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# Associations between Australian early childhood educators' mental health and working conditions:

## A cross-sectional study

**Lara Corr**

Australian National University

**Anthony D. LaMontagne**

Deakin University

**Kay Cook**

RMIT University

**Elizabeth Waters**

**Elise Davis**

University of Melbourne

**EARLY CHILDHOOD EDUCATION** and care quality relies on educator capacity; however, working conditions may compromise educators' mental health. This study examines associations between family day care (FDC) educators' mental health and working conditions to inform workplace mental health promotion. Three hundred and sixty-six FDC educators completed an online or written survey. In addition to this, regression analyses were used to examine relationships between educator mental health and working conditions. Although many FDC educators had low psychological distress and moderate mental wellbeing, 41.7 per cent reported psychological distress. Most educators' 'efforts' and 'rewards' were unbalanced (effort–reward imbalance [ERI] ratio) and showed high 'overcommitment' to work. Effort and overcommitment were significantly related to increased odds of psychological distress, whereas social support was associated with higher mental wellbeing. The ERI ratio had the strongest associations with educator psychological distress and mental wellbeing. As many working conditions associated with educator mental health are modifiable, this study highlights opportunities for workplace mental health promotion in FDC.

## Introduction

Despite its intrinsic rewards, high value to families and important role in society, early childhood education and care (ECEC) practice is beset by societal disrespect, poor compensation and poor working conditions (Andrew & Newman, 2012). While work that is challenging and rewarding with appropriate social support can promote the wellbeing of workers, there is strong, prospective evidence that poor psychosocial working conditions diminish worker mental health and can cause anxiety and depression (LaMontagne & Keegel, 2012; LaMontagne, Keegel, Louie & Ostry, 2010). Relatively little attention has been given to the mental health and wellbeing of the childcare workforce, nor its relationships with working conditions. All ECEC work includes conditions that can be testing; however, for family day care (FDC) educators, conditions such as isolation and small business operation can be particularly difficult. This research aims to characterise the relationships between FDC educator working conditions and their mental health

and wellbeing. It focuses on modifiable working conditions so as to provide information to guide workplace mental health promotion intervention.

In Australia, FDC educators provide a paid childcare service, alone in their own home for up to four children under five years old (and an additional three children aged under 12 years before and after school hours). Most FDC educators operate as 'own-account' small business owners (Louie et al., 2006) and are contracted to government-regulated FDC coordination schemes. A recent surge in FDC numbers means there are now more than 14 000 FDC educators, predominately women, providing child care for around 135 000 children in Australia (The Social Research Centre, 2014). To meet new national ECEC reforms (the first *National Quality Framework* for ECEC commenced in 2012), FDC educators now work to the same standards and framework as centre-based care (CBC) settings and include formal qualifications (COAG, 2009).

Government investment and international policy concerning ECEC educators often targets training and qualifications with dual aims of supporting higher care quality and better outcomes for children, the major foci of ECEC. Largely absent from these efforts is the promotion of conditions that facilitate educator mental health and wellbeing despite growing evidence of the associations between higher quality care (interactions, educator attitudes towards children) and better educator mental health in FDC and CBC settings (Corr, Davis, LaMontagne, Waters & Steele, 2014). Instead, concerns about educator wellbeing, job stress and turnover have led to individually targeted advice to changing educators' perceptions and attitudes (Wagner et al., 2013) and increasing self-management and care. However, promoting educator mental health and wellbeing by modifying working conditions and the systems that shape them is likely to be a more effective way to support a high-quality, sustainable workforce (LaMontagne, Keegel & Vallance, 2007).

