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### A Systematic Review of Parent and Caregiver Mental Health Literacy

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# A Systematic Review of Parent and Caregiver Mental Health Literacy

## Abstract

2019, Springer Science+Business Media, LLC, part of Springer Nature. This study aimed to systematically review the current body of research on parent and caregiver mental health literacy. Electronic databases were searched in January 2018 with 21 studies meeting inclusion criteria. A narrative synthesis of quantitative and qualitative studies was conducted. Findings across studies suggest that parents and caregivers had limited mental health knowledge. Factors associated with help-seeking included cultural and religious beliefs, financial and knowledge barriers, fear and mistrust of treatment services, and stigma. Notable limitations include non-representative samples, cross-sectional research designs, and use of inconsistent and non-validated study measures. Research would benefit from more diverse samples, an increased focus on prevention, and controlled trials of educational programmes targeting mental health literacy.

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### **Abstract**

This study aimed to systematically review the current body of research on parent and caregiver mental health literacy. Electronic databases were searched in January 2018 with 21 studies meeting inclusion criteria. A narrative synthesis of quantitative and qualitative studies was conducted. Findings across studies suggest that parents and caregivers had limited mental health knowledge. Factors associated with help-seeking included cultural and religious beliefs, financial and knowledge barriers, fear and mistrust of treatment services, and stigma. Notable limitations include non-representative samples, cross-sectional research designs, and use of inconsistent and non-validated study measures. Research would benefit from more diverse samples, an increased focus on prevention, and controlled trials of educational programmes targeting mental health literacy.

*Keywords:* child and adolescent mental health; help-seeking; mental health knowledge; mental health attitudes; narrative synthesis

## A Systematic Review of Parent and Caregiver Mental Health Literacy

### Introduction

Mental health literacy refers to knowledge, attitudes, and beliefs about mental health disorders, help-seeking and treatment options that aid in the recognition, management, and prevention of such disorders (Jorm, 2012; Jorm et al., 1997). It encapsulates the knowledge of professional help-seeking and treatment options, the ability to recognise symptoms of mental health disorders, and the capacity and willingness to effectively support and assist others experiencing symptoms (Jorm et al., 1997). The conceptualisation of mental health literacy appears to align closely with the concepts of both health literacy and health activation. While health literacy focuses predominantly on the skills involved in managing health outcomes (e.g. knowing where or how to seek help), patient activation additionally encompasses an individual's self-efficacy and motivation to take action to manage one's healthcare and well-being (Hibbard, 2017; Hibbard & Gilbert, 2014).

Previous experience of mental illness and treatment utilisation is associated with better mental health literacy (Cutler, Reavley, & Jorm, 2017; Mendenhall & Frauenholtz, 2013). Females have been found to be more mental health literate than males (Mendenhall & Frauenholtz, 2013), with Western populations demonstrating better mental health literacy than other populations, especially those in the developing world (Furnham & Hamid, 2014). However, a significant percentage of the population either struggle to spot the signs of a mental health disorder or are uncertain about how to respond if faced with a mental health disorder (Jorm, 2012; Jorm, et al., 1997). This includes parents and caregivers of adolescents who report not knowing how or when to intervene (Boulter & Rickwood, 2013). In Australia, approximately 75% of the public who had contact with a family member or friend experiencing symptoms of a mental health disorder have attempted to provide help and support (Reavley & Jorm, 2012). This finding emphasises the need for widespread mental health literacy education, including how best to respond and assist in a mental health crisis. This is especially important in regards to educating those adults in a position of care and responsibility on how to prevent and manage youth mental health disorders (Kelly et al., 2011)

Relatively little is known about the factors that influence *parental* mental health literacy (Frauenholtz, Conrad-Hiebner, & Mendenhall, 2015). Less still is known about the mental health literacy of those others in a position of direct responsibility for children and adolescents, such as family caregivers, legal guardians and foster carers. Moreover, the relationship between parents' health activation and their confidence and ability to seek help for others is unclear. This is surprising, considering the prevalence of child and adolescent mental health disorders, and the importance of parent and caregiver mental health literacy for child and adolescent

31 mental health outcomes. During childhood and adolescence, approximately 10-20% of the global population are  
32 affected by mental health disorders (Kieling et al., 2011), with a recent meta-analysis estimating a pooled  
33 worldwide prevalence of 13.4% (Polanczyk et al., 2015). However, a significant treatment gap exists for  
34 children and adolescents (Gulliver, Griffiths, & Christensen, 2010).

35         Adolescents identify their parents as a primary source of support (Jorm & Wright, 2007) and are more  
36 likely to seek and receive professional help for mental health disorders if recommended and supported by their  
37 family (Rickwood, Deane, & Wilson, 2007). Indeed, parents have reported that one of their main  
38 responsibilities in managing their adolescent's mental illness is to encourage and facilitate appropriate treatment  
39 (Honey, Alchin, & Hancock, 2014). Importantly, a recent systematic review by Reardon et al. (2017) identified  
40 barriers and facilitators to accessing youth mental health services across parent knowledge, understanding and  
41 help-seeking attitudes. Prominent barriers for parents include: recognition of a problem and need to help; lack of  
42 knowledge of help-seeking options; stigma; trust in mental health professionals; time; and, cost. Inadequate  
43 mental health literacy among parents and caregivers can have detrimental consequences for child and adolescent  
44 mental health including delayed help seeking, lack of treatment, and higher levels of stigma (Gronholm et al.,  
45 2015; Mendenhall, 2012). In addition, poor health activation is associated with a lack of help-seeking and  
46 treatment utilisation (Hibbard & Gilbert, 2014).

47         Mental health literacy can be improved at individual, community, and population levels through face to  
48 face intervention, mass media campaigns, and via self-directed online channels (Jorm, 2012). Individuals,  
49 groups and communities participating in mental health literacy campaigns are assumed to increase their  
50 knowledge and confidence to help others, reduce stigmatising attitudes, and engage in actual help-seeking and  
51 support strategies (Anderson & Pierce, 2012). Reviews of mental health literacy interventions have shown  
52 improvements in knowledge, help-seeking attitudes and supportive behaviours (Brijnath et al., 2016;; Morgan,  
53 Ross, & Reavley, 2018), but have not significantly influenced actual help-seeking behaviours (Gulliver,  
54 Griffiths, Christensen, & Brewer, 2012). In addition, health activation can be modified through intervention  
55 (Greene & Hibbard, 2012), and interventions to increase patient activation have resulted in more positive  
56 attitudes towards help-seeking and treatment, increased engagement and retention in mental health programs,  
57 and a reduction in mental health disorder symptomology (Alegria et al., 2013; Green et al., 2010).

58         To date, no systematic review has examined the literature on mental health literacy as it relates to  
59 parents and other caregivers of children and adolescents. The purpose of the current review was to collate,  
60 synthesise, and evaluate the available research on parent and caregiver mental health literacy. Moreover, this

61 review aimed to synthesise what is known about parent and caregiver mental health knowledge, attitudes and  
62 help-seeking practices as it pertains to child and adolescent mental health.

### 63 **Method**

64 This systematic review used the PRISMA-P guidelines for preferred reporting items for systematic  
65 reviews and meta-analyses (Moher et al., 2015).

