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Examining Predictors of Help Giving Toward People With a Mental Illness: Results From a National Survey of Australian Adults

Alyssia Rossetto¹, Anthony F. Jorm¹, and Nicola J. Reavley¹

Abstract
Little is known about factors influencing helping behaviors toward a person with mental illness. This study explored a range of predictors of helping intentions and behaviors using data from a national survey of Australian adults. Participants (n = 6,019) were randomly assigned one of six vignettes and asked how they would help the character if it was someone they knew and cared about, and asked whether and how they had helped a person in real life with a similar problem. Responses were scored using a system based on the Mental Health First Aid action plan. Regression analyses examined predictors of high helping scores in relation to type of disorder and respondent demographics, mental health literacy, and experiences with mental illness. Predictors of harmful responses and seeking advice on how to help appropriately were also assessed. Significant predictors varied by vignette, with the only consistent predictor being female gender. Participants aged under 30 provided less helpful responses to people with social phobia. Mental health literacy variables were inconsistently related to helping, whereas more stigmatizing attitudes significantly predicted harmful responses and poor helping scores. Targeting males and young people may improve rates of helpful responses. Education campaigns aiming to reduce stigma and increase knowledge of schizophrenia may also minimize potentially harmful actions.

Keywords
helping behaviors, helping intentions, mental illness, mental health literacy, mental health first aid

Introduction
In Australia, individuals experiencing mental illness are encouraged to seek professional help for their disorder as soon as possible to improve their chances of recovery (Gulliver, Griffiths, Christensen, & Brewer, 2012; Wilson & Deane, 2001). However, a minority of people engage with available mental health services in any given 12-month period (Burgess et al., 2009). Studies suggest that people endorse seeking help for their mental illness from their family and friends (Reavley & Jorm, 2011a; Riedel-Heller, Angermeyer, & Matschinger, 2001), utilizing them for support, information, and care (Griffiths, Crisp, Barney, & Reid, 2011), and there is also evidence indicating that the social networks of individuals with a mental illness can prompt and facilitate professional help seeking, recovery, and symptom management (Downs & Eisenberg, 2012; Griffiths et al., 2011). These actions may be termed “helping behaviors” and can be short or long term in duration. Helping behaviors form a key component of mental health literacy (Jorm, 2011), defined as “knowledge and beliefs about mental disorders which aid their recognition, management or prevention” (Jorm et al., 1997, p. 182). Given that members of the public are well placed to recognize and provide initial assistance to a person with a mental illness, it is important that they have the knowledge and skills to provide effective help; however, simply possessing these capabilities may not be enough to ensure their use.

Extensive literatures exist on help-seeking behaviors, intervening in emergency situations, and helping behaviors like volunteering and other prosocial behaviors. However, very little of this literature focuses specifically on the factors that influence people’s decisions to assist someone with a mental illness. A key reason for understanding what influences help-giving behavior in these contexts is that many potential factors that would prevent or influence people not to help are likely to be modifiable. For example, recognizing the symptoms of mental illness (Gulliver, Griffiths, &
Christensen, 2010; Reavley & Jorm, 2011a), lacking knowledge of how to help or confidence in assisting someone experiencing mental illness (Jorm, Wright, & Morgan, 2007), and stigmatizing attitudes toward the mentally ill (Angermeyer & Dietrich, 2006; Reavley & Jorm, 2011b) are all factors that could plausibly affect the likelihood of offering assistance. Importantly, all of these can be improved through education and exposure to people with a mental illness (Corrigan et al., 2002; Jorm, 2011; Kitchener & Jorm, 2002).

