

ORIGINAL ARTICLE



Exploratory Association Between Recorded Study-Specific ADL and Perceived Quality-of-Life Scores Among Older Adults in One Indonesian Residential Care Facility: A Cross-Sectional Secondary Analysis

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ABSTRACT

Background: Functional status and perceived quality of life are related but non-equivalent outcomes in residential care. This study relied on retrospective score records from one facility; the locally assembled measures had incomplete development and scoring documentation. The analysis therefore concerns recorded study-specific composites rather than validated ADL and quality-of-life constructs.

Methods: This exploratory cross-sectional secondary analysis included 50 communicative residents from one Indonesian social-care facility. Archived ADL materials contained an unresolved nine-versus-ten-item inconsistency. Three recorded ADL totals of 19 were top-coded to the documented analytic maximum of 18. The outcome was a recorded nine-item perceived quality-of-life composite (9-45). Spearman correlation with a 20,000-resample bootstrap confidence interval was primary; Kendall tau-b, an age- and sex-adjusted HC3 linear model, and threshold-based profiles were exploratory analyses.

Results: Median corrected ADL and perceived quality-of-life scores were 17 (IQR 13-18) and 40 (IQR 32-43). Corrected totals were modestly associated (Spearman $\rho=0.332$, 95% bootstrap CI 0.015-0.599; $P=0.019$). Estimates were similar using Kendall tau-b (0.256). The adjusted associational mean difference was 0.874 quality-of-life points per one-point higher corrected ADL score (95% CI 0.344-1.404; $P=0.001$). The threshold-defined mismatch was 28%.

Conclusion: The recorded composites showed a modest positive association, but the single-facility sample, upper-end score concentration, unresolved scoring provenance, and threshold sensitivity limit clinical and population interpretation. The 28% mismatch is descriptive rather than a prevalence estimate. Validated functional screening should be paired with direct, validated assessment of resident-reported well-being.

1 | Introduction

Population ageing is changing the demand for health and social care, particularly in low- and middle-income settings. The World Health Organization describes healthy ageing in terms of functional ability: the capacity to be and do what an older person values through the interaction of intrinsic capacity and the surrounding environment. [1, 2] Basic activities of daily living (ADL) are therefore clinically important because they indicate the extent to which a person can eat, bathe, dress, transfer, use the toilet, and move with or without assistance. Established ADL instruments have been used to support rehabilitation and care planning, but their identity, item composition, scoring, and cut-offs must be reported accurately. [3, 4, 5]

Perceived quality of life is a broader and explicitly subjective construct. WHO definitions emphasize a person's appraisal of life in relation to culture, values, expectations, and concerns rather than an external judgement of physical performance. [6, 7, 8] Multidimensional models of later-life quality of life similarly position function alongside psychological resources, social participation, material conditions, autonomy, and the care environment. [9, 10, 11] Function and quality of life should consequently be expected to covary without being treated as interchangeable measurements.

Evidence from institutional settings supports this distinction. ADL dependence has been associated with poorer health-related quality of life, but cognition, sarcopenia, nutritional status, self-rated health, and residential arrangements also contribute. [12, 13, 14] In a large nursing-home study, routinely available proxy indicators explained only a limited proportion of resident-reported quality-of-life variation. [15] These findings caution against inferring a resident's subjective experience from function-focused or administrative data alone.

Psychosocial and environmental factors may explain why residents with similar functional status report different levels of well-being. Sense of coherence, resilience, loneliness, pain, fear-related activity restriction, tangible support, and social engagement have each been associated with quality of life or participation in long-term care. [16, 17, 18, 19, 20] Meaningful activity can preserve identity when tasks are adapted to changing ability, [21] while residents and stakeholders continue to prioritize dignity, safety, relationships, and participation in decisions. [22, 23, 24]

