

**The future of treating atypical depression: Exploring the role of Social Identity Theory  
in group-CBT**

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## **Abstract**

Atypical depression (AD) is an overlooked and under-researched form of depression, with little to no research exploring the wide range of non-medication treatment options available. The lack of research in this area is concerning as evidence indicates that symptoms associated with AD include a longer and more severe depressive episode and a greater risk of suicidal behaviour than compared with the more traditional, melancholic depression (Weinstock et al., 2011). To ensure that providers are delivering the best form of intervention, it is essential to explore every treatment option. The present study sought to explore the efficacy of group cognitive behaviour therapy (CBT) on treating AD, with a focus on whether features of social identity theory have an influence during the group-intervention process. In this mixed-method study, participants (N=18) underwent a 10-week group intervention aimed to address issues associated with AD, with data collected pre-intervention, two-week post intervention, and 3-months post intervention to assess the effectiveness of the program. Feedback forms and interviews were undertaken and evaluated to explore whether there was a presence of social identity theory. Results revealed that the intervention significantly reduced depression levels and increased self-esteem levels in participants, indicating that group-CBT is an effective form of intervention for those with AD. Qualitative responses were subjected to thematic analysis, where themes aligning with social identity theory emerged, indicating that features of this theory may have influenced participants' experiences and signified the importance that a positive group dynamic had in the outcome. This study offers a critical insight into the effectiveness of group-CBT, and provides an alternative and successful treatment option for those who experience AD.

## **Declaration**

This thesis contains no material which has been accepted for the award of any other degree of diploma in any University, and, to the best of my knowledge, this thesis contains no material previously published except where due reference is made. I give permission for the digital version of this thesis to be made available on the web, via the University of Adelaide's digital thesis repository, the Library Search and through web search engines, unless permission has been granted by the School to restrict access for a period of time.

Sarah Halliday

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## **Introduction**

### **1.1 Overview**

Atypical depression (AD) is an overlooked and under-researched form of depression, with little to no research exploring the wide range of non-medication treatment options available. The lack of research in this area is concerning as evidence indicates that symptoms associated with AD include a longer and more severe depressive episode and a greater risk of suicidal behaviour than compared with the more traditional, melancholic depression (Weinstock et al., 2011). To ensure that healthcare providers are delivering the best form of intervention, it is essential to explore every available treatment option. This study investigates another form of treatment; the implementation of a group-Cognitive Behaviour Therapy (CBT) intervention aimed at atypical depression (AD), with a focus on how social identity theory can influence efficacy.

### **1.2 Atypical Depression**

The symptoms of atypical depression are significantly different from those seen in melancholic depression. A major difference between the conditions is that for those with melancholic depression, individuals do not experience a positive mood after an optimistic event has occurred (Gili et al., 2012). Many other symptoms (hypersomnia, hyperphagia and weight gain) are also opposite to those of traditional, melancholic depression.

#### *1.2.1 The DSM diagnosis of Atypical Depression*

Atypical depression (AD) was firstly recognised as a Major Depressive Disorder (MDD) in the 4<sup>th</sup> edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM) (Weinstock et al., 2011). For a person to be diagnosed with AD, in the same two-week period, they must demonstrate symptoms of mood reactivity – characterised by at least a 50%

mood improvement after a positive event has occurred. In addition, a person must experience at least two out of the five following criteria: hypersomnia (sleeping more than 10 hours a day), leaden paralysis (feeling that one's limbs are weighed down), hyperphagia (overeating or increased appetite), weight gain, and interpersonal rejection sensitivity (hypersensitive to criticism or rejection that can result in avoidance) (Weinstock et al., 2011; Jarrett, 1999).

### *1.2.2 Complications associated with Atypical Depression*

Studies have indicated that those suffering from AD compared to melancholic depression experience an earlier age of onset, longer depressive episode duration, greater overall depressive symptom severity, greater impairments in social adjustment, and a greater risk of suicidal behaviour (Weinstock et al., 2011; Agosti & Stewart, 2001). In addition, AD is associated with higher rates of comorbid anxiety, substance abuse, somatisation disorder, bipolar II, social phobia, binge eating, sociopathy, and neurasthenia (fatigue, irritability, and emotional disturbance) than MDD (Lojko et al., 2015; Angst et al., 2002). Along with these physical distresses, those with AD also experience self-esteem instability (van Tuijl et al., 2018).

