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Teachers' Knowledge of Anxiety and Identification of Excessive Anxiety in Children

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Abstract: This study examined primary school teachers' knowledge of anxiety and excessive anxiety symptoms in children. Three hundred and fifteen primary school teachers completed a questionnaire exploring their definitions of anxiety and the indications they associated with excessive anxiety in primary school children. Results showed that teachers had an understanding of what anxiety was in general but did not consistently distinguish normal anxiety from excessive anxiety, often defining all anxiety as a negative experience. Teachers were able to identify symptoms of excessive anxiety in children by recognizing anxiety-specific and general problem indications. The results provided preliminary evidence that teachers' knowledge of anxiety and anxiety disorders does not appear to be a barrier in preventing children's referrals for mental health treatment. Implications for practice and directions for future research are discussed.

Anxiety disorders are the most common mental health problem experienced by children, with studies reporting between 3-24% of children below the age of 12 years develop significant anxiety problems that interfere with daily functioning (Cartwright-Hatton, McNicol, & Doubleday, 2006). Gender plays a major role in the prevalence of anxiety disorders, with girls being almost twice as likely to experience a disorder compared to boys (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003). The onset of an anxiety disorder appears to be dependent on the type of anxiety disorder present, with certain disorders generally beginning in childhood (e.g., separation anxiety and specific phobia) and others more likely to develop in adolescence (e.g., social phobia and panic disorder) (Costello, Foley, & Angold, 2006; Kessler et al., 2005; Roza, Hofstra, Van Der Ende, & Verhulst, 2003). Anxiety disorders in children rarely occur in isolation, and are often highly co-morbid with other anxiety disorders and depressive disorders (Costello, Egger, & Angold, 2005; Kashani & Orvaschel, 1990). In addition, children who have an anxiety disorder are at a much greater risk of continuing to experience an anxiety disorder as they transition from childhood through to adolescence and early adulthood (Bittner, Egger, Erkanli, Costello, Foley, & Angold, 2007; Pine, Cohen, Gurley, Brook, & Ma, 1998).

Anxiety disorders can have significant consequences for children. They are equally as disabling as depression (Ezpeleta, Keeler, Erkanli, Costello, & Angold, 2001) and increase the likelihood of a child developing other psychological disorders later in life (Bittner et al., 2007; Copeland, Shanahan, Costello, & Angold, 2009). Children who experience excessive anxiety have been found to have problems with peer and parental relationships, general impairments in social and psychological functioning, and lower academic achievement (Ezpeleta et al., 2001; Grover, Ginsburg, & Jalongo, 2007; Woodward & Fergusson, 2001). The adverse consequences associated with anxiety disorders, such as excessive school absenteeism (Last & Strauss, 1990) and impairments in peer relationships, can lead to long-

term poor vocational adjustment (Hibbert, Fogelman, & Manor, 1990) and poor self-esteem (Ginsburg, La Greca, & Silverman, 1998; Strauss, Frame, & Forehand, 1987).

Given the serious consequences of anxiety disorders, the high prevalence rates and the persistent nature of the disorder, it is vital that early intervention and prevention are the primary focus of treatment efforts. However, very few children with anxiety disorders are identified and referred for mental health treatment (Costello & Janiszewski, 1990; Zahner & Daskalakis, 1997). Specifically, research has indicated that only 20-25% of children identified as having a mental health problem have accessed services within the previous 6-12 months (Farmer, Stangl, Burns, Costello, & Angold, 1999; Sawyer et al., 2001). This may be because parents, often the adults who refer, lack the skills to identify mental health problems in children and to take action once a problem is recognised (Sanders et al., 1999; Teagle, 2002). This may in part be due to the highly familial nature of anxiety disorders (Klein, 2009; Lieb et al., 2000). Therefore, it is important to look at other adults in a child's life who have the ability to identify signs of anxiety and refer for assistance. Employing a multi-informant approach in the identification of mental health problems, by incorporating parents, teachers, children and other stakeholders, will provide children with the best opportunity for successful outcomes.

The Role of Teachers and Schools

Over the past decade, there has been increasing international focus on improving the accessibility to mental health services for children, and specifically, the role of schools in identifying, promoting and preventing mental health problems (Attride-Stirling, Davis, Markless, Sclare, & Day, 2001). Schools, and particularly teachers, are in a unique position to be able to identify mental health problems such as excessive anxiety in their students because they have an understanding of what constitutes typical behavior for a particular student and they have experience with a wide range of children's behavior. This position allows them to identify non-normative behavior.