Intervention evidence also suggests that functional improvement and quality-of-life improvement should be evaluated separately. Person-centred programmes and function-focused care can alter staff practice, activity, and selected resident outcomes. [25, 26, 27] Rehabilitation and multicomponent interventions may improve ADL or physical performance, but effects on quality of life are inconsistent across designs and populations. [28, 29, 30, 31, 32] Co-designed reablement, nursing-led function-focused models, and pilot exercise programmes further emphasize tailoring and implementation rather than assuming that one functional endpoint captures the whole resident experience. [33, 34, 35]

Validated instruments would ordinarily be preferred for both ADL and quality-of-life assessment. In this study, however, data collection had already been completed and the only retrievable material consisted of locally assembled questionnaire forms, validation and reliability appendices, and a total-score tabulation. The researchers could not retrospectively substitute the Barthel Index, Katz Index, WHOQOL-BREF, WHOQOL-OLD, or another validated measure without inventing responses that had never been recorded. A post hoc review of the available item wording supported only face-level content relevance: the ADL labels concerned basic self-care and mobility, whereas the perceived quality-of-life items concerned health appraisal, pain, treatment dependence, enjoyment, energy, sleep, negative feelings, and the residential environment. This review did not establish reliability, construct validity, criterion validity, or equivalence to established instruments.

Few directly comparable Indonesian residential-care studies were identified in the literature assembled for this manuscript. The present study therefore provides a local exploratory estimate while explicitly addressing its measurement and data-provenance constraints. The primary objective was to quantify the association between the recorded study-specific ADL and perceived quality-of-life composites. A secondary objective was to examine robustness after adjustment for age and sex and under alternative handling of the three out-of-range ADL totals. An exploratory objective was to describe residents whose threshold-defined functional and well-being categories did not align. We hypothesized that higher recorded ADL totals would be associated with higher recorded perceived quality-of-life totals.

2 | Methods

2.1 | Design

This was an exploratory cross-sectional secondary analysis of data collected for an undergraduate nursing study at UPT Pelayanan Sosial Tresna Werdha Glenmore, Banyuwangi, Indonesia, on 28 May 2026. The revised report follows the Strengthening the Reporting of Observational Studies in Epidemiology statement. [36] The analysis used all 50 complete records available in the source tabulation. Because the dataset was fixed and small, no retrospective power calculation was performed; effect estimates, confidence intervals, distributional features, and sensitivity analyses were prioritized. The study was framed as a local exploratory analysis rather than a population-representative assessment.

2.2 | Samples and Participants

The source population comprised 100 residents. Purposive sampling was used. Eligibility required age 60 years or older, willingness to participate, capacity to cooperate and communicate, and ability to understand the questions. Residents with severe psychiatric disturbance, inability to speak, or incomplete questionnaire data were excluded. The source records did not preserve counts at each screening stage, reasons for non-participation, or the number approached; these values were not reconstructed. The resulting sample represents residents who were able to communicate and complete the recorded assessment. It should not be generalized to all residents, particularly those with severe communication or cognitive impairment.

2.3 | Instruments

The functional variable was a recorded study-specific ADL composite. The archived source package was internally inconsistent: one questionnaire or conceptual source listed 10 activities, including stair use, whereas the validation and reliability documentation and the analytic category rules referred to nine items with a 0-18 range. The total-score tabulation did not contain item-level responses and included three totals of 19. Consequently, the exact administered item set and original score derivation could not be reconstructed. The available activity labels had face-level relevance to basic daily functioning, but no formal adaptation or psychometric validation could be verified. The measure is therefore not labelled as the Barthel Index or any other validated ADL instrument. Throughout this manuscript, "ADL composite" refers only to the locally recorded total.

The outcome was a recorded study-specific nine-item perceived quality-of-life composite addressing overall quality of life, satisfaction with health, interference from pain, dependence on medical therapy, enjoyment of life, the residential environment, energy, sleep satisfaction, and negative feelings. Each source item used a five-point response format, and the recorded total range was documented as 9-45. The item content had face-level relevance to perceived well-being, but the source form did not document instrument development, formal validity, or whether negatively worded items were reverse-coded. Item-level responses were unavailable. The measure is not WHOQOL-BREF or WHOQOL-OLD and does not permit calculation of validated domains. [6, 7, 8] The analysis therefore concerns the recorded composite rather than a validated multidimensional quality-of-life construct.