## **1.3 The Concept of Self-Esteem**

The notion of self-esteem is important when discussing AD and social identity theory, as the premise of the theory explains how social groups the individual belongs to can influence their self-esteem (Tajfel & Turner, 1979).

### *1.3.1 Defining Self-Esteem and Social Identity Theory*

Multiple studies have come to a similar conclusion that the notion of self-esteem is quite elusive, with interpretations of the meaning varying across research (Harmon-Jones et

al., 1997; Leary & Baumeister, 2000; Robinson et al., 2013). For example, terror management theory explains that higher self-esteem protects an individual from concerns about one's mortality (Harmon-Jones et al., 1997). Sociometer theory describes self-esteem as a gauge that monitors the degree to which an individual is valued or devalued as a relational partner (Leary & Baumeister, 2000). More commonly understood is the definition from the social science perspective, which describes self-esteem as the evaluations one has toward their own worth, value, and importance (Robinson et al., 2013), and thus will be the definition that will be employed when applying the concept of self-esteem in this study.

Social identity theory proposes that the groups that an individual belongs to, such as family, sports team, or class in school, help establish the individual's self-esteem (Tajfel & Turner, 1979). Self-esteem is developed through the process of self-verification that occurs within the social groups that the individual is involved with (Cast & Burke, 2002).

An important factor to consider when discussing social identity theory is group cohesiveness, as it can determine whether individuals in the group will experience an increase in their self-esteem (Abrams & Hogg, 1988). Group cohesiveness is established through the mutual liking between members, and when this is demonstrated, members begin to feel a sense of belonging, leading to increased self-esteem (Abrams & Hogg, 1988). Along with increasing the individual's self-esteem in the group, group cohesiveness is important as it can form the motivational network that guides the behaviour of members to work towards a common goal (Abrams & Hogg, 1988).

### *1.3.2 Self-Verification*

The process of self-verification within groups occurs when role identities are verified, seen when the individual believes their behaviour matches their understandings, meanings, and feelings of a certain role or situation (Cast & Burke, 2002). The individual's belief of

what a role entails is reinforced through self-verifying feedback, such as reflected appraisal and social comparisons from others in the group (Cast & Burke, 2002; Burke & Stets, 1999). For example, a person who is attending university would believe their role as a student is to attend classes and complete assignments, and when their behaviours match these ideas, their role identity as a student becomes validated. To reinforce the idea that their behaviour matches their understanding, they would observe other people attending classes and completing assignments, just as they are, and this would act as a social comparison form of self-verifying feedback.

As role identities are verified, an individual's worth-based (worth) and efficacy-based (competency) self-esteem is established and this self-esteem is used to maintain individual and social relationships (Cast & Burke, 2002). When the process of self-verification becomes disrupted, it can result in negative emotional consequences, such as symptoms of depression and anxiety (Cast & Burke, 2002).

#### **1.4 Self-Esteem and Atypical Depression**

While self-esteem is not an explicitly documented symptom of MDD (Weinstock et al., 2011; Jarrett, 1999), the symptoms described, feelings of worthlessness and hopelessness, are described as potential symptoms (Stewart & Harkness, 2012), and when indicated, suggest that the individual is experiencing features associated with low self-esteem. This was demonstrated in a study that explored the individual's worth when experiencing depression, with results indicating that people who have negative thought patterns regarding their worth have a higher chance of experiencing lowered self-esteem and an increase in depressive symptoms ( $\beta = .28, p = .05$ ) (Crocker & Park, 2003). Due to the incredibly close relationship between depression and self-esteem, it has been theorised that these constructs are highly interdependent (Michalak et al., 2011; Hankin et al., 2007). Addressing self-esteem in the

treatment of depression is likely to act as a protective factor in preventing relapse. Additionally, the vulnerability model of depression suggests that low self-esteem can contribute to the development of depression (Sowislo & Orth, 2013; Orth et al., 2016), and so, methods of increasing self-esteem to people who may be at risk of developing depression may result in a higher chance that unhealthy thought patterns will be prevented. It is therefore important to address self-esteem issues in people who have depression, in conjunction with assisting those who have no diagnosis of depression but have low self-esteem concerns.