In Australia, primary school teachers are an easily accessible source of support and have the ability to encourage treatment by referring children to mental health services within the school or in a community-based organisation (Rickwood, Deane, Wilson, & Ciarrochi, 2005). They are recognised as often being the first adults outside the family unit to identify mental health concerns, and parents often rely on them for guidance and support in these matters (United Kingdom Department for Education, 2011). Although teachers are in a vital role in recognising potential mental health concerns, they are not expected to diagnose children. Upon identifying behavioural or emotional problems in children, teachers can choose to manage the issues internally (i.e., within the classroom) if they believe they have the appropriate skills to address the concerns, refer to the school guidance counsellor for assessment and management, or access alternative school supports if deemed necessary (Rickwood, 2005).

However, teachers receive little to no education or training in children's mental health as part of their teaching qualifications (Gowers, Thomas, & Deeley, 2004). Congruent with teachers' reports, this omission could leave them ill equipped to recognise and appropriately respond to the needs of children within the classroom (Green, Clopton, & Pope, 1996; Rothi, Leavey, & Best, 2008; Rothi, Leavey, Chamba, & Best, 2005). In addition to being unable to identify these children and respond to their needs, this lack of education may also result in inappropriate referrals being made (Cvinar, 2010). Therefore, it is important to investigate what teachers define as anxiety and when it becomes excessive in children.

Defining Anxiety

The literature defines anxiety as an emotional state that is often considered analogous to fear (Sweeney & Pine, 2004). Anxiety or fear is comprised of cognitions (e.g., worry), behaviors (e.g., avoidance), emotions (e.g., scared), physiological responses (e.g., increased heart rate), and relational aspects (Morris & March, 2004; Ollendick & March, 2004; Silverman & Treffers, 2001). It is a natural response to a realistic threat and can be protective (e.g., preventing people from walking in front of cars or assisting with preparation for exams). In children, these protective responses assist the developing child when they are faced with stimuli that either cannot be understood or controlled (Craske, 1997; Ollendick, Yule, & Ollier, 1991). Anxiety in childhood is a part of normal development and children often grow out of this anxiety as they mature (e.g., fear of dark, storms, strangers, etc.). However, some children continue to experience anxiety beyond reasonable age norms. Anxiety is considered on a continuum from normal levels of anxiety, which can be helpful, to excessive anxiety, which is where anxiety disorders are present (Eysenck, 1997). Excessive anxiety occurs when a child experiences fears that are disproportionate to the level of threat; that is, when there is a fear response in the absence of a real threat (Barrett & Pahl, 2006; Sweeney & Pine, 2004). Despite anxiety being on a continuum, anxiety is classified as a disorder when a person displays extreme distress symptoms that last a significant time (persisting between one to six months depending on the disorder), are developmentally inappropriate and interfere with daily life functioning in several areas, often leading to avoidance behaviors (American Psychiatric Association [APA], 2000; Barrett & Pahl, 2006; Campbell, 2006).

Teachers' Knowledge of Anxiety Disorders and Internalising Problems

There is scant research that has examined teachers' understanding or definitions of excessive anxiety in primary school children. The majority of research available has focused on comparing externalising and internalising disorders in children, with excessive anxiety (or anxiety disorders) being classified as an internalising disorder. A study investigating Australian pre-service teachers' knowledge of internalising disorders in primary school children found that incidental exposure (i.e., personal experiences of friends and family, community media and school-based practicum), is the main knowledge source on internalising problems for pre-service teachers and that this exposure contributed to their common-sense estimates of internalising problems in the classroom (Bryer & Signorini, 2011). Papandrea and Winefield (2011) found that Australian teachers recognise that there is an expectation for them to identify symptoms of anxiety in students, however, they do not feel sufficiently capable to put this expectation into practice due to their lack of training. Similar results have been reported in the United States of America (Walter, Gouze, & Lim, 2006) and the United Kingdom (Rothi et al., 2008). Rothi and colleagues (2008) found that teachers reported that while they feel confident in identifying students who were experiencing 'problems' and who might need assistance, they were unsure whether the child's presentation constituted a mental health problem, a behavioral or discipline problem, psychological distress, or an emotional behavioral difficulty (Rothi et al., 2008). This supports the idea that while teachers can identify children in need, they have difficulty articulating an understanding of children's emotional or psychological problems (Rothi et al., 2008).

Researchers have found that teachers frequently fail to notice children with internalising problems because these children are often well behaved (Molins & Clopton, 2002) or teachers assume that internalising problems will improve as the child matures

(Green et al., 1996). Recent studies have found that although teachers are able to recognise the existence of psychological disorders, they are far more concerned about children with externalising disorders than internalising disorders (Loades & Mastroyannopoulou, 2010; Papandrea & Winefield, 2011; Walter et al., 2006). Given the high prevalence of internalising disorders, such as anxiety disorders, these findings may indicate that teachers have difficulty understanding what internalising disorders are, the consequences of these disorders, or how to identify symptoms that are indicative of an internalising disorder.