Educator mental health appears to play an important role in ECEC provision; however, the extent of poor mental health and of mental wellbeing in the childcare workforce is largely unknown. In a review (1980–2012) of the five published studies that measure ECEC providers' mental health and wellbeing, estimates of poor mental health were highly variable (Corr et al., 2014). Between six and 27 per cent of educators who participated in cross-sectional surveys were classified as having clinically significant symptoms of depression (Curbow, McDonnell, Spratt, Griffin & Agnew, 2003; Gerber, Whitebook & Weinstein, 2007; Hamre & Pianta, 2004; Weaver, 2002). Mental wellbeing was measured in two studies of childcare providers (one in FDC,  $n = 65$ ; one in CBC,  $n = 235$ ), with mean scores indicating high mental wellbeing (Kaiser, Rogers & Kasper, 1993; Weaver, 2002). The limited research to date has been exclusively in American cross-sectional samples, most of which did not measure or provide separate prevalence figures for FDC educators. Given the limited data available, baseline prevalence data of FDC educators' mental health—both mental wellbeing and psychological distress—is needed to inform evidence-based policy, practice and workplace mental health promotion interventions. However, it is not only the status of educators' mental health that is important, but the conditions that promote, protect or risk their mental health and wellbeing. As job stress and psychosocial working conditions are highly influential for workers' mental health (LaMontagne et al., 2010), understanding the relationships between FDC educators' work and wellbeing is critical to supporting a high-quality workforce.

Like other ECEC work, FDC work features high demands, intense emotional work (Hochschild, 2012) and low pay; however, for FDC educators, further strain may arise due to isolation and the precarious nature of small business operation (Gerstenblatt, Faulkner, Lee, Doan & Travis, 2014). At the same time, the rewards of working with children and the features of small business ownership

that encourage autonomy may promote FDC educators' mental wellbeing. Research into the relationship between educator mental health and wellbeing and working conditions holds promise as many working conditions are modifiable and evidence can be integrated into context-specific workplace mental health promotion interventions at the policy, organisation and practice levels. Qualitative studies have indicated that the mental health of FDC educators is put at risk by stress arising from financial insecurity, isolation, difficult interactions with parents, caring for children at risk or with additional needs, a lack of entitlements (e.g. sick leave), disrespect for FDC work and the effect of policies created by government and by educators for use in their services (Butler & Modaff, 2008; Gerstenblatt et al., 2014; Groeneveld, Vermeer, van Ijzendoorn & Linting, 2012; McInnes, Ward & Knight, 2010; Rusby, Jones, Crowley & Smolkowski, 2012). Social and emotional rewards and support (Curbow et al., 2003; Kontos & Riessen, 1993; Weaver, 2002) as well as practical support for FDC work (Weaver, 2002) have been associated with better educator mental health. While a range of occupational health and safety risks in child care has been described in ECEC (McGrath, 2007; McGrath & Huntington, 2007), the quantitative relationships between working conditions and mental health and wellbeing have rarely been examined—and never in depth. Furthermore, research has scarcely been extended to include job stress (Curbow, Spratt, Ungaretti, McDonnell & Breckler, 2000) or psychosocial working conditions that are likely to play a role in educator mental health. This study provides evidence on the mental health status of Australian FDC educators and of associations between educator mental health and wellbeing and FDC working conditions to inform policy, planning and practice responses.

The following questions were addressed in this study:

1. What is the prevalence of psychological distress and mental wellbeing in FDC educators?
2. What is the prevalence of different working conditions in FDC that may be relevant to educator mental health?
3. How are working conditions in FDC related to educators' psychological distress and mental wellbeing?

## Method

### Data

This cross-sectional study used data from the 2012 *Work and Wellbeing in Family Day Care* study that aimed to develop an evidence base for workplace mental health promotion in FDC. The project was approved by the University of Melbourne Human Research Ethics Committee (HREC 1237396.1). A random sample of FDC educators ( $n = 1958$ ) from Victoria and Queensland and registered with Family Day Care Australia (FDCA) was invited to participate in data collection by mail or email,



depending on their registered contact details; 395 (~50 per cent Queensland and 50 per cent Victoria) consented and were subsequently included (response rate 20 per cent). The survey was designed after discussions with FDC schemes, educators and FDCA, as well as a preliminary analysis of the qualitative component of the *Work and Wellbeing in Family Day Care* study. It was piloted with FDC educators to check interpretation, acceptability and feasibility. The first section collected information on participant sociodemographic characteristics and the second section on job and client characteristics. The final section measured 'work and wellbeing', asking about sickness absences and working when sick, self-rated health, job stress, social support, practical support, psychological distress and mental wellbeing. To reduce social desirability bias and disclosure risks for educators, surveys were anonymous.

