likely – although not directly measured – that healthcare spending would increase as a result of increased access. However, it is unclear if this elevated spending continued in the long-term.

The lack of impact on healthcare spending from receipt of the Disability Allowance observed in the Maldives may be due to several factors. For example, early investments in healthcare at soon after households started receiving the Disability Allowance may have then reduced the need for further healthcare, as hypothesized by the theory of change. Alternatively, or in combination, the decrease in healthcare spending may be due to the saving patterns noted in qualitative research linked to this evaluation [43]. This research found that Disability Allowance recipients, particularly those living outside Malé, reported saving several months of their allotment for larger future health purchase (e.g., travel to Malé or abroad for healthcare). Consequently, large but infrequent health expenditures may not have been adequately captured in the one-month recall period on household expenditures.

A linked process evaluation offers areas for improvement of the design and delivery of the Disability Allowance to strengthen its impacts on health and well-being [43]. Importantly, the value of the cash transfer was insufficient to cover all needed costs for healthcare and other goods and services for supporting health and well-being, which is a common challenge noted in other settings [21, 44, 45]. Promisingly, the value of the Disability Allowance has increased since the study, and progressive levels were introduced to reflect differences in needs (new values are MVR 3000–6000; US\$195–390). Such changes may have improved the impact of the Disability Allowance. Second, although *Aasandha* covers the direct costs of many health services and products, centralisation of services in Malé – particularly of disability-related services – creates high indirect and opportunity costs. Referrals to Medical Welfare were hypothesized in the theory of change to reduce out-of-pocket spending on assistive devices and other services not covered by *Aasandha*. However, few people reported being aware of Medical Welfare (15%) or accessing it (4%) [43]. Further, other barriers to improving health and well-being are beyond the scope of a cash transfer to change (e.g., lack of disability-inclusive environments including accessible transportation, public spaces and services; stigma and discrimination of disability), which has been noted in other settings [45].

This research carries some potential limitations. First, it was not possible to conduct a randomised control trial as the Disability Allowance has been rolled out nationally and all eligible Maldivian citizens with disabilities are entitled to enrol. A quasi-experimental design was therefore the best available option, but it remained difficult to find a comparable control group. Propensity score matching helped to reduce observable differences between groups, although the intervention group remained worse off on most indicators at baseline. There could also be unobservable differences not accounted for that could have affected the assumption of parallel trends. For example, people with more obvious disabilities – who may experience more stigma of disability – may be more likely to enrol in the Disability Allowance, and exposure to stigma can affect health and well-being. Second, it is possible some of the impacts are underestimated due to potential anticipatory behaviour. For example, some in the intervention group may have begun seeking healthcare as they were aware that their application for the Disability Allowance had been successful and that they would soon receive their first instalment of the Disability Allowance. Third, there was limited power for some analyses and disaggregation of outcomes amongst people with disabilities was not possible (e.g., to explore differential impacts by sex, location, functional domain).

Still, the study has important strengths. Key strengths include the recruitment of participants from a nationally representative, population-based survey to allow for a geographically diverse sample. Additionally, quantitative findings were complemented by qualitative research [43], which allowed for a triangulation of results. Finally, the Disability Allowance implementing agency (NSPA) was a core partner in the design of the study, helping shape the theory of change and definition of outcome indicators to ensure alignment with the programme's intended aims.

Additional research is needed to assess the impact of cash transfers in other settings and explore heterogeneity of impacts amongst people with disabilities. Additionally, little evidence is available on the impact of complementary forms for social protection – such as social health insurance or other mechanisms of healthcare financing – amongst people with disabilities. Inclusive social health protection is critical for ensuring people with disabilities can access needed healthcare [46]. Healthcare expenses can be highly variable over time and between individuals, and so social health protection can be a better policy instrument for covering these costs – although cash transfers remain important, especially for meeting indirect and opportunity costs of seeking healthcare. Yet a recent systematic review on health insurance amongst people with disabilities in low- and middle-income countries retrieved 21 studies on if coverage improved healthcare utilisation, financial protection or health outcomes [47]. Findings from these studies were inconclusive and all but two of the 21 studies were observational [48, 49].

Conclusion

This research is one of the few impact evaluations of a cash transfer – or other form of social protection – amongst people with disabilities. It is part of a small but growing literature that finds that cash transfers are an important, although often insufficient, policy tool for reducing poverty and improving health and well-being amongst people with disabilities [36, 40]. Achieving UHC and social protection systems for people with disabilities in the Maldives will likely require a mix of measures, including expanding access to the Disability Allowance and investing in other improvements to the healthcare system to improve affordability, availability and quality of needed services.

Declarations

Ethics approval and consent to participate: All participants provided informed consent (written or oral). Ethical approval for this study was obtained from the London School of Hygiene & Tropical Medicine, the Maldives National Bureau of Statistics and the health research committee at the Maldives Ministry of Health. The research was conducted in accordance with the Declaration of Helsinki. Informed consent was sought from parents or legal guardians for

minors (<18 years old) and people whose disabilities affected their capacity to understand consent procedures, and these individuals provided their assent if they were still able to answer study questions.

Consent for publication: n/a

Availability of data and materials: Data is available upon request for legitimate research purposes.

Competing interests: No authors have declared any conflicts of interest.

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Figures

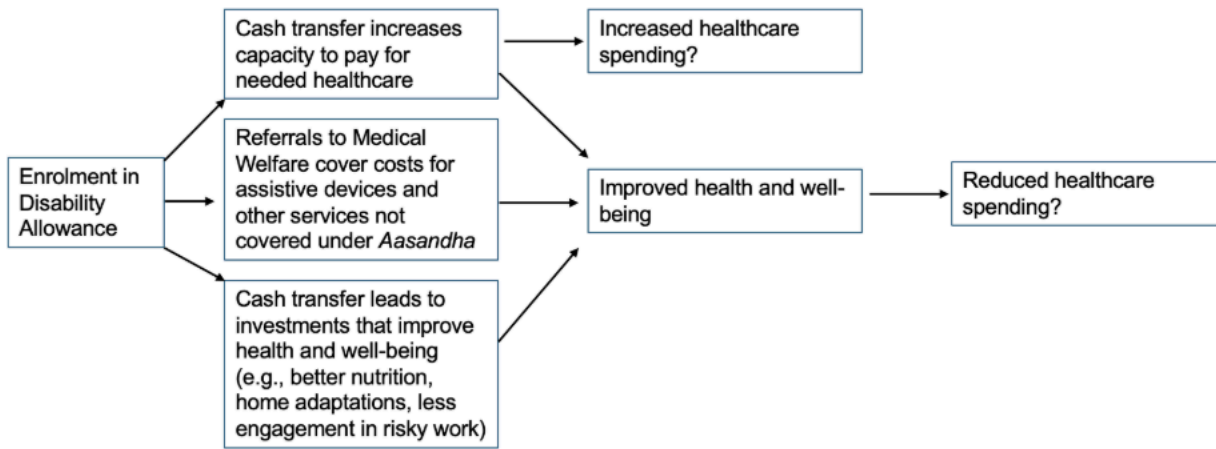


Figure 1

Theory of change for the impact of the Disability Allowance on improving health, well-being and financial protection in access healthcare

Supplementary Files

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