#### *1.4.1 Self-Esteem and Overweight Issues*

The characteristics associated with AD, such as being overweight and impairments in social adjustment, can also contribute to persistent feelings of low self-esteem. Links between obesity and self-esteem indicate people who are overweight experience significantly lower levels of self-esteem (Franklin et al., 2006), and this contributes to feelings of body dissatisfaction, social rejection, and perceived reduced self-worth (Miller & Downey, 1999). Miller and Downey (1999) explored the experiences of people who are overweight with results demonstrating that they feel stigmatised and perceive negative views from others. Stigmatisation and perceived judgement can lead to overweight people devaluing themselves and ultimately experiencing a decline in their self-esteem (Miller & Downey, 1999; Nestler & Egloff, 2013). Not only does being clinically overweight affect levels of self-esteem, but the perception itself of being overweight, can also have detrimental effects (Perrin et al., 2010). For example, a study by Perrin et al. (2010) demonstrated that even individuals in the lowest Body Mass Index (BMI) quartile (indicating a BMI furthest from the overweight range) feelings of low self-esteem were brought on by their perceived idea of being overweight (Perrin et al., 2010).

In conjunction with the negative views in people who experience low self-esteem, there is evidence showing those suffering from AD are at greater risk of suicide (Weinstock et al., 2011). Due to this correlation, it is essential that interventions for AD be designed to increase self-esteem in individuals who are overweight and depressed.

## **1.5 Individual Cognitive Behaviour Therapy vs. Group Cognitive Behaviour Therapy**

Since the 1970's, Cognitive Behaviour Therapy (CBT) has been used as an effective form of intervention when treating depression, and has been shown to be as effective, and have more beneficial longer-lasting effects, than antidepressant medication (Mark & Williams, 1984).

### *1.5.1 What is Cognitive Behaviour Therapy?*

CBT aims to identify and change thoughts and behaviours that can cause depressive symptoms for an individual. CBT is designed to teach techniques to prevent these thoughts and behaviours from occurring in the future, and increase a perceived sense of control over the individual's life (Nardi et al., 2017). When using CBT to treat people who have depression, it is of the utmost importance to create a positive therapeutic relationship, as this will aid the grieving and treatment process when issues in early childhood and current relationships are discussed (Power, 2013). Once this positive relationship is established, it is recommended that CBT be delivered in a step-by-step format that provides the therapist with a guideline to navigate the client through various stages (Gilbert & Leahy, 2007). CBT is beneficial in treating the symptoms of depression (Lepping et al., 2017) with some individuals preferring the psychological intervention to antidepressants due to the belief that drugs may reduce alertness, and that they may become addictive (Prins et al., 2008). It is also shown that those who undertake CBT in comparison to antidepressants are more likely to

avoid depression post-treatment, whereas ceasing antidepressant medication can result in relapse (Sochting, 2014).

### *1.5.2 Individual CBT and Group CBT*

Group-CBT is designed to follow the same steps as what would be conducted in an individual- setting; however, there are certain challenges that may arise due to the group aspect that are essential to address each of these. First, it is important to establish a strong group dynamic, as this will guide the experience of group members and whether interactions will contribute to positive changes (Sochting, 2014). A strong group dynamic can become difficult to develop when the facilitator(s) does not have the expertise in managing the emotional connections or interactions between themselves and members, therefore it is crucial to have another facilitator present, or commit to a smaller, more controllable group (Sochting, 2014). Creating and working towards a common goal between members and the facilitator(s) is another key aspect to administering effective group-CBT. Difficulties may arise due to the differing opinions and personal goals that each member already holds (Sochting, 2014), and so, a common understanding of respecting each person's beliefs must occur prior to goal setting so conflict is avoided.

Although effectively administering CBT to a group does provide some challenges, there are many potential benefits for members that only occur when CBT is implemented in a group setting. From a financial point of view, group-CBT is less costly to implement, as fewer sessions are required to achieve the same results as someone who is undertaking individual CBT (Sochting, 2014). A key benefit for members of group-CBT is the social aspect of being in a group and being presented with an opportunity to form relationships. Group-CBT allows for communication between members to occur (Nardi et al., 2017), which can encourage peer modelling, positive reinforcement from other members, giving and

receiving feedback, and an opportunity to expand their communication skills (Rosselló et al., 2012).