## Measures

### Mental health

The Kessler 10 (K10) was used to assess symptoms of general psychological distress experienced in the past four weeks. Participants respond using a five-point scale (all of the time, most of the time, some of the time, a little of the time, none of the time); total scores can range from 10 (no distress) to 50 (severe distress). It is an efficient, widely used screening instrument with strong validity and reliability (Andrews & Slade, 2001). Mental wellbeing was assessed using the Warwick-Edinburgh Mental Health and Wellbeing Scale (WEMHWBS), a 14-item scale that measures population mental wellbeing (psychological—eudaimonic and hedonic wellbeing—affect) in the past two weeks (Stewart-Brown et al., 2009). It has been found to have strong validity and reliability and low social desirability bias in student and population studies (Tennant et al., 2007). All items are positively worded and provide five response options on a Likert scale (never, rarely, some of the time, often, all of the time); higher scores indicate greater mental wellbeing. The seven-item short form (SWEMHWBS) was used in this survey. It has the same response options; total scores range from seven to 35. The SWEMHWBS is superior to the 14-item scale as it meets strict Rasch model criteria and is largely without gender and age bias (Stewart-Brown et al., 2009).

### Effort–Reward Imbalance

Psychosocial working conditions were primarily measured using the short form of the Effort–Reward Imbalance measure (ERI) which is an effective, reliable and valid measurement tool (Leineweber et al., 2010; Siegrist, Wege, Pühlhofer & Wahrendorf, 2009). It consists of three scales: 'effort' (three questions, score:  $\geq 12$ ), 'rewards' (seven questions, score:  $\geq 28$ ) and 'overcommitment' (six questions, score:  $\geq 24$ ) which represents an inability to withdraw from work. The 16 questions are answered using a four-point Likert scale (1 = strongly disagree to 4 = strongly agree).

Given the relevance of esteem to this population (Butler & Modaff, 2008; Rusby et al., 2012), three subscales of the rewards scale were also used: 'esteem' (respect) (score range 2–8), 'job promotion prospects' (score range 3–12) and 'job security' (score range 2–8). Scales and the ERI ratio were calculated according to ERI protocol (Leineweber et al., 2010; Siegrist et al., 2009). A ratio greater than one indicates a lack of reciprocity, where greater effort is expended than rewards received (Radi, Ostry & LaMontagne, 2007).

### Social support

A modified four-item social support scale was used to assess supervisory and collegial support (response options: often, rarely, sometimes or never) (Johnson & Hall, 1988). Questions ask about access to 'instrumental' (i.e. help and support) and 'socioemotional' (listening to work-related problems) support from supervisors and colleagues. 'Supervisor' was changed to read 'field worker or coordination scheme' and colleagues to 'other educators'. A total support score was calculated by summing the four item scores (Pelfrene et al., 2001).

## Statistical analysis

Data were analysed using Stata V.12.0 (StataCorp LP, College Station, Texas, USA). Cases without data for the working conditions and mental health survey sections were removed ( $n = 18$ ). No differences were found between sociodemographic characteristics of educators who did or did not complete data collection. Data were checked for normality. K10 scores were recoded as a binary variable due to severe skewness ( $>15$  low psychological distress;  $\geq 15$  moderate to high psychological distress) (Kessler et al., 2002). For regression analysis, health (very poor, poor, fair vs good, excellent), fee payment type (collect own fees vs fees collected by schemes), intention to stay in FDC and education (high school or lower vs vocational, tertiary) were reduced to two categories. A practical support item was generated by summing access to toy library, equipment loans and playgroups. Results were considered statistically significant at  $p < 0.05$ .

## Results

The descriptive characteristics of participants in this study are shown in Table 1.

These results describe a workforce in flux; around half the educators did not plan to stay in FDC beyond five years and a third had thought of leaving FDC in the last month (Table 2). Job security measures demonstrated that just over half of the educators felt their jobs were secure and the majority of educators felt that they would have some difficulty getting another job with the same pay and hours. The mean ERI ratio indicated an imbalance of effort expended to rewards received and 8.6 per cent ( $n = 26$ ) of educators had a ratio indicating greater rewards than effort.

