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Socioeconomic Status and Self-Rated Health in Older Adults with Disabilities: A Mediation Analysis of Reserve Capacity Using the Korea Welfare Panel Study

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Abstract

Older adults with disabilities face compounded vulnerabilities due to both functional limitations and socioeconomic disadvantage. In South Korea, where public welfare systems remain fragmented and cultural values emphasize independence and productivity, understanding the mechanisms linking socioeconomic status (SES) to health outcomes is critical. This study investigates whether reserve capacity mediates the relationship between SES and self-rated health (SRH) in older adults with disabilities. Data were drawn from the supplementary survey on people with disabilities in the 18th wave (2023) of the Korea Welfare Panel Study (KWePS). The analytic sample included older adults aged 65 and above with registered disabilities. A multiple mediation analysis was conducted using Model 4 of the PROCESS macro in SPSS to examine whether three dimensions of reserve capacity—intrapsychic resources (self-esteem), interpersonal resources (social support satisfaction), and tangible resources (use of public disability services)—mediated the relationship between SES and SRH. Demographic and health-related covariates were statistically controlled. The results are as follows: The direct effect of SES on SRH was not significant; however, significant indirect effects were found through all three mediators. Higher SES was positively associated with intrapsychic and interpersonal resources and negatively associated with tangible resource use. Among the mediators, interpersonal resources had the strongest positive effect on SRH, while tangible resources showed a negative association—possibly due to compensatory activation or increased disease awareness among service users. The findings highlight the importance of psychosocial and relational resources in shaping perceived health among disabled older adults in Korea. Policy interventions should move beyond material assistance and focus on strengthening social networks and psychological resilience to reduce health disparities in this population.

Keywords: socioeconomic status; self-rated health; older adults with disabilities; reserve capacity; mediation analysis; Korea Welfare Panel Study (KWePS)

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1. Introduction

The unprecedented pace of demographic aging in South Korea has raised profound concerns for national health policy and social welfare systems. As of 2024, individuals aged 65 and over comprise 18.7% of the population—over 9.6 million people—with projections indicating a shift to super-aged status ($\geq 20\%$) by 2025 (Statistics Korea 2024).

Within this rapidly growing demographic, there is a particularly vulnerable subgroup whose health status demands urgent attention: older adults with disabilities. Recent national data estimate that 1.5 million elderly individuals in Korea live with physical or cognitive impairments, representing 15.6% of the older adult population (Korea Disabled Persons Development Institute 2024). These individuals face heightened exposure to chronic illness, functional limitations, and psychosocial stressors, and are often marginalized in research and policy discourse.

Amid this demographic shift, self-rated health (SRH)—an individual's self-assessment of physical and mental well-being—has become a key indicator in gerontological health research. SRH has demonstrated strong predictive validity for outcomes such as morbidity, functional decline, healthcare utilization, and mortality (Idler and Benyamini 1997; Kim et al. 2017). Although inherently subjective, it reflects the cumulative influence of biological, psychological, and social factors on perceived health. In vulnerable populations, including older adults with disabilities, SRH offers a multidimensional reflection not only of physical health, but also of autonomy, perceived dignity, and capacity for social participation. In this regard, it often captures aspects of well-being that traditional biomedical indicators—such as disease count or functional status—fail to fully represent.

Socioeconomic status (SES) is among the most consistent and well-established predictors of SRH. A large body of studies has shown that lower SES is linked to poorer health perceptions, greater psychological distress, and restricted access to health-promoting resources (Jung and Ha 2021; Marmot 2005; Moon et al. 2024). Nevertheless, the mechanisms underlying this relationship—particularly among disabled older adults—remain undertheorized. Most existing research treats SES as a distal determinant of health, offering limited insight into the mediating resources that shape health outcomes in later life.

To better account for the SES–health gradient, researchers have increasingly turned to the Reserve Capacity Model (RCM) as a conceptual framework. Originally developed by Gallo and Matthews (2003), the RCM posits that individuals with lower SES are more frequently exposed to chronic stressors, yet possess fewer buffering resources—termed reserve capacity—to mitigate the negative effects of such exposures. These resources fall into three categories: intrapsychic resources (e.g., self-esteem, emotional regulation), interpersonal resources (e.g., social relationships, caregiving support), and tangible resources (e.g., financial means, access to formal services) (Schöllgen et al. 2011; Bennett et al. 2015).

