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Multidimensional Care Poverty Among East Asian and Nordic Older Adults

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Abstract

Background and Objectives: This study uses the care poverty framework, focusing on both individuals and structures. In this context, structures are represented by 2 welfare states: Taiwan, an East Asian welfare system and Finland, a Nordic welfare state. This study explores multidimensional care poverty rates and examines 3 realms of individual factors (health status, sociodemographic factors, and care support availability) among older adults in these long-term care (LTC) models.

Research Design and Methods: We analyzed data from the 2019 Taiwan Longitudinal Study on Ageing Survey and the 2020 Daily Life and Care in Old Age Survey in Finland to compare the rates and factors of care poverty in these 2 culturally and structurally different countries.

Results: Our analysis revealed different rates of care poverty in personal, practical, and socioemotional care needs in the 2 countries. Under a familistic welfare regime, Taiwanese older adults had higher personal care poverty rates than their Finnish counterparts. Those living alone faced more personal and practical care poverty. Conversely, Finnish older adults, under the Nordic welfare model, experienced more practical and socioemotional care poverty. Those with high care needs and disadvantaged social status and support were more likely to experience personal and practical care poverty. Socioemotional care poverty varied with the availability of support and health status in both countries.

Discussion and Implications: The study highlights the impact of 2 LTC policies and cultures on older adults' multidimensional care poverty, identifying disadvantaged older adults under different welfare-transforming LTC models. Taiwan's budget-constrained LTC policies and high family reliance contrast with Finland's inadequate attention to the practical and socioemotional needs of its aging population. This study suggests that holistic LTC policies are needed in both countries to improve the well-being of older adults with limited support and health issues.

Keywords: Personal care, Practical care, Socioemotional care, Unmet needs, Welfare state comparison

Translational Significance: This study examines whether long-term care services meet the needs of older adults in Taiwan and Finland, focusing on multidimensional care poverty. Previous research often overlooks inadequate care as a social policy concern and unmet needs as a deprivation of basic human rights. Our analysis reveals varying rates of care poverty across personal, practical, and socioemotional needs in both countries. Individual factors like health status and living arrangements, and structural factors like the welfare regime, are significantly associated with these outcomes. We recommend comprehensive long-term care policies to enhance the well-being of older adults with limited support and health issues.

To support older adults aging in place has been the main long-term care (LTC) policy goal of many welfare states since the 1960s. Whether LTC services are available or adequate to meet the needs of older adults living in the community has been the main concern for stakeholders and researchers. In gerontology, the concept of unmet needs has been used since the 1970s (Isaacs & Neville, 1976). Since then, several studies have analyzed unmet needs in healthcare and LTC among older adults in both Western and Asian societies (e.g., Casado et al., 2011; Desai et al., 2001; Zhu, 2015). These studies overlook inadequate care as a social policy concern and unmet needs as a basic human right deprivation. Adequate care deprivation signifies care policy and welfare state failure (Hill, 2022).

In 2010, Kröger introduced the concept of "care poverty," expanded in 2019 to LTC research (Kröger, 2010; Kröger et al., 2019), emphasizing its relevance to both individuals and welfare systems (Kröger, 2022). Sihto and Van Aerschot (2021) further examined Finnish older adults' unmet needs as broader social issues. Hu and Chou (2022) applied this

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framework to assess care poverty among older adults' personal and practical care needs in two Asian "familistic welfare regimes" (Abrahamson, 2017). However, there is still a lack of empirical data showing the association between older adults' care poverty and different welfare systems and cultures, beyond individual factors.

In addition to personal and practical care needs, recent studies have explored the impact of social isolation and loneliness on older adults' well-being (Hawkley & Cacioppo, 2007; Russell, 2009; Tanskanen & Anttila, 2016). Kröger (2022) connects this to unmet needs, arguing that social isolation and loneliness can indicate socioemotional care poverty. Thus, the three domains of care poverty are identified as personal, practical, and socioemotional care poverty, each representing a lack of coverage in corresponding care needs. However, no study has comprehensively explored multidimensional care poverty among older people, encompassing personal, practical, and socioemotional care poverty, while considering different welfare regimes. To fill this research gap, this study focuses on Taiwan, representing a familistic welfare regime, and Finland, representing a universalist welfare regime. These two countries have different LTC welfare systems, which are considered structural factors in care poverty. The study investigates and compares the extent of older adults' multidimensional care poverty and examines the factors associated with the three domains of care poverty.

Transforming Care for Older Adults in Taiwan and Finland

East Asian welfare models, like Taiwan's, are often termed "productivist," valuing economic growth over welfare services (Holliday, 2000). As a Confucian welfare system (Abrahamson, 2017), Taiwan traditionally relied on family care due to filial piety, positioning it as the main support for older adults (Solinger, 2015; Yeh et al., 2013). However, democratization and political shifts have broadened state care roles, especially for older adults (Fleckenstein & Lee, 2017; Hwang, 2012). With a fast-aging population, projected to double from 17.5% in 2023 to 37.5% by 2050 (National Development Council, Taiwan, 2024), Taiwan has launched LTC initiatives like LTC 1.0 and LTC 2.0, alongside the 2015 Long-Term Care Service Act (MOHW, 2024a), despite ongoing funding challenges (Yeh, 2020). Changing societal norms, declining fertility, and greater female employment are diminishing traditional family care and cohabitation (Chau & Yu, 2013; Lin & Yi, 2013; MOHW, 2024b), shifting toward migrant and market-based solutions (Chou et al., 2015), a shift accentuated by the coronavirus disease 2019 (COVID-19) pandemic (Lan, 2022). Still, with LTC funding at just 0.3% of GDP in 2023, Taiwan's investment lags behind other developed nations (OECD, 2021).