Identifying factors that influence help giving is the first step toward establishing whether and how they can be modified in ways that encourage people with mental illness to seek help and remain adequately supported during this process. Most studies that specifically investigate the characteristics affecting people’s helping behaviors have come from the mental health literacy field of research. Adolescents are most often studied, either as part of national surveys of mental health literacy (e.g., Yap, Wright, & Jorm, 2011) or within schools (e.g., Kelly, Jorm, & Rodgers, 2006; Olsson & Kennedy, 2010). The surveys often present participants with a vignette depicting a person with a mental illness and ask the participants what they would do to help the person if it was someone they knew. Alternatively, participants are asked whether they knew someone close to them who had experienced a mental illness and how they helped the person. Responses are provided in either an open-ended or multiple-choice format, coded into categories representing first aid responses and used as the dependent variables in analyses that assess predictors of appropriate helping. Findings from studies examining adolescent helping indicate that older respondents and females tend to help more, and more appropriately, by, for example, recommending the person seek help or sharing their concerns with an adult (Olsson & Kennedy, 2010; Yap, Reavley, & Jorm, 2012; Yap et al., 2011). Results indicate that stigma affects helping actions, with higher scores on social distance measures and perceiving the person as “weak, not sick,” reducing the likelihood of assessing for suicidal intent and significantly increasing the frequency of inappropriate responses, such as using alcohol to forget their problems (Yap & Jorm, 2011). Conversely, participants who perceive people with a mental illness as dangerous or unpredictable are more likely to encourage the person to seek professional assistance (Yap & Jorm, 2011). Characteristics of the recipient or their disorder have also been found to affect helping actions, with participants more likely to assess for suicide risk in a close friend, compared with a family member, and more likely to encourage social activities for a person experiencing social phobia than a person with depression (Yap et al., 2011). Male recipients were less likely to receive advice to seek professional help and more likely to elicit harmful actions, such as being talked to firmly about getting their act together.

The findings from adolescent studies correspond with those from an adult sample in a 2005 survey of mental health literacy (Jorm, Blewitt, Griffiths, Kitchener, & Parslow, 2005). This study assigned participants to one of four vignettes (depression, depression with suicidal thoughts, early schizophrenia, or chronic schizophrenia) and asked participants how they would help the person in the vignette. Females, people who correctly identified the disorder portrayed, and people with less stigmatizing attitudes were more likely to provide appropriate assistance. Participants receiving the chronic schizophrenia vignette were more likely to encourage professional help seeking, listen/talk to and support the family, and give or seek information.

The studies outlined above provide consistent evidence for identifying factors that affect people’s helping intentions and behavior. However, one limitation of the existing literature is that only a small number of potential predictors were included in their analyses. Predictors in these investigations focused on the age and gender of respondent and recipient, stigma and social distance scale scores, type of disorder in the vignette and whether the respondent had ever known someone with a mental illness. Examining additional predictors, especially those related to mental health literacy and personal experiences with mental illness, could provide additional insight into factors that influence helping behaviors and reveal new directions for future research and public education programs.

This study aims to provide more comprehensive information on the influences on helping behavior in the Australian adult population. As only one study has previously examined helping in a national survey of Australian adults (Jorm, Blewitt, et al., 2005) and the mental health literacy of the Australian population has significantly increased since then (Reavley & Jorm, 2012), additional, updated information will offer insight into whether better mental health literacy also influences help giving. This research explores a broad range of predictors of helping behaviors in Australian adults using a sample from the 2011 National Survey of Mental Health Literacy and Stigma. A large national sample is useful for examining several factors that may be important predictors of helping and are not easily or adequately obtained through other sampling methods. The analyses examined predictors of high scores on a measure of helping behaviors derived from actions specified by the Mental Health First Aid (MHFA) program (Kitchener, Jorm, & Kelly, 2013), including type of disorder, respondent and recipient demographics, the respondent’s general knowledge of mental illness, and the respondent’s experiences with mental illness. These characteristics were examined in two situations: one involving a hypothetical person in a vignette and the other in relation to helping a person in real life. Additional analyses ascertained predictors of harmful responses and factors that influence the likelihood of a respondent seeking advice on what to do in situations involving helping a person with mental illness, which have not been comprehensively examined in the literature to date.
**Method**

A sample of 6,019 Australians aged 15 and above was interviewed via telephone by the company The Social Research Centre between January and April 2011. To obtain a representative population sample, random digit dialing of both landline and mobile phone numbers was used (see Reavley & Jorm, 2011a, for comprehensive information on this methodology). Eligible respondents were aged 15 and above, could understand and communicate in English, and had secured consent to participate from a parent or guardian if aged below 18.

**Survey Interview**

After providing demographic information, participants received one of six randomly allocated vignettes: depression, depression with suicidal thoughts, early schizophrenia, chronic schizophrenia, social phobia or post-traumatic stress disorder (PTSD), presented with either a male (“John”) or a female (“Jenny”) character (the vignettes have been previously published in Jorm, Blewitt et al., 2005; Reavley & Jorm, 2011a). Each vignette met Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV; American Psychiatric Association, 1994) and International Classification of Diseases (ICD-10; World Health Organization, 1993) diagnostic criteria. Respondents were asked to identify what, if anything, they thought was wrong with John/Jenny and rate the helpfulness or harmfulness of specific psychopharmacological, self-help and health professional interventions. Participants provided a response to the open-ended question “Imagine John/Jenny is someone you have known for a long time and care about. You want to help him/her. What would you do?” and rated their agreement or disagreement with statements relating to personal and perceived stigma on a five-point scale. Interviewers then asked questions about the mental health of the participant’s friends and family, identifying whether they knew anyone with a problem similar to that of the person in the vignette. This was followed by questions about how many people the respondent knew with the problem, whether the respondent did anything to help the person they knew best, how they helped, and whether the close friend or family member sought professional help or treatment. Participants were also asked about their beliefs about causes of mental illness, their own mental health (using the K6 Psychological Distress Scale), their physical health, and their awareness and knowledge of mental health resources.