Importantly, in the context of disabled older adults in Korea, tangible resources must be understood not only as financial assets, but also as the availability and actual utilization of formal public services—such as emotional counseling, assistive care, and daily living support. In this study, we operationalize tangible resources via the use of institutional disability services, which may indicate not resource abundance, but rather a compensatory activation in response to heightened health vulnerabilities. This interpretation provides a framework for understanding counterintuitive findings, such as the negative association between tangible resource use and SRH observed in recent studies—a dynamic that reflects need-driven service use rather than proactive resource engagement.

While the RCM has gained empirical traction in Western contexts—especially among low-income and chronically ill populations (Azizoddin et al. 2024; Howarter and Bennett 2013)—its application in East Asia remains limited. In Korea, where caregiving norms are in flux and public infrastructure for long-term care is still evolving, the relevance of the RCM requires contextual validation. The erosion of traditional family-based care and insufficient institutional support may amplify the impact of SES disparities on reserve capacity among disabled older adults (Ga 2024; Chon et al. 2024).

Recent Korean studies lend partial support to the RCM framework. For instance, Choi et al. (2025) identified income and education as significant predictors of psychological stress using national panel data, with gendered disparities suggesting that stress—a

core RCM pathway—is closely linked to structural disadvantage. Similarly, Moon and Noh (2024) found that economic insecurity and social disengagement undermine SRH in retirement, underscoring the roles of tangible and interpersonal resources. However, most of these studies assess single resource domains and seldom address the integrative framework provided by the RCM. Moreover, disabled older adults—who experience intersecting physical, psychological, and social vulnerabilities—remain theoretically and empirically marginalized within this body of research.

This study addresses these gaps by applying the RCM to examine the relationship between SES and SRH among older adults with disabilities in South Korea. Specifically, we explore the mediating roles of three domains of reserve capacity: (1) intrapsychic resources (e.g., self-esteem), (2) interpersonal resources (e.g., satisfaction with social support), and (3) tangible resources (e.g., public disability service use). By integrating these dimensions within a theoretically grounded and culturally relevant framework, the study aims to clarify how socioeconomic inequality translates into disparities in subjective health. The findings are expected to advance both theoretical refinement of the RCM and evidence-based policy for disabled older adults with complex needs.

2. Materials and Methods

2.1. Study Design

This study employed a parallel multiple mediation model to examine whether different dimensions of reserve capacity mediate the relationship between SES and SRH among older adults with disabilities. A hypothetical model of subjective health and its influencing mechanisms was developed based on the conceptual framework (RCM) originally proposed by Gallo and Matthews (2003) and supported by a review of relevant empirical literature. As illustrated in Figure 1, the model posits that SES affects SRH both directly and indirectly through three types of mediators: intrapsychic resources, interpersonal resources, and tangible resources. This parallel structure allows for simultaneous estimation of the individual mediating effects of each reserve capacity domain.

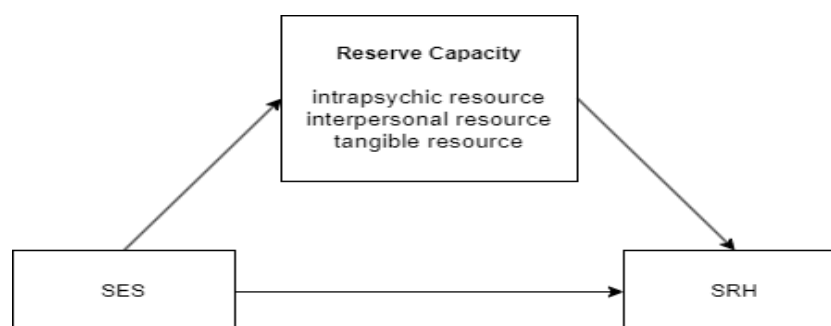


Figure 1. Analytic Model of the Study.

2.2. Participants and Materials

SRH of older people with disabilities were investigated using the supplementary survey data on people with disabilities from the 18th (2023) waves of the Korea Welfare Panel Study (KWePS). The KWePS is a nationwide longitudinal data set that dynamically encapsulates the living conditions and welfare requirements of Koreans, and covers various population groups (25). The KWePS is conducted annually, with the Supplementary Survey on Persons with Disabilities administered every three years. As a nationally representative panel survey, the KWePS provides robust population-level data, making it well-suited for research focusing on older adults with disabilities. The 18th wave of the supplementary survey included a total of 1576 individuals aged 15 and older with registered

disabilities. Among them, 845 individuals aged 65 and older were selected as the analytical sample for this study.