Instead of relying on family, Finland, known for its universalist welfare regime alongside Denmark and Sweden (Anttonen, 2002), has offered extensive public care for older adults since the 1960s (Anttonen & Sipilä, 1996; Pavolini & Ranci, 2008). However, since the 1990s, the Nordic countries, particularly Sweden and Finland, have seen a shift toward deuniversalization and marketization, impacting the accessibility and coverage of care services (Rostgaard et al., 2022; Szebehely & Meagher, 2018). In Finland, comprehensive care is now limited to those with the greatest needs, with public services falling short (Kröger & Leinonen, 2012). The rise of for-profit care, especially in residential settings, marks a significant departure from the past, where such providers were almost nonexistent before the 1990s (Kröger, 2019). This shift has led to increased reliance on informal or for-profit care services (Meagher & Szebehely, 2013). Amidst these changes, Finland's aging population continues to grow rapidly (Sotkanet, 2023). Despite these challenges, Finland strives to maintain its universalist principle, ensuring welfare coverage for all, even as privatization and refamilization trends alter its welfare landscape (Mathew Puthenparambil et al., 2017).

Recent reforms in Taiwan's and Finland's LTC systems, representing East Asian and Nordic models respectively, show diverging trends in care transformation. Taiwan still relies on family and market-based care (Abrahamson, 2017; Hu & Chou, 2022), despite diminishing family involvement and increasing public funding, while Finland's care universalism is eroding in various aspects (Moberg, 2017; Rostgaard et al., 2022; Szebehely & Meagher, 2018). Under these changing care systems for older adults, it is crucial to promptly assess whether older people are receiving adequate support, especially those who are most disadvantaged. Analyzing care adequacy across these welfare models can highlight their unique challenges and features. However, no studies have explored and compared these recent LTC policy changes in East Asian and Nordic countries or their association with care poverty among older adults living in the community and aging in place.

Framework of Care Poverty

Definitions of Care Poverty

The World Bank defines poverty not only as economic deprivation but also as "pronounced deprivation in well-being" (Haughton & Khandker, 2009; see Kröger, 2022, p. 21). In sociology, "poverty" describes inequality and deprivation. For example, "time poverty" highlights gender and social class inequality among working women balancing family and paid work (Chatzitheochari & Arber, 2012; Irani & Vemireddy, 2021; Newman & Chin, 2003). Regarding childcare, "leisure-time equality" relates to welfare arrangements and issues of social class and gender (Fraser, 2000). The term "healthcare poverty," used by Raiz (2006), refers to unmet healthcare needs rather than the deprivation of economic resources (see Kröger, 2022, p. 25).

According to Kröger (2022), the concept of "care poverty" bridges poverty and inequality research, feminist social policy, and gerontology. It highlights the lack of care from both individual and societal perspectives, recognizes informal and formal care as resources, and considers their unequal distribution (Kröger, 2022, p. 27). Care poverty is defined as "a situation where, as a result of both individual and structural issues, people in need of care do not receive sufficient assistance from informal or formal sources, and thus have care needs that remain uncovered" (Kröger et al., 2019, p. 487). We adopt this concept as the framework for this study.

Multidimensional Care Poverty and Measures

Kröger (2022) defines the multidimensionality of care poverty, covering personal, practical, and socioemotional aspects, alongside *absolute* and *relative* measurement methods.

Personal care poverty arises from difficulties in daily activities like eating or dressing, jeopardizing health and well-being. *Practical care poverty* results from challenges in tasks such as shopping or managing bills, adversely affecting the quality of

life. Experiencing social isolation and loneliness places an individual in *socioemotional care poverty*. These three domains of care needs are crucial for an older adult's everyday life and should not be overlooked by social care policy (Kröger, 2022).

Absolute care poverty denotes a complete lack of support, while *relative care poverty* reflects insufficient support, assessed against societal norms and personal expectations (Kröger, 2022). From a policy perspective, comparing welfare models should assess not just the presence of care for older adults but also its adequacy. *Care poverty rates* across personal, practical, and socioemotional domains are measured by the proportions of people who have unmet needs out of all those who have personal, practical, or socioemotional care needs (Kröger et al., 2019). Such care poverty rates can be categorized into absolute, relative, and overall care poverty rates. The first indicates the proportion of those for whom care is not available, the second indicates the proportion of those whose care is insufficient, and the third represents the sum of absolute and relative care poverty rates.

