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## Non-participation in education, employment, and training among young people accessing youth mental health services: demographic and clinical correlates

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### ABSTRACT

**Objective:** The aim of this study was to investigate participation in employment, education, or training among a national cohort of young people presenting to youth-specific mental health services across Australia, and identify the key demographic and clinical correlates of non-participation.

**Method:** Clinician and self-reported demographic and clinical characteristics were ascertained for 57,644 young people aged 15–25 years presenting to a national youth-specific mental health service between 1 April 2013 and 31 March 2015, including level of participation in education, employment, or training in four categories (not participating, not in the labour force, partial participation, and full participation).

**Results:** The results showed that these young people are very vulnerable to non-participation in employment, education or training. Characteristics most strongly associated with non-participation were being Aboriginal or Torres Strait Islander, male, homeless, diagnosed with a substance use disorder, or having a neurodevelopmental disorder in young adulthood.

**Discussion:** The results extend understanding of the major risk factors associated with non-participation in employment, education, or training for help-seeking young people. Distinct patterns emerged across the three non-participation groups suggesting that support must be tailored to individual needs. Supporting those who experience mental illness to re-engage is essential to buffer against the long-term impacts. Holistic, integrated services that can incorporate mental health and vocational services are crucial for prevention, early intervention, and treatment.

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### KEYWORDS

NEET; unemployment; Aboriginal and Torres Strait Islander; youth mental health; homelessness

Participation in employment, education or training is a strong protective factor for young people's mental health and well-being, whereas non-participation is a major risk factor to which young people are highly exposed. In 2014 in Australia, 10% of young people (13% of young adults aged 20–24 years and 7% of adolescents aged 15–19 years) were not

participating in employment, education, or training (NEET) (Australian Institute of Health and Welfare [AIHW], 2015). Further, under-employment (working less than 35 hours per week and wanting to work more) is twice the rate for young people compared to all ages, and has been steadily rising from 11.3% in 2008 to 16.3% in 2014 (AIHW, 2015). In periods of economic downturn, young people are the first to feel the effects through decreased work opportunities (Eurofound, 2012).

A two-way relationship exists whereby unemployment can lead to poor mental health and psychosocial maladjustment (Modini et al., 2016; Paul & Moser, 2009), and young people with mental health problems are more vulnerable to non-participation in the workforce (Baggio et al., 2015). Recent reports show that about one-third of young people accessing youth mental health services in Australia reported being NEET (Hilferty et al., 2015; Rickwood, Telford, Parker, Tanti, & McGorry, 2014). This high rate is concerning, as adolescence and emerging adulthood are critical periods for vocational and social development. Non-participation at this time of life can have serious ongoing consequences, by excluding and marginalising young people from the primary means of economic and social participation (Gibb, Fergusson, & Horwood, 2010; Eurofound, 2012; International Labour Organisation [ILO], 2013).

Having any psychiatric disorder between ages 18 and 21 has been associated with lower likelihood of engaging in any paid employment, lower likelihood of being employed full-time, fewer hours worked each week, increased rates of welfare dependence, decreased personal income, and lower likelihood of home ownership by age 30 (Gibb et al., 2010). As the protective effects of employment and the negative impacts of unemployment are well established (Modini et al., 2016), the potent risk factor of non-participation must be directly addressed for young people accessing mental health services.

Determining which young people are most likely to be not participating in education, employment, or training when they access mental health care is necessary in order to understand the characteristics of those most in need of support to ameliorate this major risk to their current and future well-being. Along with mental ill-health (Baggio et al., 2015; Fergusson, Boden, & Horwood, 2007), many socio-demographic factors have been associated with non-participation, many of which are also related to mental health status. Key factors associated with non-participation include: demographics (low socio-economic status, homelessness, being of Indigenous or immigrant background, living in a rural or remote area); education (e.g. low educational attainment, poor literacy and numeracy skills, having a learning disability); familial factors (e.g. parental low educational attainment, unemployment, low household income, divorce); forensic factors (e.g. personal criminal history, risk-taking behaviours including illicit substance use, alcohol use, and tobacco use); and having poor physical health or a disability (Baggio et al., 2015; Coles, Bradshaw, Craig, Godfrey, & Johnson, 2002; Eurofound, 2012). The transition from school to work is a significant challenge, increasingly so as current economic and financial environments impact disproportionately on young people. To help young people successfully navigate this transition period and address the youth experience gap, developed countries have all implemented a different mix of policy, labour market flexibility, education and training schemes, income support measures, and fiscal incentives, and there is no agreement regarding the optimal approach (Pastore, 2015).

