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RESEARCH ARTICLE

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Validation of the Good Spirit, Good Life quality-of-life tool for older Aboriginal Australians

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Abstract

Objective: Improving the quality of life (QoL) of older people is a key priority for governments, clinicians, researchers and service providers worldwide. However, the lack of culturally appropriate QoL tools for First Nations people is a major barrier to such efforts. The purpose of this study was to evaluate the psychometric properties of the Good Spirit, Good Life (GSGL) QoL tool for older Aboriginal Australians.

Methods: One hundred and twenty older Aboriginal people living in Perth and Melbourne, Australia, were administered the GSGL tool, along with several other instruments assessing cognition (KICA-Cog), depression (KICA-Dep), anxiety (GAI-SF), health and well-being (EQ-5D-5L and ICECAP-O) and resilience (ARRQ-25). Associations between these instruments and the GSGL tool were explored to determine concurrent and known-groups validity. Internal consistency was assessed with split-half reliability and Cronbach's alpha. Exploratory factor analysis was performed to investigate construct validity.

Results: GSGL scores were positively correlated with ICECAP-O and ARRQ-25 scores, and negatively correlated with EQ-5D-5L score. GSGL scores differed significantly between participants with a probable anxiety disorder or depression, but not those with cognitive impairment. The Spearman–Brown prophecy estimate was 0.83 and Cronbach's alpha was 0.75. Principal component analysis identified two factors, which were labelled foundation and external.

Conclusions: The GSGL tool is a valid tool to assess quality of life in older Aboriginal Australians. The tool demonstrates acceptable convergent, concurrent and known-groups validity. It was co-designed at all stages with older Aboriginal people contributing to its strong face and content validity.

KEYWORDS

Aboriginal, Indigenous, quality of life, validity, well-being

1 | INTRODUCTION

Aboriginal and Torres Strait Islander people, referred to in this paper as First Nations people, are the traditional custodians of Australia with a rich and diverse cultural heritage that has survived and continued despite the impacts of colonisation. The older First Nations population is steadily growing, with the proportion of those aged >50 years projected to rise from 16% in 2016 to 20% by 2031.[1,2] However, racism, trauma and diminished health, life expectancy and socio-economic outcomes continue to pervade this older population's experiences. Addressing this requires a focus on ageing well from the perspective of older First Nations Australians through culturally safe models of care and genuine engagement.[3,4]

Presently, the aged care system is not meeting the holistic health and well-being needs of older First Nations people.[5-7] A major finding of the recent Australian Royal Commission into Aged Care is that the current aged care system does not provide culturally safe care for First Nations people; thus, an imperative for change and reform is outlined in the report's recommendations. This includes the urgent call for a greater focus on quality of life (QoL), trauma informed care, Aboriginal-led service delivery and cultural safety in all levels of the aged care system.[5]

Optimising QoL is especially important in later life when quality over quantity becomes increasingly important.[8] Additionally, QoL outcomes for older non-Aboriginal people are associated positively with resilience and negatively with disabling health conditions such as depression and anxiety.[9-11] The Royal Commission recommended that QoL must be a constant and key priority to improve health and well-being, including cultural safety, in the aged care system,[5] stating that the current system 'pays insufficient attention to the quality of life of aged care users'.[5(p136)] However, until recently, no valid QoL framework, measure or strategies for older First Nations people were available.

There is great diversity in cultural expression and identity between Aboriginal people and Torres Strait Islander people.[12] The Good Spirit, Good Life (GSGL) tool is a newly developed instrument specifically designed with, and for, older Aboriginal Australians from urban and regional areas. Due to the participatory and iterative nature of its development, the tool is grounded in the collective and holistic Aboriginal worldview of health and well-being, informing a cultural QoL framework and contributing to the tool's face and content validity. The GSGL tool has 12 culturally informed dimensions that contribute to an older Aboriginal person's QoL, including family and friends, community, Country, culture, health, the Elder role, respect, spirituality, supports and services, safety and security, future planning and basic needs.[13]

Policy Impact

Good Spirit, Good Life (GSGL) is a valid tool recommended for incorporation into the Commonwealth aged care assessment package for Aboriginal Australians. Development of new quality indicators for aged care including QoL assessment will enhance quality of life (QoL) and culturally safe care for older Aboriginal Australians.

