



The Effect of Social Support on Psychological Flourishing and Distress Among Migrants in Australia

Daniel R. du Plooy¹ · Anthony Lyons¹ · Emiko S. Kashima²

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Abstract

We examine the access that culturally diverse migrant groups in Australia have to different sources of social support and how this access, or lack thereof, is associated with psychological flourishing and distress. A national online survey was conducted with 1334 migrants in Australia, examining 11 different sources of social support, including family, friends, relationship partner, acquaintances, work colleagues, health professionals, government agencies, community organisations, religious groups, social groups and online groups. We also examined migrants from different cultural groups. All sources of support were significantly associated with mental health, but somewhat differently for the dimensions of distress and flourishing. Flourishing was linked to higher support from all 11 sources, though not for all cultural groups. High psychological distress was linked to lower support only from family, friends, a partner, acquaintances, work colleagues and social groups, and only for some cultural groups. In particular, for distress, there was no link between migrants from Southern Asia and family support, as well as Confucian Asia groups and friend support. Understanding where migrants from different cultural origins draw their support from could help policymakers and support workers improve health and well-being in migrant populations, especially by focusing on sources of support that are linked to lower distress and greater flourishing, as indicated in this study.

Keywords Social support · Migrants · Flourishing · Distress · Mental health

Background

Social support is known to mitigate the experience of stress [2, 30], and research has found that social support interventions can increase psychological well-being [11]. In particular, numerous studies have shown that when people report that they receive high levels of social support, they tend to also report better mental health, such as fewer symptoms of

depression and/or anxiety [17, 33], and better overall well-being [37, 43].

Migrating to a new country can be challenging and stressful, which may make social support potentially important to overall well-being and therefore how successfully migrants establish their new life. Although migrant well-being in Australia has been studied in general [19, 36, 39], studies examining links between social support and mental health among migrants are relatively scarce. One study, conducted among international students in Hawai'i, found that friendship is an important part of psychological functioning in the host nation [9]. Similarly, a study of migrants in Germany found that more local friendships can improve subjective well-being [31]. Thus, finding the appropriate support may be critical for migrants' mental health and well-being. There appear to be no published studies of migrants examining the links between mental health and a comprehensive range of support sources that not only include friendships, but also family, work colleagues, community organisations and more. Though the importance of social support for mental health outcomes is clear in general populations, having access to different sources of support is likely to be especially

✉ Daniel R. du Plooy
d.duplooy@latrobe.edu.au

Anthony Lyons
a.lyons@latrobe.edu.au

Emiko S. Kashima
e.kashima@latrobe.edu.au

¹ Australian Research Centre in Sex, Health and Society, School of Psychology and Public Health, La Trobe University, Melbourne, VIC 3086, Australia

² Department of Psychology and Counselling, School of Psychology and Public Health, La Trobe University, Melbourne, VIC 3086, Australia

important for migrants who experience depletion of their social support networks as a result of the migration process [38]. Identifying those sources of support most strongly linked to mental health outcomes could therefore help governments and other policymakers, as well as support workers in promoting and facilitating effective support for migrants.

When examining links between social support and mental health, there is value in not only focusing on psychological distress such as depression or anxiety, but also positive mental health or flourishing. Flourishing refers to high levels of well-being [22]. It is more than the absence of a mental disorder, rather more the opposite of a mental disorder [16]. Researchers have argued that a dual continuum model [45] can provide a more complete understanding of mental health. This model proposes that flourishing and distress are two distinct dimensions that are not mutually exclusive or perfectly correlated [23], thus factors linked to distress may not necessarily be the same factors linked to flourishing. Separating the effect of social support in relation to flourishing and/or distress would enable a more nuanced understanding of the role each source of support plays in overall well-being. Thus, we need to know which sources are linked to flourishing or distress, or both.

Another consideration is potential cultural differences in support-seeking behaviours. For example, researchers who compared people with Asian, Asian American, and European American backgrounds concluded that those from a collectivist background tend to seek less social support in general to deal with stress [41]. This would seem counter-intuitive, but as Kim, Sherman, and Taylor [26] explain, seeking out social support is associated with losing face, disrupting group harmony and potentially receiving criticism from others, which are all central elements of collectivist cultures. There is also a correlation between people's willingness to find outside professional help and their willingness to find help inside their own social networks [26]. Hernández-Plaza et al. [10] reports that migrant populations in many European countries tend to rely more on informal support systems within the community than formal resources such as government assistance through social workers. Thus, examining social support patterns and links to mental health among migrants may benefit from also taking into account the culture of their country of origin.

For the present study, we conducted a large survey called *Born Overseas* for migrants in Australia, examining 11 different sources of social support. We had two main aims. First, we sought to examine whether the amount of support received from the 11 sources differed depending on migrants' culture of origin. Second, we sought to assess the strength of association between each source of support and migrants' levels of distress and flourishing according to different cultural backgrounds. This latter aim was important given that previous research has shown that the degree to

which migrants rely on particular sources of support can vary depending on their culture of origin. Thus, the amount of support received from particular sources of support might have a larger association with distress or flourishing for some cultural groups than others.

Methods

Participants

A total of 1334 migrants responded to questions used in this paper. Based on the 2015 census data [1] the sample closely reflected the Australian migrant population in overall composition, with Britain, India and China being the largest countries of origin. The survey was translated into Chinese by the La Trobe University Confucius Institute, but not into any Indian languages. English was the preferred language for people from India, whereas most Chinese indicated a preference for a Chinese language survey in preliminary investigations. It was not feasible to translate into more languages.

Data Collection

The survey was hosted online from August 2016 to November 2016 using the Qualtrics survey platform. Most of the recruitment was from Facebook advertising, strategic Facebook group promotion and some Google AdWords advertising. The option to enter a prize draw to win an iPad mini or equivalent was provided. Anonymity was assured, and no identifying information were linked to responses. The study was approved by the La Trobe University Human Ethics Committee.