2.3. Measurements of Variables

2.3.1. Dependent Variable

In this study, SRH was employed as the dependent variable, reflecting individuals' overall subjective evaluation of their health status. SRH was measured using a five-point Likert scale, ranging from "very poor" to "very good," with higher scores indicating more favorable health perceptions. Although SRH is based on a single item, it has been extensively validated across epidemiological and gerontological research as a reliable and parsimonious indicator of general health. Longitudinal studies, such as the Whitehall II and Gazel cohort analyses, have demonstrated that single-item SRH is predictive of both morbidity and mortality (Singh-Manoux et al. 2006). Furthermore, meta-analytic evidence shows that SRH correlates strongly with objective health measures, including physical functioning, disease burden, and disability (Pinquart 2001). Despite its subjective nature, SRH is thus widely regarded as a valid proxy for health status and has been frequently utilized in large-scale surveys and aging studies. Accordingly, it was deemed a theoretically and methodologically appropriate outcome variable for the present analysis.

2.3.2. Independent Variable

(1) Socioeconomic Status (SES)

SES was measured using a composite index derived from three dichotomous indicators: receipt of medical assistance, housing tenure, and educational attainment. For the medical assistance variable, respondents were coded as 1 if they were beneficiaries of either Type 1 or Type 2 Medical Aid, and 0 otherwise. In the South Korean healthcare system, Medical Aid is a public health benefit program targeted at low-income populations. Type 1 Medical Aid is provided to individuals with extremely low income or those with severe disabilities, while Type 2 is designated for low-income individuals with partial work capacity, typically those whose income is below 50% of the national median. Thus, eligibility for Medical Aid serves as a meaningful proxy for socioeconomic disadvantage. Housing tenure was coded as 1 for individuals who owned their residence or lived under a long-term lease arrangement (jeonse), and 0 for all other types of housing (e.g., monthly rental, public housing). Educational attainment was coded as 1 for those with an associate degree or higher, and 0 for those with a high school diploma or less. The three binary variables were summed to create a composite SES score ranging from 0 to 3, with higher scores indicating a higher level of SES.

2.3.3. Mediating Variables

(1) Interpersonal resources

Interpersonal resources were measured as the average of two indicators: satisfaction with family relationships and satisfaction with social relationships. Each was assessed using a single-item question on perceived satisfaction, rated on a five-point Likert scale, ranging from 1 ("very dissatisfied") to 5 ("very satisfied"). Higher scores indicate greater satisfaction in each domain. The composite variable represents the mean of the two satisfaction scores, with higher values reflecting more favorable perceived relational resources.

(2) Intrapsychic resources

Internal resources were operationalized using self-esteem, measured by the Rosenberg Self-Esteem Scale (Rosenberg 1965), a widely validated instrument for assessing global self-worth. The scale comprises 10 items, each rated on a four-point Likert scale ranging from 1 ("strongly disagree") to 4 ("strongly agree"). The total score was calculated

by summing all item responses, with higher scores indicating higher levels of self-esteem. In this study, the internal consistency of the scale was acceptable, with a Cronbach's alpha of 0.799.

(3) Tangible resources

Tangible resources were assessed based on the respondent's current utilization of five categories of formal public services: (1) emotional support services, (2) assistance with daily living, (3) housing support, (4) household management support, and (5) physical therapy or rehabilitation services. For each service, respondents were asked whether they were currently using the service (coded as 1) or not (coded as 0). The total score was computed by summing the number of services used, with higher scores indicating greater access to or utilization of tangible public resources.

2.3.4. Control Variables

The following variables were included as controls in the analysis: gender, marital status, and age. Gender was coded as 1 for male and 0 for female. Marital status was based on a question regarding current marital situation; individuals with a spouse present were coded as 1, while those who were widowed, divorced, separated, never married, or other were coded as 0. Age was calculated by subtracting the respondent's year of birth from the survey year.