Practice Impact

The Good Spirit, Good Life assessment is recommended for use by Australian health and aged care services as the gold standard to identify and address the quality-of-life needs of older Aboriginal people and inform quality, culturally meaningful health and aged care.

An instrument must have robust psychometric properties before it is used for clinical, research and/or service improvement purposes.[14] As QoL is shaped by a person's values and culture,[15] QoL instruments must be developed and validated with the intended target population. Therefore, the aim of this study was to evaluate the psychometric properties of the GSGL tool with older Aboriginal people living in urban and regional areas.

2 | METHODS

2.1 | Instrument development

The GSGL tool was co-developed using Indigenous research methodology with a participatory action research approach[16,17] with older Aboriginal people aged 45 years or older living in Perth and Melbourne, Australia.[13] There are two versions: a 'Participant Version' that is self-reported, and a 'Carer Version' reported by proxies when a person is unable to self-report. An Aboriginal Elders Governance Group and a Service Providers Advisory Group were established to oversee the research process from a cultural and service provision perspective. The development and face validity of the tool are described in greater detail in our qualitative methodology paper.[13]

The final version of the tool (see Appendix S1) comprises 12 items, each scored using a Likert scale ranging from 0 to 4. The corresponding responses to each item are 'never', 'not much', 'sometimes', 'most of the time' and 'all of the time'. The scores for each item are summed to produce a total score ranging from 0 to 48. A higher

score equates to greater well-being. The GSGL Assessment Package (tool and resources) is freely available to be downloaded from: http://www.aboriginalageingwellresearch.com.

2.2 | Participants and study design

A total of 120 Aboriginal people aged 45 years or older living in Perth, Western Australia, Melbourne, Victoria, or visiting from regional areas, were recruited via snowball sampling to assess the validity of the instrument.

Participants were administered the GSGL tool and several other instruments assessing health and well-being domains that may influence QoL. Instruments were selected based on their validity or suitability for use with older Aboriginal people, and then reviewed and endorsed by the Elders Governance and Service Provider Advisory Groups. These included the Kimberley Indigenous Cognitive Assessment of Depression (KICA-Dep; total score 0–33, scores ≥8 indicate possible depression), Geriatric Anxiety Inventory short form (GAI-SF; total score 0–5, scores ≥3 indicate a possible anxiety disorder), the short form of the Aboriginal Resilience and Recovery Questionnaire (ARRQ-25; total score 0–100), and the Kimberley Indigenous Cognitive Assessment (KICA-Cog; total score 0–39, scores ≤33 indicate possible cognitive impairment). The EQ-5D-5L (a tool to measure health-related QoL; total raw summative score 0–20) and ICEpop capability measure for older people (ICECAP-O; total raw summative score 0–15) are internationally developed QoL tools that are commonly used in clinical practice with older Australians. These QoL tools were selected for comparison due to the previous absence of a gold standard QoL tool for older Aboriginal peoples.

2.3 | Ethics

Ethical approval was obtained from the Western Australian Aboriginal Health Ethics Committee (HREC 722) and the University of Western Australia Human Research Ethics Committee (RA/4/1/8454). All participants provided written informed consent.

2.4 | Statistical analyses

We analysed the data using Stata SE, version 15.1 (StataCorp) and investigated differences in continuous variables between groups with two-sample t tests and one-way analysis of variance. The Shapiro–Wilk W test was applied to assess normality, we calculated the Spearman–Brown prophecy estimate as a measure of split-half reliability, and further explored internal consistency with Cronbach's alpha. Factor extraction was performed using principal component analysis (PCA) with orthogonal equamax rotation and Kaiser normalisation. Parallel analysis (using the *fapara* package) was used to determine the number of factors to retain. As there is no gold standard for the measurement of QoL for older Aboriginal people, we investigated associations between the GSGL tool and other instruments with Spearman's rank-order correlation. p values <0.05 were considered statistically significant.

3 | RESULTS

3.1 | Demographics

Characteristics of the 120 participants are shown in Appendix S2. Their mean age was 64.4 ± 9.6 years. Participants had an average of 8.5 ± 2.1 years of education, and the majority (68%) were women. Most participants (58%) reported 'good', 'very good' or 'excellent' health. Ten participants (8%) met criteria for cognitive impairment, 48 (40%) for an anxiety disorder and 54 (45%) for depression.