**Predictor Variables Used in Regression Analyses**

**Demographics.** The demographic variables included in the regression analyses were age group (under 30, 30-59, and 60+), gender (male as reference), identification as Aboriginal or Torres Strait Islander, country of birth (born outside Australia as reference), language spoken at home (language other than English as reference), and educational attainment (below bachelor’s degree as reference). Table 1 provides the sample characteristics for this dataset. The gender of the person in the vignette was also included (female as reference).

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2,670</td>
<td>44.4</td>
</tr>
<tr>
<td>Female</td>
<td>3,349</td>
<td>55.6</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 30 years</td>
<td>1,182</td>
<td>19.6</td>
</tr>
<tr>
<td>30-59 years</td>
<td>3,028</td>
<td>50.3</td>
</tr>
<tr>
<td>60 years and over</td>
<td>1,809</td>
<td>30.1</td>
</tr>
<tr>
<td>Highest level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor degree or above</td>
<td>1,920</td>
<td>31.9</td>
</tr>
<tr>
<td>All other qualifications</td>
<td>4,034</td>
<td>67.0</td>
</tr>
<tr>
<td>Country of birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>4,396</td>
<td>73.0</td>
</tr>
<tr>
<td>Other</td>
<td>1,608</td>
<td>26.7</td>
</tr>
<tr>
<td>Language spoken at home</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>5,147</td>
<td>85.5</td>
</tr>
<tr>
<td>Other</td>
<td>864</td>
<td>14.4</td>
</tr>
<tr>
<td>Identification as Aboriginal or Torres Strait Islander (ATSI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>113</td>
<td>1.9</td>
</tr>
<tr>
<td>No</td>
<td>5,897</td>
<td>98.0</td>
</tr>
</tbody>
</table>

Note. Some total percentages may not sum to 100% due to missing data.

**Stigma scales.** Three stigma scales were included in these analyses. Five items assessing people’s willingness to interact socially with John/Jenny were rated by participants on a five-point scale ranging from “very willing” to “very unwilling” (Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999); the ratings on these items were summed to create a social distance scale. Based on the work of Yap and colleagues (Yap, Mackinnon, Reavley, & Jorm, 2014), two stigma scales were created from several stigma measurement items in the survey. Participant responses were given on a five-point scale from “strongly agree” to “strongly disagree.” The “weak-not-sick” scale comprised five items and represented the belief that people with a mental illness are weak in character, and the “dangerous/unpredictable” scale, representing the belief that people with mental illnesses are dangerous to others, comprised three items. The mean scores on each of the three scales were included in the analyses.

**Mental health literacy variables.** Several variables assessing respondents’ knowledge of mental illness were examined in the survey. Answers were scored according to newly developed mental health literacy scales specific to disorder, which comprised correct recognition of disorder and agreement with professionals regarding the helpfulness and harmfulness of various professional and self-help interventions (Reavley, Morgan, & Jorm, 2014). Each response that
accorded with the beliefs of professionals received a point. These were summed to give a score on the scale corresponding to the disorder presented to the participant in the vignette. The scales were included in their respective analyses (i.e., the depression scale with the depression regression, etc.). Additional mental health literacy variables included what John’s/Jenny’s likely recovery prospects would be if he or she did and did not receive appropriate help, whether it was likely that John/Jenny would be discriminated against by others in the community if they knew about John’s/Jenny’s condition, and whether respondents had heard of any organizations related to mental health.

**Personal experience with mental illness.** Respondents were asked several questions relating to whether they or people close to them had experienced mental illness. The variables included in these regressions were as follows: whether the respondent had ever had a problem similar to the person in the vignette, whether the respondent knew anyone with a condition similar to the person in the vignette, whether the respondent had any professional experience in mental health and the respondent’s levels of psychological distress as measured by the six-item Kessler Psychological Distress Scale.

