The Gerontologist, 2023, **63**, 1028–1038
https://doi.org/10.1093/geront/gnac190
Advance access publication 18 January 2023
Measurement Article

Developing the Occupational Communion Scale: Belonging-Based Social Connections Are Vital for Work Engagement, Self-Efficacy, and Positive Affect in Aged Care Workforces

Kate-Ellen J. Elliott, PhD,[1,2,*] Michael G. Quinn, PhD,[2] Christine M. Stirling, PhD,[3] Kristy Sanderson, PhD,[4] Andrew L. Robinson, PhD,[1] Angela J. Martin, PhD,[5] and Jennifer L. Scott, PhD[2]

[1]Wicking Dementia Research and Education Centre, College of Health and Medicine, University of Tasmania, Hobart, Tasmania, Australia.
[2]School of Psychological Sciences, College of Health and Medicine, University of Tasmania, Hobart, Tasmania, Australia.
[3]School of Nursing, College of Health and Medicine, University of Tasmania, Hobart, Tasmania, Australia.
[4]School of Health Sciences, University of East Anglia, Norwich, Norfolk, UK.
[5]Menzies Institute for Medical Research and Tasmanian School of Business and Economics, University of Tasmania, Hobart, Tasmania, Australia.

*Address correspondence to: Kate-Ellen J. Elliott, PhD, University of Tasmania, School of Psychological Sciences, Private Bag 30, Hobart, Tasmania 7001, Australia. E-mail: KateEllen.Elliott@utas.edu.au

Decision Editor: Suzanne Meeks, PhD, FGSA

Abstract

Background and Objectives: A multifaceted construct called *occupational communion* (OC), defined as a sense of belonging based on social interaction at work, has been proposed to understand why care workers were positively engaged in their jobs over time, even though they were very demanding. Rich qualitative data on the multiple aspects of OC in care work exist, but a valid measure does not.

Research Design and Methods: We applied a mixed-method systematic scale development process to measure OC. Aged and dementia care workers in Australia (76%) and other countries participated in a focus group and online surveys (N = 2,451). We also used interview data from our prior study. The study involved 3 components: (1) scale development and design; (2) pilot test validation with exploratory factor analysis; and (3) confirmatory validation via confirmatory factor analysis. The third component assessed convergent and discriminant validity using measures of communion, self-efficacy, work engagement, job and life satisfaction, intention to leave, positive and negative affect, and mood.

Results: We developed a 28-item *Occupational Communion Scale* (OCS) with good internal consistency (composite reliability = 0.75–0.91) across 6 factors: (1) "natural" carer, (2) psychological need to care, (3) connection with clients, (4) connection with coworkers, (5) desire for more connection, and (6) blurred boundaries. All validity measures correlated with OC and work engagement, self-efficacy, and positive affect showed the strongest association.

Discussion and Implications: The OCS can be used to design and evaluate interventions addressing aged care workforce engagement, social connections and well-being, and care outcomes.

Keywords: Caregiving—formal, Measurement, Psychometrics, Well-being, Workforce issues

Research and development of care workforces is a current priority to manage the aging population and age-related conditions such as dementia (ACSWT, 2018; Pickett et al., 2018; Prince et al., 2016). Instability associated with high staff turnover is a problem for care services, with care failures linked to inadequate skilled labor supply in Australia, the United Kingdom, and the United States (Atkinson et al., 2018; Howe et al., 2012; Pagone & Briggs, 2021; Spetz et al., 2015). The coronavirus 2019 (COVID-19) pandemic has further exacerbated care workforce issues and strengthened the need to reinvest in care sectors (Meeks & Degenholtz, 2021). Localized solutions are highly contextual and consider the wide ecosystem of care is necessary to resolve the workforce crisis, particularly in the absence of substantive investment to redress the longstanding problems with job quality, remuneration, and low status of aged care work (Scales, 2021).

Finding evidence-based ways to build capacity, knowledge, skills, coping, and interest in caring workforces is essential (Colombo et al., 2011; Elliott et al., 2012; Prince et al., 2016). Research that considers the psychosocial nature of the care work environment has much potential, especially given the evident emotional and interpersonal requirements of aged

Received: January 27, 2022; Editorial Decision Date: December 1, 2022.

care work (Brenenbaum et al., 2017; King, 2012). Social and organizational psychological theories, such as communion (Bakan, 1966), and job demands–resources (Demerouti et al., 2001) that seek to understand interpersonal relationships and perceptions about social connections in the work context may offer insights for assessment and the design of future interventions.

The term *communion* was coined alongside *agency* more than 50 years ago (Bakan, 1966), each reflecting fundamental modes of human existence corresponding to "getting along" or "getting ahead" (Able & Wojciszke, 2018; Helgeson, 1994). Communion (warmth, being focused on others) is a trait-like construct where individual fulfillment is experienced through close relationships and a sense of belonging by forming bonds (Able & Wojciszke, 2018; Guisinger & Blatt, 1994). Mutually rewarding interactions in close relationships can result in positive well-being when caring for others (measured by positive and negative affect and life satisfaction; Le et al., 2018). When the desire to care for others outweighs caring for the self, the consequences can be poor psychological health such as depressive symptoms (Helgeson & Fritz, 1998; called *unmitigated communion*). Similar findings may exist when caring relationships are bounded by psychological contracts of employment (O'Donohue & Nelson, 2009). Social connectedness with colleagues (de Oliveira Maciel & Camargo, 2016; van der Borg et al., 2017) and potential clients may have implications for workforce well-being and engagement in the job.

Applying the concept of communion to work contexts is not new. Several studies have applied communion across a range of occupational arenas such as career development, motivation, success, and corporate social responsibility (Abele & Spurk, 2011; Chiaburu & Carpenter, 2013; Van Marrewijk, 2003), female careers and hierarchical structures (Ellery-Brown, 2011; Pringle & McCulloch-Dixon, 2003), and bullying and turnover in care organizations (Kim & Glomb, 2010; Regts & Molleman, 2013). Despite some exploration of communion in work contexts, no studies have adapted measures to suit work-specific relationships. Instead, these studies have mostly adopted self-report questionnaires with a personality trait approach, which was sometimes assessed as a subscale alongside other factors. For example, communion personality traits are often associated with relating to others, cooperation, empathy, agreeableness, global feelings of "we," togetherness, and/or close social connection (Barrick et al., 2002; Spence & Helmreich, 1978). Communion values include compassion, humility, harmony, equality, and trust (Trapnell & Paulhus, 2012), as well as behaviors such as helping others (Buchanan & Bardi, 2015). Rarely have these self-reports focused on social connection with clientele, and the communion concept has not been tailored to the context of the psychosocial work environment.

