Children and Youth Services Review 68 (2016) 132–138

Contents lists available at ScienceDirect

Children and Youth Services Review

journal homepage: www.elsevier.com/locate/childyouth

Residential group care workers' recognition of depression: Assessment of mental health literacy using clinical vignettes

Tahlia Winsor, Sara McLean *

Australian Centre for Child Protection, University of South Australia, Adelaide, South Australia, Australia

ARTICLE INFO

Article history:
Received 16 March 2016
Received in revised form 29 June 2016
Accepted 29 June 2016
Available online 1 July 2016

Keywords:
Children in out of home care
Depression
Caregiver
Residential care
Mental health
Internalizing, externalizing

ABSTRACT

Background: Residential group-care workers have a critical role to play in recognizing mental health problems amongst children in their care. However, little is known about the extent to which workers recognize and respond to mental health and behavioral concerns.
Method: A sample of 124 residential group care workers completed an online survey in which vignettes of children experiencing either internalized or externalized symptoms of depression and 'typical' behavior were presented. In order to explore aspects of mental health literacy, workers were asked to rate each vignette for severity of a specific mental health concern (adolescent depression), portrayed as internalized or externalized behavior. Ratings of worker confidence and concern for the young person were also obtained.
Results: Workers were able to recognize the existence of depression in these fictional vignettes. Depression in the presence of externalized behavior was rated as both more severe and more concerning than depression accompanied by internalized behaviors. Furthermore, workers had greater confidence in endorsing the presence of a mental health issue when accompanied by externalized behavior compared to an internalized presentation.
Conclusions: Residential group-care workers are able to recognize the existence of depression amongst children in their care. Externalized presentation of mental health appears to be more easily recognized by workers and they are also more confident in identifying mental health concern when it is accompanied by externalized, compared with internalized behaviors. The implications for training and support of residential group care workers are discussed.

1. Introduction

Children removed from their biological families due to parental mental health issues or substance abuse, neglect, or some form of abuse, are at increased risk of mental health issues compared to their same age peers (Meltzer, Gatward, Corbin, Goodman, & Ford, 2003; Stanley, Riordan, & Alaszewski, 2005). This risk is further compounded if children experience frequent changes of caregiver (Cheung, Goodman, Leckie, & Jenkins, 2011; Nicholas, Roberts, & Wurr, 2003; Rubin, O'Reilly, Luan, & Localio, 2007). While the majority of children removed from their biological families are raised in home-based foster or kinship care, a small proportion of these children are placed in a residential group care setting. Of the 43,400 Australian children in out of home care as of June 30, 2015, approximately 6% (2,604) are in living in some form of residential home (Australian Institute of Health and Welfare, 2016).

In Australia, residential group care tends to be used for a small proportion of children who have complex behavioral and mental health needs and who have a history of foster placement instability (AIHW, 2016). In contrast to many international models, Australian residential facilities do not generally offer integrated education and/or treatment services; rather, they meet a need for supported accommodation and basic care (Ainsworth & Hansen, 2005). This care is provided in small houses or group homes of between 4 and 12 children. It is provided by rostered staff who provide daily care, supervision and support (Australian Institute of Health and Welfare, 2016). Residential care workers are typically involved in tasks such as setting routines, preparing meals, liaising with key social workers, chaperoning children on activities and assisting with other daily living tasks. While these are important aspects of physical care; it is unclear to what extent staff in residential group care settings also recognize and support the emotional needs of children in their care.

There is extensive evidence that children in out-of-home care present with higher levels of emotional, mental health and behavioral disorders compared to children in the general population (Egelund & Lausten, 2009; Lamington, Addo, Towlson, Blower, & Hodgson, 2004; Meltzer et al., 2003; Richardson & Lelliott, 2003; Tarren-Sweeney, 2008) or compared to maltreated children of similar socioeconomic backgrounds (Ford, Vostanis, Meltzer, & Goodman, 2007). Children in residential group homes also have higher rates of mental health

* Corresponding author at: The Australian Centre for Child Protection, GPO Box 2471, Adelaide SA 5001, Australia.
E-mail address: sara.mclean@unisa.edu.au (S. McLean).

http://dx.doi.org/10.1016/j.childyouth.2016.06.028
0190-7409/

problems than those who are in foster care (Meltzer et al., 2003; Stanley et al., 2005). Specifically, children in residential homes may be twice as likely as those in foster care to have an anxiety disorder, display sexualized behaviors, or to abscond, and may be up to four times as likely to suffer a depressive illness (Cousins, Taggart, & Milner, 2010; Damnjanovic, Lakic, Stevanovic, & Jovanovic, 2011; Janssens & Deboutte, 2010). Collectively, these findings highlight the salience of mental health concerns in this group of children.