**Dependent Variable: Coding of Responses to Open-Ended Questions**

The two open-ended questions relating to how the participant would help the person in the vignette and what the participant did to help their close other with a similar problem to John/Jenny were scored using a system developed by the creators of the MHFA program, based on the ALGEE action plan taught in the course (Kitchener et al., 2013), detailed below. The action plan was derived from several studies that aimed to create guidelines, based on expert consensus, for how the public could help someone experiencing mental illness and represents the core elements of all MHFA responses. ALGEE stands for **Approach the person, Assess and Assist with any crisis, Listen non-judgmentally, Give support and information, Encourage appropriate professional help, and Encourage other supports** (Kitchener et al., 2013). Responses were scored based on the level of detail provided for each of the six components of the action plan such that 0 points were awarded for no or inappropriate coverage, 1 point was awarded for providing superficial details (e.g., “Talk to the person”), and 2 points were given for providing specific details (e.g., “Listen empathically”). The points per category were summed, giving a total score representing the quality of the response that ranged from 0 to 12.

To ensure the reliability of the scoring, a rater was trained in the use of the scoring system by initially scoring 60 responses from a previous MHFA trial. Interrater reliability was calculated using Pearson’s $r$ for each category and the total score, and ranged from $r = .68$ (Give support and information) to $r = .94$ (Assess and assist with any crisis). The rater and the scoring system developers then independently coded and compared 80 randomly selected open-ended responses from the two questions about helping behaviors in the 2011 Adult Mental Health Literacy Survey. Interrater reliability was very high overall, ranging from $r = .76$ (Give support and information) to $r = 1.00$ (Assess and assist with any crisis). The rater then scored all the help-giving responses for each question (the intention question: “Imagine John/Jenny is someone you have known for a long time and care about. You want to help him/her. What would you do?” and the behavior question: “What did you do to help the close friend/family member you know who had a problem similar to John’s/Jenny’s?”), resolving ambiguous responses by consulting the scoring system developers as necessary. Additional notes were taken when responses were harmful to the person with a mental illness (for example, encouraging the person to drink to forget their troubles or talking to the person firmly about getting their act together) and where the participant did not know what to do but resolved to seek help from other sources such as their general practitioner (GP), mental health websites, or a helpline. These responses were of interest as they represent a form of indirect help, and the scoring system was developed for people who had undertaken the MHFA course and thus were expected to know how to assist a person experiencing a mental illness. Because the respondents were untrained and the scoring system could not accommodate these responses, these responses were noted separately and a dichotomous variable created for analysis.

**Statistical Analyses**

Pre-weights were applied to all data to adjust for the respondents’ chances of selection and the dual-frame survey design. A population weight was applied to adjust for the over-sampling of university-educated and English-speaking background participants and under-sampling of males and younger adults. Data analyses were performed using Intercooled Stata 12. A series of multivariate linear regressions and logistic regressions were performed separately for each vignette. Each regression included all the predictor variables described above, but due to the large number of non-significant predictors, only significant predictors are shown in Tables 2 and 3. Four dependent variables were used in the analyses: the total ALGEE score for the intention question; whether the person gave a harmful response to the intention question, whether the person said that they did not know what to do but resolved to seek help from other sources, and the total ALGEE score for the behavior question.

As there were a large number of analyses conducted, the $p < .01$ level of significance was used to reduce the Type 1 error rate. Analyses were initially conducted by running separate regressions for each vignette using the same predictors and dependent variable. Examination of these regressions suggested that similar vignettes shared similar predictors; thus, they could be combined by vignette type. Therefore,
one regression each for the depression and depression with suicidal thoughts, early and chronic schizophrenia, and social phobia and PTSD (anxiety) vignettes were subsequently run to ascertain predictors of total scores for intention and for behavior. All regressions were run with the same independent variables and included the corresponding mental health literacy scales. The mental health literacy scales were standardized, as each scale consists of different variables (Reavley et al., 2014) and combined by vignette type before inclusion in the pooled regressions.

**Ethics**

Participants provided oral consent to the interviewer before the interview commenced. This study was approved by the University of Melbourne Human Research Ethics Committee.

**Results**

The response rate for the survey was 44%, defined as the number of completed interviews (n = 6,019) out of the number of potential participants who were contacted and confirmed as in scope (n = 13,636). A total of 4,323 interviews were conducted on landlines and 1,696 interviews were conducted on mobile phones. There were no significant differences in age, gender, marital status, education level, country of birth, or location between vignettes. Of the total number of respondents, 1,016 received the depression vignette, 1,008 received the depression with suicidal thoughts vignette,
Table 3. Significant Predictors of Total Score for Intention and Behavior Questions, Analyzed by Vignette Type.