Traditionally, communion has been explored within familial, friendship, and intimate partner contexts rather than the occupational arena. The concept of communion has more recently been expanded to care work, by adding the perspective of employees with caring roles. The term *communion* was used instead of *social connection* or *social support*, because in comparison within the psychological literature, there was less consensus as to the precise definition of these terms (Kim et al., 2008; see Elliott et al., 2013, for further discussion). In an earlier study, we identified *occupational communion* (OC) as a multifaceted concept and defined OC "as a sense of belonging based on social interaction at work that can assist adaptive coping" (Elliott et al., 2013, p. 771). This research builds on our earlier qualitative study of capacity building in Australian aged and dementia care workers (Elliott et al., 2013) by quantifying OC on a scale.

Close relationships, being well suited to the job, and caring for the self as well as clients, were reported characteristics in the aged care workforce and were found to influence well-being, self-efficacy (e.g., confidence in abilities), job attraction, and satisfaction (Elliott et al., 2016; Peng & Mao, 2015; Piercy, 2000; Sheridan & Agim, 2014; Xiao et al., 2021). These aspects of care work relate to communion because they represent a care worker's intrinsic focus on helping others and forming social bonds, which can be personally rewarding and motivating. Communion in the context of aged care work appears to have a nuanced expression of the purpose behind this orientation toward others. When we described OC in our qualitative study (Elliott et al., 2013), we highlighted that those social interactions, and togetherness with coworkers and clients, were considered as psychological needs that were met at work but not in personal lives. Positivity was experienced when relationships with clients were rewarding and workers could build trust, and advocate for and meet their clients' needs, but opportunities for social connection with colleagues were lacking (Elliott et al., 2013). The application of communion to care work has, therefore, meant the concept is changing to account for additional aspects specific to professional caring relationships, which may not be mutual, or reciprocal (i.e., when workers feel that they cannot burden clients with their own personal worries or concerns; Elliott et al., 2013).

Elliott et al. (2013) proposed a conceptual model of OC (see Supplementary Figure 1) that explains possible relationships with other constructs relevant for occupational health and well-being, such as job demands–resources and capacity, and resilience indicators in care work. In this model, aspects of OC, such as social connections with colleagues and clients, can buffer against the job demands of grief and isolation, resulting in adaptive capacity such as confidence in abilities and positive emotions. There may also be implications for job resources such as work engagement. We detail, in this study, how we used our OC model to inform hypotheses and choose validation measures to explore the assessment of OC.

The objective of this study was to develop and validate a measure of OC. We first hypothesized that a measure of OC would have multiple domains as displayed in the circle at the center of Supplementary Figure 1. These were positive, rewarding, and trusting close relationships with clients and coworkers; care and compassion for clients; being suited to the job; psychological need for social interaction; desire for coworker social connection and support; and motivation to help and advocate for clients, sometimes above one's own needs. We expected that the multiple aspects of OC would correlate with a measure of general communion. Validation measures based on the conceptual model for job demands–resources variables included job satisfaction and work engagement (see Supplementary Figure 1). Capacity and resilience indicators were included as intent to leave, self-efficacy, mood and affect, and satisfaction with life. The measures were chosen to correlate with OC in aged care across some or all of the multiple aspects of the concept.

The definition of OC includes an association between social interaction and positive adjustment at work. This is informed

Table 1. Sample Characteristics for the EFA and CFA Samples in Initial Validation of the Occupational Communion Scale.

Variable	EFA sample (N = 329)			CFA sample[a] (N = 2,115)		
	%	Mean (*SD*)	Range	%	Mean (*SD*)	Range
Age (in years)		49.3 (9.8)	22–67		47.7 (11.5)	18–76
Sex	95.7%			91.5%		
Female						
Male	4.3%			8.5%		
Highest education level						
Year 10 or below	8%			7%		
Year 11 or 12	7%			9%		
Vocational certificate/diploma	54%			40%		
University degree (incl. postgraduate)	27%			45%		
Other/not specified	2%			<1%		
Country of residence						
Australia	100%			76%		
New Zealand	—			9%		
Canada	—			6%		
United Kingdom and Ireland	—			6%		
Other Europe, Asia, Africa, South and Central America	—			<1%		
Length of time working in sector		8.3 (8.6)			8.7 (9.5)	
Length of time in current workplace		4.8 (5.6)			5.2 (6.4)	

Notes: CFA = confirmatory factor analysis; EFA = exploratory factor analysis; *SD* = standard deviation.[a]Where percentages do not equal 100%, remainder is not specified.

by literature on the influence of the psychosocial work environment on worker health and well-being (Finne et al., 2014) and communion and well-being from the perspectives of close partners and family (Helgeson & Fritz, 1998; Le et al., 2018). Therefore, psychometric testing of convergent and discriminant validity between OC and organizational health and well-being outcomes was examined. The relationships between OC, job demands and resources, and resilience may all have relevance for building capacity in care workforces (Elliott et al., 2018). Secondly, we hypothesized that indicators of resilience would be positively related to aspects of OC such as connectedness with coworkers and clients, employees' strong sense of being suited to the job, a psychological need for social interaction, and togetherness, whereas resilience indicators would be negatively related to aspects of OC that reflect putting others' needs above their own and when social connection with colleagues was lacking. We expected that measures of negative mood and or affect correlate better with aspects of OC that represent isolation from coworkers, more so than aspects of OC that relate to interactions with clients. Instead, parts of OC that represent social interactions with clients and advocating for their needs would be more likely to correlate with measures of work engagement, self-efficacy, and positive affect. This may represent that employees want more control over their jobs via changes in the psychosocial work environment (Elliott et al., 2017; Gleason & Miller, 2021) so that better opportunities are available to interact with colleagues, and that connections with clients are meaningful and meet a psychological need not fulfilled elsewhere.

The aim of the research was to develop a scale to measure OC. This will enable the conceptual model of capacity and resilience in care work to be empirically tested and inform the development and evaluation of workforce interventions. The study involved three components. The first component was the scale development and design and applied a triangulated qualitative approach with data from review of the literature, interviews (from previously collected data on OC; Elliott et al., 2013), and a focus group. The second component involved an exploratory factor analysis (EFA) used to examine the scale factor structure. The third component was a confirmatory validation via confirmatory factor analysis (CFA) of the model developed using EFA and included convergent and discriminant validity testing.