Non-participating young people are not a homogeneous group, although the field generally broadly dichotomises them into being either 'participating in any employment/

education' or 'not participating' (Elder, 2015; Serracant, 2014; Yates & Payne, 2006). There is a lack of consistency in classification, as some researchers explicitly exclude those who are parents or carers (Goldman-Mellor et al., 2016), while others classify young people as NEET even if they are not actively seeking employment (Baggio et al., 2015), or are participating in volunteering, parenting, or caring roles (O'Dea et al., 2014). The inclusion of those who are not participating in the labour force (NILF) but who are socially engaged through other meaningful activity (e.g. parents), and those who are employed casually or part-time (partial participation) obscures potentially important diversity (Eurofound, 2012; Simmons, Russell, & Thompson, 2014). Furthermore, young people frequently move in and out of categories, termed the 'churn' effect, adding to the heterogeneity of the groups (Hayward, Wilde, & Williams, 2008).

This study examines participation in employment, education and training among a national cohort of young people accessing youth-specific mental health services across Australia. It investigates the extent of non-participation of young people presenting to mental health care, and reports the demographic and clinical correlates of non-participation. The study extends previous research from a smaller study of 696 young people aged 15–25 years attending such services in two large metropolitan areas (Sydney and Melbourne) in 2012. That study focused only on participants who were NEET, and revealed this group to be more likely to be male, young adult rather than adolescent, have a more progressed stage of illness and greater disability, higher risk cannabis use, and a history of criminal charges (O'Dea et al., 2014). In contrast to previous findings (Coles et al., 2002; Eurofound, 2012), the study did not find that those who were Aboriginal or Torres Strait Islander, from immigrant backgrounds, or with lower educational attainment, were more likely to be NEET, perhaps because of the small sample size and restricted geographical setting. The current study investigates the characteristics of a large cohort of help-seeking young people from both metropolitan and non-metropolitan areas, and differentiates levels of participation to consider the protective factors for full participation and the separate risk factors for being NEET, NILF, or partial participation in education, employment, or training.

## Method

### Participants

Participants were 57,644 young people aged 15–25 years commencing a first episode of care at one of the 80 *headspace* centres that were operational across Australia between 1 April 2013 and 31 March 2015. *headspace* is a major initiative of the Australian Government that over the past decade has implemented easily accessible, youth-friendly, multi-disciplinary service hubs to support young people aged 12–25 with their mental health, health and well-being needs (McGorry, Purcell, Hickie, & Jorm, 2007). The *headspace* centres comprise a major reorientation of mental health service delivery for adolescents and young adults through a primary care-based, early intervention approach (McGorry, Goldstone, Parker, Rickwood, & Hickie, 2014).

Measures analysed here come from data reported at first presentation for clients aged 15 years and over. The majority of participants were female (59.9%), 39.2% were male, and 0.9% were gender diverse. The mean age was 18.5 years ( $SD = 2.79$ ); 65.8% were

adolescents aged 15–19 and 34.2% were young adults aged 20–25 years. The majority were heterosexual (83.7%) but a substantial minority were LGBTIQ (16.3%) and another 3.8% preferred not to disclose their sexuality. There were 7.7% who were Aboriginal and/or Torres Strait Islander, and 7.5% who were from a culturally or linguistically diverse background. Participants came from all Australian states and territories, and the distribution generally reflected the Australian population with an overemphasis on non-metropolitan areas (consistent with prioritisation of *headspace* centres in regional areas), with 64.6% from metropolitan areas, 26.2% from inner regional areas, 7.08% from outer regional areas, and 2.1% from remote Australia. While 86.6% reported stable accommodation, there were 13.4% who were homeless or at risk of homelessness.

For clinical characteristics, most clients (66.4%) experienced mild-to-moderate or sub-threshold symptoms of mental illness according to clinician rating. Consequently, there were 52.4% who did not have a diagnosis. The most common primary diagnoses were: depressive disorders (16.1%); anxiety disorders (10.3%); trauma or stressor-related disorders (7.5%); neurodevelopmental disorders (2.1%); and substance-related and addictive disorders (1.7%).