#### 66 **Search Strategy**

67 A search strategy was developed over multiple iterations by the research team, with initial search terms  
68 created by examining the concept of mental health literacy and its various components (Jorm et al., 1997).  
69 Search terms used in previous systematic reviews examining mental health literacy (e.g., Brijnath et al., 2016)  
70 were also examined. Preliminary search returns were then mined (Weed, Coren, & Fiore, 2009) for consistent,  
71 alternative key words, to identify the most appropriate and comprehensive search terms. During this process it  
72 became evident that the inclusion of some independent search phrases such as “mental health” yielded excessive  
73 search returns and so were excluded. “Mental health literacy” was chosen as an encompassing search term likely  
74 to capture parent or caregiver knowledge, attitudes and help-seeking practices in relation to mental health.  
75 Subcomponents of mental health literacy (e.g., mental health knowledge) were also included to optimise  
76 relevant search returns. The final search terms were: Mental health literacy OR depression literacy OR anxiety  
77 literacy; AND, Parent\* OR Mother OR Father OR Famil\* OR Caregiv\*; AND, Mental health attitudes OR  
78 mental health belief\* OR mental health knowledge OR mental health awareness OR stigma OR help-seeking.  
79 The full search strategy is reported in the Supplementary File<sup>1</sup>.

80 Ten electronic databases (PsycINFO, PsycARTICLES, SPORTDiscus, Scopus, Web of Science,  
81 CINAHL Plus, SOCindex, Humanities International Complete, MEDLINE, and Psychology and Behavioural  
82 Sciences Collection) were searched by a single researcher in May 2017 (and updated in January 2018) for  
83 eligible articles. In addition to the electronic database search, Google Scholar was searched by the same  
84 researcher using combinations of the final search terms as well as searching the key authors in the mental health  
85 literacy field (Frauenholtz, Gulliver, Jorm, Mendenhall) and the reference lists of included articles.

#### 86 **Eligibility Criteria**

87 To be included in this review, studies were required to meet the following criteria: (1) be an empirical  
88 study of parent and caregiver mental health literacy as it relates to child and adolescent mental health; (2)  
89 explicitly use the phrase *mental health literacy* in the title, abstract, review of literature or discussion of results;

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<sup>1</sup> Supplementary files documenting the search strategy, search returns and quality appraisal of individual studies are available from the authors upon request.

90 and (3) be a peer reviewed journal article published in the English language. Studies were excluded if they did  
91 not refer explicitly to parent or caregiver mental health literacy, for example, studies examining the mental  
92 health literacy of the general public. Studies were also excluded if they did not examine parent and caregiver  
93 mental health literacy in the context of child and adolescent mental health, for example, studies examining  
94 mental health literacy of carers of the elderly.

#### 95 **Quality Assessment**

96 The methodological quality of included studies was assessed by a single researcher using the Mixed  
97 Methods Appraisal Tool (MMAT; Pluye et al., 2009). The MMAT is a reliable method of assessing study  
98 quality relative to the methodology and design employed with substantial inter-rater reliability (Pace et al.,  
99 2012). Quantitative studies are sub-divided into randomised controlled trials, non-randomised trials and  
100 descriptive studies. Articles are assessed against four dimensions of quality based on design and are allocated  
101 one point per criteria met. Studies are determined to be of low methodological quality if 0-25% of criteria are  
102 met, of moderate methodological quality if 50%-75% of criteria are met and of high quality if 100% of criteria  
103 are met. Assessment of study quality can be found in the Supplementary File.

#### 104 **Data Extraction and Synthesis**

105 The first author extracted data from all eligible studies. These data included author details, the country  
106 where the study was conducted, study design, measures used, sample size, sample characteristics and main  
107 findings (see Table 1). For quantitative studies, mental health literacy related measures and primary outcomes  
108 were extracted. For qualitative studies, data collection methods, and individual study authors' interpretations of  
109 participant quotes in the form of descriptive themes and categories were extracted. To enable integration and  
110 analysis of evidence with significant methodological heterogeneity, a narrative synthesis was undertaken (Popay  
111 et al., 2006). A narrative synthesis involves using text to summarise and explain findings (Popay et al., 2006),  
112 and can be used to organise and highlight similarities, differences or patterns across study designs, samples and  
113 findings (Centre for Review and Dissemination, 2009; Ryan, 2013).

114 Popay et al. (2006) outline four main elements of the narrative review process. The first element is  
115 developing a framework or theory to organise and understand findings. In this review, the mental health literacy  
116 framework as defined by Jorm et al. (1997) was used. The second element is to develop a preliminary synthesis  
117 (i.e. extracting, organising and describing findings from the studies). Quantitative and qualitative data were  
118 considered separately before merging the data (Popay et al., 2006). For qualitative studies, thematic categories  
119 as interpreted by the study authors' were extracted. For quantitative studies, outcomes and associations relevant

120 to mental health literacy were interpreted and summarised textually. A thematic summary was chosen as the  
121 most appropriate method of synthesis and involved deductively categorising both quantitative and qualitative  
122 studies using the conceptual framework of the review (Thomas, Harden, & Newman, 2012). As such, findings  
123 were categorised into the following components of mental health literacy: 1) knowledge and understanding; 2)  
124 attitudes and beliefs; 3) help-seeking categories; and, 4) mental health literacy interventions. Within these  
125 components, data were analysed inductively to facilitate the emergence of descriptive sub-themes. For example,  
126 findings first deductively coded within the “knowledge and understanding” category were inductively coded  
127 into: 1) the degree and nature of knowledge; 2) sources of knowledge, and; 3) correlates of knowledge sub-  
128 themes. The third element of the narrative review is to explore the relationships in the data to investigate  
129 differences between studies. This involved examining the breadth and strength of evidence for findings within  
130 each sub-theme across studies, and the factors (e.g., sample size, measurement validity) which may explain any  
131 variation in findings. The fourth element is to examine the robustness of the synthesis based on the strength of  
132 the evidence and the ability to draw and generalise conclusions. This was achieved by a thorough  
133 methodological critique of included studies and the comparison of findings in relation to previous research.

#### 134 **Ethical Standards and Conflict of Interest**

135 IRB approval was not necessary because this was a review of the literature that entailed no human  
136 subject participation. The authors report no conflict of interest.

137

### 138 **Results**

#### 139 **Search Returns**

140 The electronic databases returned 425 records and another 37 were identified through other sources.  
141 After duplicates were removed, 296 articles were screened by title and abstract against exclusion criteria by two  
142 researchers. If uncertainty remained as to an article’s eligibility, the full text of the article was scrutinised ( $n =$   
143 97). Discrepancies were discussed before reaching a mutual agreement. The most common reasons for study  
144 exclusion were no assessment of mental health literacy ( $n = 42$ ) or a non-parent or caregiver population ( $n = 30$ ).  
145 In total, 20 studies were identified that met inclusion criteria. A second search was conducted in January 2018  
146 by the lead researcher using the same search criteria but restricting the study date range to the years 2017-2018.  
147 One qualitative study was identified that met inclusion criteria resulting in a total of 21 studies (see Figure 1). In  
148 addition, prominent authors as identified previously were contacted and asked to review the list of included  
149 studies and identify any missing studies. No further studies were added following this process.