Measures

Participants completed the *Born Overseas* survey, which included several demographic questions: age, gender, location (capital city, regional town or rural), education (secondary or below, some university/vocational, undergraduate or postgraduate), employment status (full time, part-time/casual, unemployed, student or retired), and annual before-tax income (recoded into five brackets). Participants also reported their country of birth. This variable was later recoded into different regions to provide a broad cultural comparison (see House et al. [15]). These regions are based on well-established cultural dimensions originally identified by Hofstede, Kluckhohn and Strodbeck, also referred to as GLOBE regions (see House et al. [14]). To assess social support, participants were asked to rate each of 11 sources of social support (family, friends, significant other/partner, acquaintances, work colleagues, health professionals, government agencies, community organisations, church/

religious groups, social groups and online groups) on a scale of 1–5 (none, a little, a moderate amount, a lot, a great deal). ‘Not applicable’ could also be chosen. Those who selected this option were excluded from the analysis for that particular source of support.

The Kessler Psychological Distress 10-item scale (K10) was used to measure the degree of depression and anxiety experienced by the person in the past 30 days [21]. It is a widely used measure in Australia, with demonstrated validity [6]. The analysis was conducted using a dichotomised score, combining the low and moderate categories into one and the high and very high into a second category. The scale had a Cronbach’s alpha of .92 in this study.

Flourishing was measured by the 14-item Mental Health Continuum Short Form (MHC-SF). The MHC-SF was specifically designed to assess flourishing and covers three well-being dimensions: emotional; psychological; and social well-being [23]. The cross-cultural psychometric properties as well as overall validity has been shown by numerous studies [12]. To focus on flourishing, the analysis was conducted using a dichotomised score combining the languishing and moderately mentally healthy categories into one with the flourishing category as another. The scale had a Cronbach’s alpha of 0.93 in this study.

Analysis

A sample profile was first compiled by using descriptive data. To gauge the proportion of migrants who were receiving high levels of support, the highest two response categories, ‘a lot’ and ‘a great deal’, were combined to indicate high support and the remaining categories were combined to indicate lower support. Separate logistic regressions were then conducted for each of the 11 sources of social support to assess GLOBE region differences in the perceived amount of social support received. To account for potential demographic variations that might influence support levels, results were adjusted for age, location, education, employment, income, gender, and time spent living in Australia, while unadjusted data are also presented. The Anglo group was used as the reference category, as Australia is generally closest to this group in culture. Separate logistic regressions, adjusted for the above demographic variables, were conducted to assess the degree to which social support from each source was associated with either psychological distress or flourishing for each of the GLOBE regions. Wald tests were conducted to assess the overall effect of each social support variable, while odds ratios (ORs) and 95% confidence intervals (CIs) are also reported to assess the likelihood of experiencing distress or flourishing. Given the focus on overall associations, support variables were treated as continuous variables for these analyses. To deal with missing data, list-wise deletion was used. Alpha level was set

to 0.05. All analyses were conducted using Stata SE 14.2 software.

Results

Sample Profile

Participants were generally well educated and the majority were employed with mid-range incomes. The mean age for the sample was 46.2 years. See Table 1 for a sample profile. We used regions previously described by the GLOBE project [3] to categorize respondents into one of four region groups. The largest group was the Anglo group at 40%, which included countries such as the UK, USA, Canada, Ireland and South Africa. This was followed by the Southern Asian group at 31%, which included countries such as India, Pakistan, Bangladesh and Sri Lanka. A Confucian Asian group comprised 21% of the sample and included countries such as China, Hong Kong, Singapore and Taiwan. Due to their small numbers, participants from all other European countries including Germany, Denmark, and France were classified as ‘All Other European’ (8% of the sample). GLOBE regions are usually separated into Nordic, Germanic and Latin groups, but the sample size for these groups were too small to analyse separately, yet as a regional block they share some collective identity [35] and were therefore retained in the analyses as a broad indicator of migrants from other European countries. The remaining countries involved less than 112 participants in total and were excluded from this analysis.

High Social Support According to GLOBE Region

Table 2 displays the numbers and percentages of participants reporting high social support from each of the four GLOBE regions. A significantly greater proportion of participants in the Southern Asian group reported receiving high family support than the other three groups ($\chi^2_3 = 21.26, p < .001$ when unadjusted; $\chi^2_3 = 29.39, p < .001$ when adjusted for age, location, education, employment, income, gender, and time spent living in Australia). High levels of support from government agencies was reported by more of the participants in the Southern and Confucian Asian groups compared to the Anglo group. While this was not significant in unadjusted analyses ($\chi^2_3 = 2.80, p = .42$) it was significant after adjusting for demographics ($\chi^2_3 = 10.84, p = .012$). The Southern Asian group reported receiving higher support from health professionals compared to the other three groups. Although this difference was not significant in unadjusted analyses ($\chi^2_3 = 7.62, p = .055$), it was significant following demographic adjustment ($\chi^2_3 = 11.67, p = .009$). High levels of support from church/religious groups was

Table 1 Sample profile (N = 1334)

	n	%
GLOBE regions		
Anglo	528	39.58
Southern Asia	413	30.96
Confucian Asia	285	21.36
All other European	108	8.10
Location		
Capital city	983	73.85
Regional town	274	20.59
Rural	74	5.56
Gender		
Male	634	47.71
Female	695	52.29
Education		
Secondary or below	181	13.57
Some university/vocational	321	24.06
Undergraduate	430	32.23
Postgraduate	402	30.13
Employment		
Working full time	535	40.47
Working part time/casual	231	17.47
Unemployed	105	7.94
Student	203	15.36
Retired	248	18.76
Income		
–25k	228	17.42
25–50k	288	22
50–100k	387	29.56
100k–200k	317	24.22
200k+	89	6.78
Source of support		
Family	1217	91.23
Friends	1310	98.20
Significant other/partner	1137	85.23
Acquaintances	1277	95.72
Work colleagues	1140	85.46
Health professionals	1255	94.08
Government agencies	1171	87.78
Community organisations	1079	80.88
Church or religious groups	1058	79.31
Social groups	1137	85.23
Online groups	1260	94.45
	M	SD
Age	46.15	17.08
Time spent in Australia	17.44	16.30
Distress and flourishing measures		
Distress (K10)	18.73	7.35
Flourishing (MHC-SF)	58.73	14.39

Table 2 GLOBE region differences in reported experience of high support from various sources of social support