### *1.5.3 Group CBT and the Treatment of Depression*

In the treatment for depression, group-CBT is slowly becoming a more researched and used form of intervention, with findings from the literature indicating that group-CBT is as effective as individual-CBT in treating depression (Sochting, 2014; Tucker & Oei, 2007; Nielsen, 2015; Lockwood et al., 2004). Participants indicate that there is no significant difference between group-CBT and individual-CBT in regards to their satisfaction during the intervention process, and no significant difference in rates of dropout for both (Brown et al., 2011). Group-CBT is a replicable intervention that can be facilitated by a trained therapist using a therapy manual, which is an important factor to consider when evaluating the interventions' reliability (Wilkinson et al., 2009).

Unfortunately, Group-CBT has only been used when exploring the most effective interventions for those suffering from melancholic depression, not atypical depression. As there are no comprehensive group-CBT treatment guidelines for AD (Lojko & Rybakowski, 2017), the research has predominately focused on the efficacy of different types of antidepressants for those suffering from this illness (Henkel, 2006). Consequently, further research will need to be undertaken in order to fully understand the advantages of group-CBT for those with AD, which is what this study aims to explore.

## **1.6 Social Identity Theory and Group Cognitive Behavioural Therapy**

As social identity theory suggests that social group membership influences self-esteem (Aviram & Rosenfeld, 2002), it could be suggested that group-based CBT would serve as a beneficial intervention for those who suffer from AD. In a previous study exploring social



identity theory and the benefits of group therapy for adults with mild mental retardation [*sic*], a psychotherapy intervention aiming to create positive relationships and enhance collective self-esteem between members of the group was implemented (Aviram & Rosenfeld, 2002). Findings from this study indicate that having groups of individuals, who share similarities, increases the sense of belonging and the formation of relationships, which ultimately increases self-esteem (Aviram & Rosenfeld, 2002). As the results of this study successfully show that forming a group identity (and having this identity validated through shared commonalities and social comparisons within the group), leads to improved self-esteem, it would be beneficial to implement a similar intervention for those suffering from AD. Unfortunately, this type of study is yet to be conducted.

### **1.7 The Current Study**

It has been outlined that there are no existing comprehensive guidelines for treating those who are suffering from AD (Lojko & Rybakowski, 2017), therefore the current study intends to explore the role of social identity theory in group-based CBT with individuals suffering from atypical depression. This will be explored through the guidance of the following aims and hypotheses:

- a) **Aim 1:** To determine whether group-CBT results in a decrease of atypical depression symptoms in participants.

**Hypothesis 1:** It is expected that compared to Time 1, depression scores at Time 2 will be significantly lower.

**Hypothesis 2:** It is expected that depression scores will be sustained from Time 2 to Time 3.

b) **Aim 2:** To determine whether there is evidence of social identity theory in this group CBT setting.

As there is minimal research exploring the role of social identity theory in group-CBT, this is strictly exploratory. Furthermore, self-esteem scores and interview responses will be included in this exploration as group identity verification is demonstrated through the increase in self-esteem, and interview responses can be analysed to gain an understanding of how individuals felt being part of this group.

**Hypothesis 3:** It is expected that compared to Time 1, self-esteem scores at Time 2 will be higher, and interview responses will reflect a feeling of belonging to the group for individuals.

## **Method**

### **2.1 Participants**

Participants for this study were accessed through recruitment for a larger study titled 'Results from a pilot trial of a new group psychological intervention program for people with both depression and overweight' (Lores et al., ACTRN12617001079336#) that was being conducted at the South Australian Health and Medical Research Centre (SAHMRI). Recruitment for this study was conducted via SAHMRI online where people could provide their details if they wished to volunteer and participate in research. To be eligible, participants must have been aged between 18-65 years, have a BMI in the overweight or obese categories (25+), and scored above the clinical cut-off of 5 on the Patient Health Questionnaire (PHQ-9 – a brief self-report measure for depression) (Kroenke et al., 2001). Potential participants who fit the eligibility criteria were contacted and provided with an information sheet and consent form for the larger SAHMRI study.