Method

Participants

In the first component, qualitative data were collected prior to this study by Elliott et al. (2013) from a convenience sample of community-based aged and dementia care workers (N = 25 interviews); mean age 53 years (*SD* = 9.6); majority (N = 22) female. Only the qualitative interview data that formed the theme called OC were used in the first component of the study. Face validity of OC was tested on another convenience sample of aged and dementia care workers (N = 7 focus group) based in a residential aged care facility.

For the second component using EFA, the OC scale was piloted on Australian aged and dementia care workers (N = 329) recruited via a university-led Massive Open Online Course (MOOC) on Understanding Dementia from October 2014 to March 2015. Participants were invited through a link to a project webpage to complete an online survey about psychological adjustment to job roles and workplace supports. Additional sample characteristics are outlined in Table 1.

For the third component, the EFA factor structure was tested using CFA from a global sample of N = 2,115, recruited via the same university-led MOOC on Understanding Dementia, this time from August to December 2015, in which

paid care workers were invited to complete an online survey about organizational health and well-being. Although most participants worked in Australia, 24% were from other countries. Additional sample characteristics are outlined in Table 1. Ethics approval was granted from the Tasmanian Social Sciences Human Research Ethics Network (H0013800) prior to beginning the studies and all participants gave their informed consent before participating.

Materials

For the second component involving EFA, the only questionnaire was the OC measure. The initial OC measure was 52 items rated on a 6-point Likert scale (0 = strongly disagree to 5 = strongly agree). For the third component applying CFA, participants completed the OC measure and other measures on organizational health and well-being. These measures included the assessment of convergent and discriminant validity (see Table 5 for names and descriptions of each measure).

Procedure

Item development occurred following a review of literature on communion applied to the work setting, close re-examination of qualitative data from semi-structured interviews describing OC, and a focus group. The first author developed an item pool from the interview data in the OC theme (see Elliott et al., 2013) and was then cross-referenced with existing items from measures of communion in non-work contexts. A total of 52 items were generated and a 4-point Likert scale was used (1 = strongly disagree to 4 = strongly agree) to rate statements relating to the past month. Items were then reviewed by five interdisciplinary experts (aged care nursing, community nursing, management, clinical psychology, and psychiatry) and the face validity of OC was tested in a focus group comprising a convenience sample of aged and dementia care workers (N = 7). The focus group discussed the definition of OC, then completed the scale and reflected on the item wording, comprehensibility, and ease of use. Based on the focus group qualitative comments, the response set was changed to a 6-point Likert rating, and respondents were asked to consider the previous month. The initial item pool of 52 items is available from the first author.

For both the EFA and CFA samples, participants completed an online survey about adjustment to their job roles and workplace supports.

Analyses

Exploratory factor analysis

A factor model for the Occupational Communion Scale (OCS) was developed from the initial 52 items using EFA using Mplus version 7 (Muthen & Muthen, 2012). Items were screened for normality and skew, and intercorrelations between items were calculated. Items showing multicollinearity (r > 0.85) or items that did not correlate with other items above r = 0.3 were removed. Items where there was minimal or no endorsement of one end of the Likert scale were removed. Following this, an EFA was conducted using robust weighted least squares (WLSMV) method of estimation and oblimin rotation. WLSMV is appropriate for categorical data such as Likert scales (Brown, 2015), and an oblique oblimin rotation was appropriate given OCS factors were expected to correlate. Initially, three- to seven-factor solutions were extracted and analyzed for statistical and theoretical fit. The appropriateness of EFA models was determined by the fit indices derived from Mplus. Mplus calculates χ^2 likelihood ratios; however, χ^2 can reject models with relatively small residual variance when there is a large sample size (see Brown, 2015, for an outline of the limitations of χ^2). In view of this, additional fit indices were used to evaluate model fit. Mplus provides approximate (or practical) fit indexes for the Tucker–Lewis Index (TLI), the comparative fit index (CFI), and the root-mean-squared error of approximation (RMSEA). For the CFI and TLI, values of 0.95 or above were taken as indicating good model-data fit, with values above 0.90 indicative of acceptable fit (Brown, 2015; Hu & Bentler, 1999). Based on guidelines suggested by Hu and Bentler (1998), RMSEA values close to 0.06 or below were taken as good fit, with values from 0.06 to 0.08 inferred as moderate fit, and 0.08–0.10 as marginal fit as per the guidelines of Browne and Cudeck (1993). Following initial solutions, for each model that showed reasonable fit, an EFA was repeated such that items were removed if they did not substantively load on factors, or those that cross-loaded on factors were subsequently removed, to ensure a clear factor solution.

Confirmatory factor analysis

Factor solutions taken forward from the EFA were then evaluated using CFA with the larger global sample. The robust WLSMV estimator was used, and model evaluation used the same criteria as specified for the EFA. Once a final factor structure had been determined from CFA, internal consistency of the measure was considered using composite reliability (CR; Fornell & Larcker, 1981; Raykov, 1997). CR is an alternative to Cronbach's alpha, and uses factor loadings to calculate internal consistency, and thus is often done in conjunction with CFA and related techniques (Peterson & Kim, 2013).

Further analyses

To assess the convergent and discriminant validity of the OCS with other constructs, each acceptable CFA model was carried forward to a subsequent analysis where each of the six OCS factors was correlated (using a freely estimated covariance path) with the observed total score of a range of measures. This was again undertaken in Mplus with a WLSMV estimator. Model fit was not a criterion in this analysis; rather the significance and size of the correlation (covariance) path between the measures and the OCS factors were assessed.

Results

Exploratory Factor Analysis

From the initial screening of the 52-scale items, 16 items were excluded for reasons including low correlations with other items (seven items correlated r > 0.3 with 1 or no other items in the data set, indicative of orphan items); minimal or no endorsement of one end of the Likert scale (six items: in all cases minimal/no endorsement of the strongly disagree or disagree options); or for both of these reasons (three items).

Subsequently, EFA was conducted with the remaining 36 items. Two- to seven-factor solutions were extracted and fit indices for these EFAs are shown in Table 2. Initial screening

Table 2. Fit Indices for the Extracted Exploratory Factor Analysis (EFA) Solutions

EFA model	χ^2		CFI	TLI	RMSEA
	Value	*df*			
Two-factor solution	2,601.01*	559	0.77	0.74	0.11
Three-factor solution	1,954.53*	525	0.84	0.81	0.09
Four-factor solution	1,455.10*	492	0.89	0.86	0.08
Five-factor solution	1,107.48*	460	0.93	0.90	0.07
Five-factor revised 33 item	912.09*	373	0.94	0.91	0.07
Six-factor solution	927.51*	429	0.94	0.92	0.06
Six-factor revised 28 item	553.04*	225	0.96	0.93	0.07
Seven-factor solution	755.55*	399	0.94	0.96	0.05

Notes: CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root-mean-square error of approximation.*$p < .0001$.

indicated that the two-, three-, and four-factor solutions were not acceptable statistically, with fit indices outside desired values, as shown in Table 2. Inspection of each of these models also identified that each model had as many cross-loading items as items loading on a single factor, and showed residual correlations >0.2, further indicative of poor fit (Gorsuch, 1983).