Table 1. Characteristics of FDC educators and their services (*n* = 366)

Characteristic	
<i>Sex, n (%)</i>	
Female	361 (99)
<i>Age (years)</i>	
Mean $\pm$ SD*	47.3 $\pm$ 11.2
<i>Place of birth, n (%)</i>	
Australia	250 (68.3)
<i>Identify as Aboriginal or Torres Strait Islander, n (%)</i>	1 (>1)
<i>Language spoken at home, n (%)</i>	
English	293 (80.1)
<i>Location, n (%)</i>	
Victoria	176 (48.1)
Queensland	185 (50.8)
Other	3 (0.8)
<i>Education, n (%)</i>	
Less than Year 12	61 (16.8)
Year 12 or equivalent	32 (8.8)
Technical college certificate	143 (39.4)
Diploma or equivalent	98 (26.8)
Bachelor degree	19 (5.2)
Postgraduate degree	10 (2.8)
<i>Study enrolment status, n (%)</i>	
Currently studying	95 (26.5)
Of those currently studying:	
Certificate III Children's Services	52 (56)
Diploma/Adv. Diploma Children's Services	32 (34.5)
University—Early Childhood	5 (5.4)
<i>Scheme funding type, n (%)</i>	
Local government	136 (39)
Private	112 (32.1)
Not-for-profit	88 (25.2)
Other	13 (3.7)
<i>Employment type, n (%)</i>	
Contractor	309 (86.6)
Employee	48 (13.4)
<i>Years working in FDC, mean <math>\pm</math> SD</i>	10.4 $\pm$ 9.1
<i>Working hours, mean <math>\pm</math> SD</i>	
Paid	45.3 $\pm$ 27.5
Unpaid	10.3 $\pm$ 13.4
<i>Work overnight and/or weekend, n (%)</i>	84 (23.3)

Characteristic	
<i>No. of children attending FDC weekly, mean (range)</i>	8 (1–27)
<i>Health status, n (%)</i>	
Very poor	2 (>1)
Poor	0 (0)
Fair	43 (11.8)
Good	206 (56.4)
Excellent	114 (31.2)
<i>Taken time off work due to illness in last four weeks, n (%)</i>	53 (14.6)
<i>Worked unwell in last four weeks, n (%)</i>	118 (32.2)
<i>Number of days worked unwell in last four weeks, mean <math>\pm</math> SD</i>	5 ( $\pm$ SD 5.36)
<i>Own child/children attends FDC service, n (%)</i>	90 (25.4)
<i>Child age range in FDC service, mean <math>\pm</math> SD (range)</i>	23 months ( $\pm$ SD 22.2) –7.75 years ( $\pm$ 3.6)
<i>Children with a disability or developmental delay, n (%)</i>	85 (36)
<i>Children with a serious health problem, n (%)</i>	31 (15)
<i>Parent clients with mental illness or substance abuse problem, n (%)</i>	25 (12.7)

\* SD = Standard deviations

Table 2. Descriptive characteristics of participants' family day care motivations, future plans, job security and income security

Descriptive characteristics	<i>n</i> (%)
<i>Reason(s) for becoming an educator*</i>	
It suited me to work from home as I had my own child/children at home	223 (60.9)
I enjoy working with children	264 (72.1)
I like the idea of working from home	142 (38.8)
I wanted to run my own business	79 (21.6)
It lets me decide my hours of work	129 (35.2)
To work with children in a non-centre-based environment	97 (26.5)
To work from home while completing other study	27 (7.4)
Suited my career development plan	30 (8.2)
Other family reasons	7 (1.9)