	Has high support		Unadjusted		Adjusted ^a	
	No	%	OR (95% CI)	p	OR (95% CI)	p
Family				<0.001		<0.001
Anglo ^b	271	55.08	–		–	
Southern Asia	252	69.61	1.87 (1.40–2.49)***		2.61 (1.81–3.79)***	
Confucian Asia	149	56.02	1.04 (0.77–1.40)		1.32 (0.88–1.97)	
All other European	56	57.73	1.11 (0.72–1.73)		1.28 (0.80–2.04)	
Friends				0.01		0.36
Anglo ^b	232	44.96	–		–	
Southern Asia	211	52.10	1.33 (1.03–1.73)*		1.31 (0.93–1.84)	
Confucian Asia	160	56.34	1.58 (1.18–2.11)**		1.23 (0.85–1.80)	
All other European	49	46.67	1.07 (0.70–0.97)		0.92 (0.59–1.44)	
Significant other/partner				0.04		0.23
Anglo ^b	364	78.62	–		–	
Southern Asia	276	79.08	1.03 (0.73–1.45)		1.04 (0.67–1.62)	
Confucian Asia	166	71.24	0.67 (0.47–0.97)*		0.88 (0.55–1.42)	
All other European	64	69.57	0.62 (0.38–1.02)		0.61 (0.36–1.02)	
Acquaintances				0.28		0.78
Anglo ^b	86	16.90	–		–	
Southern Asia	53	13.49	0.77 (0.53–1.11)		1.19 (0.73–1.93)	
Confucian Asia	46	16.85	1.00 (0.67–1.48)		1.24 (0.74–2.10)	
All other European	21	20.59	1.28 (0.75–2.17)		1.26 (0.71–2.22)	
Work colleagues				0.24		0.31
Anglo ^b	104	25.18	–		–	
Southern Asia	116	31.27	1.35 (1.00–1.85)		1.39 (0.94–2.08)	
Confucian Asia	70	26.12	1.05 (0.74–1.50)		1.12 (0.72–1.75)	
All other European	22	25.00	0.99 (0.58–1.68)		0.91 (0.52–1.59)	
Health professionals				0.05		0.01
Anglo ^b	181	35.77	–		–	
Southern Asia	121	31.35	0.82 (0.62–1.09)		1.65 (1.13–2.42)**	
Confucian Asia	71	26.89	0.66 (0.48–0.92)*		1.30 (0.84–2.01)	
All other European	27	27.27	0.67 (0.42–1.08)		0.64 (0.38–1.08)	
Government agencies				0.42		0.01
Anglo ^b	53	11.21	–		–	
Southern Asia	52	14.44	1.34 (0.89–2.02)		2.54 (1.43–4.49)***	
Confucian Asia	36	14.23	1.31 (0.83–2.07)		2.08 (1.11–3.90)*	
All other European	9	10.59	0.94 (0.44–1.98)		0.98 (0.44–2.16)	
Community organisations				0.92		0.18
Anglo ^b	43	9.84	–		–	
Southern Asia	31	9.34	0.94 (0.58–1.53)		2.05 (1.03–4.08)*	
Confucian Asia	19	8.19	0.82 (0.24–1.44)		1.54 (0.71–3.35)	
All other European	7	8.97	0.90 (0.39–2.11)		0.81 (0.34–1.97)	
Church or religious groups				0.01		0.02
Anglo ^b	49	11.64	–		–	
Southern Asia	65	19.64	1.86 (1.24–2.78)**		2.35 (1.37–4.05)**	
Confucian Asia	41	17.60	1.62 (1.03–2.54)*		2.02 (1.11–3.67)*	
All other European	8	10.96	0.93 (0.42–2.06)		0.96 (0.42–2.18)	
Social groups				0.96		0.80
Anglo ^b	84	18.50	–		–	
Southern Asia	62	17.71	0.95 (0.66–1.36)		1.20 (0.74–1.93)	
Confucian Asia	39	15.66	0.82 (0.54–1.24)		1.06 (0.62–1.84)	

Table 2 (continued)

	Has high support		Unadjusted		Adjusted ^a	
	No	%	OR (95% CI)	p	OR (95% CI)	p
All other European	14	16.67	0.88 (0.47–1.64)		0.85 (0.44–1.62)	
Online groups				0.07		0.04
Anglo ^b	158	31.04	–		–	
Southern Asia	101	26.44	0.80 (0.59–1.07)		1.16 (0.79–1.72)	
Confucian Asia	88	32.00	1.05 (0.76–1.43)		1.58 (1.03–2.41)*	
All other European	19	20.21	0.56 (0.33–0.96)*		0.65 (0.37–1.14)	

^aMultivariable regression adjusted for the following demographic variables: location, age, education, employment, income, gender and time spent in Australia

^bIndicates the reference category

* $p < .05$ ** $p < .01$ *** $p < .001$

also reported by more of the participants in the Southern Asian and Confucian Asian groups in both unadjusted ($\chi^2_3 = 11.22, p = .01$) and adjusted ($\chi^2_3 = 10.45, p = .015$) analyses. A significantly greater proportion of the Confucian Asian group also reported receiving high levels of support from online groups compared to the other three regions ($\chi^2_3 = 7.22, p = .065$ when unadjusted; $\chi^2_3 = 8.43, p = .038$ when adjusted). There were no significant GLOBE region differences in levels of support received from friends, a relationship partner, acquaintances, work colleagues, community organisations, or social groups.

Social Support and Flourishing According to GLOBE Region

Table 3 displays unadjusted and adjusted results for associations between the 11 sources of support and psychological flourishing. From the adjusted analyses, all sources of support were significantly associated with flourishing for at least some of the GLOBE region groups. Specifically, flourishing was significantly associated with higher levels of support from family (Anglo: $\chi^2_1 = 27.57, p < 0.001$; Southern Asian [SA]: $\chi^2_1 = 6.05, p = .014$; Confucian Asian [CA]: $\chi^2_1 = 4.12, p = .042$), friends (Anglo: $\chi^2_1 = 30.79, p < 0.001$; SA: $\chi^2_1 = 16.56, p < 0.001$; CA: $\chi^2_1 = 5.81, p = .016$, Other European [OE]: $\chi^2_1 = 11.81, p = .001$), a partner (Anglo: $\chi^2_1 = 7.50, p = .006$; SA: $\chi^2_1 = 5.10, p = .024$; OE: $\chi^2_1 = 5.76, p = .016$), acquaintances (Anglo: $\chi^2_1 = 27.45, p < 0.001$; SA: $\chi^2_1 = 33.05, p < 0.001$; CA: $\chi^2_1 = 4.01, p = .045$, OE: $\chi^2_1 = 6.27, p = .012$) and work colleagues (Anglo: $\chi^2_1 = 30.49, p < 0.001$; SA: $\chi^2_1 = 25.09, p < 0.001$; CA: $\chi^2_1 = 9.64, p = 0.002$, OE: $\chi^2_1 = 7.78, p = 0.005$) for all regions, except family support for the Other European group and partner support for the Confucian Asian group. Flourishing was significantly associated with higher levels of support, but only among the Anglo and Southern Asian groups, from