The larger study conducted at SAHMRI held two intervention trials, one in September 2017 (Group 1) and the other in March 2018 (Group 2). Quantitative statistics and feedback forms from both groups were accessed to triangulate with the interview responses from Group 2. A total of 24 participants enrolled in the SAHMRI study (Female = 14, Male = 9, Undisclosed = 1), and were aged between 28-64 ( $M = 46.39$  years,  $SD = 10.08$ ). During the study, a total of six participants decided to withdraw. Therefore, data were collected for 18 participants ( $F = 12$ , mean age = 46,  $SD = 10.73$ ), with 9 participants in each group. This current study used a mixed-methods within subjects design.

### **2.2 Materials**

Participants underwent assessment at three time points: pre-intervention (within two weeks prior to the group program) (T1), post-intervention (within two weeks after completion

of the group program) (T2), and three months post-intervention (T3). At these three time points, participants were assessed on their basic metric measures (weight), depressive symptoms, and levels of self-esteem. In addition, at T3 participants were also invited to partake in an interview that would form the qualitative component of this study.

### *2.2.1 Basic Metric Measures.*

Basic metric measures consisting of participants' weight (kg) were obtained at all three time points.

### *2.2.2 Hamilton Depression Rating Scale (HAM-D) (Hamilton, 1960).*

The HAM-D aims to assess the severity of, and change in, depressive symptoms for an individual (Appendix A). 17 items are answered based on a structured interview, taking 20 to 30 minutes to administer. Total score ranges from 0 to 50, with a clinical cut-off of 8. Scores between 0-7 indicate normal functioning, 8-13 indicate mild depression, 14-18 moderate depression, 19-22 severe, and 23 and above very severe. The HAM-D shows high internal reliability (.91), high test-retest reliability (.96), and indicates high convergent validity with the Rosenberg Self-Esteem Scale (-.72) (Reynolds & Kobak, 1995). The HAM-D was administered at all three time points by SAHMRI researchers.

### *2.2.3 Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965).*

The RSES measures global self-worth by measuring both positive and negative feelings about the self (Appendix B). Participants rate their answers on a 4-point scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree), with a higher total score indicating higher self-esteem. The RSES shows high internal reliability (.92), excellent to good test-retest reliability from one week (.82) to six months (.63) respectively, and high

convergent validity with the HAM-D (-.72) (Rosenberg, 1979; Fleming & Courtney, 1984; Reynolds & Kobak, 1995). The RSES was administered at all three time points.

#### *2.2.4 Qualitative Questions*

At T3, participants in Group 2 were invited to partake in a 10-minute interview designed to capture the individuals' experience regarding the group intervention. The interviews were only conducted for Group 2 participants, as Group 1 underwent the intervention in 2017 and were not accessible for the current study. Using the data and feedback forms for Group 1 was deemed beneficial as this would result in more rich, insightful data, as well as establish triangulation across the qualitative and quantitative methods of data collection for both groups. For the Group 2 interviews, the 6 questions chosen (Table 1) were adapted from Cameron's 'Three-Factor Model of Social Identity' (2004), and were designed to avoid the notion of social identity theory in order to gain non-biased recollections of participant experiences in the program. The open-ended interview was also administered in a non-biased manner, however, the overall aim was to discover whether there was evidence of participants forming a group identity and ultimately experiencing an increase in their self-esteem, which serves as the basis of social identity theory. Two researchers were present during six of the nine interviews, both noting participants' responses to provide evidence for reliability with responses. On three occasions, only one researcher was present, due to conflicts with availability. Along with Group 2's interview responses, answers on a feedback form administered at T2 for both groups were used in the analysis. Responses were analysed using a theoretical thematic analysis approach (Braun & Clarke, 2006), where the results reflected themes relating to answers provided at these interviews. Further details on the procedure are given below.

*Table 1: Interview Questions*

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1	What can you tell me about your time during the course?
2	What was the best thing about the course?
3	What was the worst thing about the course?
4	How did you overcome any challenges you experienced during the course period?
5	Tell me about your experience of doing the course as part of a group?
6	What are some of the pros and cons to group formats based on your personal experience?