Descriptive characteristics	<i>n</i> (%)
<i>Plan to stay in FDC</i>	
Under 12 months	16 (4.5)
1–2 years	66 (18.5)
3–5 years	95 (26)
6–10 years	89 (25)
More than 10 years	90 (25.3)
<i>Thought of leaving FDC in last month</i>	120 (33)
Once	13 (12.4)
2–4 times	53 (50.5)
Five times or more	39 (37.1)
<i>How secure in future of FDC?</i>	
Not at all secure	22 (11.5)
Moderately secure	68 (35.4)
Secure	71 (37)
Extremely secure	31 (16.1)
<i>If stop FDC, difficulty getting another job</i>	
Not at all difficult	67 (18.6)
Moderately difficult	105 (29.2)
Difficult	99 (27.5)
Extremely difficult	89 (24.7)
<i>Income adequacy</i>	
Not enough to meet your needs	107 (29.5)
Enough to meet your needs	234 (64.5)
More than enough to meet your needs	22 (6.1)
<i>Outstanding fees followed up</i>	
Never	88 (24.2)
Sometimes	179 (49.3)
Often	87 (24)
Not applicable, my scheme collects the whole fee from parents	9 (2.5)
<i>Access to toy library</i>	243 (66.4)
<i>Access to equipment loans</i>	242 (69.6)
<i>Access to playgroups</i>	272 (76.2)
<i>Social support measure</i>	13.02 (±SD 2.47)
<i>Effort–reward imbalance measure</i>	
Effort	8.47 (±SD 2.02)
Overcommitment	14.86 (±SD 3.73)
Reward	16.44 (±SD 16.44)
Esteem	3.95 (±SD 1.39)
Job security	5.32 (±SD 1.47)
Promotion prospects	7.17 (±SD 1.23)
Effort–reward ratio	1.22 (±SD 0.35)

\*Multiple responses allowed, numbers will not add up to 100 per cent

## Educator mental health

Educators completing the K10 ( $n = 338$ ) had a mean score of 15.2 ( $\pm$ SD 5.62), a median of 14 (range 10–50), with 58.3 per cent of respondents ( $n = 197$ ) scoring under 15. This indicates that while many participants did not report having experienced poor mental health in the past month, 41.7 per cent had experienced moderate to severe levels of psychological distress. The distribution is heavily skewed (skew 2.0) and the majority of people report little or no distress, which is consistent with Australian population data of the K10 and other measures of psychological distress (Andrews & Slade, 2001). Mental wellbeing scores, measured by the SWEMHWBS, also indicated that most educators have moderate wellbeing with a mean score of 27.12 ( $\pm$ SD 4.55) and a median score of 27 (experienced indicators of mental wellbeing ‘some of the time’ and ‘often’).

## Multivariable analysis

Unpaid, paid and irregular work hours and the number of children cared for each week were not associated with educator mental health outcomes and are not reported in Tables 3 or 4.

## Psychological distress

Table 3 presents the results of multiple logistic regression analyses between moderate to severe psychological distress and working conditions. Unadjusted logistic regressions showed that caring for a child/children with a disability or developmental delay was associated with reduced odds of distress. However, lack of job security and working for children and families with problems such as parent substance abuse were associated with increased risk of distress. On the ERI measure, educators reporting higher overcommitment, effort, low promotion prospects and a higher ERI ratio had increased odds of distress. After adjusting for confounders there was strong evidence that educators working with children and/or parents with additional needs, or who had insufficient incomes to meet their needs, had higher odds of reporting distress. Further, ‘overcommitment’, ‘effort’ and ‘esteem’ had significant ( $p > 0.001$ ) positive relationships to distress. Multivariable logistic regression modelling showed that the odds of distress were 5.34-fold higher in educators who reported a higher ERI ratio.

## Mental wellbeing

The results of linear regressions with mental wellbeing and working conditions are presented in Table 4. Univariate analysis showed that caring for your own child in FDC or a child/children with a disability or developmental delay, and the areas of social support and job security, were associated with higher educator mental wellbeing. Negative associations with mental wellbeing were found for educators that had to follow up fees with parents,

felt their jobs weren't secure and felt that finding a new, equivalent job would be difficult. On the ERI scales, negative associations were found between educator mental wellbeing and educators reporting higher overcommitment and effort and lower esteem and ERI ratio. After adjusting for age, health status, education and language spoken at home, social support and job security had significant, positive associations with educator mental wellbeing. Job stressors of overcommitment, effort and esteem were significantly associated with decreased mental wellbeing. The strongest relationship was between mental wellbeing and ERI ratio: for every unit increase in the ERI ratio, mental wellbeing decreased by 2.3 points on the SWEMHWBS (95 per cent Confidence Interval [CI] 3.33 to 1.29). Social support remained significantly related to higher mental wellbeing after multiple adjustments (Model 3).

