RESEARCH ARTICLE

A Community Mental Health and Wellbeing Literacy Study Among Australian Adults

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Abstract

This study aimed to investigate the mental health and wellbeing literacy of Australian adults by examining their ability to correctly discriminate mental health and wellbeing indicators. Mental health indicators were symptoms of Major Depression Disorder (MDD) and Generalized Anxiety Disorder (GAD) from the Diagnostic and Statistical Manual of Mental Disorders (DSM). Wellbeing indicators were derived from the European Social Survey (ESS) personal wellbeing module and reflect hedonic, eudaimonic and social wellbeing domains. A sample of 705 Australian adults aged > 18 years ($M = 50$; $SD = 15.9$) were recruited to an online survey and assigned into one of two conditions in which indicators were either negatively ($N_{condition1} = 359$) or positively ($N_{condition2} = 346$) framed. In an initial discrimination task, participants were generally able to correctly identify indicators as reflecting mental health or wellbeing. While those in the positive condition reported slightly higher literacy, this was attributed to differences on only a couple of items. In a second discrimination task, participants were provided the additional option of classifying indicators as reflecting "both mental health and wellbeing" which, in both conditions, was how most participants generally classified both wellbeing and mental health indicators. Although many wellbeing and mental health researchers carefully discriminate between wellbeing and mental health, for lay community members, this distinction may be less important. These findings have implications for theoretical frameworks of mental health and wellbeing, may inform clinical practice, and can be used to improve the quality of educational campaigns targeting community mental health and wellbeing literacy.

Keywords: Mental health literacy, wellbeing literacy, prevention, help-seeking, treatment

The burden of mental illness is substantial. Globally, mental illness accounts for approximately 32% of Years of Life lost to Disability (YLD) and 13% of Disability Adjusted Life Years (DALYs). YLD and DALY are two common metrics that reflect burden of disease; YLD reflects the number of years individuals live with disability, whilst the DALY is a metric derived from YLD and Years of Life Lost (YLL) due to premature death. Whilst mental health is not a burden in terms of YLL, it does explain a substantial proportion of disease burden in terms of YLL and DALYs, representing 5 of the top 20 causes of global burden of disease (Global Burden of Disease Study, 2015). In Australia, where the current study is based, one in five individuals experience symptoms of mental disorders during a 12-month period (Slade et al., 2009). However, the number of people who are actively seeking professional help remains low, with only 34.9% of adults out of an estimated 3.2 million people who met criteria for mental disorders (11.9% of the general Australian adult population) accessing services for mental health issues in a 12-month period (Burgess et al., 2009). A large body of research has sought to understand factors that facilitate or impede help-seeking for mental health in the population (Gulliver et al., 2010; Rickwood & Thomas, 2012) and health literacy is one key factor that can drive utilisation of health services (Jorm, 2000; Jorm, 2012; Jorm et al., 1997; Kutcher et al., 2016; Nutbeam, 2008).

Health literacy is the understanding of information needed to promote good health (Nutbeam, 2008) and mental health literacy specifically describes individuals' knowledge of mental illness and treatment (Jorm et al.,

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1997). Mental health literacy decreases mental health stigma, and promotes good health and help-seeking behaviour (Jorm, 2000; Jorm, 2012; Jorm et al., 1997; Kutcher et al., 2016). Evidence from Australia suggests a substantive increase in mental health literacy following concerted public mental health campaigns over almost two decades (Jorm et al., 2006; Reavley & Jorm, 2012). There has been a burgeoning literature on wellbeing, happiness and positive mental health. Multiple studies, primarily qualitative, have sought to understand individuals' personal experience of wellbeing and what the key drivers are for individuals' sense of wellbeing (Daaleman et al., 2001; Harvey, 2010; Kasle et al., 2002; Wood & Selwyn, 2017). However, the development of wellbeing literacy frameworks borne from wellbeing models (Huppert & So, 2013; Keyes, 2002; Ryff, 1989; Ryff & Keyes, 1995), similar to that proposed for mental health literacy, have narrowly focused on individuals' use of language about, and for their wellbeing (Oades et al., 2020) and less on ability to recognise key wellbeing dimensions.

Mental Health Literacy

Mental health literacy has been identified as a key determinant in enhancing help-seeking through improved symptom recognition of mental disorder(s) (Cotton et al., 2006; Rickwood et al., 2007). Derived from the concept of health literacy, mental health literacy refers to an individual's ability to recognise mental illness and use information to promote and maintain good health (Jorm et al., 1997). Components of mental health literacy include recognition of mental disorder symptoms, knowledge to seek mental health information, understanding of risk factors, causes, and available help, and attitudes promoting recognition and appropriate help-seeking (Jorm et al., 1997). Recognition of symptoms is necessary in the facilitation of help-seeking, enabling individuals to receive timely and appropriate interventions (Jorm et al., 1997), and supporting better outcomes for adults in terms of symptom reduction, enhanced confidence, and improved emotions and behaviours (Burns & Birrell, 2014).

As early and accurate identification of symptoms increases early help-seeking behaviour, there has been an increase in efforts to improve community mental health literacy. In Australia, between 1992/93 and 2010/11, there was a 178% increase in the government's expenditure on mental health to provide psychiatric medication subsidies, fund national mental health care programmes, and implement public mental health services (Department of Health and Department of Health and Ageing, 2013; Jorm, 2014). Consequently, the most recent National Survey of Mental Health Literacy and Stigma revealed that there was an increase in recognition of depression from 39% in 1997 to 73.7% in 2011 (Jorm et al., 1997; Reavley & Jorm, 2011). Concurrently, there has been a rise in the number of Australians seeking professional help for appropriate interventions. Beyond Blue reported an increase in the percentage of people receiving treatment for mental disorders after the implementation of campaigns promoting awareness of mental disorders (Jorm et al., 2006; Jorm et al., 1997). However, despite improvements in the ability of the general public to recognise symptoms of mental disorders, and an increase in the proportion of the population seeking appropriate treatment, results of national surveys have also illustrated little corresponding change in the prevalence of mental disorders and psychological distress (Burns et al., 2020; Jorm & Reavley, 2012). One argument is that much of the focus has been on identification and treatment response; instead, a prevention focus would seek to improve wellbeing to reduce the incidence of severe mental illness (Jorm et al., 2017).

Wellbeing Literacy

In contrast to mental health literacy, wellbeing literacy is less clearly articulated in the literature. Oades et al. (2020) describe wellbeing literacy as the individuals' use of language about, and for, their wellbeing. Similarly, Hou et al. (2021) define wellbeing literacy as the vocabulary, knowledge and language intentionally used to improve the wellbeing of oneself or others. This contrasts from mental health literacy with and so we propose a model of wellbeing literacy more similar to mental health literacy which emphasises community members' knowledge about indicators of wellbeing, and the behavioural adaptations necessary to improve it. The current study will focus on a broad wellbeing framework that considers both personal and interpersonal dimensions encompassing hedonic and eudaimonic wellbeing (Huppert et al., 2009). The hedonic approach focuses on feelings of individual pleasure, enjoyment and satisfaction while the eudaimonic approach emphasises functioning and realisation of one's potential including autonomy, mastery, growth, purpose in life, and self-acceptance (Huppert et al., 2009; Ryff, 1989). Lastly, the interpersonal aspect of wellbeing focuses on how an individual's wellbeing can be influenced by one's perception and quality of social interactions (Waters et al., 2022; Keyes, 2002).

Current Study

In comparison to mental health literacy, there is a paucity of research exploring wellbeing literacy. What limited research is available indicates that perceptions vary across different contexts and cultures (e.g., Wilson Fadiji et al. (2019)). A recent study of students, parents and educators, demonstrated wellbeing literacy to be a distinct construct from wellbeing and illbeing (Hou et al., 2021). However, further research is needed to extend these findings.

The current study therefore aims to investigate the mental health and wellbeing literacy of Australian adults. We do this by examining community members' ability to correctly discriminate between indicators of mental disorder and wellbeing drawn from existing diagnostic and theoretical frameworks. First, we examine the proportion of individuals who correctly endorse individual indicators as reflecting mental health or wellbeing. We then examine overall mental health and wellbeing literacy and the extent individual characteristics, including socio-demographic and health characteristics are associated with better literacy.