2.4. Analytic Strategy

Data were analyzed using IBM SPSS version 25.0 (IBM Corp., Armonk, NY, USA). Skewness and kurtosis were estimated to confirm the normal distribution of variables. Multicollinearity between the measured variables was analyzed using the tolerance and variance inflation factor (VIF). To examine whether reserve capacity mediates the relationship between SES and SRH among older adults with disabilities, this study employed multiple mediation analysis using Model 4 of the PROCESS macro (Hayes 2017). The PROCESS macro is a widely used statistical tool for conducting mediation and moderation analyses in SPSS, particularly effective when dealing with complex models relative to the sample size (Jang et al. 2020). It is especially suitable for models with multiple mediators, allowing for the estimation of direct and indirect effects through bootstrapping procedures. Model 4 in the PROCESS macro represents a parallel mediation model, which consists of two sets of regression equations: the first estimates the effects of the independent variable (SES) on each mediator (i.e., internal, external, and tangible resources), and the second estimates the effects of both the independent variable and mediators on the dependent variable (SRH). When multiple mediators are included, the model fits a separate regression for each mediator and evaluates their respective indirect effects. In this study, the analysis aimed to determine whether each dimension of reserve capacity—namely, intrapsychic, interpersonal, and tangible resources—independently mediates the relationship between SES and SRH. Furthermore, it compared the relative magnitudes of the mediation effects across these dimensions. The number of bootstrap samples was set to 5000 to estimate the confidence intervals of the indirect effects.

3. Results

3.1. Demographic Information of Participants

The demographic characteristics of the study participants are presented in Table 1. In terms of gender, 42.6% were male and 57.4% were female. Regarding age distribution, 32.0% were between 65 and 74 years old, 48.6% were aged 75 to 84, and 19.4% were 85 years or older. With respect to educational attainment, the majority had completed only elementary school (47.1%), followed by middle school graduates (18.5%), those with no

formal education (17.8%), high school graduates (13.4%), and college-level education or higher (3.3%). In terms of marital status, 52.3% of respondents were currently married, while 38.1% were widowed, and 7.6% were divorced.

Table 1. Demographic information of the participants. (N= 845).

Characteristics	Categories	N (%)
Gender	Male	360 (42.6%)
	Female	485 (57.4)
Age	65~74	270 (32.0)
	75~84	411 (48.6)
	85 and over	164 (19.4)
Education	No formal education	150 (17.8)
	Elementary school	398 (47.1)
	Middle school	156 (18.5)
	High school	113 (13.4)
	College Graduate and over	28 (3.3)
Marital Status	Married	442 (52.3)
	Widowed(er)	322 (38.1)
	Divorced	64 (7.6)
	Separated	3 (0.4)
	Never been married	14 (1.7)

3.2. Descriptive and Correlational Statistics

Descriptive statistics for the key variables used in this study are presented in Table 2. For SES, the scores ranged from 0 to 3, with a mean of 1.49, indicating a generally low to moderate level of socioeconomic resources among the participants. The dependent variable, SRH, was measured on a five-point scale, yielding a mean score of 2.65, which suggests that participants, on average, perceived their health to be at a moderate level. Among the mediating variables, internal resources, operationalized as self-esteem, showed a mean score of 21.07, based on the summation of responses to the Rosenberg Self-Esteem Scale. For external resources, which included satisfaction with family and social relationships (measured on a five-point Likert scale), the mean score was 3.66, reflecting a slightly above-average level of relational satisfaction. In contrast, tangible resources—measured as the number of public services currently utilized (ranging from 0 to 5)—had a notably low mean of 0.74, suggesting limited access to or utilization of formal support services among the participants. Finally, the average age of the study sample, included as a control variable, was 78 years, indicating an older-old population.

Table 2. Descriptive statistics of the variables. (N = 845).

Title 1		Min.	Max	Mean	SD	Skewness	Kurtosis
SES *		0	3	1.49	0.75	−0.76	−0.36
Reserve Capacity	Intrapsychic	15	31	21.07	2.39	0.40	0.64
	Interpersonal	1	5	3.66	0.51	−0.98	1.47
	Tangible	0	5	0.74	1.05	1.43	1.45
Self-rated health		1	5	2.65	0.88	0.28	−0.82
Age		66	98	78.013	6.804	0.037	−0.788

As shown in Table 3, the correlations among key variables were generally significant. However, the associations between SES and intrapsychic resources, as well as between SES and SRH, were not statistically significant. The highest correlation was observed between SES and tangible resources, with a coefficient of −0.386. This value falls within an

acceptable range and does not indicate a problem of multicollinearity. All variance inflation factor (VIF) values were below 10, further confirming the absence of multicollinearity among the variables.

Table 3. Correlation analysis of the variables. (N = 845).