## Discussion

This study demonstrates that FDC educator mental health is a key issue for the ECEC sector. The findings provide baseline information of the mental health status and working conditions of FDC educators and highlight the crucial role of psychosocial working conditions in the promotion and protection of educator mental health in FDC. As the vast majority of educators had imbalanced effort–reward ratios, these results call to question the fairness of the ‘rewards’ that educators receive in exchange for the effort they expend, particularly esteem, income and job security. They also highlight the role of social support in promoting educators’ mental health. Findings can be used to inform ECEC policy, practice or research interventions in workplace mental health promotion.

Table 3. Crude and multivariate odds ratios for FDC working conditions and educator psychological distress

	Model 1			Model 2			Model 3		
Working conditions	OR	95% CI	p-value	AOR	95% CI	p-value	AOR	95% CI	p-value
Own child in FDC service	0.54	0.33 to 0.89	0.016	0.79	0.43 to 1.43	0.429			
Child/children with disability/developmental delay	0.42	0.24 to 0.75	0.003	0.49	0.26 to 0.93	0.030	0.68	0.17 to 2.62	0.577
Children/families with additional needs/problems	1.64	1.04 to 2.58	0.031	1.73	1.05 to 2.83	0.030	1.68	0.46 to 6.10	0.429
Income does not meet needs	1.55	0.96 to 2.51	0.069	1.95	1.15 to 3.29	0.013	0.49	0.17 to 1.39	0.179
Need to follow up fee payments	1.22	0.73 to 2.03	0.453	-	-	-			
Number of days worked when unwell in the last month	1.02	0.94 to 1.10	0.616						
How secure FDC job	1.94	1.03 to 3.67	0.042	1.78	0.91 to 3.47	0.093	0.82	0.28 to 2.39	0.711
Ease in finding new job	1.16	0.66 to 2.04	0.607	-	-				
Social support scale	0.95	0.87 to 1.04	0.309	-					
Practical support	0.99	0.61 to 1.61	0.972	-					
<i>Effort–reward imbalance</i>									
Overcommitment	1.24	1.15 to 1.33	0.000	1.24	1.15 to 1.34	0.000	1.22	1.05 to 1.41	0.007
Effort scale	1.39	1.23 to 1.58	0.000	1.40	1.22 to 1.61	0.000			
Reward scale	0.82	0.75 to 0.89	0.000	0.81	0.73 to 0.89	0.000			
Esteem subscale	0.74	0.62 to 0.87	0.000	0.77	0.64 to 0.92	0.005			
Job security subscale	0.78	0.67 to 0.91	0.002	0.73	0.62 to 0.87	0.001			
Promotion subscale	0.73	0.60 to 0.89	0.002	0.70	0.56 to 0.88	0.002			
Effort–reward ratio	3.69	2.24 to 6.07	0.000	4.19	2.40 to 7.30	0.000	5.34	1.66 to 17.16	0.005

OR = Odds Ratio; AOR = Adjusted Odds Ratio; 95% CI = 95% Confidence Interval; p-value demonstrates the significance of results, > 0.05 indicates likely significance (e.g. p = 0.000 indicates very high significance)

Covariates Model 1: none

Covariates Model 2: age, education, health status, English primary language spoken at home

Covariates Model 3: As model 2, mutually adjusted for significant predictors ( $p > 0.1$ ) excluding ERI variables effort, reward, esteem, job security and promotion. R<sup>2</sup> = 27 per cent



Table 4. Unadjusted and adjusted linear regression of educator mental wellbeing and working conditions