3.2 | Instrument overview

There were four persons with missing data. Accordingly, the GSGL tool was scored for 116 participants (97%). Total GSGL scores ranged from 18 to 47, with a mean of 36.7 ± 6.9. The distribution had a moderate negative skew (skewness = −0.5, kurtosis = 2.7) and as such was

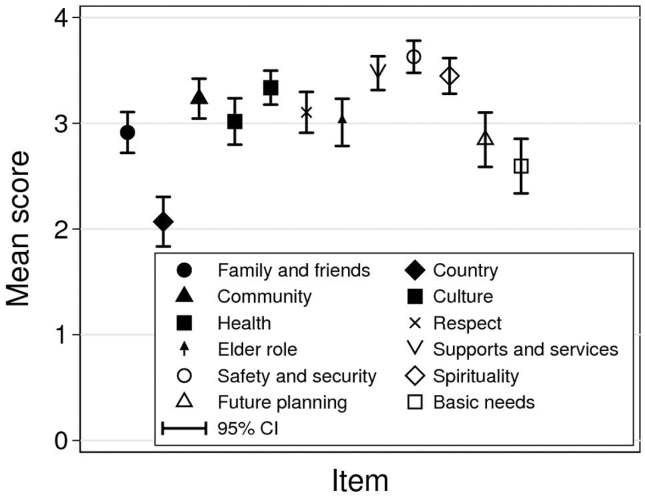

FIGURE 1 Scores for individual items of the Good Spirit, Good Life tool.

not normal ($p = 0.02$). The Spearman–Brown prophecy estimate was 0.83, and Cronbach's alpha was 0.75, indicating acceptable reliability. There was, however, a difference in mean scores for the individual items of the scale ($p < 0.001$; Hotelling's T^2 test). The mean score for the Country item (2.1 ± 1.3) was markedly lower than that of the other components (Figure 1). Item-total correlations were greatest for the Respect ($\rho = 0.65$), Elder role ($\rho = 0.65$), Culture ($\rho = 0.62$) and Spirituality ($\rho = 0.61$) items.

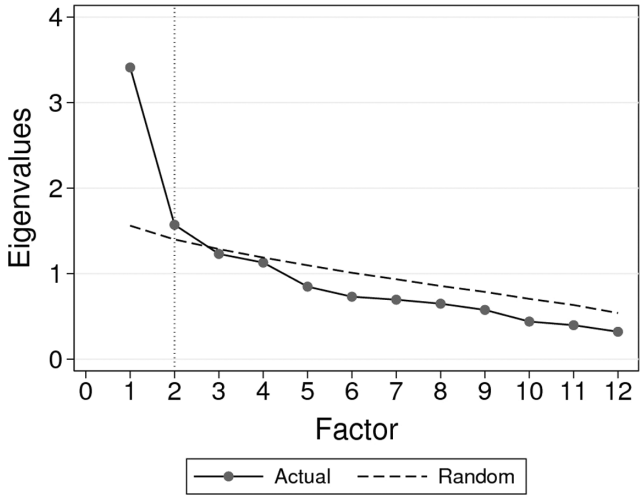

FIGURE 2 Scree plots comparing actual and random data by parallel analysis. Vertical line denotes the number of factors retained.

3.3 | Factor analysis

The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.72 and Bartlett's test of sphericity was significant ($p < 0.001$), indicating data were appropriate for factor analysis. An initial PCA revealed that four components had eigenvalues greater than 1, explaining 61% of the variance. However, parallel analysis suggested a two-factor model was appropriate (Figure 2). Two factors were retained and orthogonal equamax rotation performed, yielding a model explaining 41% of the variance (22% for factor one and 19% for factor two). Factor loadings were relatively clear, with all but two greater than 0.5 (Table 1). The loading for item 8 (Supports and services) was particularly low (0.28) and the uniqueness high (0.91). This item was retained, because a secondary aim of this project was to develop a tool which could be used by service providers to gauge whether clients' needs were met. However, we did not consider a three-factor solution because parallel analysis indicated this

TABLE 1 Two-factor solution for exploratory factor analysis of the Good Spirit, Good Life tool using principal component analysis with equamax rotation and Kaiser normalisation.