It appears that the inherent nature of internalising disorders, particularly anxiety disorders, presents challenges for teachers to recognise the associated symptoms. In the only study available, Layne, Bernstein, and March (2006) used the Multidimensional Anxiety Scale for Children (MASC) to assess which anxiety symptoms in children are associated with greater teacher awareness. The MASC is a self-report measure that assesses anxiety symptoms across four scales (i.e., physical symptoms, harm avoidance, social anxiety, and separation anxiety or panic) with a total anxiety score also being generated. They found that American teachers were most likely to identify children who displayed symptoms consistent with being highly anxious overall, expressing physiological complaints, or demonstrating social or separation anxiety, as evidenced by scores on the MASC. This provides emerging evidence that teachers may have the knowledge of what constitutes excessive anxiety or an anxiety disorder and the ability to identify children with certain anxiety symptoms.

The Present Study

Gaining insight into teachers' knowledge of anxiety and recognizing what signs are important for teacher identification is vital to understand which anxious children are likely to be referred for assessment and treatment, and also in identifying which children are likely to be overlooked. If teachers do not have an understanding of anxiety or the ability to identify excessive anxiety, it is unlikely that they will be able to refer children for treatment. If children with excessive anxiety can be identified by teachers, and subsequently referred, this will improve their life trajectory by reducing the likelihood of continued mental ill-health into adulthood, improving their social functioning and relationships, and leading to better academic and occupational outcomes. This will also allow teachers greater opportunity to focus on their key role of facilitating the learning process. Given the lack of research investigating teachers' knowledge of anxiety and anxiety disorders in children, this study explored a) Australian teachers' definitions of anxiety and b) how teachers recognise when a primary school child is experiencing excessive anxiety within their classroom (i.e., what signs are associated with the identification of excessive anxiety).

Method

Participants

Three hundred and fifty-eight primary school teachers (Prep to Grade 7) were voluntarily recruited from 27 Brisbane Catholic Education schools in a large Australian city (56 schools were initially contacted). Forty-three participants were excluded from the sample either because they were not classroom teachers (N=22) or there was missing or uninterpretable data (N=21), which resulted in a sample of 315 classroom teachers. Fifty-nine participants were male (19%) and 255 were female (81%) (one participant did not specify), which reflects the gender proportion in the teaching population. The mean age of teachers

was 40 years, with a range of 21 to 71 years. The mean years of teaching experience was 16.72 years with a range from less than 1 year to 50 years.

Measures

Teachers' Anxiety Identification and Referral Questionnaire (TAIRQ).

The TAIHQ is a four part self-report questionnaire developed by the researchers for use in this study. The first section of the TAIHQ comprised socio-demographic information on age, gender, teaching experience (years and grade-level), status of teaching career, and previous referring history. The second part of the questionnaire examined teachers' understanding of anxiety and anxiety disorders by asking two open-ended questions, "What is anxiety" and "How would you tell if a child in your classroom was excessively anxious?" These questions were asked to gain a baseline understanding of teachers' knowledge of anxiety and to gain an insight into how teachers identify excessive anxiety given there is limited research available. The third part of the questionnaire has been examined in previous research (see authors, 2011 for more details) and the final part of the questionnaire examined teachers' identification of typical and atypical signs of anxiety in children. The order of the parts in the questionnaire was carefully selected to avoid contamination of the questions (i.e., using information from later parts of the questionnaire to inform responses to earlier parts in the questionnaire).

Procedure

Once the schools were contacted and agreed to participate, the researcher attended each school to conduct the study. Teachers were approached in staff meetings and asked to complete the questionnaire in the meeting. Teachers were initially provided with an information sheet and allowed time to review this. Subsequently, the study was introduced with all relevant information outlined and those who were willing to participate in the study completed the questionnaire in the following 10-15 minutes. A blank envelope was provided for teachers to submit their completed questionnaires to preserve anonymity and confidentiality. Alternatively, a reply-paid envelope was provided and teachers could return the completed questionnaire in their own time. No extrinsic incentives were offered for participation.

Data Analysis

Inductive thematic analysis was used to identify, code, and analyze the themes contained in the answers to section two of the questionnaire, to provide a rich description of the data set. This process was done following the six-phase procedure on thematic analysis in psychology outlined by Braun and Clarke (2006), which is a method used by other authors conducting psychological research (e.g., Lynass, Pykhtina, & Cooper, 2012). The analysis was conducted across participants, for each of the two questions individually, in order to identify common themes for each separate question. The analysis involved repeatedly reading and categorizing the data to ensure the themes were derived from the data, as opposed to being derived from prior theory or research (Boyatzis, 1998; Braun & Clark, 2006; Gibbs, 2007). Despite using inductive thematic analysis, qualitative research cannot escape the theoretical and epistemological position of the researcher because the process of developing and selecting themes is unavoidably influenced by the researchers' judgment and decision-making (Braun & Clark, 2006).