Concerns have also been raised about the capacity of this vulnerable group of children to access mental health services (Nicholas et al., 2003; Beck, 2006; Clark, O'Malley, Woodham, Barrett, & Byford, 2005). One factor influencing this may be the unique nature of caregiving in the residential care environment. Children's caregivers typically play an important 'gatekeeping' role in the detection of mental health concerns and in facilitating mental health service referrals and access (Heim, Smallwood, & Davies, 2005). In the residential environment, the responsibility for detecting and initiating a referral to mental health services initially falls to the residential care worker and their team. As the capacity to recognize a mental health issue is a necessary precursor to initiating a mental health referral, it seems important to better understand workers' capacity to recognize mental health concerns in children (Knorth, Harder, Zanberg, & Kendrick, 2008; Leichtman, Leichtman, Cornsweet Barber, & Neese, 2001; Marsh, Evans, & Williams, 2010; Mount, Bennun, & Lister, 2004).

The recognition of children's mental health concerns has been examined in parents, foster caregivers and teachers. These studies of related populations consistently show that it easier for responsible adults to recognize and respond to externalized mental health problems than those that are internalized (Clopton, Pearcy, & Pope, 1993; Loades & Mastroyannopoulou, 2010; Mount et al., 2004). There may be many reasons for this, including exposure to training, confidence, and perception of risk, amongst others. It may also be that internalized mental health difficulties are more easily hidden from caregivers (Mount et al., 2004). Others have argued that externalized disorders are more concerning and easier to recognize because they impact on others, whereas internalized behavior usually affects only the individual (Loades & Mastroyannopoulou, 2010; Clopton et al., 1993). Irrespective of the reason, it appears that the behavioral presentation of mental health has bearing on how easily it is recognized. Externalized behavior appears to be more easily recognized and to cause more concern (Loades & Mastroyannopoulou, 2010). Since the first step to referral is recognition of a problem, it seems that whether distress is expressed as "outward negative behavior" or in terms of "negative inner emotions" (Harris & Thackerey, 2003, p. 433) may have important implications for how likely it is that young people will be encouraged to access mental health services. While this issue has been explored in other caregiving groups, it does not yet appear to have been examined in the residential care workforce.

Depression is one of the main mental health issues facing young people (Burns & Rapee, 2006). Although research on depression amongst children in residential care is minimal, it appears that on average 60% of young people in residential group homes experience some form of depression (Cousins et al., 2010; Damnjanovic et al., 2011; Janssens & Deboutte, 2010). Amongst young people generally, the presence of depression is associated with significant risk for both attempted and completed suicides, and for the development of long term poor adult mental health (Burns & Rapee, 2006). The high prevalence of depression amongst children in residential care is unsurprising, given the history of many of these young people; and it is therefore important to better understand how well residential care workers recognize and react to depression amongst the children in their care.

The majority of young people in Australian residential homes are young males (Australian Institute of Health and Welfare, 2016). It may be particularly difficult to recognize depression in young men. The way that many mental health issues manifest is complex, but gender is an important influence on the presentation of many mental health issues (Dekker et al., 2007). Depressed males are more likely than depressed females to present with externalizing behaviors including hostility, irritability and aggression (Breland & Park, 2008; Crowe, Ward, Dunnachie, & Roberts, 2006; Möller Leimkühler, Heller, & Paulus, 2007). Symptoms such as social withdrawal, loneliness, concentration problems and indecisiveness may be less prominent in young men (Crowe et al., 2006). The prominence of irritability and aggression in depressed young men may mean that the significance of these behaviors is missed; especially amongst workers without advanced mental health training (Crowe et al., 2006; Möller Leimkühler et al., 2007), raising the possibility that depression in many young men in residential group care could go unrecognized. Given this, it seems important to understand how workers recognize and react to the full range of behaviors that may reflect depression in young men in residential group care.

There is great potential for residential care workers to enhance young peoples' life by recognizing young men's depression and connecting them with appropriate services. Despite the apparent prevalence of mental health problems amongst young people in care, residential care workers' confidence in recognizing and responding to these concerns does not yet appear to have been explored. The current study examines whether residential care workers can recognize the existence of one serious and significant mental health issue; the presence of a major depressive episode in young men; where the presentation can be complex. It explores how residential care workers interpreted two different ways of expressing the emotional distress of depression; by having them respond to written descriptions of young men with depression accompanied either by externalized behaviors or withdrawn, internalized behavior.

Mental health literacy research explores knowledge, recognition and beliefs about mental health disorders as factors that affect help seeking and other behaviors. Research in this area frequently uses hypothetical scenarios (vignettes) to determine attitudes and beliefs about mental health disorders. In keeping with previous mental health literacy research on caregivers and teachers, we hypothesized that reactions to scenarios depicting young men with depression would differ, according to whether the young person's depression was accompanied by internalized or externalized behaviors. We anticipated that compared to a scenario describing depression accompanied by internalized presentation, an equivalent externalized presentation would attract higher ratings of mental health severity, higher levels of concern for the young person depicted in the scenario; and that workers would be more confident in their 'diagnosis' as a result.