Age was recorded in completed years and analysed continuously. Sex was recorded as male or female in the source dataset. No data were available on comorbidity, cognition, depression, pain severity, medication burden, nutritional status, length of residence, family contact, social support, or activity participation.

2.4 | Data Collection

The parent-study documentation states that the researcher observed ADL performance and asked residents to complete the nine-item perceived quality-of-life questionnaire. Data collection was conducted in Indonesian with the researcher and facility staff present to support comfort and communication. The records do not document a standardized interviewer-training protocol, whether staff ratings contributed to ADL scoring, the degree of assistance given during questionnaire completion, or whether proxy responses were permitted. No proxy response was identified in the available tabulation. These procedural uncertainties were retained as limitations rather than resolved through unsupported assumptions.

2.5 | Data Analysis

Before inferential analysis, the questionnaire forms, validation and reliability appendices, analytic score ranges, category definitions, and total-score worksheet were compared. Four prespecified rules were applied. First, all original totals were preserved in separate raw variables. Second, a corrected ADL variable was created by deterministically top-coding only the three recorded totals of 19 to 18, because 18 was the maximum supported by the nine-item analytic documentation and operational category rules. Third, no item was imputed, no total was rescaled, and no item-level response was reconstructed. Top-coding was a range-harmonization rule, not evidence that the underlying nine-versus-ten-item inconsistency had been resolved. Fourth, the descriptive quality-of-life category was regenerated from the documented thresholds; this reclassified one record with a total of 39 from moderate to high, while no continuous quality-of-life total was changed. The primary analysis used corrected ADL totals. Sensitivity analyses used the original totals and excluded the three records with out-of-range original values. Tables, figures, and narrative text explicitly distinguish corrected from original totals.

Continuous variables were summarized using means and standard deviations together with medians and interquartile ranges; categorical variables were summarized using counts and percentages. Range and completeness checks were performed before analysis. Distributional asymmetry was summarized with the bias-corrected Fisher-Pearson skewness coefficient. Because both composites were bounded and contained substantial ties, Spearman rank correlation between the corrected ADL total and recorded perceived quality-of-life total was the primary analysis. A percentile bootstrap confidence interval was obtained from 20,000 resamples using a fixed random seed. A two-sided P value below .05 was used for the primary hypothesis.

Sensitivity analyses addressed scoring uncertainty, tied observations, and model assumptions. Spearman correlation was repeated using the three original ADL totals of 19 and after excluding the three records with out-of-range original totals. Kendall tau-b was calculated because it explicitly accommodates tied ranks. An ordinary least-squares model estimated the associational mean difference in recorded quality-of-life score per one-point higher corrected ADL total after adjustment for centred age and sex. HC3 robust standard errors were used to reduce small-sample bias in variance estimation. Model evaluation included residual distribution, heteroscedasticity, leverage, Cook's distance, and leave-one-out estimates. HC3 inference and diagnostic stability do not remove the restricted variance created by ceiling concentration; the coefficient is interpreted only as a cross-sectional association within the observed score range, not as a causal effect or a constant dose-response relation.

The exploratory profile analysis used the documented operational thresholds of corrected ADL ≥ 16 for independence and recorded perceived quality-of-life score ≥ 37 for high status. The label "threshold-defined mismatch" denotes only an analytic difference between two study-specific dichotomizations; it is not a diagnosis or a prevalence estimate. Robustness was examined using adjacent thresholds and sample medians. Other repeated transformations of the same 50 observations were treated as supplementary rather than independent confirmation. Analyses were conducted in Python using SciPy and statsmodels; the de-identified total-score dataset and reproducibility materials are retained with the study files.