Item	Factor 1 Foundation	Factor 2 External	Uniqueness
1. Family and friends—Do you get to have a yarn and spend time with family or friends?	**0.65**	−0.12	0.56
2. Country—Do you feel you spend enough time connecting to country?	**0.70**	−0.08	0.50
3. Community—Do you feel connected to the Aboriginal (and/or Torres Strait Islander) community?	**0.46**	0.25	0.73
4. Culture—Do you feel connected to cultural ways?	**0.69**	0.18	0.50
5. Health—Do you do things to take care of your health?	0.01	**0.59**	0.65
6. Respect—Do you feel respected and valued as an elder/older person?	0.25	**0.74**	0.39
7. Elder role—Do you feel you can share your knowledge and stories with the younger mob?	**0.53**	0.44	0.53
8. Supports and services—Do you feel the services you use are respectful and support your needs?	−0.07	**0.28**	0.91
9. Safety and security—Do you feel you have a safe place to live?	**0.62**	0.13	0.59
10. Spirituality—Do you feel safe and supported in your spiritual beliefs?	**0.52**	0.40	0.57
11. Future planning—Do you feel you have things in place as you grow older?	−0.01	**0.76**	0.42
12. Basic needs—Do you feel you have enough money to get by?	0.22	**0.53**	0.67

Note: Coefficients in bold indicate major factor loadings.

would be inappropriate, and we wanted to ensure all factors had at least three items. Thus, the final model had two factors labelled as foundation (7 items) and external (5 items).

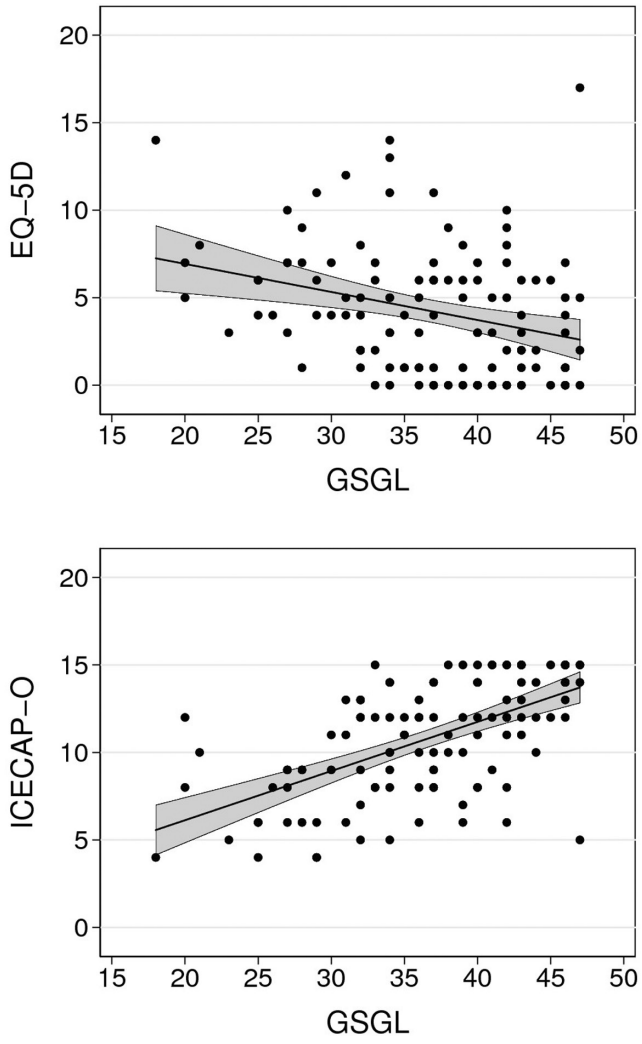

FIGURE 3 Correlations between Good Spirit, Good Life tool and other instruments. Shaded region indicates 95% confidence interval. EQ-5D-5L, EuroQoL-5 Dimension-5 Level; GSGL, Good Spirit, Good Life; ICECAP-O, ICEpop capability measure for older people.

3.4 | Convergent validity

There was a moderate positive correlation between total GSGL score and participants' overall self-reported QoL ($\rho = 0.48$; $p < 0.001$). Mean total GSGL score was 26.0 ± 7.0 in those who reported never feeling they had a good life, and 39.1 ± 6.1 in those who felt they always had a good life ($p < 0.001$).