2. Method

2.1. Procedure

Ethics approval was obtained from University of South Australia's Human Research Ethics committee and ethics committees of the organizations involved in the research. Managers from Australian government and non-government organizations, representing the large providers of residential care services to children ($N = 14$) were contacted, advised of the study and asked to allow their workers to participate. Once an organization agreed to participate, managers distributed an introductory email to their workers. This email contained an embedded web link to the research homepage of the Australian Centre for Child Protection. The Centre's webpage provided information about the study and statement of consent, together with a link to the online survey. The process of recruitment ensured that individual agencies and workers were not identifiable, but meant that a survey response rate could not be established.

2.2. Participants

Current statutory residential care workers from both government and non-government agencies were invited to participate. Workers

were asked to first endorse whether or not they had been working in a residential care setting for more than six months. Only workers who had at least six months experience were included in the analysis. This length of experience was chosen to ensure workers would have an adequate level of experience to draw reference from.

In total, 142 participants who met the study criteria responded to the survey. Of these, 124 provided complete data. Of the final sample of 124, there were 43 males and 81 females, with a mean age of 38.6 years (SD = 10.7, minimum 21, maximum 65). Participants reported working full time (66.1%), part time (21.8%) and on a casual basis (8.9%) (see Table 1). Participants' number of years working within residential group homes varied, with 22 participants (32.3%) having between six months and 2 years' experience, and less and 15 participants (10.5%) having worked within residential group homes for >10 years. Approximately 40.3% of participants were university graduates; 36.3% of participants' highest educational attainment was a technical qualification, diploma or certificate; 15.3% were currently undertaking university education in the field(s) of social sciences, health sciences or education; and 6.5% had completed secondary schooling or less. There does not appear to be published data on the characteristics of the Australian residential care workforce, so it is unclear how representative this sample is of the workforce.

2.3. Measures

A cross-sectional online survey was employed to elicit responses to three descriptive case vignettes; depicting 'internalized' & 'externalized' depression and 'typical behavior' for residential care (control condition). The order of the clinical vignettes was randomized in order to eliminate the impact of order of presentation and fatigue on responses. In all cases the control vignette was presented between the two clinical scenarios.

Three descriptive case vignettes were developed for the study (see Fig. 1). This methodology is consistent with previous research on mental health recognition amongst samples of foster carers, teachers and adolescents (Bonfield, Collins, Guishard-Pine, & Langdon, 2010; Burns & Rapee, 2006; Clopton et al., 1993; Loades & Mastroyannopoulou, 2010; Moldavsky, Groenewald, Owen, & Sayal, 2013).

Table 1
Descriptive statistics for participant characteristics (N = 124).

Characteristic	Mean (SD)	n (%)
Age (years)	38.55 (10.66)	
Gender		
Male		43 (34.7)
Female		81 (65.3)
State/Territory		
Australian Capital Territory		0
New South Wales		9 (7.3)
Northern Territory		0
Queensland		21 (16.9)
South Australia		77 (62.1)
Tasmania		4 (3.2)
Victoria		11 (8.9)
Western Australia		2 (1.6)
Number of years working in residential care	5.78 (6.16)	
Type of Residential care		
Transitional accommodation		19 (15.3)
Community residential care		55 (44.4)
Intensive therapeutic care		37 (29.8)
Emergency accommodation		7 (5.6)
Other		6 (4.8)
Additional Training undertaken[a]		
Mental health literacy		52 (41.9)
Juvenile justice		38 (30.6)
Crisis intervention		92 (74.2)
Attachment intervention		86 (69.4)
Behavior management		104 (83.9)

[a] Proportion adds to >100% as carers may have undertaken more than one type of training.

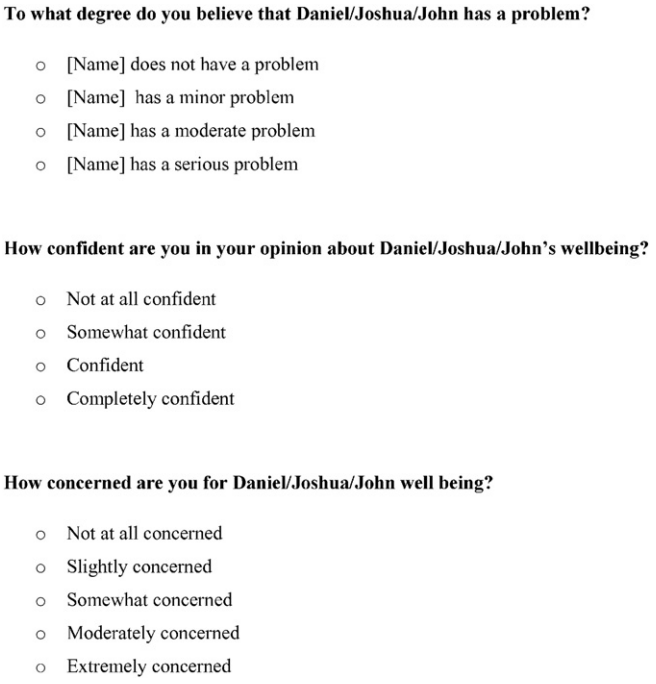

Fig. 1. Case vignettes.

