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Sustainably Social Welfare for the Older Adults: The Transition from Welfare to Human Capital Investment

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ABSTRACT

This study examined sustainable social welfare for older adults in post-COVID-19 Thailand. It employed a survey, focus group interviews, and an ordered logistic regression analysis to identify sustainable welfare models. All respondents reported receiving at least one form of government welfare support. The universal old-age allowance was most common because 96.5% of respondents received it. Seventy-six percent were enrolled in the Universal Coverage scheme. Results indicated that top welfare priorities included in-home healthcare for older adults with chronic illnesses or limited mobility, with a mean of 4.24, as well as employment opportunities, with a mean of 4.22, for seniors wishing to remain economically active. The only measure below the midpoint, which equaled 2.23, was the perceived adequacy of current welfare provisions. Routine in-home care services, including safety assistance, grocery shopping, and housekeeping, were also considered essential (mean 4.21). In the economic domain, older age was significantly associated with greater welfare needs. The coefficient is 0.0034. In the social domain, changes in household roles significantly lowered the likelihood of improvement with a coefficient of –0.30, while the absence of chronic illness was associated with greater improvement with a strongly significant coefficient of 0.27. In the family and psychological domains, advancing age was associated with improved family and mental well-being with a significant coefficient of 0.037, but socially active seniors paradoxically had a lower likelihood of improvement with a significant coefficient of -0.4856 (the "Socially Active Paradox"). In the health domain, social activity increased the likelihood of improved health status with a large coefficient of 0.5654, whereas older age reduced it. Overall, these findings underscore the necessity of transitioning from a universal welfare approach to a model that strategically integrates health and social policies, emphasizing the investment in human capital.

1. INTRODUCTION

Thailand has undergone a rapid demographic transition and officially entered a "complete-aged society" in 2023, with approximately 19.97% of its population aged 60 years and over. The country is projected to become a "super-aged society" by 2040, when roughly 26% of the population will be aged 60 or older. The number of older adults in Thailand has increased steadily, from approximately 8.7 million in 2013 to 12.7 million in 2022. This demographic shift has profound implications for the country's economic structure and social protection systems. Thailand's core social protection instrument for older adults is a non-contributory old-age allowance—a monthly transfer ranging from 600 to 1,000 baht by age group (60–69, 70–79, 80–89, and 90+)—as stipulated by the Department of Older Persons [1]. Additional instruments include hardship grants, subsidized credit for senior entrepreneurs, and entitlements provided under the Older Persons Act B.E. 2546 (2003). These programs have reached a rapidly expanding older population; for example, in 2020 about 9.66 million older adults received the old-age allowance (rising to 10.49 million in 2021), and roughly 4.68 million seniors held welfare cards (4.81 million in 2021) with budgets of 3.35 and 4.21 billion THB (approximately USD 107.5 million and USD 135.1 million) (Calculated based on the current exchange rate (1 Thai baht ≈ 0.03209 U.S. dollars; 1 U.S. dollar ≈ 31.15 Thai baht)) respectively. (Other benefits such as pensions and funeral assistance also reached several thousand cases.) Such figures illustrate the broad reach of Thailand's financial welfare for seniors, even as costs have risen with coverage. These figures illustrate the extensive coverage of Thailand's elderly transfer system, alongside the rising fiscal burden associated with its expansion (Table A1).

Despite these programs, Thailand faced significant fiscal and administrative pressures. The OECD report noted that the country's social protection spending remained below the

regional average, with low benefit adequacy and a fragmented governance structure [2, 3]. The COVID-19 crisis further exposed and amplified these vulnerabilities. Over 600,000 older Thais lost employment or had work hours cut during the 2020 lockdowns, as employers often viewed seniors as less productive [4]. Many seniors also suffered income losses indirectly when their adult children's earnings fell during the economic downturn [4, 5].

The pandemic was not only a public health crisis but also a catalyst that revealed structural weaknesses in Thailand's aged care system. Globally, COVID-19 disproportionately affected older populations, exposing hidden vulnerabilities in aging societies [6, 7]. Measures to contain the virus (lockdowns, social distancing) had complex effects on seniors' health and well-being. In Thailand, the strong Universal Health Coverage system supported the emergency response, yet many welfare programs proved insufficient or untimely to protect seniors at this scale. These challenges underscore the urgent need for an integrated and resilient welfare architecture for older adults that is adequate, inclusive, and resilient. Strengthening social protection for older adults is closely aligned with the United Nations Sustainable Development Goals [8], particularly those relating to poverty reduction, health, and inequality.

The remainder of the paper is organized as follows. Section 2 reviews relevant literature on COVID-19's impact on the older persons and existing welfare approaches. Section 3 describes the research methodology. Section 4 presents the results and discussion. Section 5 concludes with key findings and policy recommendations for improving welfare.

2. LITERATURE REVIEW

Studies of COVID-19's impact on older adults in Thailand and abroad yielded mixed findings. Some Thai studies found that many seniors recovered physically quickly after acute infection [9], whereas others reported severe, prolonged consequences of Long COVID among older survivors [10, 11]. These differences may reflect heterogeneity within the older persons: healthier, more robust individuals tended to recover quickly, whereas those who became seriously ill experienced lasting effects. There remains a lack of in-depth research specifically on Long COVID among Thai seniors.

Persistent health challenges for older Long COVID survivors have been documented. For example, research noted that COVID-19 can cause lasting multi-system effects in older patients, including respiratory and cardiovascular problems, extreme fatigue, and heart palpitations [10]. The pandemic also appeared to accelerate sarcopenia (muscle loss) common in older age. Psychological impacts were significant: many older adults suffered depression, anxiety, and stress during the pandemic [5]. Hospitalized elderly patients, in particular, faced the risk of post-traumatic stress disorder (PTSD) after isolation during treatment [5].

Internationally, research also showed that the crisis led to enduring shifts in seniors' social behavior. Many older adults remained more isolated even after the pandemic abated. Qualitative synthesis of studies from around the world further documented intense feelings of loneliness, anxiety, and fear linked to social isolation among older adults during COVID-19, pointing to deeper psychosocial impacts beyond the immediate public-health threat [7]. This isolation has direct mental health consequences: numerous studies reported that lockdowns and restrictions significantly increased loneliness, anxiety, and depression among the older persons [12, 13]. Even small social interactions (e.g., a friendly greeting to a cashier) – which might have been an older person's only daily social contact – were lost, leading many seniors to permanently lose important social connections [7].