## 150 **Characteristics of Included Studies**

151           The 21 studies (see Table 1) included a total sample of 9019 parents, foster carers and other caregivers.  
152 The sample was predominantly female (70.7%). There were 16 independent samples, with five studies (Jorm &  
153 Wright, 2007; Jorm et al., 2007a; Jorm et al., 2007b; Jorm et al., 2008; Yap & Jorm, 2012) using the same  
154 survey data to investigate different components of mental health literacy. Thirteen studies were quantitative,  
155 seven were qualitative, and one was mixed methods. Three studies included parent or caregivers of children and  
156 adolescents without current mental health disorders, 11 had mixed samples of children and adolescents with or  
157 without diagnosed mental health disorders, and seven had samples of children with mental health disorders/in  
158 treatment services. Thirteen studies had parent samples, four studies had foster carers or caregivers, three studies  
159 used mixed samples, and one study involved clinician perceptions about parent mental health literacy. Nine  
160 studies were conducted in Australia, six in the United States, four in the United Kingdom, one in Canada, and  
161 one in Malaysia. The quality of studies as assessed by the MMAT (Pluye et al., 2009) ranged from 25% of  
162 criteria met (two studies of low quality) to 100% of criteria met (two studies of high quality), with the majority  
163 of studies assessed as moderate quality. Qualitative studies were primarily limited by the lack of evidence of  
164 researcher reflexivity, whereas quantitative studies were limited by restrictive sampling strategies, inadequate  
165 sample representativeness, and the use of non-validated measures. Results are presented within the three major  
166 categories of mental health literacy: (a) knowledge and understanding; (b) attitudes and beliefs; (c) help-  
167 seeking; and, a fourth category of (d) mental health literacy interventions (see Table 2 Supplementary File).

## 168 **Knowledge and Understanding**

169           Seventeen studies investigated parents and caregivers' knowledge or understanding of mental health  
170 issues and help-seeking. Various dimensions of mental health knowledge were measured including problem or  
171 symptom recognition, the amount, accuracy and source of knowledge, mental health awareness, and knowledge  
172 of depression, anxiety mood disorders, and treatment options. This section is divided into three sub-themes  
173 representing: (a) degree and nature of knowledge; (b) sources of knowledge; and, (c) correlates of knowledge.

174           **Degree and nature of knowledge.** There were mixed findings relating to mental health knowledge of  
175 parents and caregivers with studies highlighting strengths and gaps in knowledge. Five cross-sectional studies  
176 examined parents' recognition of mental health disorders symptoms (Bonfield, Guishard-Pine, & Langdon,  
177 2010; Frauenholtz, Conrad Hiebner, & Mendenhall, 2015; Lawrence et al., 2015; Mendenhall & Frauenholtz,  
178 2015; Shah et al., 2004). In one study, mothers had high problem recognition accuracy with 91.0% correctly  
179 identifying a mental health problem from a depression vignette, and 84.0% from an anxiety vignette (Shah et al.,

180 2004). Similarly, 86.0% of foster carers were able to accurately recognise a mental health problem from a  
181 vignette (Bonfield, Guishard-Pine, & Langdon, 2010) but this was not associated with their ability to detect a  
182 mental health problem in their child. In another study, 66.7% of mental health providers indicated that parents'  
183 mental health knowledge was strongest in terms of identifying symptoms (Frauenholtz, Conrad Hiebner, &  
184 Mendenhall, 2015). However, in the same study almost half (44.8%) reported that parents had very little or no  
185 knowledge of youth mental health disorders overall, with 79.3% rating parent knowledge as limited, mostly  
186 inaccurate and inconsistent, especially in terms of prevention, treatment and help-seeking options. In another  
187 cross-sectional study, parents of youths with mood disorders were found to have some limited knowledge of  
188 mood disorders and treatment (Mendenhall & Frauenholtz, 2015). Just over a quarter of Australian parents  
189 (27.3%) reported being uncertain if their child or adolescent needed help for a mental health disorder, with two  
190 in five parents unsure of where to seek help (Lawrence et al., 2015).

191         Five qualitative studies investigated parent and caregiver mental health knowledge. Two studies  
192 revealed that parents of young athletes (Hurley et al., 2017), and immigrant mothers (Montgomery & Terrion,  
193 2016) had some knowledge and understanding of supportive actions and prevention strategies such as engaging  
194 in discussions about mental health with their adolescents. However, parents of young athletes felt they had  
195 inadequate knowledge of mental health disorder symptoms, how to handle mental health disorders, or how to  
196 communicate about mental health (Hurley et al., 2017). There is some indication that the level of parent and  
197 caregiver knowledge differs across cultural groups. Malaysian caregivers were found to have limited knowledge  
198 of mental illness and treatment, associated with religious and spiritual beliefs of unknown and supernatural  
199 causes of mental illness (Mohammad et al., 2012). Korean-American parents had limited knowledge and some  
200 misconceptions about the causes of depression and its treatment (Jeong, McCreary, & Hughes, 2017). The study  
201 also found that Korean fathers had less knowledge about depressive symptoms and treatment than mothers with  
202 their primary focus on earning and providing for the household (Jeong et al., 2017).

203         **Sources of knowledge.** Parent and caregivers identified both formal and informal sources of mental  
204 health information. In three qualitative studies, those parents and caregivers with experience of mental health  
205 disorders reported that they learned about mental health and treatment options through contact with mental  
206 health professionals (Honey et al., 2015; Mohammad et al., 2012; Umpierre et al., 2015). Caregivers in Malaysia  
207 described learning through the experience of caring for a person with mental illness (Mohammad et al., 2012).  
208 Latino parents and caregivers indicated that they had little knowledge about child mental health services until  
209 they entered into care (Umpierre et al., 2015). Friends and co-workers were identified by 70.1% of mental health

210 professionals as the primary source of parents' knowledge, with family the second biggest influence  
211 (Frauenholtz et al., 2015). Parents and caregivers reported that they gain information and advice from friends,  
212 family and peers (Honey et al., 2015, Umpierre et al., 2015; York & Jones, 2017) and learned about mental  
213 health through exposure to online and print material (Frauenholtz, Conrad-Hiebner, & Mendenhall, 2015;  
214 Honey et al., 2015; Mohammad et al., 2012).

215 **Correlates of knowledge.** Personal and family experience of mental health issues and help-seeking, as  
216 well as exposure to mental health related information, were associated with greater parent and caregiver mental  
217 health knowledge in five studies (Frauenholtz, et al., 2015; Honey et al., 2015; Hurley et al., 2017; Lopez et al.,  
218 2009; Mendenhall & Frauenholtz, 2015). Diagnosis of a family member (77.0%) and prior treatment  
219 experiences (75.9%) were identified by mental health professionals as the primary influences on parent and  
220 caregiver knowledge (Frauenholtz et al., 2015). Exposure to mental health information, but not parent mental  
221 health history, significantly correlated with Australian parents' prevention knowledge (Yap & Jorm, 2012). One  
222 study found that child and parent disorder diagnosis, and current use of treatment services were associated with  
223 greater knowledge of mood disorders (Mendenhall & Frauenholtz, 2015). That study also found that child  
224 bipolar diagnosis and current in-family use of mental health services were associated with knowledge of  
225 treatment services. Other correlates of mental health knowledge included being highly educated, female,  
226 Caucasian, having older children, and having a higher perceived need for treatment (Mendenhall & Frauenholtz,  
227 2015). Parents' level of education was also reported by 75.9% of mental health professionals as an influence on  
228 parent mental health knowledge, but child and parent sex, age and race were not considered influential  
229 (Frauenholtz et al., 2015).

### 230 **Attitudes and Beliefs**

231 Sixteen studies explored parent and caregiver attitudes and beliefs about mental health and help  
232 seeking. The following subthemes were represented: (a) stigma; (b) role of parent; (c) attitudes to help-seeking;  
233 and, (d) fear and worry.