Themes were identified at a semantic level, which involved identifying within the explicit or surface meanings of the data without looking beyond what the participant had written (Boyatzis, 1998). This process allowed a progression from a descriptive level to an interpretative level once the semantic content was organized into themes. The themes were repeatedly reviewed and refined to ensure the data within the themes cohered together meaningfully, while ensuring clear and identifiable distinctions between the themes. This involved first reviewing and refining the data extracts to check whether they formed a coherent pattern. For those themes that did not form a coherent pattern, the theme itself was reviewed to determine its appropriateness. Following this, the data extracts were reviewed to determine whether they would better fit in another theme, which resulted in the creation of new themes or the re-adjustment of existing themes. If they did form a coherent pattern, the researcher reviewed the entire data set to consider the validity of the individual themes in relation to the data set and made adjustments where necessary. Thematic maps were drafted and refined throughout this process to allow a better understanding of the relationship between themes and subthemes, and to review and adjust existing themes taking into consideration the entire data set. After reviewing each theme, subtheme, and the data set as a whole, labels were refined and each theme was defined in regards to the contribution it made to the broader analysis.

Direct quotes from the data were categorized under each theme and subtheme (Breakwell, 1995) followed by the participant's number and gender (F = female and M = male) in brackets. This categorization provided a clear illustration of individual themes using the teachers' own words and provided results on the frequency of each theme in the teachers' responses. Hence, frequency rates were calculated at the level of data concept by examining whether a theme appeared anywhere in each individual teacher's response. Data concepts (e.g., words, sentences, or phrases) were placed in one theme only. Teachers' responses were often complex, indicating that one teacher's response might incorporate several themes. The significance of reporting frequency rates in qualitative analysis is open to question (Braun & Clarke, 2006). However, in this study it allowed an understanding of which themes were most (and least) commonly reported, which provided an insight into how anxiety is generally understood by teachers. Analysis was conducted by the first author and later audited by the second author.

Results

Question 1. What is Anxiety?

Analysis of teachers' responses revealed three key themes, each with subthemes. These themes can be viewed in Table 1 along with the frequency rates for each subtheme.

Themes and Subthemes	Frequency ^a
Definitions of Anxiety	
Emotional response	239
Cognitive response	70
Physiological response	53
Behavioral response	36
Inability to cope	56
The Normality of Anxiety	
Not normal	43
Normal	5
Anxiety in Context	
Significant consequences	45
Occurs in different situations	38
Varied	7

^aFrequency rates are the number of teachers who reported a subtheme at least once.

Table 1: Frequency of Data Concepts Across Teachers' Definitions of Anxiety for Each Subtheme.

1. Definitions of Anxiety.

Teachers described five subthemes when defining anxiety.

Anxiety is an Emotional Response.

The overwhelming majority of teachers reported that anxiety was an emotional response, which was analogous to certain other emotions. While teachers reported a wide variation in associated emotions, they primarily viewed anxiety as being synonymous with fear, nervousness, stress, distress, uncertainty, apprehension, and being scared or worried. Typical responses in this theme included:

“Feeling stressed, worried, scared or panicky” (272, F); *“An emotional response to external or internal stimuli that causes a person to experience varying levels of distress”* (191, M); and *“Anxiety is a general sense of feeling concern, worry, fear which can in turn lead to panic or a sense of feeling trapped, uneasy, unsafe etc”* (264, F).

Anxiety Involves a Cognitive Response.

Several teachers reported that anxiety involved cognitive or thought processes similar to those reflected in the emotions discussed above. The primary cognitions reported by teachers focused on excessive or constant worry and concern. Several teachers also reported that anxiety involved unhelpful thought processes such as negative thoughts, irrational

thoughts, intrusive thoughts, catastrophising, rumination, and mental avoidance. For example:

“Pre-conceiving the worst of a situation” (122, F); *“Child with anxiety will ruminate & worry over things”* (155, F); and *“... Lose perspective, overly negative”* (272, F).

Anxiety Involves a Physiological Response.

Some teachers defined anxiety as the presentation of physiological symptoms, such as increased heart rate, nausea, tension, breathing difficulties, decreased concentration, tears, shakes, and fatigue. Examples include:

“Physical changes in the body, e.g. heart rate, breathing difficulties, tension” (54, F); *“Anxiety is when the person feels symptoms within their body. Fast heart beat, sweaty, feeling sick, weak at the knees, crying, vomiting, tummy pains”* (70, F); and *“Anxiety is a state of being characterised by possible changes in physiology, e.g. heart rate, sweating, wanting to escape”* (78, M).

Anxiety Involves a Behavioural Response.

Behavioural responses were reported as a less common associated aspect when defining anxiety. There were a wide variety of behaviours noted by teachers. However, generally they could be classified as reflecting precise actions (e.g., *“Scratching their skin excessively”* [2, F]), compared to more general changes in behaviour including:

“Refusing to participate or attend school...” (94, F) and *“Can be displayed through behaviours, avoidance, procrastination etc. Also not sleeping & eating well”* (245, F).