2.6 | Ethical Consideration

The parent study received approval from the Health Research Ethics Committee of Universitas Dr. Soekardjo (128/01/KEPK-UNIDSOE/V/2026). Participants were informed about the study and provided consent. The analytic dataset contained no direct identifiers. This secondary analysis used the de-identified records without changing the original conditions of participation.

3 | Results

3.1 | Participant Characteristics and Score Distributions

All 50 records had complete age, sex, original ADL-total, and recorded perceived quality-of-life-total data. Participants were 60-90 years old, with a mean age of 73.94 years (SD 8.82); 25 were women and 25 were men. The corrected ADL composite had a mean of 15.40 (SD 3.36), median of 17 (IQR 13-18), range of 7-18, and bias-corrected skewness of -

1.09. Twenty-three participants (46%) had the maximum corrected score of 18, demonstrating a pronounced ceiling effect and restricted upper-end variability. The recorded perceived quality-of-life composite had a mean of 36.98 (SD 6.06), median of 40 (IQR 32-43), range of 25-43, and skewness of -0.58. Fourteen participants (28%) shared the highest observed score of 43; the theoretical maximum of 45 was not observed. This pattern is more accurately described as upper-end concentration than a complete scale ceiling. Both distributions therefore had limited discrimination among residents with relatively high scores (Table 1).

TABLE 1 | Participant Characteristics and Study-Specific Composite Scores

Characteristic	Overall (n=50)
Age, years, mean (SD)	73.94 (8.82)
Age, years, median (IQR)	75 (65-81)
Age 60-69 years, n (%)	17 (34.0)
Age 70-79 years, n (%)	16 (32.0)
Age ≥80 years, n (%)	17 (34.0)
Women, n (%)	25 (50.0)
Corrected recorded ADL composite, mean (SD)	15.40 (3.36)
Corrected recorded ADL composite, median (IQR)	17 (13-18)
Corrected recorded ADL composite, range	7-18
Perceived QoL composite, mean (SD)	36.98 (6.06)
Perceived QoL composite, median (IQR)	40 (32-43)
Perceived QoL composite, range	25-43
Corrected recorded ADL composite, skewness	-1.09
Corrected ADL at maximum of 18, n (%)	23 (46.0)
Recorded perceived QoL composite, skewness	-0.58
Recorded QoL at highest observed score of 43, n (%)	14 (28.0)

Description: QoL = quality of life. Skewness values are bias-corrected Fisher-Pearson coefficients; negative values indicate concentration toward higher scores. The corrected ADL range reflects top-coding of three original values of 19 to the documented analytic maximum of 18. Original-total and exclusion sensitivity results are reported in Table 2.

3.2 | Primary Association and Sensitivity Analyses

The corrected recorded ADL composite was positively associated with the recorded perceived quality-of-life composite (Spearman $\rho=0.332$, 95% bootstrap CI 0.015-0.599; $P=0.019$). The estimate is best described as a modest positive association with substantial uncertainty: the confidence interval extended from nearly null to moderately strong. Because almost half of participants shared the maximum corrected ADL total, tied ranks and restricted variance may have attenuated differentiation among highly functional residents. Figure 1 displays the observed scores and their upper-end concentration.

Using the original recorded ADL totals, including three values of 19, produced an almost identical Spearman estimate ($\rho=0.329$, 95% bootstrap CI 0.023-0.593; $P=0.020$). Excluding the three records with original totals above 18 also produced a similar estimate ($n=47$; $\rho=0.342$, 95% bootstrap CI 0.028-0.608; $P=0.019$). Kendall tau-b, which accounts for ties, was 0.256 (95% bootstrap CI 0.011-0.477; $P=0.020$). The age- and sex-adjusted HC3 model estimated a 0.874-point higher mean recorded quality-of-life score per one-point higher corrected ADL total (95% CI 0.344-1.404; $P=0.001$). This coefficient is an associational mean contrast within a score-restricted sample. A one-point difference near the upper boundary should not be assumed equivalent to a one-point difference elsewhere on the scale, and the estimate does not imply that an intervention changing ADL would cause an equivalent change in well-being.