As can be seen, the five-factor solution showed marginal fit though with only one residual correlation >0.1, this model was carried further to CFA testing, as once items within each factor were interpreted, there were items clustered around common themes. The six-factor solution showed acceptable fit with the items within each factor interpreted, there were items clustered around common themes, and this model was carried further to CFA testing. The seven-factor solution, although statistically acceptable, produced a solution that did not provide a more theoretically or practically distinct structure than the six-factor model described later, and included a factor with only two items loading >0.4. Although in special cases, two items can be acceptable for a subscale, it is generally considered preferable to have at least three items per factor (see Brown, 2015; Kline, 2016), and given the seven-factor model did not provide a distinct solution, in the interests of parsimony, it was not considered further.

To create more coherent and interpretable factors in the models carried forward, both the five- and six-factor solutions were further refined by eliminating items that cross-loaded across multiple factors, or which did not load substantively (>0.4) on any factor. In the case of the five-factor solution, four items did not load on any item, and a single item cross-loaded on two factors; the subsequent 33-item, five-factor EFA showed acceptable fit, as seen in Table 2. In the case of the six-factor solution, six items did not load on any item, two items cross-loaded on two factors; the subsequent 28-item EFA acceptable-to-good statistical fit is seen in Table 2.

Confirmatory Factor Analysis

The 33-item five-factor model identified in the EFA was tested with CFA in the larger sample, but showed poor fit by all indices, $\chi^2(485, N = 2,115) = 9,900.92$, $p < .001$, CFI = 0.85, TLI = 0.84, RMSEA = 0.096. The five-factor model was thus not considered further.

The 28-item six-factor model identified in the EFA and subjected to CFA using the larger sample showed acceptable fit by the fit indices $\chi^2(335, N = 2,115) = 4,829.93$, $p < .001$, CFI = 0.92, TLI = 0.91, RMSEA = 0.08 [90% CI: 0.078, 0.082], even though χ^2 was significant. Table 3 shows the CFA factor loadings for the six-factor model and internal consistency (CR) for the six-factor CFA model. Internal reliability for the measure ranged from 0.74 to 0.91, which is well within acceptable limits (Fornell & Larcker, 1981; Raykov, 1997). Factor intercorrelations, shown in Table 4, were all 0.6 or below. Thus, although some factors were moderately intercorrelated, each can be considered a statistically distinct construct.

Following confirmation of the fit of the six-factor model, three authors reviewed and interpreted (K.-E. J., Elliott, M. J. Quinn, and J. L. Scott) items comprising each factor, and described the following domains: "natural" carer; psychological need to care; connection with clients; connection with coworkers; desire for more connection; blurred boundaries.

Further Analyses

The six-factor model was carried forward, and each OCS factor was correlated with observed scores of measures. The direction and strength of the relationships shown in Table 5 were as expected. Overall, the "natural" carer and desire for more connection with coworker factors had the highest number of significant moderate relationships across occupation and well-being measures, particularly for work engagement, self-efficacy, and positive affect.

Discussion and Implications

Research on social connection is expanding to include new aspects, such as OC, which is relevant for caring professionals' resilience and engagement in their work. To our knowledge, this is the first study to develop and test a measure of OC, which advances the literature on the assessment of social psychological concepts that appear vital to engage and develop aged and dementia care workforces. The valid and reliable 28-item OCS appears easy for care workers to understand and complete, and was theory driven and informed by evidence. It is intended for all direct care workers and health professionals who may work to partner in care with older people including people living with dementia. The first hypothesis was supported to show OC is a multifaceted construct represented by six dimensions: (1) "natural" carer, (2) psychological need to care, (3) connection with clients, (4) connection with coworkers, (5) desire for more connection, and (6) blurred boundaries (see Supplementary Figure 2). We also found substantive moderate associations between OC and work engagement, self-efficacy, positive affect, job satisfaction, and intention to leave the job, which suggests this construct may be useful to inform interventions aimed to engage employees in their jobs and enhance well-being at work, with potential to prevent high staff turnover.

OC is redefined as a sense of belonging based on social interactions in care work that includes multiple domains of being suited to the job, a psychological need to care (e.g., "fills a void"), and strong and rewarding connections with clients and coworkers, which must be balanced alongside navigating professional boundaries and seeking better connections to assist with adaptive coping among care workers. Although OC means care workers can get a sense of positivity

Table 3. Standardized (STDYX) Factor Loadings and Internal Reliability (Composite Reliability) Statistics for the Six-Factor Confirmatory Factor Analysis

Item number	Question	Factor loading	Factor CR
"Natural" carer factor			0.81
5	My job comes easily and naturally to me	0.78	
3	I feel like I belong in my job	0.76	
11	I know I'm good at what I do	0.75	
Psychological need to care factor			0.74
12	My job matches my personal needs	0.74	
6	My job fills a void in my life	0.71	
10	If it wasn't for my job I would feel somewhat empty inside	0.63	
Connection with clients factor			0.91
34	I feel connected to my clients	0.87	
35	I have a powerful emotional connection to the people I care for	0.81	
26	I generally have a strong connection with all the people I care for at work	0.77	
32	Getting to know the person I'm caring for is the best part of my job	0.77	
25	Sometimes the people I care for are like my extended family	0.73	
33	My clients get the best care because I know them well	0.73	
30	It is important that I remain caring for the people I care for as long as I can	0.70	
31	The best part of work is when I can share a cup of tea with my clients	0.64	
29	Having balanced relationships with the people I care for are an important part of my work	0.63	
36	It is important for me to fix problems for the people I support in my work	0.61	
Connection with coworker factor			0.87
50	The quality of my relationships at work are of a high standard	0.85	
51	I feel respected in most of my relationships at work	0.81	
47	I feel connected to my coworkers	0.75	
49	I have the opportunity to make relationships at work with others doing similar work as me	0.71	
52	I speak up at work for the needs of my coworkers	0.67	
Desire for more connection factor			0.84
42	I want more interaction with other workers who care for people with dementia	0.87	
43	I want more opportunities to share the ups and downs of my work with other workers	0.85	
44	My job would be better if I could share and learn more about the "tricks of the trade"	0.72	
45	When I care for a person with dementia I wish for more support from work	0.52	
Blurred boundaries factor			0.83
38	I have to blur the professional boundaries to provide the best care for people I provide care for	0.93	
48	I blur the professional boundaries with my colleagues now and again so I can do my job well	0.74	
39	It's hard to keep my personal life and work life separate	0.67	

Notes: CR = composite reliability. All-factor loadings significant at $p < .001$ level.