## Procedure

*headspace* centres collect a minimum data set (MDS) of information from all clients and service providers at every occasion of service (Rickwood et al., 2014). Young people are provided either an iPad or given access to a private computer on which to enter their data into a purpose-built electronic form. Service providers also complete relevant information for each occasion of service through an online form. Data are de-identified and encrypted to ensure confidentiality and stored in a national data warehouse.

Ethics approval was obtained through quality assurance processes, which were reviewed and endorsed by an independent body—Australasian Human Research Ethics Consultancy Services.

## Measures

*Participation in employment, education, or training* was determined by asking participants if they were currently studying or training (yes/no) and, if so, what level (secondary school through to postgraduate degree). A second item asked if they were currently employed (yes/no) and, if yes, whether they were currently employed full-time, part-time or casually. If no, they were prompted to specify if they were not in the labour force and not looking for work (e.g. still in school, home duties) or looking for full-time, part-time or casual work. On the basis of these item-level responses, four levels of participation were derived (AIHW, 2015): NEET (not participating in employment, or education or training but looking for work); NILF (not in the labour force and not looking for work); partial participation (working part-time or casually but not participating in education); and full participation (participating in full-time work and/or education).

Demographic measures included: age group (adolescents: 15–19 years; young adults: 20–25 years); gender (male, female, gender diverse, intersex); sexual orientation (heterosexual; lesbian, gay, bisexual, transgender, intersex, and queer or questioning [LGBTIQ]); Aboriginal and/or Torres Strait Islander; culturally and linguistically diverse (CALD);

location (metropolitan, regional, remote); and living situation (stable accommodation, homeless or at risk of being homeless).

Clinical measures comprised: diagnosis reported by clinician according to DSM or ICD criteria (depressive, anxiety, trauma, substance use, neurodevelopmental disorder); clinician-rated psychosocial functioning using the Social and Occupational Functioning Assessment Scale (SOFAS) (Goldman, Skodol, & Lave, 1992); self-reported psychological distress according to the Kessler-10 scale (K10; Kessler et al., 2002); and self-reported life satisfaction measured through a seven-item scale adapted from the Peabody Treatment Progress Battery that assesses satisfaction against the key domains of family life, friendships, romantic relationships, school/work, self, living situation, and life overall (Bickman et al., 2010).

### **Data analysis**

Analyses were undertaken using IBM SPSS v21. Frequencies were calculated and Chi-square ( $\chi^2$ ) tests of independence were performed to examine the associations between levels of participation with demographic and clinical characteristics. Given that the Chi-square statistic is over-sensitive to detecting statistical significance with large sample sizes, Cramer's *V* was used to describe the strength of associations using conventions by Rea and Parker (1992) ( $\geq .00$  and  $< .10$  = Negligible association;  $\geq .10$  and  $< .20$  = Weak association;  $\geq .20$  and  $< .40$  = Moderate association). One-way analyses of variance (ANOVA) using Welch's test were used to examine the relationship between participation and the continuous clinical variables. Multinomial regression analyses were performed to determine the significant demographic and clinical predictors of being NEET, NILF or partial participation compared to full participation (reference group) in employment/education within a multivariate model. A significance level of 1% was used in order to reduce the probability of Type 1 errors. Models were estimated separately for adolescents and young adults consistent with data reported by the Organisation for Economic Cooperation and Development (OECD, 2016).

## **Results**

### **Participation status at first presentation**

Overall, 6.4% of participants were NILF, 17.3% were NEET, 8.9% were partially participating and 67.4% were fully participating. The percentages of young people in each participation group by demographic characteristics are shown in Table 1. Chi-square analyses revealed significant but generally weak associations with all demographics. The strongest effect was for age group. Young adults were less likely to be fully participating and more likely to be in all three non-participation groups compared to adolescents. Being homeless was the strongest risk factor specifically for being NEET and homeless young people were least likely to be fully participating.

Table 1 also shows types of diagnosis associated with participation status at presentation, revealing that substance use disorders were most strongly associated with non-participation. While other types of disorders also revealed significant associations, the strength of these associations was weak.