Method

Participants

Participants were invited to consent to an online survey through Facebook advertising. Eligibility to participate included Australian citizenship and being aged 18 and over. Of the 1120 individuals who followed the survey link from the advertisement, our final sample comprised N = 705 eligible participants (130 men and 575 women; M_{age} = 50.0 years). Participants completed one of two versions of a questionnaire in which indicators of mental disorders and wellbeing were either negatively (Condition 1, n = 359) or positively (Condition 2, n = 346) framed. Allocation to these two conditions was dependent on the time of survey completion (15th July 2020 to 31st July 2020 for Condition 1, 15th August 2020 to 22nd August for Condition 2). In each condition, participants were provided tasks to measure their ability to discriminate indicators of wellbeing and mental health. Participation in the study was voluntary and participants were provided with the option to refuse to answer questions in the survey and withdraw from the study. No identifying information was collected, and participants were provided support service information. This study was approved by the ANU Human Research Ethics Committee, protocol number 2019/945.

Measures

Literacy Discrimination Tasks

Mental Health Literacy. Mental health literacy was operationalised in terms of participants' ability to correctly identify Diagnostic Statistical Manual-5 (DSM 5; American Psychiatric American Psychiatric Association (2013)) criteria for Major Depressive Disorder (MDD) and Generalised Anxiety Disorder (GAD) correctly. MDD and GAD were chosen as they are the most prevalent in the Australian population aged 16 to 85 years old, impacting 14.4% and 6.2% of the population respectively each year (Slade et al., 2009). A total of nine symptoms represented MDD and GAD with three symptoms unique to each disorder (MDD: depressed mood; diminished pleasure, feelings of worthlessness; GAD: excessive anxiety; irritability; muscle tension) and three symptoms common to both disorders (fatigue; diminished ability to concentrate, insomnia or hypersomnia). Recurrent thoughts of death, which is a symptom of MDD, was excluded as it was deemed to be an obvious symptom of mental disorders. The diagnostic timeframe for symptoms of mental disorders were excluded to allow items to be phrased consistently with the indicators of wellbeing.

Wellbeing Literacy. Wellbeing literacy was operationalised as participants' ability to correctly identify wellbeing indicators from the European Social Survey (ESS) Wellbeing Module (Huppert & So, 2013). A total of 11 items from the ESS Wellbeing Module encompassed dimensions of social, psychological and subjective wellbeing, including items: "Feeling close to community and people in the local area"; " Having a lot of energy"; "Feeling very positive about oneself"; "Being able to bounce back when things go wrong"; "Having people around who really care about me"; "Taking all things together, generally feeling happy most of the time"; "Being optimistic about the future"; "Having a sense of accomplishment"; "Feeling that what you do in your life is valuable and worthwhile"; "Being interested in learning new things"; "Feeling calm and peaceful".

Socio-Demographic Information. A range of socio-demographic characteristics were collected including gender (male, female, other), age (in years), relationship status (single, married, de-facto, separated, divorced, widowed), occupation status (full-time, part-time, casual, unemployed), education status (full-time, part-time, not in education), mental disorder diagnosis in the past 12 months (yes, no) and access to services for mental disorder in the past 12 months (yes, no).

Familiarity with Mental Disorders. The Level-of-Contact Report (LCR; Holmes et al. (1999)) measured familiarity and level of contact with people with mental illness. The LCR used in this study combined "My job includes providing services/ treatment for persons with a severe mental illness" and "My job includes providing services to persons with a severe mental illness" to reduce the number of work-related situations as not all participants were employed. Participants indicated their agreement with each situation. Participants scores ranged from 1 to 11 with 1 indicating the lowest level of familiarity towards mental disorders and 11 reflecting the highest level of familiarity towards mental disorders. The interrater reliability of the mean rank order has been reported to be r = .83 (Holmes et al., 1999).

Psychological Distress. The Kessler Psychological Distress Scale (K10; (Kessler et al., 2002)) measured psychological distress in the last 30 days. The K10 consists of 10 items responded to on a Likert-type scale from 1 (*none of the time*) to 5 (*all the time*). A total score was obtained by with scores ranging from 10 to 50; higher scores reflect higher levels of distress (Kessler et al., 2002). When compared to gold standards of mental health diagnosis (e.g., DSM, International Classification of Diseases) the K10 has reported to predictive validity of .90 (95% CI: .89; 0.91; Furukawa et al. (2003)). Both Conditions 1 and 2 reported Cronbach's alphas at .93, indicating high internal consistency.

Hedonic and Eudaimonic Wellbeing. Hedonic and Eudaimonic wellbeing over the past 2 weeks was measured using the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS; Tennant et al. (2007)). The WEMWBS consists of 14 items responded to on a 5-point Likert scale from 1 (*none of the time*) to 5 (*all of the time*). A total score was obtained with total scores ranging from 14 to 70; higher scores reflect higher levels of wellbeing. The WEMWBS has reported high internal consistency (α = .91), high test-retest reliability (.83, *p* < 0.01) and significant high correlations with other measures of wellbeing (r = 0.71; 0.77; Tennant et al. (2007)). Cronbach's alpha values of .94 and .95 were reported for Conditions 1 and 2 respectively, reflecting high internal consistency.

Personal Stigma. Personal stigma was measured using the 9-item Personal Stigma Subscale of the Depression Stigma Scale (PSS; Griffiths et al. (2004)). Items are responded to on a 5-point Likert scale from 0 (*strongly disagree*) to 4 (*strongly agree*). A total score is obtained with scores ranging from 0 to 36. Higher scores reflect higher levels of stigma towards depression. The PSS has good internal consistency (α = .76; Griffiths et al. (2004)). Strong internal consistency was reported in the present study with alpha values of .81 and .82 reported for Conditions 1 and 2 respectively.

Design

To investigate accuracy in identifying and discriminating mental health and wellbeing indicators, participants engaged in two discrimination tasks. In the first discrimination task, participants were provided with the list of 20 items and were tasked to classify each as *either* an indicator of mental health or wellbeing. In the second discrimination task, participants were provided with the same list of items but were given an additional option to specify items as *either* an indicator of mental health *or* wellbeing, *or* an indicator of both mental health *and* wellbeing. The purpose of the additional option in the second discrimination task is to examine the potential for respondents to perceive indicators of mental health and wellbeing as reflective of both mental health and wellbeing. In both tasks, separate indices of mental health and wellbeing literacy were computed by summing the total number of correctly classified indicators of mental health and wellbeing.

In designing the discrimination tasks, one potential confound identified was the positive framing of wellbeing indicators (e.g., I am always optimistic about my future) and negative framing of mental health indicators (e.g., experiencing depressed mood). In order to control for differences in item valence, the wellbeing and mental health indicators were rephrased in both negative and positive conditions. Participants in Condition 1 were provided indicators with a negative valence to be classified in negatively phrased categories (e.g., presence of mental ill-health and absence of wellbeing). Participants in Condition 2 were provided with positively phrased items (e.g., absence of mental ill-health and presence of wellbeing). For example, the item *"In general, I feel very positive*

about myself" from the ESS wellbeing module, was rephrased as *"Not feeling very positive about oneself"* in the negative condition (absence of wellbeing symptom) and *"Feeling positive about oneself"* in the positive valence condition (presence of wellbeing symptom). Conversely, the DSM criteria *"Diminished ability to think or concentrate"* was rephrased as *"Having difficulties in concentrating" i*n the negative condition (presence of mental illness symptom), and *"Not having difficulties in concentrating"* in the positive condition (absence of mental illness symptom).

Data Analysis

Of the 1120 individuals who followed the survey link from the advertisement, 705 eligible participants provided complete data on the discrimination tasks. Indeed, after the introductory pages and the socio-demographic and health questions, there was no missing data in participant responses on the discrimination tasks. Independent *t*-tests and chi-square tests of independence were conducted to examine group differences between participants in socio-demographic and self-reported health characteristics. As mental health and wellbeing literacy reflected counts of indicators correctly endorsed, Poisson regression provided maximum likelihood estimates of differences in literacy outcomes, where standardized estimates are interpreted as Incidence Rate Ratios (IRR). Due to the large sample size of the study, and in keeping with best-practice we focus on estimates with large effect sizes and very high probability values (e.g., $P < 0.001$; Wasserstein et al., 2019).

Results

Socio-Demographic and Health Characteristics

There were no socio-demographic differences between samples exposed to either the positive or negative conditions (Table 1). There is a small indication of an older sample in the positive condition. There were no differences between samples in terms of their psychological distress, wellbeing, stigma, level of contact or frequency of reporting a mental illness in the last 12 months. 12-Month prevalence of between 24.8 and 28.6% is slightly higher than Australian rates ($\approx$ 20%) and may suggest a slight bias in the sample.