Table 4. Latent Factor Intercorrelation (Covariance) Matrix for the Six-Factor Occupational Communion Scale

Factor	Psychological need to care	Connection with clients	Connection with coworkers	Desire for more connection	Blurred boundaries
"Natural" carer	0.59**	0.49**	0.59**	0.18**	–0.16**
Psychological need to care		0.49**	0.36**	0.32**	0.28**
Connection with clients			0.44**	0.51**	0.35**
Connection with coworkers				0.23**	0.07*
Desire for more connection					0.35**

*$p < .01$. **$p < .001$.

Table 5. Standardized Correlations (STDYX) Between the OCS Latent Factors, With Observed Scores From Other Measures (With Measure Details)

Construct	Measure	*N* of items ([a]Cronbach α)	Likert response	*High score indicates…*	Correlations with OCS factors					
					"Natural" carer	Psychological need to care	Connection with clients	Connection with coworkers	Desire for more connection	Blurred boundaries
Communion	Communion, Personal Attribution Questionnaire (Spence & Helmreich, 1978)	6 (0.86)	5-pt	*High levels of communion*	0.34**	0.11**	0.19**	0.21**	0.08**	−0.14**
Work engagement	Utrecht Work Engagement Scale (Schaufeli et al., 2006)	3 (0.82)	6-pt	*High engagement in work*	0.50**	0.35**	0.32**	0.37**	0.13**	−0.03
Job satisfaction	Job Satisfaction Scale (Spector, 1985)	36 (0.91)	6-pt	*High job satisfaction*	0.29**	0.21**	0.07*	0.36**	−0.19**	−0.17**
Intent to leave	Intention to leave (Cho et al., 2009)	1 (n/a)	7-pt	*High intention to leave.*	−0.21**	−0.21**	−0.09**	−0.23**	0.06	0.05
General self-efficacy	General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995)	10 (0.89)	4-pt	*Good self-efficacy*	0.50**	0.18**	0.25**	0.31**	0.10**	−0.12**
Psychological distress	Kessler 10 (K-10: Kessler et al., 2003)	10 (0.89)	5-pt	*High psych. distress*	−0.25**	0.07*	0.05	−0.19**	0.11**	0.22**
Depression	Centre for Epidemiological Studies—Depression scale (Radloff, 1977)	20 (0.72)	4-pt	*High levels of depressive symptomatology*	−0.32**	0.01	−0.01	−0.28**	0.10**	0.23**
Positive affect	Positive and Negative Affect Schedule (PANAS; Watson et al., 1988)	10 (0.94)	5-pt	*High positive affectivity*	0.43**	0.20**	0.26**	0.37**	0.13**	−0.07*
Negative affect	As previously	10 (0.92)	5-pt	*High negative affectivity*	−0.25**	>0.01	0.03	−0.20**	0.10**	0.23**
Satisfaction with life	Satisfaction with Life Scale (Diener et al., 1985)	5 (0.91)	7-pt	*Highly satisfied with life.*	0.29**	0.09**	0.13**	0.32**	0.03	−0.05

Notes: CFA = confirmatory factor analysis; OCS = Occupational Communion Scale.[a]Cronbach's alpha derived from CFA sample.
*p <.01. **p <.001.

from connections with others, there is a flip side that can be negative.

Values-based recruitment and retention strategies may focus on candidates' predisposition for caring (i.e., their sense of being a "natural" carer, belonging, and being suited to the job). Our results showed that the "natural" carer dimension of OC strongly aligned with self-efficacy, work engagement, and positive affect. This is supported by previous research indicating a significant relationship between person–job fit (a match between the employees' characteristics and their job roles) and self-efficacy (Peng & Mao, 2015). Being suited to the job has also been reported as a reason for entering aged care with a passion for the job (Xiao et al., 2021). Significant moderate negative relationships were also found between "natural carer" and mood indicators, which suggest the potential for poor health when workers are unsuited to their caring roles, which is similar to past reports of the connection between depression and job misfit (Ford, 2012).

Meaningful work may be an important factor to consider for engaging aged and dementia care workers in their job roles over time. In our study, the psychological need to care dimension of OC was characterized by an alignment between personal needs and the caring duties of the job, as though the work fills a missing part of the self. This dimension was significantly and moderately positively related to work engagement, with substantive correlations also found with job satisfaction and positive affect, and negatively with intent to leave. It was, however, quite unrelated to mood indicators. It represents what some care workers have described as "empty nest syndrome" (Elliott et al., 2013) and may be important for work motivation and self-fulfilling work (Allan et al., 2016). The psychological need dimension of OC has a high potential to inform marketing strategies to attract people into the care workforce.

Assessment of social connections in care work can be broadened to include relationships with clients. We found a connection with clients dimension was characterized by powerful emotional ties. This is when employees prioritize getting to know the client and enjoy sharing socially, being dependable, and advocating to fix clients' problems. Such interactions by employees may lead to positive levels of engagement, satisfaction, positive affect, and self-efficacy, as indicated by our covariance results. These findings support the benefits espoused by the move toward relational care models in aged care services, and when caring for those with dementia (Nolan et al., 2004).

Understanding relationships in the care work environment, and how workers interact, may be an essential part of increasing staff numbers to relieve high demands of care (Cooke & Baumbusch, 2021). Connection with coworkers appeared to be more influential across well-being outcomes such as satisfaction with life. This confirms previous findings that indicate the positive associations between good relationships with coworkers and quality of care, self-belief, social support, and positive work engagement (García-Sierra et al., 2016; Halbesleben, 2010; Xiao et al., 2021). They also suggest that positive and enhanced relationships between managers and coworkers may build an engaged and motivated care workforce, with implications for training and career advancement opportunities (Scales, 2021). Relationships with coworkers (van der Borg et al., 2017) may also underpin success in team-based skills training (i.e., occupational adaption framework, McKay et al., 2021).

Poor health outcomes can result when personal and professional boundaries are blurred. In care work settings, this may occur when people place others' needs above their own to extreme levels. This has been found for other carer contexts such as with unmitigated communion in those caring for patients with cardiovascular disease (Helegson & Frits, 1998). Qualitative studies have described a similar blurred boundary phenomenon (Elliott et al., 2013; Bailey et al., 2015; Mears, 2009; Piercy, 2000). The associations between blurred boundaries and mood indicators shown in our study highlight that employers need to be aware of the possible psychosocial risks for their employees combined with "friend and family-like" relationships with clients. Further, there can be implications for compliance with regulations (Sheridan & Agim, 2014) that underpin good-quality care.