**Table 1.** Level of participation at presentation by demographic factors and diagnosis.

	<i>n</i>	Participation status (row %)				$\chi^2$	Cramer's $V^b$
		NILF (%)	NEET (%)	Partial participation (%)	Full participation (%)		
<b>Age</b>						2882.20**	.24**
15–19 years	32,925	4.9	13.7	6.1	75.4		
20–25 years	16,695	9.4	24.6	14.3	51.7		
<b>Gender</b>						973.67**	.14**
Male	19,155	6.5	23.8	9.0	60.8		
Female	29,411	6.3	13.1	8.8	71.8		
<b>Sexuality</b>						7.37	.01
LGBTIQ	7634	6.5	18.0	8.9	66.5		
Non-LGBTIQ	39,255	6.1	17.0	9.0	67.8		
<b>Aboriginal or Torres Strait Islander Status</b>						462.56**	.10**
Aboriginal or Torres Strait Islander	3751	11.4	26.2	5.6	56.7		
Non-Aboriginal or Torres Strait Islander	45,354	6.0	16.6	9.1	68.3		
<b>CALD Status</b>						176.00**	.06**
CALD	3664	4.1	12.1	6.6	77.2		
Non-CALD	45,439	6.6	17.8	9.0	66.6		
<b>Living Situation</b>						2007.95**	.20**
Not homeless	42,929	5.7	14.7	9.0	70.6		
Homeless or at-risk	6659	11.1	34.1	8.1	46.7		
<b>Rurality of headspace Centre</b>						108.61**	.03**
Metropolitan	32,148	5.9	17.2	8.6	68.4		
Regional	16,624	7.5	17.9	9.1	65.5		
Remote	832	4.9	11.7	13.7	69.7		
<b>Diagnosis</b>							
Depressive disorder	11,215	6.4	16.9	9.1	67.5	9.25*	.02*
Anxiety disorder	9193	6.2	15.4	8.9	69.6	65.05**	.05*
Trauma or stressor-related disorder	5380	6.8	17.4	8.2	67.6	6.47	.02
Substance-related or addictive disorder	1743	10.8	33.4	11.4	44.3	481.61**	.14**
Neurodevelopmental disorder	1315	10.6	23.6	6.2	59.5	83.91**	.06**

\* $p < .05$ , \*\* $p < .001$ .

On average, clients experienced high levels of self-reported psychological distress (K10:  $M = 28.95$ ,  $SD = 9.16$ ) and moderate clinician-rated levels of social and occupational impairment (SOFAS:  $M = 64.68$ ,  $SD = 12.42$ ). ANOVAs revealed significant associations between participation status for the clinical variables: psychological distress (K10;  $F[3, 8944.90] = 47.86$ ,  $p < .001$ ,  $\eta^2 = .00$ ); social and occupational functioning (SOFAS;  $F[3, 8451.76] = 776.75$ ,  $p < .001$ ,  $\eta^2 = .04$ ); and life satisfaction ( $F[3, 8848.85] = 706.65$ ,  $p < .001$ ,  $\eta^2 = .05$ ). Despite being statistically significant, the effects sizes show that these associations were weak ( $\eta^2 < .06$ ).

### Multivariate model for adolescents

Goodness-of-fit statistics indicated adequate model fit for the multinomial logistic regression. Pearson Chi-square ( $\chi^2[104562] = 103713.21$ ,  $p = .969$ ) statistic for model fit was not significant, suggesting the model described the data adequately. Receiver operating characteristic (ROC) curves showed a good fit to the data, with areas under



the ROC curve (AUR) all exceeding .70 (NEET = .79; 95% CI [.78, .79]; NILF = .72; 95% CI [.71, .74]; partial participation = .75; 95% CI [.73, .76]; and full participation = .79; 95% CI [.78, .79]).

As shown by the odds ratios in Table 2, adolescents who were homeless or at risk of homelessness were twice as likely to be NEET compared to fully participating young people. Being diagnosed with a substance use disorder, older age in years, being Aboriginal or Torres Strait Islander, and being male also almost doubled the likelihood of NEET status in relation to full participation. Almost all the predictors were significant, except LGBTIQ status and diagnoses of neurodevelopmental and trauma-related disorder, although because of the high power many significant effects were very weak. Lower life satisfaction also predicted being NEET. A similar pattern was evident predicting NILF status. Here, the strongest predictors were being Aboriginal or Torres Strait Islander, substance use disorder, homelessness, older age, and lower life satisfaction. Partial participation had few significant predictors, and was primarily associated with older age and not being from a culturally or linguistically diverse background.

**Table 2.** Summary statistics for the multinomial logistic regression predicting level of participation (NEET, NILF, partial participation, fully participating<sup>REF</sup>) for adolescents.