Numerous studies have explored unmet care needs among community-dwelling older adults, aiming to identify high-risk groups. Previous research (e.g., Desai et al., 2001; LaPlante et al., 2004; Meng et al., 2021) has identified factors linked to these unmet needs, spanning demographic and socioeconomic elements; however, the discussion related to structural factors has been overlooked. Under the care poverty approach, which focuses on both individual characteristics and social structures, Kröger (2022, p. 119) categorizes these issues into three realms related to the three domains of care poverty: health and functional status, sociodemographic factors, and availability of care support.

Through a cross-national comparison, this study extends the framework to examine whether the rates and factors of the three domains of care poverty differ between the two countries, which have distinct welfare regimes and LTC systems. The hypotheses are as follows.

1. There are significant differences in the rates of absolute, relative, and overall care poverty in personal, practical, and socioemotional care needs among older adults between Taiwan and Finland.
2. The three realms of factors—older adults' health and functional status, sociodemographic factors, and availability of care support—are significantly associated with personal, practical, and socioemotional care poverty in Taiwan and Finland, and these associations differ between the two countries.

Data and Methods

Data

Taiwanese data

We used the Taiwan Longitudinal Study on Aging (TLSA), a comprehensive, nationwide survey conducted by Taiwan's Health Promotion Administration in 2019, targeting individuals aged 50 and above. Initiated in 1989, TLSA had follow-ups in 1996, 2003, 2015, and 2019, with a new cohort added in 2015 to counter sample attrition (HPA, MOHW, Taiwan, 2020).

The survey employed a three-stage sampling technique. Initially, towns and districts were chosen proportionally to their population sizes, serving as the primary sampling units. Systematic sampling then selected neighborhoods as secondary sampling units, based on case distribution across layers. Finally, individuals were systematically picked from these neighborhoods as Tertiary Sampling Units, again considering case distribution, to form the survey's final sample.

To ensure comparability between the datasets from Taiwan and Finland, individuals under the age of 75 from Taiwan were not included in the analysis. This aligns with the updated definition of older adults, which excludes those under 75, as they are typically well-maintained mentally and physically (Ouchi et al., 2017). Additionally, the 65–74 age group generally requires minimal to no care support, which is beyond our study's focus on care poverty. We analyzed only the 2019 data, with an 84.5% response rate among 4,644 participants aged 65 and over, to compare it with Finnish data from 2020. To focus on care poverty among older adults aging in place, we excluded 86 institutionalized participants who receive care from facility workers.

Finnish data

We analyzed the 2020 Daily Life and Care in Old Age (DACO) survey, targeting 6,000 individuals aged 75 and above through simple random sampling from the Digital and Population Data Services Agency database, achieving a 54.7% response rate. Questionnaires were provided in Finnish and Swedish to reflect linguistic diversity. The DACO dataset encompasses extensive information on care needs, use of care services, social interactions, loneliness, social support, and demographics, including socioeconomic status, health, and living arrangements. From 3,279 respondents, 2,855 older adults living in the community were included in our study.

Dependent Variables: Care Poverty in Personal, Practical, and Socioemotional Care Needs

We adopted the concept of care poverty, rather than unmet needs, as our dependent variable is to highlight both structural and individual factors. Structural issues particularly pertain to the distinct LTC systems in Taiwan and Finland, reflecting their differing welfare models (Kröger et al., 2019, p. 488). We measure care poverty by checking if participants had I/ADL (instrumental/activities of daily living) and socioemotional needs and whether these were entirely unmet (*absolute* care poverty) or inadequately met (*relative* care poverty).

In Taiwan, ADL and IADL were assessed through questions asking participants about their difficulties performing six ADL tasks (e.g., bathing, dressing) and eight IADL tasks (e.g., shopping, managing money) alone. A response of "no difficulty" was coded as having no care need in ADL or IADL, whereas "somewhat difficult," "very difficult," or "totally unable" indicated a care need. Concerning *absolute* care poverty in ADL and IADL, those respondents were coded in the category who answered to have a care need and replied to "have no person to help." Those stating they had "a primary person to help" were further queried if the assistance was sufficient or if more was needed. Answers indicating a need for more assistance were classified as *relative* care poverty in I/ADL, while those satisfied with their help were considered to have their care needs met. The assessment of *absolute* and *relative* socioemotional care poverty was conducted using the six-item De Jong Gierveld Loneliness scale (De Jong Gierveld & Van Tilburg, 2006). Responses were scored as "yes" (2), "more or less" (1), and "no" (0), with higher scores indicating greater loneliness. The scale ranged from 0 (not lonely) to 12

(extremely lonely), with scores categorized into three groups: 0–4 (needs met), 5–8 (*relative* care poverty), and 9–12 (*absolute* care poverty), under the assumption that every participant requires socioemotional support.

In Finland, care needs were similarly reported through six ADL and eight IADL tasks. Participants responded to "How do you manage the following activity?" with "I cope without difficulties," "I do not cope by myself, but I receive enough help," or "I cannot cope by myself and I need more help than I receive." Those choosing the third option for any task were identified as having unmet care needs, signifying *relative* care poverty. *Absolute* care poverty was determined for participants who, when asked "In the past year, where or who have you received help from in managing the difficulties indicated in the previous question?" replied "I do not receive help." Socioemotional care poverty was measured by asking, "Do you feel lonely?" with responses from "never" to "almost always." These were classified as "never/rarely" (needs met), "sometimes" (*relative* care poverty), and "often/almost always" (*absolute* care poverty).