health professionals (Anglo: $\chi^2_1 = 11.61, p = 0.001$; SA: $\chi^2_1 = 13.35, p < 0.001$), community organisations (Anglo: $\chi^2_1 = 13.53, p < 0.001$; SA: $\chi^2_1 = 19.37, p < 0.001$), government agencies (Anglo: $\chi^2_1 = 17.77, p < 0.001$; SA: $\chi^2_1 = 9.12, p = 0.003$), church or religious groups (Anglo: $\chi^2_1 = 4.74, p = 0.029$; SA: $\chi^2_1 = 5.05, p = 0.025$) and social groups (Anglo: $\chi^2_1 = 26.53, p < 0.001$; SA: $\chi^2_1 = 12.98, p < 0.001$). Flourishing and online support was only significant for the Anglo group ($\chi^2_1 = 11.94, p < 0.001$).

Social Support and Distress According to GLOBE Region

Associations between the 11 sources of support and psychological distress for the different GLOBE regions are shown in Table 4. Patterns varied from one GLOBE region to another. From the adjusted analyses, high distress was significantly associated with lower support from family for the Anglo and Confucian Asian groups (Anglo: $\chi^2_1 = 19.53, p < 0.001$; CA: $\chi^2_1 = 8.27, p = 0.004$) and friends for the Anglo, Southern Asian, and Other European groups (Anglo: $\chi^2_1 = 15.84, p < 0.001$; SA: $\chi^2_1 = 5.83, p = 0.016$; OE: $\chi^2_1 = 5.27, p = 0.022$). For the Anglo and Other European groups, high distress was also significantly linked to lower support from a partner (Anglo: $\chi^2_1 = 14.77, p < 0.001$; OE: $\chi^2_1 = 7.12, p = 0.008$) and from acquaintances (Anglo: $\chi^2_1 = 8.35, p = 0.004$; OE: $\chi^2_1 = 7.92, p = 0.005$). For only the Anglo group, high distress was further significantly associated with lower support from work colleagues ($\chi^2_1 = 12.57, p = 0.004$) and social groups ($\chi^2_1 = 7.61, p = 0.006$). There were no significant associations between distress and support from health professionals, community organisations, government agencies, church or religious groups and online groups for any of the GLOBE regions.

Table 3 Associations between sources of support and psychological flourishing by GLOBE region

Source of Support	Unadjusted		Adjusted	
	OR (95% CL)	<i>p</i>	OR (95% CL)	<i>p</i>
Family support				
Anglo	1.59 (1.36–1.85)***	< 001	1.58 (1.33–1.87)***	< 001
Southern Asia	1.23 (1.03–1.46)*	0.02	1.27 (1.05–1.53)*	0.014
Confucian Asia	1.21 (0.99–1.47)	0.06	1.25 (1.01–1.57)*	0.042
All other European	1.30 (0.96–1.75)	0.09	1.13 (0.78–1.64)	0.51
Friends support				
Anglo	1.63 (1.39–1.92)***	< 001	1.66 (1.39–1.99)***	< 001
Southern Asia	1.40 (1.18–1.66)***	< 001	1.49 (1.23–1.81)***	< 001
Confucian Asia	1.31 (1.02–1.68)*	0.04	1.46 (1.07–1.99)*	0.016
All other European	1.87 (1.30–2.68)***	< 001	2.32 (1.44–3.76)***	< 001
Significant other/partner				
Anglo	1.21 (1.04–1.40)*	0.01	1.26 (1.07–1.50)**	0.006
Southern Asia	1.24 (1.04–1.47)*	0.01	1.25 (1.03–1.52)*	0.024
Confucian Asia	1.20 (0.98–1.47)	0.08	1.15 (0.90–1.46)	0.26
All other European	1.52 (1.10–2.09)**	0.009	1.66 (1.10–2.51)*	0.016
Acquaintances				
Anglo	1.74 (1.45–2.10)***	< 001	1.76 (1.43–2.18)***	< 001
Southern Asia	1.95 (1.58–2.41)***	< 001	1.94 (1.55–2.44)***	< 001
Confucian Asia	1.22 (0.96–1.56)	0.10	1.33 (1.01–1.76)*	0.045
All other European	1.65 (1.11–2.46)**	0.01	1.77 (1.13–2.78)*	0.012
Work colleagues				
Anglo	1.59 (1.35–1.88)***	< 001	1.85 (1.48–2.29)***	< 001
Southern Asia	1.62 (1.33–1.97)***	< 001	1.77 (1.42–2.21)***	< 001
Confucian Asia	1.57 (1.23–2.00)***	< 001	1.56 (1.18–2.06)**	0.002
All other European	1.83 (1.20–2.79)**	0.002	2.21 (1.27–3.85)**	0.005
Health professionals				
Anglo	1.44 (1.23–1.68)***	< 001	1.37 (1.14–1.64)***	001
Southern Asia	1.53 (1.29–1.83)***	< 001	1.42 (1.18–1.71)***	< 001
Confucian Asia	1.04 (0.84–1.29)	0.71	1.05 (0.82–1.35)	0.70
All other European	1.49 (1.03–2.15)*	0.03	1.34 (0.87–2.06)	0.19
Community organisations				
Anglo	1.35 (1.13–1.61)***	< 001	1.51 (1.21–1.89)***	< 001
Southern Asia	1.48 (1.23–1.78)***	< 001	1.61 (1.30–1.98)***	< 001
Confucian Asia	1.06 (0.85–1.32)	0.62	1.06 (0.81–1.37)	0.70
All other European	1.17 (0.77–1.80)	0.45	1.19 (0.68–2.10)	0.54
Government agencies				
Anglo	1.71 (1.38–2.11)***	< 001	1.68 (1.32–2.14)***	< 001
Southern Asia	1.40 (1.14–1.72)**	0.001	1.42 (1.13–1.79)**	0.003
Confucian Asia	1.10 (0.84–1.45)	0.49	1.22 (0.89–1.68)	0.22
All other European	1.21 (0.76–1.92)	0.42	1.31 (0.73–2.37)	0.37
Church or religious groups				
Anglo	1.17 (0.98–1.40)	0.08	1.26 (1.02–1.54)*	0.03
Southern Asia	1.26 (1.07–1.49)**	0.005	1.24 (1.03–1.49)*	0.025
Confucian Asia	1.11 (0.91–1.35)	0.30	1.16 (0.93–1.46)	0.18
All other European	0.90 (0.61–1.32)	0.60	0.80 (0.49–1.32)	0.40
Social groups				
Anglo	1.65 (1.39–1.97)***	< 001	1.66 (1.37–2.01)***	< 001
Southern Asia	1.40 (1.17–1.68)***	< 001	1.45 (1.18–1.77)***	< 001
Confucian Asia	1.20 (0.96–1.50)	0.10	1.29 (0.99–1.67)	0.06