Some studies noted that older adults reported fewer immediate mental health problems than younger adults during the crisis [13]. However, such generalizations risk overlooking hidden difficulties. Other research found that very social seniors often lacked coping mechanisms when abruptly forced into isolation [13], already-vulnerable elders (for example, widowed individuals or those with physical frailties) experienced even worse effects [11]. These mixed findings underscore that the older persons cannot be treated as a homogeneous group; future research and policy should differentiate impacts by socioeconomic status, living arrangements, and health conditions to understand each subgroup's needs.

In terms of policy, the pandemic highlighted gaps in Thailand's elder care system. Although the Older Persons Act of 2003 legally guarantees a comprehensive set of benefits for seniors, in practice fiscal and administrative constraints have limited welfare support [2]. An OECD report confirmed that Thailand's social protection expenditure is low relative to regional peers, with benefit levels often inadequate and delivery structures fragmented [3]. These issues pose growing challenges as the population continues to age.

The pandemic severely impacted Thai seniors' livelihoods. A study by the Thailand Development Research Institute (2020) found that over 600,000 older workers were directly affected during the lockdowns, as they were among the first to lose jobs or have work hours reduced [4]. Additionally, many retired or non-working seniors suffered indirect income losses because their adult children's earnings fell during the economic downturn [5].

Thailand's elder welfare system consists of contributory pension schemes (e.g., Social Security Fund and government pensions) and non-contributory programs (notably the universal old-age allowance). Although coverage has expanded over time, the old-age allowance remains insufficient. It has unintentionally become a primary income source for many low-income seniors, yet the monthly benefit has not kept pace with living costs [14, 15]. The allowance lacks an automatic cost-of-living adjustment, leaving seniors vulnerable to inflation. The COVID-19 crisis further emphasized this reliance, even as static benefit levels left many seniors economically exposed.

Health services for older adults were also disrupted during the outbreak. Hospitals deferred non-urgent care and rapidly expanded telehealth monitoring [16]. Experts have argued that post-pandemic elderly care should integrate digital technology with stronger community and family support networks [17]. Meanwhile, long-term care (LTC) facilities remain scarce: state-run nursing homes in Thailand operated at full capacity, highlighting a severe shortage of quality, affordable eldercare. Consequently, caring for frail seniors largely fell on families, and existing policies have not adequately addressed the needs of rural elders or expanded community-based LTC.

International models offer valuable lessons. Sweden, for example, provides extensive in-home care and housing adaptations for seniors [14]. Japan's mandatory Long-Term Care Insurance (automatic enrollment at age 40, with premium-supported services for those 65+) delivers in-home care, institutional care, and home safety modifications, funded

by public contributions [18]. South Korea's aging strategy includes incentivizing older worker employment (through tax breaks and employer agreements), promoting senior entrepreneurship, and implementing lifelong savings and health education to counter demographic decline [19]. Singapore combines mandatory savings accounts (Medisave), insurance (MediShield/CareShield Life), and means-tested subsidies: for example, ElderShield (now CareShield Life) automatically enrolls citizens at age 40 and provides disability insurance, while LTC services are subsidized based on income, with co-payments scaled to ability to pay [18]. These examples underline the value of robust insurance and pension schemes, active aging policies, and integrated healthcare/social care in supporting aging populations.

International policy evidence highlights the necessity of strengthening LTC systems in aging societies, particularly in the aftermath of COVID-19. Comparative analyses indicate that many countries implemented rapid LTC workforce expansion, emergency staffing flexibility, and integrated care coordination mechanisms during the pandemic [20, 21]. These structural adjustments improved continuity of care for frail older adults and reduced institutional vulnerability.

Evidence from Asian social protection reforms further reinforces the importance of adaptive welfare systems. Several countries expanded pension coverage, strengthened community-based care networks, and introduced flexible social assistance mechanisms to buffer older populations from pandemic-related socioeconomic shocks [22, 23]. These reforms demonstrate that integrated pension expansion and localized welfare delivery systems can significantly mitigate vulnerability among older adults.

Active ageing policies also play a crucial role in enhancing long-term well-being among older adults. International evidence demonstrates that health promotion programs, social participation initiatives, and age-friendly community environments substantially improve psychological resilience, social engagement, and functional capacity in later life [24, 25]. These findings support the argument that welfare systems should not be limited to income transfers but must incorporate multidimensional interventions that promote autonomy, productivity, and social inclusion among older populations.

Financial protection mechanisms remain another central pillar of sustainable welfare in aging societies. Evidence suggests that pension reforms and healthcare financing strategies must integrate targeted income support with risk-pooling insurance schemes to prevent old-age poverty and catastrophic health expenditures [26, 27]. Combining contributory pension expansion with subsidized insurance coverage provides stronger income security than flat universal transfers alone.

At the global level, international frameworks consolidate best practices in care systems for older adults, emphasizing integrated service delivery, community support structures, and intergenerational solidarity [28]. Effective policy responses require coordination between health systems, social protection mechanisms, labor institutions, and community networks.

In summary, the literature indicates that while some Thai seniors showed resilience post-pandemic, many faced enduring health, social, and economic challenges. Comparative findings suggest the importance of comprehensive, multi-dimensional support—combining health insurance, employment policies, and integrated care services—to sustain an aging population. These insights highlight the need for a welfare model for Thai seniors that is tailored to the country's demographic and socioeconomic context.

3. METHODOLOGY

This study adopted a mixed-methods approach, combining quantitative and qualitative methods, to examine the changing context of Thai society after COVID-19 and to design an appropriate social welfare model for Thailand's fully aged society. The target population was defined as Thai individuals aged 60 years and above. A total of 400 seniors were selected from eight provinces: Bangkok, Pathum Thani, Nonthaburi, Phra Nakhon Si Ayutthaya, Saraburi, Ang Thong, Samut Prakan, and Nakhon Nayok, where they have 2,119,190 adult individuals. These provinces include both urban and peri-urban areas around the capital, providing diverse socioeconomic contexts. Data were collected between April 2022 and March 2023.