	Model 1			Model 2			Model 3		
Working conditions	$\beta$ Coe	95% CI	p-value	$\beta$ Coe	95% CI	p-value	$\beta$ Coe	95% CI	p-value
Own child in FDC service	1.43	0.32 to 2.54	0.012	0.70	-0.50 to 1.89	0.253			
Child/children with disability/developmental delay	1.51	0.30 to 2.72	0.014	1.04	-0.23 to 2.32	0.109	-0.29	-2.81 to 2.24	0.822
Children/families with additional needs/problems	-0.88	-1.89 to 0.13	0.088	-0.98	-1.98 to 0.01	0.053	0.14	-2.16 to 2.45	0.903
Income not enough to meet needs	-0.72	-1.81 to 0.36	0.189	-	-	-			
Need to follow up fee payments	-1.51	-2.64 to -0.38	0.009	-1.49	-2.58 to -0.04	0.007	-0.54	-2.29 to 1.22	0.547
Number of days worked when unwell in the last month	-0.13	-0.29 to 0.31	0.119						
How secure FDC job	-1.96	-3.19 to -0.73	0.002	-1.50	-2.72 to -0.28	0.017	0.59	-1.10 to 2.27	0.490
Ease in finding new job	-1.21	-2.44 to 0.02	0.054	-1.39	-2.58 to -0.20	0.022	0.15	-1.90 to 2.20	0.887
Social support scale	0.47	0.28 to 0.66	0.000	0.43	0.24 to 0.61	0.000	0.39	0.07 to 0.71	0.018
Practical support	0.13	-0.98 to 1.23	0.822						
Effort-reward imbalance									
Overcommitment	-0.50	-0.62 to -0.38	0.000	-0.47	-0.59 to -0.35	0.000	-0.23	-0.48 to 0.02	0.071
Effort scale	-0.70	-0.94 to -0.46	0.000	-0.66	-0.90 to -0.42	0.000			
Reward scale	0.56	0.39 to 0.73	0.000	0.52	0.34 to 0.69	0.000			
Esteem subscale	1.02	0.68 to 1.35	0.000	0.81	0.48 to 1.15	0.000			
Job security subscale	0.77	0.44 to 1.09	0.000	0.79	0.46 to 1.12	0.000			
Promotion subscale	0.65	0.21 to 1.10	0.004	0.62	0.20 to 1.05	0.004			
Effort-reward ratio	-3.21	-4.05 to -2.37	0.000	-3.04	-3.90 to -2.18	0.000	-1.8	-3.55 to -0.06	0.043

$\beta$  Coe =  $\beta$  Coefficient; OR = Odds Ratio; AOR = Adjusted Odds Ratio; 95% CI = 95% Confidence Interval; p-value demonstrates the significance of results, > 0.05 indicates likely significance (e.g. p = 0.000 indicates very high significance)

Covariates Model 1: none

Covariates Model 2: age, education, health status, English primary language spoken at home

Covariates Model 3: As model 2, excluding ERI variables effort, reward, esteem, job security and promotion. Pseudo R<sup>2</sup> = 25 per cent

### FDC educator mental health

Educators in this sample had, on the whole, reasonable mental health with psychological distress and mental wellbeing scores that were comparable to adult population means (Andrews & Slade, 2001; Chanfreau et al., 2008). However, a notable proportion of educators experienced significant emotional distress in the past month and this group of educators is likely to benefit from appropriate mental health support. Despite experiences of mental wellbeing, the challenging psychosocial working conditions, namely a lack of reciprocity between the efforts they expend and the rewards they receive, may underlie the common instances of psychological distress.

### Work-related insecurity

Financial insecurity, from having to chase up fees from parents and having an inadequate income, was a problem for many educators, associated with higher odds of psychosocial distress and lower mental wellbeing. Job stress may arise from not only the financial insecurity of unpaid fees, but also the strained relationships that may result from having to ask parents to pay.