234 **Stigma.** The relationships between stigma, knowledge, and help-seeking were mixed, as reported in  
235 five qualitative studies (Honey et al., 2015; Hurley et al., 2017; Montgomery & Terrion, 2016; Mohammad et  
236 al., 2012; Umpierre et al., 2015). Immigrant mothers espoused stigmatising attitudes about mental illness despite  
237 having knowledge of mental health and help-seeking options (Montgomery & Terrion, 2016). Conversely,  
238 parents of youth athletes perceived their mental health literacy as limited, but the majority were open to mental  
239 health discussion and education and wanted to reduce the public stigma attached to mental illness and help-

240 seeking (Hurley et al., 2017). Three studies reported that some parents and caregivers were fearful, mistrustful  
241 and reluctant in accessing services *until* their child became unwell and they entered into care (Honey et al.,  
242 2015; Mohammad et al., 2012; Umpierre et al., 2015). Parents and caregivers in these studies originally believed  
243 that others in their community networks would view mental illness and help-seeking negatively but their  
244 attitudes became more positive through contact with mental health professionals and gaining more knowledge.

245 **Role of parent in youth mental health.** Qualitative findings from four studies revealed that the  
246 majority of parents and caregivers perceived that they had a role and responsibility in supporting youth mental  
247 health but there were differences in how confident they felt about this role. Canadian immigrant mothers felt  
248 positive about their role and were confident in their ability to use their experience and knowledge to support  
249 their child's mental health (Montgomery & Terrion, 2016). Parents of young male athletes also recognised their  
250 role but were not confident in their ability to communicate and actively support and protect their children's  
251 mental health (Hurley et al., 2017). Parents of adolescents with mental health disorders were proactive in  
252 seeking knowledge and maximising support resources available to them (Honey et al., 2015). Korean-American  
253 parents perceived that parenting style and family issues were one of the main causes of depression and that  
254 changing parenting style could be effective in treating depression (Jeong et al., 2017). A sample of Australian  
255 parents believed that their behaviour could aid prevention of mental health disorders (Yap & Jorm, 2012). For  
256 example, 92.0% of parents perceived that "showing the child lots of affection" can protect against the  
257 development of mental health disorders.

258 **Attitudes to help-seeking.** Parents and caregivers believed in the value and importance of seeking help  
259 and using services in six studies (Bonfield, Guishard-Pine, & Langdon, 2010; Honey et al., 2015; Hurley et al.,  
260 2017; 2018; Mohammad et al., 2012; Montgomery & Terrion, 2016). Parent and caregivers in four qualitative  
261 studies reported that they had taken or were willing to take whatever steps necessary to help and support their  
262 child through a mental health problem. A cross-sectional study found that foster carers' favourable attitudes to  
263 help-seeking were associated with both contacting and referral to mental health services but not actual service  
264 use (Bonfield et al., 2010). Previous exposure and experience of mental illness and service use was associated  
265 with a willingness to seek help in two qualitative studies (Honey et al., 2015; Hurley et al., 2017). In contrast,  
266 parents in two other qualitative studies held negative attitudes (e.g. fear, mistrust, lack of faith) to mental health  
267 services that was based on observation of others' unsuccessful help-seeking experience (Jeong et al., 2017;  
268 Umpierre et al., 2015).

269           **Fear and worry.** Three focus group studies revealed that parents expressed concerned about child  
270 mental health and help-seeking (Hurley et al., 2017; Montgomery & Terrion, 2016; Umpierre et al., 2015).  
271 Parents of youth athletes were fearful of the potential impact of mental health disorders on their child and their  
272 lack of knowledge about how to help (Hurley et al., 2017). Immigrant mothers were also worried about giving  
273 mental health information to children fearing that such knowledge might evoke a negative, undesirable reaction  
274 (Montgomery & Terrion, 2016). Fear and mistrust were also barriers to seeking help, with Latino parents  
275 referring to negative mental health treatment stories and the belief that children could be taken away by social  
276 services (Umpierre et al., 2015).

### 277 **Help-seeking and Support**

278           This category encapsulates how parents and caregivers access help and support and what action  
279 strategies they put in place to support and protect youth mental health. The section is divided into three sub-  
280 themes: (a) sources of support; (b) help-seeking strategies; and, (c) factors influencing help-seeking.

281           **Sources of support.** Formal and informal sources of support played an important role in parents'  
282 knowledge, beliefs and practices about mental health and help seeking. Australian parents in cross-sectional  
283 research samples endorsed speaking to family and friends as an appropriate help-seeking response (Jorm &  
284 Wright, 2007; Jorm et al., 2007b; Jorm et al., 2008). For example, 86.0% of parents of 12-17 year olds believed  
285 it helpful to engage the support of close family, and 82.0% believed in the helpfulness of close friends (Jorm &  
286 Wright, 2007). In addition, mental health providers rated informal sources of support, such as family and  
287 friends, as parents' primary source of information on mental health issues (Frauenholtz et al., 2015). Four  
288 qualitative studies revealed that parents and caregivers had positive views about, and sought support and advice  
289 from informal sources such as friends, family, peers and co-workers (Honey et al., 2015; Hurley et al., 2017;  
290 Umpierre et al., 2015; York & Jones, 2017). In particular, Latino parents identified close female relatives such  
291 as mothers and sisters as particularly valuable sources of support (Umpierre et al., 2015). Parents of youth sport  
292 athletes emphasised the importance of close family and community support networks (Hurley et al., 2017), and  
293 Malaysian caregivers valued traditional healers in the community (Mohammad et al., 2012).

294           **Help-seeking strategies.** Parents in Australian samples reported that they would search for  
295 professional help (65.0%; Jorm et al., 2007b) or would suggest to seek professional help (73.3%; Jorm et al.,  
296 2008) when asked to rank response strategies to a youth mental health issue. Open ended responses also  
297 revealed parents' intentions to seek help from a mental health specialist or service (Jorm et al., 2007a). General  
298 practitioners were endorsed by Australian parents as their preferred first option for seeking professional help and

299 advice in five cross-sectional studies, with endorsement ranging from 55.0% (Jorm et al., 2007b) to 95.0%  
300 (Jorm & Wright, 2007) of parents. Counsellors were rated more favourably than mental health specialists such  
301 as psychologists and psychiatrists (Jorm et al., 2007a; Jorm et al., 2007b), and psychologists were rated more  
302 favourably than psychiatrists (Jorm & Wright, 2007; Jorm et al., 2007b).

303 Parents in Australian samples rated medication, hospitalisation, dealing with the problem alone, and  
304 talking about suicide as negative or harmful (Jorm & Wright, 2007; Jorm et al., 2007b; Jorm, et al., 2008).  
305 Parents endorsed listening, talking and supporting as an appropriate first course of action (Jorm et al., 2008;  
306 Jorm, et al., 2007b). In addition, parents rated self-help intervention strategies, such as physical activity (91.0%)  
307 and relaxation training (93.0%), as helpful (Jorm & Wright, 2007; Jorm et al., 2008). Counselling was rated  
308 positively in two studies (Jorm & Wright, 2007; Jorm et al., 2007a), with 44.0% of Australian parents and  
309 caregivers identifying counselling on how to manage a mental health problem as their biggest perceived need  
310 for help (Lawrence et al., 2015). In contrast, counselling was perceived as mostly ineffective by Korean-  
311 American parents due to perceived lack of improvement and slow progress (Jeong et al., 2017).