Variables	1	2	3	4	5	6	7	8
1. SES *	1							
Reserve Capacity								
2. Intrapsychic	0.056	1						
3. Interpersonal	0.285 **	0.209 **	1					
4. Tangible	−0.386 **	−0.094 **	−0.239 **	1				
5. Self-rated health	0.049	0.286 **	0.278 **	−0.167 **	1			
6. Age	−0.006	−0.138 **	−0.010	0.230 **	−0.188 **	1		
7. Gender	0.077 *	0.076 *	0.001	−0.212 **	0.113 **	−0.177 **	1	
8. Marital Status	0.358 **	−0.008	0.204 **	−0.283 **	0.110 **	−0.130 **	0.396 **	1

* $p < 0.05$, ** $p < 0.01$

3.3. The Effect of SES on Reserve Capacity

PROCESS macro Model 4 consists of two regression models: the first estimates the effect of the independent variable on the mediator(s), and the second estimates the effects of both the independent variable and the mediator(s) on the dependent variable (Jang et al. 2020). In this study, PROCESS macro was employed to assess the mediating pathways through which SES influences three dimensions of reserve capacity: internal resources, external resources, and tangible resources. The results are presented in Table 4. All models included covariates (control variables) in the analysis.

The effect of SES on all three types of reserve capacity was statistically significant at the 0.05 level. Specifically, SES had a positive effect on both intrapsychic resources and interpersonal resources, and a negative effect on tangible resources. These findings suggest that individuals with higher SES tend to possess greater psychological and social resources but report fewer tangible constraints, such as financial aid or public assistance.

Among the control variables, gender and marital status were significantly associated with interpersonal resources at the 0.05 significance level. Male participants and those with a spouse reported higher levels of interpersonal resources. Additionally, gender, age, and marital status were significantly associated with internal resources. Specifically, female participants, those who were younger, and those without a spouse reported higher levels of intrapsychic resources. Finally, gender, age, and marital status also had significant effects on tangible resources. Tangible resources were higher among male participants, those who were older, and those who had a spouse.

Table 4. The Effects of SES on Reserve Capacity (N = 845).

Variables	Intrapsychic Resource				Interpersonal Resources				Tangible Resources			
	B	SE	t	p	B	SE	T	P	B	SE	T	p
Cons	3.229 ***	0.203	15.896	0.000	25.214 ***	0.98	25.729	0	−0.868 *	0.386	−2.247	0.025
SES	0.162 ***	0.024	6.748	0.000	0.254 *	0.116	2.190	0.029	−0.478 ***	0.046	−10.463	0.000
Gender	0.080 *	0.038	2.128	0.034	−0.389 *	0.181	−2.148	0.032	0.255 ***	0.071	3.576	0.000
Age	−0.000	0.003	−0.090	0.928	−0.047 ***	0.012	−3.899	0.000	0.026 ***	0.005	5.410	0.000
Marital Status	0.153 ***	0.039	3.877	0.000	−0.413 *	0.190	−2.171	0.030	−0.189 *	0.075	−2.523	0.012

R ²	0.098	0.031	0.218
F(Sig)	22.804 (0.000)	6.502 (0.000)	58.403 (0.000)

* $p < 0.05$, *** $p < 0.01$.

3.4. The Effects of SES and Reserve Capacity on SRH

Using PROCESS macro Model 4, the effects of the independent variable (SES) and the mediators (three dimensions of reserve capacity) on the dependent variable (SRH) were examined. The results are presented in Table 5. The analysis revealed that intrapsychic resources, interpersonal resources, tangible resources, gender, and age all had statistically significant effects on self-rated health at the 0.05 level. With regards to age and gender, those female and older were associated with lower SRH. After controlling for gender, age, and marital status, the findings indicated that higher levels of intrapsychic and interpersonal resources were associated with better SRH, while higher levels of tangible resources were associated with lower SRH.

Table 5. Multiple Regression Model (The Effects of SES and Reserve Capacity on SRH) (N = 845).

Variables		B	SE	T	P
Cons		1.293 ***	0.462	2.798	0.005
SES		−0.063	0.043	−1.476	0.140
Reserve Capacity	Intrapsychic	0.076 ***	0.012	6.329	0.000
	Interpersonal	0.406 ***	0.059	6.941	0.000
	Tangible	−0.065 *	0.030	−2.150	0.032
Gender		−0.156 *	0.063	−2.498	0.013
Age		−0.017 ***	0.004	−3.957	0.000
Marital Status		−0.067	0.066	−1.015	0.311
R ²			0.169		
F(Sig)			24.312 (0.000)		

* $p < 0.05$, *** $p < 0.01$.

3.5. Mediation Analysis

In the present model, the mediation analysis aimed to examine whether SES influences SRH through three distinct dimensions of reserve capacity—intrapsychic resources, interpersonal resources, and tangible resources—each treated as a mediator. As such, three indirect effect pathways were tested, and the results are reported in Table 6.

