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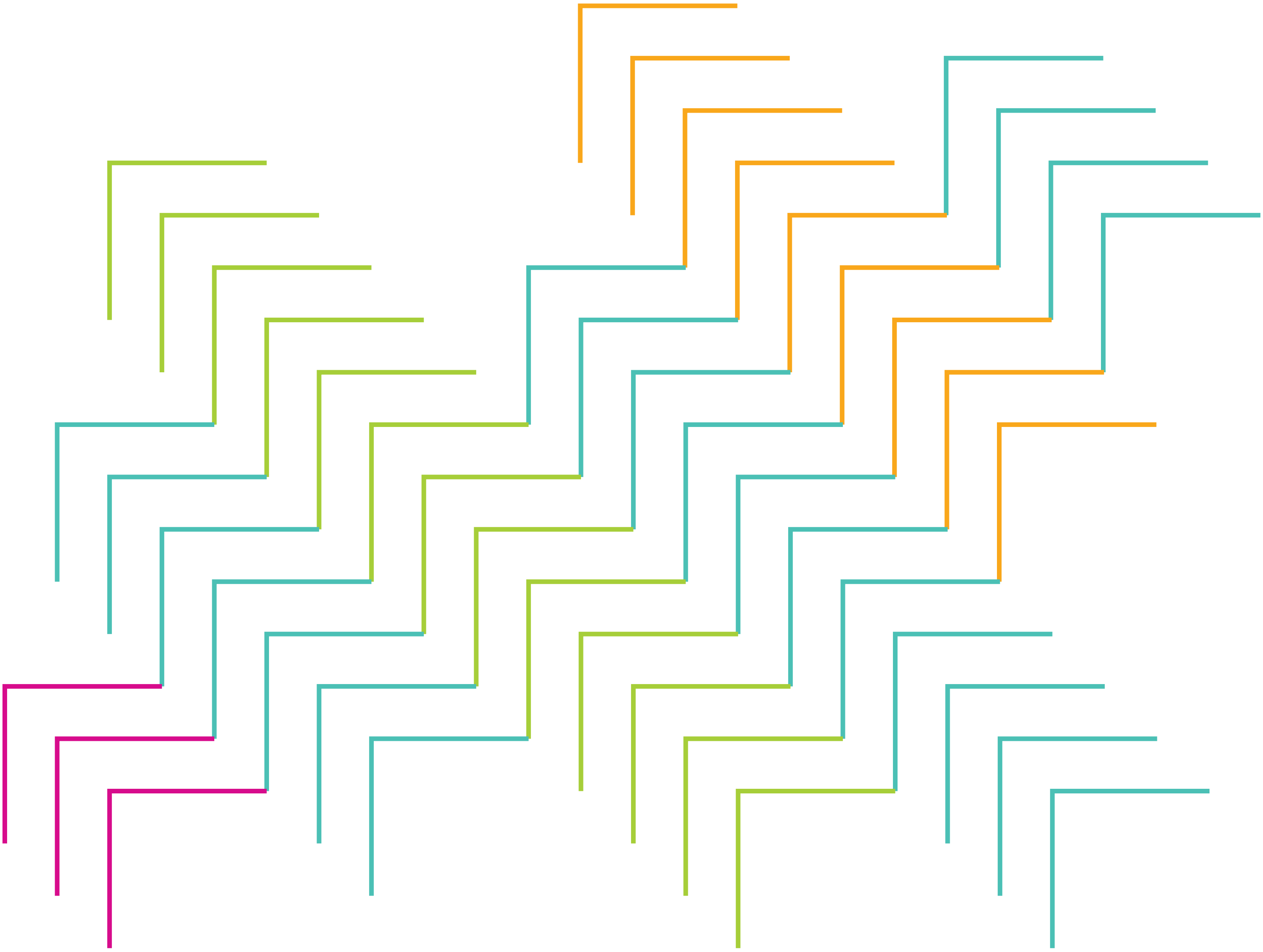

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ISBN 978-92-4-007787-4 (electronic version)
ISBN 978-92-4-007788-1 (print version)

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Suggested citation. Saito T, Jin X, Noguchi T, Komatsu A, Kanamori M. Inequities by sex and gender in access to, and affordability of, long-term care: modifiable factors. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at http://apps.who.int/iris.

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Design and layout by Howdy LLP

Contents

Acknowledgements

The authors of this report are Tami Saito (Chapters 1 and 6, and Annex), Xueying Jin (Chapter 2 and Annex), Ayane Komatsu (Chapter 4), National Center for Geriatrics and Gerontology, Obu, Japan; and, Taiji Noguchi (Chapter 3) and Mariko Kanamori (Chapter 5), Japan Society for the Promotion of Science, Tokyo, Japan.

The authors would like to thank Katsunori Kondo, Chiba University, Japan; Naoki Kondo, Kyoto University, Japan; Masashige Saito, Nihon Fukushi University, Japan; Yugo Shobugawa, Niigata University, Japan; Yuri Sasaki, National Institute of Public Health, Japan; Satoko Fujihara, Tokyo Metropolitan Institute for Geriatrics and Gerontology, Japan; and Kenjiro Kawaguchi, Chiba University, Japan for their contribution to content development. Ricardo Jorge Alcobia Granja Rodrigues, University of Lisbon, Portugal; Sarah L Barber, World Health Organization Centre for Health Development (WHO Kobe Centre – WKC), Japan; and Hyobum Jang and Prerna Banati, WHO Department of Maternal, Newborn, Child and Adolescent Health and Ageing, Switzerland contributed to the technical review and revision of earlier drafts.

The officers from the Kobe City Office are thanked for participating in a multi-sector meeting with the authors (Annex), allowing the sharing of perspectives on sex- and gender-based inequalities in access to long-term care in the city, and proposals to alleviate these issues.

Abbreviations

ADL	activity of daily living
IADL	instrumental activity of daily living
LGBT+	lesbian, gay, bisexual, transgender and other gender minorities
LTC	long-term care
LTCI	long-term care insurance
OECD	Organisation for Economic Co-operation and Development
SES	socioeconomic status
UHC	universal health coverage
USA	United States of America
WHO	World Health Organization
WKC	WHO Centre for Health Development or WHO Kobe Centre

Executive summary

Objectives. In this background study we aim to investigate sex- and gender-based disparities in access to, and affordability of, long-term care (LTC), and the factors affecting these issues.

Methods. We introduce this report with a detailed description of the changing global demography, emphasizing the importance of a globally accessible LTC system. We conducted four different literature or narrative reviews, using either PubMed or CINAHL databases or an online search engine, to identify relevant articles for review on the subjects of: differences in LTC expenditure and utilization between men and women (Chapter 2); varying burdens between male and female caregivers (Chapter 3); potentially effective programmes and policies to mitigate sex- and gender-based differences in access to LTC (Chapter 4); and the additional barriers to LTC access experienced by gender minority groups (Chapter 5).

Key findings. From statistical data, we demonstrate that the global population is ageing and that the number of people needing LTC is projected to increase dramatically in the near future. In Chapter 2 we demonstrate that, in all countries, women are more likely than men to use any form of formal LTC (i.e. home care or LTC facility care). It is not only biological differences but also gender norms that affect the disparities between men and women in terms of LTC expenditure and utilization. In Chapter 3, we report how women experience a higher caregiving burden than men. The socioeconomic status and financial situation of caregivers were also found to be associated with the differences between men and women in terms of burden and service use of LTC. In Chapter 4, we report on several policies and programmes related to LTC, but show how their effect on reducing disparities between men and women in accessing LTC is difficult to measure. In Chapter 5, we report on the fears of discrimination in LTC facilities faced by members of the lesbian, gay, bisexual, transgender and other (LGBT+) population. The LGBT+ community are less likely to receive informal care and may be at higher risk of economic hardship in later life; however, studies for review were limited in number.

Conclusions. Further research is urgently needed on LTC needs and systems from less developed and developing countries. Although LTC spending is higher for women, modifiable background factors, such as possibly less access to both informal and formal care, should be thoroughly considered when developing an inclusive LTC system. Barriers for LGBT+ older adults should also be assessed in the development of a formal LTC system, as these individuals also tend to have lower access to both types of LTC. As well as further research in all these areas, collaboration with policy-makers to plan appropriate interventions – the effectiveness of which can be measured – are also needed.

1

Introduction

Despite the promotion of accessible and affordable universal long-term care (LTC) for the older population, defined by the World Health Organization (WHO) as those aged 60 years or older, people face disparities in LTC either in the countries of their residence or among the sociodemographic and socioeconomic groups to which they belong. In particular, sex- and gender-based disparities in LTC are of concern in both developed and developing countries *(1–4)*.

In many countries, older adults with frailty have traditionally been cared for by female members of their family (e.g. wives, daughters and daughters-in-law), that is, they have traditionally been the recipients of a type of informal (unpaid) care. However, a changing global demography, with modernization and population ageing, has affected the care situation. Such changes to our global demography, described in more detail in Section 1.1, are known to affect older male and female recipients of LTC differently.

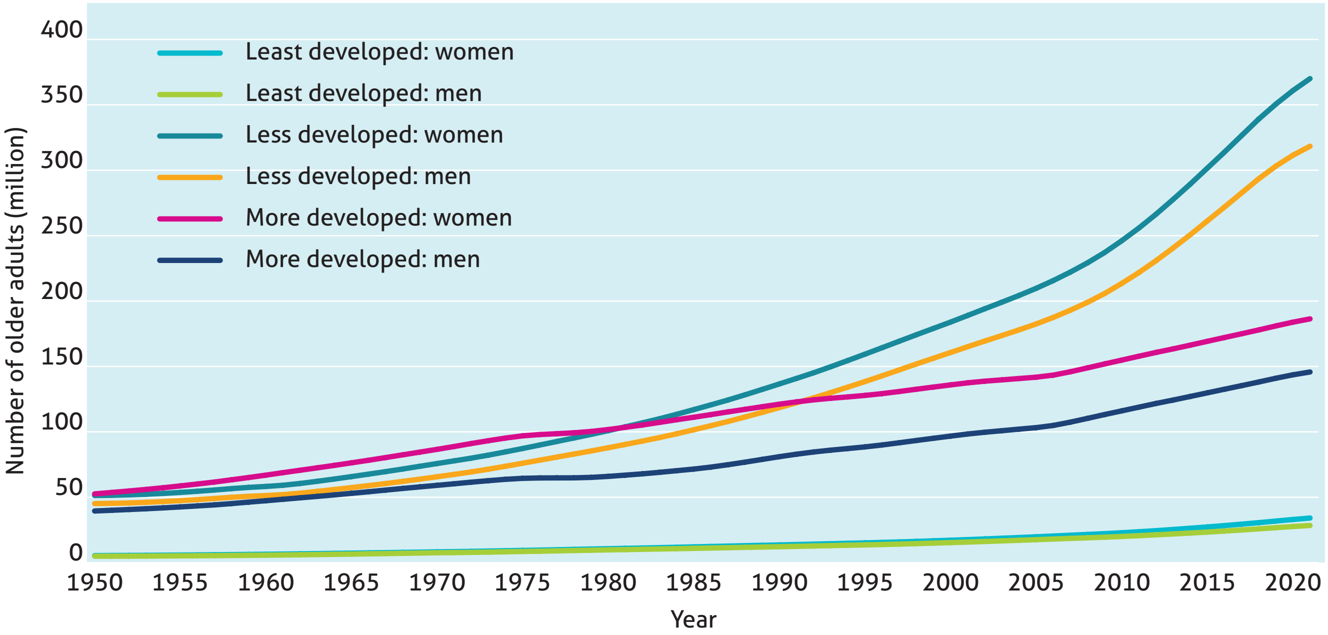
The level of such social changes differs between countries, meaning that the accessibility and affordability of LTC have become more diverse around the world. As well as sex- and gender-based inequities in access, this study also focuses on LTC financing and its antecedents, such as access to formal care (i.e. professional/non-professional care purchased by the individual from any kind of care provider, whether public/private or profit/non-profit organizations) and other background factors. Because formal and informal care are related, a conceptual model that considers these relationships is proposed in this study (Section 1.2) to help understand inequities in access to LTC.

1.1 Changing demography and its implications

The global population is ageing rapidly, particularly in developing countries. According to WHO, the proportion of the population aged 60 years and older will increase from 12% in 2015 to 22% in 2050 *(5)*.

Fig. 1.1 illustrates the volume of this older population by sex and by development index. In 1950, the greatest proportion of older women lived in the more developed countries; in 2021, the greatest proportion of older women lived in the less developed countries. During the last 50 years (1971–2021), the population growth rate of older people has been 241.7% and 209.9% in the most developed countries, 471.8% and 475.5% in developing countries, and 368.0% and 403.5% in the least developed countries for men and women, respectively. By 2050, 80% of older people are likely to be living in low- and middle-income countries *(5)*, where universal LTC systems are yet to be established.

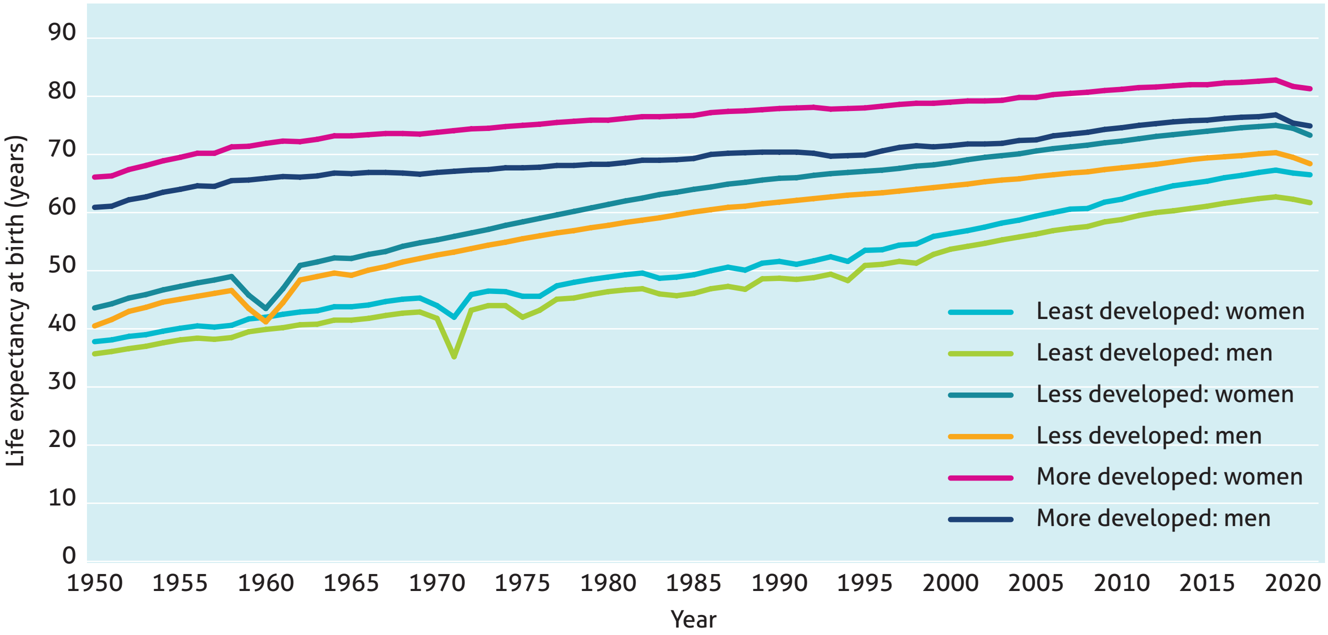
Fig. 1.1. Transitions in the population of those aged 60 years and older between 1950 and 2021, by sex and by development index.



Source of data: United Nations (UN) Department of Economic and Social Affairs (DESA) *(6)*.

Women outlive men in most countries. In 2021, life expectancy at birth was 73.8 and 68.4 years for women and men, respectively. Life expectancy has increased during the last 50 years (1971–2021) by a global average of 27 and 24 years in men and women, respectively; the largest gains in life expectancy have been observed in the least developed countries (Fig. 1.2), in which the number of older adults needing LTC is likely to increase rapidly.

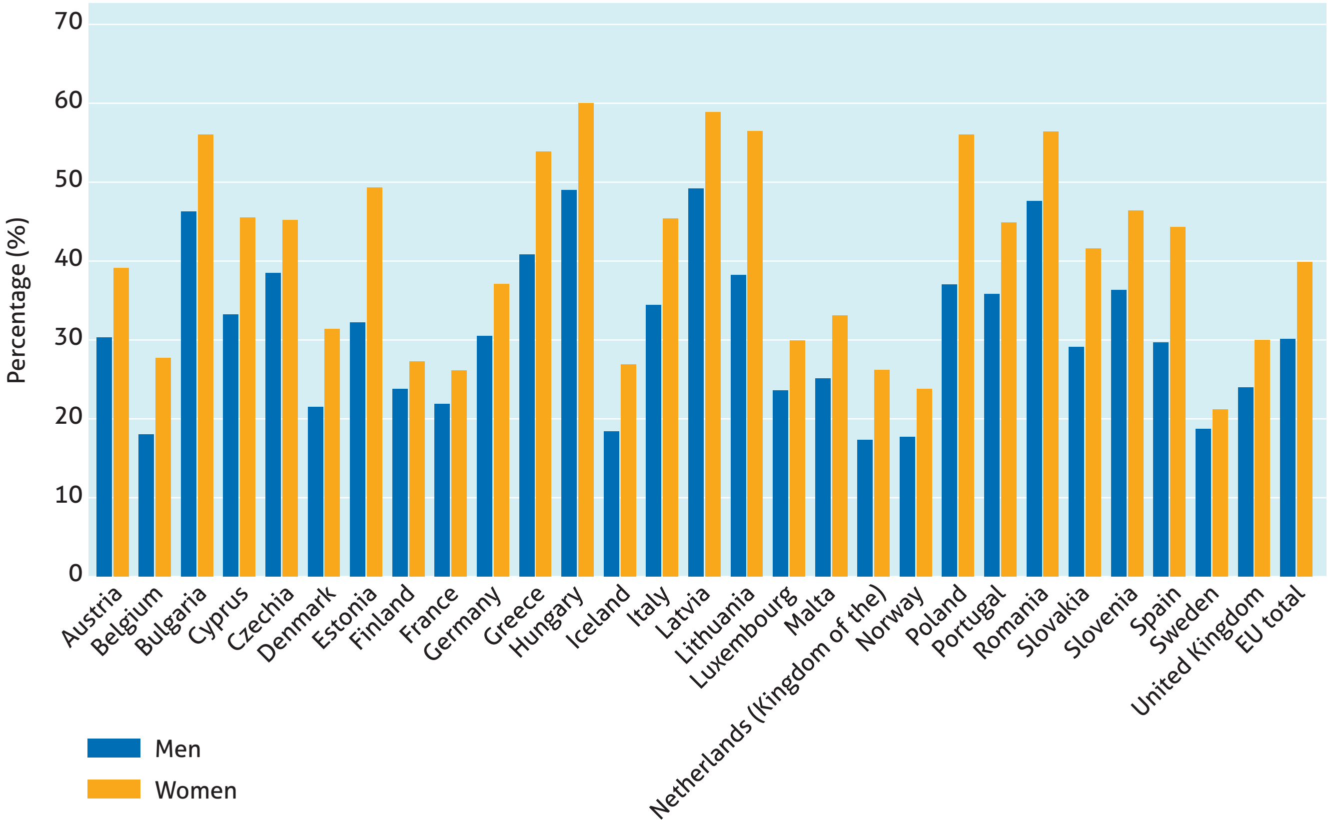
Fig. 1.2. Growth in life expectancy at birth between 1950 and 2021, by sex and by development index.