Model diagnostics did not identify a single observation that determined the adjusted result. The maximum leverage was 0.184 and the maximum Cook's distance was 0.180. Leave-one-out ADL coefficients ranged from 0.769 to 1.015, while leave-one-out Spearman coefficients ranged from 0.288 to 0.392. Residual and heteroscedasticity checks did not indicate that a single model defect explained the association. These checks support numerical stability within this dataset but do not correct the underlying ceiling effect, bounded outcome, restricted variance, or measurement uncertainty.

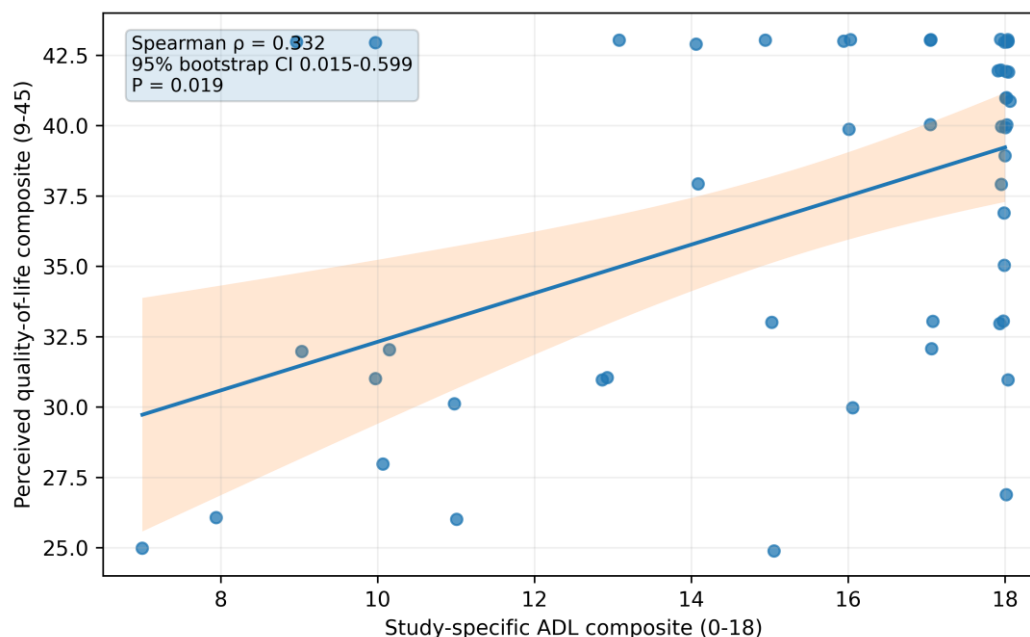


FIGURE 1 | Association between the corrected study-specific ADL composite and perceived quality-of-life composite. Points are minimally jittered to display overlapping observations. The line and shaded band show an unadjusted linear fit and 95% confidence interval for visualization only; primary inference used Spearman rank correlation.

TABLE 2 | Primary and Main Sensitivity Analyses

Analysis	Estimate	95% CI	P value
Primary: corrected-total Spearman correlation	rho=0.332	0.015 to 0.599*	0.019
Sensitivity: original-total Spearman correlation	rho=0.329	0.023 to 0.593*	0.020
Sensitivity: exclude three out-of-range original totals	rho=0.342	0.028 to 0.608*	0.019
Sensitivity: corrected-total Kendall tau-b	tau-b=0.256	0.011 to 0.477*	0.020
Sensitivity: adjusted HC3 linear model	beta=0.874	0.344 to 1.404	0.001

Description: f(%) = Number of Participants (percentage); M = Mean; SD = Standar Deviation *Percentile bootstrap confidence interval from 20,000 resamples. The exclusion analysis omitted the three records whose original ADL totals exceeded 18. The HC3 model was adjusted for centred age and sex; beta is the associational mean difference in recorded quality-of-life score per one-point higher corrected ADL total.