The concept of OC has a potential to inform workplace development programs. Prior to quantifying OC, it was applied in a training manual for interprofessional dementia care (Rudd et al., 2012). The new measure extends this potential application, and we suggest that the OCS can be used to assess staff and potentially the workplace, throughout the career pathway (from entry to exit) to inform these initiatives. Strengths-based programs that promote the positives and address unmet social interaction needs may suit care workers. Strategies may aim to develop social support mechanisms to reduce isolation such as providing more opportunities for good-quality peer, supervisor, or team interactions. This could follow other professions where workers are required by regulatory standards to undertake peer consultation which includes a critically reflective focus on practice (World Federation of Medical Education, 2015). Addressing this issue may mean there is potential to change stigma and the negative public perception of care work (Machha et al., 2021) by improving job attractiveness.

The strengths of our research include the multiple independent samples, confirmatory analysis, and a unique focus on care work that contributes to existing social and organizational psychological theory. A limitation of our study is the specialized nature of the employee sample, as results may not generalize beyond care workers, which is a predominantly female workforce. Although the samples are narrow in scope, their characteristics are similar to available workforce demographics (Mavromaras et al., 2017). Future research may investigate the utility of the OCS in general healthcare workers, or in roles where employees have repetitive social interactions with people other than their colleagues, particularly when helping others is the aim of the job. Consideration of workforce subgroups and how they may differ on the OCS may be useful in more clearly understanding the construct of OC, and ways to improve capacity and resilience in the care workforce (e.g., latent class/profile analysis). The OCS may be relevant for other regions and cultures; however, further cross-cultural research is necessary to comment thoroughly on the generalizability of the measure. Future research should focus on further validation methods (e.g., test–retesting, concept analysis) and testing mediation models.

In summary, OC has a theoretically coherent multidimensional structure that is associated with established organizational health and well-being variables. The application of OC to human resourcing decisions, such as job selection, recruitment, orientation to and engagement in job roles, as well as retention efforts, appear promising.

Supplementary Material

Supplementary data are available at *The Gerontologist* online.

Funding

Funding was from National Health and Medical Research Council, and Australian Research Council (E0023237), University of Tasmania Research Enhancement Grant Scheme (E0021909), an Early Career Seeding Grant from University of Tasmania, Wicking Dementia Research and Education Centre, and a PhD scholarship jointly provided by TIME for Dementia (Tasmania and Victoria Dementia Training Study Centre, Australia), the Wicking Dementia Research and Education Centre and the University of Tasmania, Australia (045135, awarded to J. L. Scott and A. L. Robinson; K.-E. J. Elliott stipend).

Conflict of Interest

None declared.

Author Contributions

K.-E. J. Elliott led and formulated the research questions, designed, and carried out the study in collaboration and with advice from C. M. Stirling, J. L. Scott, A. L. Robinson, K. Sanderson, A. J. Martin, and M. G. Quinn. M. G. Quinn analyzed the data and wrote the results section and assisted with writing the full article. All authors assisted with writing the article.

Data Availability

Data are not stored in a public repository as participants did not provide their informed consent to share their deidentified data. This study was not preregistered.

References

Abele, A. E., & Spurk, D. (2011). The dual impact of gender and the influence of timing of parenthood on men's and women's career development: Longitudinal findings. *International Journal of Behavioral Development*, 35(3), 225–232. doi:10.1177/0165025411398181

Abele, A. E., & Wojciszke, B. (Eds). (2018). *Agency and communion in social psychology*. Routledge. doi:10.4324/9780203703663

Aged Care Workforce Strategy Taskforce. (2018). *A matter of care: Australia's aged care workforce strategy report of the aged care workforce strategy taskforce*. https://www.health.gov.au/sites/default/files/a-matter-of-care-australia-s-aged-care-workforce-strategy.pdf

Allan, B. A., Autin, K. L., & Duffy, R. D. (2016). Self-determination and meaningful work: Exploring socioeconomic constraints. *Frontiers in Psychology*, 7, 71. doi:10.3389/fpsyg.2016.00071

Atkinson, C., Crozier, S., & Lucas, R. (2018). Workforce policy and care quality in English long-term elder care. *Public Performance & Management Review*, 41(4), 859–884. doi:10.1080/15309576.2018.1473784

Bailey, S., Scales, K., Lloyd, J., Schneider, J., & Jones, R. (2015). The emotional labor of health-care assistants in inpatient dementia care. *Ageing & Society*, 35(2), 246–269. doi:10.1017/S0144686X13000573

Bakan, D. (1966). *The duality of human existence: Isolation and communion in Western man*. Rand McNally.

Barrick, M. R., Stewart, G. L., & Piotrowski, M. (2002). Personality and job performance: Test of the mediating effects of motivation among sales representatives. *Journal of Applied Psychology*, 87(1), 43–51. doi:10.1037/0021-9010.87.1.43

Brenenbaum, R., Tziraki, C., & Cohen-Mansfield, J. (2017). The right to mourn in dementia: To tell or not to tell when someone dies in dementia day care. *Death Studies*, 41(6), 353–359. doi:10.1080/07481187.2017.1284953

Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd ed.). Guilford Press.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Sage.

Buchanan, K., & Bardi, A. (2015). The role of values, behavior, and value–behavior fit in the relation of agency and communion to well-being. *Journal of Personality*, 83(3), 320–333. doi:10.1111/jopy.12106

Chiaburu, D. S., & Carpenter, N. C. (2013). Employees' motivation for personal initiative: The joint influence of status and communion striving. *Journal of Personnel Psychology*, 12(2), 97–103. doi:10.1027/1866-5888/a000089

Cho, S., Johanson, M. M., & Guchait, P. (2009). Employees intent to leave: A comparison of determinants of intent to leave versus intent to stay. *International Journal of Hospitality Management*, 28(3), 374–381. doi:10.1016/j.ijhm.2008.10.007

Colombo, F., Llena-Nozali, A., Mercier, J., & Tjadens, F. (2011). *Help wanted? Providing and paying for long-term care: OECD Health Policy Studies*. OECD Publishing. doi:10.1787/9789264097759-en.