The table presents the indirect effect coefficients, along with bootstrapped standard errors and 95% confidence intervals. Statistical significance was determined based on whether the confidence intervals excluded zero. All three mediation paths yielded significant indirect effects, as none of the confidence intervals contained zero.

These findings indicate that intrapsychic resources, interpersonal resources, and tangible resources each significantly mediate the relationship between SES and SRH. Among the three, interpersonal resources demonstrated the strongest mediating effect, suggesting that the availability of social support and interpersonal connections plays a particularly critical role in translating socioeconomic advantages into perceived health benefits for the older adults with disabilities.

Table 6. The Mediation Analysis.

Mediating Variables	Mediating Effect Coefficient	BootSE	95% Confidence Intervals	
			BootLLCI	BootULCI
Intrapsychic resources	0.0193	0.0097	0.0016	0.0394
Interpersonal resources	0.0658	0.0143	0.0402	0.0957
Tangible resources	0.0309	0.0144	0.0033	0.0606

To determine which of the three significant mediation pathways exerted a stronger effect, pairwise comparisons of the indirect effects were conducted. The results of this comparison are presented in Table 7.

Table 7. The Comparative Analysis of the Mediation Effects.

	Comparing Mediating Effects		Contrast	BootSE	95% Confidence Intervals	
					BootLLCI	BootULCI
Tangible resources	A–B	Interpersonal resources	−0.0349	0.0213	−0.0778	0.0059
Tangible resources	A–C	Intrapsychic resources	0.0116	0.0181	−0.0241	0.0471
Interpersonal resources	B–C	Intrapsychic resources	0.0465	0.0159	0.0157	0.0784

As shown in Table 7, the notation A–B refers to the comparison between the mediation effects of Path A and Path B, while A–C indicates the comparison between Path A and Path C. Each path represents a specific mediation route through which SES affects SRH, via one of the three subdimensions of reserve capacity. Path A corresponds to the route mediated by tangible resources, Path B to the route mediated by interpersonal resources, and Path C to the route mediated by intrapsychic resources. Since all three indirect effects were statistically significant, three pairwise comparisons were conducted to determine whether the strength of the mediation effects differed across the paths. Among these comparisons, only the difference between interpersonal resources (Path B) and intrapsychic resources (Path C) reached statistical significance, as its bootstrapped confidence interval did not include zero. This result indicates that the mediating effect of interpersonal resources was significantly stronger than that of intrapsychic resources. In contrast, the differences in indirect effects between tangible and intrapsychic resources (Path A vs. Path C), as well as between tangible and interpersonal resources (Path A vs. Path B), were not statistically significant, as the corresponding confidence intervals contained zero. Taken together, these findings suggest that SES positively influenced SRH through all three dimensions of reserve capacity. However, among the three, the interpersonal resource pathway demonstrated the most substantial mediating effect in both statistical and practical terms.

4. Discussion

This study examined how SES influences SRH in older Korean adults with disabilities in South Korea, using 18th (2023) waves of the KWePS, with a particular focus on the mediating role of three distinct components of reserve capacity: intrapsychic, interpersonal, and tangible resources.

The first major finding indicates that SES significantly affected all three forms of reserve capacity, although the direction of these associations varied. Based on the results shown in Table 4, SES was positively associated with both intrapsychic and interpersonal resources, while it was negatively associated with tangible resources. In other words, individuals with higher SES demonstrated greater access to psychological and social coping assets, yet reported a lower reliance on material or institutional forms of support. The positive association between SES and intrapsychic resources (e.g., self-esteem) aligns with stress-buffering theories, in which personal psychological assets serve as protective mechanisms in the stress–health pathway. Meta-analytic evidence further substantiates this relationship. In a comprehensive review, Twenge and Campbell (2002) reported a small but statistically significant positive correlation between SES and self-esteem ($r = 0.08$), with variations across lifespan and cultural contexts. Notably, effect sizes were larger in Asian populations compared to Western samples, suggesting that SES may exert a relatively stronger influence on self-esteem in collectivist societies where social status and education

are tightly linked to identity and worth. Although their study did not include a specific Korean disabled older adult sample, the findings point toward the cultural plausibility of similar associations in this group.