Table 3 (continued)

Source of Support	Unadjusted		Adjusted	
	OR (95% CL)	<i>p</i>	OR (95% CL)	<i>p</i>
All other European	1.11 (0.77–1.60)	0.57	0.96 (0.61–1.51)	0.86
Online groups				
Anglo	1.33 (1.14–1.54)***	< 001	1.34 (1.14–1.58)***	< 001
Southern Asia	1.14 (0.96–1.34)	0.14	1.11 (0.92–1.35)	0.28
Confucian Asia	1.15 (0.95–1.41)	0.16	1.18 (0.95–1.46)	0.15
All other European	1.21 (0.85–1.73)	0.30	1.21 (0.77–1.92)	0.40

All logistic regressions were adjusted for: Location, Age, Education, Employment, Income, Gender and Time spent in Australia. Flourishing variable is dichotomised. Source of support variable is continuous

p* < .05 *p* < .01 ****p* < .001

Discussion

This study compared perceived levels of social support among four different cultural groups that make up a large proportion of migrants to Australia. We also examined the relationships between different sources of support and psychological flourishing and distress in each cultural group, based on the GLOBE regional categorisations. Specifically, levels of support from 11 sources of support were similar across cultural groups, however, there were a few differences. In particular, compared to the Anglo group, a greater proportion of participants in the Southern Asian group reported receiving high support from family, health professionals, government, and religious/church groups. In addition, receiving high support from government, religious/church groups, and online groups was more common in the Confucian Asian group. Overall, flourishing was linked to support from all 11 sources for at least some of the four GLOBE regions we examined in this study. In contrast, distress was linked to only a few sources of support and only for some of the region groups, namely family, friends, a partner, acquaintances, work colleagues and social groups, where high distress was associated with lower support.

An interesting finding was that, even though the Southern Asian group was more likely to report high support from family compared to the Anglo group, having high support did not appear to be associated with a lower likelihood of distress. This might seem counterintuitive, but we already know that collectivistic cultures position the *self* differently towards *others* [20, 42]. In some collectivistic cultures, we thus might expect that more family support could potentially provide increased relational demands which could in turn lead to compromised stress handling or even increased distress [5, 13]. These relational demands could be seen as part of an individual's duty in more collectivistic cultural groups compared to individualistic Anglo groups, thereby potentially having less power in lowering distress in comparison. This collectivist/individualistic distinction does not, however, explain why the same result was not found for the

Confucian Asian group, which showed a significantly lower likelihood of distress with greater family support. Other, more specific cultural differences between the Southern Asian and Confucian Asian groups may also be at play, and would need to be investigated in future research. Some cultural differences might also be put into more stark contrast when colliding with values and attitudes to family life in Australia which are very dissimilar. Canadian research on migrant groups [27] provides evidence on the generational conflict that could develop within the family in the new country when the next generation start to adopt the values of the host country, potentially adding to distress within the family support system.

An interdependent relational view that is more prevalent in collectivistic cultures might also contribute to different emphases being placed on specific types of support within the cultural group, depending on other cultural factors. In other words, not only do cultures differ in their willingness to seek certain types of support [24, 26], but different relational expectations might contribute to differences in the type of support sought from specific sources [40]. For example, an emphasis on maintaining group harmony may result in concealment of emotional challenges, which may then mean that other forms of support, such as practical support, are more readily sought than emotional support. Thus, despite the Southern Asian group receiving high levels of family support, it may be possible that other groups are seeking more emotional support from their families [41, 44], which may provide a greater buffer to distress. But this is only one possible explanation and would need to be tested in future research that closely examines the different types of support available and accessed in families across cultures, as well as other contextual factors. Another issue to consider is, if many of the family members migrated together, they might be experiencing the same problems in adapting to their new country, and might therefore be less able to help lessen each other's distress despite offering support.

For the Confucian Asian group, it was only family support that was linked to a lower likelihood of distress, while

Table 4 Associations between sources of support and psychological distress by GLOBE region