Table 1. Socio-demographic, psychological health and literacy characteristics of participants by Condition.

	Negative Condition (*n* = 359)	Positive Condition (*n* = 346)	t, Z or χ^2 statistic	*p*
	M (SD)	*M (SD)*		
Age	48.72 (16.43)	51.38 (15.37)	t = 2.22	.027
Sex, N (%)				
Female	292 (81.3)	283 (81.8)	χ^2 = 0.02	.876
Male	67 (18.7)	63 (18.2)		
Partner Status, N (%)				
Not Partnered	148 (41.2)	142 (41.0)	χ^2 = 0.01	.960
Partnered	211 (58.8)	204 (58.9)		
Education Status, N (%)				
Not in Education	290 (80.8)	264 (76.3)		
Part-Time	36 (10.0)	41 (11.8)	χ^2 = 2.17	.338
Full-Time	33 (9.2)	41 (11.8)		
Employment Status, N (%)				
Not Employed	148 (41.2)	126 (36.4)		
Part-Time/Casual	114 (31.8)	103 (29.8)	χ^2 = 3.95	.138
Full-Time	97 (27.0)	117 (33.8)		
LCR[a], Median (IQR)	10 (9; 11)	10 (9; 11)	Z = 1.17	.244
K10[b]	11.69 (8.48)	12.13 (8.58)	t = 0.69	.419
WEMWBS[c]	31.41 (10.43)	31.06 (10.36)	t = 0.45	.656
PSS[d]	6.35 (4.91)	5.53 (5.05)	t = 2.22	.027
MH diagnosis, N (%)				
No	270 (75.2)	247 (71.4)	χ^2 = 2.17	.338
Yes	89 (24.8)	99 (28.6)		

[a] = LCR: Level of Contact Report. [b] = K10: Kessler Psychological Distress Scale. [c] = WEMWBS: Warwick Edinburgh Mental Wellbeing Scale. [d] = PSS: Personal Stigma Subscale.
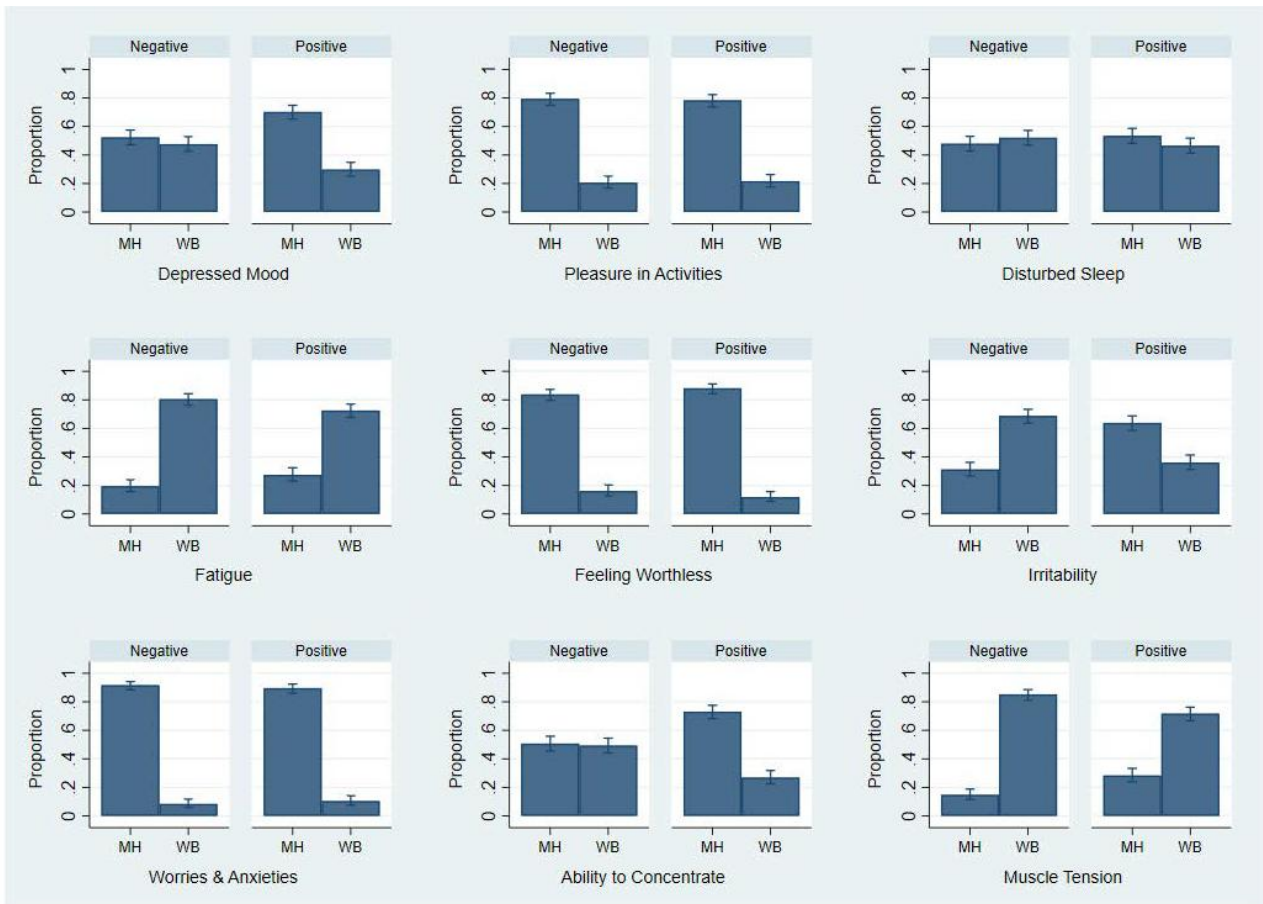
Figure 1. Proportion of participants classifying each mental health indicator as either reflecting mental health or wellbeing, by positive and negative conditions, in Task 1.
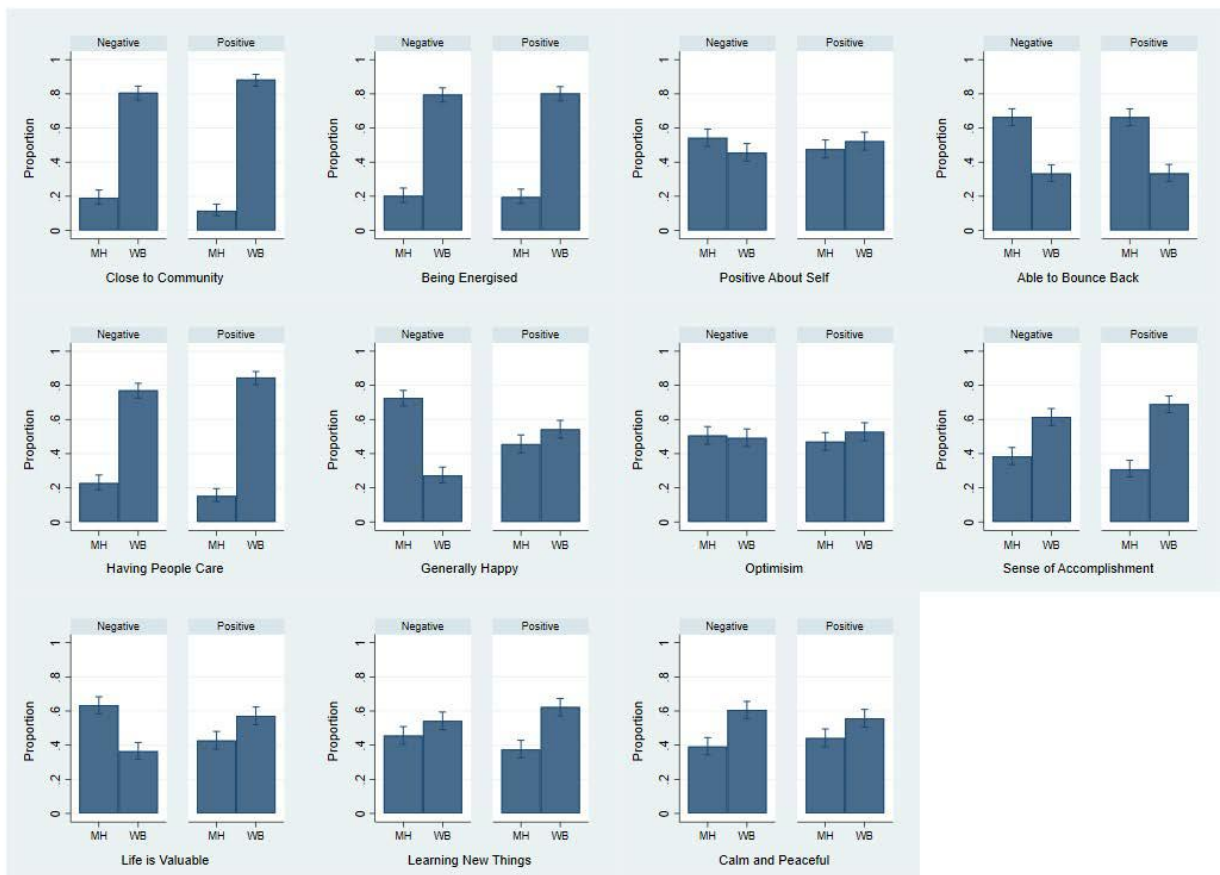
Figure 2. Proportion of participants classifying each wellbeing indicator as either reflecting mental health or wellbeing, by positive and negative conditions in Task 1.