312 **Factors influencing help-seeking.** Ethnic, cultural and religious affiliation were related to parents'  
313 perceptions of appropriate help-seeking strategies (Honey et al., 2015; Jeong et al., 2017; Mohammad et al.,  
314 2012; Shah et al., 2004). For example, fewer Pakistani mothers (64%) would seek professional help for  
315 psychosis compared to Caucasian (88%) mothers (Shah et al., 2004). For caregivers in Malaysia, mental health  
316 services were limited, and caregivers tried alternative treatments, based on religious or spiritual beliefs  
317 (Mohammad et al., 2012). Korean-American fathers had the final say in seeking help for their child as they were  
318 the primary income earners and thus the decision maker in Korean culture (Jeong et al., 2017).

319 The nature of the mental health problem was also an important factor in whether or not parents would  
320 take action and seek help. For example, qualitative studies indicated that parents and caregivers were likely to  
321 take action if they observed children's disruptive externalising behaviour or changes in personality (Honey et  
322 al., 2015; Hurley et al., 2017; Jeong et al., 2017; York & Jones, 2017). In a cross-sectional study, the presence of  
323 a mental health problem in a child (scoring in the abnormal or borderline range) was associated with a greater  
324 likelihood of problem detection, referral to mental health services, and service use (Bonfield et al., 2010). In  
325 another study with Australian parents, the greater impact of a mental health disorder on youth daily functioning  
326 was associated with a greater perceived need for parental help, with 100% of parents of youths with a severe  
327 mental health disorder perceiving need for help compared to 68.3% of parents of youths with a mild mental  
328 health disorder (Lawrence et al., 2015).

329           The most prominent barriers to help-seeking across studies were financial difficulties (Hurley et al.,  
330 2017; Jeong et al., 2017; Jorm et al., 2007a; Lawrence et al., 2015; Umpierre et al., 2015), inadequate mental  
331 health knowledge (Hurley et al., 2017; Jeong, et al., 2017; Lawrence et al., 2015; Mohammad et al., 2012), and  
332 availability of services (Honey et al., 2015; Jeong et al., 2017; Lawrence et al., 2015; Mohammad et al., 2012).  
333 Other barriers included child resistance (Jorm et al., 2007a; Lawrence et al., 2015), time (Honey et al., 2015;  
334 Hurley et al., 2017; York & Jones, 2017), fear and suspicion of services (Montgomery & Terrion, 2016;  
335 Umpierre et al., 2015), lack of parent confidence (Honey et al., 2015, Hurley et al., 2017), and preferring to  
336 handle the problem by themselves or with the help of family or friends (Lawrence et al., 2015).

### 337 **Mental Health Literacy Interventions**

338           There were four interventions, of which two were controlled trials and two were non-controlled trials.  
339 The first (non-controlled) trial tested a counselling skills intervention to increase the mental health awareness  
340 and coping strategies of ten foster carers (Mosuro, Malcolm, & Guishard-Pine, 2014). The study found that  
341 mental health awareness was higher following the intervention but no change was found in coping skills. The  
342 second (non-controlled) trial aimed to increase psychosis literacy (specifically the identification of symptoms of  
343 psychosis, and knowledge of professional help-seeking options) in Latino caregivers of children with  
344 schizophrenia and other Latino community residents (Lopez et al., 2009). The study revealed increases in  
345 knowledge of symptoms and confidence in both caregiver and resident samples. There were also increases in  
346 problem attributions to psychosis and mental illness, and a greater likelihood to recommend professional help-  
347 seeking among residents but not caregivers.

348           Two controlled interventions aimed to increase the mental health literacy of parents in the workplace  
349 and in community sport clubs. The first study developed four interactive modules covering anxiety, depression,  
350 treatment options and what parents can do (Deitz et al., 2009). The intervention was delivered online through  
351 parents' workplace and aimed to increase parent's knowledge and confidence in dealing with mental health  
352 issues. It was found that parents receiving the intervention had greater knowledge of youth mental health issues  
353 and greater self-efficacy in handling these issues compared to a waitlist control group. No significant differences  
354 were found between those parents with known or suspected mental health problems and those without.

355           In the second study, a pilot intervention was developed to increase mental health literacy of parents of  
356 adolescents through community sport clubs (Hurley et al., 2018). A face-to-face workshop covered symptoms of  
357 depression and anxiety, communicating about mental health, and mental health resources and treatment options.  
358 Participants in the intervention group increased their depression and anxiety literacy, knowledge of help-seeking

359 options, and confidence to assist someone experiencing a mental health disorder, compared to parents in a  
360 matched sport club community control group. Qualitative evaluation of the intervention revealed that parent's  
361 awareness had increased, they had applied knowledge from the intervention and used it as a catalyst for  
362 discussion of mental health in their families.

### 363 **Discussion**

364 This systematic review aimed to synthesise and evaluate research on parent and caregiver mental health  
365 literacy referent to youth mental health. There were mixed findings relating to parent and caregiver knowledge  
366 of mental health and help-seeking options. Previous experience of mental health disorders and help-seeking was  
367 associated with greater knowledge but the relationship between past experience and help-seeking attitudes was  
368 less clear. Overall, parents and caregivers were in favour of seeking help with some exceptions based on fear,  
369 mistrust, and stigma. Parents and caregivers used both formal and informal sources of support, with general  
370 practitioners the preferred professional help-seeking option. Multiple factors influenced parent and caregivers'  
371 ability to support and help young people with cultural and religious beliefs, financial and knowledge barriers,  
372 and the severity and impact of the mental health problem the most prominent factors. Four interventions  
373 reported some increases in mental health knowledge. Findings should be interpreted with caution due to  
374 limitations of the evidence base such as restrictive sampling strategies, non-representative samples, inconsistent  
375 and non-validated measures, and lack of longitudinal and controlled trial studies.

376 Variation in the findings relating to parent and caregiver knowledge may be due to the different types  
377 of knowledge measured such as symptom identification, prevention and self-help strategies, and knowledge of  
378 treatment and help-seeking options, as well as different knowledge measurement tools. Previous personal and  
379 familial experience of mental health disorders and help-seeking as well as experience in the mental health  
380 caregiver role was associated with greater mental health knowledge in the majority of studies, supporting  
381 previous research (Jung, Von Sternberg, & Davis, 2017; Mendenhall & Frauenholtz, 2013). This may be due to  
382 parent and caregiver interaction with mental health professionals, a prominent source of information and advice  
383 as evidenced in this review. However, a lack of prevention studies with parent or caregiver samples prohibits  
384 comparison of knowledge between those in treatment and those not. The nature of the relationship and  
385 interaction between different sociodemographic variables such as age, education and gender on parent and  
386 caregiver knowledge remains unclear with sample diversity an issue. Indeed, a recent large scale study of over  
387 16,500 Australians found no clear evidence of age or gender as predictive of mental health literacy and found  
388 only mixed associations for participants' exposure to mental illness (Cutler, Reavley, & Jorm, 2017).

389 Previous personal experience of help-seeking was associated with increased willingness to seek help.  
390 This review also found that once in care, parents' negative attitudes appeared to diminish as they gained more  
391 knowledge, indicating the relationship between knowledge, attitudes and help-seeking components of mental  
392 health literacy. Research has indeed shown that help-seeking experience among parents and caregivers has been  
393 associated with more positive help-seeking attitudes, reduced stigmatisation, greater help-seeking intentions, ,  
394 and higher use of services in adolescents (Sherman & Ali, 2017; Turner & Liew, 2010). There was a preference  
395 for parents and caregivers, regardless of mental health status, to seek and use help from informal sources of  
396 support in line with previous research (Gulliver et al., 2012; Reardon et al., 2017). More positive attitudes to  
397 help-seeking are associated with support and encouragement from within social networks such as family and  
398 friends (Jung, Von Sternberg, & Davis, 2017). However, in this review exposure to others' negative help-  
399 seeking experiences and attitudes was associated with more negative parent attitudes. Thus, social networks  
400 have the potential to influence parent and caregiver attitudes and inhibit or facilitate help-seeking practices.