<table>
<thead>
<tr>
<th>Vignette type</th>
<th>Depression vignettes (depression and depression with suicidal thoughts)</th>
<th>Schizophrenia vignettes (early and chronic)</th>
<th>Anxiety vignettes (social phobia and PTSD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant predictors for intention question</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent is female</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent believes John/Jenny will be discriminated against by others in the community if they knew about his or her condition</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social distance score</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined depression mental health literacy scale score</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent believes that John/Jenny will fully recover with appropriate help</td>
<td>+</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Respondent believes that John/Jenny will fully recover without appropriate help</td>
<td>+</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Respondent has professional experience in mental health</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent is aged under 30</td>
<td>—</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Respondent’s education level is Bachelor’s degree or higher</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weak-not-sick stigma scale score</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined anxiety mental health literacy scale score</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent received PTSD vignette</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.085</td>
<td>0.051</td>
<td>0.094</td>
</tr>
</tbody>
</table>

Significant predictors for behavior question

| Respondent is female | + |
| Respondent believes that John/Jenny will fully recover without appropriate help | — |
| Respondent believes that John/Jenny will be discriminated against by others in the community if they knew about his or her condition | — |
| Respondent is aged under 30 | — |
| Respondent has had a similar problem to John/Jenny | — |
| Weak-not-sick stigma scale score | + |
| $R^2$                                | .079         | .046                                      | .102                                       |

Note. All predictors are significant at $p < .01$. Plus signs indicate a positive relationship with the dependent variable and minus signs indicate a negative relationship with the dependent variable. All models are significant at $p < .01$, except the schizophrenia model for the behavior question, $F(20, 599) = 1.43, p > .05$. PTSD = post-traumatic stress disorder.

1,002 received the early schizophrenia vignette, 993 received the chronic schizophrenia vignette, 992 received the social phobia vignette, and 1,008 received the PTSD vignette. The percentage of people answering the intention question by vignette ranged from 98.0% (chronic schizophrenia) to 99.3% (depression with suicidal thoughts), with 98.6% of the total sample answering the question. The percentage of people answering the behavior question ranged from 28.8% (chronic schizophrenia) to 55.2% (depression), with 43.4% of the total sample answering this question.

**Characteristics of Total Scores for the Intention and Behavior Questions**

The scores for each ALGEE category were summed to give a total score for each response. For both questions, the total scores ranged between 0 and 7 out of 12, with most people receiving a score between 1 and 3 (intention, $M = 2.08, SD = 1.16$; behavior, $M = 2.15, SD = 1.15$). Seven people answering the intention question received scores of 7 (0.1% of the total sample), with four of these coming from people
receiving the depression with suicidal thoughts vignette, two from the depression vignette, and one from the PTSD vignette. Three people received scores of 7 (0.1%), and 21 people scored a total of 6 (0.8%) for the behavior question. The most commonly reported ALGEE actions for both questions were listening, providing support and information, and encouraging professional help seeking. Actions such as assessing and assisting with crisis were rarely stated, even for the depression with suicidal thoughts vignette. This information suggests that, overall, the Australian public are not knowledgeable about appropriate MHFA intentions and behaviors, a finding supported by previous literature (Jorm, Blewitt, et al., 2005). Further information about these results can be found in Rossetto, Jorm and Reavley (2014).

**Predictors of Total Score for the Intention Question**

Initially, six linear regressions were run to examine this question, one for each vignette, which incorporated the corresponding mental health literacy scale. Overall, no single predictor was found to be consistent across all vignettes and the predictors explained only small percentages of the variance in total scores for intention. However, all models were significant at the p < .01 level. An overview of significant predictors is shown in the first section of Table 2. Female gender was a significant positive predictor for depression (B = 0.29, p = .001), depression with suicidal thoughts (B = 0.31, p = .001), social phobia (B = 0.24, p = .001), and PTSD (B = 0.35, p = .000). Low social distance scores were associated with higher total scores for the intention question for the depression with suicidal thoughts vignette (B = −0.17, p = .008) and low scores on the weak-not-sick stigma scale predicted higher total scores for the social phobia vignette (B = −0.16, p = .004). Mental health literacy scale variables were positively associated with high scores for the depression with suicidal thoughts (B = 0.07, p = .007) and social phobia (B = 0.06, p = .01) vignettes, but non-significant for the other vignettes. A curious finding was that for the chronic schizophrenia vignette, respondents who believed that the person was likely to fully recover without receiving appropriate help were likely to score highly (B = 1.04, p = .008). Predictors associated with personal experience with mental illness did not significantly predict total scores.