### **2.3 Procedure**

The Flinders University Social and Behavioural Research Ethics Committee (SBREC) granted ethics approval for the study (Project No. 7601). Individuals who had shown interest via SAHMRI online and were eligible for the study were contacted and given a participant information sheet and consent form. The information sheet explained that the study consisted of ten weekly group sessions that were aimed at targeting both depression and overweight/obesity. Once informed consent was obtained, participants were required to undertake initial measures of basic weight metrics, depression, and self-esteem that would provide the pre-intervention (T1) data. Participants then underwent a ten-week group intervention facilitated by a Psychologist (TL) and Senior Research Fellow (MM) employed by SAHMRI, where each weekly session was designed to address issues associated with depression and being overweight. Cognitive Behaviour Therapy (CBT), Acceptance, and Mindfulness techniques were used with the aim of implementing new thought and behaviour patterns in participants. Session topics are outlined in Table 2.

Post-intervention (T2), participants were invited back to complete the basic weight metrics, depression, and self-esteem measures, along with a feedback form regarding the intervention. Three months post-intervention (T3), participants were invited back to complete

the same measures, and those in Group 2 were also invited to partake in an interview that consisted of open-ended questions about their experiences during the intervention. These interviews formed the qualitative component of this study, along with the feedback forms from two weeks post intervention. Informed consent (Appendix C) for the interview was obtained from Group 2 participants who were made fully aware that their responses would help provide data for an Honours thesis. Confidentiality and anonymity were maintained within the study through the removal of names and participant ID codes on feedback forms and interview responses.

Theoretical Thematic Analysis was used to analyse qualitative interview data, using guidelines developed by Braun and Clarke (2013) outlining the steps to conduct this. Once the feedback forms and transcripts from the interviews were collected, the following steps were undertaken: 1) familiarising oneself with the data, through reading and re-reading 2) initial code generation through finding interesting features 3) searching for emerging themes 4) reviewing these themes against the coded data and entire dataset 5) refining, defining and naming these themes and 6) confirming the analysis through comparing it to the research question and literature.

To ensure rigour and trustworthiness for the final themes identified, the qualitative data was triangulated with results collected from the self-esteem scores to offer a richer, more accurate insight into the understanding of social identity theory in group-CBT. To further provide rigour and trustworthiness, the final themes were reviewed against the qualitative raw data by the primary supervisor. The researcher also kept an audit trail when giving interviews and undertaking the theoretical thematic analysis (Appendix D). As interviews were not recorded, detailed notes were taken and analysed. Member reflections (Tracy, 2010) were conducted after the interview where participants were invited to retract or add any information to satisfy credibility and ethical obligations to participants.

*Table 2: Outline of Program*

<b>Session</b>	<b>Topics Discussed</b>
1	Introduction
2	Education
3	Movement
4	Awareness
5	Emotion Regulation
6	Thinking
7	Challenging
8	Self-value
9	Broader Health
10	Future Directions



## Results

### 3.1 Inspection of Data

A one-way repeated measures ANOVA was conducted to test the two hypotheses; determining whether depression scores decreased significantly from two weeks before the intervention (T1), to two weeks post intervention (T2), to three months post intervention (T3), and exploring whether self-esteem scores increased from T1 to T2 to T3.

Firstly, boxplot and Shapiro-Wilk tests were run to determine whether outliers were present in the dataset and to test for normality, respectively. Boxplots revealed that depression and weight scores had no outliers present for any time points. Self-esteem scores displayed an outlier for T2, however this was left as further investigation discovered that the result of removing the score would not alter significance. Shapiro-Wilk tests determined that data were normally distributed ( $p > .05$ ) for depression (HDRS), self-esteem (SE) and weight (Table 3). The Shapiro-Wilk test was used, as the sample size was less than 50 participants. Finally, the assumption of sphericity was met, determined by Mauchley's Test of Sphericity, for depression ( $\chi^2(2) = .729, p = .695$ ), self-esteem ( $\chi^2(2) = 4.468, p = .107$ ) and weight ( $\chi^2(2) = 2.299, p = .317$ ).