The sample size for this study was determined using Taro Yamane's formula [29], and respondents were selected using proportional stratified random sampling. The stratification was based on geographic areas, with the sample proportionally allocated according to the size of the older population in each province. As of 31 December 2022, the total number of older adults in the Bangkok Metropolitan Area was 1,180,095, yielding a proportional sample size of 207 respondents. Samut Prakan had 233,665 older adults, corresponding to 41 respondents; Nonthaburi had 260,948 older adults (46 respondents); Pathum Thani had 195,582 older adults (34 respondents); Phra Nakhon Si Ayutthaya had 166,328 older adults (29 respondents); Ang Thong had 65,845 older adults (12 respondents); Saraburi had 120,493 older adults (21 respondents); and Nakhon Nayok had 56,272 older adults (10 respondents).

To capture heterogeneity among the elderly, respondents were categorized by their Activities of Daily Living (ADL) capability into three groups: (1) Socially active older adults: largely independent seniors in good health (no or controlled chronic conditions) who engage actively in social activities and can perform all basic and instrumental ADLs; (2) Homebound older adults: partially dependent seniors who can perform basic self-care but require assistance, typically having mobility limitations or uncontrolled chronic illnesses; and (3) Bedbound older adults: fully dependent seniors unable to perform basic self-care, often bedridden or severely immobile with multiple uncontrolled conditions requiring full-time care. The sample included individuals from each group (approximately 274 socially active, 118 homebound, and 8 bedbound), reflecting their population proportions.

Quantitative data were collected through a structured survey administered to all 400 respondents. The survey gathered information on demographics, household characteristics, health status, current welfare benefits received, financial situation, and self-reported changes in well-being after receiving government welfare. Key outcomes were changes in four dimensions of quality of life: (1) Economic status change – improvement in financial or economic situation; (2) Social living condition change – improvement in social life and living conditions; (3) Family and mental well-being change – improvement in family relationships and psychological well-being; and (4) Health status change – improvement in physical health status. Each outcome was measured by a five-level ordinal scale ("much improved," "improved," "moderately

improved," "slightly improved," or "not improved") reflecting the degree of positive change perceived after welfare receipt.

Focus group discussions (FGDs) and in-depth interviews were also conducted in June 2023 to contextualize the survey findings and to inform the development of a welfare service model better aligned with seniors' needs. The FGDs took place in the three selected provinces, representing different geoeconomic settings (rural, peri-urban, riverside urban).

For quantitative analysis, an ordered logistic regression model was employed to assess how various factors influenced the probability of improvement in each well-being dimension after accessing welfare services. The general form of the model was:

$$P(Y_i \geq j) = F\big(\beta_0 + \beta_1 \text{ Type }_i + \beta_2 \text{ Age }_i + \beta_3 \text{ Sex }_i + \beta_4 Edu_i + \cdots + \beta_n X_{in}\big) \quad (1)$$

where, Y_i denotes the level of social welfare benefits received by older adult i, measured as an ordinal variable taking values from 1 to 5. Specifically, $Y_i = 5$ if the social welfare benefits received by older adult; *i* are perceived as most appropriate for improving quality of life, $Y_i = 4$ if they are very appropriate, $Y_i = 3$ if moderately appropriate, $Y_i = 2$ if slightly appropriate, and $Y_i = 1$ if not appropriate at all.

$F(\cdot)$ is the logistic cumulative distribution function. Independent variables included Type of older persons (socially active, homebound, bedbound), age, sex, highest education level, disability status, household head status, family structure, number of household members, total monthly government welfare benefits received (welfare_g), presence of chronic illness, current occupation, total monthly income (including personal earnings, pension, family support, etc.), monthly expenditures, total debt, total savings, self-reported impact of COVID-19 on the individual's life, and community or civic participation (e.g., whether the respondent engaged in senior clubs or activities). All monetary variables were measured in Thai Baht. Prior to modeling, variables were checked for multicollinearity and were mean-centered or scaled as appropriate. The ordered logit model estimated the marginal effects of each factor on the probability of being in a given improvement category. Robust standard errors were used, and statistical significance was evaluated at conventional levels.

4. RESULTS AND DISCUSSION

4.1 Descriptive characteristics of the sample

The sample comprised 400 respondents, including 274 socially active older adults (68.5%) and 126 homebound individuals and bedbound individuals (31.5%). The sample was predominantly female (61.3%), with males accounting for 37.8% and approximately 1% identifying as other genders. The mean age was 70.2 years (range 60–98): 55.8% were aged 60–69, 31.3% were 70–79, and 13.0% were 80 or older. Nearly half of the respondents were married (47.8%), 26.0% were widowed, 17.5% had never married, and the remainder were separated (2.8%), cohabiting without formal marriage (3.5%), or divorced (2.5%). Educational attainment was generally limited, reflecting restricted schooling opportunities among older cohorts. 71.8% had only primary education, 6.3% had completed lower secondary, 7.8% had upper secondary or vocational training, 1.3% held a bachelor's degree, and 2.3% had education above the bachelor's level. This distribution reflects limited educational opportunities for many in the older cohorts.

All respondents reported receiving at least one form of government welfare support. The universal old-age allowance was most common (96.5% of respondents received it), and an equal proportion (96.5%) reported receiving pandemic-era survival packages (essential goods). Other benefits were less common: 31.5% held state welfare cards (for low-income individuals), 16.5% received disability allowances, and 10.0% had participated in government-sponsored training programs for seniors. Smaller fractions reported other benefits: 5.0% had emergency cash assistance, 2.3% had housing repair/modification support, 1.3% had received enterprise grants or loans, 1.0% had access to "priority lanes" for seniors at government offices, 0.8% had reduced public transportation fares, 0.5% had venue fee waivers (e.g., free park admission), and 0.5% had an in-home volunteer caregiver. These figures indicate that almost all seniors received basic pension support and pandemic aid, but relatively few accessed specialized or conditional programs.

Health insurance coverage was nearly universal among respondents. Seventy-six percent were enrolled in the Universal Coverage scheme (the "gold card" for general citizens). Fifteen percent had civil service/state enterprise health benefits through their children, 3.8% were covered by social security or workmen's compensation (from prior private-sector employment), 3.5% had their own civil service benefits, 0.8% had coverage via a spouse's civil service employment, and 1.0% had no government health insurance. Thus, virtually all seniors in the sample had access to some form of public health coverage, reflecting Thailand's strong universal healthcare system.