Cooke, H. A., & Baumbusch, J. (2021). Not just how many but who is on shift: The impact of workplace incivility and bullying on care delivery in nursing homes. *Gerontologist*, 61(4), 563–572. doi:10.1093/geront/gnaa203

de Oliveira Maciel, C., & Camargo, C. (2016). Social connection in organizations: The effects of local ties on job engagement and performance. *Revista De Administração*, 51(4), 377–385. doi:10.1016/j.rausp.2016.07.005

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The Job Demands–Resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512. doi:10.1037/0021-9010.86.3.499

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, 49(1), 71–75. doi:10.1207/s15327752jpa4901_13

Ellery-Brown, M. J. (2011). The significance of career narrative in examining a high acheiveing woman's career. *Australian Journal of Career Development*, 20, 18–23. doi:10.1177/103841621102000304

Elliott, K. J., Rodwell, J., & Martin, A. J. (2017). Aged care nurses' job control influence satisfaction and mental health. *Journal of Nursing Management*, 25(7), 558–568. doi:10.1111/jonm.12493

Elliott, K. J., Scott, J. L., Stirling, C. M., & Martin, A. J. (2018). Developing resilience in the aged and dementia care workforce. In B. Resnick, L. P. Gwyther, & K. A. Roberto (Eds.), *Resilience in aging: Concepts, research, and outcomes* (2nd ed.) (pp. 347–365). Springer Nature. doi:10.1007/978-3-030-04555-5_19.

Elliott, K. J., Scott, J. L., Stirling, C. M., Martin, A. J., & Robinson, A. L. (2012). Building capacity and resilience in the dementia care workforce: A systematic review of interventions targeting worker and organizational outcomes. *International Psychogeriatrics*, 24(6), 882–894. doi:10.1017/S1041610211002651

Elliott, K. J., Stirling, C. M., Martin, A. J., Robinson, A. L., & Scott, J. L. (2013). Perspectives of the community-based dementia care workforce: "Occupational Communion" a key finding from the Work 4 Dementia Project. *International Psychogeriatrics*, 25(5), 765–774. doi:10.1017/S1041610212002323

Elliott, K. J., Stirling, C. M., Martin, A. J., Robinson, A. L., & Scott, J. L. (2016). We are not all coping: A cross-sectional investigation of

resilience in the dementia care workforce. *Health Expectations*, 19, 1251–1264. doi:10.1111/hex.12419

Finne, L. B., Christensen, J. O., & Knardahl, S. (2014). Psychological and social work factors as predictors of mental distress: A prospective study. *PLoS One*, 9(7), e102514. doi:10.1371/journal.pone.0102514

Ford, M. T. (2012). Job–occupation misfit as an occupational stressor. *Journal of Vocational Behavior*, 80(2), 412–421. doi:10.1016/j.jvb.2011.10.004

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39–50. doi:10.2307/3151312

García-Sierra, R., Fernández-Castro, J., & Martínez-Zaragoza, F. (2016). Work engagement in nursing: An integrative review of the literature. *Journal of Nursing Management*, 24(2), E101–E111. doi:10.1111/jonm.12312

Gleason, H. P., & Miller, E. A. (2021). Maximizing home health aide retention: The impact of control and support on the job. *Gerontologist*, 61, 517–529. doi:10.1093/geront/gnab003

Gorsuch, R. (1983). *Factor analysis* (2nd ed.). Lawrence Erlbaum Associates.

Guisinger, S., & Blatt, S. (1994). Individuality and relatedness: Evolution of a fundamental dialectic. *American Psychologist*, 49(2), 104–111. doi:10.1037/0003-066X.49.2.104

Halbesleben, J. (2010). A meta-analysis of work engagement: Relationships with burnout, demands, resources, and consequences. In A. B. Bakker & M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp. 102–117). Psychology Press.

Helgeson, V. S. (1994). Relation of agency and communion to well-being: Evidence and potential explanations. *Psychological Bulletin*, 116(3), 412–428. doi:10.1037/0033-2909.116.3.412

Helgeson, V. S., & Fritz, H. L. (1998). A theory of unmitigated communion. *Personality & Social Psychology Review*, 2(3), 173–184. doi:10.1207/s15327957pspr0203_2

Howe, A., King, D., Ellis, J., Wells, Y., Wei, Z., & Teshuva, K. (2012). Stabilising the aged care workforce: An analysis of worker retention and intention. *Australian Health Review*, 36, 83–91. doi:10.1071/AH11009

Hu, L.-T., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3(4), 424–453. doi:10.1037/1082-989x.3.4.424

Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling*, 6, 1–55. doi:10.1080/10705519909540118

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., Howes, M. J., Normand, S. L., Manderscheid, R. W., Walters, E. E., & Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives General Psychiatry*, 60(2), 184–189. doi:10.1001/archpsyc.60.2.184

Kim, E., & Glomb, T. M. (2010). Get smarty pants: Cognitive ability, personality, and victimization. *Journal of Applied Psychology*, 95(5), 889–901. doi:10.1037/a0019985

Kim, H., Sherman, D., & Taylor, S. (2008). Culture and social support. *American Psychologist*, 63, 518–526. doi:10.1037/0003-066X

King, D. (2012). It's frustrating! Managing emotional dissonance in aged care work. *Australian Journal of Social Issues*, 47(1), 51–70. doi:10.1002/j.1839-4655.2012.tb00234.x

Kline R. B. (2016). *Principles and practise of structural equation modelling* (4th ed.). Guilford.

Le, B. M., Impett, E. A., Lemay, E. P., Jr., Muise, A., & Tskhay, K. O. (2018). Communal motivation and well-being in interpersonal relationships: An integrative review and meta-analysis. *Psychological Bulletin*, 144(1), 1–25. doi:10.1037/bul0000133

Machha, A. V., Walker, N., Way, K. A., Dawson, D., Tann, K., & Thai, M. (2021). Deeply discrediting: A systematic review examining the conceptualizations and consequences of the stigma of working in aged care. *Gerontologist*, 61(4), e129–e146. doi:10.1093/geront/gnaa166

Mavromaras, K., Knight, G., Isherwood, L., Crettenden, A., Flavel, J., Karmel, T., Moskos, M., Smith, L., Walton., H., & Wei, Z. (2017). *2016 National Aged Care Workforce Census and Survey—The Aged Care Workforce, 2016* (Report No. 11848). Flinders University, National Institite of Labor Studies, Australian Government, Department of Health. https://agedcare.royalcommission.gov.au/system/files/2020-06/CTH.0001.1001.2805.pdf

McKay, M. H., Pickens, N. D., Medley, A., Cooper, D., & Evetts, C. L. (2021). Comparing occupational adaptation-based and traditional training programs for dementia care teams: An embedded mixed-methods study. *Gerontologist*, 61(4), 582–594. doi:10.1093/geront/gnaa160

Mears, J. (2009). Blurred boundaries: How paid care workers and care managers negotiate work relationships. In D. K. G. Meagher (Ed.), *Paid care in Australia: Politics, profits, practices* (pp. 145–166). Sydney University Press.