Source of data: UN DESA *(6)*.

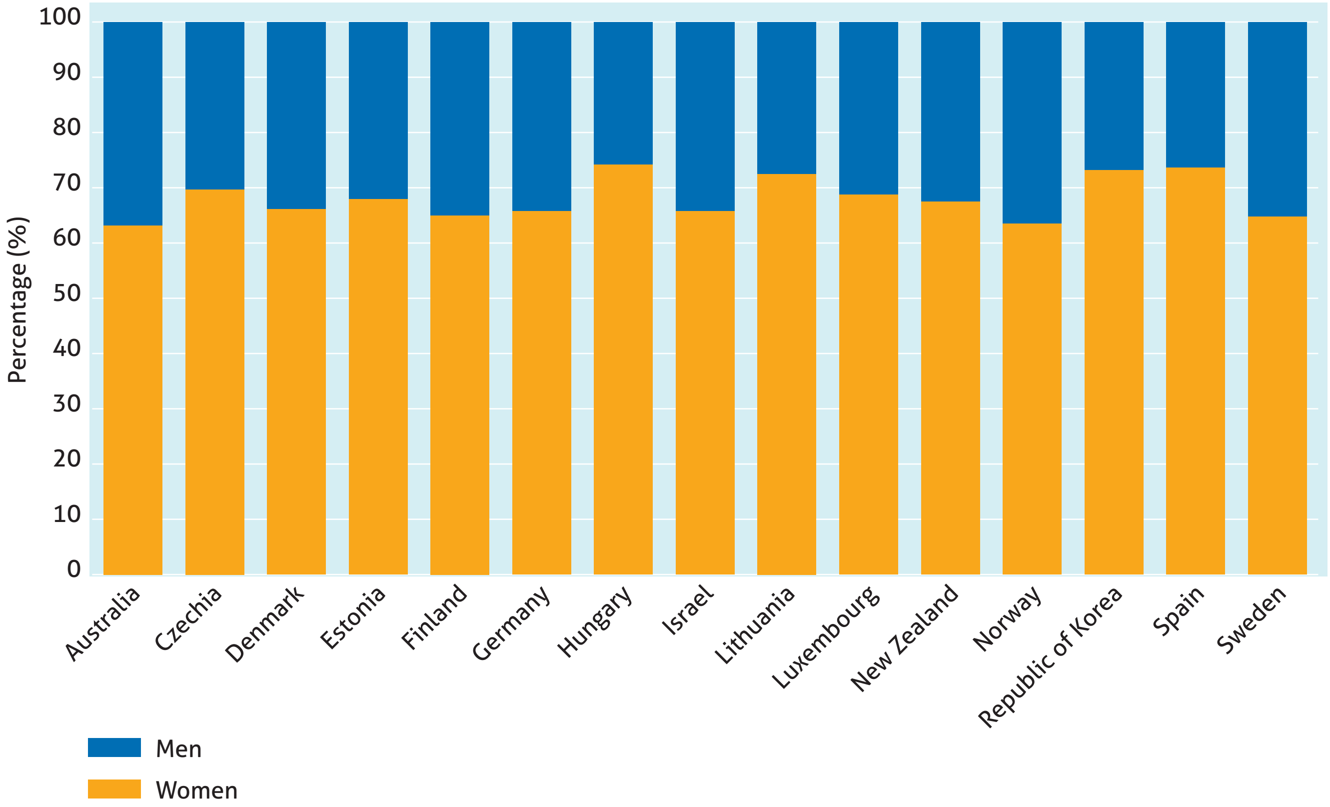
As well as living longer, women were more likely to spend their later life with disabilities in the 27 European countries as of 2012 (Fig. 1.3) *(7)*. In Organisation for Economic Co-operation and Development (OECD) countries, of those aged 65 years and older with LTC needs, the greatest proportion are women (range: 63–74%; Fig. 1.4).

Fig. 1.3. Percentage of men and women aged 65 years and older with long-term disabilities.



United Kingdom: United Kingdom of Great Britain and Northern Ireland.
Source of data: European Union *(7)*.

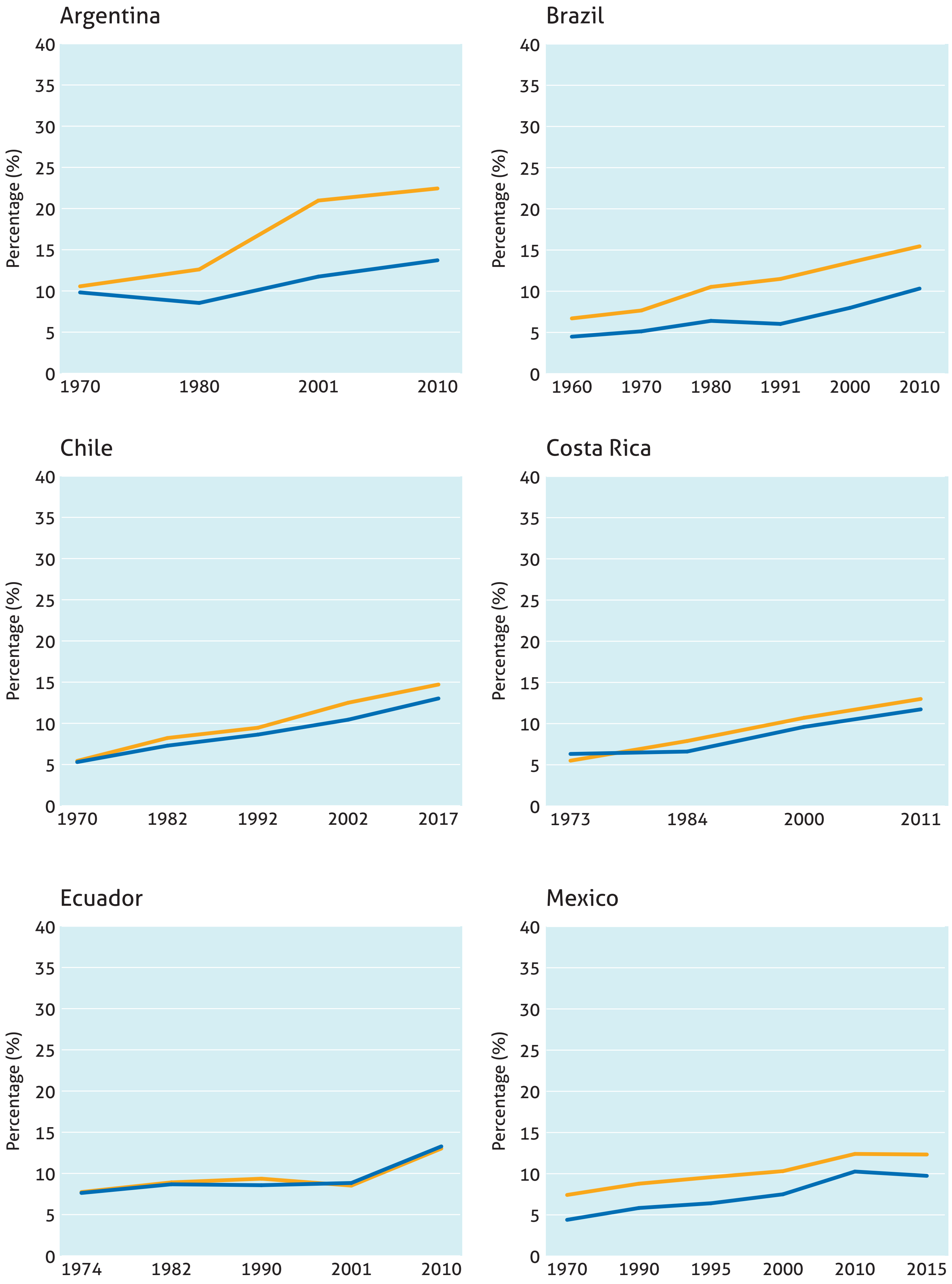
Fig. 1.4. Proportion of men and women aged 65 years and older with LTC needs.

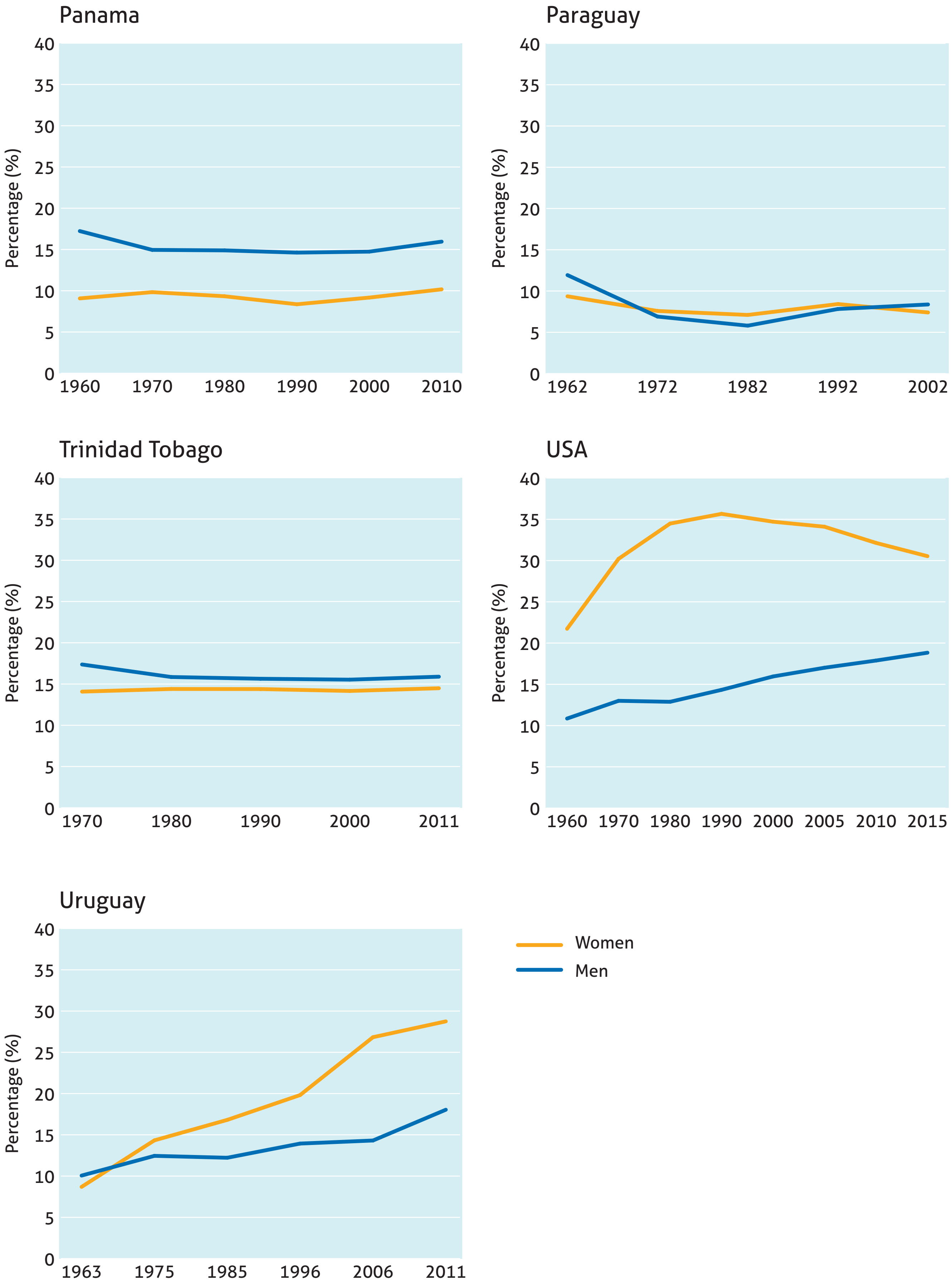


Source of data: OECD *(8)*.

Traditionally, older adults with LTC needs have received informal care from mostly co-resident female family members. However, solitary living has become more prevalent, particularly in developed countries. For example, in France in 2011, 62.4% and 25.8% of women and men, respectively, aged 80 years and older were living alone *(9)*. Fig. 1.5 depicts the changing proportion of older people who live alone in countries in the WHO Region of the Americas by sex. In most countries, the proportion of older people who live alone is increasing; the rate of increase is greater for women in Argentina and Uruguay.

Fig. 1.5. Percentage of people aged 60 years and older who are living alone, by sex.

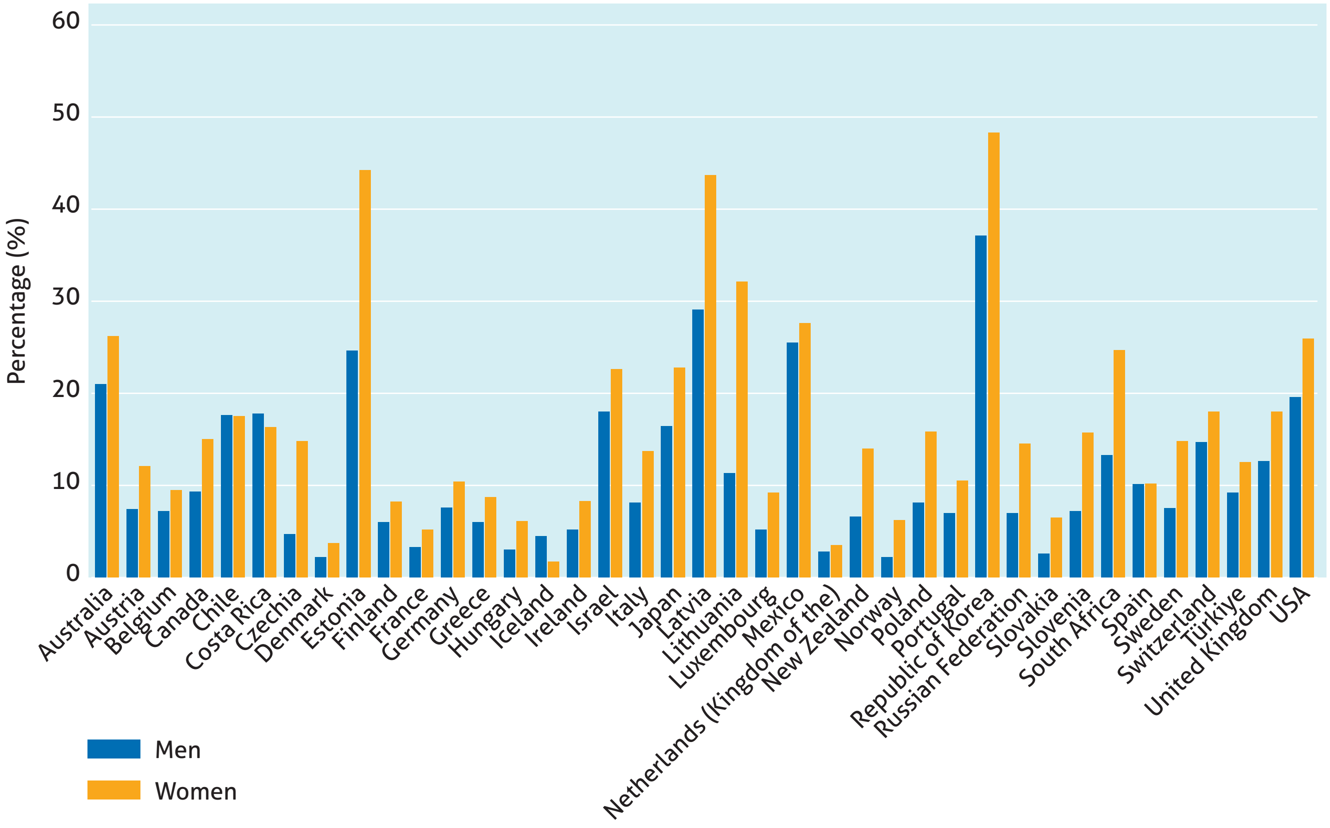




Source of data: UN DESA *(9)*.

Income level is an important factor in considering the affordability of LTC services. Fig. 1.6 depicts the proportion of men and women aged 66 years and older living in poverty, defined as having an income of less than 50% of the average income in each country, for the 38 OECD countries as well as the Russian Federation and South Africa. In most countries the proportion of women living in poverty is higher than that of men, although the differences are diverse across countries. For example, women are approximately 3.1 and 2.8 times more likely to experience poverty than men in Czechia and Lithuania, respectively. Conversely, in Chile and Costa Rica, differences in income between men and women are much smaller.

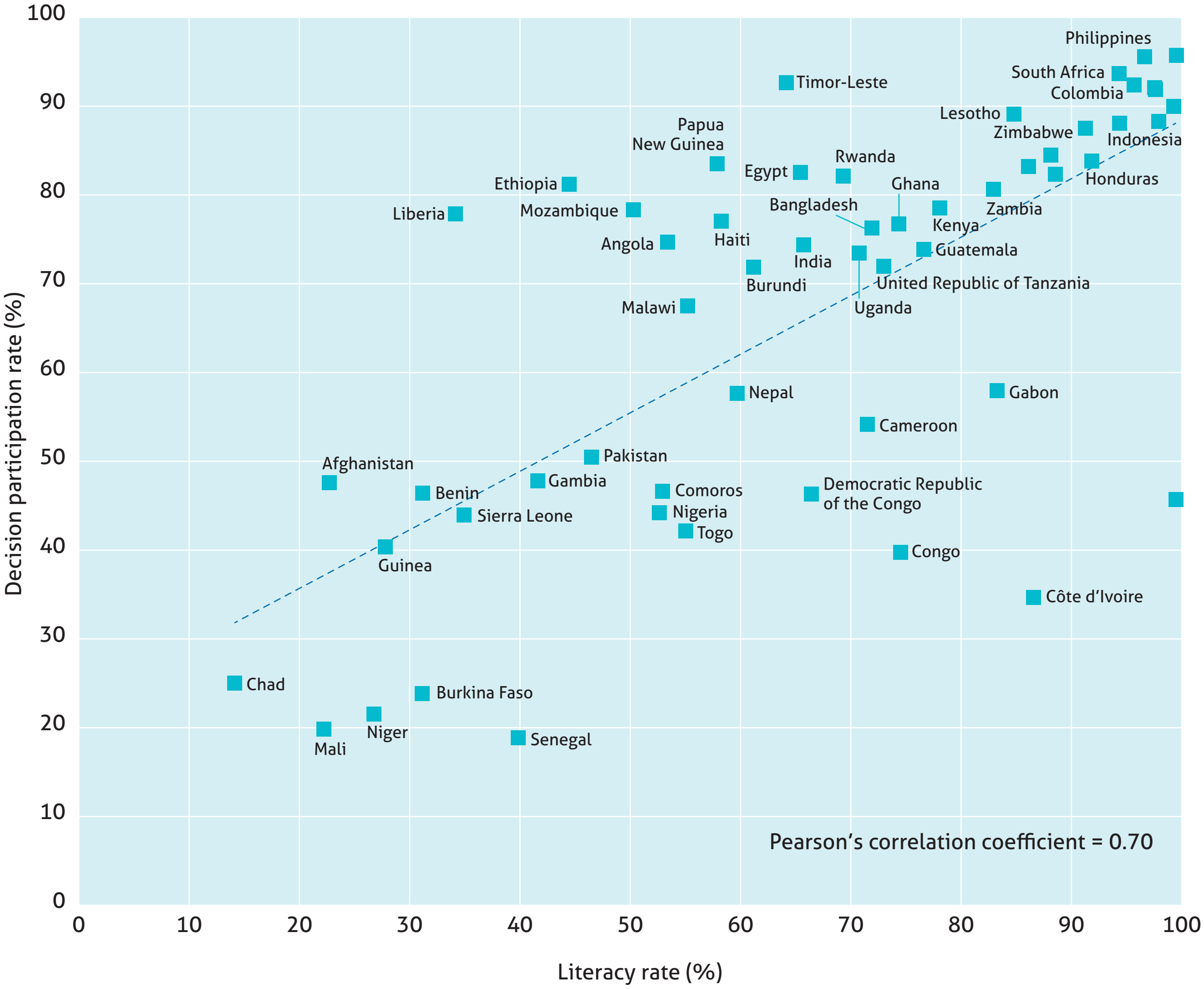
Fig. 1.6. Percentage of people aged 66 years and older whose income is less than 50% of the average income in each country.