Anxiety is Being Unable to Cope.

Several responses reflected the belief that anxiety involves the inability to cope. Whether that is the inability to cope with change, everyday situations, new situations, pressure or daily life, teachers commonly noted this theme as a defining feature of anxiety. For instance:

“An inability to cope with everyday situations, experiences and people” (16, M); *“When somebody/someone is unable to cope with the pressures of daily life”* (101, F); and *“Anxiety is an inability to deal appropriately with stress”* (221, F).

2. The Normality of Anxiety.

Despite the research question asking teachers about anxiety generally (as opposed to anxiety disorders) teachers reported two distinct subthemes regarding the normality of anxiety.

Anxiety is Not Normal.

A number of teachers reported that anxiety is not normal, is unnatural, and indicates a disorder or mental health condition. Comments included:

“Anxiety is a disorder characterised by a set of symptoms” (282, F); *“Worrying... to a higher degree than what would be considered the ‘norm’”* (283, M); and *“An abnormal or unusual response to common events”* (327, F).

Anxiety is Normal.

Worth noting are the relatively rare responses that comprised the subtheme of anxiety being a normal or natural experience. Only five teachers provided a response that indicated an understanding that anxiety is part of the normal human experience and is unavoidable when presented with a perceived threatening situation. For example:

“Anxiety is a natural part of the human condition that usually occurs when people are faced with new or uncertain situations” (182, M) and *“Fight or flight response to a situation”* (315, F).

3. Anxiety in Context.

The final theme that emerged indicated that teachers acknowledged that anxiety is contextual.

Anxiety Occurs in Different Situations.

In defining anxiety, a few teachers reflected that anxiety is an experience that is often influenced by and occurs in specific environments or situations. The predominant contexts noted in teachers' responses were situations that were novel and unfamiliar, disrupted or changed, socially-related, family-related, and anticipated situations. Examples included:

“...most often a new event, change or something happening at home. Sometimes this is evidenced at times of separation from parent or caregiver” (84, F); *“...response to perceived pressure, certain environments (noisy), certain activities, family situations or friend issues”* (137, F); and *“... when children are worried about security at home, parental situations, bullying at home or at school etc. Generally external factors”* (354, F).

Anxiety is Varied.

A small proportion of teachers noted that anxiety was different for each individual and also affected people differently. For instance:

“Anxiety is a condition which affects individuals in different ways resulting in various behaviours” (90, M) and *“Anxiety is displayed in many different forms and each case is unique to the particular student”* (256, M).

Anxiety has Significant Consequences.

Teachers reported that anxiety has significant consequences across a range of domains. This included consequences socially, emotionally, behaviourally, physically, mentally and academically. Most responses indicated that anxiety is a phenomenon that often impacts on performance in these areas negatively:

“Affects your behaviour..., can lead to social & emotional difficulties” (124, F); *“Stops a child from performing in any capacity, i.e. socially, emotionally & academically”* (241, F); and *“Abnormal worrying leading to exhaustion and even depression”* (279, F).

No responses indicated positive effects on performance and a small number of responses indicated neutral impacts on performance:

“*Can ultimately affect the way they participate, their relationships and performance*” (268, F) and “*... affects people with anxiety emotionally, mentally & physically*” (301, M).

Question 2. How would you tell if a child in your classroom was excessively anxious?

Themes emerging from the second analysis, along with the frequency of responses in each theme and subtheme, are summarized in Table 2. Five key themes emerged from the data, along with several subthemes, and are subsequently described in detail.

Theme and Subthemes	Frequency ^a
Behavioral indications	
Avoidant behaviors	165
Overt nervous behaviors	118
Security seeking behavior	86
Externalising behavior	48
Perfectionist behavior	21
Changes in behavior	28
Physical manifestations	196
Observed emotional state	105
Verbal communication	
Approach to verbalizing	68
Direct reports	17
Consequences	
Social problems	35
Academic problems	38
Adjustment problems	21

^aFrequency rates are the number of teachers who reported a subtheme at least once.

Table 2: Frequency of Data Concepts Across Teachers’ Indications of Excessive Anxiety for the Themes and Subthemes.

1. Behavioural Indications.

A large proportion of teachers reported that they used behavioural cues to identify when a child is excessively anxious.

Avoidance.

The majority of teachers’ responses indicated that they relied on signs of avoidance, disconnection and withdrawal to indentify anxiety. For example:

“*Reluctance to engage in something new, refusal to come to school or participate*” (84, F) and “*Withdrawn, not wanting to participate in activities or class routines*” (120, F).

Overt Nervous Behaviours.

