Children at risk of an eating disorder: Early identification and assessment of children and intervention strategies for children and their carers

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Abstract

This thesis project involved the development and validation over three major projects of a unique, needed, measure of pre-cursors to eating disorder practices. The first project identified potentially destructive eating practices via the development and validation of a scale on maladaptive eating practices - the Maladaptive Eating Practices Questionnaire (MEPQ). The second project examined the efficacy of a preventative intervention for children at risk of an eating disorder, providing them with a set of skills to support healthy eating practices. The third project had as its focus the parental carers of children at risk of an eating disorder. Parental carers who participated in a cognitive-behavioural intervention developed skills to assist them and their children in eating management.

Current childhood assessment methods are unable to detect maladaptive eating practices or the formative stages of eating disorders in children. Poor detection poses life-threatening complications for both underweight and overweight children (Abraham, Boyd, Lal, Luscombe, & Taylor, 2009; AED, 2011). Mortality rates for eating disorders is the highest of any mental illness in Australia (Birmingham, Su, Hlynsky, Goldner, & Gao, 2005; Sullivan, 1995). Stage 1 of this PhD research developed a scale to identify early maladaptive eating practices and thus assist children at risk, their carers and their clinicians, through the ability to identify potentially maladaptive eating practices. In stage 2 the MEPQ was used to examine changes in eating behaviours in children aged 8 to 12, who were undergoing Cognitive Behavioural Therapy (CBT). In stage 3 CBT based treatment interventions were given to their parental carers (Alexander & Treasure, 2012). The efficacy of CBT based treatment interventions in providing support to affected children and to their carers was evaluated. This showed support for the interventions and demonstrated the usefulness of the developed scale.
The three major projects of the thesis were conducted from 2011 to 2013. The focus of study 1 was to develop a psychometrically sound screening tool for detection of the risk of eating disorders in children aged 8 to 12, when maladaptive eating practices first occur (Herrin & Larkin, 2013). The preliminary stages of development of the MEPQ included an expert panel (n= 15) and a parent panel (n= 25) to review the initial 74 items drafted. A provisional 43-item version of the MEPQ was administered to a sample of 329 participants (256 females and 73 males) aged 16 to 25 (M= 20.08 years, SD= 2.487) to finalise the items. Five reliable factors reflective of the five dimensions of the Integrative Cognitive-Behavioural Model of eating disorders (Williamson, White, York-Crowe, & Stewart, 2004) were obtained from an exploratory factor extraction resulting in a 25-item instrument. To evaluate the psychometric properties of the MEPQ, the 25-itemed version was administered to two additional samples of 224 participants (67 males and 157 females) over the age of 17 years (M = 30.96, SD = 13.92) and a sample of 90 child participants (70 girls and 30 boys), aged 8 and 12 (M= 9.92 years, SD =1.45). Results suggest that the MEPQ has good psychometric properties, where internal reliability coefficients for the subscales were found to be strong, as was test-retest reliability. The MEPQ-25 demonstrated significant positive correlations with a convergent measure of eating and body concerns and weaker but significant correlations with divergent measures of personality, confirming convergent and discriminant validity.

The primary objective of Study 2 was to evaluate the efficacy of a modified CBT prevention program for children at risk of an eating disorder, (known as the FRIENDS for Life program; Barrett, 2010), and provide these children with a set of skills that would be expected to support healthy eating practices. This study involved 90 participants (70 girls and 30 boys), aged between 8 and 12 years of age (M= 9.92 years, SD =1.45), recruited from eating disorder clinics and organisations Australia wide. This
eight-session intervention was selected to provide at risk children with a set of skills that would support healthy eating practices. All participants completed a package of child self-report measures assessing maladaptive eating, anxiety, depression, and coping skills and behavioural difficulties, prior to commencing the intervention. Outcomes were recorded post-treatment, and at a three-months follow-up.

The results of statistical analyses indicated that children who received the intervention program showed significant reductions in maladaptive eating practices and associated risk factors of anxiety, depression, and behavioural difficulties between pre-test and post-test, in comparison with the active waitlist. Furthermore, the statistically significant differences between the waitlist and intervention groups were evident at three-month follow-up.

Study 2 also examined whether there was a greater benefit for children, when their parental carers were actively involved in the intervention, compared with children where no parental carer was present. A sample of 30 female parental carers aged between 23 and 45 years of age ($M=30.57$ years, $SD=5.96$), were recruited with their children as part of study 2. Significant differences between the two intervention groups became evident at three-month follow-up. Children who attended their intervention alone showed deterioration of scores between post-test and follow-up; though there was significant improvement. Children with a parental carer in attendance maintained their post-test improvements at follow-up.

The primary objective of Study 3 was to evaluate the efficacy of a CBT prevention program for parental carers of children displaying early warning signs of maladaptive eating using the adult version of the CBT FRIENDS for Life program (Barrett, 2011). The CBT based adult FRIENDS program, a three-session intervention, was selected to provide effective prevention intervention strategies that would improve
the effectiveness of parental carers as moderators of treatment outcomes and to also ease
the stress on these carers. A sample of 60 female parental carers aged between 22 and 46
years of age ($M=32.83$ years, $SD=5.96$), was recruited from eating disorder
organisations Australia wide. All participants completed a package of self-report
measures assessing depression, anxiety and stress, and resiliency at four points: prior to
commencing the intervention, at post-intervention, and at three-month and six-month
follow-ups.