Source of support	Unadjusted		Adjusted	
	OR (95% CL)	<i>p</i>	OR (95% CL)	<i>p</i>
Family support				
Anglo	0.67 (0.57–0.80)***	< 001	0.64 (0.52–0.79)***	< 001
Southern Asia	1.01 (0.85–1.20)	0.88	0.95 (0.78–1.15)	0.57
Confucian Asia	0.80 (0.66–0.97)*	0.02	0.73 (0.59–0.91)**	0.004
All other European	0.56 (0.37–0.85)**	0.006	0.64 (0.37–1.11)	0.12
Friends support				
Anglo	0.71 (0.59–0.85)***	< 001	0.65 (0.53–0.81)***	< 001
Southern Asia	0.85 (0.72–1.01)	0.06	0.79 (0.66–0.96)*	0.02
Confucian Asia	0.96 (0.75–1.22)	0.71	0.91 (0.69–1.20)	0.48
All other European	0.48 (0.29–0.79)**	0.004	0.46 (0.24–0.89)*	0.02
Significant other/partner				
Anglo	0.72 (0.62–0.84)***	< 001	0.70 (0.58–0.84)***	< 001
Southern Asia	0.81 (0.69–0.95)*	0.012	0.90 (0.75–1.09)	0.28
Confucian Asia	0.80 (0.66–0.96)*	0.02	0.85 (0.69–1.06)	0.15
All other European	0.47 (0.31–0.72)**	< 001	0.39 (0.19–0.78)**	0.008
Acquaintances				
Anglo	0.69 (0.56–0.86)***	< 001	0.70 (0.55–0.89)**	0.004
Southern Asia	0.82 (0.67–1.00)	0.053	0.81 (0.65–1.01)	0.062
Confucian Asia	0.90 (0.70–1.15)	0.38	0.88 (0.67–1.14)	0.32
All other European	0.28 (0.13–0.59)***	< 001	0.18 (0.05–0.59)**	0.005
Work colleagues				
Anglo	0.74 (0.61–0.89)**	0.002	0.63 (0.49–0.82)***	< 001
Southern Asia	0.82 (0.68–0.99)*	0.04	0.82 (0.66–1.01)	0.06
Confucian Asia	0.81 (0.65–1.02)	0.07	0.85 (0.66–1.09)	0.21
All other European	0.67 (0.41–1.10)	0.12	0.67 (0.36–1.22)	0.19
Health professionals				
Anglo	0.83 (0.69–1.00)*	0.045	0.92 (0.74–1.13)	0.43
Southern Asia	0.89 (0.75–1.05)	0.17	0.95 (0.79–1.15)	0.60
Confucian Asia	0.90 (0.73–1.12)	0.36	0.94 (0.74–1.19)	0.61
All other European	0.41 (0.22–0.77)**	0.005	0.58 (0.29–1.17)	0.13
Community organisations				
Anglo	0.84 (0.68–1.04)	0.10	0.86 (0.67–1.10)	0.23
Southern Asia	0.88 (0.73–1.07)	0.21	0.88 (0.71–1.09)	0.24
Confucian Asia	1.05 (0.84–1.30)	0.67	0.98 (0.77–1.25)	0.85
All other European	0.42 (0.18–0.98)*	0.02	0.28 (0.07–1.03)	0.06
Government agencies				
Anglo	0.77 (0.60–0.99)*	0.04	0.78 (0.59–1.05)	0.10
Southern Asia	0.94 (0.76–1.16)	0.56	0.89 (0.70–1.13)	0.32
Confucian Asia	1.06 (0.81–1.39)	0.69	0.98 (0.73–1.33)	0.91
All other European	0.47 (0.18–1.26)	0.13	0.41 (0.10–1.62)	0.21
Church or religious groups				
Anglo	1.05 (0.86–1.28)	0.63	1.07 (0.85–1.34)	0.59
Southern Asia	0.98 (0.83–1.16)	0.82	0.95 (0.78–1.15)	0.58
Confucian Asia	1.04 (0.85–1.27)	0.71	1.06 (0.86–1.33)	0.57
All other European	1.11 (0.71–1.74)	0.64	1.36 (0.74–2.49)	0.32
Social groups				
Anglo	0.72 (0.58–0.89)**	0.002	0.71 (0.55–0.90)**	0.006
Southern Asia	0.92 (0.76–1.10)	0.34	0.87 (0.71–1.07)	0.18
Confucian Asia	1.08 (0.87–1.34)	0.50	1.04 (0.81–1.34)	0.75

Table 4 (continued)

Source of support	Unadjusted		Adjusted	
	OR (95% CL)	<i>p</i>	OR (95% CL)	<i>p</i>
All other European	0.77 (0.46–1.28)	0.31	1.01 (0.51–2.02)	0.97
Online groups				
Anglo	0.94 (0.79–1.11)	0.46	0.99 (0.82–1.21)	0.95
Southern Asia	1.03 (0.87–1.23)	0.68	1.03 (0.84–1.26)	0.79
Confucian Asia	0.88 (0.72–1.07)	0.19	0.88 (0.71–1.08)	0.22
All other European	0.58 (0.33–0.99)*	0.04	0.48 (0.21–1.10)	0.08

All logistic regressions were adjusted for: location, age, education, employment, income, gender and time spent in Australia. Distress variable is dichotomised. Source of support variable is continuous

p* < 0.05 *p* < 0.01 ****p* < 0.001

it was the only group not to show a significant link between friend support and distress. In contrast, for the Southern Asian group, it was only friend support that was linked to a lower likelihood of distress. Gaining emotional support has been shown to be important as a buffer to distress [34], and has been shown to be moderated by culture [44], so one possible explanation is that the Confucian Asian group seeks more emotional support from family while the Southern Asian group seeks more emotional support from friends. Some cultural factors which could contribute to differences in support seeking behaviour between Confucian and Southern Asian groups specifically might stem from differences in religious beliefs [18], family collectivism practices [7], and family structures, interactions, relational consequences and expectations of family members [25, 26]. Interestingly, for both groups, family and friend support were linked to flourishing. It may be that other types of support, such as companionship or practical forms of support, make a difference when it comes to flourishing but are perhaps not so good at preventing distress. However, all of this remains to be tested. The types of support sought from different sources, and the effect of culture, may therefore be a topic worthy of investigation in future research. In contrast, many more sources of support were linked to flourishing and distress for the Anglo group than for the other groups. Perhaps again there are cultural differences, where feeling supported across many different areas of life is helpful for the Anglo group, while in some other groups support from particular sources is more important.

Previous research has also pointed out that the uptake of formal sources of social support like those from government are lower among migrant populations [10]. When compared to their Anglo and European counterparts, the Southern Asian and Confucian Asian groups seemed to seek more support from health professionals and government agencies. One reason for this might be the comparisons some migrant groups make with their peers back home, thus potentially showing the reference group effect [8]. As Australia has free universal healthcare and a generous government social

support system, there might be a greater feeling of support if one's country of origin did not provide these services. Objectively, the actual support received from these sources could therefore still be lower than the general population, although this would need to be examined in future research. Certain migrant groups might also be at a disadvantage in finding employment for several reasons, including language ability and discrimination issues [29]. This might in turn necessitate more reliance on government and health professionals.