	NEET			NILF			Partial participation		
	OR	95% CI	<i>p</i>	OR	95% CI	<i>p</i>	OR	95% CI	<i>p</i>
<b>Demographic predictors</b>									
Age (years)	1.92	1.87, 1.98	<.001	1.54	1.48, 1.61	<.001	2.14	2.06, 2.23	<.001
Sex (Male, Female <sup>REF</sup> )	1.78	1.65, 1.93	<.001	1.38	1.23, 1.56	<.001	1.01	0.91, 1.13	.821
LGBTIQ (Yes, No <sup>REF</sup> )	1.03	0.93, 1.14	.583	0.86	0.73, 1.02	.079	0.83	0.72, 0.96	.011
Aboriginal or Torres Strait Islander (Yes, No <sup>REF</sup> )	1.79	1.58, 2.03	<.001	1.97	1.66, 2.35	<.001	0.68	0.54, 0.86	<.01
CALD (Yes, No <sup>REF</sup> )	0.44	0.37, 0.53	<.001	0.55	0.42, 0.72	<.001	0.47	0.37, 0.59	<.001
Living situation (Homeless, Stable <sup>REF</sup> )	2.03	1.83, 2.24	<.001	1.65	1.42, 1.93	<.001	1.15	0.98, 1.35	.090
Rurality (Regional and remote, Metropolitan <sup>REF</sup> )	1.09	1.00, 1.18	.042	1.25	1.11, 1.41	<.001	1.06	0.95, 1.18	.308
<b>Clinical predictors</b>									
Substance use disorder (Yes, No <sup>REF</sup> )	1.93	1.62, 2.31	<.001	1.85	1.42, 2.40	<.001	1.42	1.08, 1.87	.011
Neurodevelopmental disorder (Yes, No <sup>REF</sup> )	1.07	0.87, 1.31	.535	1.44	1.09, 1.89	<.01	0.79	0.56, 1.12	.185
Trauma-related disorder (Yes, No <sup>REF</sup> )	0.91	0.81, 1.03	.133	0.90	0.76, 1.08	.275	0.82	0.7, 0.97	.022
Depressive disorder (Yes, No <sup>REF</sup> )	0.79	0.72, 0.87	<.001	0.87	0.76, 1.00	.055	0.97	0.86, 1.1	.664
Anxiety disorder (Yes, No <sup>REF</sup> )	0.86	0.77, 0.95	<.01	1.00	0.86, 1.17	.951	0.89	0.78, 1.02	.083
Life satisfaction	0.77	0.75, 0.79	<.001	0.78	0.75, 0.81	<.001	0.94	0.91, 0.98	<.01
Social and occupational functioning (SOFAS)	0.97	0.96, 0.97	<.001	0.95	0.95, 0.95	<.001	1.00	0.99, 1.00	.165
Psychological distress (K-10)	0.97	0.97, 0.98	<.001	0.97	0.96, 0.97	<.001	0.99	0.99, 1.00	.067

Note: <sup>REF</sup> = The reference group, OR = Odds ratio, Bold denotes statistical significance at  $\alpha = .01$ .



### Multivariate model for young adults

Goodness-of-fit statistics for the multivariate model for young adults again indicated adequate model fit because the Pearson Chi-square goodness-of-fit statistic was not significant ( $\chi^2_{(22260)} = 22278.12$ ,  $p = .465$ ). The areas under the ROC showed a fair to good fit to the data for the NEET, NILF, and fully participating groups (NEET = .70; 95% CI [.69, .72]; NILF = .72; 95% CI [.70, .74]; fully participating = .68; 95% CI [.67, .69]). The AUR for the partial participation group was poor, suggesting the data could not distinguish between the partial participation and fully participating groups (.58, 95% CI [.56, .60]).

As shown in Table 3, the strongest predictors of NEET status when compared with the fully participating group were being Aboriginal or Torres Strait Islander, having a diagnosis of neurodevelopmental or substance use disorder, being male, and being homeless or at risk of homelessness. Unlike the adolescents, older age did not have a significant association. NILF status was similarly predicted most strongly by being Aboriginal or Torres Strait Islander, living in a regional or remote area, neurodevelopmental disorder, and being homeless or at risk of homelessness. Lower life satisfaction was also evident as a

**Table 3.** Summary statistics for the multinomial logistic regression predicting level of participation (NEET, NILF, partial participation, full participation<sup>REF</sup>) for young adults.