When the vignettes were combined by type, giving greater statistical power, more conclusive findings emerged (Table 3). For the depression vignettes, female gender (B = 0.30, p = .000), believing John/Jenny would be discriminated against in the community (B = 0.20, p = .002), and low social distance scores (B = −0.16, p = .001) predicted higher helping scores. Mental health literacy for depression also predicted higher scores (B = 0.11, p = .002). Significant predictors of total scores for the schizophrenia vignettes were as follows: believing the person in the vignette would recover with appropriate help (B = 0.24, p = .000), having worked in a mental health field (B = 0.23, p = .004), and curiously, believing that the person in the vignette would recover even if he or she did not receive appropriate help (B = 0.79, p = .005). Total scores for the anxiety vignettes were associated with being aged above 30 (B = −0.21, p = .007), female gender (B = 0.30, p = .000), higher educational attainment (B = 0.18, p = .002), believing that John/Jenny would not recover without appropriate help (B = −0.40, p = .004), low scores on the weak-not-sick stigma scale (B = −0.12, p = .002), higher scores on the anxiety mental health literacy scale (B = 0.10, p = .000), and receiving the PTSD vignette (B = 0.21, p = .000), rather than the social phobia vignette. Cohen’s f² calculations suggested a small to medium effect size for R² (range .05 to .10).

**Predictors of Harmful Responses**

To establish whether there were any predictors of harmful responses to the intention question, a logistic regression was performed by entering the same variables as for the linear regressions, plus variables controlling for each type of vignette, and creating a new dependent variable with binary outcomes corresponding to whether the respondent had or had not provided a response deemed inappropriate or harmful to the person in the vignette. Although there were only 39 harmful responses in the sample (where total N = 5,360), the results were quite clear. The likelihood of providing a harmful response was predicted by believing that the person in the vignette would fully recover without appropriate help (odds ratio [OR] = 8.36, p = .000), high scores on the weak-not-sick stigma scale (OR = 2.34, p = .000), and high social distance scores (OR = 1.80, p = .009). This model was significant, with F(24, 5336) = 3.88, p = .000. No significant differences between vignettes were found.

**Predictors of Intention to Seek Advice on How to Help From Knowledgeable Sources**

As previously mentioned, notes were made of responses where the participant did not know what to do but resolved to seek help from other sources such as their GP, mental health websites, or a helpline, because the scoring system was designed to evaluate the benefits of training and did not accommodate these responses. A logistic regression was performed to establish whether there were any significant predictors of seeking advice or help from other sources for the intention question only, as there were few responses like this for the behavior question. A total of 510 responses relating to seeking advice or help from elsewhere were recorded and scored dichotomously for this analysis. The predictors were the same as those entered into the previous logistic regression. Resolving to seek advice or help from other sources was predicted by lower scores on the weak-not-sick stigma scale (OR = .051, p = .000), receiving the early schizophrenia vignette (OR = 2.92, p = .000), and receiving...
the chronic schizophrenia vignette (OR = 4.76, p = .000). This model was significant, with \( F(24, 5336) = 9.70, p = .000 \).

Predictors of Total Score for the Behavior Question

Six linear regressions, one per vignette, were run to explore factors predicting total scores for the behavior question. The predictor variables entered into the equation were the same as those for the previous sets of regressions, with the omission of the variable relating to whether the respondent had a close friend or a family member with a problem similar to John’s or Jenny’s. This is because if the respondent answered “no” to this question, they were not required to answer the behavior question and so were excluded from further questions about helping behavior, while answering “yes” generated a response to the behavior question, so there is no variation to analyze. This also means that there are fewer cases included in these analyses, as only 43.4% of the total sample answered the behavior question. Again, significant predictors varied by vignette and the variance explained by each model also differed to some extent. Two models were not significant at \( p < .01 \). These were the chronic schizophrenia model, \( F(19, 244) = 1.88, p = .016 \), and the PTSD model, \( F(19, 359) = 1.85, p = .017 \). An overview of significant predictors is provided in the second section of Table 2. Again, there was little consistency in significant predictors. Female gender was not significantly associated with any vignette, while being aged under 30 was negatively associated with helping someone with social phobia (\( B = −0.59, p = .003 \)), a finding which was also true of the social phobia vignette results for the intention question. Respondents were less likely to score highly when they received the male version of the early schizophrenia vignette (\( B = −0.43, p = .001 \)) and when they had high scores on the weak-not-sick stigma scale (social phobia, \( B = −0.26, p = .007 \); PTSD, \( B = −0.24, p = .008 \)).