3.5 | Concurrent validity

As illustrated in Figure 3, there was a weak inverse correlation between total GSGL score and EQ-5D-5L score ($\rho = -0.32$; $p < 0.001$), and a direct moderate correlation between total GSGL score and ICECAP-O score ($\rho = 0.61$; $p < 0.001$) and ARRQ-25 score ($\rho = 0.64$; $p < 0.001$). Total GSGL score was only weakly correlated with self-reported general health ($\rho = 0.25$; $p = 0.007$). Mean GSGL score by health status was as follows: poor, 30.8 ± 7.5; fair, 36.9 ± 5.9; good, 37.5 ± 6.8; very good, 38.7 ± 6.6; excellent, 38.3 ± 4.8 ($p = 0.008$). The mean score was 35.1 ± 6.9 in those with fair or poor general health, and 37.9 ± 6.5 in those reporting good health or better ($p = 0.03$).

3.6 | Known-groups validity

As shown in Table 2, mean total GSGL score was lower in participants meeting criteria for depression (33.7 ± 6.4 vs. 39.2 ± 6.0; $p < 0.001$), and those with a possible anxiety disorder (33.5 ± 6.7 vs. 38.8 ± 6.3; $p < 0.001$). There was no significant difference in total GSGL score between those with and without evidence of cognitive impairment (35.9 ± 9.7 vs. 36.7 ± 6.6; $p = 0.7$).

3.7 | Invariance

Total GSGL score did not differ by sex ($p = 0.6$) and was not significantly correlated with age ($\rho = 0.17$; $p = 0.07$).

TABLE 2 Good Spirit, Good Life scale scores by known groups.

	No anxiety (GAI-SF ≤2)	Anxiety (GAI-SF ≥3)		No depression (KICA-Dep ≤7)	Depression (KICA-Dep ≥8)	
GSGL scores	**Mean ± SD**	**Mean ± SD**	***p* value**	**Mean ± SD**	**Mean ± SD**	***p* value**
Total score	38.8 ± 6.3	33.5 ± 6.7	<0.001	39.2 ± 6.0	33.7 ± 6.4	<0.001
Foundation score	22.3 ± 4.4	19.8 ± 4.9	0.004	22.7 ± 4.3	19.8 ± 4.6	<0.001
External score	16.5 ± 3.3	13.7 ± 3.3	<0.001	16.6 ± 3.3	13.9 ± 3.2	<0.001

Abbreviations: GAI-SF, Geriatric Anxiety Inventory short form; KICA-Dep, Kimberley Indigenous Cognitive Assessment of Depression.

4 | DISCUSSION

This study demonstrates that the GSGL tool is a valid QoL measure for older Aboriginal Australians, with acceptable convergent, concurrent, and known-groups validity. It is a culturally valid tool recommended for older Aboriginal people living in both urban and regional settings.

The general QoL question in the prototype GSGL tool, '*Overall, do you feel you have a good life?*' was not strongly correlated with total GSGL score. This question was therefore removed from the final GSGL tool. Self-reported general health was weakly correlated with total GSGL score, suggesting the GSGL tool captures additional information to self-reported health status. This is reflected in the GSGL framework where health is one component of the 12 dimensions important to QoL for older Aboriginal people.[13] A holistic measure is required to capture all QoL dimensions.