Meeks, S., & Degenholtz, H. B. (2021). Workforce issues in long-term care: Is there hope for a better way forward? *Gerontologist*, 61(4), 483–486. doi:10.1093/geront/gnab040

Muthen, L. K., & Muthen, B. O. (2012). *Mplus user's guide* (7th ed.). Muthen & Muthen.

Nolan, M. R., Davies, S., Brown, J., Keady, J., & Nolan, J. (2004). Beyond "person-centred" care: A new vision for gerontological nursing. *Journal of Clinical Nursing*, 13, 45–53. doi:10.1111/j.1365-2702.2004.00926.x

O'Donohue, W., & Nelson, L. (2009). The role of ethical values in an expanded psychological contract. *Journal of Business Ethics*, 90(2), 251–263. doi:10.1007A10551-009-0040-

Pagone, G., & Briggs, L. (2021). *Final report: Care, dignity and respect*. Royal Commission into Aged Care Quality and Safety, Commonwealth of Australia. https://agedcare.royalcommission.gov.au/sites/default/files/2021-03/final-report-volume-1_0.pdf

Peng, Y., & Mao, C. (2015). The impact of person–job fit on job satisfaction: The mediator role of self-efficacy. *Social Indicators Research*, 121(3), 805–813. doi:10.1007/s11205-014-0659-x

Peterson, R. A., & Kim, Y. (2013). On the relationship between coefficient alpha and composite reliability. *Journal of Applied Psychology*, 91(1), 194–8. doi:10.1037/a0030767

Pickett, J., Bird, C., Ballard, C., Banerjee, S., Brayne, C., Cowan, K., Clare, L., Comas-Herrera, A., Corner, L., Daley, S., Knapp, M., Lafortune, L., Livingston, G., Manthorpe, J., Marchant, N., Moriarty, J., Robinson, L., van Lynden, C., Windle, G., … Walton, C. (2018). A roadmap to advance dementia research in prevention, diagnosis, intervention, and care by 2025. *International Journal of Geriatric Psychiatry*, 33(7), 900–906. doi:10.1002/gps.4868

Piercy, K. W. (2000). When it is more than a job: Close relationships between home health aides and older clients. *Journal of Aging and Health*, 12(3), 362–387. doi:10.1177/089826430001200305

Prince, M., Comas-Herrera, A., Knapp, M., Guerchet, M., & Karagiannidou, M. (2016). *World Alzheimer Report 2016: Improving healthcare for people living with dementia coverage, quality and costs now and into the future*. Alzheimer's Disease International. https://www.alzint.org/u/WorldAlzheimerReport2016.pdf

Pringle, J. K., & McCulloch-Dixon, K. (2003). Re-incarnating life in the careers of women. *Career Development International*, 8(6), 291–300. doi:10.1108/13620430310496107

Radloff, L. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychosocial Measurement*, 1, 385–401. doi:10.1177/014662167700100306

Raykov, T. (1997). Estimation of composite reliability for congeneric measures. *Applied Psychological Measurement*, 21, 173–184. doi:10.1177/01466216970212006

Regts, G., & Molleman, E. (2013). To leave or not to leave: When receiving interpersonal citizenship behavior influences an employee's turnover intention. *Human Relations*, 66(2), 193–218. doi:10.1177/0018726712454311

Rudd, C., Contarino, M., Langdon, C., Clark, R., Hasson, H. (2012). *Interprofessional learning through simulation: Husband and wife are not coping; Facilitators guide*. Edith Cowan University and Health Workforce Australia. https://www.ecu.edu.au/__data/assets/pdf_file/0005/564134/Facilitators_Guide_4_Husband_Wife_Not_Coping.pdf

Scales, K. (2021). It is time to resolve the direct care workforce crisis in long-term care. *Gerontologist*, 61(4), 497–504. doi:10.1093/geront/gnaa116

Schaufeli, W., Bakker, A., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational Psychological Measurement*, 66(4), 701–716. doi:10.1177/0013164405282471

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35–37). NFER-Nelson.

Sheridan, L., & Agim, T. (2014). Aged care safety dilemma: Caring-for-self versus caring-for-residents. *Australasian Journal on Ageing*, 33(4), 283–285. doi:10.1111/ajag.12128

Spector, P. E. (1985). Measurement of human service staff satisfaction: Development of the Job Satisfaction Survey. *American Journal of Community Psychology*, 13(6), 693–713. doi:10.1007/bf00929796

Spence, J. T., & Helmreich, R. L. (1978). *Masculinity and femininity: Their psychological dimensions, correlates, & antecedents*. University of Texas Press. doi:10.7560/764439

Spetz, J., Trupin, L., Bates, T., & Coffman, J. M. (2015). Future demand for long-term care workers will be influenced by demographic and utilization changes. *Health Affairs*, 34(6), 936–945. doi:10.1377/hlthaff.2015.0005

Trapnell, P. D., & Paulhus, D. L. (2012). Agentic and communal values: Their scope and measurement. *Journal of Personality Assessment*, 94(1), 39–52. doi:10.1080/00223891.2011.627968

van der Borg, W. E., Verdonk, P., Dauwerse, L., & Abma, T. A. (2017). Work-related change in residential elderly care: Trust, space and connectedness. *Human Relations*, 70(7), 805–835. doi:10.1177/0018726716684199

Van Marrewijk, M. (2003). Concepts and definitions of CSR and corporate sustainability: Between agency and communion. *Journal of Business Ethics*, 44, 95–105. doi:10.1023/A:1023331212247

Watson, D., Clark, L. A., & Carey, G. (1988). Positive and negative affectivity and their relation to anxiety and depressive disorders. *Journal of Abnormal Psychology*, 97(3), 346–353. doi:10.1037/0021-843x.97.3.346

World Federation for Medical Education. (2015). *Continuing professional development of medical doctors, world federation for medical education global standards for quality improvement, the 2015 revision*. University of Copenhagen. https://wfme.org/download/wfme-global-standards-cpd-english/?wpdmdl=866&refresh=6361e6e5eb52f1667360485

Xiao, L. D., Harrington, A., Mavromaras, K., Ratcliffe, J., Mahuteau, S., Isherwood, L., & Gregoric, C. (2021). Care workers' perspectives of factors affecting a sustainable aged care workforce. *International Nursing Review*, 68, 49–58. doi:10.1111/inr.12635