Several teachers also reported that they relied on observing overt typical nervous behaviours when identifying excessive anxiety. For instance:

“Visible symptoms of hand wringing, pick their hands, chew, restless, suck fingers or clothing” (224, F); *“Fidgeting, repetitive actions, hand rubbing, chewing nails”* (287, M); and *“... obsessive/compulsive behaviours - rocking, tidying, arranging, repeating”* (353, F).

Security-Seeking Behaviours.

Numerous teachers reported that they rely on witnessing security-seeking behaviours, such as reassurance seeking and separation issues, to indicate excessive anxiety. Comments included:

“Constant reassurance, continual questions/clarification of task, attachment to teacher or other adults in the class/school” (27, F); *“... crying when leaving parent”* (104, F); and *“Being particularly clingy to the teacher at certain times or regularly”* (172, F).

Externalising Behaviours.

Some teachers reported that externalising behaviours, such as acting out and aggression, could indicate a child is highly anxious. Examples included:

“... disruptive anti-social behaviour” (80, F); *“Disruptive, aggressive or abusive to others, puts others down”* (191, M); and *“Acts out, lashes out, can be violent”* (224, F).

Perfectionist Behaviours.

A smaller number of teachers reported that perfectionist behaviours might also indicate excessive anxiety. Typical responses included:

“Worry about work even when a capable student. Need to be always correct in all things. Rubbing out work because ‘not good enough’” (25, F) and *“Fear of making mistakes”* (291, F).

Changes in Behaviour.

A few teachers reported that witnessing a change in a child’s behaviour from their typical behaviour might be a sign of excessive anxiety. For instance:

“Sudden change in behaviour patterns, or change at a certain time of day around routines” (121, M) and *“Exhibiting behaviours that are perhaps out of character”* (184, F).

2. Physical Manifestations.

A large number of teachers’ responses indicated that they relied on physical signs to inform them when a child is excessively anxious. This included relying on body language, facial expressions (e.g. eye contact, fearful look), bodily marks (e.g. from self harm) and physiological signs (e.g. tears/crying, wetting, difficulty concentrating, nauseous, sweating, headaches). It is recognised that responses in this theme overlap to some extent to those classified under overt nervous behaviours. However, the decision was made to classify these

signs of anxiety separately because overt nervous behaviours represent a conscious and controllable aspect of behaviour whereas physical manifestations reflect often an unconscious uncontrollable bodily response to anxiety. Typical examples included:

“Physical - inability to focus or be still, frequent toileting, pains in the stomach with no medical explanation, shallow breathing, rigid body” (137, F); *“Some behaviours to look out for include physical manifestations - vomiting, trembling, crying, fear on face, frozen, hands moving, feels ill”* (252, F); and *“Excessively teary, outburst, rapid breathing, headache or stomach ache, often has a worried look or frown on their face”* (316, F).

3. Observed Emotional State.

A number of teachers indicated that they identified excessive anxiety in children by recognizing their emotions. Teachers did not indicate the process they used to identify emotions but simply stated that if the child appeared to display a specific or excessive emotion (e.g. fear, nervousness, worry) that would indicate that they were experiencing significant anxiety. Examples included:

“Outwardly worried, nervous, uptight, sad” (76, F); *“Upset, panic, stressed, embarrassed”* (94, F); and *“Highly emotional - easily upset/saddened”* (306, F).

4. Verbal Communication.

Several teachers reported that verbal communication largely informed their ability to identify excessive anxiety in children. Teachers' responses for this theme were divided into two subthemes.

Approach to Verbalising.

Teachers indicated that the way in which children approached verbal communication would indicate whether they were excessively anxious. However, teachers' responses varied significantly for this subtheme. Some teachers reported that children with excessive anxiety would be less likely to talk (e.g., *“Unable or unwilling to talk both 1:1 or in front of group”* [68, F]). Whilst other teachers reported that children would display excessive talking (e.g., *“Talking excessively to self”* [39, F]). This dichotomy could also be seen within a single teachers' response:

“They can be very loud and over talk or very quiet and avoid communication” (37, F) and *“Very quiet or talkative (can be both extremes)”* (106, F).

Direct Reports.

A few teachers indicated that they would identify excessive anxiety by direct verbal reports from either the child or information from teachers, parents or guidance officers. For example:

“Most children of year 1 or 2 would tell you” (70, F) and *“Sometimes parents/ learning support/teacher/school counsellor would inform me”* (339, M).

5. Consequences.

A smaller number of teachers reported that they identified excessive anxiety in children by witnessing the adjustment problems, and social and academic repercussions of the anxiety.

Social Problems.

Teachers indicated that children often exhibit social problems, which informs them when a child is excessively anxious. Comments included:

“Plays alone, sometimes ‘mum’ often comes to talk about friendship issues” (68, F); *“No friends or difficulty making friends”* (212, F); and *“May not want to socialise with a larger group preferring one friend (whom they try to control or manipulate)”* (273, F).