Two vignettes were developed by the authors that described children presenting with clinical depression, based on DSM-V criteria (Diagnostic Statistical Manual of Mental Disorders – Fifth Edition; DSM-V: American Psychiatric Association, 2013). In one of these clinical vignettes, the child's depression was associated with externalized behaviors [Depression (Externalized)]. In the other, the child met the same DSM-V diagnostic criteria for depression, but with internalized presentation [Depression (Internalized)]. A third vignette was developed as a 'control' condition and represented 'typical' behavior of a child in residential care, as described by residential care workers. The order of the two clinical vignettes was randomized and the two clinical vignettes were separated by the non-clinical (control) vignette condition (See Fig. 1).

All three vignettes were subject to review by mental health consultants experienced in supporting children in care (one clinical psychologist and one psychiatrist). The clinical vignettes were matched according to multiple DSM-V criteria (American Psychiatric Association, 2013). The clinical vignettes were differentiated by the behavioral expression of distress (i.e., whether externalized or internalized) (see Table 2 for details). The mental health consultants reviewed these vignettes for adherence to DSM-V criteria and to ensure they were matched for clinical severity (number of criteria). In addition, a 'typical behavior' vignette was co-developed with input from a panel of residential group care workers and managers to ensure the development of a realistic, yet 'non-clinical' behavioral scenario typical of a child in residential care. This vignette was also reviewed by the experienced mental health clinicians. All three vignettes were also reviewed by a focus group of residential care workers to ensure ecological validity of the behavior depicted in the scenarios. The central focus of the study was on the relative significance given by residential care workers to each mental health presentation.

Demographic information was also collected as part of the online survey. This included workers' gender, age, work status (part-time, full-time or casual), years of experience, qualifications and additional training in residential group care. Non identifying information was also collected about the type of residential facility the worker was employed in (transitional accommodation, community residential care, intensive therapeutic care, or emergency accommodation). Comparatively more responses were obtained from workers in Queensland

Table 2
Code to DSM-V Symptoms in 'Joshua' and 'John' Case Vignettes.

Criteria	DSM-V symptoms
A. 1.	Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad, empty, hopeless) or observation made by others (e.g., appears tearful). (Note: In children and adolescents, can be irritable mood.) Externalized vignette: "… especially irritable and hostile…" Internalized vignette: "…appears teary…"
A. 2.	Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation). Externalized vignette: "…has not been interested in kicking around his footy and seems to have lost interest in most other enjoyable activities…" Internalized vignette: "… hasn't been going down to the courts. …he explains that he simply just doesn't enjoy it anymore. He doesn't seem to enjoy much of anything lately…"
A. 4.	Insomnia or hypersomnia nearly every day. Externalized vignette: "…has not been sleeping well for the past three weeks… seems to only get a few hours of sleep a night…" Internalized vignette: "…oversleeps every day and is difficult to rouse in the mornings…"
A. 6.	Fatigue or loss of energy nearly every day Externalized vignette: "…complains about being tired…" Internalized vignette: "… complained about feeling tired for the past three weeks…he appears exhausted…"
A. 8.	Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others). Externalized vignette: "… seems forgetful and has had a hard time following basic conversation recently…" Internalized vignette: "…often loses his train of thought mid-conversation…."

Note. For full DSM-V diagnostic criteria see Diagnostic and Statistical Manual-V; APA (2013).

and South Australian jurisdictions, which is consistent with the relatively higher use of residential care in those jurisdictions.

Following each vignette, workers rated the severity of the problem, their confidence in that rating, and how concerned they were for the child described (see Burns & Rapee, 2006; Loades & Mastroyannopoulou, 2010). Care was taken to minimize the use of mental health terminology; workers were simply asked about the presence and severity of a 'problem' for each child depicted.

2.4. Data analysis

First, a series of Wilcoxon Matched-pairs Signed Ranks tests (Wilcoxon tests) were used to explore 1) whether care workers could distinguish between clinical-level symptomatology and non-clinical 'typical' behaviors, and 2) whether they would rate depression accompanied by externalized behaviors as more of a problem than depression accompanied by internalized behaviors. Wilcoxon Matched-pairs tests were used due to the non-parametric nature of the data and the item construction.

Second, a Wilcoxon Matched-pairs Signed Ranks test was used to explore differences in workers' levels of confidence in their problem severity ratings. Confidence ratings were compared for workers' ratings of the externalizing [Depression (Externalized)] versus the internalizing vignettes [Depression (Internalized)]. A final Wilcoxon test was used to explore differences in workers' concern for the children depicted in the two clinical scenarios; in which concern ratings were compared for the externalizing [Depression (Externalized)] versus the internalizing vignettes [Depression (Internalized)].

Participants with missing data were excluded on a test-by-test basis. An effect size of 0.3 was considered to be a small effect, 0.5 a medium effect, and 0.8 a large effect (Cohen, 1992). In order to obtain 80% power, with a significance level of 0.05, a sample of 39 per vignette condition was required to maximise the chance of detecting an effect (Faul, Erdfelder, Lang, & Buchner, 2007). Therefore the sample size was adequate to ensure sufficient power.