The financial profiles of respondents showed modest means and heavy reliance on state support. The average household size was 3.75 (median 4, range 1–15). The mean monthly income per older respondent was 9,480 THB (roughly USD 280) (Calculated based on the current exchange rate (1 Thai baht ≈ 0.03209 U.S. dollars; 1 U.S. dollar ≈ 31.15 Thai baht)), however, this varied widely from 0 to 90,000 THB (USD 0–2,885), indicating a small share with substantial earnings. The mean monthly expenditure was 9,980 THB range 600–90,700 THB (USD 19–2,907), suggesting that some seniors lived very frugally, while others had high costs (likely due to family obligations or health expenses). The mean outstanding debt was 71,400 THB (approximately USD 2,288) range 1,400–500,000 THB (USD 45–16,026), showing that some seniors carried significant debt (e.g., mortgages or loans for family support). The mean savings were 574,000 THB (approximately USD 18,397, range 1,000–1,000,000 (USD 32–32,051)), indicating that while many had little savings, a subset had large lump-sum reserves (likely from retirement payouts or land sales). On average, respondents received 1,060 THB (approximately USD 34) per month in state welfare benefits (mostly the old-age allowance), with a median of 700 THB (USD 22, the rate for those aged 70–79 years). The maximum welfare received was 30,900 THB (approximately USD 990), suggesting multiple benefits or back payments, and some reported 0 THB if they were not yet registered. Overall, these data suggest that the typical senior lived in a small household with modest income and expenditures roughly in balance, moderate savings, and heavy dependence on the government old-age allowance as a key income source.

4.2 Older persons' needs and welfare perceptions in the post-COVID era

The survey assessed seniors' perceptions of current welfare services and future needs. For existing welfare provisions, respondents reported high demand across nearly all welfare dimensions (mean scores around 4 on a 5-point scale). The most highly valued existing provisions were exemption from public site entry fees (e.g., to museums and national parks, mean 4.29) and transportation fare assistance for the older persons (e.g., subsidized train/bus fares, mean 4.27). These results indicate seniors highly value support for mobility and social participation. Home environment modifications (e.g., installing elder-friendly facilities) scored 4.10, and expanded long-term healthcare and health-promotion services scored 4.00. Other highly rated needs included emergency shelters for homeless seniors (3.98), the basic old-age allowance itself (3.97), regular health check-ups and fitness assessments (3.95), and life-skills or vocational training programs for seniors (3.95). Protective services (legal aid against abuse) and dedicated government staff for older clients each scored 3.93. Notably, the only measure below the midpoint was perceived adequacy of current welfare provision was low (mean = 2.23), indicating that most seniors felt existing support was insufficient.

Regarding future welfare initiatives, all proposed programs were viewed as important. The top priority was in-home healthcare services for chronically ill, severely sick, or bedridden seniors (mean 4.24). The second priority was suitable employment opportunities for older adults wishing to work (4.22). The third was routine in-home support services (safety checks, assistance with shopping/housework) for seniors with moderate dependency (4.21). Financial planning initiatives also ranked highly: programs promoting retirement savings (4.12), marketplaces for products made by seniors (4.12), pre-retirement education (4.11), and skills training (e.g., new vocations, health management, smartphone use) (4.10). The lowest-rated future measure was establishing a contributory pension system (mean 3.68), which – although lower than others – still suggested moderate support. The lower rating may reflect that current seniors feel it is too late to start contributions, even as such a system could help future generations.

Overall, these perceptions underscore a strong desire among Thai seniors for improved health services at home, opportunities for economic participation, and supportive daily living services – reflecting the need for welfare to adapt to the post-COVID era.

4.3 Factors influencing well-being changes

The ordered logistic regression examined how various factors related to perceived improvements in the four well-being dimensions after receiving welfare. In the economic domain, advancing age was associated with a higher likelihood of economic improvement (older seniors were more likely to report gains in financial status), whereas the total welfare amount received did not have a statistically significant effect. This suggests that older seniors, who likely needed more support, showed some economic benefit, but that the current cash benefits were too small or uniform to drive substantial change for the general population.

While Table 1 presents marginal effects, the full ordered logit coefficient estimates for economic well-being are reported in Table A2.

Table 1. Marginal effect estimates in the case of not appropriate economic status among older adults

Variables	Marginal effects	Std.Err	z	P>|z|
type	-0.0490	0.073	-0.67	0.503
age	0.0034***	0.003	0.99	-0.0033
Ihead	-0.0755	0.047	-1.60	0.109
Idise	0.1488	0.139	1.07	0.284
welfare_g	-2.84×10^{-6}	0.000	-0.69	0.493
revenue	-4.63×10^{-6}	0.000	-1.28	0.199
expense	5.96×10^{-6}*	0.000	1.65	0.099
debt	1.73×10^{-7}	0.000	1.12	0.264

Note: Marginal effects indicate the change in the predicted probability of not appropriate economic status after receiving social welfare benefits, conditional on the control variables.
***, **, * represent statistical significance at the 1%, 5%, and 10% levels, respectively, y = Pr(econ = 1) (predict, outcome(1)) = 0.0375.

Table 1 shows the marginal impact of the ordered logit model on the likelihood of observing no improvement in economic position after receiving social welfare benefits. The findings reveal that age is statistically positively associated with economic outcomes (coefficient 0.0034), with older respondents perceiving a larger possibility of economic development while holding other variables constant. This pattern contradicts the generally held belief—reflected in national policy texts and international assessments—that economic vulnerability grows monotonically with age due to decreased labor market participation and increased dependency ratios [1, 3, 6, 15]. Instead, the current data show that the oldest generations may feel greater benefits from welfare support, probably because they start with a lower level of economic security and rely more largely on public transfers like pensions and associated assistance [2, 6]. This interpretation is broadly consistent with Thai policy reports, which show that the old-age allowance serves primarily as an income-buffering mechanism for the most elderly and economically dependent seniors, rather than promoting upward economic mobility across all age groups [1, 2]. In this sense, the apparent link between advanced age and better economic results may be due to differences in the marginal utility of transfers across age cohorts, rather than a reversal of age-related vulnerability. Similar concerns about the inadequate redistributive potential of flat-rate pension systems have been expressed in international assessments of Thailand's social protection system, which underline that benefit adequacy remains low in relation to living costs and demographic pressures [3, 15]. The study also discovered a positive relationship between monthly expenditures and economic growth, although the estimated effect size (5.96×10^{-6}) was exceedingly modest and had little practical value. This data suggests that, while expenditure levels may have a statistical correlation with perceived economic change, higher spending does not lead to meaningful improvements in economic well-being. This finding is consistent with findings from Thai labor and welfare studies, which demonstrate that higher consumption during crisis periods is generally driven by short-term coping mechanisms rather than actual income recovery, particularly among older households hit by COVID-19-related shocks [1, 4]. Notably, neither reported income nor welfare receipt was found to be statistically significant predictors of economic progress. This lack of correlation reinforces previous evaluations that Thailand's universal old-age stipend is intended largely as a minimal safety net rather