Academic Problems.

A similar number of teachers also reported that children with excessive anxiety might exhibit significant academic difficulties. For example:

“Inability to cope with standard of work (especially if previously coping)” (91, F); *“Unable to function to the best of their ability in the classroom”* (236, F); and *“Performs badly on tests/tasks for assessment”* (337, F).

Adjustment Problems.

Some teachers reported that children with excessive anxiety experienced difficulty adjusting to change, especially changes in routines. For instance:

“Become upset when routines change suddenly or without warning” (41, F) and *“Does not like disruption to routine, likes familiarity, worried with supply teachers etc, worried when teacher out of school, when a special friend is absent from school”* (124, F).

Discussion

This study explored teachers' definitions of anxiety and what signs they associated with excessive anxiety to assist them with identifying anxious children. The results indicated that, while teachers have an understanding of anxiety, they appear to have difficulty appreciating that anxiety is on a continuum from anxiety which is adaptive and protective to excessive anxiety which is maladaptive. Most teachers defined anxiety as an emotional response. Several teachers also recognised that anxiety has behavioural, physiological, and cognitive aspects. These findings are similar to common definitions of anxiety in the literature that recognise the cognitive, behavioural, emotional, physiological and relational nature of anxiety (Morris & March, 2004; Ollendick & March, 2004; Silverman & Treffers, 2001). This provides preliminary evidence to suggest that teachers have a relatively accurate understanding of anxiety and can appreciate the multi-dimensional features of anxiety. Given previous research has not examined this area, this finding provides new insight into teachers' knowledge of anxiety in general.

A surprising finding was that teachers commonly reported that anxiety reflected the inability to cope or manage. Considering this outcome in conjunction with the finding that many teachers believed the experience of anxiety was not normal or was disordered, indicates that, although teachers may have a basic understanding of anxiety, they often consider it to be largely an unnatural experience. In further support of this conclusion, very few teachers

recognised that anxiety is natural or normal. It appears that the majority of teachers did not have an appreciation that anxiety is on a continuum (Eysenck, 1997). Hence, they often failed to make the distinction between normal and excessive anxiety. This finding is consistent with research that has discovered that teachers have difficulty distinguishing anxiety symptoms that border on the clinical and non-clinical range (Authors, 2011). This finding indicates that teachers might not be aware that anxiety can be a protective response, which all people experience (Craske, 1997; Ollendick et al., 1991). This lack of awareness indicates that more education is needed around the nature of anxiety and the distinction of anxiety across the continuum.

Teachers often acknowledged that anxiety has significant consequences for children, but again, failed to recognise any positive outcomes and largely focused on the negative impacts of anxiety. Research has indicated that anxiety can have protective features (Craske, 1997; Ollendick, Yule, & Ollier, 1991) and that a degree of anxiety can heighten performance until an optimum level of arousal has been reached (Dobson, 1982; Eysenck, 1989). Considering several teachers defined anxiety as a negative experience with predominantly detrimental outcomes, this finding would imply that they might be more likely to refer a child with anxiety for treatment. However, research has shown that this outcome is not the case, with very few children with anxiety disorders being identified and referred for treatment (Costello & Janiszewski, 1990; Zahner & Daskalakis, 1997). Therefore, although teachers acknowledge the potential severity of anxiety, this awareness is not sufficient to encourage referrals to mental health treatment and that there must be other barriers that prevent referrals. Future research could explore alternative barriers that may prevent a teacher from referring highly anxious children for treatment.

Teachers identified several of the key signs of excessive anxiety that have been outlined in the literature including avoidance behaviours, perfectionism, social problems, shyness, upset over changes in routine, needing constant reassurance, separation issues, crying, and physical complaints (Campbell, 2006). In addition, they also appeared to use more general problem identification cues that have been found in previous research by Rothi et al. (2008), such as observing a significant change in a child's behaviour, academic deterioration, and difficulty establishing and maintaining social relationships. Given the lack of training teachers receive in children's mental health, their knowledge might be based on experiential knowledge, similar to findings by Bryer and Signorini (2011), as opposed to formal education. Interestingly, some teachers reported that children would tell them when they are anxious, which could be considered the first step in problem recognition and may be used to initiate the referral process.

The findings of this study concur with the only identified study in this area by Layne and colleagues (2006) and extend on this research to provide a more comprehensive understanding about how teachers attempt to identify excessive anxiety in children. Similar to previous reports, teachers used observed physical manifestations (including physiological signs), social difficulties, and signs of separation anxiety as cues to excessive anxiety. In addition, they also used several other indications to inform their judgments including observing a range of behaviours, the child's perceived emotional state, verbal information (including reports from the child or others and the child's approach to verbalizing), and by witnessing the consequences this has on the child's adjustment, academic outcomes, and social competence. These findings provide an insight into how teachers recognise excessive anxiety in children and indicate that, despite feeling ill prepared and under-confident to recognise and respond to mental health problems in children (Papandrea & Winefield, 2011; Rothi et al., 2008; Walter et al., 2006), teachers may have the knowledge of how to identify excessive anxiety in children. It is likely that further education and training may strengthen teachers' self-efficacy in the identification process and may assist with referrals. However, this finding also highlights the importance of investigating other factors apart from teachers' knowledge of anxiety disorders, such as teacher self-efficacy or teachers' knowledge of

referral options, which might influence teachers' decisions to refer children for mental health treatment.