#### 401 **Methodological Critique of Included Studies**

402 The majority of the quantitative studies included were cross sectional with an absence of longitudinal  
403 research limiting the ability to infer causality. In addition, four cross-sectional studies simply reported the  
404 percentage frequency of responses of parents and caregivers endorsing various help-seeking sources and  
405 services. These studies did not account for previous mental health experience or knowledge and predominantly  
406 involved parents rating behaviours as recommended by the public and mental health first aid manuals. However,  
407 closed questions or options may yield different responses than open ended options and may not reflect what  
408 parents or caregivers would actually do to help their child (Angermeyer, 2017).

409 In this review, there was no universal or consistent measure of mental health literacy employed. There  
410 was no evidence provided for the psychometric validity of measures in 9/15 (60%) studies. Eleven studies  
411 developed some or all of their own study measures while hypothetical vignettes were used in 8/15 (53.3%)  
412 quantitative studies. Furthermore, these vignettes were not consistent - varying in terms of type and number of  
413 disorders presented and questions or statements following. This can be problematic as knowledge may differ  
414 based on disorder, with previous research showing greatest public knowledge of depression and substance abuse  
415 and lowest for anxiety and psychosis (Cutler, Reavley, & Jorm, 2017). Vignettes may be limited in their ability  
416 to distinguish between different components of mental health literacy, and cannot provide total or sub-scale  
417 (e.g., knowledge, attitudes) scores of mental health literacy (O'Connor & Casey, 2014). Furthermore,  
418 participants may not respond in the same way to a hypothetical vignette as they would to their own child.

419           The majority of participants in the included studies were self-selected and female. Participants who  
420 volunteered may have had more knowledge and positive attitudes towards mental health and help-seeking.  
421 Indeed, previous research has found that females have better mental health literacy than males (Pescosolido et  
422 al., 2008; Teagle, 2002). Only one study investigated the views of mental health professionals on parents'  
423 mental health literacy (Frauenholtz et al., 2015). Considering the potential bias of self-selection, more other-  
424 report studies from key individuals in the youth mental health sphere would be beneficial. However, such an  
425 approach would need to acknowledge potential limitations in others' perceptions, such as inaccuracy, bias and  
426 the nature of their relationship and experience with parents.

#### 427 **Limitations**

428           Findings are limited and should be interpreted with caution in light of the methodological limitations of  
429 the review. As a narrative review was conducted to amalgamate research findings from different study designs,  
430 it was not possible to statistically pool quantitative findings or determine the strength of associations between  
431 knowledge, attitudes, help-seeking behaviours and other key variables. Additionally, findings investigating  
432 parent and caregiver attitudes and beliefs are limited by a lack of experimental research.

433           Almost all studies that met inclusion criteria were conducted in Western, developed countries.  
434 Improvements in public mental health literacy in recent decades have been found in these countries (Schomerus  
435 et al., 2012). In addition, most studies were conducted in Australia where the term mental health literacy was  
436 coined and large scale public awareness campaigns have been conducted revealing significant improvements in  
437 the public's mental health literacy (Jorm, Christensen, & Griffiths, 2006; Reavley & Jorm, 2011). A recent  
438 review highlighted that mental health literacy in non-western countries is poorly understood (Furnham &  
439 Hamid, 2014). Indeed, there is a lack of studies in non-western countries which may have different religious or  
440 cultural belief and value systems, as well as limited access to mental health education and treatment services.

#### 441 **Research Implications**

442           The limitations discussed above yield several implications for research at the individual study and  
443 review level. Despite mental health literacy accounting for knowledge, attitudes and help-seeking practices,  
444 multiple studies in the current review applied the term mental health literacy solely in describing knowledge  
445 outcomes. We contend that researchers within this field should endeavour to use the term mental health literacy  
446 to account for the relationship between knowledge, attitudes and help-seeking as these variables are interrelated  
447 and findings may be limited when examined in isolation. As such, future research should examine how these  
448 key components interrelate with each other and other key variables. For example, the association between

449 mental health literacy and relevant socio-demographic variables is not clear and needs to be consistently tested  
450 across diverse samples. Longitudinal research also needs to be employed to examine the stability of parent and  
451 caregiver mental health literacy over time.

452 Future studies should aim to employ different sampling strategies to reach, engage and robustly test  
453 findings with more representative samples of parents and caregivers with a particular focus on fathers, other  
454 male caregivers, and non-Western populations. Further studies need to be conducted on parents and caregivers  
455 without any experience of mental health issues and examine their mental health literacy in a preventative and  
456 promotion context. Future research also needs to employ a reliable and valid measure of parent and caregiver  
457 mental health literacy. Research is warranted on the potential positive or harmful effects of increasing mental  
458 health literacy on one's own psychological distress and well-being. This relationship is still unclear with studies  
459 in the general public reporting both negative (e.g., Goldney, Eckert, Hawthorne, & Taylor, 2010) and positive  
460 (e.g., Brijnath et al. 2016) associations. Studies should also investigate the direct or indirect effect of increased  
461 parent and caregiver mental health literacy on child and adolescent psychological and treatment outcomes.

#### 462 **Implications for Mental Health Literacy Education Programmes**

463 Despite recent improvements at a population level, parent and caregiver mental health literacy remains  
464 inadequate. There is an important need for targeted mental health education programmes to aid in the  
465 prevention, management and treatment of youth mental health. Intervention studies in this review yielded mixed  
466 results with some significant increases in parent and caregiver mental health knowledge and confidence to assist  
467 someone experiencing mental health symptoms, in line with previous review findings (Morgan, Ross, &  
468 Reavley, 2018). However, it is still unclear whether these interventions influenced actual help-seeking  
469 behaviours for participants themselves or towards others. As such, interventions need to include mechanisms to  
470 determine the transfer of benefit over time from participants to others (Anderson & Pierce, 2012).

471 Findings from this review suggest that parents and caregivers appear receptive to receiving mental  
472 health related information and recognise the importance of their role in youth mental health. However,  
473 interventions need to be made accessible to parents and take into account their preferences for content and  
474 delivery. For example, brief interventions and online interventions can overcome reported time and cost barriers  
475 and be effective in raising awareness and knowledge, but may be limited in their capacity to change long- or  
476 culturally-held attitudes to mental health and help-seeking. Intervention content and delivery should also be  
477 adapted to the target audience. For example, two studies in this review developed intervention messages and  
478 content, and used tailored delivery methods to match the preferences of Latino parents (Lopez et al., 2009;

479 Umpierre et al., 2015). Two further studies delivered intervention content in novel settings to maximise  
480 convenience and accessibility by reaching parents where they already are, such as in community sport clubs  
481 (Hurley et al., 2018) and in the workplace (Deitz et al., 2009). Content and delivery also needs to be adapted to  
482 the mental health status and experience of participants, e.g. in a prevention, help-seeking or already in-treatment  
483 context. For example, parenting programs (Sanders et al., 2014), and health activation interventions (Hibbard &  
484 Gilbert, 2014) have adapted intervention content, intensity and delivery to match the identified level and needs  
485 of participants. In addition, this review suggests the importance of engaging parent networks in education  
486 programs to increase reach and impact within the community. Indeed, peer support networks are proposed as  
487 catalytic in improving health outcomes in parents (Keller & McDade, 2000), and expanding mental health  
488 training for those in a position of responsibility or trust can influence help-seeking in others (Jung, Von  
489 Sternberg, & Davis, 2017). To test the effectiveness of any future education and intervention programmes more  
490 randomised controlled trials with larger, more diverse samples are needed.