	NEET			NILF			Partial participation		
	OR	95% CI	<i>p</i>	OR	95% CI	<i>p</i>	OR	95% CI	<i>p</i>
<b>Predictors</b>									
Age (years)	1.02	0.98, 0.11	.316	1.08	1.02, 1.14	<b>.007</b>	1.05	1.00, 1.09	.050
Sex (Male, Female <sup>REF</sup> )	1.74	1.54, 1.97	<b>&lt;.001</b>	0.77	0.64, 0.92	<b>.004</b>	1.17	1.01, 1.35	.032
LGBTIQ (Yes, No <sup>REF</sup> )	0.93	0.79, 1.08	.334	0.92	0.75, 1.14	.470	1.01	0.85, 1.20	.930
Aboriginal or Torres Strait Islander (Yes, No <sup>REF</sup> )	2.18	1.68, 2.81	<b>&lt;.001</b>	2.26	1.64, 3.11	<b>&lt;.001</b>	1.12	0.79, 1.58	.538
CALD (Yes, No <sup>REF</sup> )	0.81	0.65, 1.02	.078	0.52	0.35, 0.77	<b>.001</b>	0.73	0.56, 0.96	.022
Living situation (Homeless, Stable <sup>REF</sup> )	1.77	1.50, 2.08	<b>&lt;.001</b>	1.62	1.30, 2.01	<b>&lt;.001</b>	1.01	0.82, 1.26	.898
Location (Regional and remote, Metropolitan <sup>REF</sup> )	1.32	1.16, 1.52	<b>&lt;.001</b>	1.84	1.53, 2.21	<b>&lt;.001</b>	1.29	1.11, 1.50	<b>.001</b>
<b>Clinical predictors</b>									
Substance use disorder (Yes, No <sup>REF</sup> )	1.84	1.51, 2.26	<b>&lt;.001</b>	1.46	1.10, 1.95	<b>.009</b>	1.35	1.06, 1.73	.017
Neurodevelopmental disorder (Yes, No <sup>REF</sup> )	2.07	1.55, 2.78	<b>&lt;.001</b>	1.77	1.17, 2.68	<b>.007</b>	1.01	0.67, 1.52	.973
Trauma-related disorder (Yes, No <sup>REF</sup> )	1.15	0.97, 1.35	.114	1.01	0.81, 1.27	.924	1.04	0.86, 1.25	.703
Depressive disorder (Yes, No <sup>REF</sup> )	1.01	0.88, 1.16	.901	0.79	0.65, 0.95	.012	0.99	0.85, 1.15	.861
Anxiety disorder (Yes, No <sup>REF</sup> )	0.98	0.85, 1.12	.760	0.86	0.71, 1.05	.137	0.91	0.78, 1.06	.241
Life satisfaction	0.80	0.77, 0.84	<b>&lt;.001</b>	0.77	0.72, 0.81	<b>&lt;.001</b>	0.97	0.93, 1.02	.214
Social and occupational functioning (SOFAS)	0.96	0.95, 0.96	<b>&lt;.001</b>	0.95	0.94, 0.95	<b>&lt;.001</b>	1.00	0.99, 1.00	.083
Psychological distress (K-10)	0.98	0.97, 0.99	<b>&lt;.001</b>	0.98	0.97, 0.99	<b>.008</b>	1.00	0.99, 1.01	.927

Note: <sup>REF</sup> = the reference group, OR = Odds Ratio, Bold denotes statistical significance at  $\alpha = .01$

predictor of NILF. Partial participation was only significantly predicted in the multivariate model by living in a regional or remote area.

## Discussion

This study aimed to investigate non-participation among young people presenting to mental health care, and identify some of the demographic and clinical correlates of non-participation. The results show that young people aged 15–25 presenting for mental health care in Australia are a population group who are very vulnerable to non-participation in employment, education or training. While the majority of both adolescents and young adults accessing *headspace* were fully participating (although this dropped to about half for those aged 20–25 years), a substantial proportion (17.3%) was NEET, followed by partial participation (8.9%), and lastly being NILF (6.4%).

National Australian data show that full participation is reported for 87.2% of 15–19 year olds in the community (AIHW, 2015), which compares with only three-quarters of the adolescents accessing *headspace*; and while 74.1% of 20–24 year olds in the community are fully participating, this is true for only 51.7% of young adults at *headspace*. The rate of those classified as NEET in the *headspace* sample was nearly double that of the general population (OECD, 2016) at 13.7% versus 7.2% for 15–19 year olds and one-quarter (24.6%) versus 13.2% for 20–24 year olds. The rates for help-seeking young people are equivalent to the youth NEET rates in some of the most disadvantaged economies in the world (OECD, 2016), highlighting the seriousness of this problem among young Australians seeking mental health care.