USA: United States of America.
Source of data: OECD *(10)*.

A crucial factor in accessing LTC is self-determination of personal health and health care needs. However, level of education, a required element for self-determination, differs between men and women. Fig. 1.7 illustrates the positive relationship between the literacy rate of women aged 15 years and older and the percentage of women aged 15–49 years who participate in decision-making for their own health care, by country (data for older adults are unavailable).

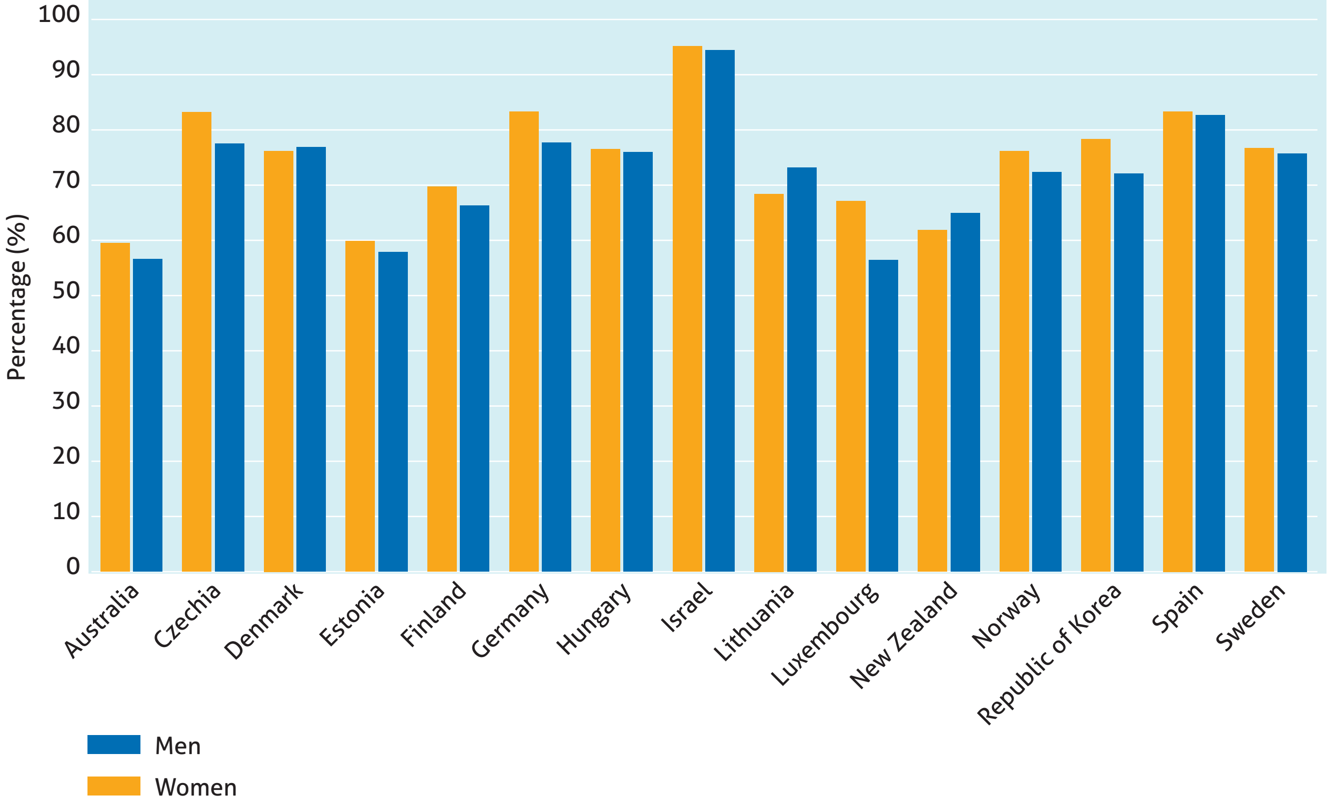
Fig. 1.7. Correlation between country-wise literacy rate for women aged 15 years and older and participation rate in decision-making for own health care in women aged 15–49 years, by country. The correlation coefficient was calculated from available data for 56 countries.



Sources of data: World Bank *(11, 12)*.

In developed countries with an LTC system, most older adults are community dwellers as opposed to LTC facility dwellers. Fig. 1.8 reveals that most people with LTC needs in OECD countries are community dwellers; as well as large differences between countries, there exists a wide range in differences between men and women. In Luxemburg, the percentage of community-dwelling men is more than 10% higher than that of community-dwelling women.

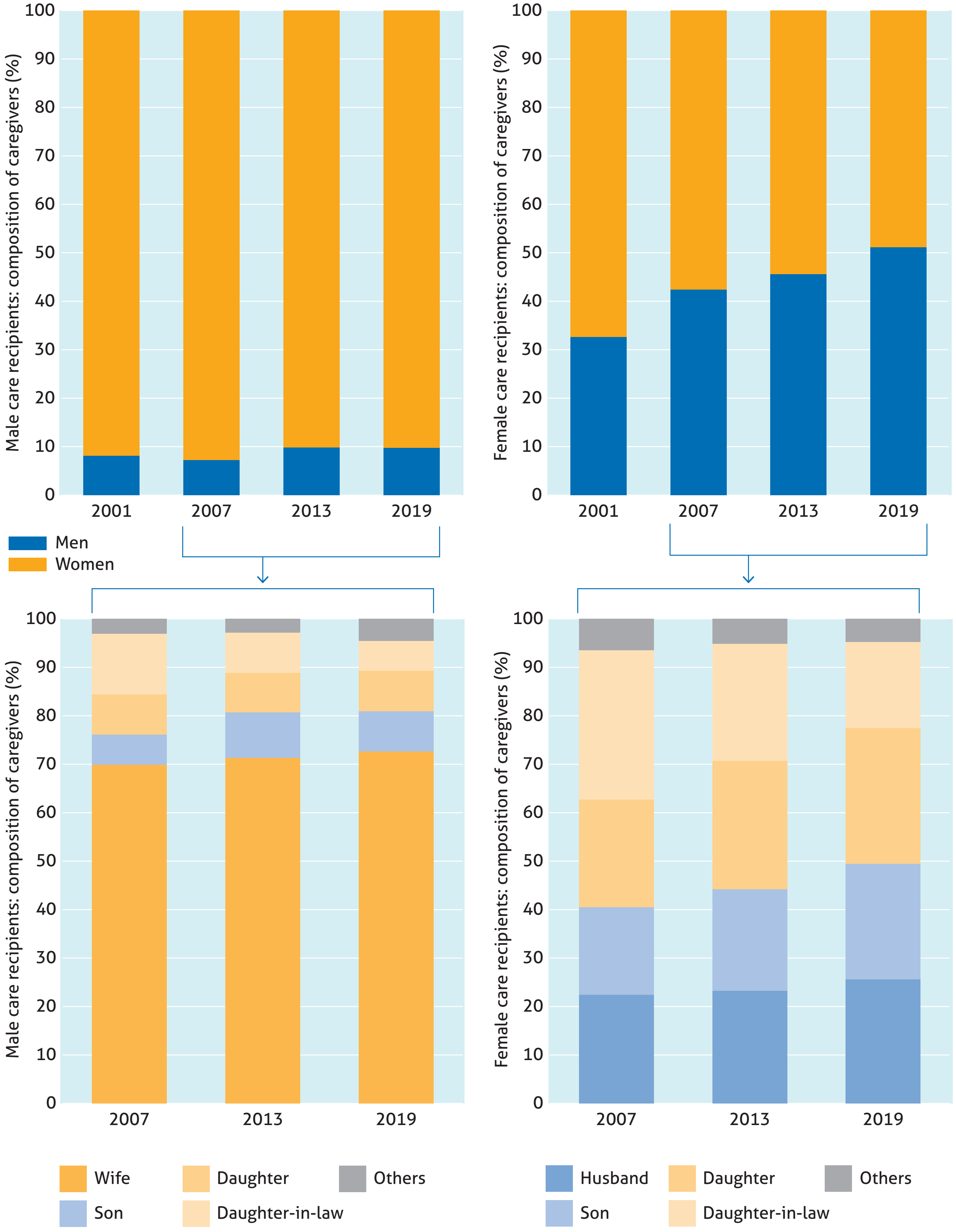
Fig. 1.8. Percentage of community-dwelling recipients of LTC, by sex and by country.



Source of data: OECD *(8)*.

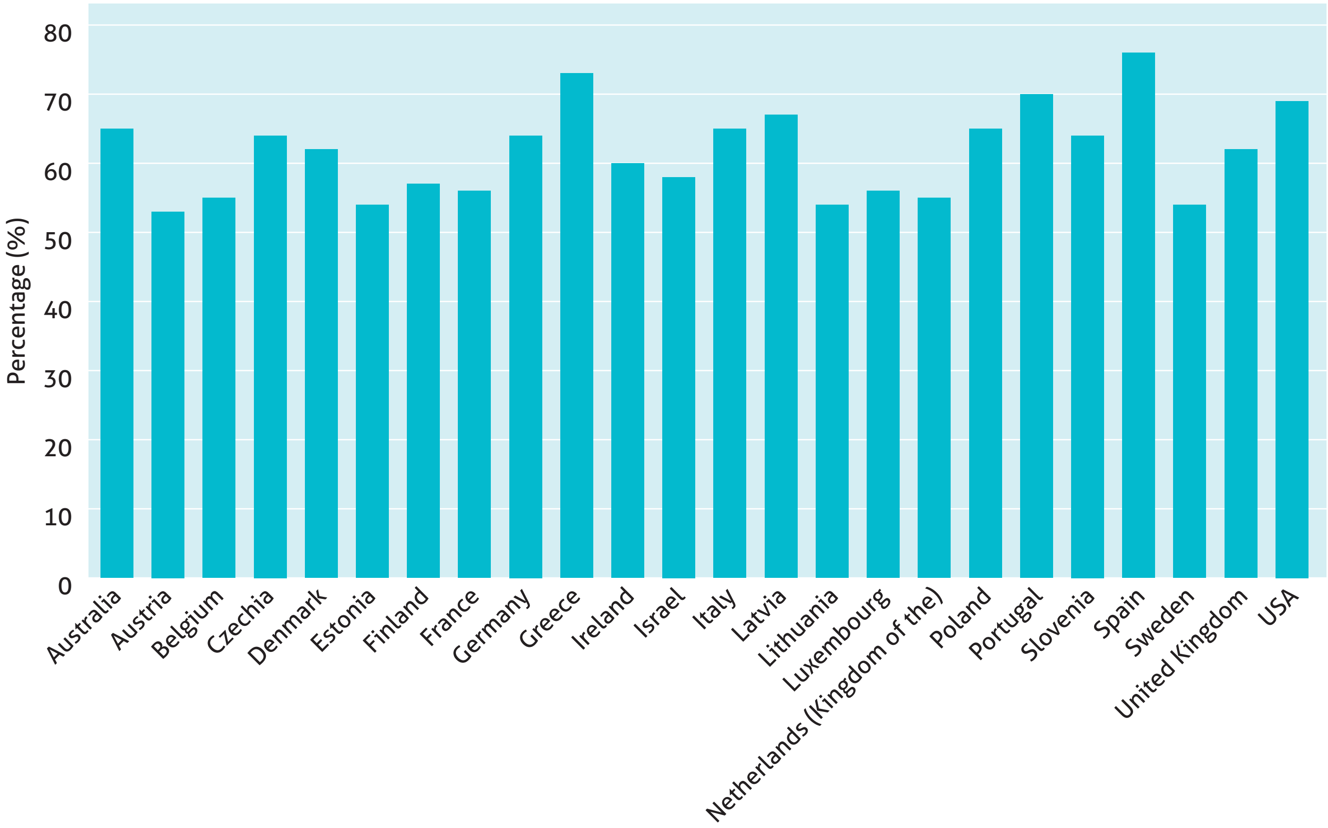
Family caregivers continue to play important roles even in developed countries. Both men and women provide informal care for their family members with frailty, although their participation rates are different. Fig. 1.9 depicts care participation rates in Japan, the most population-aged country in the world. Of male recipients of LTC, approximately 90% receive informal care from female family members. Of female recipients of LTC, only 51.1% receive informal care from male family members; however, the percentage of male caregivers has been increasing during the last two decades. Such differences should be considered in quantifying informal and formal LTC needs in older adults. Although both men and women family members are engaged in informal caregiving, Fig. 1.10 reveals that most informal caregivers are women, even in the developed countries. Large differences exist between countries; more than 70% of informal caregivers are women in Spain and Greece, while 53% of caregivers in Austria are women.

Fig. 1.9. Changes in percentage of co-resident men and women family caregivers for older men and women needing LTC in Japan.



Source of data: Statistical Bureau of Japan *(13)*.

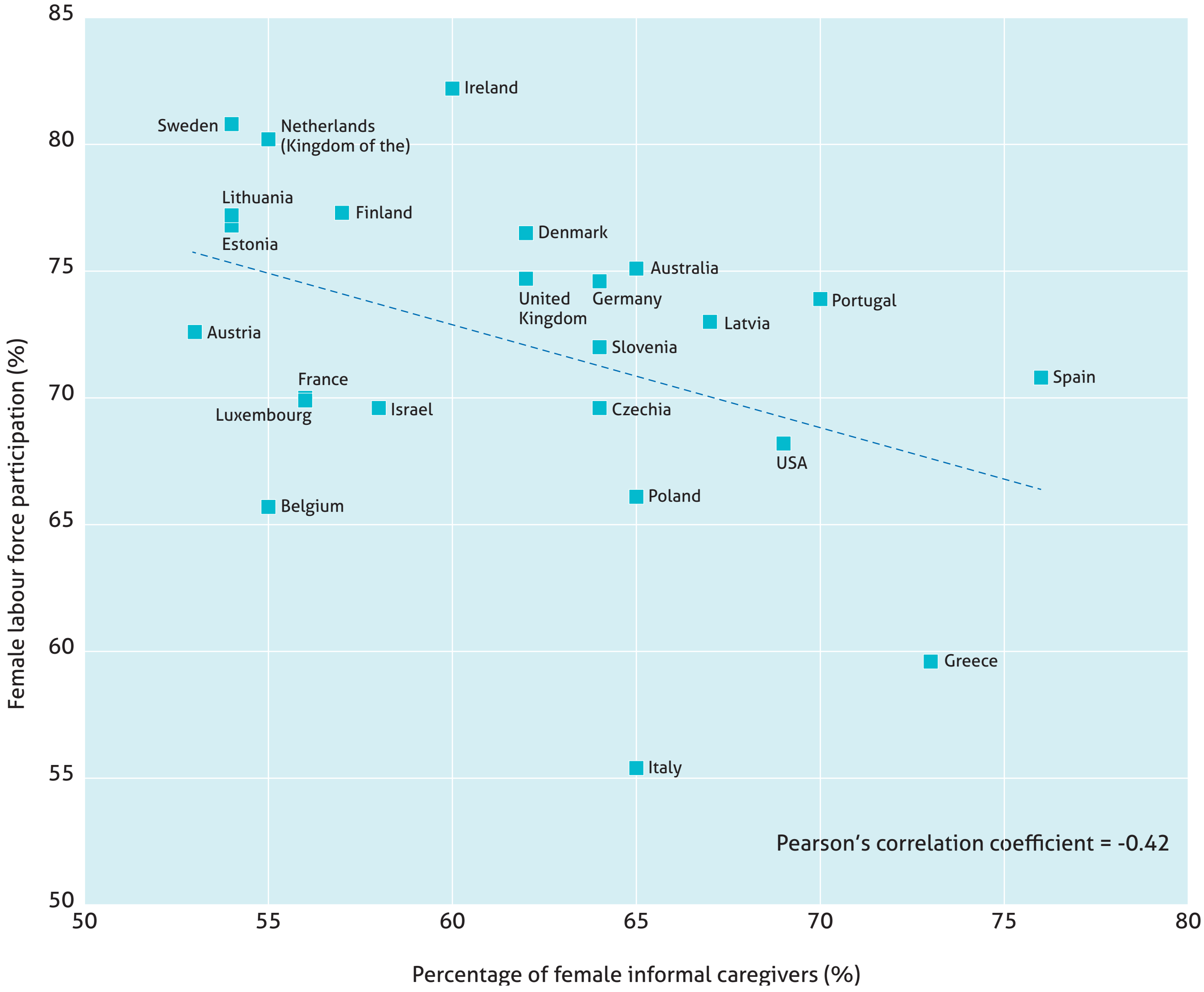
Fig. 1.10. Percentage of caregivers aged over 50 years who are women, by country.



Source of data: OECD *(14)*.

Because being a member of the working population and being a provider of informal care are both time-consuming, they can be negatively related. Fig. 1.11 illustrates the country-level negative correlation between the percentage of female informal caregivers aged over 50 years and participation rate in the labour force of women aged 15–64 years in OECD countries. In countries with a higher rate of labour force participation among women, a lower percentage of women are engaged in the provision of informal care. For increased labour force participation by women, more men need to engage in the provision of informal care.

Fig. 1.11. Country-level correlation between the percentage of informal caregivers aged over 50 years who are women and labour force participation of women aged 15–64 years in OECD countries. The correlation coefficient is calculated using available data from 24 countries.



Sources of data: OECD *(14, 15)*.