In this study, "*overall* care poverty" encompasses participants reporting a lack of care support (*absolute* care poverty) or finding existing support insufficient (*relative* care poverty).

Independent Variables and Measures

In this study, three realms of factors (12 variables) are measured as independent variables.

Measurement of health and functional status

In both Taiwan and Finland, health and functional status were measured through *self-reported health* and the count of I/ADL care needs. *Health* levels were categorized as 0 (fair, rather good, or good) and 1 (rather poor or poor); and I/ADL limitations were coded as continuous variables, with higher scores reflecting greater care needs.

Measurements of sociodemographic factors

The analyses of sociodemographic factors from Taiwan and Finland included gender, age, marital status, education, home ownership, and income. These variables were categorized as follows: gender (0 = men, 1 = women); age (0 = 75–79, 1 = 80–84, 2 = ≥85); marital status (0 = with partner, 1 = single, widowed, divorced, or separated); education (Taiwan: 0 = junior high or higher, 1 = primary or lower; Finland: 0 = vocational or higher, 1 = below vocational); home ownership (0 = own or partly own, 1 = do not own); income (Taiwan: 0 = over 1 million NTD, 1 = under 0.3 million NTD, 2 = 0.3 to 1 million NTD; Finland: 0 = over 1,500 euros, 1 = 1,000 euros or less, 2 = 1,001–1,500 euros).

Measurements of availability of care support

The availability of care support was measured by living arrangement, frequency contacting children, social support, and area of residence.

Two variables were coded as nominal variables: *living arrangement* (in both Taiwan and Finland, 0 = living with someone including with spouse/partner/children/others, 1 = living alone) and *areas of residence* (in Taiwan, 0 = urban, 1 = rural; in Finland, 0 = city and 1 = suburbs and sparsely populated areas). *Frequency contacting children* and *level of social support* were continuous variables in regression analyses, a higher score indicating more *frequent contacts with children* and a higher *level of social support*. Both in Taiwan and Finland, *frequency of contacting children* is measured by the question "How often do you contact your children?" and coded from 0 (no children/no contact) to 4 (living together/contact every day). *Social support* is measured by the question "Do you feel/agree that your family, relatives or friends pay concern to you?" in Taiwan and "Do you have someone who you can turn to if you need support or if something is bothering you?" in Finland; coded from 1 (*very much disagree* in Taiwan and *not any one* in Finland) to 4 (*very much agree* in Taiwan and *a number of people* in Finland).

Statistical Analysis

Our statistical analysis began by comparing the characteristics of older adults in Taiwan and Finland (Table 1), employing chi-square or *F* tests for this purpose. Subsequently, we calculated and compared the overall, absolute and relative rates of personal, practical, and socioemotional care poverty in the two welfare states (Table 2). To explore the association between three categories of factors—health and functional status, sociodemographic factors, and the availability of care support—and care poverty across personal, practical, and socioemotional needs, we conducted logistic regression analyses. These regressions were performed separately for each country and each care poverty domain. We estimated adjusted average marginal effects, as odds ratios would not be directly comparable across different regression models (Table 3).

Our analyses focused on older adults who reported at least one care need, as those without care needs by definition cannot experience unmet needs. All statistical analyses were performed using STATA (V.15; StataCorp, College Station, Texas, USA).

Results

Characteristics of Older Adults in Taiwan and Finland

Our analysis reveals significant differences between the two countries in age, self-reported health, I/ADL care needs, education, income, living arrangements, frequency of contact with children, and levels of social support ($p < .001$). Table 1 shows that, compared to their Finnish counterparts, the Taiwanese older adult sample tends to be older (31.6% vs 21.4% aged ≥85), report poorer health (34.1% vs 12.1% poor/rather poor), have a greater number of I/ADL care needs (average 1.1/2.7 vs 0.3/2.1), possess lower educational levels (75.1% with primary education or less vs 27.2% without vocational or higher education), are less likely to live alone (10.1% vs 41.4%), have a higher proportion contacting children daily (39.7% vs 36.9%), and report higher levels of social support (average 3.4/0.5 vs 3.2/0.7).

Comparison of Care Poverty Rates Between the Two Countries

Table 2 reveals that Taiwanese older adults have a significantly higher *overall* care poverty rate in personal care needs (ADL) at 38.0% compared with 13.3% for Finnish older adults ($p < .001$). In contrast, their *overall* care poverty rate in practical care needs (IADL) is lower at 10.8%, versus 16.9% for Finnish counterparts ($p < .001$). For *absolute* care poverty rates in both ADL and IADL, Taiwanese older adults exhibit higher rates than Finnish ones, with 34.6% vs 0.9% in ADL ($p < .001$) and 4.5% vs 0.8% in IADL ($p < .05$). Conversely, Taiwanese older adults show lower *overall* ($p < .001$) and

Table 1. Characteristics of Participants and Comparison between Taiwan and Finland