### *Demographic predictors of non-participation*

The strongest and most consistent predictor of non-participation for both adolescents and young adults was being of Aboriginal or Torres Strait Islander background. The strength of this effect increased with age, and young adults who were Aboriginal or Torres Strait Islander were more than twice as likely to be NEET or NILF rather than fully participating compared with non-Indigenous young people. While this effect was not reported by O’Dea et al. (2014) who examined NEET predictors in a small sample of *headspace* clients from just four centres in metropolitan Sydney and Melbourne, the larger and broader national sample reported in this study reveals this effect. Inequalities for young Indigenous Australians related to educational participation and employment rates are consistently reported in the literature, so this effect was expected for help-seeking Indigenous young people as well; entrenched structural barriers to the participation of Aboriginal and Torres Strait Islander young people are widely recognised as requiring urgent attention (Doyle & Hill, 2008).

Being male was a predictor of NEET status for both adolescents and young adults. Part of this gender difference is attributed to young males being less likely to participate in education and training than young women (AIHW, 2015). A different pattern of gender differences was evident for NILF status, whereby male adolescents were more likely, but young adult males were less likely, to be NILF than females. This highlights the importance of distinguishing those who are NILF from those who are NEET, because the NILF group is diverse, comprising those who are out of the workforce for varied reasons including

parenting and caring responsibilities. These become more common with increasing age and are particularly relevant for young women as a reason for non-participation in traditional work and education.

Increasing age as a predictor of NEET was only relevant for adolescents. Maturation from 15 to 19 years was associated with greater risk of all three types of non-participation, reflecting the impact of leaving school. School attendance is a legal requirement in Australia until the completion of Year 10, but young people must then participate in full-time education, employment or training (or a combination of these) until age 17. Consequently, non-participation only becomes evident after age 17.

Homelessness or high risk of homelessness was a consistent predictor of NEET and NILF compared to those with stable accommodation, which is unsurprising given the multiple vulnerabilities and complex needs of young people who are homeless (AIHW, 2015). While unemployment is generally a precursor to homelessness in adults, for young people, homelessness is more likely to be attributable to family conflict and thus presents as a multiple risk factor for non-participation (Flatau, Thielking, MacKenzie, & Steen, 2015).

Location in terms of rurality was a weaker correlate, and the effect was stronger for young adults than adolescents, probably reflecting the protective factor of education and training participation until age 17. The strongest effect was for predicting NILF status for young adults, where those in non-metropolitan areas were almost twice as likely to be NILF as fully participating, compared to those in metropolitan areas. Declining employment opportunities, under-employment, and reduced access to tertiary education are identified as being more common in Australian regional and rural areas (National Rural Health Alliance, 2013).

### ***Clinical predictors of non-participation***

Although it is known that young people with mental health problems are more vulnerable to non-participation, the current study incorporated a wide range of clinical presentations to identify which pose the greatest risk. We found that the main clinical predictor of non-participation was diagnosis of a substance use disorder. This is consistent with prior research showing that substance use, particularly cannabis use which is the most common illicit substance used, is associated with NEET status (Baggio et al., 2015; Goldman-Mellor et al., 2016; O'Dea et al., 2014). Neurodevelopmental disorders (i.e. autism spectrum disorder, intellectual disability) increased the risk of NEET and NILF status for young adults. Both physical and mental disabilities have been reported as risk factors for NEET in population-based data (Coles et al., 2002; Eurofound, 2012). In Australia in 2012, approximately 8% of all 15–24 year olds had some form of disability, and 67% of those young people reported experiencing restriction in their educational or employment opportunities (AIHW, 2015). Of disability support services recipients, 69% were receiving support for an intellectual, autism spectrum, or psychiatric disability (AIHW, 2015). It may be that adolescents with such disorders are reasonably well supported through disability support services to continue their participation while in secondary education, but that by young adulthood, these supports do not transition so readily to the workforce or further education and training. This highlights a significant point of vulnerability for social and economic exclusion in young people with neurodevelopmental disorders as they transition from adolescence to young adulthood.