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679

Figure 1

Flow diagram for database search and record screening

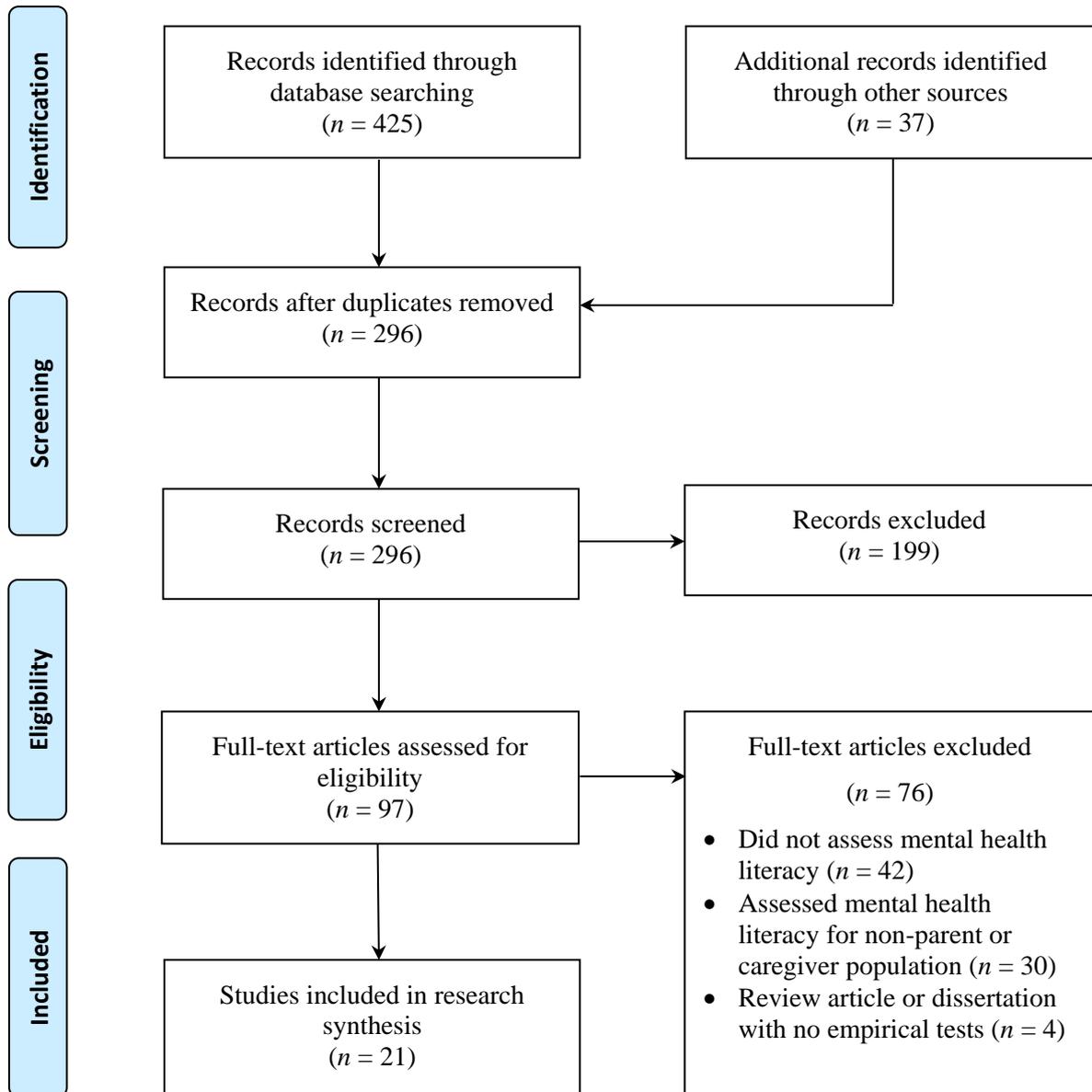


Table 1

*Characteristics of included studies*

Study	Sample demographics	Design	Mental health status	Main outcome measures/thematic categories	Main Findings	Study quality
<i>Quantitative (association) studies</i>						
Bonfield et al. (2010)	113 foster carers (18 men, 95 women)	Cross sectional	In treatment	Carers' mental health problem recognition Attitudes toward seeking professional help (ATSPPH) Carers' help-seeking practices*	Foster carers were accurate in recognising mental health problems from a vignette but this ability was not linked to problem detection and perceived need for treatment in their own looked after child. Foster carers' favourable attitudes to help-seeking were associated with the increased likelihood of making contact with and referral to mental health services but not actual service use.	Moderate
Frauenholtz et al. (2015)	87 social workers (19 men, 68 women)	Cross sectional	In treatment	Mental health service providers' perceptions of parental mental health knowledge (SM) Perceived accuracy of mental health knowledge (SM) Perceived sources of and influences on parental knowledge (SM)	Providers reported parent mental health literacy as low and mostly inaccurate. Informal sources of support were perceived as the primary source of information for parental mental health knowledge. Having another family member with a mental health disorder, prior treatment experience, and higher level of education were associated with greater perceived parent mental health literacy.	Low
Mendenhall & Frauenholtz (2015)	39 parents (2 men, 37 women)	Cross sectional	In treatment	Belief in perceived need for treatment(CCI) Knowledge about treatment (TBQ) Knowledge and understanding of mood disorders (UMDQ) Parent and child mental health status and service use	Greater parental knowledge of mood disorders was associated with child bipolar diagnosis, higher level of education, having older children, parent lifetime mental health diagnosis and greater number of mental health services currently being utilised. Greater knowledge of treatment was associated with child bipolar diagnosis, greater perceived need for child treatment, being female, being white, and greater number of mental health services being utilised currently.	Moderate
Jorm & Wright (2007)	2005 parents (624 men, 1381 women)	Cross sectional	Mixed	Treatment beliefs about the helpfulness or harmfulness of different interventions (SM)	Parents rated general and informal sources of help (e.g. GP's, family) as more helpful than specialist mental health services. Parents rated dealing with the problem alone, psychiatric medications and hospitalisation negatively.	Moderate
Jorm et al. (2008)	2005 parents (624 men, 1381 women)	Cross sectional	Mixed	Beliefs about the helpfulness or harmfulness of mental health first aid strategies (SM)	Parents rated the following first aid strategies as most helpful: listening to the person's problems in an understanding way, suggesting they seek professional help, make an appointment to see GP, and encourage to become more physically active. Parents were more likely to rate	Moderate

talking about suicide as harmful rather than helpful.