When the vignettes were combined by type, the results showed some overlap with the pooled regressions for intention (Table 3). Significant predictors of high total scores for the depression vignettes included female gender (\( B = 0.24, p = .004 \)), believing that the person would not fully recover without appropriate assistance (\( B = −0.75, p = .000 \)), and believing that John/Jenny would be discriminated against by others in the community if they knew about their problem (\( B = 0.23, p = .003 \)). There were no significant predictors at \( p < .01 \) for the combined schizophrenia vignettes; this model’s \( R^2 \) was also not significant. For the anxiety vignettes, variables associated with increased total scores for the behavior question included being aged under 30 (\( B = −0.35, p = .009 \)), the respondent having a similar problem to the person in the vignette (\( B = 0.29, p = .003 \)), and low scores on the weak-not-sick stigma scale (\( B = −0.26, p = .000 \)).

Discussion

This investigation aimed to explore predictors of helping behaviors toward people with a mental illness by Australian adults using data from the 2011 National Survey of Mental Health Literacy and Stigma. The study examined the relationship of several variables (demographic characteristics, mean scores for three stigma scales, the gender of the person in the vignette, variables relating to mental health literacy, and personal experience with mental illness) with helping intentions toward a hypothetical person and helping behaviors toward someone the respondent knew in real life. It also established predictors of responses that would be either harmful for the recipient or involve seeking additional information to address the situation appropriately.

One of the key findings of this study was that factors that influence helping behavior are highly dependent on the type of disorder experienced by the recipient of aid. Despite being able to combine the regression analyses by type of disorder, few consistent predictors of helping behaviors toward people with a mental illness emerged. Female gender was the only consistently significant positive predictor of high first aid scores across vignettes for the intention question, which supports findings from previous research (Jorm, Blewitt, et al., 2005; Yap et al., 2012; Yap et al., 2011). This suggests that efforts to improve individual community helping behaviors toward people with mental illness could specifically target males. Predictors within vignettes, when comparing the intention and behavior regressions, were also quite variable. One noteworthy finding is that for social phobia, respondents aged under 30 were less likely to score highly for both intention and behavior. This suggests that younger people are less likely to perform helpful first aid actions toward people experiencing social phobia. The significant association between high scores on the “weak-not-sick” stigma scale and lower total scores for intention and behavior also indicates that the characteristics of social phobia may be perceived as less deserving of first aid attention compared with other mental illnesses for respondents in general. This finding replicates those of previously conducted studies with youth samples (Yap et al., 2011) and suggests that more education about social phobia, and appropriate approaches to helping someone with this disorder, is needed in the community, especially in younger age groups where this disorder is common (Australian Bureau of Statistics, 2007).

Another result of note in this study was that variables related to mental health literacy were inconsistently related to helping giving. In addition, respondents’ perceptions of recovery prospects with and without appropriate help were significantly related to helping scores for the schizophrenia and depression vignettes. Puzzlingly, though, believing in full recovery without appropriate help was positively related to helping scores for the intention question for the combined and individually examined schizophrenia vignettes. This
finding is counterintuitive and not consistent with the results for the depression and anxiety vignettes. While any explanation of this finding would be speculative, it is plausible that the finding is due to Type 1 error.

For the intention and behavior questions, only a small to medium effect size was achieved for the regression models (ranging from $\hat{\beta} = .048 \ [p > .05]$ for the combined schizophrenia vignettes to $\hat{\beta} = .184 \ [p < .01]$ for the intention question for social phobia). This suggests that the factors included in these models have only small impacts on helping behavior and that there may be other factors that could not be measured from these data that influence the public’s helping behaviors toward people with a mental illness. For example, undertaking a MHFA course has been shown to increase knowledge about appropriate helping actions, intention to help a person with a mental illness, and confidence in providing that help (Kitchener & Jorm, 2006); however, no questions about MHFA training were asked in the 2011 National Survey of Mental Health Literacy and Stigma.