3.3 | Exploratory Operational Profiles

Using the documented operational thresholds, 24 residents (48%) were independent with high recorded perceived quality of life, eight (16%) were independent with non-high recorded perceived quality of life, six (12%) were dependent with high recorded perceived quality of life, and 12 (24%) were dependent with non-high recorded perceived quality of life. The two off-diagonal groups comprised 14 residents (28%). This figure is a threshold-defined descriptive mismatch, not the prevalence of a clinical condition. Across adjacent cut-offs and median-based definitions, the mismatch ranged from 28% to 36%, indicating material sensitivity to the operational definition.

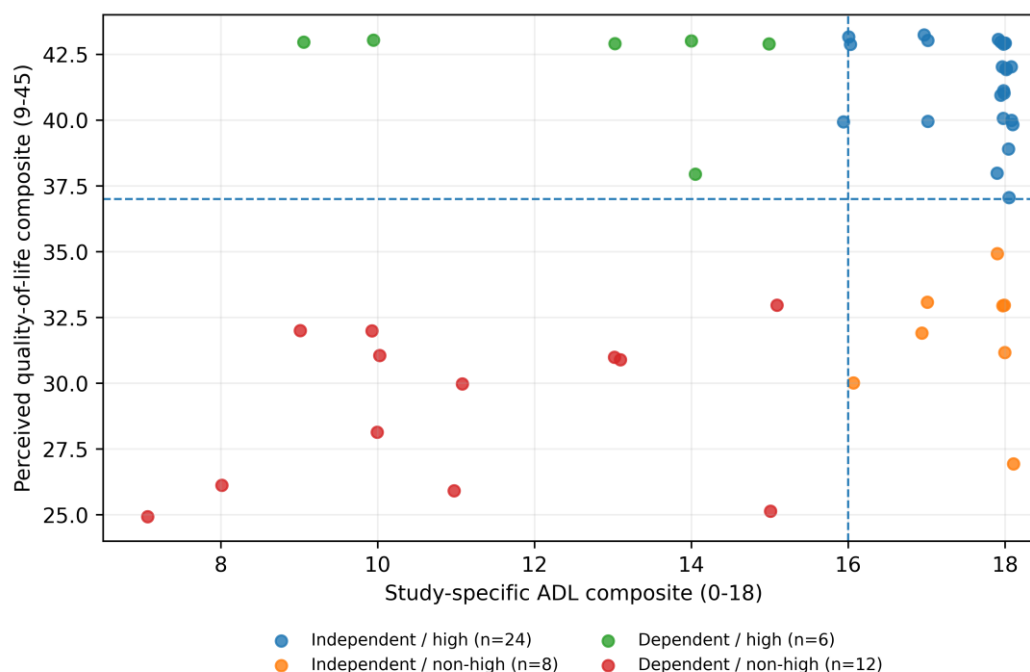


FIGURE 2 | Exploratory operational profiles defined by corrected ADL ≥ 16 and recorded perceived quality-of-life score ≥ 37 . Dashed lines mark study-specific thresholds that have not been externally validated. 'Threshold-defined mismatch' indicates only an analytic difference between the two dichotomized composites and is not a diagnosis or prevalence estimate. Threshold sensitivity is summarized in the Results.

4 | Discussion

4.1 | Interpretation of the Findings

The corrected recorded ADL and perceived quality-of-life composites showed a modest positive association among 50 communicative residents of one Indonesian facility. The direction was consistent when original values of 19 were retained, when the three out-of-range records were excluded, when a tie-adjusted rank coefficient was used, and after adjustment for age and sex. The wide confidence intervals remain central to interpretation: the data are compatible with anything from a near-null to a moderately strong monotonic relationship. The results support only a local exploratory statement that higher recorded daily-function totals tended to accompany higher recorded well-being totals. They do not establish a precise population effect, validated construct relationship, or causal pathway.