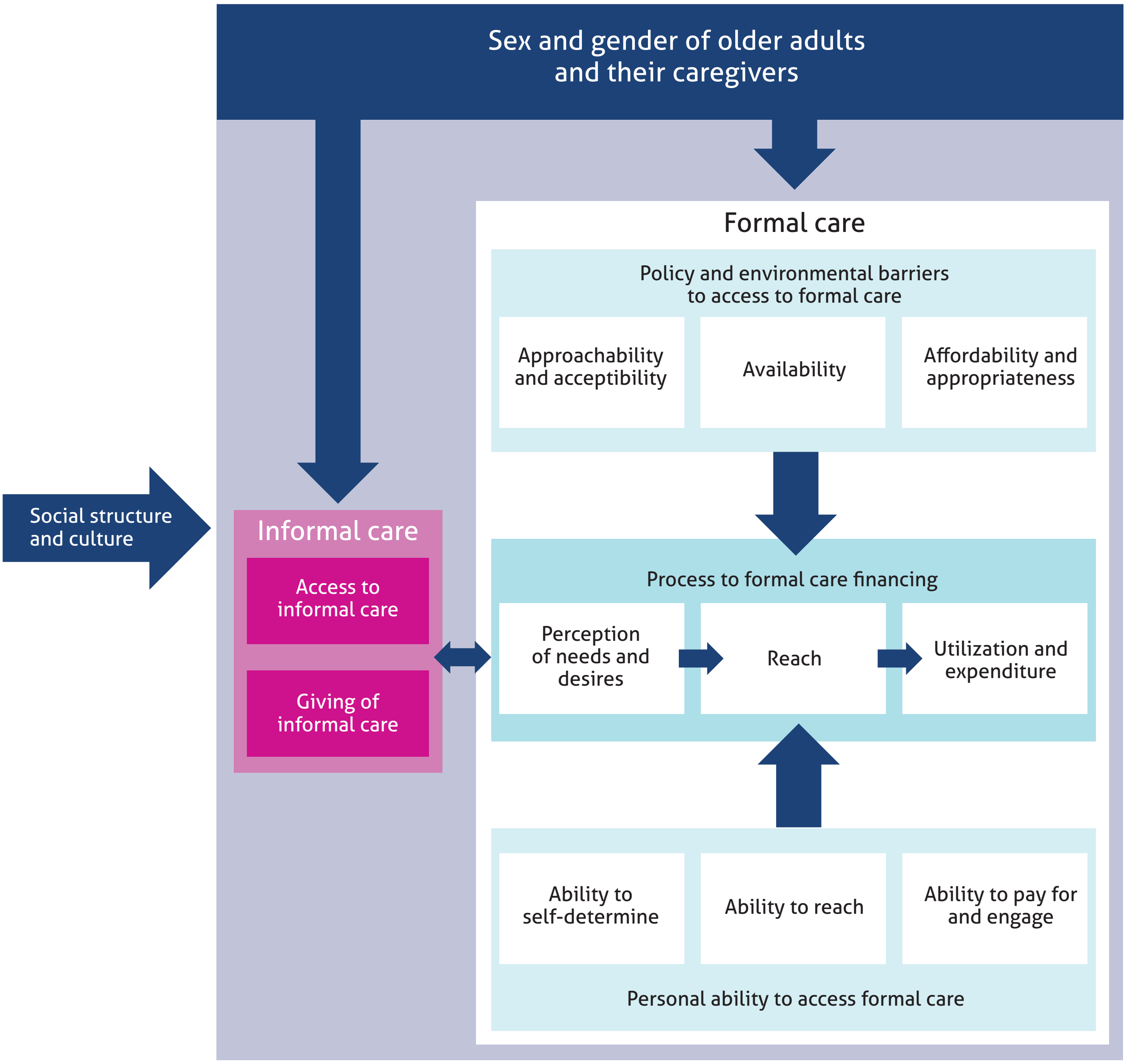
The implications of this changing demography include: the necessary establishment of a formal LTC system regardless of country; the incorporation of differences between the sexes in terms of longevity, the prevalence of disabilities, living arrangements, socioeconomic status (SES), level of education and provision of informal care when considering the financing of LTC; the development and implementation of appropriate support according to the varying support needs and attitudes of male and female family caregivers; and the provision of support to family caregivers who are also working or else withdrawing from the labour force because of the demands of providing informal care.

1.2 Conceptual model

We propose a hypothetical model to illustrate sex- and gender-based inequities in LTC financing from the point of utilization and expenditure, and its possible determinants. Studies have reported that older (defined differently in different studies) women generally pay more for LTC than older men, a point that is addressed in detail in Chapter 2. This is partially because women live longer and with a greater likelihood of disability than men. Moreover, various environmental (e.g. policy, social structure and cultural norms) and individual (e.g. psychosocial) factors can affect LTC access. For instance, in countries without affordable professional care services, women may have less access to formal care because they are more likely to live in poverty. In addition, in some countries, women are reluctant to accept care from male professionals because of social and cultural norms *(16)*. Conversely, in Japan, where a universal long-term care insurance (LTCI) system is established, women are more likely to use LTC facilities (which generally cost more than community care) than men because they are less likely to be cared for by their spouses *(17)*. LTC expenditure is a consequence of the care utilization process, such as care preference or care-seeking behaviour.

The conceptual model proposed here (Fig. 1.12) is based on the Conceptual Framework of Access to Health Care by Levesque et al. *(18)*, which clearly defines health care access as a process that begins from perception of needs and ends with the consequential benefits of care. Levesque's model also includes modifiable environmental and personal determinants that can affect LTC access, as well as equity in access. A robust formal care system has not yet been established in developing countries; focusing only on consequences (formal LTC utilization or expenditure) alone may therefore be insufficient. Understanding the background to LTC utilization and expenditure (access to and individual need for formal care) from the perspective of sex- and gender-based differences is also necessary.

Fig. 1.12. Conceptual model of access to formal LTC.



Source: adapted from Levesque et al. *(18)*.

The original Levesque framework/model and our conceptual model have several differences. First, our model differentiates informal and formal care (which can be closely related). Several studies have proposed varied hypothetical models regarding the association between these types of care, such as the hierarchical-compensatory *(19)* or substitutive *(20)* models. The former hypothesized that the primary source of care of older adults is the immediate family, which is compensated for by non-family or formal organizations when lacking. The latter hypothesized that the association between the two types of care is negative and reciprocal. However, the relationships are inconsistent between countries and in terms of the level of care needs among older adults *(21–25)*. For instance, a cross-national study in Spain and Italy reported differences in the association between formal and informal care in relation to the types of public coverage, despite a similar culture of strong family ties. In Spain, where in-kind benefits are provided, formal and informal care had a negative relationship. Conversely, in Italy where cash benefits are provided, the two types of care are positively related *(23)*. Moreover, the determinants can differ between formal and informal care *(26)*.

Of the informal care provided to older adults in countries without formal care resources, most is provided by female family members. However, a recent study reported that levels of informal care have increased because of a shortage of formal care resources even in high-income countries such as Denmark, Finland, Norway and Sweden, where universal and citizenship-based LTC is well established *(27)*. These authors also addressed the possibility that the insufficient formal care resources could force more women to engage in intensive informal care than men *(27)*. Insufficient formal LTC should therefore be regarded as a common and global issue, and one that is exacerbating already existing sex-based inequities.

Second, our model features the background factors of social structure and culture and their effect on access to LTC, regardless of care formality. Socio-structural factors such as population ageing, living arrangements or increased labour force participation among women can affect access to both formal and informal care (Section 1.1). Social culture, including sex and gender norms, can affect access to formal and informal care and their interrelationships. For example, gender-based norms such as "women should provide care" affects informal care provision by family members; concurrently, it can discourage men from participating in professional caregiving. As noted above, preferences for care from same-sex people by care recipients may also influence women to engage in caregiving, as the majority of care recipients are women.

Regarding access to formal care, we have delineated the process from perception of care needs to the economic consequences of formal care utilization (expenditure) in three steps. This process can be determined by both care providers (policy and environmental barriers) and care users (care recipients' ability). Examples of each of these three steps are provided in Table 1.1. In the first step, an individual perceives formal care needs, and subsequently desires and seeks formal care. This can only be achieved when sufficient information about the existence of formal care (i.e. the approachability of care providers) is made available to potential users. Potential users can then perceive that the notion of formal care is acceptable. Perception, desire and search for formal care are determined by the personal ability to choose formal care. Abilities such as health literacy are necessary to understand the existence and nature of formal care, and to have autonomy in decision-making in determining formal care utilization.

Table 1.1. Concept and examples of access to LTC

Process/ determinants	**1. Perception of needs and desire for formal care**	**2. Reach for formal care**	**3. Utilization of and expenditure on formal care**
Environmental barriers	Approachability and acceptability (e.g. awareness and norms)	Availability (e.g. location, operating hours and contract procedure)	Affordability and appropriateness (e.g. subsidies and quality of care)
Personal abilities	Ability to self-determine (e.g. health literacy and autonomy)	Ability to reach (e.g. mobility)	Ability to pay for and engage (e.g. income, savings and communication with care providers)

In the second step, the reach for formal care can be determined by parameters of physical access such as distance, operating hours or contract procedure of care providers. The mobility of users, including transportation, is also important. The final step indicates utilization of and expenditure on formal care. These determinants enable potential users to reach formal care; however, the users cannot utilize formal care or be satisfied unless it is affordable and quality care is assured (affordability and appropriateness).

Sex- and gender-based inequities in LTC utilization and expenditure among older adults may be better understood when the part of the process of formal care utilization in which such inequities exist, as well as the background factors that may affect these inequities, are thoroughly assessed.

1.3 About this report

To achieve the goal of universal LTC provision, the accumulation of more evidence on sex- and gender-based disparities, and on interventions for their mitigation, is necessary. In Chapter 2, we provide a scoping review of study findings regarding disparities in LTC utilization and expenditure. In Chapter 3, we review differences reported in the literature with regards to the family caregiver burden. Family caregiving continues to play an important role in LTC for older adults even in developed countries, and is sometimes the only available option. The availability of family caregiving is therefore important when addressing sex- and gender-based disparities in LTC access. In Chapter 4, we highlight LTC policies and interventions that may or may not mitigate sex-based disparities in

LTC access. In Chapter 5, we report on care access barriers and support needs as perceived by the lesbian, gay, bisexual, transgender/transsexual and other minority group (LGBT+) community. The rapid increase in the older adult population necessitates responsive care regardless of gender; however, studies on care for the LGBT+ community are insufficient. In our closing chapter, we discuss our findings and the feasibility of their social implementation, as well as the interventions that are required to establish an equitable LTC system.

2

Differences in LTC expenditure and utilization by sex: a scoping review

2.1 Introduction

In this chapter we provide the results of a scoping review of the available literature reporting on differences between men and women in LTC spending and utilization. Specifically, we aimed to identify the factors that minimize such differences in LTC spending and utilization.

LTC is defined as the broad range of personal, social and medical services that assist people who have functional or cognitive limitations in their ability to perform self-care and other activities *(28)*. LTC services can be provided at home, in the community, in rehabilitation facilities or in nursing homes. The primary providers of LTC services can be informal caregivers such as family, friends or volunteers. Formal providers include nursing homes, home- and community-based providers, and home care agencies *(29)*. LTC spending includes total spending on LTC facility services, home care services and community care services. Utilization of LTC included use of types of LTC services and length of stay in LTC facilities.

2.2 Methods

2.2.1 Literature search

Our review was conducted in accordance with the preferred reporting items for systematic review and meta-analysis extension for scoping review (PRISMA-ScR) guideline *(30)*. The MEDLINE (through PubMed) database was searched for articles published from 2000 to 2022. The search included MeSH terms, and we excluded keywords outside the search criteria (Table 2.1).

Table 2.1. Search terms for article identification

Concept	Search term
Population	"aged(MeSH)" OR "aged, 80 and over(MeSH)"
Exposure	"gender disparities" OR "gender gap" OR "gender discrimination" OR "gender inequality" OR "gender inequalities" OR "gender differences"
Outcome	"cost" OR "expenditure" OR "expense" OR "spending" OR "charges" OR "fees" OR "out of pocket" OR "unpaid care" OR "utilization" OR "utilisation" OR "services use" OR "use of services" OR "access"
Setting	"long term care(MeSH)" OR "nursing homes(MeSH)" OR "home care services" OR "community health services" OR "home health nursing" OR "home and community care" OR "nursing facility" OR "care home" OR "institution" OR "institutional care" OR "residential facility" OR "residential home" OR "older care" OR "elderly care" OR "informal care" OR "formal care"

2.2.2 Inclusion and exclusion criteria

Longitudinal (prospective or retrospective) and cross-sectional studies published in English were included. Only studies on older adults aged 65 years and older were considered. The search engine initially extracted 117 articles.

We subsequently narrowed the collection to 22 articles after excluding (i) those that only described differences between men and women without any evaluation, and (ii) those with no discussion on reasons for such differences. We then added a further 12 articles from the reference lists of included papers.

2.2.3 Extracted data

A total of 34 articles were reviewed *(31–64)*. See Table 2.2 for extracted data, including country and type of study, the area of LTC services reported on and a brief summary of main findings.

Table 2.2. Properties of literature included in scoping review

Author, year (reference); country of study	Design	Area of LTC services reported on	Main findings
Brennan et al. 2005 *(31)*; USA	Case–control	Formal care (nursing home)	Men with alcohol use disorders had shorter lengths of stay than men in the comparison group, whereas women with alcohol use disorders had longer lengths of stay than women without alcohol use disorders.
Alkema et al. 2006 *(32)*; USA	Cross-sectional	Formal care (home, community care)	Female participants used home safety services and referrals significantly more than male participants.
Calasanti and Bowen 2006 *(33)*; USA	Cross-sectional	Informal care	Men were more willing than women to accept the provision of formal care for their spouses in need of LTC.
Shugarman et al. 2007 *(34)*; USA	Cross-sectional	Formal care (nursing home, home care)	Female decedents used more services in nursing facilities and home care than males.
Guerriere et al. 2008 *(35)*; Canada	Longitudinal	Formal care (home-based health care)	Being female predicted higher private expenditure.

Author, year (reference); country of study	Design	Area of LTC services reported on	Main findings
Shugarman et al. 2008 *(36)*; USA	Longitudinal	Formal care (nursing home, home care)	Women were more likely than men to use services in a nursing facility; women were more likely than men to use home care services.
Kronman et al. 2010 *(37)*; USA	Longitudinal	Formal care (nursing home)	The highest numbers of nursing home residents are women.
de Meijer et al. 2011 *(38)*; Netherlands (Kingdom of the)	Longitudinal	Formal care (nursing home, home care)	Men living alone have substantially higher LTC expenditure compared with women living alone.
Schwarzkopf et al. 2012 *(39)*; Germany	Longitudinal	Formal care (nursing home, home care)	Female dementia patients incurred significantly higher LTCI spending than male dementia patients.
Gruneir et al. 2013 *(40)*; Canada	Longitudinal	Formal care (nursing home, home care)	Men most frequently identified a spouse as caregiver; men were more likely to be admitted to a LTC facility.
Yang et al. 2013 *(41)*; Japan	Longitudinal	Formal care (nursing home, home care)	The effects of socioeconomic status on LTC were greater for women than for men, and this difference was statistically significant.
Dorin et al. 2014 *(42)*; Germany	Cross-sectional	Formal care (home care)	Women use significantly more LTC services than men.
Hsieh et al. 2014 *(43)*; Taiwan, China	Cross-sectional	Formal care (home care)	Women are more likely than men to utilize the senior living allowance and home care.
Wu et al. 2014 *(44)*; Taiwan, China	Cross-sectional	Formal care (nursing home, home/ community care)	Women used more LTC services than men.

Author, year (reference); country of study	**Design**	**Area of LTC services reported on**	**Main findings**
Tokunaga et al. 2015 *(45)*; Japan	Cross-sectional	Formal care (home care, short stay care)	Female caregivers who were expected to have homemaking skills under family-bound gender roles were the least likely to use formal visiting home care services; they were also the most frequent users of day care and respite short-stay services. Male caregivers with less housekeeping capacity tend to use housekeeping aids as a formal substitution for informal homemaking.
Zhu 2015 *(46)*; China	Cross-sectional	Formal care (nursing home, home care) Informal care	Men have more unmet needs than women among rural residents, but not among urban residents.
Lin et al. 2016 *(47)*; Japan	Cross-sectional	Formal care (nursing home, home/community care)	Women have significantly higher LTC expenditure than men.
Thomeer et al. 2016 *(48)*; USA	Longitudinal	Formal care (nursing home)	Unmarried men have a higher risk of LTC use than unmarried women.
Crouch et al. 2018 *(49)*; USA	Cross-sectional	Formal care (nursing home, home care)	Women are more likely to use support services such as home health and hospice as well as inpatient, physician and outpatient services.
Steinbeisser et al. 2018 *(50)*; Germany	Longitudinal	Formal care (nursing home, home care), informal care	Women are more likely to utilize and transition to LTC.
Carvalho et al. 2019 *(51)*; Sweden	Cross-sectional	Formal care (home care), informal care	Men were more likely to choose a home setting with caregiving only by spouse, even when the level of disability increased; women chose help from professionals, sheltered homes or institutionalization quicker than men.

Author, year (reference); country of study	**Design**	**Area of LTC services reported on**	**Main findings**
Forstner et al. 2019 *(52)*; Germany	Cross-sectional	Formal care (nursing home), informal care	Men are more likely to use informal care than women.
Jang and Kawachi 2019 *(53)*; Republic of Korea	Cross-sectional	Formal care (home care), informal care	Women have a higher rate of use of both formal and informal services than men. Children provided assistance with ADLs/IADLs to their mothers more frequently than to their fathers. Women in the lowest household income level tend not to be cared for primarily by a paid caregiver, although the situation is not the same for men.
Khadka et al. 2019 *(54)*; Australia	Longitudinal	Formal care (nursing home, home care)	Women use more care services for older people than men.
Potter 2019 *(55)*; USA	Cross-sectional	Formal care (nursing home, home care), informal care	There are no differences in unmet needs between men and women receiving spousal care.
Jin et al. 2020 *(56)*; Japan	Longitudinal	Formal care (nursing home, home/community care)	Being female is associated with higher LTC expenditure.
Kalseth and Halvorsen 2020 *(57)*; Norway	Longitudinal	Formal care (nursing home, home care)	Women use more care services than men; in people aged 70 years and older, women have higher LTC costs than men.
Meinow et al. 2020 *(58)*; Sweden	Cross-sectional	Formal care (nursing home, home care)	Women use LTC more often and for a longer period than men during the last 2 years of life.
Koehn et al. 2021 *(59)*; Canada	Cross-sectional	Formal care (home/community care)	Women were more likely to use home and community care services than men.

Author, year (reference); country of study	Design	Area of LTC services reported on	Main findings
Kwak et al. 2021 *(60)*; China, Republic of Korea and USA	Cross-sectional	Informal care	In China and the USA, older women are more likely to receive informal care than men; however, in the Republic of Korea, older women are less likely to receive informal care than men. The effects of health and living arrangements on the use of informal care were moderated by sex in different ways across countries.
Steinbeisser et al. 2021 *(61)*; Germany	Longitudinal	Formal care (nursing home, home/ community care), informal care	Women receive less informal LTC than men; women receive more formal LTC than men; a higher level of education is associated with greater utilization of formal LTC in women, but not in men; in women, disability score has a stronger association with utilization of LTC than for men. Living alone is strongly associated with utilization of LTC in general, and particularly with formal LTC; these associations are substantially stronger for men than women.
Aaltonen et al. 2022 *(62)*; Netherlands (Kingdom of the)	Longitudinal	Formal care (nursing home, home/ community care), informal care	Men use more informal care provided by a partner than women, but women used other sources of care more than men; differences in social resources between men and women explained the sex-based gap in informal care and formal home care use and, together with health factors, the sex-based difference in residential care use.
Lee and Chin 2022 *(63)*; Republic of Korea	Cross-sectional	Formal care (nursing home, home/ community care)	Women were associated with an increase in total LTC expenditure.
Zhao et al. 2022 *(64)*; Republic of Korea	Cross-sectional	Formal care (nursing home, home/ community care)	Mental health has a strong negative impact on the need for LTC, and the effect was stronger among men compared with women.