The results indicated that parental carers who participated in the intervention
showed significantly greater decreases in symptoms of depression, anxiety, and stress
between pre-test and post-test, while the waitlist control group of parental carers showed
no changes. In the intervention group, resiliency also increased, while there was no
change in the waitlist control group. Differences from pre-test to six-month follow up
also indicated greater reductions in symptoms for the intervention group compared with
the control group. These results suggest that CBT FRIENDS for Life program (Barrett,
2011) supported the parental carers directly by increasing their sense of resiliency and
psychological well-being in comparison with the waitlist control group of carers.

A secondary focus of study 3 was to examine whether there was improved
maladaptive eating disorder outcomes for children whose parental carers participated in the
adult CBT prevention program, when compared with children whose parental carers did
not participate. A parent-rated report measure of childhood mealtime eating behaviours
was used to evaluate short and long-term changes in their children’s eating. The results
indicated that there were no significant differences in children’s eating behaviours at
post-test for the intervention group compared with the control group. However, there
was a significantly greater improvement between pre-test and the six-month follow-up
for the intervention group compared with the waitlist control. The results suggest that
the intervention did not have an immediate effect in improving parental carer competency. However, the positive improvements in behavioural eating difficulties at the six-month mark may indicate a possible impact of the FRIENDS program on carer competency.

In the final section of this thesis, clinical implications of the results of the studies are discussed, along with implications and directions for future research.
Declaration of Originality

This thesis is submitted to Bond University in fulfilment of the requirements of the degree of Doctor of Philosophy. This thesis represents my own original work towards this research degree and contains no material which has been previously submitted for a degree or diploma at this University or any other institution, except where due acknowledgement is made.

I have clearly stated the contribution of others to my thesis as a whole, including statistical assistance, help with technical procedures, and any other original research work used or reported in my thesis.

Published works by the author incorporated into this thesis:

..........................................................

Justine Ebenreuter

July, 2015
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I would also like to thank my partner GB who has been by my side throughout this process, thank-you for always supporting me in this endeavour. I truly enjoyed our Saturday morning debates about new treatments for childhood eating disorders.

Lastly, I need to recognise the influence of my twin sister Dr Lehoux and my mother Dr Ramshaw who both provided ongoing encouragement and ensured I remained focused on my goal. Mum you are the one who inspired me to do this. Your ongoing guidance and support will never be forgotten.
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List of Abbreviations

For ease of readability and clarity of understanding the use of acronyms has been restricted (see Table 1).

Table 1

<table>
<thead>
<tr>
<th>Acronyms Used in this Work</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>ANOVA</td>
<td>A one-way analysis of variance</td>
</tr>
<tr>
<td>BED</td>
<td>Binge Eating Disorder</td>
</tr>
<tr>
<td>BET</td>
<td>Branched Eating Disorders Test</td>
</tr>
<tr>
<td>BITE</td>
<td>Bulimic Investigatory Test Edinburgh</td>
</tr>
<tr>
<td>BULIT-R</td>
<td>Bulimia Test–Revised</td>
</tr>
<tr>
<td>CBT</td>
<td>Cognitive behavioural therapy</td>
</tr>
<tr>
<td>CEBI</td>
<td>Children’s Eating Behaviour Inventory</td>
</tr>
<tr>
<td>ChEAT</td>
<td>Children Eating Attitudes Test</td>
</tr>
<tr>
<td>DASS</td>
<td>Depression, Anxiety and Stress Scale-Short Form</td>
</tr>
<tr>
<td>DSM</td>
<td>Diagnostic and Statistical Manual of Mental Disorders</td>
</tr>
<tr>
<td>DSRS-C</td>
<td>Depression Self-rating Scale for Children</td>
</tr>
<tr>
<td>DVs</td>
<td>Dependent Variables</td>
</tr>
<tr>
<td>EAT-26</td>
<td>Eating Attitudes Test-26</td>
</tr>
<tr>
<td>EDE</td>
<td>Eating Disorder Examination</td>
</tr>
<tr>
<td>FCBT</td>
<td>Family-based Cognitive Behavioural Therapy</td>
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<tr>
<td>ITEQ</td>
<td>Thoughts on Eating Questionnaire</td>
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<tr>
<td>MANOVA</td>
<td>Multivariate Analysis of Variance</td>
</tr>
<tr>
<td>MBSRQ-AS</td>
<td>Multidimensional Body-Self Relations Questionnaire- Appearance Scales</td>
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<tr>
<td>MEPQ</td>
<td>Maladaptive Eating Practices Questionnaire</td>
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<tr>
<td>Mini IPIP</td>
<td>International Personality Item Pool</td>
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<tr>
<td>MMS</td>
<td>Modified Mini Screen</td>
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<tr>
<td>NSVS</td>
<td>Non-Specific Vulnerability-Stressor</td>
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<tr>
<td>OSFED</td>
<td>Other Specified Feeding or Eating Disorders</td>
</tr>
<tr>
<td>RS-14</td>
<td>Resilience Scale</td>
</tr>
<tr>
<td>SCOFF</td>
<td>Sick, Control, One, Fat, Food</td>
</tr>
<tr>
<td>SDQ</td>
<td>Strengths and Difficulties Questionnaire</td>
</tr>
<tr>
<td>SED</td>
<td>Survey for eating disorders</td>
</tr>
<tr>
<td>UFED</td>
<td>Unspecified Feeding and Eating Disorder</td>
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