3. Results

3.1. Problem recognition

One-hundred and twenty-one workers identified presence of some level of depression in all 3 vignettes. Workers who perceived the presence of a mental health problem were asked to rate the severity of the problem, given the response options 'mild', 'moderate' or 'serious'.

Problem severity ratings differed depending on condition: presence of a "*serious problem*" was endorsed most often in the [Depression (Externalized)] condition (78.2%), followed by the [Depression (Internalized)] condition (54%) and then 'typical behavior' condition (11.3%).

A '*moderate problem*' was endorsed most often in the 'typical behavior' condition (73.4%), followed by the [Depression (Internalized)] condition (41.9%) and then the Depression (Externalized) condition (20.2%). A '*minor problem*' was selected most often for the 'typical behavior' vignette (13.7%), followed by the [Depression (Internalized)] condition (1.6%). No respondents categorized the [Depression (Externalized)] condition as minor.

3.2. Perceived severity ratings

Each vignette could attract a problem severity rating 'mild', 'moderate' or 'severe'. A Wilcoxon test showed a significant difference ($z = -4.62$, $p = 0.000$) in workers' severity ratings in the scenario that described the child in the externalized condition [Depression (Externalized)]; $Mdn = 4$ versus the vignette of the child with internalized behaviors [Depression (Internalized)]; $Mdn = 4$]. The effect size was small ($r = -0.38$). Workers' severity ratings were also significantly different for the internalized presentation than the 'typical behavior (non-clinical)' scenario [Depression (Internalized); $Mdn = 4$) versus Usual Behavior $Mdn = 3$; $z = -7.12$, $p = 0.000$]. The effect size was medium ($r = -0.59$) (see Table 3).

3.3. Confidence in ratings

Workers were asked to rate how confident they were in their assessment of the young person's mental health; given the response options 'not at all confident', 'somewhat confident' 'confident' or 'completely confident'. Workers were more confident when they were assessing a description of externalized or internalized depression (see Table 4). A Wilcoxon test showed a significant difference in workers' confidence in their problem severity ratings for the vignette of the child with [Depression (Externalized)] ($Mdn = 4$) versus the vignette of the child with [Depression (Internalized)] presentation ($Mdn = 3$; $z = -3.16$, $p < 0.01$). The effect size was small ($r = -0.26$).

3.4. Concern about young person's wellbeing

Workers were then asked to rate their level of concern for the young man portrayed in each vignette. The results indicated that the vast majority of residential care workers were at least moderately concerned for the wellbeing of the children depicted in the vignettes. As hypothesized,

Table 3
Participant problem severity ratings by vignette condition (N = 124).

Rating	Externalized vignette	Internalized vignette	Non-clinical vignette
1. Does not have a problem	1.6%	2.4%	1.6%
2. Minor problem	0.0%	1.6%	13.7%
3. Moderate problem	20.2%	41.9%	73.4%
4. Serious problem	78.2%	54.0%	11.3%

Table 4
Participant confidence in ratings by vignette condition (N = 124).

Rating	Externalized vignette	Internalized vignette	Non-clinical vignette
1. Not at all confident	5.6%	6.5%	6.5%
2. Somewhat confident	1.6%	3.2%	8.9%
3. Confident	37.1%	47.6%	54.8%
4. Completely Confident	55.6%	42.7%	29.8%

workers were significantly more concerned for the child displaying depression accompanied by externalized behaviors compared to the child displaying internalized presentation (see Table 5). Wilcoxon test showed a significant difference ($z = -3.91$, $p = 0.000$) between the ratings for [Depression (Externalized)] behaviors ($Mdn = 5$) versus [Depression (Internalized)] ($Mdn = 5$). The effect size was small ($r = -0.32$).

4. Discussion

This study explored residential group care workers' ability to recognize depression in the children in their care. Workers' ratings of problem severity were greater for depression with externalized, compared with internalized presentation. These findings are consistent with previous research where researchers have found externalized disorders are more easily recognized as a serious problem than are internalized disorders (Bonfield et al., 2010; Loades & Mastroyannopoulou, 2010; Mount et al., 2004). Contrary to what might be assumed, workers did appear able to discriminate young people with depression (whether internalized or externalized) from more typical (mis-)behavior.

In responding to the scenario depicting clinical depression accompanied by externalized behavior [Depression (Externalized)]; the vast majority of respondents endorsed this as a serious problem. Responses to the vignette depicting depression accompanied with internalized presentation were more variable. For this condition, ratings of "serious" (54% of respondents) and "moderate" (41.9%) were more evenly distributed.

A surprising finding was the large proportion of workers that identified the presence of a problem in the non-clinical, 'typical behavior' vignette. The majority of respondents (73.4%) endorsed a moderate problem in response to this vignette. There are a few possible explanations for the severity ratings attributed to the 'typical behavior' vignette. First, there may have been a response bias towards ratings of pathology due to transparent nature of the research and its focus on mental health. Second, workers ratings for the 'typical behavior' vignette could reflect workers cognitive and emotional bias towards a problem focus due to workforce factors not assessed in this study. Perhaps most importantly, however, the non-clinical vignette was designed to represent the typical daily behavior of a child in care, not to represent the behavior of a 'problem-free' child. The vignette was co-constructed with residential care workers in order to develop a realistic scenario of behavior routinely displayed by children in the Australian residential care setting. Endorsement of this scenario as problematic may reflect the realistic nature of this vignette and the real world difficulties experienced by children in residential care. The daily behavior of children in care has been described in terms of difficulties across multiple domains that do not fit neatly into current diagnostic categories (De Jong, 2010).