Differences in Individual Indicators Between Positive and Negative Conditions

The proportion of respondents who endorsed each indicator as reflecting mental health or wellbeing by negative or positive conditions (Task 1) are reported in Table 2. For ease of comparison, the estimates for Task 1 are displayed in Figure 1 (mental health indicators) and Figure 2 (wellbeing indicators). Generally, we can see that the pattern of responses, in which an indicator is defined as either mental health or wellbeing, is consistent between negative and positive conditions. For example, 'Pleasure in Activities' was overwhelmingly correctly identified as a mental health indicator in both conditions. Similar responses were reported for 'Worries and Anxieties', and 'Feelings of Worthlessness'. In contrast, results suggested a preponderance of incorrectly classifying the somatic indicators 'Fatigue' and 'Muscle Tension' as indicators of wellbeing. Other patterns are worth noting; 'Disturbed Sleep" was equally distributed as indicative of mental health and wellbeing. 'Depressed Mood' and 'Ability to Concentrate' were equally distributed as indicative of mental health in the negative condition only, whilst they were more likely to be correctly classified as mental health when positively framed. Finally, responses on the indicator 'Irritability' were notable for the greater proportion of being incorrectly classified as an indicator of wellbeing in the negative condition, but correctly identified as an indicator of wellbeing in the positive condition.

Table 2. Proportion of respondents assigning each indicator to mental health or wellbeing on task 1 by condition

Endorsed As:	Negative Condition		Positive Condition		Chi-square test χ^2 (1, $N = 705$)
	Endorsed	Endorsed	Endorsed	Endorsed	
	n (%)	n (%)	n (%)	n (%)	
Mental Health Indicators					
Depressed mood	188 (52.4)	171 (47.6)	243 (70.2)	103	$\chi^2 = 23.7, p < .001$
Loss of pleasure	285 (79.4)	74 (20.6)	271 (78.3)	75 (21.7)	$\chi^2 = .120, p = .730$
Disturbed sleep	172 (47.9)	187 (52.1)	185 (53.5)	161	$\chi^2 = 2.18, p = .140$
Fatigue	70 (19.5)	289 (80.5)	95 (27.5)	251	$\chi^2 = 6.22, p = .013$
Feelings of worthlessness	301 (83.8)	58 (16.2)	305 (88.2)	41 (11.8)	$\chi^2 = 2.71, p = .100$
Feeling irritable	112 (31.2)	247 (68.8)	221 (63.9)	125	$\chi^2 = 75.5, p < .001$
Excessive worries and anxieties	329 (91.6)	30 (8.40)	310 (89.6)	36 (10.4)	$\chi^2 = .871, p = .351$
Difficulties in concentrating	182 (50.7)	177 (49.3)	253 (73.1)	93 (26.9)	$\chi^2 = 37.5, p < .001$
Having muscle tension	53 (14.8)	306 (85.2)	98 (28.3)	248	$\chi^2 = 19.3, p < .001$
Wellbeing Indicators					
Close to community and people	69 (19.2)	290 (80.8)	40 (11.6)	306	$\chi^2 = 7.91, p = .005$
Lots of energy	73 (20.3)	286 (79.7)	68 (19.7)	278	$\chi^2 = .051, p = .821$
Very positive about oneself	195 (54.3)	164 (45.7)	165 (47.7)	181	$\chi^2 = 3.10, p = .078$
Bounce back when things go	239 (66.6)	120 (33.4)	230 (66.5)	116	$\chi^2 = .001, p = .978$
Having people around who care	82 (22.8)	277 (77.2)	53 (15.3)	293	$\chi^2 = 6.44, p = .011$
Feeling happy	261 (72.7)	98 (27.3)	158 (45.7)	188	$\chi^2 = 53.4, p < .001$
Optimistic about future	182 (50.7)	177 (49.3)	163 (47.1)	183	$\chi^2 = .910, p = .341$
Sense of accomplishment	138 (38.4)	221 (61.6)	107 (30.9)	239	$\chi^2 = 4.39, p = .036$
Life is valuable and worthwhile	228 (63.5)	131 (36.5)	148 (42.8)	198	$\chi^2 = 30.4, p < .001$
Interested in learning new things	164 (45.7)	195 (54.3)	130 (37.6)	216	$\chi^2 = 4.77, p = .029$
Feeling calm and peaceful	141 (39.3)	218 (60.7)	153 (44.2)	193	$\chi^2 = 1.77, p = .183$

For the wellbeing indicators, there was clear evidence that respondents correctly classified 'Close to Community', 'Being Engaged', and 'Having People Who Care' in both positive and negative conditions. There was evidence of correctly identifying 'Sense of Accomplishment', 'Learning New Things', and 'Calm and Peaceful' as indicative of wellbeing too. For both conditions, 'Positive About Self" and 'Optimism' were equally distributed as indicative of mental health and wellbeing. Finally, responses on the indicator 'Ability to Bounce Back' for both conditions were notable for the greater proportion incorrectly identifying it as an indicator of mental health. 'Generally Happy' and 'Life is Valuable' were equally distributed across mental health and wellbeing in the positive condition, but incorrectly classified as a mental health indicator when negatively framed.

There were some differences in the endorsement of individual indicators between the negative and positive conditions. When positively framed, participants were more likely to correctly classify 'Depressed Mood' (70.2%

Table 3. Proportion of respondents assigning each indicator to mental health or wellbeing on task 2 by condition