The estimate is broadly consistent with studies in institutional settings in which ADL dependence contributed to poorer health-related quality of life alongside cognition, sarcopenia, nutrition, frailty, and self-rated health. [12, 13, 14] Longitudinal and cross-sectional studies outside this facility likewise report poorer quality of life after the onset or accumulation of ADL difficulty. [37, 38] The present study adds a local, transparently re-audited observation rather than evidence that the relationship itself is novel.

The operational profile analysis illustrates why the two recorded composites should not be treated as substitutes. Large nursing-home datasets have shown that administrative or proxy indicators explain only a limited share of resident-reported quality-of-life variation. [15] That literature supports the conceptual possibility of mismatch, but it does not validate the present 28% figure. A direct numerical comparison with a published "discordance prevalence" is not defensible because studies use different validated or non-validated instruments, populations, and cut-offs and rarely apply the same joint threshold definition. In the present data, some residents with high corrected ADL totals had non-high recorded well-being totals, while some residents with lower ADL totals had high recorded well-being totals. These patterns cannot be labelled hidden vulnerability, successful adaptation, or a clinical syndrome from the available variables. The range of 28%-36%

under alternative thresholds shows that the percentage is partly a categorization artifact and should be interpreted only as a within-sample illustration that recorded function and recorded well-being did not always move together.

Several plausible mechanisms remain relevant. Pain, loneliness, restricted activity, tangible support, and social engagement may influence well-being independently of basic task performance. [16, 17, 18, 19, 20, 39] Meaningful activity and continuity of identity may persist when activities are adapted, [21] and meaning in life can remain relevant despite institutional care and functional limitation. [40] Service quality also depends on dignity, relationships, staffing, participation in decisions, mobility opportunities, and preferred family involvement. [22, 23, 24, 41]

Intervention evidence reinforces the need to measure function and well-being separately. Person-centred programmes can improve selected resident outcomes without eliminating underlying disability. [25, 26, 27] Rehabilitation may improve ADL while producing uncertain or variable quality-of-life effects. [28] Multicomponent exercise, function-focused programmes, and virtual-reality rehabilitation have reported gains in functional performance or selected quality-of-life outcomes, but designs, populations, and measures differ. [29, 30, 32, 42] Co-designed reablement and nursing models emphasize individualized assistance and staff behaviour. [33, 34, 35]

Environmental and engagement interventions offer additional, but not uniform, pathways to well-being. Personalized tablets, digital art, and music interventions have expanded opportunities for recreation or engagement without consistently improving total quality-of-life scores. [43, 44, 45] Observational work in green-care settings links social interaction and purposeful daily life with mood, autonomy, and activity. [46, 47] These findings are compatible with the modest correlation observed here: function may enable participation, while the social and organizational environment shapes whether that capacity translates into a positive lived experience.

Residual confounding is likely. Nutritional status and frailty are closely associated with function in long-term-care populations, [42, 48] while individualized nutritional support can improve intake or selected quality-of-life dimensions without changing all functional outcomes. [49] Cognitive decline, depression, multimorbidity, frailty, sarcopenia, and fracture risk may further affect both function and well-being. [50, 51, 52] Digital comprehensive assessment may eventually facilitate repeated multidomain monitoring, but current proof-of-concept evidence remains preliminary. [53]

The data audit is both a strength and a warning. Retaining original totals, top-coding the three out-of-range values, and excluding those three records yielded similar correlations, suggesting that the observed direction was not created solely by the range-harmonization decision. Top-coding, however, was not imputation and did not resolve the underlying nine-versus-ten-item inconsistency. The ADL source materials remained internally inconsistent, and the quality-of-life form did not document reverse coding of negatively worded items. Numerical robustness across alternative handling rules cannot compensate for uncertain construct validity. The results are therefore evidence about recorded study-specific totals, not validated estimates of functional independence or multidimensional quality of life.