Table 3: Shapiro-Wilk Results

Shapiro-Wilk			
	<b>Statistic</b>	<b>df</b>	<b>Sig.</b>
T1_SE	.962	18	.647
T2_SE	.907	18	.076
T3_SE	.950	18	.420
T1_HDRS	.916	18	.112
T2_HDRS	.935	18	.240
T3_HDRS	.923	18	.149
T1_Weight	.955	18	.515
T2_Weight	.956	18	.527
T3_Weight	.945	18	.355

Note. SE = Rosenberg Self-Esteem scores; HDRS = Hamilton Depression Rating Scores

### 3.2 Descriptive Statistics

Preliminary analyses did not reveal any significant effects of gender on weight (kg), depression or self-esteem measures ( $p > .05$ ); therefore combined values for each time point are provided for each variable in Table 4. Weight (kg) slightly increased from Time 1 (M = 109.83, SD = 20.9) to Time 2 (M = 110.26, SD = 19.46) to Time 3 (M = 110.64, SD = 20.07) but these changes were not statistically significant,  $F(2,34) = .575$ ,  $p = .568$ ,  $\eta^2 = .033$ .

Table 4: Mean (SD and Range) for variables at each time point

<b>Variable</b>	<b>Mean</b>	<b>SD (Range)</b>
T1_SE	23.41	6.56 (13-39)
T2_SE	26.41	2.25 (20-30)
T3_SE	25.47	5.65 (16-34)
T1_Dep	15.94	5.82 (6-23)
T2_Dep	7.67	4.63 (1-17)
T3_Dep	6.78	5.02 (0-16)
T1_Weight	109.83	20.09 (81.5-144)
T2_Weight	110.26	19.46 (77.1-139.6)
T3_Weight	110.64	20.07 (75.2-138.9)

## **3.2 Test of Hypotheses**

### *3.2.1 Depression*

The group intervention elicited statistically significant changes in depression scores over time,  $F(2,34) = 28.97, p < .001, \eta^2 = .630$ , indicating a large effect (Cohen, 1992). Specifically, depression decreased from Time 1 ( $M = 15.94, SD = 5.82$ ) to Time 2 ( $M = 7.67, SD = 4.63$ ) to Time 3 ( $M = 6.78, SD = 5.02$ ). Post hoc analysis with Bonferroni adjustment revealed that depression scores significantly decreased from T1 to T2 ( $M = 8.27, 95\% CI [11.42, 5.14], p < .001$ ), and from T1 to T3 ( $M = 9.16, 95\% CI [12.92, 5.41], p < .001$ ). Depression scores decreased from T2 to T3, however this was not significant ( $M = .089, 95\% CI [4.54, 2.77], p = 1$ ).