|	Endorsed As:	Negative Condition			Positive Condition			Chi-square test $\chi^2(1, N = 705)$
		MH	WB	Both	MH	WB	Both	
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
Mental Health Indicators								
Depressed mood		69 (19.2)	27 (7.5)	263 (73.3)	133 (38.4)	10 (2.9)	203 (58.7)	$\chi^2 = 35.59, p < .001$
Loss of pleasure		124 (34.5)	22 (6.1)	213 (59.3)	142 (41.0)	19 (5.5)	185 (53.5)	$\chi^2 = 3.17, p = .205$
Disturbed sleep		33 (9.2)	42 (11.7)	284 (79.1)	66 (19.1)	23 (6.7)	257 (74.3)	$\chi^2 = 17.67, p < .001$
Fatigue		12 (3.3)	82 (22.8)	265 (73.8)	41 (11.9)	65 (18.8)	240 (69.4)	$\chi^2 = 18.84, p < .001$
Feelings of worthlessness		148 (41.2)	15 (4.2)	196 (54.6)	159 (46.0)	17 (4.9)	170 (49.1)	$\chi^2 = 2.13, p = .345$
Feeling irritable		40 (11.1)	82 (22.8)	237 (66.0)	113 (32.7)	40 (11.6)	193 (55.8)	$\chi^2 = 53.57, p < .001$
Excessive worries and anxieties		189 (52.7)	12 (3.3)	158 (44.0)	185 (53.5)	14 (4.1)	147 (42.5)	$\chi^2 = 0.35, p = .838$
Difficulties in concentrating		53 (14.8)	43 (12.0)	263 (73.3)	128 (37.0)	20 (5.8)	198 (57.2)	$\chi^2 = 48.42, p < .001$
Having muscle tension		14 (3.9)	131 (36.5)	214 (55.6)	36 (10.4)	102 (29.5)	208 (60.1)	$\chi^2 = 13.14, p = .001$
Wellbeing Indicators								
Close to community and people in local area		24 (6.7)	157 (43.7)	178 (49.6)	12 (3.5)	140 (40.5)	194 (56.0)	$\chi^2 = 5.42, p = .066$
Lots of energy		8 (2.2)	88 (24.5)	263 (73.3)	19 (5.5)	85 (24.6)	242 (69.9)	$\chi^2 = 5.17, p = .075$
Very positive about oneself		74 (20.6)	45 (12.5)	240 (66.9)	50 (14.5)	54 (15.6)	242 (69.9)	$\chi^2 = 3.16, p = .206$
Bounce back when things go wrong		91 (25.4)	30 (8.4)	238 (66.3)	23 (6.7)	62 (17.9)	261 (75.4)	$\chi^2 = 7.24, p = .027$
Having people around who care		35 (9.8)	161 (44.9)	163 (45.4)	15 (4.3)	137 (39.6)	194 (56.1)	$\chi^2 = 12.39, p = .002$
Feeling happy		127 (35.4)	29 (8.1)	203 (56.6)	42 (12.1)	37 (10.7)	267 (77.2)	$\chi^2 = 60.27, p < .001$
Optimistic about future		83 (23.1)	55 (15.3)	221 (61.6)	41 (11.9)	48 (13.9)	257 (74.3)	$\chi^2 = 13.87, p = .001$
Sense of accomplishment		70 (19.5)	79 (22.0)	210 (58.5)	35 (10.1)	81 (23.4)	230 (66.5)	$\chi^2 = 12.37, p = .002$
Life is valuable and worthwhile		112 (31.2)	44 (12.3)	203 (56.6)	56 (16.2)	36 (10.4)	254 (73.4)	$\chi^2 = 45.93, p < .001$
Interested in learning new things		65 (18.1)	67 (18.7)	227 (63.2)	61 (17.6)	37 (10.7)	248 (71.7)	$\chi^2 = 8.66, p = .013$
Feeling calm and peaceful		53 (14.8)	57 (15.9)	249 (69.4)	29 (8.4)	42 (12.1)	275 (79.5)	$\chi^2 = 10.35, p = .006$

vs. 52.4%), 'Feeling Irritable' (63.9% vs. 31.2%), 'Difficulties in Concentrating' (73.1% vs. 50.7%), and 'Having Muscle Tension' (28.3% vs. 14.8%) as mental health indicators. For the wellbeing indicators, when negatively framed, 'Feeling Happy' (72.7% vs. 45.7%), and 'Life is Valuable and Worthwhile' (63.5% vs. 42.8%) were more likely to be incorrectly endorsed as reflecting mental health. Otherwise, the groups generally endorsed items in similar ways.

In discrimination task 2, in both positive and negative conditions, participants were provided the additional option of responding that an indicator was reflective of both mental health and wellbeing. The exact proportion of respondents indicating indicators as reflecting mental health or wellbeing, or both, by condition, are reported in Table 3. In terms of the mental health indicators (Figure 3), it was clear that respondents overwhelmingly ascribed indicators of 'Depressed Mood', 'Disturbed Sleep', 'Fatigue', 'Irritability', 'Ability to Concentrate' and 'Muscle Tension' as both mental health and wellbeing. For 'Pleasure in Activities', 'Feelings of Worthlessness', and 'Worries and Anxieties', whilst most participants indicated these reflected both mental health and wellbeing, a substantial minority of participants also correctly specified these indicators as reflecting mental health alone. Similarly, most participants indicated 'Muscle Tension' as reflecting both mental health and wellbeing, but a substantial minority of participants also incorrectly specified this indicator as reflecting wellbeing.

There was also a preponderance of individuals ascribing the wellbeing indicators as reflecting both mental health and wellbeing (Figure 4). Despite this, there was a substantial proportion of respondents who correctly ascribed 'Close to Community' and 'Having People Who Care' as reflecting wellbeing regardless of whether they were presented in a negative or positive frame, but also a proportion who incorrectly ascribed 'Generally Happy' and 'Life as Valuable' as a mental health indicator.

Although the greater proportion of participants endorsing indicators as reflecting both mental health and wellbeing was consistent in both the negative and positive conditions, there were some notable differences.
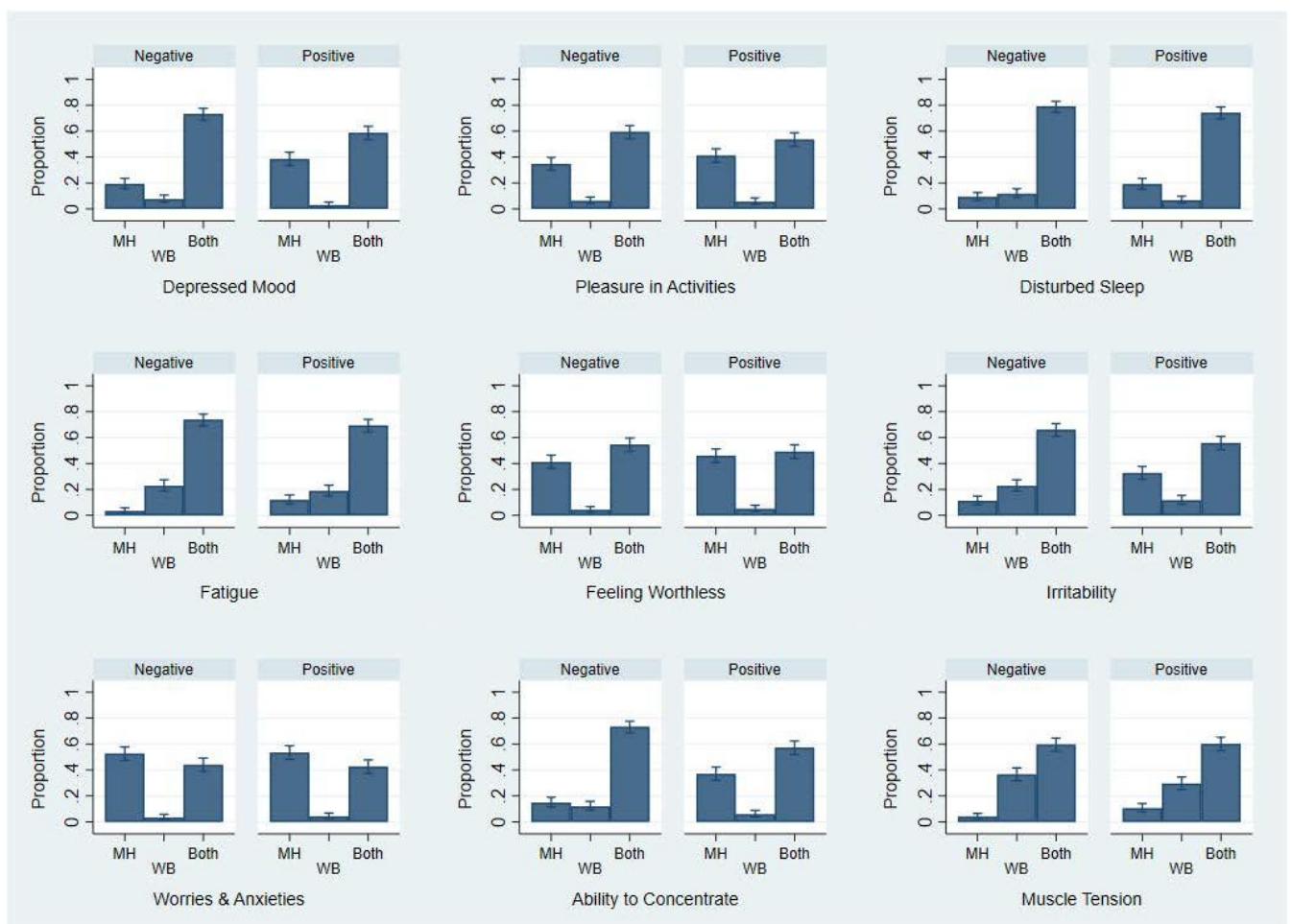
Figure 3. Proportion of participants classifying each mental health indicator as either reflecting mental health, wellbeing, or both, in Task 2 by condition
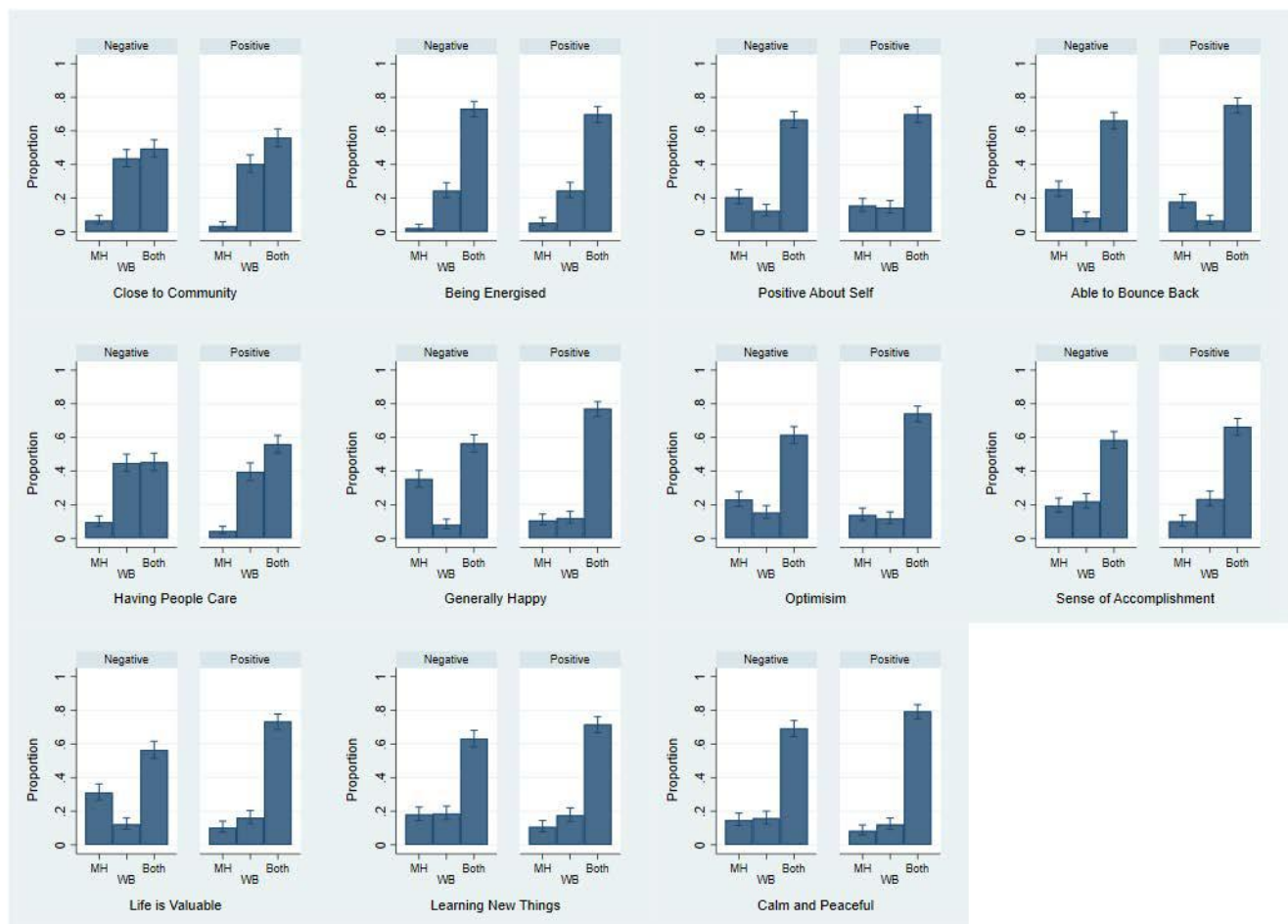
Figure 4. Proportion of participants classifying each wellbeing indicator as either reflecting mental health, wellbeing, or both, by positive and negative condition in Task 2.