An original contribution made by this research concerns predictors of harmful behavior and responses involving seeking advice from knowledgeable sources. A positive finding was that harmful responses were very infrequently reported in these data (0.65% of the total sample). Providing a harmful response was found to be associated with stigmatizing attitudes, in the form of believing that people with a mental illness are “weak-not-sick” and high social distance scores, as well as believing in full recovery without professional help. This reflects similar findings from national surveys of Australian adolescents (Yap & Jorm, 2011) and adults (Jorm, Blewitt, et al., 2005), where stigmatizing attitudes were less likely to be associated with helpful responses such as encouraging professional help seeking. Although the number of responses classified as harmful in this survey was small, these results suggest that future campaigns and programs aimed at reducing stigma in the population could be beneficial. These initiatives could also consider incorporating messages about positive, supportive behaviors toward people with a mental illness. Similarly, the strongest associations with seeking advice responses came from people who received the schizophrenia vignettes. This suggests that there is little knowledge or understanding about how to approach and assist people experiencing psychotic disorders in the community, compared with depression and anxiety disorders. Future education efforts could focus on addressing this knowledge gap and promoting helpful approaches and behaviors.

**Strengths and Limitations of This Study**

This study exhibits several strengths. The National Survey of Mental Health Literacy and Stigma had a large, nationally representative sample, enabling the detection of small effects by independent variables on helping intentions and behaviors. The variety of vignettes used in the survey enabled responses to the intention question to be compared within and across a standard set of situations, resulting in the finding that predictors varied between vignettes. Using a broad range of predictors, including new scales for measuring stigma and mental health literacy, enabled previously unexamined variables to be tested in this context. This is also one of the first studies to examine helping behaviors toward people with mental illnesses; previous research into helping intentions and behaviors tends to focus on altruistic, volunteering or prosocial behavior or on intervening in emergencies involving a physical illness or injury. In addition, establishing predictors of both helpful and harmful behaviors provides a basis for developing targeted interventions to increase helping behavior and minimize harmful responses. Finally, using a standard scoring system that provided a comparison of the general public’s knowledge and skills with best practice according to expert consensus guidelines was helpful in assessing a wide variety of responses while facilitating reliable measurement of the construct, as reflected in the high intrarater reliabilities.

This study is not without limitations, some of which can be addressed in future research. First, the small number of significant predictors and the small amount of variance explained in the models, despite the large number and variety of independent variables, are disappointing. It suggests that there are other factors that influence helping intentions and behaviors that were not addressed in this study; this is something for future research to explore. Second, answers to the behavior question were not standardized; thus, it is difficult to assess the appropriateness of these responses to the situation referred to. It is also unknown whether the respondent’s actions were helpful or harmful to the real-life recipient of aid. Future studies could examine the effects of the help-giver’s behavior on the recipient by asking specifically about the effectiveness of the actions performed and aim to recruit larger samples to increase the power to detect small effects. Finally, while the ALGEE scoring system was useful in assessing the quality of helping responses, it was not fully able to capture some aspects of the data, such as the harmful responses and those related to seeking advice. Because the original purpose of the scoring system was to assess the quality of MHFA responses from people who had been trained in MHFA, it covers positive actions that can be taken to assist the person rather than harmful responses and responses involving seeking further information. Modifications to the scoring system that incorporate such responses may improve its generalizability.

**Conclusion**

The results from this study contribute to previous research into the factors influencing helping behaviors toward a person with a mental illness. This body of work has identified some core characteristics that affect helping responses (e.g., female gender, stigmatizing attitudes). However, they
Contribute only modestly to explaining helping behaviors, indicating that more research in this area is needed. Despite this, there are clear directions for improving attitudes and behaviors toward people with a mental illness to ensure that they receive appropriate help and support. Two potential demographic targets are males and young people, which may serve to enhance their knowledge of mental illnesses generally and appropriate helping actions in particular. Improving the public’s knowledge of schizophrenia could also be a focus, as several studies, including this one, suggest a lack of knowledge and/or accurate information about this disorder (Angermeyer & Matschinger, 2003; Langlands, Jorm, Kelly, & Kitchener, 2008; Reavley & Jorm, 2011a, 2011b). Anti-stigma campaigns have reported positive results (Corrigan et al., 2002), although more research into exactly how effective they are may be needed (Angermeyer & Dietrich, 2006). Educational courses such as MHFA, which teach people the knowledge and skills required to address helping situations involving mental illness, also evidence improvements in helping attitudes and behaviors, with these results lasting up to 6 months post-intervention (Jorm, 2011; Jorm, Kitchener, & Mugford, 2005; Kitchener & Jorm, 2006). To summarize, there is clearly potential for growth in the areas of identifying factors that influence help giving and subsequently encouraging appropriate helping behaviors toward people with mental illness by members of the public.

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