than a tool capable of creating significant economic growth [3, 15]. Prior research has also emphasized that while flat-rate transfers may alleviate extreme deprivation, they are insufficient to address broader issues of economic insecurity among older adults, especially in the absence of complementary measures such as employment support, healthcare access, and LTC services [16-18]. These findings support widespread concerns in the literature about the limited redistributive and developmental efficacy of Thailand's present cash-based welfare systems for older individuals, a topic that is further discussed in the policy implications section.

Table 2. Marginal effect estimates in the case of moderately appropriate social change among older adults

Variables	Marginal Effects	Std. Err.	z	P>|z|
type	-0.1928	0.15625	-1.23	0.217
age	0.0198	0.01728	1.15	0.251
Ihead	-0.3006**	0.13748	-2.19	0.029
Idise	0.2692***	0.09068	2.97	0.003
welfare_g	-0.00002	0.00002	-0.90	0.367
revenue	-0.00002	0.00002	-1.06	0.291
expense	0.00003*	0.00001	1.81	0.070
debt	9.75×10^{-7}	0.00000	1.40	0.162

Note: Marginal effects indicate the change in the predicted probability of moderately appropriate well-being after receiving social welfare benefits, conditional on the control variables.
***, **, * represent statistical significance at the 1%, 5%, and 10% levels, respectively, y = Pr(social = 3) (predict, outcome(3)) = 0.3958.

Table 2 shows the ordered logit model's marginal impact on the likelihood of experiencing moderately good changes in the social domain of quality of life. One of the most notable discoveries is on changes in household roles. Transitioning from household head to "only a family member" was linked to a much lower likelihood of social improvement. This finding emphasizes the significance of intra-household status and decision-making authority (coefficient –0.3006) for older adults' social well-being, consistent with previous Thai and international research emphasizing the central role of family structure in shaping older adults' social participation and autonomy [1, 6, 15]. Loss of home headship may restrict control over resources, limit social involvement, and erode perceived social value within the family, limiting prospects for social betterment even in the context of assistance. Health status appeared as an important predictor of social outcomes. The lack of chronic sickness was linked to modest social progress (coefficient 0.2692), implying that healthier older persons were better able to increase social participation and improve their living conditions after receiving welfare benefits. This finding is consistent with previous studies establishing that physical health is a precondition for social engagement and active aging, especially in environments where formal LTC resources are limited and families play the primary caregiver role [9, 16, 17]. Studies undertaken during and after the COVID-19 pandemic underline that poor health and chronic illnesses increase social isolation and limit mobility among older persons, strengthening the link between health status and social well-being shown in this analysis [7, 11, 12]. Monthly spending revealed a positive relationship with social improvement; nevertheless, the estimated marginal effect was small and of little consequence (0.00003). This suggests that, while increasing spending may be statistically associated with marginally better social outcomes—possibly due to minor expenditures in housing or daily living conditions—it does not result in considerable social development. Similar findings have been documented in assessments of elder households during crisis times, where increased spending frequently reflects short-term coping methods rather than long-term gains in social conditions or quality of life [1, 4]. Contrary to predictions, once other characteristics were taken into account, membership in the socially engaged group did not significantly predict social improvement and was slightly negative. This finding contradicts policy narratives that link pre-existing social activity with resilience and better post-intervention outcomes [2, 3]. One possible explanation is that older persons who were socially active found it more difficult to return to their typical social routines during the pandemic, resulting in a slower or less successful recovery than those who were already homebound. Similar results have been observed in investigations of social isolation during COVID-19, indicating that persons with higher baseline social engagement may feel greater perceived losses when social interactions are abruptly limited [7, 12, 13]. The increased relevance of social interaction in other life domains, as noted below, emphasizes the domain-specific nature of welfare-related outcomes. Overall, the findings show that family dynamics and health status are more important predictors of social well-being than financial indicators alone. This study adds to general criticisms in the literature that cash-based welfare initiatives, when implemented without accompanying family- and health-oriented support mechanisms, have little ability to achieve meaningful social gains among older persons [3, 15, 18]. These patterns suggest that, in addition to income support, measures addressing household responsibilities, caregiving arrangements, and health-related limits may be required to improve social outcomes. The full ordered logit coefficient estimates for social well-being are presented in Table A3.

Table 3. Marginal effect estimates in the case of slightly appropriate family and psychological of among older adults

Variables	Marginal Effects	Std. Err.	z	P>|z|
type	-0.4856*	.27973	-1.74	0.083
age	0.0373**	01907	1.96	0.050
Ihead	-0.0252	.15234	-0.17	0.868
Idise	0.0605	.21596	0.28	0.779
welfare_g	-0.0000	.00002	-0.71	0.475
revenue	-4.71×10^{-6}	00001	-0.33	0.742
expense	0.00002*	.00001	1.73	0.083
debt	2.43×10^{-6} **	.00000	2.27	0.023

Note: Marginal effects indicate the change in the predicted probability of slightly appropriate family relationships and psychological well-being after receiving social welfare benefits, conditional on the control variables.
***, **, * represent statistical significance at the 1%, 5%, and 10% levels, respectively, y = Pr(HH = 2) (predict, outcome(2)) = 0.2454.