Quite often, faith-based organisations and religious institutions specifically reach out to migrant groups, and position themselves as a source of support [4]. A religious support base often provides a familiar space despite any cultural differences. It could then be natural to expect that those cultural groups with a higher percentage of faithful/religious adherents might seek out this source of support. In our results, both the Southern Asian and Confucian Asian groups sought significantly more support from religious/church groups compared to the Anglo cultural group, and having greater amounts of this support was linked to higher flourishing, specifically for the Anglo and Southern Asian groups.

Differing patterns in the results between psychological distress and flourishing would seem to support the dual continuum model [23]. Lacking high levels of support from health professionals, government agencies, community organisations, church/religious groups, and online groups was not significantly linked to greater distress. However, those sources that seem to have a larger emotionally-sustaining quality, such as support from family and friends, generally predicted a lower likelihood of distress. All the sources of support had, however, a significant link to a greater likelihood of flourishing. A greater range of sources of support might be beneficial in supporting flourishing. When a person is generally well, feeling supported in all aspects of life might be more likely to make the difference between being 'just okay' versus flourishing.

One of the limitations for this study includes our inability to distinguish where a source of support is accessed.

Family support, for example, could potentially still be sought from outside Australia with the use of social media and other technology. We therefore cannot say that family support, or friend support, come from connections available within Australia. Another limitation is the use of cross-sectional data. It is not possible to determine directions of causality. It is possible, for example, that people who are flourishing are better at seeking support from friends because they feel happier to start with. We acknowledge that these are only associations and we are not able to make conclusions about causality at this stage. However, the findings do provide information that could help to inform approaches for supporting migrants and could be further explored in future research, especially in longitudinal research where causal pathways could be tracked over time. Previous research does, however, show causal links between social support and mental health [28, 32], which makes it highly likely that there are causal links between mental health and social support in this study. Our ‘all other European’ group was relatively small, and prohibit us from drawing firm conclusions based on this group. More participants from different European nations would enable clearer results for this group. Lastly, we also do not know what types of support people are receiving from particular sources. For example, for friend support, an individual might be receiving more practical support instead of emotional support. As we mentioned earlier, future studies could distinguish between these types of support to provide a more complete picture. Even so, this study does show that by simply considering the source of support, clear relationships are established to flourishing and distress.

New Contribution to the Literature

First, though much has been investigated on the well-being of migrant groups in Australia in the past, this research contributes to a better understanding of Australian migrants in general. Second, a more holistic view of well-being is used which focuses on supporting flourishing, and is not only focussed on alleviating distress, which lends itself to a more nuanced understanding of the role each source of support plays in overall well-being. Finally, identifying sources of support linked to the well-being of migrants from specific cultural groups may help to inform and guide relevant stakeholders by identifying vulnerabilities in certain cultural groups, devising possible support strategies, and potentially facilitating a more successful migration experience. An effective strategy might involve, first focussing on minimising distress in the early stages of the migration process, and then making sure that sources important to flourishing in the later stages are not neglected.

Compliance with Ethical Standards

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Disclosure The authors declare that they have no conflict of interest.

Informed consent Informed consent was obtained from all individual participants included in the study.

References

1. Australian Bureau of Statistics (2015) National Migrant Statistics Unit (NMSU). <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/3415.0Main+Features12012?OpenDocument>. Accessed 31 Aug 2015.
2. Cohen S, Wills TA. Stress, social support, and the buffering hypothesis. *Psychol Bull.* 1985;98:310–57. <https://doi.org/10.1037/0033-2909.98.2.310>.
3. Dorfman P, Javidan M, Hanges P, et al. GLOBE: a twenty year journey into the intriguing world of culture and leadership. *J World Bus.* 2012;47:504–18. <https://doi.org/10.1016/j.jwb.2012.01.004>.
4. Eppsteiner H, Hagan J Religion as psychological, spiritual, and social support in the migration undertaking. *Intersections of religion and migration*. University of North Carolina, Chapel Hill; 2016.
5. Fuligni AJ, Yip T, Tseng V. The impact of family obligation on the daily activities and psychological well-being of Chinese American adolescents. *Child Dev.* 2002;73:302–14. <https://doi.org/10.1111/1467-8624.00407>.
6. Furukawa TA, Kessler RC, Slade T, Andrews G. The performance of the K6 and K10 screening scales for psychological distress in the Australian National Survey of Mental Health and Well-Being. *Psychol Med.* 2003;33:357–62. <https://doi.org/10.1017/S0033291702006700>.
7. Gupta V, Surie G, Javidan M, Chhokar J. Southern Asia cluster: where the old meets the new? *J World Bus.* 2002;37:16–27. [https://doi.org/10.1016/S1090-9516\(01\)00071-2](https://doi.org/10.1016/S1090-9516(01)00071-2).
8. Heine SJ, Lehman DR, Peng K, Greenholtz J. What’s wrong with cross-cultural comparisons of subjective Likert scales?: The reference-group effect. *J Pers Soc Psychol.* 2002;82:903–18. <https://doi.org/10.1037/0022-3514.82.6.903>.
9. Hendrickson B, Rosen D, Aune RK. An analysis of friendship networks, social connectedness, homesickness, and satisfaction levels of international students. *Int J Intercult Relations.* 2011;35:281–95.
10. Hernández-Plaza S, Alonso-Morillejo E, Pozo-Muñoz C. Social support interventions in migrant populations. *Br J Soc Work.* 2006;36:1151–69. <https://doi.org/10.1093/bjsw/bch396>.
11. Hogan BE, Linden W, Najarian B. Social support interventions: Do they work? *Clin Psychol Rev.* 2002;22:381–440. [https://doi.org/10.1016/S0272-7358\(01\)00102-7](https://doi.org/10.1016/S0272-7358(01)00102-7).
12. Hone LC, Jarden A, Schofield GM, Duncan S. Measuring flourishing: The impact of operational definitions on the prevalence of high levels of wellbeing. *Int J Wellbeing.* 2014;4:62–90. <https://doi.org/10.5502/ijw.v4i1.1>.
13. House J. Structures and processes of social support. *Annu Rev Sociol.* 1988;14:293–318. <https://doi.org/10.1146/annurev.soc.14.1.293>.