ADL: activity of daily living; IADL: instrumental activity of daily living; LTC: long-term care: LTCI: long-term care insurance; USA: United States of America.

2.3 Results

2.3.1 Study characteristics

There was only one cross-national study: Kwak et al. *(60)* examined sex-based differences in the use of LTC services in China, the Republic of Korea and the USA. The remaining 33 studies were based in the USA (9), Germany (5), Japan (4), Canada (3), Republic of Korea (3), Taiwan, China (2), Netherlands (Kingdom of the) (2), Sweden (2), Australia (1), China (1) and Norway (1). More than half (19) of the studies were cross-sectional, 14 were longitudinal studies and one was a case–control study.

2.3.2 Differences in LTC spending and utilization by types of care

Formal care

Regardless of country and types of care (i.e. home and community care or residential care), women were more likely to use formal care services than men *(32, 34–37, 42–44, 47, 49, 50, 54, 56–59, 63)* after controlling for sociodemographic factors (age, living arrangements, level of education and income) and health status (disability and chronic diseases). Among home and community care services, women had a greater likelihood of using home safety (2.5 times) and transportation (2.6 times) services than men *(32)*. Four studies examined LTC utilization towards the end of life, and found that more women used LTC than men. In Sweden, women and men used LTC for an average of 15.6 and 14.1 months, respectively, during the last 2 years of life *(58)*. The average length of stay in LTC facilities was 7.2 and 6.2 months for women and men, respectively *(58)*.

This difference between men and women in LTC utilization could be explained by the fact that women experience both greater longevity but also higher disability rates and poorer health than men *(65)*; women subsequently pay the greatest share of LTC costs. Because of sex-based differences in mortality, women are more likely to spend the end of their lives in widowhood; they may therefore have a greater need for formal care systems. According to the Cabinet Office of Japan, the number of community-dwelling men and women aged 65 years and older who are living alone has been increasing every year; 15.0% of men and 22.1% of women were reported as living alone in 2020 *(66)*. Single older people are usually initially cared for at home; however, as their physical condition deteriorates, many choose to enter LTC facilities. In Japanese LTC facilities, women outnumber men by a ratio of approximately 3:1 *(56)*. Dementia, which disproportionally affects women, is another important risk factor for LTC facility admission *(57)*. Since the costs of LTC facilities are twice as expensive as the costs of home care, women incurred significantly higher LTC spending *(56)*.

Living arrangements largely affected the use of formal care, revealing that solitude places men at greater risk for LTC facility use than women. Studies reported that solitary men had substantially higher LTC expenditure than women *(38, 48)*.

Informal care

Differences between men and women in the use of informal care varies between countries, and may be influenced by cultural differences. Five studies conducted in Canada *(40)*, Germany *(52, 61)*, Netherlands (Kingdom of the) *(62)* and the Republic of Korea *(53)* revealed that men were more likely to use informal care than women. When men need care, this is often provided informally by their spouses. This is a reflection of the cultural expectations and conservative gender roles in patriarchal societies, in which women are responsible for household chores and more willing to provide informal LTC for their spouses than men *(61)*. Having housekeeping and caregiving skills can influence whether a person is able to provide self-care, requires informal care or is willing to receive formal LTC services as an alternative. One qualitative study reported that, because of historical behaviour and existing gender role models, men are more willing than women to accept formal assistance for the provision of LTC for their spouses in need of LTC *(33)*.

Conversely, in China and the USA, women are more likely to receive informal care than men *(60)*. This may be because women are more active in expressing their needs and have a closer relationship with their children than men, which likely helps them to receive more informal care than men. In addition, Chinese women are reported to have disabilities at a relatively younger age than women in the Republic of Korea and the USA. Chinese women may therefore have a higher probability of living with family members, such as spouses or unmarried adult children, for support with their daily activities *(60)*.

Based on these results, several policy implications for narrowing the sex-based gap in informal care utilization were summarized *(60)*. However, sex-based differences in receiving informal care were inconsistent, and policies should be adapted in accordance with national status. First, men's increased participation in household duties will aid their ability to provide self-care and spousal care. Second, encouraging men to build a closer relationship with their children is desirable to ensure the provision of informal care from them.

Unmet care needs

Differences between men and women in unmet care needs also varied between countries. In the USA, no differences in unmet needs were observed between men and women receiving spousal care *(55)*. Conversely, studies in China *(46)* and the Republic of Korea *(53)* revealed that men were more likely to experience unmet needs than women. In China, women received fewer hours of care than men, and were more likely to be caregivers even when they experienced disability. Women reported fewer unmet needs because they had lower care expectations; they were therefore more likely to be satisfied with the care provided *(46)*. However, in the Republic of Korea, the unmet care needs of men were more related to traditional culture norms; even health care professionals were restrained in the amount of physical contact they had with patients of the opposite sex. Older men in the Republic of Korea may not easily find caregivers within or outside of their families because of their high spousal dependency *(53)*.

2.3.3 Potential factors of sex-based differences in LTC spending and utilization

Women with a higher level of education were more likely to use formal LTC than informal care, but not men *(61)*. One explanation is that women with a higher level of education may have different attitudes about the benefits realized by accessing specialist care, and may be more motivated to seek opportunities for specific care *(53)*.

High-income households were more likely to receive formal or informal help than those in other income brackets. A study based in the Republic of Korea reported that older women were financially dependent on their children, and tended to adhere to family decisions rather than their own personal preferences. These women may avoid using formal LTC services because they do not want to financially burden their children *(53)*.

An association between SES and the need for LTC was found among both men and women; level of SES exerted a slightly stronger effect on the need for LTC for older women than for men *(41, 64)*. The authors explained that this may be due to the older average age of women seeking LTC and the higher proportion of women living alone, resulting in a higher level of dependence on socioeconomic and care support *(64)*. Future studies are needed to examine SES and care needs with adequate control for potentially confounding social factors.

Specific diseases were associated with differences between men and women in length of stay. Among the articles included in this review, one study showed that the effects of alcoholism on length of stay in nursing homes was different between men and women. Men with alcohol use disorders had shorter lengths of stay than those without alcohol use disorders. By contrast, women with alcohol use disorders had longer lengths of stay than women without alcohol use disorders *(31)*. Because older men generally have more longstanding and severe alcohol problems than older women, they may be more likely to pursue early discharge to return to abusive drinking patterns or behavioural problems. Compared with women without alcohol use disorders, many women with such disorders lived alone before their nursing home admission. Lack of social services and assistance in the community may hinder efforts to formulate successful discharge plans for older women with alcohol use disorders, resulting in more extended nursing home stays *(31)*.

Men in rural areas are more likely to have their needs for care unmet. Sociocultural patterns such as the lower engagement of women in paid employment could explain these results. This pattern, which caused a lower care expectation in women, was particularly strong in rural China *(46)*.

Opinions and preferences regarding LTC arrangement may influence the sex-based gap in utilization. Men were more likely to choose a home setting with spousal caregiving, even if they had severe disabilities. In contrast, women chose professional help or institutionalization more swiftly than men *(51)*.

2.4 Limitations and future research

Considerable evidence is available from developed regions, with studies mainly conducted in the USA and in Europe. Most studies examine sex-based differences in the use of care services in broad categories (i.e. home care versus institutional care); however, detailed classification was not highlighted (e.g. rehabilitation, recreational activities or bathing care). Second, despite the common recognition of inequities in LTC utilization and expenditure between men and women, assessment studies of programmes, interventions or policies to close this gap are yet to be undertaken. Third, the interplay between biological differences and social factors should be considered. For example, the association between age at marriage and sex-based differences in utilizing LTC were still unclear. Finally, most studies only examined differences in LTC utilization between men and women; few studies provided any insights into the factors affecting these differences in LTC utilization.

2.5 Conclusions

In all the studies reviewed, women used more formal LTC than men. Longer life expectancy for women means that men are commonly cared for by their spouses, while women are more likely to end their lives in widowhood and are often forced to choose formal care. Caregiving policies that consider the biological differences between men and women are therefore efficient in narrowing the sex-based gap. Behavioural and social factors also influence this gap; the low participation of men in household chores and lack of ability to provide self-care or care for their spouses could be mitigated by increasing the participation of men in such chores. A lack of access to informal care resulting from poor relationships between men and their children could be mitigated by increasing their participation in childcare. In addition, reducing the burden of co-payment for people with lower incomes may increase the accessibility of formal care.

Regarding gender differences in the utilization of informal care, inconsistent results were observed between different countries, possibly a result of cultural differences. In a society where women are expected to provide spousal care, men may be less hesitant to receive help related to household chores and personal care. In a society that encourages masculinity and places a high value on independence, men may be reluctant to seek help from any source and express their care needs less.

In conclusion, sex and gender are the most important factors affecting inequities in LTC utilization and spending. This review indicated that social and cultural factors may be critical in narrowing the disparities in LTC utilization and expenditure.

3

Varying burdens of LTC and service use between male and female caregivers

3.1 Introduction

In this chapter, we examine differences in providers of informal care by sex as well as potential determinants of LTC expenditure of people with care needs. We focus specifically on the differences between men and women in the severity of caregiver burden and degree of procurement of outside formal LTC services. Additionally, we explore the challenges that developed countries are beginning to face as a result of these differences (e.g. forced withdrawal from the workforce by women and willingness/ability to become caregivers by men). In this review, the term "burden" includes both the subjective burden of caregiving, as assessed by questionnaires such as the Zarit Burden Interview *(67)*, and the objective burden such as the time spent in caregiving and the amount of care tasks. The decline in mental and psychological health and other health problems among caregivers are also included in the term "burden".

3.2 Methods

3.2.1 Literature search

We searched the PubMed database for peer-reviewed research reports on differences by sex in caregiver burdens and service use in LTC. See Table 3.1 for a list of search terms used. To widen the scope of the search results, no time restriction was applied. The search was conducted on 15 February 2023. We also included articles found by manually searching the reference lists of reports found in the PubMed database or Google Scholar, as well as those suggested by reviewers.

Table 3.1. Search terms

Concept	Search terms
Population	"carers" OR "caregivers" OR "unpaid care"
Exposure	"gender disparities" OR "gender gap" OR "gender discrimination" OR "gender inequality" OR "gender inequalities" OR "gender differences"
Outcome	"caregiver burden" OR "caregiving time" OR "time cost" OR "time use" OR "burden" OR "community health service"
Setting	"long-term care" OR "home care" OR "community care"

3.2.2 Inclusion and exclusion criteria

The search strategy was restricted to peer-reviewed empirical studies published in English or Japanese. This review included publications focusing on: differences or disparities by sex in caregiving burdens and tasks of informal caregivers in LTC; and differences in LTC service procurement between male and female providers of informal care.

We excluded articles that: did not have a primary focus on differences or disparities by sex in caregivers in LTC; were focused on caregiving for children in need of medical care; were review articles, conference presentations, discussion papers or dissertations; and were not of full length. With regards to review articles that were excluded, if the original articles met the above inclusion criteria we added these original articles to the list of reviewed articles.

3.2.3 Extracted data

The database search yielded 68 articles. The titles and abstracts were screened and, after the elimination of duplicates and articles that did not meet the inclusion criteria, 28 articles were finally selected. After an additional hand-search, a further 32 articles were included. We therefore reviewed the full-length texts of 60 articles in detail, eliminating a further 15 because they were not related to differences by sex in LTC. A total of 45 articles *(45, 68–111)* were therefore included in this review. See Table 3.2 for extracted data from the reviewed publications.

Table 3.2. Properties of publications included in literature review

Author, year (reference); country of study	Design	Area of LTC services reported on	Main findings
Barusch and Spaid 1989 *(68)*; USA	Quantitative, cross-sectional	Informal care	Female caregivers experienced a higher caregiving burden than males, although men engaged in a wider range of caregiving tasks. Women were more likely to prepare meals and clean their homes, while men provided mobility support and help with grooming and dressing.
Lee et al. 1993 *(69)*; Norway	Quantitative, cross-sectional	Informal care	A frail parent is more likely to receive ADL and IADL care from their daughters than from their sons. For mothers, daughters tended to be more likely to provide care.
Allen 1994 *(70)*; USA	Quantitative, cross-sectional	Informal care	In couples where one partner was a cancer patient, husbands were less likely than wives to help their sick spouses with household tasks, and husbands who helped were more likely to have other helpers, whereas wives tended to be sole caregivers. Wives provided approximately twice the hours of care that husbands provided.
Garity 1999 *(71)*; USA	Quantitative, cross-sectional	Informal care	While female caregivers learn caregiving by enjoying it and trying it out in practice, male caregivers learn it through observation and logic.
Rudd et al. 1999 *(72)*; Australia	Quantitative, cross-sectional	Informal care	Caregiving wives expressed significantly higher levels of anxiety, sadness and anger than caregiving husbands.
Beeson et al. 2000 *(73)*; USA	Quantitative, cross-sectional	Informal care	Significant differences between men and women were found: caregiving wives and daughters reported higher mean scores than caregiving husbands on relational deprivation, loneliness and depression.

Author, year (reference); country of study	**Design**	**Area of LTC services reported on**	**Main findings**
Laditka et al. 2001 *(74)*; USA	Quantitative, cross-sectional	Formal care	Compared with women, men were more willing to use formal care services than to seek help from family members. Men used support groups more, while women were more likely to use care management. Only a small percentage (9.1%) reported financial barriers to using formal services, but women were more likely than men to report such barriers.
Gallicchio et al. 2002 *(75)*; Canada	Quantitative, cross-sectional	Informal care	Female caregivers had a significantly higher subjective caregiving burden than male caregivers. There were no differences between men and women regarding high levels of depressive symptoms.
Navaie-Waliser et al. 2002 *(76)*; Spain	Quantitative, cross-sectional	Informal care	Female caregivers provided more intensive and complex care; however, they also suffered from deteriorating emotional health secondary to caregiving, and coped with caregiving responsibilities by refraining from participating in respite and increasing religious activities.
Tamiya et al. 2002 *(77)*; Japan	Quantitative, cross-sectional	Formal care	Day care services were most commonly and most frequently used when wives provided caregiving for their husbands. Home care services were the second most commonly used, most often when wives provided caregiving for their husbands or when caregivers were unavailable.
Chumbler et al. 2003 *(78)*; USA	Quantitative, cross-sectional	Informal care	For the subjective caregiving burden, there was an association with kinship but no sex difference. Adult children had a greater burden of caregivers than distant relatives. There was no significant difference in caregiver burden between adult children and spouses. Adult daughters had a higher care burden compared with more distant relatives, but the same as wives, sons and husbands.

Author, year (reference); country of study	Design	Area of LTC services reported on	Main findings
Matthews et al. 2004 *(79)*; USA	Quantitative, cross-sectional	Informal care	Male caregivers were less burdened than female caregivers, and were more likely to acknowledge that caregiving made them feel useful and appreciated and gave more meaning to their lives.
Sugiura et al. 2004 *(80)*; Japan	Quantitative, cross-sectional	Informal care	Women caregivers cared for care recipients with more severe cognitive impairment. Women spent significantly more time in caregiving and engaged in more care tasks. Women were more likely to have both caregiving burdens and depression. Men were more likely to use home help services.
Chiou et al. 2005 *(81)*; Taiwan, China	Quantitative, cross-sectional	Informal care	Compared with male caregivers, female caregivers reported more often suffering from symptoms of lack of well-being, a decrease in psychosocial health and overall self-rated health.
Zhan 2005 *(82)*; China	Quantitative, cross-sectional	Informal care	Female caregivers performed more hours of care tasks per week and were more involved in personal care and house chores, even though they perceived their health as being poorer compared with their male counterparts.
Awadalla et al. 2006 *(83)*; Sudan	Quantitative, cross-sectional	Informal care	No differences in health status between men and women were found among informal caregivers for patients with diabetes.
Ulstein et al. 2007 *(84)*; Norway	Quantitative, cross-sectional	Informal care	Female caregivers, time spent in caregiving, and patient behavioural and psychological symptoms of dementia (BPSD) explained 38% of the variance in emotional distress in caregiving. Female spousal caregivers were associated with negative emotions in caregiving.
Zodikoff 2007 *(85)*; USA	Quantitative, cross-sectional	Informal care	Female spousal caregivers reported a higher level of confidence in formal care services compared with male spousal caregivers. Male spousal caregivers reported higher worry about and fear of such services compared with female spousal caregivers.

Author, year (reference); country of study	Design	Area of LTC services reported on	Main findings
Brown and Chen 2008 *(86)*; USA	Qualitative	Informal care	Male spousal caregivers were comfortable with letting others assume care or getting others to provide care, while female spousal caregivers felt responsible for providing care.
Grov and Eklund 2008 *(87)*; Norway	Quantitative, cross-sectional	Informal care	Female caregivers were more financially disadvantaged, limited in their activities, fatigued, interrupted at work, limited in their social interactions and restricted in their schedules than male caregivers.
Papastavrou et al. 2008 *(88)*; Cyprus	Quantitative, cross-sectional	Informal care	Female caregivers had a higher overall caregiving burden and tended to be more depressed than male caregivers; female caregivers were also more burdened with relational deprivation.
Brazil et al. 2009 *(89)*; Canada	Quantitative, cross-sectional	Informal care	Women reported a greater caregiving burden than men. Female caregivers were more likely than male caregivers to provide support for toilet-related tasks, and male caregivers were more likely to provide support for mobility-related tasks.
Sugiura et al. 2009 *(90)*; Japan	Quantitative, cross-sectional	Informal care	Wives caregiving for their husbands reported higher levels of depression than husbands caregiving for their wives. Wives tended to seek emotional support to cope with their caregiving experience. Husband caregivers used more home care services; however, service use had no effect on the levels of depression reported by male spousal caregivers.
Välimäki et al. 2009 *(91)*; Finland	Quantitative, cross-sectional	Informal care	The sense of coherence of male caregivers was higher than that of female caregivers. Female caregivers reported more depressive symptoms and distress than male caregivers. The main predictors of high health-related quality of life were sex (female) and low distress.

Author, year (reference); country of study	Design	Area of LTC services reported on	Main findings
Conde-Sala et al. 2010 *(92)*; Spain	Quantitative, cross-sectional	Informal care	Husbands, wives, daughters and sons (in that order) experienced an increase in the level of subjective caregiver burden and deterioration in their mental health. The correlation between the burden and mental problems was strongest for daughters.
Noël-Miller 2010 *(93)*; USA	Quantitative, longitudinal	Informal care	Disabled husbands receive more hours of spousal and non-spousal care following worsening in ADL function than wives. Disabled wives lose more spousal and non-spousal care hours following improvements in ADL disability than husbands.
Pattanayak et al. 2010 *(94)*; India	Quantitative, cross-sectional	Informal care	Female caregivers perceived a higher burden in physical and mental health related to their spouse and caregiver's routine.
Sugiura et al. 2010 *(95)*; Japan	Quantitative, longitudinal	Informal care	Over the 2-year period, husband caregivers increased the amount of ADL care and the rate of support provided by a secondary caregiver than wife caregivers. Wife caregivers increased formal care service uses. Although there were no sex differences in the adoption of coping strategies for caregiving stress, formal care service use was more common among husband caregivers than among wife caregivers.
Akpınar et al. 2011 *(96)*; Türkiye	Quantitative, cross-sectional	Informal care	Female caregivers experienced higher levels of subjective caregiver burden than male caregivers, with significant differences in domains of time-dependent, developmental, physical burden and social burden, but not emotional burden.
McCann et al. 2012 *(97)*; Ireland	Quantitative, longitudinal	Institutional care	Compared with males, female recipients of care had a higher risk of institutional admission, which was mainly explained by the age and frailty level of spousal caregivers.