Table 3 shows the marginal impact of the ordered logit model on the likelihood of experiencing minor increases in familial and psychological well-being. Two findings are particularly notable. First, age was linked to improvements in this domain, with older respondents reporting greater positive changes than younger seniors (coefficient 0.0373). This pattern may reflect bigger relative gains among the oldest generations, who are more likely to experience baseline vulnerability in terms of loneliness or psychological strain and hence report greater benefit when help is provided [1, 6]. Alternatively, this link may be compatible with data suggesting that older adults gain adaptive coping strategies and psychological resilience throughout time, allowing them to change expectations and retain emotional stability in the

face of adversity [12, 13]. In contrast, belonging to the socially active group was related with negative and significant improvements in familial and psychological well-being (a coefficient of -0.4856). This unexpected finding, known as the "Socially Active Paradox," contradicts the widely held belief in the literature that social participation protects mental health in later life [7, 12]. Several studies have found that decreasing social engagement and isolation among older persons increases the likelihood of loneliness, anxiety, and depressive symptoms, particularly during and after the COVID-19 pandemic [7, 11-13]. As a result, the current study contradicts generally held beliefs that socially active seniors are better positioned to recover psychologically after receiving welfare assistance. One plausible reason is that older persons who were socially active prior to the pandemic had higher expectations for social involvement and interpersonal roles, making the disruption of these activities more psychologically impactful. Individuals with richer pre-pandemic social lives may endure greater perceived losses when social networks and routines are unexpectedly limited, according to evidence from qualitative and review-based studies [7, 12]. Furthermore, some socially engaged seniors may have experienced role displacement—for example, losing leadership or community participation positions during lengthy restrictions—which may have harmed psychological well-being despite their continued classification as socially active [2, 6]. These trends suggest that social involvement alone may not be sufficient to ensure psychological security in post-pandemic settings, particularly when welfare measures fail to explicitly incorporate role continuity, emotional support, or family relationships. The model also found that greater household debt was related with a reduced likelihood of improving familial and psychological well-being, however the estimated effect size was small and lacks practical importance (a coefficient of 2.43×10^{-6}). This finding is consistent with broader research associating financial stress to psychological discomfort in older persons, particularly during times of economic uncertainty [3, 4, 15]. Overall, the findings for this domain highlight the complex relationship between age, social roles, and psychological adaptation, implying that welfare responsiveness in family and mental well-being may be influenced not only by material support, but also by expectations, social identity, and intra-family relationships. The corresponding ordered logit coefficient estimates for family and psychological well-being are shown in Table A4.

Table 4. Marginal effect estimates in the case of the most appropriate health among older adults

Variables	dy/dx	Std. Err.	z	P>|z|
type	0.5654**	0.2357	2.40	0.016
age	-0.0604**	0.0246	-2.46	0.014
Ihead	0.0687	0.1897	0.36	0.717
Idise	-0.229	0.2808	-0.82	0.414
welfare_g	0.0000	0.0000	0.49	0.627
revenue	5.90×10^{-7}	0.0000	0.03	0.973
expense	-0.00002*	0.0000	-1.65	0.100
debt	-8.89×10^{-7}	0.0000	-0.95	0.343

Note: Marginal effects indicate the change in the predicted probability of most appropriate changed health status after receiving social welfare benefits, conditional on the control variables.
***, **, * represent statistical significance at the 1%, 5%, and 10% levels, respectively, y = Pr(health = 4) (predict, outcome(4)) = 0.6476.

Table 4 shows the marginal effects of the ordered logit model on the likelihood of experiencing major health benefits. In contrast to the family and psychological domains, social involvement appeared as a strongly favorable predictor of health improvement. Membership in the socially engaged group was linked to a significantly higher likelihood of reporting health gains (coefficient 0.5654), highlighting the importance of social activity in determining health-related outcomes in older persons. This finding is consistent with a wide body of research associating social and physical activity to improved health, mobility, and higher use of preventative and curative health services in later life [9, 16, 17]. The favorable relationship between social activity and health improvement is consistent with both national and international studies that highlight active aging as a critical mechanism for maintaining health in aging societies [1, 3, 6]. Social involvement can encourage healthier behaviors, make health information and services more accessible, and provide informal monitoring and support, all of which lead to better health outcomes. In contrast, social isolation has been widely established as a risk factor for declining physical health, particularly during the COVID-19 epidemic, when access to normal healthcare and community services was hampered [7, 11, 12]. However, age had the expected negative connection with health improvement (coefficient –0.0604). As age advanced, the likelihood of achieving health gains decreased dramatically, demonstrating well-documented age-health gradients in the literature [3, 6, 15]. Even when welfare and healthcare support are provided, older seniors are more likely to have cumulative health deficits, chronic illnesses, and functional restrictions, limiting their ability to achieve measurable health improvement [10, 11, 16]. This research suggests that younger cohorts of older persons may benefit more from health-focused initiatives, whereas the oldest seniors may require more extensive or specialized care to avoid further decline rather than achieve better. Monthly expenditure was associated with a modest decline in health improvement, but the effect was minor and not substantively significant. This pattern could indicate that larger expenditures reflect greater underlying health requirements or medical costs rather than investments that contribute to improved health status, as shown in prior reviews of healthcare access among older persons in Thailand [1, 16]. Overall, the health domain results show that social engagement and age are the strongest predictors of health improvement, emphasizing the relevance of active aging measures while also admitting the biological and functional limitations associated with old age. The full coefficient estimates for health well-being are reported in Table A5.

4.4 Focus group findings

FGDs and interviews (June 2023) were held in three communities: a rural agrarian village (Huai Phai, Ang Thong), a peri-urban area (Chiang Rak Noi, Ayutthaya), and a high-density riverside community (Laem Fa Pha, Samut Prakan). The discussions revealed several key themes. First, many seniors experienced a “stagflationary” effect: incomes from traditional livelihoods (farming, small trade) were declining, while living costs were rising. As a result, older adults increasingly relied on family support and informal borrowing to smooth consumption. Second, COVID-related anxiety led many seniors to self-isolate even after lockdowns ended, reducing their mobility. Accessing healthcare remained difficult, especially in the riverside area where seniors faced long and costly boat commutes to clinics. Third, traditional

social support networks had weakened due to distancing, but at the same time there was a notable increase in digital connectivity: many seniors began using smartphone apps (e.g., Line) to maintain social contacts.

Participants consistently reported that existing state interventions functioned primarily as a residual safety net rather than a developmental welfare system. Three structural inefficiencies were repeatedly emphasized: (1) Fixed cash transfers had been eroded by inflation, reducing their real value; (2) Vocational training programs often lacked pathways to markets, resulting in skills without income generation; and (3) Housing repair subsidies were inaccessible to the poorest elders who lacked formal land titles (common in informal settlements), leaving the neediest households unable to benefit.