14. House R, Javidan M, Hanges P, Dorfman P. Understanding cultures and implicit leadership theories across the globe: an introduction to project GLOBE. *J World Bus.* 2002;37:3–10. [https://doi.org/10.1016/S1090-9516\(01\)00069-4](https://doi.org/10.1016/S1090-9516(01)00069-4).
15. House RJ, Dorfman PW, Javidan M, et al. Strategic leadership across cultures: GLOBE study of CEO leadership behavior and effectiveness in 24 countries. Los Angeles: Sage; 2014.
16. Huppert F, So TTC. Flourishing across Europe: application of a new conceptual framework for defining well-being. *Soc Indic Res.* 2013;110:837–61. <https://doi.org/10.1007/s11205-011-9966-7>.
17. Jensen MP, Smith AE, Bombardier CH, et al. Social support, depression, and physical disability: age and diagnostic group effects. *Disabil Health J.* 2014;7:164–72. <https://doi.org/10.1016/j.dhjo.2013.11.001>.
18. Joshanloo M. Eastern conceptualizations of happiness: fundamental differences with western views. *J Happiness Stud.* 2014;15:475–93. <https://doi.org/10.1007/s10902-013-9431-1>.
19. Kashima ES, Abu-Rayya HM. Longitudinal associations of cultural distance with psychological well-being among Australian immigrants from 49 countries. *J Cross Cult Psychol.* 2014;45:587–600. <https://doi.org/10.1177/0022022113519857>.
20. Kashima Y, Koval P, Kashima ES. Reconsidering culture and self. *Psychol Stud.* 2011;56:12–22. <https://doi.org/10.1007/s12646-011-0071-4>.
21. Kessler RC, Andrews G, Colpe LJ, et al. Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychol Med.* 2002;32:959–76. <https://doi.org/10.1017/S0033291702006074>.
22. Keyes C. (2010) Flourishing. *Corsini Encycl Psychol* 2009.
23. Keyes C. The mental health continuum: from languishing to flourishing in life. *J Health Soc Behav.* 2002;43:207–22. <https://doi.org/10.2307/3090197>.
24. Kim HS, Sherman DK, Ko D, Taylor SE. Pursuit of comfort and pursuit of harmony: culture, relationships, and social support seeking. *Personal Soc Psychol Bull.* 2006;32:1595–607. <https://doi.org/10.1177/0146167206291991>.
25. Kim HS, Sherman DK, Sasaki JY, et al. Culture, distress, and oxytocin receptor polymorphism (OXTR) interact to influence emotional support seeking. *Nat Acad Sci.* 2010;107:15717–21. <https://doi.org/10.1073/pnas.1010830107>.
26. Kim HS, Sherman DK, Taylor SE. Culture and social support. *Am Psychol.* 2008;63:518–26. <https://doi.org/10.1037/0003-066X>.
27. Kwak K, Berry JW. Generational differences in acculturation among Asian families in Canada: a comparison of Vietnamese, Korean, and East-Indian groups. *Int J Psychol.* 2001;36:152–62. <https://doi.org/10.1080/00207590042000119>.
28. Lakey B, Orehek E. Relational regulation theory: a new approach to explain the link between perceived social support and mental health. *Psychol Rev.* 2011;118:482–95. <https://doi.org/10.1037/a0023477>.
29. Lassetter JH, Callister LC. The impact of migration on the health of voluntary migrants in western societies. *J Transcult Nurs.* 2009;20:93–104. <https://doi.org/10.1177/1043659608325841>.
30. Lazarus RS, Folkman S. Stress, appraisal, and coping. New York: Springer; 1984.
31. Mahmud SH, Schölmerich A. Acculturation and life satisfaction: Immigrants in Germany. *Psychol Res.* 2011;1:278–86.
32. Park J, Kitayama S, Karasawa M, et al. Clarifying the links between social support and health: culture, stress, and neuroticism matter. *J Health Psychol.* 2013;18:226–35. <https://doi.org/10.1177/1359105312439731>.
33. Peter PJ, de Mola CL, de Matos MB, et al. Association between perceived social support and anxiety in pregnant adolescents. *Rev Bras Psiquiatr.* 2017;39:21–7. <https://doi.org/10.1590/1516-4446-2015-1806>.
34. Reblin M, Uchino BN. Social and emotional support and its implication for health. *Curr Opin Psychiatry.* 2008;21:201–5. <https://doi.org/10.1097/YCO.0b013e3282f3ad89>.
35. Sassatelli M. The shaping of a European cultural identity through EU cultural policy. *Eur J Soc Theory.* 2002;5:435–51.
36. Scott WA, Scott R. Adaptation of immigrants: individual differences and determinants. In: Argyle M, editor. Volume 18 of International series in experimental social psychology. Dordrecht: Elsevier; 2013. p. 227.
37. Siedlecki KL, Salthouse TA, Oishi S, Jeswani S. The relationship between social support and subjective well-being across age. *Soc Indic Res.* 2014;117:561–76. <https://doi.org/10.1007/s11205-013-0361-4>.
38. Stewart MJ, Makwarimba E, Beiser M, et al. Social support and health: immigrants' and refugees' perspectives. *Divers Heal Care.* 2010;7:91–103.
39. Taft R. Methodological considerations in the study of immigrant adaptation in Australia. *Aust J Psychol.* 1986;38:339–46. <https://doi.org/10.1080/00049538608259020>.
40. Taylor S, Welch W, Kim H, Sherman D. Cultural differences in the impact of social support on psychological and biological stress responses. *Psychol Sci.* 2007;18:831–8.
41. Taylor SE, Sherman DK, Kim HS, et al. Culture and social support: who seeks it and why? *J Pers Soc Psychol.* 2004;87:354–62. <https://doi.org/10.1037/0022-3514.87.3.354>.
42. Triandis HC. The self and social behavior in differing cultural contexts. *Psychol Rev Psychol Rev.* 1989;96:506.
43. Turner RJ. Social support as a contingency in psychological well-being. *J Health Soc Behav.* 1981;22:357. <https://doi.org/10.2307/2136677>.
44. Uchida Y, Kitayama S, Mesquita B, et al. Is perceived emotional support beneficial? Well-being and health in independent and interdependent cultures. *Pers Soc Psychol Bull.* 2008;34:741–54. <https://doi.org/10.1177/0146167208315157>.
45. Westerhof GJ, Keyes CLM. Mental illness and mental health: The two continua model across the lifespan. *J Adult Dev.* 2010;17:110–9. <https://doi.org/10.1007/s10804-009-9082-y>.