Total GSGL scores were positively correlated with ICECAP-O and ARRQ-25, and weakly negatively correlated with EQ-5D-5L. The ICECAP-O questions lacked relatability for participants; hence, we recommend against using the ICECAP-O tool to assess QoL for older Aboriginal Australians. The ARRQ-25 is a culturally specific questionnaire assessing resilience.[18] The positive correlation between total GSGL score and ARRQ-25 score is consistent with current literature. MacLeod et al.[11] explored the impact of resilience among older adults in the general population and found higher levels of resilience enables higher QoL, despite any adversity experienced. The EQ-5D-5L tool uses a deficit-based method of questioning compared to the GSGL tool, which explains the negative correlation between scores of the two tools. The EQ-5D-5L focusses on health-related QoL but does not encompass the holistic QoL values of older Aboriginal people. The key health-related actions that strengthen QoL for older Aboriginal people are self-determination to make positive health decisions; having physical, emotional and spiritual well-being in balance; and being healthy enough to care for family.[13] The EQ-5D-5L tool does not encompass these actions but could supplement the GSGL tool to obtain further information on clinical health-related dimensions. A recent study by Ribeiro Santiago et al[19] determined good concurrent validity of the EQ-5D-5L for Aboriginal Australians; however, the authors acknowledge that these health-related QoL domains do not encompass the holistic QoL dimensions important to Aboriginal Australians and a more comprehensive instrument is recommended.[19] Furthermore, face validity testing of the GSGL tool determined that use of personal statements and a typical Likert scale (used in the ICECAP-O) is inappropriate for older Aboriginal people,[13] particularly given the high prevalence of dementia in this population.[20,21] The GSGL tool uses questions rather than statements and a yes/no dichotomous response to divide the Likert scale into smaller parts. We found this modified assessment method improved both administration (by the assessor) and understanding (from participants), creating a more perceptive and user-friendly tool.

Total GSGL scores differed significantly between participants who did or did not meet criteria for anxiety or depression. Anxiety and depression are known to be independently associated with lower perceived QoL. In their study with older non-Aboriginal people, Sivertsen et al.[9] found a significant association between lower QoL and severity of depression in older persons. Similarly, a systematic review by Creighton et al.[22] found anxiety was strongly correlated with lower perceived QoL in older non-Aboriginal adults living in residential aged care facilities.[22] The GSGL participants who screened positively for anxiety or depression in our study were referred to their general practitioner for medical review by the study's geriatricians. The high prevalence of possible anxiety (40%) and depression (45%) among participants is concerning, although our sample was non-representative and it is possible that individuals accessing health and aged care services are more likely to have these conditions.[23,24] Addressing QoL through a culturally informed well-being framework such as GSGL may assist in the management of anxiety and depression with older Aboriginal people. There was no difference in total GSGL score between those with and without cognitive impairment, suggesting that people with cognitive impairment do not necessarily view that they have poor QoL.

We found the mean score for the Country item was lower than other item scores suggesting that opportunities to connect to Country was the primary unmet need identified by the GSGL assessment during the study. Due to colonisation and past policies, including the Australian governmental policy of removing First Nations children from their families (known as the Stolen Generation), many First Nations older people were displaced from their Country (the Australian geographical region over which the person has ancestral ties and custodianship).[13] Additionally, older First Nations people may have relocated for other reasons, (for example, medical or family reasons), and no longer live on Country. During the development phase of the GSGL tool, the Elders Governance Group identified yarning about Country or being outside in nature as important to QoL. Service providers can do more to enhance older Aboriginal people's connection to Country, and thus have a positive impact

on QoL. Strategies to improve connection to the GSGL dimensions are freely available at: http://www.aboriginalageingwellresearch.com.

Principal component analysis identified two factors: foundation and external. The foundation factor comprises the family and friends, Country, community, culture, Elder role, spirituality, and safety and security items. These foundation items are grounded in the Aboriginal worldview of well-being. Gee et al.[25] identified Country, family, community, spirituality and culture as key determinants of well-being for Aboriginal Australians of all ages. The two additional foundation items (Elder role; safety and security) become increasingly important to Aboriginal people as they age. The Elder role is fulfilled by an older and respected First Nations person who is recognised by the community to hold authority, protect and pass on traditions and culture, and provide counsel to younger generations. The safety and security item was associated with personal and family safety to overcome barriers, such as housing insecurity, abuse racism.[13] The external factor comprises the health, respect, supports and services, future planning and basic needs items. These items comprise services or constructs having an external circle of influence. For example, the basic needs and future planning items encompass concerns relating to managing current and future financial hardships for the individual and their families. Service providers can improve the health and well-being outcomes of older Aboriginal people by taking time to build trust and respect.[26] The health item describes being empowered to make health decisions enabling older people to meet their cultural, family and community obligations.