To address these gaps, participants proposed a targeted welfare model based on dependency level. For socially active seniors, they recommended upskilling aligned with labor market demand and establishing distribution channels (online/offline) for goods produced by seniors. Preventive healthcare (e.g., subsidized dental and vision care) and vibrant social clubs or hobby groups were also suggested to maintain their vitality. For homebound elderly, policies should enable home-based economic activities, with the state acting as an aggregator or distributor for products. Healthcare access could be improved through mobile medical units to overcome transportation barriers. It was also suggested to subsidize high-cost consumables (such as incontinence supplies and disinfectants) for the bedridden elderly. Crucially, participants emphasized formalizing the "care economy" by providing training and financial compensation to family caregivers, thus mitigating the opportunity cost of informal caregiving. These qualitative insights informed the development of a proposed welfare model that integrates these tailored interventions for different senior groups.

5. CONCLUSIONS AND POLICY IMPLICATIONS

This study evaluates the performance and limitations of Thailand's social welfare model for older adults in the post-pandemic context. Drawing on survey data from 400 older adults across multiple provinces, complemented by FGDs and ordered logistic regression analysis, the study explores perceived welfare adequacy and well-being outcomes across four key life domains. Overall, respondents consistently reported that existing welfare provision remains insufficient, particularly in relation to health-related services and support that facilitates mobility and daily functioning. Looking ahead, older adults expressed strong preferences for expanded home-based health services, employment-related support, enhanced in-home and community care, and improved financial security mechanisms. Taken together, these patterns suggest a mismatch between the design of current welfare provision and older adults' lived experiences and expectations. In summary, the older respondents showed a strong preference for initiatives that improve their health and economic engagement while addressing social isolation. General discontent with the adequacy of welfare underscores a structural disconnect between policy formulation and actual experience.

The quantitative analysis indicates that different factors are associated with variation in perceived outcomes across life domains. Advancing age was positively associated with more favorable economic and family/psychological outcomes, suggesting that redistributive mechanisms may be more salient for the oldest cohorts. Social engagement was consistently associated with better health-related outcomes, which illustrates the importance of active aging and social participation. In addition, better health status was associated with improved social outcomes, while changes in household roles—such as losing household head status—were linked to reduced social engagement. Thailand's flat-rate old-age allowance may have limited capacity to differentiate welfare support across heterogeneous groups of older adults, as there is no statistically significant association between transfer size and well-being outcomes.

These findings offer policy-relevant insights that align with the objectives of the Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), SDG 3 (Good Health and Well-Being), SDG 8 (Decent Work and Economic Growth), and SDG 11 (Sustainable Cities and Communities). First, the evidence suggests that the structure of financial assistance for older adults warrants reconsideration. Rather than relying primarily on passive income support, policymakers may consider gradually rebalancing welfare expenditure toward more targeted and productive forms of social investment, such as voluntary participation in health promotion, skills development, or community engagement programs. For example, linking benefits to participation in health programs, vocational training, or community service could encourage active aging and skill development. Second, the observed associations between health status and social participation point to the potential value of closer coordination between health and social protection systems. The strong link between health and social participation suggests that expanding community-based senior centers, day-care facilities, and activity groups can improve overall well-being and mitigate loneliness (advancing SDG 3 on health and SDG 11 on inclusive communities). Third, the results also show how important it is to take into account the differences between older adults when planning welfare programs. Younger seniors may benefit more from employment support, retraining opportunities, and active lifestyle programs, whereas the oldest cohorts may require more intensive healthcare, home-based services, and stronger financial safety nets. Differentiated policy approaches may therefore allocate resources more effectively than uniform benefit schemes. Customized policies would better target resources than a one-size-fits-all approach. Fourth, the results highlight the importance of systematic feedback mechanisms to identify gaps in existing welfare programs and improve alignment with local needs. Although multiple programs already exist, their effectiveness may be constrained by limited outreach or misalignment with local needs. Regular local-level needs assessments and greater flexibility in service delivery may help ensure that welfare programs better reflect community priorities and reach the most vulnerable groups. Finally, the experience of COVID-19 underscores the importance of preparedness in social protection systems for future shocks. During the pandemic, we could institutionalize temporary measures like food assistance and home-visit programs as part of an emergency response framework, while investments in registries of vulnerable older adults and telehealth infrastructure may enhance continuity of care during future crises.

Taken together, these evidence-informed proposals align with the global commitment to "leaving no one behind" by illustrating how age-responsive social protection can enhance economic resilience and social inclusion in rapidly aging

societies. The unexpected "Socially Active Paradox" identified in this study indicates that it requires further investigation. Future research employing longitudinal data, qualitative methods, or quasi-experimental designs would be particularly valuable for clarifying causal pathways and assessing the longer-term effects of welfare interventions across diverse subgroups of older adults.

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DATA AVAILABILITY STATEMENT

The data supporting this study's findings are not publicly available due to confidentiality agreements with participants. De-identified interview excerpts and analytic summaries may be provided by the corresponding author upon reasonable request and with institutional approval.

ETHICAL APPROVAL

The research obtained ethical approval from the relevant institutional review board. All participants provided informed consent, and procedures complied with ethical standards for research involving human subjects.

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APPENDIX

Table A1. Number of older adults receiving state financial welfare

State Financial Welfare for Older Adults	Year 2020	Year 2021
Older adults receiving old-age allowance (people)	9,663,169	10,488,013
Older adults receiving gratuities, pensions, and civil servant pensions (people)	803,293	792,581
Older adults who have registered and received a state welfare card (people)	4,678,596	4,814,228
Older adults who have registered and received a state welfare card (budget in million baht)	3,349.87 (≈ USD 107.54 million)	4,214.21 (≈ USD 135.29 million)
Support for traditional elderly funeral management (cases)	8,807	7,000
Support for traditional elderly funeral management (budget in million baht)	20 (≈ USD 0.64 million)	21 (≈ USD 0.67 million)

Source: Department of Older Persons (2022). Report on the Situation of the Thai Elderly 2021.