Variable	Taiwan (n = 2,027)		Finland (n = 2,855)		X^2/F	Df (TW, FN)	p Value
	N (%)	M (SD)	N (%)	M (SD)			
Health and functional status							
Self-reported health					337.733	1	<.001
Very good, good, fair (good, rather good or fair)	1,336 (65.9)		2,453 (87.9)				
Very bad, bad (poor or rather poor)	691 (34.1)		338 (12.1)				
Care needs in ADL (range: 0–6)		1.1 (2.1)		0.3 (0.9)	5.306	(2,026, 2,854)	<.001
Care needs in IADL (range: 0–8)[a]		2.7 (3.1)		2.1 (2.4)	1.588	(1,990, 2,854)	<.001
Sociodemographic background							
Gender					1.252	1	.263
Men	913 (45.0)		1,239 (43.4)				
Women	1,114 (55.0)		1,614 (56.6)				
Age					72.408	2	<.001
75–79 years old	801 (39.5)		1,401 (49.1)				
80–84 years old	586 (28.9)		844 (29.5)				
85+ years old	640 (31.6)		610 (21.4)				
Marital status					0.131	1	.718
With spouse/partner	1,163 (57.4)		1,613 (57.9)				
Without spouse/partner	864 (42.6)		1,173 (42.1)				
Education					1,081.460	1	<.001
Primary and below (TW); No vocational/higher education (FN)	1,523 (75.1)		757 (27.2)				
Junior/senior + bachelor and up (TW); vocational or higher education (FN)	504 (24.9)		2,027 (72.8)				
Home ownership[a]					0.161	1	.688
Yes	1,749(86.5)		2,464 (86.9)				
No	274 (13.5)		373 (13.1)				
Family income					337.447	2	<.001
<NT$300,000 per year (TW); <€1,500 per month (FN)	1,086 (53.6)		1,038 (38.4)				
NT$300,000–1,000,000 per year (TW); €1,500–2,500 per month (FN)	769 (37.9)		846 (31.3)				
>NT$1,000,000 per year (TW); >€2,500 per month (FN)	172 (8.5)		819 (30.3)				
Availability of care support							
Living arrangement					570.529	1	<.001
Living with someone	1,822 (89.9)		1,673 (58.6)				
Living alone	205 (10.1)		1182 (41.4)				

Table 1. Continued

Variable	Taiwan (n = 2,027)		Finland (n = 2,855)		X^2/F	Df (TW, FN)	p Value
	N (%)	M (SD)	N (%)	M (SD)			
Frequency contacting children					98.941	4	<.001
No contact	134 (6.6)		183 (6.7)				
Less frequent	159 (7.8)		97 (3.6)				
Monthly	277 (13.7)		255 (9.4)				
Weekly	652 (32.2)		1,181 (43.4)				
Daily	805 (39.7)		1,005 (36.9)				
Social support[c] (range: 1–4)		3.4 (0.5)		3.2 (0.7)	0.547	(1,594, 2,814)	<.001
Area of residence					0.002	1	.964
City center/urban/semiurban area	1,698 (83.8)		2,393 (83.8)				
Suburb or sparsely populated/rural area	329 (16.2)		462 (16.2)				

Note: ADL = activities of daily living; FN = Finland; IADL = instrumental activities of daily living; NT$= New Taiwan Dollar; TW = Taiwan
[a]Taiwan: n = 1,991; Finland: n = 2,855.
[b]For Finland, home ownership includes full (n = 2,373) and partial ownership (n = 91).
[c]Taiwan: n = 1,595; Finland: n = 2,815.

absolute socioemotional care poverty rates than Finnish ones, at 20.2% vs 30.7% and 1.4% vs 6.1%, respectively.

Taiwanese participants face higher personal care poverty, while Finnish participants have higher rates of practical and socioemotional care poverty. However, the situation differs between *absolute* and *relative* care poverty. Hypothesis 1 was partially supported.

Factors Associated with Personal, Practical, and Socioemotional Care Poverty

Table 3 outlines the adjusted marginal effects of various factors on care poverty across personal, practical, and socioemotional domains. In Taiwan, an East Asia familistic welfare regime, older adults with poor to very poor health were 11.9 percentage points more likely to experience personal care poverty ($p < .05$), and those living alone faced a 30.4 percentage point higher risk ($p < .01$) compared with their respective reference groups. In Finland, a universalistic Nordic welfare regime, a higher probability of personal care poverty was associated with greater ADL needs ($p < .001$) and being female ($p < .05$). Conversely, not owning a house and more frequent child contact reduced the likelihood of personal care poverty ($p < .05$ and $p < .01$, respectively).

Panel 2 of Table 3 deliberates the regression findings for practical care poverty, highlighting the role of care support. In Taiwan, living alone significantly had 18.5 percentage points higher probability of experiencing practical care poverty ($p < .001$), but this was not observed in the Finnish sample. Higher levels of social support correlated with lower practical care poverty in both countries ($p < .001$), with a more pronounced effect in Taiwan. Finnish older adults with poor self-reported health, greater ADL and IADL care needs, and those not owning a home faced higher risks of practical care poverty ($p < .001$, $p < .01$, and $p < .001$ respectively). In contrast, lower education and more frequent child contact were less likely to experience practical care poverty in Finland ($p < .001$), but these factors were not significant in the Taiwanese sample.