Contrary to existing research, teachers reported that externalising behaviours such as violence, aggression, and acting out behaviours might be an indication of excessive anxiety. Research has typically found that anxious children tend to respond with more avoidant patterns, while oppositional children tend to respond more aggressively (Barrett, Rapee, Dadds, & Ryan, 1996). However, while aggressive behaviours are not a typical sign commonly associated with anxiety, it is nonetheless a possibility that a child displaying externalising behaviours may be experiencing covert anxiety problems.

Limitations

This study relied on teachers to complete a self-report measure, as opposed to an interview, and this approach may have affected the length and depth of responses provided. Teachers were also socialized to the nature of the study (i.e., teachers understanding of anxiety and anxiety disorders) and the role of the researcher (i.e., psychologist), which could have influenced teachers' perception of anxiety as being largely negative. In addition, analysis was conducted and audited by the authors, which did not allow the coding procedures to be independently verified. Teachers' previous training and educational experiences in childhood anxiety were not directly assessed, which may limit the representativeness of the sample of primary school teachers. Finally, this study sampled teachers in one area of the education system (i.e., Catholic Education) and one location in Australia, which might also limit the interpretation of the results for teachers working outside these areas. However, given teachers educational experiences appear to be similar across educational environments and locations, this factor is unlikely to have had a major impact on the interpretation of the results. A major strength of the current study is the large number of teachers who completed the questionnaire, which provided richness to the qualitative results and allowed the detection of unusual themes.

Implications and Future Directions

The results of this study provide valuable information that can inform the development of educational interventions for teachers. While it appears teachers would benefit from education and training in children's mental health, based on the results, teachers would gain most benefit from an intervention that specifically focused on understanding normal anxiety and how it differs from excessive anxiety. This education may assist teachers in being able to detect those children who warrant a referral for treatment and may also strengthen teachers' confidence in identifying and managing anxiety in the classroom. The need for training should be considered in pre-service teaching programs, professional development and educational opportunities and policies, and government funding initiatives. Furthermore, providing teachers with the opportunity to engage and collaborate with child and adolescent mental health professionals might be an additional option to strengthen and refine teachers' knowledge and improve their self-efficacy in identifying and referring children in need. Increasing partnerships with schools by offering consultation and liaison services with child and adolescent mental health professionals might provide a valuable opportunity to enhance the mental health of students (Walter et al., 2006).

Future research should explore other factors that prevent teachers from referring children for mental health treatment. Of particular interest would be the impact of teachers' self-efficacy, given that teachers' often report lacking confidence in their ability to identify

and manage mental health problems in children (Papandrea & Winefield, 2011; Rothi et al., 2008; Walter et al., 2006). This is despite results from this study indicating that teachers have an understanding of what anxiety is and also have the ability to identify excessive anxiety symptoms. It would be interesting to explore teachers' knowledge and recognition of specific anxiety disorders to determine whether they have a greater knowledge of certain anxiety disorders. The results of this investigation may also impact on the focus of training efforts. It would also be valuable to investigate how teachers learn about anxiety despite not receiving specific training in children's mental health. Extending on this research, it would be interesting to explore whether, once teachers identify excessive anxiety in children they would then refer these children for treatment. This research may assist in understanding which children are likely to be referred, which will provide an insight into those children who may be more likely to be overlooked.

Conclusion

The results of this study provide a significant addition to the limited research in this area. Specifically, this study provides preliminary evidence to suggest that teachers have a sound knowledge of anxiety and they are able to identify a range of symptoms that would indicate excessive anxiety in children (including both anxiety-specific and general problem indications). Although teachers have an understanding of what anxiety is generally, they appear not to exhibit as much understanding that anxiety is on a continuum, often viewing all anxiety as having negative outcomes. Given that teachers have knowledge of anxiety and are aware of the indications of excessive anxiety, the results of this study fail to explain the lack of referrals for anxiety disorders in children. It is imperative that research efforts focus on exploring reasons behind the lack of referrals given the high prevalence rates of anxiety disorders to ensure that, as a community, we are narrowing the gap in children's access to mental health services. If the problems with accessibility are not addressed, it is likely that children in need of assistance will continue to be neglected and the mental health of young people will continue on the current path of deterioration (McGorry & Goldstone, 2011).

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