Table A2. Ordered logit estimates for economic well-being

Variable	Coefficient	Std. Error	z	p-value	95% CI (Lower, Upper)
Type (Itype = 2)	0.965	1.044	0.92	0.355	−1.081, 3.011
Type (Itype = 3)	Reference	-	-	-	-
Age	−0.094	0.088	−1.08	0.282	−0.267, 0.078
Household head (Ihead = 2)	1.924	0.825	2.33	0.020 **	0.307, 3.541
Household head (Ihead = 3)	Reference	-	-	-	-
Chronic disease (Yes)	−1.963	1.044	−1.88	0.060 *	−4.009, 0.083
Government welfare	0.000079	0.000111	0.71	0.478	−0.000139, 0.000296
Household revenue	0.000128	0.000083	1.55	0.121	−0.000034, 0.000290
Household expense	−0.000165	0.000071	−2.33	0.020 **	−0.000304, −0.000026
Household debt	−0.000005	0.000004	−1.31	0.19	−0.000012, 0.000002
Threshold Parameters					
Cut Point	**Coefficient**	**Std. Error**			**95% CI (Lower, Upper)**
Cut 1	−9.591	6.072			−21.493, 2.310
Cut 2	−6.632	5.956			−18.306, 5.043
Cut 3	−0.895	5.978			−12.611, 10.820

Notes: 1) Dependent variable: Ordered measure of economic well-being.
2) Reference categories are omitted to avoid multicollinearity.
3) $p < 0.10$ (*), $p < 0.05$ (**). Pseudo $R^2 = 0.2682$
4) Coefficients are estimated using an ordered logit model; cut points indicate category thresholds.

Table A3. Ordered logit estimates for social well-being

Variable	Coefficient	Std. Error	z	p-value	95% CI (Lower, Upper)
Type (Itype = 2)	1.039	1.008	1.03	0.303	−0.937, 3.014
Type (Itype = 3)	Reference	-	-	-	-
Age	−0.096	0.082	−1.18	0.24	−0.257, 0.064
Household head (Ihead = 2)	1.57	0.767	2.05	0.041 **	0.065, 3.074
Household head (Ihead = 3)	Reference	-	-	-	-
Chronic disease (Yes)	−1.922	1.012	−1.90	0.058 *	−3.906, 0.062
Government welfare	0.000081	0.000089	0.91	0.362	−0.000093, 0.000255
Household revenue	0.000083	0.000077	1.07	0.283	−0.000068, 0.000233
Household expense	−0.000125	0.000065	−1.91	0.056 *	−0.000252, 0.000003
Household debt	−0.000005	0.000003	−1.43	0.152	−0.000011, 0.000002
Threshold Parameters					
Cut Point	**Coefficient**	**Std. Error**			**95% CI (Lower, Upper)**
Cut 1	−11.979	5.948			−23.638, −0.321
Cut 2	−9.637	5.631			−20.673, 1.399
Cut 3	−6.765	5.531			−17.605, 4.075
Cut 4	−2.098	5.507			−12.891, 8.695

Notes: 1) Dependent variable: Ordered measure of social well-being.
2) Reference categories are omitted to avoid multicollinearity.
3) $p < 0.10$ (*), $p < 0.05$ (**). Pseudo $R^2 = 0.2357$.
4) Estimates are obtained from an ordered logit model; threshold (cut) parameters indicate boundaries between adjacent outcome categories and are not substantively interpreted.

Table A4. Ordered logit estimates for family and psychological well-being

Variable	Coefficient	Std. Error	z	p-value	95% CI (Lower, Upper)
Type (Itype = 2)	2.179	1.347	1.62	0.106	−0.462, 4.820
Type (Itype = 3)	Reference	-	-	-	-
Age	−0.202	0.095	−2.13	0.033 **	−0.387, −0.016
Household head (Ihead = 2)	0.136	0.824	0.17	0.869	−1.479, 1.752
Household head (Ihead = 3)	Reference	-	-	-	-
Chronic disease (Yes)	−0.309	1.047	−0.30	0.768	−2.360, 1.742
Government welfare	0.000065	0.000091	0.72	0.473	−0.000113, 0.000243
Household revenue	0.000025	0.000078	0.33	0.743	−0.000126, 0.000177
Household expense	−0.000128	0.000068	−1.87	0.061 *	−0.000261, 0.000006
Household debt	−0.000013	0.000005	−2.48	0.013 **	−0.000024, −0.000003
Threshold Parameters					
Cut Point	**Coefficient**	**Std. Error**			**95% CI (Lower, Upper)**
Cut 1	−15.998	6.607			−28.949, −3.048
Cut 2	−14.554	6.511			−27.316, −1.793
Cut 3	−10.158	6.219			−22.347, 2.031

Notes: 1) Dependent variable: Ordered measure of Family and Psychological well-being.
2) Reference categories are omitted to avoid multicollinearity.
3) $p < 0.10$ (*), $p < 0.05$ (**). Pseudo $R^2 = 0.4618$.
4) Estimates are obtained from an ordered logit model; threshold (cut) parameters indicate boundaries between adjacent outcome categories and are not substantively interpreted.

Table A5. Ordered logit estimates for health well-being

Variable	Coefficient	Std. Error	z	p-value	95% CI (Lower, Upper)
Type (Itype = 2)	2.703	1.579	1.71	0.087 *	−0.391, 5.797
Type (Itype = 3)	Reference	-	-	-	-
Age	−0.281	0.111	−2.52	0.012 **	−0.500, −0.063
Household head (Ihead = 2)	0.321	0.884	0.36	0.717	−1.412, 2.054
Household head (Ihead = 3)	Reference	-	-	-	-
Chronic disease (Yes)	−0.983	1.174	−0.84	0.402	−3.283, 1.317
Government welfare	0.000048	0.0001	0.48	0.629	−0.000148, 0.000244
Household revenue	0.000003	0.000082	0.03	0.973	−0.000158, 0.000163
Household expense	−0.000127	0.000072	−1.78	0.075 *	−0.000268, 0.000013
Household debt	−0.000004	0.000004	−0.95	0.344	−0.000013, 0.000004
Threshold Parameters					
Cut Point	**Coefficient**	**Std. Error**			**95% CI (Lower, Upper)**
Cut 1	−21.494	7.466			−36.127, −6.860
Cut 2	−20.273	7.386			−34.750, −5.796

Cut 3	−15.053	6.821	−28.422, −1.685

Notes: 1) Dependent variable: Ordered measure of health well-being.
2) Reference categories are omitted to avoid multicollinearity.
3) $p < 0.10$ (*), $p < 0.05$ (**). Pseudo $R^2 = 0.4864$.
4) Estimates are obtained from an ordered logit model; threshold (cut) parameters indicate boundaries between adjacent outcome categories and are not substantively interpreted.