A major strength of this study is that the research process was guided by the Elders Governance Group and developed with older Aboriginal people.[13] The findings are therefore grounded in Aboriginal Australian worldviews. Additionally, all data were collected by Aboriginal researchers, who were also engaged in the analysis and discussion of the findings, enhancing cultural safety within the research process. It can be challenging to obtain large sample sizes in Aboriginal health research. Our sample size was relatively small, but adequate based on sample size requirements determined by a simulation study.[27] A limitation of this research is that the ICECAP-O and GAI-SF tools are not validated for use with Aboriginal people. Accordingly, the KICA-Dep and ARRQ-25 were the only 'gold standard' instruments to which we could compare our tool. Furthermore, we only evaluated the GSGL tool with older Aboriginal Australians living in urban and regional areas. Further testing will be completed to ensure the GSGL tool is valid both in remote populations and with older Torres Strait Islander people.

5 | CONCLUSIONS

The GSGL tool was launched in July 2020 by the Honourable Ken Wyatt, the Federal Minister for Indigenous Australians and the Honourable Ben Wyatt, the West Australian Treasurer and Minister for Aboriginal Affairs. In 2020, the good spirit, good life centre for research excellence (CRE) was funded by the National Health and Medical Research Council. An objective of the CRE is to investigate the adaptation of the GSGL tool for older Aboriginal people living in remote regions and Torres Strait Islander people. The GSGL tool is being reviewed for inclusion as a supplementary assessment in the Australian aged care assessment protocol. The GSGL package is available at http://www.aboriginalageingwellresearch.com for use by service providers, researchers and policymakers to optimise the QoL of older Aboriginal Australians.[13] As this is the first QoL assessment for older Indigenous peoples in Australia and worldwide, there is interest from international research teams in tailoring the methods of GSGL tool development and validation for other Indigenous populations.[13]

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CONFLICTS OF INTEREST

Co-author Professor Leon Flicker is a member of the Editorial Board of the *Australasian Journal on Ageing*.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions

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REFERENCES

1. Australian Bureau of Statistics. Estimated resident and projected population, Aboriginal and Torres Strait Islander Australians, series B, single year of age, Australia, states and territories, 2006 to 2031. 2019. Accessed June 5, 2021. https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/estimates-and-projections-aboriginal-and-torres-strait-islander-australians/latest-release#data-download
2. Australian Institute of Health and Welfare. Aged care for Indigenous Australians. 2019. Accessed June 5, 2021. https://www.aihw.gov.au/reports/australias-welfare/aged-care-for-indigenous-australians
3. Quigley R, Russell SG, Larkins S, et al. Aging well for indigenous peoples: a scoping review. *Front Public Health*. 2022;10:780898. doi:10.3389/fpubh.2022.780898
4. Lindeman MA, Smith K, LoGiudice D, Elliott M. Community care for I ndigenous older people: an update. *Australas J Ageing*. 2017;36(2):124-127.
5. Royal Commission into Aged Care Quality and Safety. *Final Report: Care, Dignity and Respect*. Vol 1. Commonwealth of Australia; 2021.
6. National Advisory Group for Aboriginal and Torres Strait Islander Aged Care. Our care, our way, our future: transforming care pathways for Aboriginal and Torres Strait Islander Elders. 2021. Accessed June 16, 2021. https://www.vaccho.org.au/nagatsiac/
7. Sivertsen N, Harrington A, Hamiduzzaman M. Exploring aboriginal aged care residents' cultural and spiritual needs in South Australia. *BMC Health Serv Res*. 2019;19(1):477. doi:10.1186/s12913-019-4322-8
8. Evans CJ, Ison L, Ellis-Smith C, et al. Service delivery models to maximize quality of life for older people at the end of life: a rapid review. *Milbank Q*. 2019;97(1):113-175. doi:10.1111/1468-0009.12373
9. Sivertsen H, Bjørkløf GH, Engedal K, Selbæk G, Helvik AS. Depression and quality of life in older persons: a review. *Dement Geriatr Cogn Disord*. 2015;40(5–6):311-339. doi:10.1159/000437299
10. Porensky EK, Dew MA, Karp JF, et al. The burden of late-life generalized anxiety disorder: effects on disability, health-related quality of life, and healthcare utilization. *Am J Geriatr Psychiatry*. 2009;17(6):473-482. doi:10.1097/JGP.0b013e31819b87b2
11. MacLeod S, Musich S, Hawkins K, Alsgaard K, Wicker E. The impact of resilience among older adults. *Geriatr Nurs*. 2016;37:266-272. doi:10.1016/j.gerinurse.2016.02.014
12. Dudgeon P, Wright M, Paradies Y, Garvey D, Walker I. Chapter 1: Aboriginal social, cultural and historical contexts. In: Pat Dudgeon HM, Walker R, eds. *Working Together: Aboriginal and Torres Strait Islander Mental Health and Well-Being Principles and Practice*. 2nd ed. Commonwealth Government of Australia; 2014:3-24.
13. Smith K, Gilchrist L, Taylor K, et al. Good spirit, good life: a quality of life tool and framework for older aboriginal peoples. *Gerontologist*. 2021;61:e163-e172. doi:10.1093/geront/gnz185
14. Beaudart C, Biver E, Reginster JY, et al. Validation of the SarQoL®, a specific health-related quality of life questionnaire for sarcopenia. *J Cachexia Sarcopenia Muscle*. 2017;8(2):238-244. doi:10.1002/jcsm.12149
15. World Health Organization. The health of Indigenous peoples. Accessed May 13, 2021. https://www.who.int/gender-equity-rights/knowledge/factsheet-indigenous-healthn-nov2007-eng.pdf?ua=1
16. Drawson A, Toombs E, Mushquash C. Indigenous research methods: a systematic review. *Int Indig Policy J*. 2017;8:6-7. doi:10.18584/iipj.2017.8.2.5
17. Baum F, MacDougall C, Smith D. Participatory action research. *J Epidemiol Community Health*. 2006;60(10):854-7. https://doi.org/10.1136/jech.2004.028662.PMID:16973531;PMCID:PMC2566051.
18. Gee G. *Resilience and recovery from trauma among aboriginal help seeking clients in an urban aboriginal community controlled organisation*. Unpublished doctoral dissertation. University of Melbourne, Melbourne; 2016.
19. Ribeiro Santiago PH, Haag D, Macedo DM, et al. Psychometric properties of the EQ-5D-5L for aboriginal Australians: a multimethod study. *Health Qual Life Outcomes*. 2021;19(1):81. doi:10.1186/s12955-021-01718-8
20. Smith K, Flicker L, Dwyer A, et al. Assessing cognitive impairment in indigenous Australians: re-evaluation of the Kimberley indigenous cognitive assessment in Western Australia and the Northern Territory. *Aust Psychol*. 2009;44(1):54-61. doi:10.1080/00050060802563463
21. Radford K, Mack HA, Draper B, et al. Comparison of three cognitive screening tools in older urban and regional aboriginal Australians. *Dement Geriatr Cogn Disord*. 2015;40(1–2):22-32. doi:10.1159/000377673
22. Creighton AS, Davison TE, Kissane DW. The correlates of anxiety among older adults in nursing homes and other residential aged care facilities: a systematic review. *Int J Geriatr Psychiatry*. 2017;32(2):141-154. doi:10.1002/gps.4604
23. Tusa N, Koponen H, Kautiainen H, et al. The profiles of health care utilization among a non-depressed population and patients with depressive symptoms with and without clinical depression. *Scand J Prim Health Care*. 2019;37(3):312-318. doi:10.1080/02813432.2019.1639904
24. Kujanpää T, Jokelainen J, Auvinen J, Timonen M. Generalised anxiety disorder symptoms and utilisation of health care services. A cross-sectional study from the "northern Finland 1966 birth cohort". *Scand J Prim Health Care*. 2016;34(2):151-158. doi:10.3109/02813432.2016.1160631
25. Gee G, Dudgeon P, Schultz C, Hart A, Kelly K. Chapter 4: Aboriginal and Torres Strait islander social and emotional wellbeing. In: Pat Dudgeon HM, Walker R, eds. *Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice*. 2nd ed. Commonwealth Government of Australia; 2014:55-58.
26. Gibson C, Crockett J, Dudgeon P, Bernoth M, Lincoln M. Sharing and valuing older aboriginal people's voices about social and emotional wellbeing services: a strength-based approach for

service providers. *Aging Ment Health*. 2020;24(3):481-488. doi: 10.1080/13607863.2018.1544220

27. Mundfrom DJ, Shaw DG, Ke TL. Minimum sample size recommendations for conducting factor analyses. *Int J Test*. 2005;5(2):159-168.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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