In the Korean context, these associations acquire particular salience. Korean older adults with disabilities frequently face cumulative disadvantage across the life course, including limited educational attainment, restricted occupational trajectories, and insufficient public support. These structural constraints often lead to diminished self-esteem and perceived social value in later life (Cho 2017). Moreover, the deeply rooted Confucian ideals of filial piety and individual productivity may unintentionally marginalize older adults with disabilities who are unable to fulfill these social roles. In Korean society, where filial responsibility and social contribution are culturally valorized, older individuals who are economically inactive or physically dependent may experience implicit social exclusion and psychological devaluation (H.-J. Park 2022; Lee 2024). Particularly, Confucian familism continues to shape expectations around caregiving and intergenerational reciprocity, often rendering older adults with disabilities passive recipients of care rather than agents of social participation (Do 2017; K.-S. Park 2013).

The finding that higher SES is associated with greater interpersonal resources, such as social support satisfaction, also corroborates the literature on social buffering mechanisms. Socioeconomic advantage tends to enhance individuals' access to broader social capital, higher-quality relationships, and more supportive networks, all of which play a critical role in moderating the adverse effects of life stressors (Thoits 2011; Kawachi and Berkman 2001). Individuals of higher social standing also report higher environmental mastery and perceived control, enabling them to better navigate challenges and maintain psychological well-being. These patterns are particularly relevant to older Koreans, given the high prevalence of social isolation in this group—especially among those with functional limitations and low income (Yan et al. 2024).

Moreover, the Korean welfare regime, despite recent reforms, continues to exhibit a familistic orientation, which leaves older adults—especially those with disabilities—at risk of social exclusion when family support systems are absent or insufficient (Lee 2024). This structural context reinforces the importance of interpersonal coping resources in shaping subjective health, as individuals without family-based or community support face greater difficulty in mobilizing help. Therefore, the link between SES and interpersonal resources may be even more crucial in the Korean setting, where state-provided services for older adults with disabilities remain underdeveloped or fragmented (Jeon and Kwon 2017).

The inverse association between SES and tangible resources may be explained through the lens of autonomy and control. While this may seem counterintuitive, higher SES often confers greater capacity for self-care and health management, reducing dependency on formal support systems. According to the RCM (Gallo and Matthews 2003), individuals with higher SES possess a richer repertoire of coping assets, both internal and external, which enables them to navigate health-related stressors with less need for external intervention. From this perspective, lower reliance on tangible resources does not necessarily indicate unmet need but may instead reflect greater independence and resource sufficiency—a pattern that is theoretically consistent and empirically plausible.

Another central finding of this study is that SES did not exert a statistically significant direct effect on SRH among older adults with disabilities. Instead, its influence was mediated through intrapsychic, interpersonal, and tangible resources. This indirect pathway departs from studies of the general older population, which often report a direct link between SES and health outcomes. However, it aligns with a growing body of research emphasizing the importance of intermediary mechanisms in shaping health perceptions among physically and socially vulnerable groups. For example, digital exclusion—a proxy

for cumulative SES disadvantage—has been linked to lower health literacy and, subsequently, to poorer SRH, with mediation by psychosocial factors such as self-efficacy and social support (Zhou et al. 2025).

Similarly, interpersonal and intrapsychic resources were found to positively influence SRH, whereas tangible resource use demonstrated a negative association. The beneficial role of interpersonal resources is well documented: social networks, support satisfaction, and community engagement have consistently been shown to protect against cognitive decline, buffer stress, and enhance mental well-being (Sampson et al. 2002; Conger and Donnellan 2007). In the Korean context, community-based social capital has been associated with reduced depressive symptoms and higher life satisfaction among older adults (Bae et al. 2023), supporting the importance of these relational resources. Intrapsychic resources, particularly self-esteem and self-efficacy, are similarly central to the stress–health process. These psychological traits influence health evaluation by shaping affective responses and cognitive appraisals, both of which determine how individuals interpret physical symptoms and illness experiences.

By contrast, the negative association between tangible resource use and SRH may reflect either compensatory dynamics or perceptual bias. According to the Compensatory Resource Activation Hypothesis, individuals with fewer material assets may rely more heavily on social and psychological resources, which in turn enhance perceived health. Alternatively, individuals with more tangible resources may have greater access to health services, increasing the likelihood of diagnosis and awareness of medical conditions—leading to lower subjective health ratings despite objectively better health (Pearlin et al. 1981). In South Korea, where SES stratifies healthcare access and utilization, this interpretation is especially pertinent. Research indicates that older adults with higher income and education are more likely to undergo regular check-ups and specialist visits, potentially increasing disease awareness (Lueckmann et al. 2021; Shin et al. 2018).