Those completing the positive condition were more likely to correctly classify 'Depressed Mood' (38.4% vs. 19.2%), 'Disturbed Sleep' (19.1% vs. 9.2%), 'Fatigue (11.9% vs. 3.3%), 'Feeling Irritable' (32.7% vs. 11.1%), 'Difficulties in Concentrating' (37.0% vs. 14.8%), and 'Having Muscle Tension' (10.4% vs. 3.9%) as mental health indicators. For the wellbeing indicators, those in the negative condition, were more likely to incorrectly endorse 'Feeling Happy' (35.4% vs. 10.7%), 'Optimistic About the Future' (23.1% vs. 13.9%), and 'Life is Valuable and Worthwhile' (31.2% vs. 10.4%) as reflecting mental health. Otherwise, as with discrimination task 1, participants in both conditions generally endorsed items in similar ways.

Overall Mental Health and Wellbeing Literacy

We examined community members' literacy of mental health and wellbeing by using total accuracy scores of mental health and wellbeing from Discrimination Task 1. In the negative condition, participants correctly identified a median of 5 (IQR: 3; 6) out of the 9 mental health indicators, and 6 (IQR: 4; 9) out of the 11 wellbeing indicators correctly. In the positive condition, participants endorsed a median of 6 (IQR: 5; 7) out of the 9 mental health indicators and 7 (IQR: 5; 9) out of the 11 wellbeing indicators accurately. Owing to the proportion of the respondents who selected 'both mental health and wellbeing' in Discrimination Task 2, overall literacy scores for mental health and wellbeing for this task were low. In the negative condition, participants endorsed a median of 2 (IQR: 0; 3) out of the 9 mental health indicators and 1 (IQR: 0; 3) out of the 11 wellbeing indicators accurately. In the positive condition, participants endorsed a median of 3 (IQR: 0; 5) out of the 9 mental health indicators and 1 (IQR: 0; 3) out of the 11 wellbeing indicators accurately.

Unadjusted estimates of the literacy scores on both tasks revealed differences between framing conditions and literacy. On Task 1, those in the positive condition reported higher mental health (IRR = 1.21 (95% CI: 1.14; 1.30) $p < .001$) and wellbeing (IRR = 1.14 (95% CI: 1.08; 1.21) $p < .001$) literacy. For Task 2, those in the positive condition reported higher mental health literacy (IRR = 1.53 (95% CI: 1.38; 1.68) $p < .001$), but not wellbeing (IRR = 0.97 (95% CI: 0.88; 1.07) $p = .527$); there was no difference between framing in the proportion reporting indicators as reflecting both mental health and wellbeing (IRR = 1.03 (95% CI: 0.99; 1.08) p = .133).

Table 4. Differences in mental health and wellbeing literacy between condition on Task 1

	Mental Health		Wellbeing	
	IRR (95% CI)	p	IRR (95% CI)	p
Condition				
Negative	Ref		Ref	
Positive	1.20 (1.12; 1.28)	< .001	1.15 (1.08; 1.22)	< .001
Sex				
Female	Ref		Ref	
Male	0.96 (0.88; 1.05)	.399	0.99 (0.92; 1.07)	.791
Age	1.00 (0.99; 1.00)	.025	1.00 (0.99; 1.00)	.084
K-10[a]	1.00 (0.99; 1.01)	.391	0.99 (0.99; 0.99)	.008
WEMWBS[b]	1.00 (0.99; 1.01)	.925	0.99 (0.99; 1.00)	.535
PSS[c]	0.99 (0.98; 0.99)	< .001	1.01 (0.99; 1.01)	.087
LCR[d]	1.04 (1.01; 1.06)	.001	0.98 (0.96; 1.00)	.015
MH Diagnosis[e]				
No	Ref		Ref	
Yes	1.03 (0.95; 1.12)	.498	0.99 (0.91; 1.07)	.716
Education				
No	Ref		Ref	
Part-time	1.00 (0.90; 1.11)	.998	0.96 (0.87; 1.06)	.383
Full-time	0.99 (0.88; 1.12)	.866	1.03 (0.92; 1.15)	.584
Employed				
No	Ref		Ref	
Part-time/Casual	1.05 (0.96; 1.14)	.284	1.04 (0.97; 1.12)	.312
Full-time	1.07 (0.99; 1.17)	.101	1.01 (0.93; 1.09)	.822
Partnered				
No	Ref		Ref	
Yes	1.02 (0.96; 1.10)	.508	0.94 (0.89; 1.00	.055

[a]K-10: Kessler Psychological Distress Scale; [b]WEMWBS: Warwick Edinburgh Mental Wellbeing Scale; [c]PSS: Personal Stigma Subscale; [d]LCR: Level of Contact Report; [e]MH Diagnosis: Mental Health Diagnosis in the preceding 12 months.