Workers were also more confident in their judgment about the severity of depression when accompanied by externalized behavior compared to when accompanied by an internalized presentation. The issue of confidence in judgment in relation to behavioral presentation does not appear to have been explored before, although caregivers have been reported to have more difficulty in recognizing the symptoms of internalized disorders (Bonfield et al., 2010; Loades & Mastroyannopoulou, 2010). Workers' confidence in their mental health judgment has implications for the care of young people and warrants further exploration. Ferguson, Follan, Macinnes, Furnivall, and Minnis (2011) suggested caregivers could lack confidence in supporting children with mental health difficulties due to lack of access to mental health training. The relevance of this argument is unclear in this case. Many of the respondents were currently undergoing or had completed university level education in either social work, psychology, mediation, or counselling; these are courses that are likely to contain some exposure to mental health literacy. The relative lack of confidence in recognizing internalized mental health problems points to the need for training for workers in recognizing and responding to children who may appear more self-contained and make relatively fewer demands on staff time. It is feasible that with improved confidence and recognition, workers will engage in increased help-seeking on behalf of young people in their care.

Workers were also more concerned about a child with an externalized presentation of depression than an internalized one. This is entirely consistent with research showing that similar elevated concern amongst teachers for this type of mental health presentation (Loades & Mastroyannopoulou, 2010). It may be that, whether in a classroom or residential environment, this behavioral presentation has a more negative impact on others. Internalized mental health issues may be perceived as less burdensome as they tend to demand less staff attention and impact only the affected individual (Loades & Mastroyannopoulou, 2010; Clopton et al., 1993). The potential for externalized behavior to negatively affect others may be particularly exaggerated in the residential group home environment.

Taken together, the findings of this study suggest to us that workers may be more likely to refer children who display externalized symptoms to mental health services, although it cannot be determined from this study what help-seeking behaviors workers would actually engage in. The relationship between workers' recognition of mental health issues and help-seeking warrants further attention, in particular for 'internalizing' young people who may make relatively less demands on staff time.

Table 5
Participant concern ratings by vignette condition (N = 124).

Rating	Externalized vignette	Internalized vignette	Non-clinical vignette
1. Not at all concerned	0.8%	0.8%	0.8%
2. Slightly concerned	0.0%	0.8%	2.4%
3. Somewhat concerned	2.4%	7.3%	26.6%
4. Moderately concerned	24.2%	37.1%	62.1%
5. Extremely concerned	72.6%	54.0%	8.1%

There are also some limitations to this study. This study may have attracted workers who already had an interest in mental health issues. There is no information about the characteristics or the representativeness of residential group care workers who chose not to take part in this research, nor about the response rate due to the nature of the study recruitment process. There may also be substantial differences in the knowledge, skills, attributes and role of the residential care workforce in countries other than Australia.

The study aims were reasonably transparent and relatively easy to ascertain. As such, participants may have been aware they were being assessed for mental health recognition. Case vignettes were succinct. While this minimized participant burden, it may also have meant that for some participants the vignettes were relatively transparent and lacking in real world complexity. Further, respondents were asked to endorse the presence of a 'problem'; therefore we do not know whether they recognized depression accurately or just the presence of some sort of problem or difficulty.

The study was limited in that the focus was entirely on the recognition of depression in boys and the findings are not generalizable to all types of mental health and behavioral issues. Although vignettes are considered a reliable method for measuring problem detection ability (Wilson & While, 1998), the use of vignettes has limitations. The presentation of case vignettes provides all relevant information simultaneously and in a condensed form, which does not mirror the way that workers are likely to experience issues in practice. Clearly vignette responses are ideal or hypothetical and may be dissonant with actions taken when faced with these situations in real life (Clopton et al., 1993; Loades & Mastroyannopoulou, 2010; Burns & Rapee, 2006; Moldavsky et al., 2013). This study did not ask about help-seeking behavior, so it is not clear to what extent differences in perceptions equate with intended responses to young people.

There are also strengths to this research. The study employed a well-established approach to identifying attitudes and beliefs about mental health via the use of vignette ratings (Clopton et al., 1993; Loades & Mastroyannopoulou, 2010; Burns & Rapee, 2006; Moldavsky et al., 2013). Other strengths include the use of clear diagnostic criteria (DSM-V), and the focus on a significant and common mental health issue. The content and ecological validity of the vignettes was established in collaboration with experienced child and mental health consultants and practitioners in out- of- home care. Every attempt was made to ensure the ecological, face and content validity of the vignettes used. This study appears to be the first to examine residential care workers' recognition of a major mental health problem experienced by children in their care. The findings of this study, although exploratory in nature, point to the potential for this methodology to contribute to our understanding of how residential care workers recognize and respond to this vulnerable group of children.