Author, year (reference); country of study	**Design**	**Area of LTC services reported on**	**Main findings**
Pöysti et al. 2012 *(98)*; Finland	Quantitative, cross-sectional	Informal care	There were no differences in depression, satisfaction with life or loneliness according to whether a caregiver is a man or woman. Male caregivers had more comorbidities than females, and the wives of male caregivers had a more severe stage of dementia than the husbands of female caregivers. Subjective caregiving burden was significantly lower among male than female caregivers.
Prince et al. 2012 *(99)*; China, Cuba, Dominican Republic, India, Mexico, Peru and Venezuela	Quantitative, cross-sectional	Informal care	Female caregivers reported a greater burden than males. Caregiver burden was correlated with patient BPSD, dementia severity, caregiving needs and time spent caregiving. Those who had reduced their work experienced a greater burden. There was tentative evidence of the protective effect of additional informal and paid support.
Qadir et al. 2013 *(100)*; Pakistan	Qualitative	Informal care	Women, especially those working, reported higher levels of caregiving stress than men.
Chappell et al. 2015 *(101)*; Canada	Quantitative, cross-sectional	Informal care	Daughter caregivers not only experienced the highest burden, but also had the highest self-esteem. Wife caregivers were the most vulnerable of the other gender and kinship groups.
Tokunaga et al. 2015 *(45)*; Japan	Quantitative, repeated cross-sectional	Formal care	Unmarried sons and husbands were more likely to use home care services compared with daughters-in-law. Day care services were used most by daughters-in-law and least by husbands and unmarried children. Husbands and unmarried sons most frequently used respite care services. There were no consistent findings by sex regarding the non-use of formal care services.

Author, year (reference); country of study	**Design**	**Area of LTC services reported on**	**Main findings**
Sutcliffe et al. 2016 *(102)*; United Kingdom	Quantitative, cross-sectional	Informal care	Five factors associated with higher subjective caregiver burden were identified: neuropsychiatric symptomatology in the patients with dementia, intensive supervision of the patients with dementia by the caregivers, being a female caregiver, being an adult-child caregiver and the absence of informal support.
Glauber 2017 *(103)*; USA	Quantitative, repeated cross-sectional	Informal care	Men were three times more likely to receive informal care from their female spouse than women from their male spouse. This sex-based difference decreased with increasing age.
Sutcliffe et al. 2017 *(104)*; Europe (Estonia, Finland, France, Germany, Netherlands (Kingdom of the), Spain, Sweden, United Kingdom)	Quantitative, cross-sectional	Informal care	High caregiving burden was significantly associated with characteristics of informal caregivers (family relationships, especially wives and daughters).
Tokunaga and Hashimoto 2017 *(105)*; Japan	Quantitative, repeated cross-sectional	Informal care	Single women with a lower level of education were likely to be primary caregivers when the care recipients had severe levels of care needs, whereas the association was null in the case of care recipients with milder conditions. A women's low level of education and non-married status were related to a higher likelihood of becoming a primary caregiver of severely disabled elderly for reasons other than lower economic power.

Author, year (reference); country of study	Design	Area of LTC services reported on	Main findings
Swinkels et al. 2019 *(106)*; Netherlands (Kingdom of the)	Quantitative, cross-sectional	Informal care	Women had a higher burden of caregiving for their partners than men, which was associated with women experiencing more secondary stressors.
von Känel et al. 2019 *(107)*; USA	Quantitative, cross-sectional	Informal care	No sex differences in self-rated health were found in older (aged ≥ 55 years) caregivers for a spouse with dementia at home.
Lee et al. 2020 *(108)*; USA	Quantitative, cross-sectional	Informal care	Female caregivers showed more depressive tendencies than male caregivers.
Schaffler-Schaden et al. 2021 *(109)*; Australia	Quantitative, cross-sectional	Informal care	Female caregivers had a higher subjective caregiver burden than male caregivers, and men used formal care services more often than women.
Floridi et al. 2022 *(110)*; Europe	Quantitative, cross-sectional	Informal care	Female caregivers showed overall lower levels of well-being than male caregivers. Among female caregivers in south Europe, well-being declined significantly when formal care services were used. Among male caregivers, outsourcing caregiving was associated with sustaining well-being.
Skinner et al. 2022 *(111)*; Norway	Quantitative, cross-sectional	Informal care	Women were more likely than men to give personal care, whereas men were overrepresented among caregivers providing practical help only.

ADL: activity of daily living; BPSD: behavioural and psychological symptoms of dementia; IADL: instrumental activity of daily living.

3.3 Results

3.3.1 Study characteristics

Most studies were conducted in the USA (13), followed by Japan (6), Norway (4), Canada (3), Finland (2), Spain (2), the United Kingdom (2), Austria (1), Australia (1), China (1), Taiwan, China (1), Cyprus (1), India (1), Netherlands (Kingdom of the) (1), Pakistan (1), Sudan (1) and Türkiye (1). Two studies were based in several countries within Europe, and another study of low- and middle-income countries was based within China, India and the WHO Region of Latin America.

A total of 24 articles were related to caregiving burdens, including caregiving time and subjective burdens (e.g. strain); 15 articles reported on health status, including mental, psychological and physical health; 10 publications described factors potentially explaining the differences in caregiving burden between men and women; eight reports discussed caregiving tasks; and eight reports investigated service use.

Most of the included articles (43/45) in this review were quantitative studies; the remaining two were qualitative studies. Most of the quantitative studies (40/43) were of a cross-sectional study design; the remaining three were of a longitudinal study design.

3.3.2 Differences in caregiving time and tasks

Of the studies on caregiving burden, several referred to differences between men and women in objective burdens such as time spent on caregiving and caregiving labour. A few studies reported on sex-based differences in caregiving time burden. A study in the USA reported that women were three times as likely as men to be involved in spousal caregiving *(103)*. The average amount of time spent in caregiving per month is more for middle-aged (aged 50–65 years) women than that for middle-aged men (110 hours versus 94 hours); however, this difference was demonstrated to decrease for older adults, possibly a result of the reduced time restrictions involved in caregiving as male caregivers retire *(103)*. Studies in Japan and Netherlands (Kingdom of the) also revealed that women spend more time in caregiving than men *(80, 106)*. Women spend twice as much time as men in spousal caregiving during outpatient cancer treatment *(70)*. Additionally, a longitudinal study in the USA reported that women experienced a larger increase in caregiving time for spousal care recipients whose activities of daily living dysfunction were severe *(93)*, suggesting a widening gap between the sexes due to an increased severity of illness of care recipients.

Several studies reported differences in caregiving tasks between men and women who were providing informal care. Some indicated that women caregivers engage in more caregiving tasks than men caregivers, suggesting a higher burden for women *(69, 82, 80)*. Women have been reported to provide more intensive and complex caregiving than men, and to engage in extensive caregiving tasks *(76)*. Additionally, women tend to provide caregiving for care recipients with severe dementia *(80)*, although there were conflicting results *(98)*. Regarding caregiving for a spouse receiving outpatient cancer treatment, men tend to provide less care than women *(70)*. Meanwhile, a study on participants in a caregiving training programme reported that male caregivers engaged in more caregiving tasks than women, except for home maintenance and food preparation tasks *(68)*.

Differences between men and women have also been reported in types of caregiving tasks. Women are more likely than men to undertake caregiving tasks related to the personal care of care recipients (e.g. toileting, medications, dressing, bathing and eating) and household work (e.g. meal preparation, house cleaning, shopping and money management) *(68, 80, 89)*. Male caregivers tended to engage in practical help, such as mobility and transport support and contact with health care providers *(68, 89, 111)*. However, some reports indicated that men were more likely to provide hygiene and dressing care, as well as financial support *(68, 82)*.

3.3.3 Differences in caregiving subjective burdens and health problems

Numerous studies reported differences between men and women in subjective and psychological caregiving burdens including strain, mental health decline or depression. Several reports evaluated the multidimensional burden of caregiving using tools such as the Zarit Burden Interview *(67)*, and suggested that women experience overall higher levels of burdens than men *(68, 75, 79, 84, 88, 96, 98–102, 104, 106, 109)*. Only a few reports did not find any sex-based differences in caregiving burden, and one study found differences by kinship, reporting that adult daughters experienced the highest caregiving burden *(78)*. In contrast, other studies found that husbands reported the highest burden *(92)*. The kinship differences were more complex, however, with inconsistent results. Women experience more secondary stressors due to caregiving, such as relational and financial problems, which explains the high caregiving burden in women *(88, 106)*.

Female caregivers tend to experience deterioration of mental and psychological health more than male. Overall, female caregivers experience more depression, anxiety and loneliness than male caregivers *(72, 73, 84, 88, 90, 94, 108)*. Women were described as having a lower sense of well-being *(110)*, and were reported to express feelings of sadness and anger *(72)*. Only a few reports found no differences between men and women in terms of depression *(75, 98)*.

Some studies reported caregiver differences between the sexes in health outcomes other than mental and psychological health. Male caregivers had a higher number of comorbidities than female caregivers *(98)*. Meanwhile, female caregivers were more likely than male caregivers to have experienced a worsening decline in their total subjective health states *(81)*, although another study reported no difference *(107)*. A study based in Sudan found no differences in health-related quality of life between male and female caregivers to diabetic patients *(83)*.

3.3.4 Differences in LTC service procurement among caregivers

Evidence of any differences between male and female caregivers in LTC service procurement is limited in the literature. A small-scale study in the USA revealed differences only in the use of meal delivery services, with men tending to use them considerably *(68)*. A large-scale study in Japan found characteristics explained by sex and kinship for service procurement *(45)*. Unmarried sons who are caregivers were the most frequent users of visiting home care services for care recipients (38.8–56.6%), compared with married daughters and sons (25.7–30.3% and 20.2–29.1%, respectively). Daughters-in-law used day care services for care recipients most frequently (39.1–40.4%), and husbands used them the least (25.2–34.2%). Unmarried daughters and daughters-in-law were the most frequent users of short-term stay services (respite care) (10.8–15.2% and 9.8–13.3%, respectively). Husbands were the least likely to procure LTC services. Another study in Japan reported that wives often used day care and visiting home care services for care recipients when caring for their husbands *(77)*. In another publication, the sex of the caregiver was not found to be related to the use of institutional care *(97)*.

3.3.5 Potential factors for differences among informal caregivers

Some of the reviewed literature reported potential (modifiable) factors for differences between the informal care provided by men and women. First, women are more financially disadvantaged than men, which may cause sex-based differences in informal caregiving. Female caregivers are more impoverished than male caregivers *(74, 87, 106)*, and this may be a cause of high caregiving burden *(106)* and a barrier to service procurement *(74, 87, 106)*. Among female caregivers, low SES is reportedly a risk factor for engaging in informal caregiving for care recipients with severe care needs *(105)*. Because SES can be related to income, the mitigation of financial disparities may be necessary to address differences in caregiving by men and women.

Second, only a few studies reported differences between men and women in service procurement attitudes. Male caregivers were more likely than female caregivers to prefer community services rather than informal support, such as from other family members *(74)*. A study reported that while husbands tended to actively rely on others for caregiving, wives felt responsible for caregiving *(86)*. Meanwhile, female caregivers were reported as demonstrating high levels of confidence towards formal LTC services, while men demonstrated worry and fear *(85)*; one study reported that women's confidence in their caregiving abilities was reduced when they increased their use of LTC services *(95)*. Regarding caregiving practices, women were reported as learning by practising and trying, while men learnt by observation and logic *(71)*.

Third, some studies reported differences in coping strategies for caregiving experiences between women and men. For female caregivers, a tendency to seek emotional support and a willingness to commit were the coping strategies in spousal caregiving *(90)*. Although differences were not found in a willingness to use formal services as a coping strategy, men used such services, especially home care services, more than women *(90)*. Another study reported that women were more likely than men to adopt coping strategies that utilized informal support and accepted caregiving roles positively *(80)*. Additionally, male caregivers showed a greater sense of coherence than female caregivers *(91)*.

3.4 Discussion

3.4.1 Caregiver differences as determinants of LTC expenditure

It is hypothesized that the challenges of caregiver differences between men and women affect differences in LTC expenditure. Our findings reveal that, overall, female caregivers spend more time in caregiving *(70, 80, 103, 106)* and have more care tasks *(69, 70, 76, 80)*. Additionally, almost consistently, women experience higher caregiving burdens *(68, 75, 79, 84, 88, 98–101, 104, 106, 109)* and psychological burdens than men *(72, 73, 81, 84, 88, 90, 94, 108, 110)*. These differences may affect LTC service use and expenditure for care recipients. For example, men may actively outsource caregiving as they are less often mobilized for informal care or are limited to performing only certain tasks *(68, 89, 111)*. Despite limited and inconclusive evidence, the caregiver's sex is speculated to determine the availability of some informal care for care recipients. These disparities may be a potential upstream determinant of differences in the type and frequency of care services and their expenditure. However, because these associations are only hypothetical, further evidence on the impact of caregiver differences between men and women in LTC financing is needed.

SES, including individual economic status, can also be a factor in disparities in informal caregiving. Poor financial conditions may lead women to refrain from procuring care services; economically disadvantaged women may therefore be forced to bear a greater caregiving burden *(74, 87, 105, 106)*. Underlying societal structures and attitudes, such as differences in employment types between men and women, and gender norms for caregiving, may affect these differences, potentially contributing to differences in attitudes towards caregiving, service uses and coping strategies *(74, 80, 85, 86, 90)*. Societal norms may potentially dictate a caregiver's role and tasks as an informal caregiver according to their sex, which may indirectly determine the LTC spending of care recipients.

3.4.2 Issues experienced by informal caregivers in developed countries

New and emerging issues in high-income countries include the differences between male and female caregivers in terms of withdrawal from the workforce, and the mobilization of male caregivers. Such issues may also become prevalent in low- and middle-income countries in the future, where an ageing population may increase demand for informal caregivers.

Because women have traditionally been primarily engaged as informal spousal, parental and family caregivers, the promotion of women's participation in the workforce is an important issue that competes with the increasing needs of informal caregiving: engaging in informal caregiving can result in a withdrawal from the workforce. Several studies suggest that the impact of engaging in informal care on employment status may be greater for women than for men *(112–114)*. Additionally, working women caregivers reportedly have a higher risk of absenteeism than men caregivers *(115)*. Informal caregiving with high caregiving burdens and more caregiving tasks, and caregiving for people with dementia, may be factors that increase caregiving labour, which in turn leads to increased job loss *(113, 116, 117)*. However, the results are inconsistent: some studies did not find differences in job loss between men and women as a result of caregiving *(118, 119)*. Notably, caregivers in Sweden were less likely to leave their job because of caregiving, unlike those in Canada and the United Kingdom *(119)*. This may be contextually influenced by the LTC system and work environment in these countries. Although further evidence is needed, caregiving turnover and differences between the sexes may become a greater issue of concern in low- and middle-income countries in the future as the demand for informal care increases. For women in particular, the weakening of financial foundations because of job loss may be related to further increases in the caregiving burden, possibly leading to widening disparities. Although further evidence needs to be accumulated, policy and institutional development to enable caregivers to continue working and to ensure that female caregivers are not disadvantaged in terms of workforce participation may be necessary.

Mobilizing men in the provision of informal care may be another important consideration to address disparities between male and female caregivers. Traditionally, women (especially wives or daughters) provide most informal care (approximately 35% of primary family caregivers in Japan are men *(120)*); however, the changing demography means that men (e.g. husbands or sons) are increasingly being engaged as primary caregivers. Several publications have reported on the challenges faced by male caregivers, in particular, laundry activities, meal preparation and personal care (e.g. toileting, dressing or bathing) *(121)*. Male caregivers are often less likely to seek help from those around them. Some male caregivers hide their caregiving from colleagues and neighbours, and do not seek support from care workers *(122)*. They also tend to be more isolated and have difficulty accessing informal support *(121)*; traditional masculine values may hinder help-seeking behaviour. Men develop masculine values such as responsibility and rationality through education and work, which can be expressed in the attitude of "care-as-work" when they are engaged as caregivers. Specifically, males may prioritize rationality and efficiency over the care recipients' needs, such as establishing a strict rehabilitation programme or implementing lifestyle management *(122)*. This strong sense of responsibility can prevent them from communicating the hardships of caregiving and the anxiety of an uncertain future with others. Although the active involvement of men in caregiving may be an important factor to reduce differences between men and women in caregiving, emerging issues challenging male caregivers also need to be addressed.

3.5 Limitations and future research

Overall, there is not enough evidence on differences between men and women in caregiving, including health effects and caregiving tasks, although a number of studies have reported on subjective caregiving burden. Several published studies have small sample sizes and their sample generation mechanisms are not known, thereby limiting the generalizability of the results. Some studies may not have adequately addressed the internal validity of the results, demonstrating a lack of multivariable analysis. Because evidence from low- and middle-income countries is limited, most of the studies reviewed here were based in high-income countries such as the USA and European countries; it is unclear whether the results from high-income countries could be transferred to low- and middle-income countries. Further evidence accumulation is therefore required in the region. Differences between men and women have been suggested in terms of caregiving labour and the burdens and health problems of informal caregivers. These differences may even influence service procurement for care recipients, potentially leading to differences in care recipients' service use and costs. However, because this association may be a complex issue involving sex as well as kinship, the accumulation of evidence through further detailed analysis is necessary to consider the data quality and the validity of the results. The accumulation of evidence on differences between men and women providing informal care in low- and middle-income countries is also required, as are the sex-based challenges of caregivers such as those faced in high-income counties. Finally, an increased focus on the disparities in caregiver burdens between men and women, as well as policies to support caregivers internationally, is urged.

3.6 Conclusions

There is a possibility that, among informal caregivers, differences exist in caregiver burden between men and women, including subjective burden, caregiving time and tasks, service procurement and health effects. These differences may potentially determine some of the service use and expenditure of care recipients, resulting in sex-based disparities in access to LTC. It is necessary to focus more on differences in caregivers between men and women, and to assess these disparities. Additionally, informal caregivers in high-income countries may face a variety of issues related to sex-based differences, including withdrawal from the workforce for women, and a lack of caregiving skills and male-specific attitudes towards caregiving for men. This area requires the accumulation of further evidence, including from low- and middle-income countries, and more attention needs to be paid to supporting informal caregivers internationally.

4

Potentially effective interventions to mitigate inequities in access to LTC between men and women

4.1 Introduction

There exist sex-based inequities in various aspects of access to LTC. In Chapter 2, we demonstrated that sex is an important driver of inequities in LTC utilization and spending; social and cultural factors may be critical in narrowing this gap in LTC expenditure. In Chapter 3 we described how differences between men and women in caregiver burden and service utilization may be potential determinants of LTC expenditure for care recipients; reducing such disparities between caregivers could help to reduce sex-based inequities in LTC expenditure. In this chapter, we discuss eight LTC policies and programmes, and their specific efficacy in reducing inequality among care recipients and family caregivers, in terms of our conceptual model (Section 1.2, Fig. 1.12). The policies and programmes described in this chapter may be considered for adoption in countries with ageing populations.