Panel 3 of Table 3 shows the regression outcomes for socioemotional care poverty, indicating that poor self-rated health increases the likelihood of experiencing socioemotional care poverty in both groups. In the Finnish sample, poor functional status, living alone, and residing in rural areas were significantly linked to a higher chance of socioemotional care poverty.

When comparing the two East Asian and Nordic countries, the characteristics of older adults across the three realms (health and functioning, sociodemographic, and care support) show both differences and similarities in their association with personal, practical, and socioemotional care poverty. Hypothesis 2 was partially supported.

Discussion

This study compares the Finnish universalistic welfare model in LTC with the Taiwanese familistic welfare model. It found that Finnish older adults have a lower rate of personal care poverty compared to their Taiwanese counterparts. Conversely, Finnish older adults exhibit higher rates of practical and socioemotional care poverty than Taiwanese older adults. This suggests that while the universalistic Finnish care policy adequately meets older adults' personal care needs,

Table 2. Overall, Absolute, and Relative Care Poverty Rates in Personal, Practical, and Socioemotional Care Needs: Taiwan vs Finland

Care poverty domain	Measure	No Care Need *N* (%)		Met Care Need [a] *N* (%)		Unmet Care Need [b] *N* (%)		Care Poverty Rate [c] %		X^2	*df*	*p* Value
		Taiwan	Finland	Taiwan	Finland	Taiwan	Finland	Taiwan	Finland			
Personal care poverty (ADLs)	Overall	1,761 (86.9)	2,524 (88.7)	165 (8.1)	280 (9.8)	101 (5.0)	43 (1.5)	38.0	13.3	48.014	1	<.001
	Absolute[d]					92 (4.5)	3 (0.1)	34.6	0.9	32.838	1	<.001
	Relative[d]					9 (0.4)	40 (1.4)	3.4	12.4			
Practical care poverty (IADLs)	Overall	1,202 (59.3)	1,055 (37.1)	736 (36.3)	1,488 (52.3)	89 (4.4)	302 (10.6)	10.8	16.9	16.436	1	<.001
	Absolute[d]					37 (1.8)	14 (0.5)	4.5	0.8	5.809	1	.016
	Relative[d]					52 (2.6)	288 (10.1)	6.3	16.1			
Socioemotional care poverty (loneliness)	Overall	0	0	1,618 (79.8)	1,966 (69.3)	409 (20.2)	871 (30.7)	20.2	30.7	67.527	1	<.001
	Absolute[e]					29 (1.4)	172 (6.1)	1.4	6.1	1.624	1	.203
	Relative[e]					380 (18.8)	699 (24.6)	18.8	24.6			

Note: ADL = activities of daily living; IADL = instrumental activities of daily living.
[a]For socioemotional care, "met care need" indicates "never/rarely lonely."
[b]For socioemotional care, "unmet care need" indicates "often/always/sometimes lonely."
[c]Share of people with unmet needs among all who have care needs (met + unmet = care needs).
[d]Absolute personal/practical care poverty = no help from any person; relative care poverty = help is not enough.
[e]Absolute socioemotional care poverty = often/always lonely; relative care poverty = sometimes lonely.

Table 3. Marginal Effect Analysis on Overall Personal Care Poverty (ADL), Overall Practical Care Poverty (IADL) and Socioemotional Care Poverty

Variables	Overall Personal Care Poverty (ADL)[a]		Overall Practical Care Poverty (IADL)[b]		Socioemotional Care Poverty (loneliness)[c]	
	Taiwan (n = 241)	Finland (n = 273)	Taiwan (n = 778)	Finland (n = 1,557)	Taiwan (n = 1,564)	Finland (n = 2,468)
	Marginal effect *dy/dx*	Marginal effect *dy/dx*	Marginal effect *dy/dx*	Marginal effect *dy/dx*	Marginal effect *dy/dx*	Marginal effect *dy/dx*
Health and functional status						
Self-reported health (ref = very good/good/fair)						
Very bad/bad	0.1188*	0.0329	0.0204	0.0978***	0.1146***	0.130***
Care needs in ADL[d] (range 0–6)	−0.0405*	0.0472***	0.0112	0.0173**	0.0086	0.0226**
Care needs in IADL[d] (range 0–8)	−0.0584***	−0.0090	−0.0040	0.0387***	0.0054	0.0202***
Sociodemographic background						
Gender (ref = men)						
Women	−0.0278	0.0699*	−0.0182	0.030	−0.0268	−0.0069
Age (ref = 75–79 years old)						
80–84 years old	−0.0037	0.0327	−0.0083	0.0121	0.0350	0.0213
85+ years old	−0.1463*	0.0112	−0.0373	−0.0152	−0.0106	0.0374
Education (ref = junior/senior/bachelor and up (TW); higher or vocational education (FN))						
Primary and below (TW); no vocational education (FN)	0.1146	0.0215	0.0060	−0.0548***	0.0443	0.0086
Home ownership (ref = yes)						
No ownership	−0.0472	−0.0709*	0.0161	0.0613**	0.0232	−0.0218
Yearly income (ref = >NT$1,000,000 (TW); >€2500 (FN))						
<NT$300,000 per year (TW); <€1,500 per month (FN)	0.1123	0.0468	0.0276	0.0274	0.0273	0.028
NT$300,000–1,000,000 per year (TW); €1,500–2,500 per month (FN)	0.1115	0.02	0.0601	0.0187	−0.0011	0.0361
Availability of care support						
Living arrangement (ref = living with someone)						
Living alone	0.3042**	0.0458	0.1847***	0.0272	0.0158	0.255***
Frequency contacting children[d]	−0.0193	−0.0387**	−0.0044	−0.0186***	−0.0449***	−0.0117
Level of social support[d]	−0.0901	0.0178	−0.1356***	−0.0434***	−0.1853***	−0.0900***
Area of residence (ref = urban/semiurban)						
Rural/suburb or sparsely populated area	−0.0868	−0.0167	0.0006	−0.0295	−0.0257	0.0494**