It appears that although residential group care workers may be generally good at recognizing whether a child presents with a problem, their perception of the severity of the issue, their concern for the child and their confidence in determining whether a mental health problem exists are all influenced by whether or not mental health concern is accompanied by problematic behaviors. Supporting workers to recognize mental health issues in the absence of more overt behavioral indicators is likely to be helpful. In a residential environment, the needs of less demanding children may otherwise run the risk of being overlooked in favor of those with 'high maintenance' behaviors. Replication and extension of the present study, including action oriented questions concerning mental health referral, would provide further insight into this under-researched area.

Acknowledgments

The researchers would like to thank the workers and organization managers involved in the study without whom this research would not have been possible.

References

Ainsworth, F., & Hansen, P. (2015). Therapeutic Residential Care: Different population, different purpose, different costs. *Children Australia*, *40*(4), 342–347.

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

Australian Institute of Health and Welfare (2016). *Child protection Australia 2012–13 (child welfare series no. 63)*. Canberra: AIHW.

Beck, A. (2006). Addressing the mental health needs of looked after children who move placement frequently. *Adoption & Fostering*, *30*, 60–65. http://dx.doi.org/10.1177/030857590603000308.

Bonfield, S., Collins, S., Guishard-Pine, J., & Langdon, P. E. (2010). Help-seeking by foster-carers for their 'looked after' children: The role of mental health literacy and treatment attitudes. *British Journal of Social Work*, *40*(5), 1335–1352. http://dx.doi.org/10.1093/bjsw/bcp050.

Breland, D. J., & Park, M. J. (2008). Depression: Focus on the adolescent male. *American Journal of Men's Health*, *2*(1), 87–93. http://dx.doi.org/10.1177/1557988307310958.

Burns, J. R., & Rapee, R. M. (2006). Adolescent mental health literacy: Young people's knowledge of depression and help seeking. *Journal of Adolescence*, *29*(2), 225–239. http://dx.doi.org/10.1016/j.adolescence.2005.05.004.

Cheung, C., Goodman, D., Leckie, G., & Jenkins, J. M. (2011). Understanding contextual effects on externalizing behaviors in children in out-of-home care: Influence of workers and foster families. *Children and Youth Services Review*, *33*(10), 2050–2060. http://dx.doi.org/10.1016/j.childyouth.2011.05.036.

Clark, A. F., O'Malley, A., Woodham, A., Barrett, B., & Byford, S. (2005). Children with complex mental health problems: Needs, costs and predictors over one year. *Child and Adolescent Mental Health*, *10*(4), 170–178. http://dx.doi.org/10.1111/j.1475-3588.2005.00349.x.

Clopton, J. R., Pearcy, M. T., & Pope, A. W. (1993). Influences on teacher referral of children to mental health services. *Journal of Emotional and Behavioral Disorders*, *1*(3), 165–169. http://dx.doi.org/10.1177/106342669300100304.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*(1), 155–159. http://dx.doi.org/10.1037/0033-2909.112.1.155.

Cousins, W., Taggart, L., & Milner, S. (2010). Looked after or overlooked? An exploratory investigation of the mental health issues of adolescents living in state care in Northern Ireland. *Psychology, Health & Medicine*, *15*(5), 497–506. http://dx.doi.org/10.1080/13548506.2010.487110.

Crowe, M., Ward, N., Dunnachie, B., & Roberts, M. (2006). Characteristics of adolescent depression. *International Journal of Mental Health Nursing*, *15*(1), 10. http://dx.doi.org/10.1111/j.1447-0349.2006.00399.x.

Damnjanovic, M., Lakic, A., Stevanovic, D., & Jovanovic, A. (2011). Effects of mental health on quality of life in children and adolescents living in residential and foster care: A cross-sectional study. *Epidemiology and Psychiatric Sciences*, *20*(3), 257–262. http://dx.doi.org/10.1017/s2045796011000291.

De Jong, M. (2010). Some reflections on the use of psychiatric diagnosis in the looked after or 'in care' child population. *Clinical Child Psychology and Psychiatry*, *15*(4), 589–599.

Dekker, M. C., Ferdinand, R. F., van Lang, N., Bongers, I. L., van der Ende, J., & Verhulst, F. C. (2007). Developmental trajectories of depressive symptoms from early childhood to late adolescence: Gender differences and adult outcome. *Journal of Child Psychology and Psychiatry*, *48*(7), 657–666. http://dx.doi.org/10.1111/j.1469-7610.2007.01742.x.

Egelund, T., & Lausten, M. (2009). Prevalence of mental health problems among children placed in out-of-home care in Denmark. *Child and Family Social Work*, *14*(2), 156–165. http://dx.doi.org/10.1111/j.1365-2206.2009.00620.x.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175–191 (Retrieved from http://www.psycho.uni-duesseldorf.de/abteilungen/aap/gpower3/download-and-register).