4.2 Methods

We conducted a manual search of white papers and websites, written in English or Japanese, describing existing LTC policies and programmes nominated by LTC experts as having the potential to reduce sex-based inequities among care recipients and family caregivers. The results are presented separately for policies (Section 4.3) and programmes (Section 4.4). We utilized the Google search engine using the English or Japanese policy or programme names as keywords (e.g. gender-neutral pricing, support for men caregivers). Each intervention is discussed for its possible impact on specific parts of the conceptual model (Fig. 1.12), namely: policy and environmental barriers to accessing formal care, personal ability to access formal care, and access to informal care.

4.3 Potentially effective policies

4.3.1 Universal health coverage (UHC)

UHC ensures that everyone has access to basic health care services in their time of need and at an affordable cost. Its achievement is important for eradicating poverty, promoting shared prosperity and, in addition, promoting sex- and gender-based equality in LTC. A system that helps all recipients, regardless of sex or gender, to receive basic and affordable LTC services will improve the acceptability, availability and affordability of formal care, subsequently alleviating policy and environmental barriers in accessing formal care (Fig. 1.12). The provision of publicly funded LTC services through a social insurance scheme (e.g. as in Germany or Japan) could be a possible policy for affordable LTC services for all care recipients *(123)*; public LTC services could be made available to almost every older adult, with no or low co-payments for service use. Public LTCI was legalized in the Republic of Korea in 2008;

recently, some Chinese cities have initiated pilot public LTCI systems, highlighting the adoption of such systems in several countries *(124)*.

Limitations. Despite the existence of UHC, differences between men and women in public service use and unmet needs exist, even in countries where public LTC services are provided through social insurance systems. Such differences in LTC service use therefore cannot be eliminated by providing affordable service alone. Even in countries with LTCI systems, the rate of informal care utilization remains high and most informal caregivers are women. The motivation for the provision of public LTC services through the social insurance system varies by country, and is not always to reduce sexual disparities. Success is not guaranteed even when reducing such inequities is the motivation: in Japan, although the LTCI system was initially intended to socialize care (i.e. free women family members from the burden of informal care), the majority of family caregivers are still women.

4.3.2 Sex- and gender-neutral pricing of LTCI products

Because women have a longer life expectancy, they are more likely to use LTC and other medical services and for a longer period than men. However, if sex is incorporated into the pricing variable, a price gap will be created. Sex-neutral (or unisex) pricing is therefore desirable for LTC services under the public and private LTCI system to avoid increasing the inequities in service affordability.

In 2011, the European Court of Justice ruled that sex-based disparities in insurance premiums are discriminatory. Consequently, the European Union (EU) banned the use of sex as a pricing variable for insurance products of private insurers and recommended unisex pricing *(125)*. Unisex pricing in LTC services would lead to sex-equal affordability and reduce policy and environmental barriers to accessing formal care (Fig. 1.12).

Limitation. Unisex pricing was designed with the intention of eliminating sex-based inequities. However, comparative studies before and after the introduction of unisex pricing are limited, and the effectiveness of correcting disparities in LTC use between men and women requires further verification. Another issue of unisex pricing of LTC products is that women often have lower incomes or are poor, and may have difficulty in paying either premiums to stay insured or service co-payments. Women may therefore be less likely than men to benefit from insurance. Additional efforts may be needed to solve this problem beyond simple unisex pricing.

4.3.3 Increased affordability for low-income groups

Women care recipients and family caregivers are overrepresented in low-income groups. An increased focus on these groups could therefore lead to reduced disparities in LTC expenditure.

The Japanese social security system addresses the social insurance premium burden of low-income group individuals. The Japanese LTCI system, introduced in 2000, is financed by public funds (50%) and insurance premiums (50%). Social insurance premiums, including LTCI, are based on the individual's income (ability to pay). First, premiums are levied on people aged 40 years and older based on their income. Second, all LTC services require a co-payment; initially set at 10%, this co-payment has been means-tested since 2014. System reforms have resulted in a 20% or 30% co-payment for those with higher incomes *(126, 127)*. Older women are overrepresented in the low-income group; reducing the LTC expenditure burden on these groups through the principle of ability to pay could therefore lead to the increased affordability of formal care among older women.

In Germany, close relatives are legally obligated to support their older family care recipients regardless of income; reducing the caregiver care burden is therefore an important issue. A law to reduce caregiver burden was promulgated in 2019 and enacted in 2020 *(128)*, and households with gross income of less than 100 000 euros are consequently exempt from family support obligations for care recipients *(129)*. Women are also overrepresented in low-income groups in Germany, as in other developed countries. Exemptions from parental support obligations in low-income groups could potentially reduce sexual inequalities among informal caregivers and in informal care access for care recipients (Fig. 1.12).

Limitations. Although these policies may not have been designed with the intention of reducing sex-based inequities, they may be useful because they focus on poverty, which is a major contributor to inequality. However, because of this, they have not been tested for their actual contribution to the reduction of sex-based inequities.

4.3.4 Care (case) management

Female care recipients may have difficulty in having their preferences and wishes regarding formal care use considered. A system that indicates the willingness of female care recipients in service use decision-making may therefore help to reduce sexual inequality in access to formal care (Fig. 1.12).

Care management can help guide people in need of LTC towards available services *(130)*. Through the care management process, care recipients can realize their needs, make decisions about the care they want and obtain information about available services. Care management could enhance the ability for self-determination in service use, and ensure support in accessing formal and informal care is available to all care recipients regardless of sex. In Japan, access to care managers is provided as part of the public LTCI system. Care managers provide information on available services and assist care recipients in service use decision-making *(127)*. Even in countries without a public LTCI system, care management is adopted in certain regions, for example: Flanders in Belgium *(130)* and British Columbia in Canada *(131)*.

Limitations. The intention of care management is to protect the rights of both men and women, and not actually to reduce disparities between the sexes. If care managers are insensitive to these disparities in LTC service utilization, their effect on inequality reduction is not likely to be significant.

4.3.5 Additional wages for formal caregivers

Wages for formal caregivers are unjustifiably low *(132)*. Most care workers are women, and the low wage for care providers is directly related to economic sexual inequality. Developed countries have a shortage of formal caregivers because of an ageing population; fair wages for care providers will therefore lead to a system that allows for adequate provision and increased availability of formal care (Fig. 1.12). Since most care workers are women, higher wages for care workers will also lead to higher wages for women, thus preventing their slide into poverty and difficulties with paying for future formal care. Higher wages would also attract more men into the caregiving field, improving the balance between the sexes and alleviating the lack of professional caregivers.

Efforts to pay justified wages for formal care are ongoing in several countries. In Japan, several policies have been implemented to improve remuneration of care workers *(133)*. However, because most policies are only targeted at permanent staff, and the majority of female care workers are non-permanent staff *(134)* and therefore excluded *(135)*, such policies have not contributed to a reduction in disparities. Conversely, Sweden has implemented a policy termed "gender equality pot" (*jämställdhetspott, kvinnopott,* in Swedish), in which a flat monthly salary of 205 Swedish kroner (SEK) was paid to women earning less than 20 000 SEK/month. Because most formal caregivers are women, this policy has led to improved treatment of care workers *(136)*.

Limitation. Although the Swedish policy described here was intended to reduce sexual disparities, the Japanese policy was not. Future studies will verify whether policies focusing on wages in the caregiver profession or on women's wages will be more effective in eliminating disparities in the wages of formal caregivers.

4.3.6 Benefits for informal caregiving (caregivers)

Compensation for informal caregivers, most of whom are women, is unreasonably low or even non-existent. Family members – most often women – who provide informal care for their loved ones may be unable to search for work or to remain in their current employment. Remuneration for informal caregivers may contribute to both men and women becoming caregivers and may moderate sexual disparities in the provision of informal care (Fig. 1.12).

There are some countries with advanced and distinctive systems regarding additional wages for informal caregivers *(129)*. In Austria, subsidies are provided towards substitute caregiver costs if the family caregiver is unable to care for the family member for more than 7 days because of illness or for other reasons (Federal Caregiver Allowance Act). In Australia, exemption from social insurance premiums as well as receipt of carer's benefit, carer's allowance and carer's supplementary benefit are all available (Social Security Act). In France, an allowance is provided for caregivers to use respite care (2015 Act on Adapting Society to an Ageing Population). In the United Kingdom, 62.1 pounds sterling/week/carer is paid by the local authority (carer's allowance) to caregivers even while continuing to work.

Limitations. These benefits can both intentionally and unintentionally affect sexual disparities. Further verification is necessary to determine whether these benefits actually reduce the disparities in access to formal care experienced by care recipients. A more careful discussion is needed on whether cash-for-care benefits paid to family caregivers contribute to a reduction in inequality. The Japanese LTCI system did not adopt cash benefits for family caregiving because of the risk of increasing caregiving roles and burdens on family members (especially women) *(137)*. In addition, it has been suggested that home-based care recipients might be subjected to financial abuse if the care provided by family caregivers is compensated for by the state or local community. This may be more applicable to women, as care recipients living alone are more likely to be abused and women are more likely to live alone *(132)*. When introducing cash benefits for family caregiver care, methods to reduce sexual disparities in the likelihood of financial abuse by family caregivers should be considered. In general, however, it is not clear whether in-kind or cash benefits would be more helpful in eliminating sex-based disparities.

4.3.7 Nursing care leave (to prevent informal caregivers losing their employment)

Working informal caregivers often leave their jobs because of their caregiving burden and the difficulty of balancing caregiving and work. Loss of employment by caregivers is more common among women; the caregiver role disproportionately burdens female caregivers because of gender norms. A sex-equal care leave system has the potential to reduce the concentration of informal caregiving burdens on women (Fig. 1.12).

Although nursing care leave programmes have been adopted in most developed countries, the duration of availed leave and the salary compensation during the leave period differs greatly *(129)*. Few countries provide strong guarantees to caregivers, either in terms of the right to access care leave or compensation during the care leave period. In this respect, the current situation has not strongly contributed to reducing sexual disparities.

4.4 Potentially effective programmes

In Chapter 3 we described how traditional sex and gender norms surrounding informal caregivers have been undermined in some developed countries, and that men are increasingly engaged as primary caregivers. While the active involvement of male caregivers may be a contributing factor in a reduction of sex-based disparities in caregiving, the newer issues facing male caregivers also need to be addressed. Some programmes that may contribute to the resolving of such issues are described in the following.

In Japan, the Nationwide Network of Men Caregivers and Supporters (abbreviated as Men Caregiver's Network; https://dansei-kaigo.jp/) was introduced in March 2009. This network promotes online information exchange and interaction among male caregivers, creating an environment of support. In Ishinomaki City, medical and nursing care professionals have collaborated to establish a Men's Nursing Care Class (*Otoko no Kaigo Kyoushitsu* in Japanese) that offers courses on housework and nursing care techniques *(138)*. This initiative has become a model case and is being expanded nationwide.

In the United Kingdom, the Care Act 2014 provides caregivers with the right to an assessment, regardless of their financial situation and required support level. To determine whether the caregiver needs support, the municipality checks the caregiver's employment status, activities and future intentions, and develops a customized support plan for the caregiver's needs. This support varies between regions; for example, in Glasgow (Scotland), training, networking and information-sharing opportunities are offered for caregivers *(129)*. Although this support is not targeted at male caregivers only, such unisex support could contribute to the resolution of some of the issues faced by male caregivers.

Limitations. The Japanese initiative targets only men and may be designed with the intention of reducing sexual disparities. Conversely, it is unclear whether the British initiative is intended to reduce such disparities.

4.5 Limitations of current policies/programmes and future research

Most policies and programmes described in this chapter are from developed countries, and include a mixture of those that were intended to reduce sexual disparities and those that were not. In some cases, the main difference between similar policies and programmes from different countries was their aim. The contribution of these policies and programmes – which could be either unisex or male- or female-transformative in aim – towards reducing the sexual inequities in accessing LTC remains untested; verification studies are therefore required. It will also be necessary to examine how much and which part of the LTC utilization process each policy/programme may contribute to the elimination of sexual disparities. The European Institute for Gender Equality states that consistent and comparable data are required to monitor developments in the provision of formal home-based LTC services in the EU Member States from a sexual-equality perspective *(132)*; this holds true for non-EU countries.

The policies and programmes described in this chapter have the potential to contribute to reducing sexual inequalities in the policy and environmental barriers to accessing formal and informal care (Fig. 1.12). However, few have the potential to reduce inequalities in personal ability to access formal care (Fig. 1.12).

4.6 Conclusions

Several initiatives have been contributing to the elimination of sexual disparities in LTC access, although each has its own challenges. Interventions in one aspect alone may be less effective in eliminating such disparities. Verification of the effectiveness of each initiative is therefore necessary, the initial steps of which are data collection and collation.

5

Barriers to LTC access among gender minority care recipients and potential interventions for their mitigation

5.1 Introduction

The previous chapters have focused on the differences in access to LTC between men and women; however, research structured by conventional binary gender concepts excludes those members of the population categorized within sexual and gender minority groups. Lesbian, gay, bisexual, transgender and people with gender expressions outside traditional norms (LGBT+) experience discrimination in many countries, which can create barriers to LTC access (Fig. 1.12). In this chapter, existing literature on the barriers to LTC access for LGBT+ people (societal gender norms, availability of informal care, personal ability to access formal care, and policy and environment) – as well as intervention strategies to mitigate these barriers – are reviewed.

5.2 Methods

5.2.1 Literature search

We identified publications from which to conduct our narrative review by searching the PubMed and CINAHL databases for articles published up until 19 August 2022. Table 5.1 lists the keywords used for these databases. We conducted our search on 19–21 August 2022.

Table 5.1. Search terms

Concept	PubMed search terms	CINAHL search terms
Population	"sexual and gender minorities" (Mesh)	MH "sexual and gender minorities+"
Setting	"long-term care" (Mesh)	MH "long term care"

5.2.2 Inclusion and exclusion criteria

Initially, PubMed and CINAHL searches yielded 19 and 24 articles, respectively. Duplicates (6), articles that were not relevant to the aim of this review (15), systematic/narrative reviews (2) and articles not of full length (2) were excluded. Finally, 18 articles were reviewed.

5.2.3 Extracted data

We reviewed the 18 articles that met our inclusion criteria *(139–156)*. Data extracted from each study include the country in which it was based, the study design, the area of LTC services reported on and the main findings. See Table 5.2 for a summary of studies reviewed.

Table 5.2. Properties of publications included in literature review

Author, year (reference); country of study	Study design	Area of LTC services reported on	Main findings
Gabrielson 2009 *(139)*; USA	Qualitative	Informal and formal care	Lesbian participants caring for older heterosexual family members realize that such care and support (allowing them to preserve their dignity and prevent discrimination as they age) will not be available to them in their biological family relationships. Experiences, expectations and realizations have led to the decision to live in an LGBT continuing care retirement community.
Price 2012 *(140)*; United Kingdom	Qualitative	Formal care	LGBT+ respondents' narratives reflect a range of pervasive anxieties about the future, including a potential diagnosis with a condition such as dementia and, consequently, how their sexualities and lifestyle choices may be perceived and interpreted as they age, and possibly require health and/or social care and support.
Henning-Smith et al. 2015 *(141)*; USA	Quantitative	Formal and informal care	Although LGB adults had greater expectations of needing LTC in the future than their heterosexual counterparts, that association was largely explained by sociodemographic and health differences. After control for these differentials, LGB adults were less likely to expect care from family and more likely to expect to use institutional care in old age.
Sharek et al. 2015 *(142)*; Ireland	Mixed	Formal care	Only one in three LGBT+ participants believe that health care professionals have sufficient knowledge of LGBT issues, and less than half (43%) felt respected as an LGBT person by health care professionals. Although 26% had chosen not to reveal their LGBT status for fear of a negative response, many positive encounters of coming out to health care professionals were relayed in the interviews. LGBT persons have specific concerns and perceptions regarding residential care, particularly that the Irish health care services emanate a heteronormative culture.

Author, year (reference); country of study	Study design	Area of LTC services reported on	Main findings
Donaldson and Vacha-Haase 2016 *(143)*; USA	Qualitative	LTC service providers	Results suggested that LTC staff struggle with how to be sensitive to the needs of LGBT residents. Tension appeared to exist between wanting to provide an equal standard of care to all LTC residents, while also trying to avoid unprofessional favouritism or special treatment. Participants indicated training could help to address the ambivalence they experience about providing sensitive care to subpopulations of residents who face stigma and oppression.
Lowers 2017 *(144)*; USA	Qualitative	End-of-life care	LGBT+ participants regarded end of life as any period after the loss of decision-making capacity and felt strongly that individuals in that state would need an advocate to ensure that they were cared for with respect and dignity; many lacked confidence that the health care system would do so without prompting. Participants who had partners or children hoped that family would serve as advocates, but worried that they might outlive their partners; participants who were single worried that the advocate role was too great a burden to ask of friends or distant relatives.
Pelts and Galambos 2017 *(145)*; USA	Mixed	LTC service providers	Storytelling yielded a significant and positive effect on LTC service provider attitudes towards lesbian and gay patients.
Willis et al. 2017 *(146)*; United Kingdom	Mixed	Service providers and LGB stake-holders	Affirmative views and practices towards sexual minorities are evident among care workers and managers; however, the inclusion of LGB residents needs to be advanced systemically at structural, cultural and individual levels of provision.
Butler 2018 *(147)*; USA	Qualitative	Informal and formal care	Half of single participants (i.e. those without a partner) reported some level of isolation from support networks. Nearly all study participants eventually found home care workers with whom they were satisfied and even connected.

Author, year (reference); country of study	**Study design**	**Area of LTC services reported on**	**Main findings**
Kortes-Miller et al. 2018 *(148)*; Canada	Qualitative	Formal care	Specific and frequent reference to fear of entering LTC homes was common across all focus groups. LGBT+ participants anticipated social isolation, decreased independence and capacity for decision-making, increased vulnerability to LGBTQ+-related stigma, as well as exposure to unsafe social and physical environments.
Putney et al. 2018 *(149)*; USA	Qualitative	Formal care	LGBT+ participants seek an inclusive environment where they will be safe and feel connected to a community. They fear dependence on health care providers, dementia onset, mistreatment and isolation. Importantly, these fears can lead to identity concealment and psychological distress, including suicide ideation.
Sussman et al. 2018 *(150)*; Canada	Qualitative	LTC service providers	LGBT inclusivity training was the most commonly adopted strategy among the LTC homes surveyed. Study findings further suggested that practices more visible to residents and families, such as LGBT-themed programming, inclusive language and symbols, or joint initiatives with LGBT communities, were less commonly adopted because of anticipated negative resident/family reactions.
Donaldson et al. 2019 *(151)*; USA	Quantitative	LTC service providers	Following participation in training, staff showed a significant increase in knowledge about LGBT veterans, but not in skills or attitudes.
Pang et al. 2019 *(152)*; Canada	Qualitative	Later and end-of-life care	Three primary themes emerged: (i) dealing with "the day-to-day", reflecting economic insecurity and transitioning in later life; (ii) fractures and support within family and community; and (iii) a perceived gap between principles and practices, reflecting mixed experiences and perceptions of health care services.