Socio-demographic and health characteristics of mental health and wellbeing literacy

Adjusted estimates of the differences between positive and negative conditions and potential predictors of literacy are reported in Tables 4 and 5 for Discrimination Tasks 1 and 2 respectively. For Task 1, those in the positive condition continued to report slightly better mental health and wellbeing literacy, though the effect size is only of a small magnitude. Other effects of statistical difference were very small and can be attributed to the increased statistical power of the large sample sizes. Results for Task 2 show a pattern on mental health literacy only in the adjusted model. Given the extent to which participants in both conditions defined indicators as reflecting both mental health and wellbeing, this difference on mental health should be balanced by the low proportions who classified indicators as mental health.

Interactions between the two conditions and the covariates were tested, indicating few differences. On Task 1, there were small interactions on mental health literacy for level of contact (IRR = 0.95 (95% CI: 0.91; 0.99) p = .017) and psychological distress (IRR = 0.99 (0.97; 1.00) p = .038), suggesting the effects were slightly lower in the positive condition. It is important to note that the main effects were not substantive, and for psychological distress not related to mental health literacy, so these interaction effects did not suggest meaningful differences between positive and negative conditions. Similarly, for Task 2, there was a very small effect on wellbeing literacy for those in the positive condition with age (IRR = 0.99 (95% CI: 0.99; 1.00) p =.003). There was one interaction of note reported for full-time education status (IRR = 0.73 (95% CI: 0.58; 0.91) p = .006), suggesting that those currently in full-time education in the positive condition reported poorer wellbeing literacy. Again,

these interaction effects need to be considered in relation to the main effects, where no main effect was reported for both age and full-time education.

Table 5. Differences in mental health and wellbeing literacy between conditions on Task 2

	Mental Health		Wellbeing		Both Mental Health & Wellbeing	
	IRR (95% CI)	p	IRR (95% CI)	p	IRR (95% CI)	p
Condition						
Negative	Ref		Ref		Ref	
Positive	1.55 (1.40; 1.71)	< .001	1.02 (0.92; 1.13)	.725	1.01 (0.97; 1.06)	.575
Sex						
Female	Ref		Ref		Ref	
Male	0.95 (0.84; 1.09)	.466	1.40 (1.24; 1.57)	< .001	0.89 (0.84; 0.94)	< .001
Age	0.99 (0.99; 0.99)	< .001	1.00 (0.99; 1.01)	.053	1.00 (0.99; 1.00	.389
K-10[a]	0.99 (0.98; 1.00)	.268	0.98 (0.97; 0.99)	< .001	1.00 (0.99; 1.01)	.222
WEMWBS[b]	1.00 (0.99; 1.00)	.312	1.00 (0.99; 1.00)	.502	1.00 (0.99; 1.00)	.661
PSS[c]	0.99 (0.98; 1.01)	.350	1.04 (1.03; 1.05)	< .001	0.98 (0.98; 0.99)	< .001
LCR[d]	1.04 (1.01; 1.08)	.007	0.97 (0.94; .0.99)	.006	1.01 (0.99; 1.02)	.433
MH Diagnosis[e]						
No	Ref		Ref		Ref	
Yes	0.86 (0.76; 0.98)	.022	1.03 (0.90; 1.19)	.640	1.06 (1.00; 1.12)	.039
Education						
No	Ref		Ref		Ref	
Part-time	1.03 (0.89; 1.20)	.682	1.10 (0.93; 1.31)	.255	0.96 (0.89; 1.02)	.208
Full-time	0.93 (0.78; 1.11)	.444	1.36 (1.13; 1.63)	.001	0.97 (0.90; 1.05)	.522
Employed						
No	Ref		Ref		Ref	
Part-time/Casual	0.99 (0.88; 1.12)	.860	1.02 (0.90; 1.15)	.756	1.02 (0.97; 1.07	.455
Full-time	1.03 (0.91; 1.17)	.593	0.96 (0.84; 1.09)	.519	1.03 (0.98; 1.09)	.227
Partnered						
No	Ref		Ref		Ref	
Yes	1.05 (0.95; 1.17)	.310	0.94 (0.85; 1.05)	.279	0.99 (0.95; 1.04)	.888

[a]K-10: Kessler Psychological Distress Scale; [b]WEMWBS: Warwick Edinburgh Mental Wellbeing Scale; [c]PSS: Personal Stigma Subscale; [d]LCR: Level of Contact Report; [e]MH Diagnosis: Mental Health Diagnosis in the preceding 12 months.

Although the proportion of indicators reported to reflect mental health and wellbeing was low in Task 2, a number of interactions were identified. Those in the positive condition who reported a mental health diagnosis (IRR = 1.33 (95% CI: 1.02; 1.75) p =.037), were partnered (IRR = 1.26 (95% CI: 1.02; 1.54) p =.032), and in full-time education (IRR = 1.567 (95% CI: 1.07; 2.30) p =.020) reported higher mental health literacy. And those who were older (IRR = 0.98 (95% CI: 0.98; 0.99) p < .001), in part-time education (IRR = 0.50 (95% CI: 0.36; 0.71) p < .001) and male (IRR = 0.76 (95% CI: 0.60; 0.96) p =.037) reported poorer wellbeing literacy. However, we caution over-interpreting the main and interaction effects for mental health and wellbeing literacy since most participants classified items as both mental health and wellbeing in which there were no substantive interaction effects to report.

Discussion

This paper explored community members' literacy of mental health and wellbeing, and examined a number of socio-demographic and health characteristics that may predict literacy in Australian adults. Participants were enrolled into one of two conditions in which indicators of mental health and wellbeing were either positively or negatively framed. The first aim of the study was to identify whether community members can correctly identify individual indicators of mental disorder symptoms and components of wellbeing. At the individual item level, there was general consistency between the two samples in terms of the extent to which items were correctly classified. In the Discrimination Task 1, participants were most competent in accurately endorsing commonly-known mental disorders symptoms (e.g., 'Excessive worries and anxieties', 'Feelings of worthlessness') and core aspects of subjective wellbeing (e.g., 'Feeling happy', 'Life is valuable and worthwhile') in comparison with other

mental health and wellbeing indicators. The ability of community members to identify key symptoms of common mental health disorders accurately corresponds to improvements in mental health literacy of Australians in the National Survey of Mental Health Literacy and Stigma (Reavley & Jorm, 2011).

Those indicators reflecting physical symptoms of mental disorders were most likely to be misclassified in Discrimination Task 1. In both conditions, the majority of the community members endorsed 'having muscle tension' and 'fatigue' incorrectly, which may contribute to low rates of treatment-seeking for mental illness in the community (Burgess et al., 2009). For example, community members in Ghana identified physical health as an important aspect of wellbeing, but not mental health (Wilson Fadiji et al., 2019). This may reflect an important avenue for mental health education to highlight the somatic basis of some physical symptoms of mental health illness.

In terms of wellbeing literacy, in Discrimination Task 1, community members generally correctly identified indicators of wellbeing. However, the item 'Bounce back when things go wrong', which reflects the eudaimonic construct resilience, was frequently and mistakenly categorised as a mental health indicator. Higher levels of resilience are negatively correlated with psychological distress, depression and anxiety, and posited as a means to prevent the development of mental health disorders (Haddadi & Besharat, 2010); it is understandable that community define this wellbeing indicator as an indicator of mental health.

For Discrimination Task 2, the results are quite notable and pose important questions for wellbeing researchers who frequently posit that wellbeing and mental health are distinct constructs of psychological health. The findings suggest that the majority of the community mostly classified indicators as representative of both mental health and wellbeing, as opposed to distinct dimensions of psychological health. This has implications for wellbeing researchers in particular who frequently define wellbeing as complementary and in addition to mental health. Whilst this distinction may be useful at a measurement level, and in trying to capture the full gamut of human experiences of psychological health, community members are most likely to view these different components o as reflecting the same condition. It may be worthwhile for researchers to consider whether mental health and wellbeing are themselves reflective of a higher-order or 'g' latent factor that reflects overall psychological health.