Lastly, all three sub-dimensions of reserve capacity demonstrated significant mediating effects in the SES–SRH relationship, with interpersonal resources emerging as the most influential mediator. This finding underscores the primacy of social support and relational networks in shaping health perceptions among older adults with disabilities. Theoretical models such as the social control hypothesis suggest that such social networks enhance perceived control and reduce chronic stress exposure (Umberson 1987). Moreover, evidence indicates that the quality—not merely the quantity—of social ties is a stronger predictor of subjective well-being and health in older age (Pinquart and Sörensen 2000).

The findings of this study underscore the need for a multidimensional approach to promoting the well-being of older adults with disabilities in Korea. Beyond medical or financial assistance, it is essential to build systems that strengthen interpersonal, psychological, and structural resources simultaneously.

First, community-based connection and participation must be at the center of policy and practice. As traditional family caregiving networks continue to weaken, local welfare centers, senior community hubs, and day-care programs should serve as spaces where older adults with disabilities can rebuild social ties and regain a sense of belonging. Programs that foster peer mentoring, intergenerational interaction, and neighborhood outreach can effectively reduce isolation and loneliness while restoring confidence in daily life.

Second, psychological resilience and self-efficacy should be recognized as central components of care. Many older adults in long-term care settings receive physical or instrumental assistance but lack access to structured mental health or self-management programs. Evidence-based interventions—such as cognitive-behavioral therapy, self-management education, and strengths-based counseling—should be incorporated into the service menu of community welfare centers and long-term care institutions. Expanding mobile counseling and digital therapy options would also help reach disabled older adults in rural or underserved areas.

Third, policies should adopt a more balanced perspective on material resources. While income support and care benefits under the Long-Term Care Insurance system remain critical, material assistance alone does not ensure happiness or autonomy of disabled older adults. Welfare policies must be designed to combine economic security with psychosocial enrichment—empowering disabled older adults as active participants rather than passive beneficiaries. For instance, opportunities for volunteering, peer leadership, and shared decision-making can strengthen their sense of control and purpose.

At the policy level, an integrated care framework linking long-term care, community-based services, and mental health support is urgently needed. The current separation between physical care and psychological well-being limits the effectiveness of existing systems. A national strategy that connects Community Care, Long-Term Care Insurance, and Mental Health Promotion programs through shared funding and case management can improve coordination and efficiency. Ultimately, promoting happiness and well-being in later life requires not only better services but also a change in perspective—recognizing that older adults with disabilities are not merely recipients of care, but active agents capable of growth, contribution, and self-determination. Strengthening both their inner resources and community belonging will allow Korea to move toward a more inclusive and dignified model of aging.

Despite these implications, several limitations of this study must be acknowledged. First, the use of secondary data imposed constraints on the conceptualization and operationalization of reserve capacity. In particular, intrapsychic resources were represented solely by self-esteem, whereas in reality, this domain may encompass a broader range of psychological and cognitive constructs such as cognitive functioning, health literacy, and self-efficacy. Similarly, interpersonal resources were limited in their capacity to reflect the qualitative aspects of social relationships, including interaction dynamics and emotional closeness.

Second, there were limitations in the measurement of tangible resources due to the small sample size of respondents utilizing relevant public services. Although older adults with disabilities in Korea may access various forms of support—including personal assistance, housing subsidies, and mobility services—the current study was only able to incorporate a limited set of service indicators. As a result, the analysis may not fully capture the comprehensive effects of tangible resources on subjective health outcomes.

Third, the cross-sectional nature of the study restricts the ability to establish causal relationships among variables. It remains unclear whether reserve capacity influences subjective health in a unidirectional manner or whether the relationship is reciprocal. Moreover, the study design precluded the analysis of temporal dynamics or changes over time. Future research employing longitudinal designs is necessary to better elucidate causal pathways and examine how reserve capacity and perceived health interact across the aging trajectory.

This study contributes to a more differentiated understanding of how SES influences health among older adults with disabilities by demonstrating that its effects are largely indirect and mediated through reserve capacity. Importantly, interpersonal and intrapsychic resources emerged as key pathways through which SES shapes health perceptions, while tangible resource reliance showed complex, and at times counterintuitive, associations. In the Korean context, where structural support for older adults with disabilities remains limited, the cultivation of psychosocial reserves is not only beneficial—it is essential. Future policies must go beyond income supplementation and address the relational, emotional, and cognitive dimensions of aging, ultimately fostering environments that support holistic and dignified later life for all.

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