4.2 | Implications for Practice

The findings support a cautious two-axis assessment approach. Functional assessment should identify what a resident can do safely and where graded assistance, environmental modification, or rehabilitation may be required. A separate resident-reported assessment should ask about pain, sleep, emotional experience, enjoyment, social connection, autonomy, and environmental satisfaction. The two results should be interpreted together rather than collapsed into a single judgement of whether the resident is 'doing well'.

Practice recommendations must remain proportionate to the evidence. This single-site analysis does not demonstrate that improving ADL causes improved quality of life, does not validate the locally recorded composites, and does not validate the operational profile thresholds. Its clinically reasonable implication is limited to assessment process: a resident should not be judged to be doing well solely because a function-focused score is high. Services should use validated functional instruments alongside direct, validated resident-reported assessment of pain, sleep, emotional experience, enjoyment, social connection, autonomy, and environmental satisfaction. These recommendations arise from person-centred assessment principles and the broader literature, not from the exact numeric coefficient observed in this small dataset.

4.3 | Limitations

This study has substantial limitations. The cross-sectional design prevents temporal and causal inference. Purposive sampling from one facility limits generalizability, and eligibility criteria excluded residents unable to communicate or understand the questionnaire. The findings may therefore overrepresent relatively communicative and functionally able residents. The sample size was small, confidence intervals were wide, and adjustment was limited to age and sex because clinically important confounders were unavailable. The corrected ADL distribution had a pronounced ceiling effect, and the recorded quality-of-life distribution had substantial upper-end concentration. These features restricted variance, increased tied observations, reduced discrimination among high-scoring residents, and limit interpretation of the adjusted linear mean difference even though HC3 standard errors and leave-one-out diagnostics were used.

Construct validity is the principal limitation. The ADL source materials were internally inconsistent regarding the number of items and maximum score. The quality-of-life composite was not WHOQOL-BREF or WHOQOL-OLD, and reverse coding of negatively worded items could not be verified. The post hoc face-level content review cannot substitute for formal validity evidence. Item-level data were unavailable for internal consistency, dimensionality, inter-rater reliability, rescoring, or identification of the exact source of the three totals of 19. The conservative top-coding rule prevented known out-of-range values from exceeding the supported analytic maximum but did not repair the underlying instrument provenance. Administration details, interviewer training, assistance, and proxy use were incompletely documented. Finally, the operational cut-offs were not externally validated; the 28% mismatch must not be interpreted clinically or as a population prevalence.

Future studies should use validated Indonesian instruments, retain item-level data, document administration and rater training, and measure cognition, depression, pain, multimorbidity, nutrition, social support, family contact, length of residence, and participation. Multicentre prospective designs could determine whether changes in function precede changes in resident-reported well-being. Qualitative work could examine why residents with similar functional scores evaluate their lives differently.

5 | Conclusion

In this exploratory secondary analysis of 50 communicative residents from one Indonesian social-care facility, higher corrected recorded study-specific ADL totals were modestly associated with higher recorded perceived quality-of-life totals. The direction was similar under alternative handling of the three out-of-range ADL values, but wide confidence intervals, pronounced upper-end score concentration, uncertain instrument construction, and unvalidated thresholds substantially limit interpretation. The exact 0.874-point adjusted mean difference and the 28% threshold-defined mismatch should not be generalized as clinical effects or prevalence estimates. The defensible takeaway is that a locally recorded function-focused total did not fully represent recorded resident well-being. Future multicentre studies should use validated Indonesian ADL and quality-of-life instruments, retain item-level data, include residents across broader functional and cognitive ranges, and assess relevant clinical, psychological, social, and environmental factors.

Declaration of Interest

The authors declare that they have no conflicts of interest.

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Data Availability

The de-identified total-score dataset and reproducibility materials used for the revised analyses are retained with the study files and may be shared subject to institutional approval and the ethical conditions of the parent study. Item-level questionnaire responses were not available.

Supplementary Material

Supplementary Figures S1 and S2 are available in the accompanying Supplementary Material file.

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