Note: ADL = activities of daily living; FN = Finland; ADL = instrumental activities of daily living; NT$= New Taiwan Dollar; Ref = reference group; TW = Taiwan.
[a]Taiwan missing = 25; Finland missing = 50.
[b]Taiwan missing = 47; Finland missing = 233.
[c]Taiwan missing = 463; Finland missing = 369.
[d]A higher score indicates more I/ADL difficulties, more frequent contacts with children and a higher level of social support.
$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

it tends to overlook their practical and socioemotional care needs. Such findings can only be fully understood through a cross-national comparative study focusing on different welfare regimes. Our study exemplifies this approach. Conversely, the Taiwanese familistic welfare model, which relies on family care and the value of filial piety, appears to be more functional in addressing the practical and socioemotional care needs of older adults compared to the Finnish model (Table 2). These differences reflect the distinct welfare systems and cultural variations between an East Asian and a Nordic country. For example, Table 1, consistent with previous research (Blomgren et al., 2012), shows that Finnish older adults, particularly those aged 75 and above, are more likely to live alone compared with their Taiwanese peers. Taiwanese older adults often live with their children and receive support from informal networks (MOHW, 2024b). This highlights how cultural norms shape living arrangements, frequency of contact with children, and informal care support for older adults. Additionally, these cultural norms are linked to the differences in personal, practical, and socioemotional care poverty between the two countries. The study confirms that different welfare regimes and cultural contexts are associated with variations in care support. Finland's universalistic care services focus on extensive personal care needs (ADL) (Kröger & Leinonen, 2012) but often overlook practical care needs (IADL), whereas Taiwan's limited LTC infrastructure relies heavily on informal family support. This results in Taiwanese older adults experiencing unavailability of care (i.e., absolute care poverty), whereas Finnish older adults face insufficiency of care (i.e., relative care poverty) (Table 2). Both countries need to address these deficiencies by strengthening their care policies.

The analysis of individual care needs, sociodemographic, and support factors in the two countries reveals that Taiwanese older adults' practical and socioemotional care needs are supported by their informal networks, such as living with someone and maintaining frequent contact with children (Table 3). In line with previous studies, Table 3 further confirms that Taiwanese older adults, especially those living alone, face higher levels of care poverty (Liu et al., 2012; Yeh & Lo, 2004). In Taiwan, older adults' care needs are mostly supported by an informal care system (Chou et al., 2015), driven not only by the familistic welfare model but also by cultural factors such as living with children and having frequent contact with them. Although Taiwanese statutory sectors are taking up more responsibility, the findings show that older adults living alone are the most disadvantaged when the welfare model uses family culture as an excuse to withhold welfare support. It is important to note that whether care needs are met or unmet is linked not only to individual and social welfare models but also to the cultural context, which has not been discussed by the care poverty approach previously.

As discussed, the Finnish universalistic welfare model for older adults is transitioning towards market-based and refamilization approaches (Mathew Puthenparambil et al., 2017; Rostgaard et al., 2022). This study found that disadvantaged Finnish older adults, due to individual and social factors such as higher levels of care needs, lower social status, and lower levels of social support, are more likely to experience care poverty (Table 3). This finding challenges the universalistic perception of Finland's welfare system, revealing care disparities based on older adults' individual health, sociodemographic, and support factors (Mathew Puthenparambil, 2019; Szebehely & Meagher, 2018). This comparative study highlights that current LTC policies in both Taiwan and Finland lead to inequality among older adults due to their different individual and social contexts, such as self-reported health and functioning, educational attainment, and living arrangements.

Overall, based on the results of this comparative study, it is suggested that, first, Taiwanese LTC policies should prioritize support for older adults who live alone. The family culture, such as filial piety, should not be an excuse for the state's absence in meeting older people's care needs, particularly for personal care needs. Second, Finnish care policies for older adults need to be revised to meet not only personal care needs but also practical and socioemotional care needs, and to reduce the gap among older adults with different levels of health, functioning, and social contexts.