### Child and family characteristics

For educators caring for children with a disability or developmental delay, the odds of having moderate to severe mental distress were decreased by as much as 51 per cent

compared with those who did not care for children with these characteristics (Table 3, Models 1 and 2). This evidence stands in contrast to that of research into the mental health of parents of a child/children with a disability, where an elevated risk of depression in parents is consistently reported (Singer & Floyd, 2006). As the cross-sectional study design precludes causality, these findings may represent the rewards from caring for children with additional needs, or that educators who choose to care for children with a disability or developmental delay have better mental health at the outset. Working with parents that have mental health or substance abuse problems, or other problems, was associated with poorer mental wellbeing, though this effect disappeared after adjustments. Caring for your own child in FDC was a motivation for commencing FDC for around 60 per cent of educators in this study and was associated with better mental health outcomes in univariable regression analyses. This finding highlights how fulfilling parenting wishes or needs while earning an income through FDC (Community Services and Health Industry Skills Council, June, 2011; Nelson, 1988) can aid in supporting educator's mental health.

### **Practical and social support**

While practical support was not significantly associated with mental health outcomes, social support was found to be related to mental wellbeing but not psychological distress. In ECEC literature from FDC (Kontos & Riessen, 1993), CBC (Ghazvini & Mullis, 2002) and combined FDC and CBC studies (Curbow et al., 2003), social support was found to be related to fewer depressive symptoms in educators. However, the relationship between mental wellbeing and social support was not measured.

### **Effort–Reward Imbalance**

An imbalance of effort expended and rewards received was common in this population, as was overcommitment. Consistent with previous ERI research, an imbalanced ERI ratio was associated with higher odds of poor mental health (Stansfeld & Candy, 2006); in this instance, the odds of psychological distress were increased 5.34-fold. 'Rewards', both before and after adjustments and modelling, were significantly associated with reduced odds of psychological distress. To our knowledge, the ERI measure has not been tested against mental wellbeing. In this study, ERI ratio was related to worse mental wellbeing and rewards to better wellbeing. Job security and promotion items were associated with better mental health outcomes. Due to the high demand for ECEC providers, job security is not commonly examined in the ECEC literature; however, it has been noted that job promotion opportunities are scarce in the field (Doherty, Lero, Goelman, LaGrange & Tougas, 1999). This is particularly the case in FDC, where an educator must close their small business and change occupations to be promoted. Higher esteem was found to be protective of educator mental health

in this study—supported by ECEC and FDC literature—which has documented perceived lack of esteem and respect from others (supervisors, community, society) as a key stressor and concern (Butler & Modaff, 2008; Rutman, 1996).

### **Limitations**

The study sample is representative of the Australian population of FDC educators on markers of gender, average age, proportion of educators born in Australia and average job tenure (Community Services and Health Industry Skills Council, June, 2011; Williamson, Davis, Priest & Harrison, 2011). However, caution should be exercised when generalising these findings to the total FDC population due to the response rate. This survey was distributed at the peak of changes resulting from national ECEC reforms, which resulted in educators being under additional time pressure, hence the 20 per cent response rate was lower than hoped, though not unusual in FDC research (O'Connor & Temple, 2005). This timing may also mean that psychological distress and job stress responses are inflated. However, as the second study ever to measure psychosocial job stress in ECEC educators (Curbow et al., 2000) and the only study to use an extensively tested, theoretically sound, valid, reliable and comparable measure (ERI), it contributes timely and requisite knowledge for practice and policy responses (Siegrist, 1996; Siegrist et al., 2009). Lastly, multiple adjustments and predictors were analysed in multiple regressions, which can increase the risk of false positives but allowed a comprehensive assessment of associations between working conditions and educator mental health.

### **Conclusions**

The mental health and wellbeing of FDC educators is an overlooked, yet fundamental part of supporting a sustainable and high-quality workforce. In this study, the average educator's mental health was of moderate quality; however, a considerable proportion of educators reported moderate to severe psychological distress. A variety of psychosocial working conditions, including financial and job insecurity, child and family characteristics, work-related social support and ERI measures had significant relationships with mental health outcomes. Notably, an imbalanced ERI ratio was common and related to significantly worse mental health outcomes. This research supports investment in the FDC workforce beyond training and reforms to practice by modifying psychosocial working conditions (i.e. increasing financial security, social support and respect) and the ECEC system, which includes FDC schemes, the ECEC sector and relevant government policy and initiatives, to support the mental health and wellbeing of educators.

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