For the second aim, results revealed slightly higher mental health and wellbeing literacy in the positive condition although this was primarily driven by differences on only a couple of mental health (depressed mood, irritability, difficulty concentrating) and wellbeing (feeling happy, life is valuable) indicators. These differences were of a very small magnitude and statistically significant owing to the sample size. Past research has shown response incongruity between positively and negatively framed items, finding positively framed items result in higher levels of information and discrimination as compared to negatively framed items (Sliter & Zickar, 2014). This suggests that the presentation of mental health and wellbeing indicators needs to be carefully considered as the valence of items could influence participants' perceptions of them. This has particular relevance for previous mental health literacy research (Jorm, 2000), where the valence of vignettes rest on identification of symptoms presented in negative frames (e.g., depressed). Otherwise, there were few socio-demographic characteristics that were predictors of literacy in both discrimination tasks. Those of statistical significance were of such small magnitude that interpreting the effects is difficult. For example, a one-point increase in the Level of Contact Report was associated with only a 4% increase in additional mental health symptoms reported in Discrimination Task 1 and 2. Whilst the lack of substantive associations may appear disappointing, this could be interpreted in positive terms such that the absence of non-modifiable socio-demographic factors as drivers of mental health and wellbeing literacy emphasises that to a large extent the level of literacy among community members may be improved with the provision of public educational campaigns itself and not something unique to individuals themselves.

Limitations and Future Directions

For the current study, two independent groups were recruited. It would be important to consider whether this question regarding differences between valence conditions could be examined in a within-subjects design. Otherwise replication of the findings in other between-subject designs are warranted. Further, we recognise there is often concern over sampling of participants from social media accounts. However, there is evidence that participant recruitment through online social media or the use of online research panels does not lead to

substantively different outcomes (Batterham, 2014; Thornton et al., 2016). For example, Batterham (2014) identified that samples derived from postal and online sources were generally comparable, but that a social media sample was more likely to recruit 'hard-to-reach' participants. In contrast, psychological studies and wellbeing studies are often predominantly derived from student populations, lack generalisability and often produce results which are not reproducible (Hanel & Vione, 2016; Sassenberg & Ditrich, 2019).

Notwithstanding these limitations, participants correctly recognised about 52% and 64% of mental health disorder indicators on average in the negative and positive conditions respectively, and is slightly lower than other mental health literacy studies (Reavley & Jorm, 2011). These differences could be attributed to the use of individual indicators of mental health and wellbeing to measure literacy in the current study, where previous literacy studies have evaluated mental health literacy using vignettes describing an individual with a set of mental disorder symptoms (Reavley & Jorm, 2011). A further line of enquiry would be to examine whether community members are able to discriminate between vignettes which describe individuals with a mixture of mental health and wellbeing states. Also, we recognise that when selecting 'both mental health and wellbeing' people may just err on the side of caution by designating them in both when unsure. Future exploration of the joint classification may consider the value in providing an 'unsure' or 'neither' option. The rationale for forced-choice tasks is because people may not discriminate if they don't have to. Finally, as an Australian-based study, there is a need to replicate and validate these findings in other national and cultural contexts. It would be equally important to confirm these patterns of finding in other English-Speaking populations, and also elucidate whether cultural differences in perceptions of wellbeing (Wilson Fadiji et al., 2019) may be related to differences in mental health and wellbeing literacy.

Implications of Findings

By examining literacy at the item level, we have been able to derive a more accurate indication of literacy and may reflect a particular gap in current mental health and wellbeing knowledge. Importantly, this could then lead into improved awareness campaigns for both mental health and wellbeing which flow on to greater help-seeking for poor mental health, and preventative measures to improved wellbeing. The use of vignettes is one of the most common methodologies employed to assess mental health literacy. The use of vignettes may bias results as participants may rely on prominent symptoms to provide accurate responses without an understanding of other less well-known symptoms. In particular, our findings suggest that participants were generally poor at correctly identifying somatic mental health indicators. Future educational campaigns to improve mental health and wellbeing literacy could focus on raising awareness of physical symptoms in mental disorders, aspects of personal wellbeing, and differences between mental health and wellbeing indicators representing similar concepts to address this problem.

As the valence of indicators affected levels of literacy to a small degree, symptoms of mental disorders and aspects of personal wellbeing could be positively phrased in resources for the community. Also, educational campaigns on mental health and wellbeing literacy could be conducted in conjunction with each other. Studies have shown that higher levels of wellbeing serve as a buffer against the development of psychopathology (Trompetter et al., 2017; Wood & Joseph, 2010). For example, people with higher levels of wellbeing have been reported to utilise self-compassion skills to promote resilience against psychopathology (Trompetter et al., 2017). At a therapeutic level, Wellbeing Therapy (Fava, 1999, 2012, 2016) utilises traditional Cognitive Behavioural Therapy with a therapeutic process which seeks to not just decrease psychopathology, but improve wellbeing by focusing on key wellbeing dimensions (e.g., mastery, purpose in life). Similarly, Acceptance and Commitment Therapy (ACT) focuses on empowering individuals to live a meaningful life by increasing psychological flexibility, the ability to adapt to different situations, and undertake behaviours aligned with personal values (Wersebe et al., 2018). ACT addresses various eudaimonic aspects of wellbeing by encouraging clients to flourish and live a purposeful life guided by values personally important to them (Fava, 2016; Öst, 2014), and has been shown to reduce symptoms of mental disorders and promote wellbeing and flourishing (Bohlmeijer et al., 2015; Öst, 2014). Complementing education in mental health literacy with wellbeing literacy could be a way to close the "prevention gap" (Jorm et al., 2017) and the otherwise lack of improvement in poor mental health in the community (Burns et al., 2020; Jorm, 2014).

Perhaps the most notable implication of the findings from this study related to how wellbeing researchers have proposed a system of positive mental health that is different to, but complements, the traditional focus on psychopathology. Despite concerted debate regarding the structure of wellbeing (Burns, 2020; Chen et al., 2013;

de Bruin & du Plessis, 2015; Gallagher et al., 2009; Gatt et al., 2014; Hides et al., 2016; Jovanović, 2015; Kim et al., 2016; Longo et al., 2020; Ryff & Keyes, 1995) and its relationship with mental health (Black et al., 2019; Keyes, 2005; Massé et al., 1998; Winefield et al., 2012), the results from our second discrimination task clearly show that community members do not necessarily discriminate different components of wellbeing and mental health as separate phenomena. These findings highlight challenges in defining wellbeing, which have implications for wellbeing literacy frameworks informing clinical practice and health policy. That community members endorsed most mental health and wellbeing indicators as reflecting both mental health and wellbeing clearly adds complexity to the wellbeing literature (Huppert & So, 2013; Keyes, 2002). There may be a need to reconcile current theoretical frameworks of wellbeing with the results of our community study. That is, defining wellbeing in terms of the presence of wellbeing alone may not concord with lay understandings of mental health and wellbeing where discriminating between these constructs may not be important. We therefore propose instead that both dimensions (wellbeing and mental health) be considered reflective of overall psychological health. For example, wellbeing may decrease the likelihood of mental illness, but the two states are not exclusive. This is in a similar way to how we may conceptualise physical health in terms of the extent or presence of illness (Type II Diabetes) on one dimension which focuses on limitation, and physical¬¬ health (e.g., aerobic fitness) on the other dimension which focuses on capacity and is in line with the WHO's definition of health as both the absence of disease and the presence of wellbeing (World Health Organization, 1946). Clearly there is scope for further research considering how and in what ways wellbeing and mental health co-occur.

Conclusion

To conclude, the results of this community study suggest community members are generally literate in identifying indicators of mental health and wellbeing, but poorer at classifying physical symptoms of mental health disorders. However, when provided the option, respondents were more likely to classify most wellbeing and mental health indicators as reflecting both mental health and wellbeing and not as independent dimensions of psychological health. This outcome raises serious questions regarding the perceived differentiation of mental health and wellbeing in the scientific literature; at the lay community level, these indicators all reflect some higher order factor of psychological health. Notably, socio-demographic and self-reported characteristics were not related to mental health and wellbeing literacy. These findings can be used to improve the quality of future educational campaigns for mental health and wellbeing literacy.

Compliance with Ethical Standards

Acknowledgement and Funding

Conflict of Interest

No conflict of interest to disclose.

Ethics Approval

The Australian National University Human Research Ethics Committee approved the research study (Protocol 2019/945). All procedures performed in this study involving human participants were in accordance with the ethical standards of the institution, the National Statement on Ethical Conduct in Human Research 2007 and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Author Contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. The first draft of the manuscript was written by JYC and RAB. All authors made substantial contributions to the final version of the manuscript. All authors have read and approved the final manuscript for publication

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