In contrast to previous findings (e.g. Baggio et al., 2015; Goldman-Mellor et al., 2016; O'Dea et al., 2014), there was no association between depressive or anxiety disorders and NEET in young adults, while in adolescents, being diagnosed with either of these disorders resulted in slightly lower rates of NEET compared to the distribution of fully participating young people. Similarly, self-reported psychological distress and clinician-reported social and occupational functioning had negligible effects on participation status. Life satisfaction had the strongest association, and not surprisingly, lower satisfaction was associated with NEET and NILF status.

### **Implications**

Overall, the results reveal a pattern whereby the factors most strongly associated with young people not participating in employment, education, or training when they access mental health services are being Aboriginal or Torres Strait Islander, male, homeless, substance using or diagnosed with a neurodevelopmental disorder (young adulthood only). Importantly, these factors are also associated with greater reluctance to access mental health care and more challenges to effective engagement in treatment (Brown, Rice, Rickwood, & Parker, 2016; Rickwood et al., 2015).

The impact of non-participation for adolescents and young adults has a long-term impact on the individual as well as more broadly for society. Supporting those who experience mental illness to re-engage in employment, education, and training is essential to buffer against the long-term effects. In particular, supporting young adults transitioning from school to employment or further education is needed as this age group showed higher levels of non-participation than adolescents. Enabling those with substance use disorders and neurodevelopmental disorders to engage is critical; young people with these diagnoses experience barriers to education and employment that are complex and substantial, and require specialist intervention. For help-seeking young people who are participating full-time, support may still be needed to ensure they retain their participation and achieve their vocational aims, while dealing with their mental health problems.

### **Limitations**

The results of the study must be interpreted in the context of its limitations. The data come from young people accessing only *headspace* services which, while comprising a significant innovation and investment in youth mental health by the Australian government, do not represent all mental health service provision. The strong focus on promoting awareness of and enabling easy access to *headspace* centres may mean that this group of help-seeking young people is unique. The data were reported at one point in time, at the point of initial access, when some information was not available. For example, diagnosis was only available for about half the sample, which reflects the early intervention and non-medical approach of most *headspace* centres (Rickwood et al., 2014), as well as the likelihood that diagnosis was not yet determined at this early point for some clients. Further, the cross-sectional design limits any inference with regards to causality: poor psychological health and life satisfaction are risk factors for NEET (Baggio et al., 2015), and unemployment is a risk factor for poor psychological health and life

satisfaction (Goldman-Mellor et al., 2016; Paul & Moser, 2009); both pathways are likely to play an important role in risk and vulnerability. Similarly, while the current study shows the co-occurrence of homelessness and non-participation, the direction and causality cannot be established.

A limited range of measures was available from the *headspace* MDS, and it would be of interest to explore and control for other factors that have previously been associated with employment status, such as: literacy and intellectual ability; family and parental factors; socio-economic status; forensic history; peer group influences; caring roles; and comorbid physical conditions/disabilities (Baggio et al., 2015; Creed, 1999; Flouri & Buchanan, 2002). It would be particularly useful to differentiate those seeking employment, education, and training opportunities (NEET, partially participating) from those not seeking those opportunities (NILF) (Goldman-Mellor et al., 2016), as well as the effect of 'churn' through different categories. Identifying differential patterns within groups, based on length of time in that group, is also worth further consideration. While there are shared characteristics and experiences for those within the NEET classification, those who have been seeking employment, education, and training opportunities for a long period of time will have unique attributes compared to those in this situation for a brief period (Hayward et al., 2008).

## Conclusions

The results of this study extend understanding of the factors associated with non-participation in employment, education, and training for help-seeking young people. The study examined a very large sample of young people from diverse locations across Australia, and was able to differentiate non-participation into three groups, which is seldom evident in the literature. Young people in each of these groups have unmet needs in terms of their social and economic participation potential, and support must be tailored to individual needs, which will vary over time as type of participation changes. Consequently, support needs to be timely and appropriately targeted. It is evident that young people with mental health problems are at risk of being doubly stigmatised and excluded from social participation, and have a high level of need for support for vocational participation. Holistic, integrated services that can incorporate mental health and vocational services are crucial for effective early intervention. On a broader level, there is need for further policy development and innovative solutions to ensuring the effective transition of vulnerable young people from school to the workforce and other forms of meaningful social participation. The current study shows that focusing resources on help-seeking young people will assist young people who are particularly vulnerable to the negative impact of the youth experience gap for economic participation.

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