Author, year (reference); country of study	Study design	Area of LTC services reported on	Main findings
Smith et al. 2019 *(153)*; USA	Quantitative	LTC service providers	Most providers felt that working with LGBT issues was relevant to their practice, and felt well-prepared and willing to learn, although they were unaware of evidence-based practices, especially for LTC settings. They had little coursework on LGBT issues, and identified lack of training, stigma and residents concealing their identity as the greatest barriers to providing quality care.
Knochel and Flunker 2021 *(154)*; USA	Qualitative	Formal care	Oppression is central to LGBT+ participants' consideration of future LTC. They fear mistreatment, and loss of authentic gender expression and recognition in LTC facilities. Fears of oppression factor into consideration of suicide and physical transition, although some participants hope societal shifts will lead to unbiased LTC.
Dickson et al. 2022 *(155)*; USA	Quantitative	Formal care	78.6% of LGBT+ respondents anticipated discrimination in LTC services. Previous experiences with discrimination, higher educational attainment and questioning sexual orientation were associated with greater expectation of discrimination. Higher anticipation of discrimination was also associated with a greater preference for utilizing LTC services offered by LGBTQ+ providers or for LGBTQ+ older adults.
Williams et al. 2022 *(156)*; USA	Qualitative	Formal care	Several LGBT+ participants described experiencing discrimination and/or marginalization while accessing formal services. A number of participants were fearful about the lack of LGBT+-inclusive services and would consider leaving the area if their own or their partner's health declined or if they or their partner required LTC services, particularly residential care. Many participants expressed the need for local provider education and training on the needs of LGBT+ older adults.

LGBT+: lesbian, gay, bisexual, transgender and other gender minority members of the population; LTC: long-term care.

5.3 Results

5.3.1 Study characteristics

All of the 18 reviewed studies were based in either the WHO Region of the Americas or the WHO European Region, namely the USA (12), Canada (3), the United Kingdom (2) and Ireland (1). Study designs included 11 qualitative, four quantitative and three mixed-methods. The majority (12) of the studies were focused on LGBT+ adults, and the remainder (6) on care providers.

5.3.2 Societal gender norms

Binary sex roles and norms in the family and community can affect the use of LTC services by LGBT+ older adults. This population has been reported to anticipate and fear discrimination regarding future use of LTC services. Qualitative studies have reported that LGBT+ older adults often anticipate social isolation and mistreatment at care facilities *(148, 149, 154)*, meaning that they can be concerned about disclosing their sexual orientation and/or gender identity because of a fear of oppression. Discrimination and prejudice are valid worries for sexual and gender minorities, which can lead to suicidal ideation to avoid LTC. Residential care is a particular concern, because LGBT+ older adults believe that they would be trapped in a heterosexual-dominated environment in which their sexual orientation would be disrespected *(142, 156)*. A quantitative study in south USA reported that, among the 789 LGBTQ+ adults who participated in the online survey, 78.6% anticipated discrimination in LTC *(155)*. Participants were more likely to prefer to access LTC services offered by LGBTQ+ providers, or those designed specifically for LGBTQ+ older adults, when their expectation of discrimination was higher.

A systematic review of studies conducted in the USA *(157)* revealed that few studies have been conducted with LGBT+ older adults who have utilized or are currently utilizing LTC; most studies focused on concerns about receiving LTC in the near future. Residential LTC facilities may not be aware of the presence of LGBT+ residents because the environment may not be conducive for them to reveal their sexual identities; this factor complicates the investigation of LGBT+ care recipients *(156)*.

5.3.3 Availability of informal care

Notably, LGBT+ older adults are less likely to expect family support, which suggests an increased need for formal care services. Compared with heterosexual older adults, a larger proportion of LGBT+ older adults comprise those who do not have partners or children, and those who have experienced conflicts with their family of origin. In addition, the partners and closest friends of LGBT+ older adults are often of a similar age group, making it difficult to expect informal care *(144)*. Among the more than 13 000 participants aged

40–65 years in the United States National Health Interview Survey, LGB adults were less likely to expect care from family members and were more likely to expect to utilize residential care in the future than heterosexual adults *(141)*.

Several qualitative studies have noted that LGBT+ older adults may have limited social support. A focus group interview with 24 transgender older adults in Canada reported that they had difficulties in forming close friendships and experienced exclusion from the broader LGBT+ community *(152)*. Although studies of actual LTC service recipients are limited, a study interviewing 20 lesbian older adults living in the USA who had used home care services reported that half of those without partners were isolated from their community, friends and family networks *(147)*.

5.3.4 Personal ability to access formal care

LGBT+ older adults have reported concerns about the perception and interpretation of their sexuality and lifestyle by their care providers if they developed dementia in the future. For example, they would no longer be able to control who they revealed their sexual orientation to *(140)*. Concerns about whether their caregivers would respond appropriately when cognitive impairment may return them to a time when they hid their sexual identity *(149)*, and about whether their preferred names/pronouns would be used *(144)*, were also reported. Many believed that they would need an advocate to be cared for with respect and dignity after the loss of decision-making capacity; however, they felt that finding such an advocate was a major burden if they lost their partner or if they were single *(142)*.

The ability to access various services after the loss of driving skills is a common concern for many older adults. In particular, those in rural areas may need to travel a long distance to access such services; however, because of limited LGBT+-inclusive facilities this can be an issue for such adults *(156)*.

Typically, LGBT+ older adults face economic hardship due to discrimination in the labour market and the limited ability to receive partner benefits and inheritances. A survey conducted in the USA reported that approximately 30% of LGB and 50% of transgender older adults live below 200% of the federal poverty level, leading to health disparities *(158, 159)*. However, few studies have examined the impact of this issue on their refraining from using LTC services.

5.3.5 Policy and environment: acceptability, availability and affordability

Several studies were conducted with LTC staff regarding their cultural competence, and attitudes towards and experience of LGBT+ users of LTC services. A mixed-methods study of care workers, nurses and managers in older adult care settings in the United

Kingdom (Wales) indicated that most participants had positive beliefs about the LGB identity of their clients; however, they did not have sufficient knowledge of the history of sexual minorities *(146)*. Similarly, a survey of mental health providers in the USA revealed that participants believed that addressing LGBT+ issues was relevant to their work and were willing to learn; however, inadequate educational opportunities for this purpose was a barrier *(153)*. Conversely, in a focus group interview study, staff working in LTC facilities in the USA described their desire to provide equal care to all residents; however, they struggled with implementing special care for LGBT+ older adults because it could be seen as favouritism or special treatment, and therefore unprofessional *(143)*.

The provision of gender-sensitive LTC services is generally limited; moreover, the literature is limited to reports from the Region of the Americas and the European Region. Studies from Canada, the United Kingdom and the USA report that training programmes have been developed to improve the LGBT+ cultural competence of care facility staff (see the following section). Notably, LGBT+-specific care facilities are available in some areas of the USA *(139)*. Studies examining the needs of LGBT+ adults advocate the education of service providers regarding awareness of this population's needs, and that facilities should convey that LGBT+ older adults are welcome *(149, 156)*.

Even within the same country, contextual factors such as scarcity of resources, lack of public transportation, and stigmatization of sexual and gender minorities can cause differences in the availability of LTC *(156)*. Previous research on LTC for LGBT+ older adults has focused mostly on residential care and less on home care. In a qualitative study of 20 lesbian older adults who had used home care services, 25% of participants reported that they had been subjected to homophobia *(147)*. Nonetheless, nearly all participants eventually found a home care worker with whom they were satisfied and were able to bond *(147)*. The author opined that the fact that the care giver and care recipient were both women and of a similar older age may have contributed to their good relationship.

5.3.6 Intervention studies supporting gender minority care recipients

Studies in several countries reported that efforts were underway to achieve LGBT+ inclusiveness in LTC residential facilities. Interviews with administrators of Canadian LTC facilities reported that varied LGBT-inclusive training strategies were employed in the 32 surveyed facilities *(150)*. Educational programmes for care providers was the most commonly employed strategy *(150)*. Several studies addressed the development of effective programmes to help care providers acquire the knowledge, attitudes and skills necessary to work with the LGBT+ population. Visual storytelling reportedly had a positive effect on the attitudes of LTC staff in the USA towards lesbian and gay older adults *(145)*. In a 20-minute video, lesbian and gay older adults described their experiences of identifying as a sexual minority and its effect on their work, family life and relationships with health care professionals during a period when same-sex behaviour was both criminalized and classified as a mental illness *(145)*. In addition, online training – an easy and low-cost method – has been developed and deployed with a focus on specific occupational groups *(151)*. A 5-hour workshop for United States veteran caregivers that included information on veteran lifestyles, sexual orientation and gender identity terminology, as well as fictional case studies, significantly increased staff knowledge; however, it did not change skills or attitudes *(151)*.

5.4 Limitations and future research

Our review of barriers to access to LTC services experienced by LGBT+ adults revealed a paucity of published research, especially in low-income countries and in countries outside of the Region of the Americas and the European Region. No comparisons between urban and rural LGBT+ populations and issues in accessing LTC services were found. Most of the studies reviewed here analysed the results of surveys on future/anticipated use of LTC services, and not on evidence from those who have used or currently use LTC services. Only one study reported on the experiences of members of the LGBT+ community in receiving home care. Few studies on subgroups within the LGBT+ population (e.g. differences between lesbians and gays regarding race, immigration status, SES and having a partner or not) appear to have been conducted. Finally, more studies on the link between gender and ability to pay for LTC services are needed.

5.5 Conclusions

Our review revealed that LGBT+ older adults have an increased need for care services because of difficulties in receiving informal family support and concerns about using public services, especially residential care. Future studies should be conducted on how these characteristics relate to financing LTC. Several studies reported on the development of training programmes for LTC facility staff to improve the inclusiveness of their services. However, the current status of service provision varies between countries and regions. Research that describes the current situation in other WHO regions (outside the Region of the Americas and the European Region) with ageing populations will be extremely valuable. In addition, research that considers various regional characteristics, such as urban and rural areas, would help to understand the varying needs of the LGBT+ population according to contextual factors.

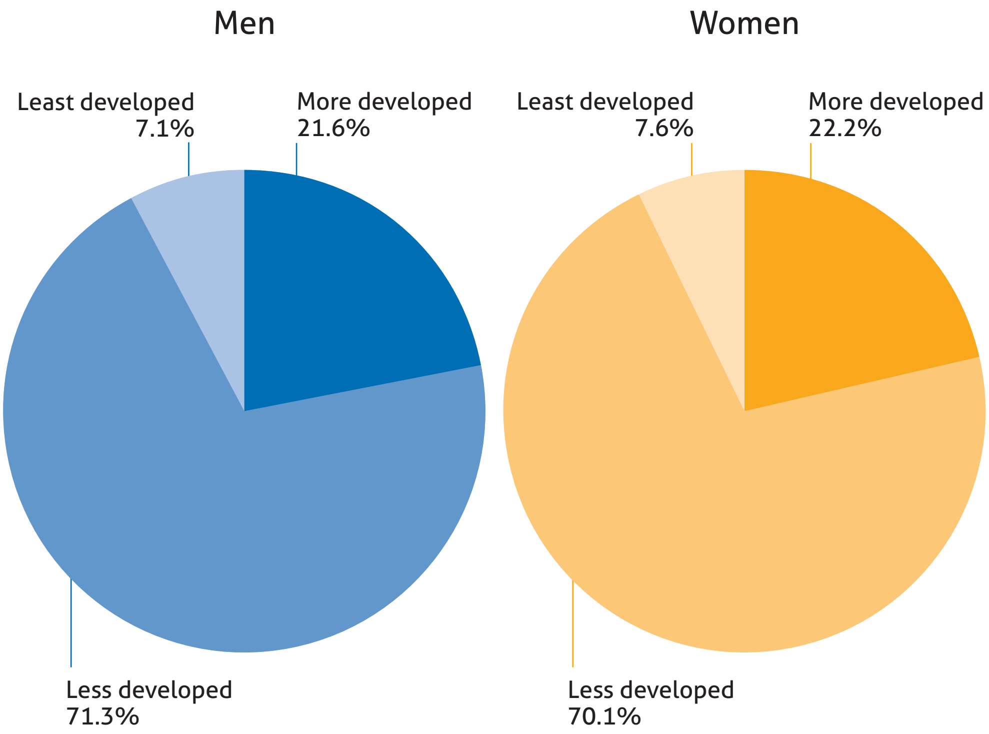
6

Discussion and conclusion

Based on the statistics on changes in social structure (Chapter 1), and literature reviews on LTC financing (Chapter 2), caregiver burden (Chapter 3), potential interventions (Chapter 4) and barriers to LTC services access among LGBT+ older adults (Chapter 5), we discuss our conceptual model proposed in Chapter 1 (Fig. 1.12) in terms of access to LTC services among older adults and their family caregivers, inclusive of sex and/or gender.

First, although the statistics and literature reviews provide suggestions for developing countries to establish an LTC system in the future, most of these are from developed countries that have a well-established LTC system. However, nearly 80% of older people will live in developing or least developed countries in 2050, where the LTC system has yet to be established (Fig. 6.1). Typically, in developing or least developed countries, demographic changes such as population ageing and prolonged longevity are more rapid. Because environmental (policy) and personal barriers to formal LTC access are more difficult to overcome and can affect men and women differently (Fig. 1.12), assessments and measures to cope with the barriers to LTC access are necessary when developing a formal LTC system. However, data acquisition is challenging and studies regarding LTC among older adults in developing countries are scarce.

Fig. 6.1. Projected distribution of people aged 65 years and over in 2050.



Source of data: UN DESA *(6)*.

Equality in LTC access by sex and gender should also be considered in the more developed countries, where ageing populations inflict heavy demands on budgets for universal health coverage and the provision of affordable formal care. As mentioned in Chapter 1, equality in access to LTC services is not guaranteed even in high-income countries such as Denmark, Finland, Norway and Sweden.

Second, we discuss our conceptual LTC access model (Fig. 1.12) in terms of older men and women. Access to LTC services by older women is more likely to be affected by socio-structural and sociocultural changes, such as population ageing or decreased family size, than access to LTC services by older men. Women are less likely to receive informal care from their family members as they tend to live longer. This increased longevity, combined with the fact that they are also more likely to experience widowhood and live alone, means that women tend to rely more on formal than informal care. In Chapter 2 we discussed differences in LTC expenditure between men and women. Compared with men, women (particularly women in developing countries) have a higher risk of poverty, illiteracy and other personal disadvantages in accessing formal care. Care providers should therefore empower older women in the process of formal LTC access by, for example, supporting decision-making and providing sex-neutral and affordable services, as suggested in Chapter 4. Different attitudes between male and female family caregivers can also have an effect on whether formal care is sought for family care recipients. In Chapter 3, we showed that women are more likely to engage in intensive and extensive caregiving than men; however, it is likely that the proportion of male caregivers will increase in the future. Nearly half of informal caregivers are already men in some developed countries (Fig. 1.10). Policy-makers should focus on the sex of care recipients and caregivers and provide appropriate support for both older adults and informal caregivers.

As well as sex-based disparities in access to LTC services, we also investigated barriers to access experienced by LGBT+ older adults. The numbers of LGBT+ older adults must also be increasing with rapid population ageing. However, social norms and biases can incur a fear of utilizing LTC services among LGBT+ older adults regardless of the care formality, and they are at risk of having unmet needs. In Chapter 5 we discussed both environmental and personal barriers to accessing formal LTC in this population. Higher levels of socioeconomic hardships, isolation or other personal disadvantages for LGBT+ older adults that hinder LTC access should be considered, and policy-makers should develop gender-inclusive care, such as gender-inclusive facilities and education for care staff.

This background study has aimed to investigate both sex- and gender-based disparities in LTC financing and its modifiable factors in a changing global demography, including access to LTC services and informal care. Our findings show that developing and least developed countries need to expedite the accumulation of evidence to inform the development of appropriate LTC systems. The cost of LTC services is currently higher for women; to address this, background factors (such as reduced access to informal care and less personal ability to access formal care) should be carefully considered when developing a robust LTC system. Barriers for LGBT+ older adults should be assessed in the development of a formal LTC system, as these individuals also tend to have lower access to both informal and formal care. As well as further research in all these areas, collaboration with social care departments to share research findings and plan appropriate interventions are also needed (Annex). Although interventions aiming to alleviate sex- and gender-based disparities in LTC financing do exist, evidence of their effectiveness is lacking.

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Annex

Social implementation: a multi-sector meeting on gender inequalities in LTC in Kobe City, Japan

To relate the findings of this report to the community, we planned to collaborate with municipalities to alleviate sex and gender inequality in LTC. Accordingly, we visited Kobe City, the location of the WHO Kobe Centre, on 3 February 2023 to seek the local government's perspectives on such inequalities, and discussed the possible coping strategies for these inequalities in the current Japanese LTC policy. Kobe, one of Japan's largest cities, is located in the Kinki region and has a population of approximately 1.5 million. Multi-sector collaborations could help to promote projects to solve problems caused by multiple background factors, such as sex and gender inequalities in access to LTC. However, such collaboration often proves challenging for the local government office, particularly in large cities, because tasks are highly specialized. The Kobe Municipality has separate sections for gender equality, human rights and LTC for older adults; we therefore organized a multi-sector meeting on sex and gender inequalities in LTC in Kobe City.

Officers from the departments of LTC for older adults (three), gender equality (one) and human rights (one) participated in the meeting. The 90-minute group meeting was divided into three parts. The first part included sharing our findings relevant to sex and gender disparities and modifiable factors in care recipients and family caregivers. During the second part we conducted a group interview to determine how the officers from each department perceive sex and gender inequality in LTC for older adults and their family caregivers. This helped the researchers to understand how the local government officers perceive inequalities in LTC. At the same time, we expected the officers to understand how those from other departments perceived the same problem differently. During the third part, we discussed the planning of a project together to alleviate sex and gender inequalities in LTC. To conclude, the researchers summarized the findings of the meeting.

In the group interview, all three departments acknowledged gender differences in LTC; activities to narrow the gender gap in LTC were primarily undertaken by the department of LTC for older adults. Officers from the department of LTC for older adults mentioned that, although they regularly held caregiver training programmes to support family caregivers, most participants were women. They are considering developing a caregiver training programme for men to encourage participation. The officer from the gender equality department stated that few citizens had consulted about sex or gender issues specific to LTC. From his experience, he believes that gender gaps in wages at a younger age may influence economic status in older age, which may affect LTC utilization among men and women. The officer from the human rights department stated that, when residing in an LTC facility, using private rooms rather than shared rooms may mitigate discomfort felt by sexual minority residents.

In the group discussion, the officers stated that they have seldom worked together and expressed that the meeting was an excellent opportunity to develop a collaborative plan. One idea that emerged from the discussion was that including disaster preparedness knowledge in the family caregiver training programme would encourage male caregivers to actively participate in the programme. In Japan, men are likely to take a leadership role in disaster management. In addition, women's engagement in disaster plans is also necessary to meet sex- or gender-responsive needs such as hygiene issues. Such collaborations between the disaster prevention and LTC departments will improve the planning of appropriate disaster preparedness and active participation by male caregivers.

After the multi-sector meeting, the officers and researchers shared their thoughts on gender issues in LTC and agreed with the following perceptions. Although the awareness of gender differences and gender minorities in LTC is increasing, our society's understanding of gender issues is limited. One of the reasons for this limitation is the insistent gender-biased social norms; it is essential to change our attitudes towards men and women, and the first step is to know the current status of gender differences in LTC. Finally, the feedback provided by the officers for the conceptual model and findings was that they improved their understanding of the existence of gender disparities in LTC.

Although our meeting was just an initial step in social implementation in a local government, this multi-sector meeting succeeded in highlighting the consistency of our findings and practice perspectives. Further networking to record the thoughts and opinions of both caregivers and care recipients is necessary.

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