Both Taiwanese and Finnish older adults' socioemotional care poverty is more closely linked to health and the availability of support than to sociodemographic factors (Table 3). This finding aligns with previous studies emphasizing the reduction of loneliness through cohabitation with a spouse or maintaining close ties with children (Lin et al., 2008; Long & Martin, 2000; Russell, 2009). Referring to Table 2, Finnish older adults exhibit a significantly higher rate of socioemotional care poverty compared with their Taiwanese counterparts. They also have a higher proportion living alone, lower levels of social support, and less frequent contact with children (Table 1). This implies that cultural considerations are crucial when designing LTC to meet the multidimensional needs of older adults. In Nordic countries, independent living among older adults is highly valued even at the oldest-old age (Pirhonen et al., 2016). However, Table 3 shows that less frequent contact with children, living alone, and lower levels of social support are strongly related to Finnish older adults' three domains of care poverty. Although independent living and reliance on family represent different cultural norms in Nordic and East Asian societies, both LTC policies can learn from this study.

Pearson correlation coefficients between the three domains of care poverty in both countries show that practical care poverty significantly correlates with personal and socioemotional care poverty ($p < .001$), indicating the importance of addressing practical care needs in LTC schemes (statistics shown in Supplementary Table 1).

In conclusion, our research underscores the complex dynamics of multidimensional care poverty among older adults in Taiwan and Finland. It highlights the pivotal role of policy, culture, and structural contexts in shaping care poverty for those in a vulnerable position. Our findings emphasize the need for tailored policy interventions to address the nuanced and diverse care needs of older adults in different welfare states. Long-term care services in both Taiwan and Finland should address practical (IADL) and socioemotional care needs, not merely focus on personal (ADL) care needs.

This study is subject to several limitations. First, although both data sets originate from national surveys conducted around 2019–2020, they differ in response rates, definitions of variables (e.g., absolute and relative care poverty, social support), and data collection methods—by mail in Finland and face-to-face in Taiwan, a limitation not unique to our study (Clasen, 2005). This disparity may have biased the Finnish sample toward healthier, younger participants. Second, both data sets feature a limited number of

respondents with personal care needs, highlighting the need for future studies with larger samples to explore personal care and its impact on care poverty across different welfare systems. Additionally, the Taiwanese survey lacked data on live-in migrant care workers, which could be significant in the context of care for Taiwan's older adults (Chou et al., 2015). Future research should also examine the effects of unmet care needs on the mental health of older adults (Hu & Chou, 2022). Our study was unable to analyze the broader consequences of care poverty, such as well-being, due to limitations in the Finnish data. Moreover, the use of cross-sectional data limits our ability to draw causal inferences, leaving the relationship between poor health and care poverty ambiguous. Further longitudinal and qualitative research is necessary to fully comprehend the causes and consequences of care poverty among older adults.

Conclusion and Implications

This study examines whether LTC services adequately meet the needs of older adults in community settings, focusing on multidimensional care poverty in Taiwan and Finland. By comparing older adults' absolute, relative, and overall rates of care poverty across three domains in two countries, we analyze the association between social structures, specifically the welfare regime and the availability and adequacy of care. We also study who are the most disadvantaged in these respects.

The findings show significant differences in overall care poverty rates for personal, practical, and socioemotional care needs between older adults in Taiwan and Finland. Finnish older adults, from a universalistic welfare regime with Nordic cultural influences, are more likely to experience practical and socioemotional care poverty, whereas Taiwanese older adults are more likely to face personal care poverty.

The study also analyzed individual and social factors related to older adults' care poverty under the two different welfare regimes. It found that some individual factors, such as health level and support availability, were strongly related to the three domains of care poverty in both countries. However, some other factors, such as level of functioning and sociodemographic background, were significant in only one country. In both welfare models, individuals with high care needs, limited support, and those living alone face significant care deficiencies.

All in all, this cross-national study marks an advance in understanding care poverty among older adults within the contrasting welfare systems of an East Asian and a Nordic country. It highlights the different levels of care poverty and identifies the factors associated with personal, practical, and socioemotional care poverty among Taiwanese and Finnish older adults. Our findings support Kröger's (2022) assertion that structural factors must be considered in analyzing and addressing older adults' unmet care needs. Cultural issues should not be overlooked, either. Despite data set limitations, this research provides important insights into care poverty in diverse cultural and welfare contexts. However, further research using international and comparative longitudinal data from various countries is needed to validate and extend our findings.

Addressing the needs of older adults, especially those living alone with poor health and limited support, should be a priority in both countries. Adopting a comprehensive LTC policy that includes personal, practical, and socioemotional support is essential to meet the increasing needs of an aging population.

Supplementary Material

Supplementary data are available at *Innovation in Aging* online.

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Conflict of Interest

None.

Data Availability

Taiwan Longitudinal Study on Ageing (TLSA) data are available at the National Health and Welfare Database Centre, Ministry of Health and Welfare, Taiwan. Finnish datasets of the current study are available from the authors on reasonable request. This study is not preregistered.

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Author Contributions

Y.-C. Chou. designed the study and wrote most parts of the paper; J. Mathew Puthenparambil analyzed the Finnish data and participated in writing the paper; T. Kröger participated in writing the paper; and C. Pu provided assistance with the statistical analysis and the interpretation of data.

Ethics Approval

This study has obtained IRB approval (code of IRB: YM110083E) from the university of first author.

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