Jorm et al. (2007a)	2005 parents (624 men, 1381 women)	Cross sectional	Mixed	Help seeking intentions (SM) Barriers to seeking help (SM)	Parents most frequently endorsed GP's as the intended source of help for their children. The main help-seeking barriers for parents were resistance from the child and cost of treatment.	Moderate
Jorm et al. (2007b)	2005 parents (624 men, 1381 women)	Cross sectional	Mixed	Parents endorsement of mental health first aid strategies for their child (SM) Confidence in providing first aid to child (SM)	The most frequently intended mental health first aid actions of parents were to get professional help and listen/talk/support person. GP/doctor/medical and counsellor were the most frequent types of professional help recommended. Parents reported more confidence in helping younger children than in helping older children.	Moderate
Lawrence et al. (2015)	6310 parents and carers	Cross sectional	Mixed	Severity of disorder (SM) Perceived need for services (SM) Barriers to service use (SM)	Increased severity of the child or adolescent mental health disorder was associated with an increase in parents' perceived need for help. The most commonly identified barriers were child resistance (48.4%), not being sure where to get help (39.6%), not being able to afford help (37.0%), preferring to handle the problem by themselves or with help from family or friends (31.1%), and not sure if adolescent needed help (27%).	Moderate
Shah et al. (2004)	79 Caucasian and Pakistani mothers	Cross sectional	Prevention	Problem recognition(SM) Intention to seek help(SM)	High levels of problem recognition accuracy in both Caucasian and Pakistani mothers. Pakistani mothers were less likely to seek professional help in comparison to Caucasian mothers.	Low
Yap & Jorm (2012)	982 parents (311 men, 671 women)	Cross sectional	Mixed	Prevention beliefs (SM) Correlates of prevention beliefs**	Tertiary education, speaking English, exposure to mental health information at work, and mental health advertising were associated with accurate mental health disorder prevention beliefs in parents. No association was found between parent sex, or parent mental health history and prevention beliefs.	Moderate

### *Quantitative (experimental) studies*

Deitz et al. (2009)	99 parents (54 men, 45 women)	Controlled trial	Mixed	Parent knowledge of depression, anxiety, treatment and parenting (SM) Attitudes About Seeking Professional Psychological Help (ATSPPH) Treatment seeking self-efficacy and confidence (SM)	Parents receiving a multimedia web-based mental health literacy program improved their knowledge of children's mental health, mental illness and help-seeking, and their confidence in addressing mental health issues, compared to a no-treatment control condition. No significant differences were found between the groups on help-seeking attitudes.	Moderate
Lopez et al. (2009)	42 caregivers of relatives with schizophrenia, 63 community residents	Uncontrolled trial	In treatment	Symptom identification (SM) Efficacy beliefs in identifying mental illness (SM)	Community residents and caregivers receiving a brief mental health literacy intervention had increased knowledge of symptoms and greater confidence to identify mental	Moderate

				Attributions to mental illness (SM) Recommended help-seeking options (SM)	illness. Community residents attributed behaviour more to psychosis and were more likely to recommend professional help-seeking with no change found among caregivers.	
Mosuro et al. (2014)	10 foster parents (1 man, 9 women)	Uncontrolled trial	Mixed	Coping skills (F/COPEs) Mental Health Awareness (SM).	The mental health awareness of foster carers was higher following a counselling skills intervention. No significant impact was found on coping skills.	Moderate

### *Qualitative studies*

Honey et al. (2015)	32 parents (9 men, 23 women)	Interview	In treatment	Knowing what to do. Being able to do it.	Parent's help-seeking practices were shaped by interacting factors related to their knowledge and beliefs about support strategies and help-seeking options and their ability to apply that knowledge.	Moderate
Hurley et al. (2017)	46 parents (14 men, 32 women)	Focus group	Mixed	Experience and exposure to mental health. Dealing with mental health disorders.	Parents had limited mental health literacy, were worried about their adolescents developing a mental health disorder, and wanted information and education on mental health and help-seeking. Past mental health experience was associated with more favourable attitudes toward mental health and help-seeking.	High
Jeong et al. (2017)	14 parents (4 male, 10 female)	Focus Group	Mixed	Misconceptions about the causes and treatment of depression Views of depressive symptoms Beliefs about barriers to treatment Lack of awareness of intervention pathways	Korean-American parents had limited knowledge and held some misconceptions about depression and its treatment. Parenting style was seen as a primary cause of depression. Fathers appeared to have less knowledge than mothers but ultimately made the final decision on seeking help. Barriers to seeking help included availability, negative beliefs about effectiveness and cost.	Moderate
Mohamad et al. (2012)	24 caregivers of relatives with schizophrenia (10 men, 14 women)	Interview	In treatment	Knowledge about mental illness. Sources of information. Causes and effects of mental illness. Identification of illness. Coping strategies.	Caregivers learned about mental health primarily through interaction with mental health professionals. They had facilitative attitudes towards mental health and help-seeking but also relied on religious and cultural practices in understanding and treating mental health disorders.	Moderate
Montgomery & Terrion (2016)	7 new immigrant mothers	Focus group	Prevention	Mother as communicator. Informed views and support of mental health. Myths and illusions of mental illness.	Mothers viewed themselves as being able to communicate about and support youth mental health. They were somewhat informed about mental health but still held stigmatising attitudes.	Moderate
Umpierre et al. (2015)	36 parents and caregivers (6 men, 30 women)	Focus group	In treatment	Trusted Advisors about child-rearing practices and problems. Preferred health communication methods. Pathways into child mental health care.	Parents had fear and suspicion of mental health services and did not have much knowledge until they entered into care. Informal sources of support were important for advice and support. Parents were open to receiving mental health information.	Moderate

				Participants' recommendations to service providers.		
York & Jones (2017)	10 women foster carers	Interview	Mixed	Foster carers' psychological understanding of challenging behaviour. Barriers to accessing mental health services. Importance of support	Foster carers had good mental health literacy, and had experience of mental health services but experienced barriers within the treatment system. Informal and formal support networks were important in being able to fulfil the foster carer role.	High
<b><i>Mixed-method studies</i></b>						
Hurley et al. (2018)	66 parents (17 men, 51 women)	Controlled Trial	Mixed	Depression Literacy (D-LIT) Anxiety Literacy (A-LIT) Attitudes to facilitate mental health promotion and help seeking (MHLS) Knowledge of help-seeking options (MHLS) Confidence to assist (SM)	Parents receiving a brief mental health literacy intervention through community sport clubs improved their knowledge of depression and anxiety, help-seeking options and confidence to assist someone experiencing a mental health disorder compared to a no-treatment control condition. No significant differences were found for parent attitudes.	Moderate

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*Note.* (SM) = measure developed for study. A-LIT = Anxiety Literacy questionnaire (Gulliver et al., 2012), ATSPPH = Attitudes toward seeking professional help (Fischer and Farina, 1995), CCI = Caregiver concordance interview (Goldberg-Arnold et al., 1999), D-LIT = Depression Literacy questionnaire (Griffiths et al., 2004), F/COPES = The family crisis oriented personal evaluation scales (McCubbin et al., 1991), MHLS = Mental health literacy scale (O'Connor & Casey, 2015), TBQ = Treatment beliefs questionnaire (Davidson & Fristad, 2006), UMDQ = Understanding of mood disorders questionnaire (Gavazzi et al., 1997).  
\*Carers' help-seeking practices = problem detection, perceived need for mental health services, contact with mental health provider, referral to mental health services and use of mental health services, \*\*Correlates of prevention beliefs = child and parent socio-demographic variables, parent exposure to mental health disorders and information.

Table 2

*Mental health literacy categories and sub-themes*

Sub-themes	Mental Health Literacy Categories
Degree and nature of knowledge	Knowledge and Understanding
Sources of knowledge	
Correlates of knowledge	
Stigma	Attitudes and Beliefs
Role of parent	
Attitudes to help-seeking	
Fear and worry	
Sources of support	Help-seeking
Help-seeking strategies	
Factors influencing help-seeking	
Controlled trials	Mental Health Literacy Interventions
Non-controlled trials	