Ferguson, L., Follan, M., Macinnes, M., Furnivall, J., & Minnis, H. (2011). Residential childcare workers' knowledge of reactive attachment disorder. *Child and Adolescent Mental Health*, *16*(2), 101–109. http://dx.doi.org/10.1111/j.1475-3588.2010.00575.x.

Ford, T., Vostanis, P., Meltzer, H., & Goodman, R. (2007). Psychiatric disorder among British children looked after by local authorities: Comparison with children living in private households. *British Journal of Psychiatry*, *190*, 319–325. http://dx.doi.org/10.1192/bjp.bp.106.025023.

Harris, M., & Thackerey, E. (Eds.). (2003). *The gale encyclopedia of mental disorders*. Detroit, MI: Cengage Learning.

Heim, D., Smallwood, J., & Davies, J. B. (2005). Variability in lay perceptions of depression: A vignette study. *Psychology and Psychotherapy*, *78*(3), 315–325. http://dx.doi.org/10.1348/147608305X25793.

Janssens, A., & Deboutte, D. (2010). Psychopathology among children and adolescents in child welfare: A comparison across different types of placement in Flanders, Belgium. *Journal of Epidemiology and Community Health*, *64*(4), 353–359. http://dx.doi.org/10.1136/jech.2008.086371.

Knorth, E. J., Harder, A. T., Zanberg, T., & Kendrick, A. J. (2008). Under one roof: A review and selective meta analysis on the outcomes of residential child and youth care. *Children and Youth Services Review*, *30*, 123–140. http://dx.doi.org/10.1016/j.childyouth.2007.09.001.

Lamington, L., Addo, A., Towlson, K., Blower, A., & Hodgson, J. (2004). Mental health of 'looked after' children: A needs assessment. *Clinical Child Psychology and Psychiatry*, *9*(1), 117–129. http://dx.doi.org/10.1177/1359104504039176.

Leichtman, M., Leichtman, M. L., Cornsweet Barber, C., & Neese, D. T. (2001). Effectiveness of intensive short-term residential treatment with severely disturbed adolescents. *American Journal of Orthopsychiatry*, *71*, 227–235 (Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/11347363).

Loades, M. E., & Mastroyannopoulou, K. (2010). Teachers' recognition of Children's mental health problems. *Child and Adolescent Mental Health*, *15*(3), 150. http://dx.doi.org/10.1111/j.1475-3588.2009.00551.x.

Marsh, S. C., Evans, W. P., & Williams, M. J. (2010). Social support and sense of program belonging discriminate between youth-staff relationship types in juvenile correction settings. *Child and Youth Care Forum*, *39*, 481–494. http://dx.doi.org/10.1007/s10566-010-9120-8.

Meltzer, H., Gatward, R., Corbin, T., Goodman, R., & Ford, T. (2003). *The mental health of young people looked after by local authorities in England*. London: The Stationery Office (Retrieved from http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_4019442).

Moldavsky, M., Groenewald, C., Owen, V., & Sayal, K. (2013). Teachers' recognition of children with ADHD: Role of subtype and gender. *Child and Adolescent Mental Health*, *18*(1), 18–23. http://dx.doi.org/10.1111/j.1475-3588.2012.00653.x.

Möller Leimkühler, A. M., Heller, J., & Paulus, N. -C. (2007). Subjective well-being and 'male depression' in male adolescents. *Journal of Affective Disorders*, *98*(1–2), 65–72. http://dx.doi.org/10.1016/j.jad.2006.07.007.

Mount, J., Bennun, I., & Lister, A. (2004). Identifying the mental health needs of looked after young people. *Clinical Child Psychology and Psychiatry*, *9*(3), 363–382. http://dx.doi.org/10.1177/1359104504043919.

Nicholas, B., Roberts, S., & Wurr, C. (2003). Looked after children in residential homes. *Child and Adolescent Mental Health*, *8*(2), 78–83. http://dx.doi.org/10.1111/1475-3588.00050.

Richardson, J., & Lelliott, P. (2003). Mental health of looked after children. *Advances in Psychiatric Treatment*, *9*(4), 249–256. http://dx.doi.org/10.1192/apt.9.4.249.

Rubin, D. M., O'Reilly, A. L. R., Luan, X., & Localio, A. R. (2007). The impact of placement stability on behavioral well-being for children in foster care. *Pediatrics*, *119*(2), 336–344. http://dx.doi.org/10.1542/peds.2006-1995.

Stanley, N., Riordan, D., & Alaszewski, H. (2005). The mental health of looked after children: Matching response to need. *Health and Social Care in the Community*, *13*(3), 239–248. http://dx.doi.org/10.1111/j.1365-2524.2005.00556.x.

Tarren-Sweeney, M. (2008). The mental health of children in out-of-home care. *Current Opinion in Psychiatry*, *21*(4), 345–349. http://dx.doi.org/10.1097/YCO.0b013e32830321fa.

Wilson, J., & While, A. (1998). Methodological issues surrounding the use of vignettes in qualitative research. *Journal of Interprofessional Care*, *12*(1), 79–86. http://dx.doi.org/10.3109/13561829809014090.