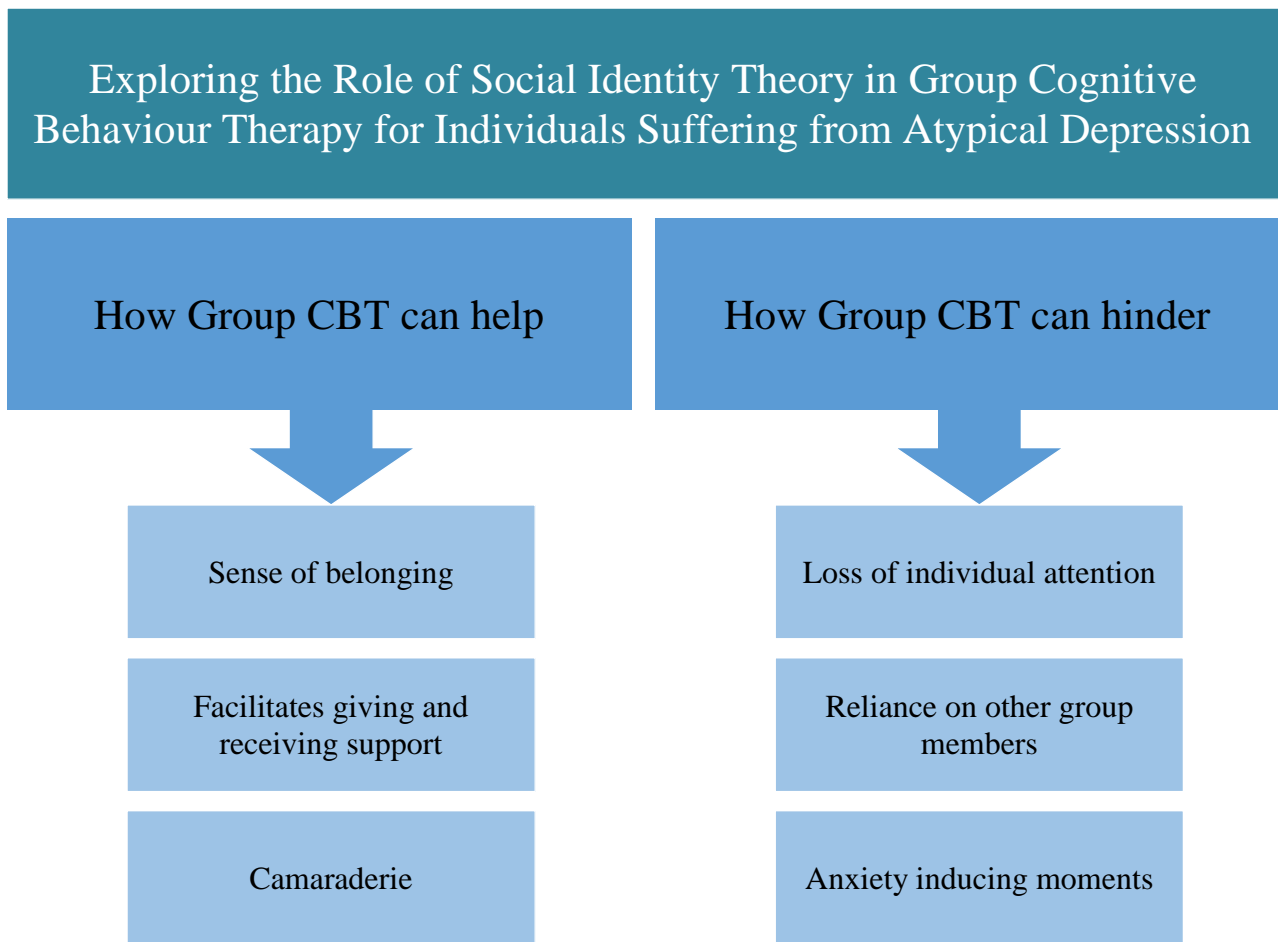
### *3.2.2 Self-Esteem*

The group intervention elicited an increase in self-esteem from Time 1 ( $M = 23.42, SD = 6.56$ ) to Time 2 ( $M = 26.42, SD = 2.25$ ) however, this change was not statistically significant and indicates a medium effect (Cohen 1992),  $F(2,34) = 2.980, p = .064, \eta^2 = .149$ . From T2 to T3 ( $M = 25.47, SD = 5.65$ ), self-esteem decreased, but this change was not statistically significant.

## **3.3 Qualitative Content Analysis**

Participants were able to share their experiences of the intervention via feedback forms at T2, and for Group 2, through the interview responses from at T3. From these experiences, the final themes identified were; (1) How group CBT can help, and (2) How group CBT can hinder, both of which contain several subthemes (Figure 1).

Figure 1: Structure of Themes



### 3.4 How Group CBT can help

Participants discussed the positive aspects to group-CBT in terms of having a sense of belonging, the facilitation of giving and receiving support, and camaraderie.

#### 3.4.1 Sense of belonging

An overwhelming factor emerging from participants' responses was the positive impact that belonging to a group had offered. Belonging was commented on when participants were reflecting on the benefits of being in the group, and how this improved their wellbeing and the experience they had. The group environment allowed participants to “be

*part of a group with a goal*” (Participant 10) and this was established in the early sessions of the intervention. Another prevalent response from feedback and interviews was the benefit of others in the group having the same experiences, and how this resulted in the opportunity to learn from others, not only from the facilitators. The responses aligning with this theme were most consistent with existing literature illustrating the importance of belonging to a group to help increase one’s self-esteem and how the feeling of belonging to a group is a major benefit of group-CBT (Tajfel & Turner, 1979; Sochting, 2014). This sense of belonging is well illustrated by the following quotes from participants.

“I liked that we were given the ability to share and discuss in a group of like-minded people.” (Participant 1)

“We are all quite similar; I can see commonalities in the way we deal with problems.” (Participant 2)

“Because I’m not at work, I’m isolated at home... so it was important for me to be part of a group ... To know I’m not alone.” (Participant 3)

#### 3.4.2 *Facilitates giving and receiving support*

The environment that the groups established enabled participants to feel comfortable when discussing personal experiences. It was expressed that having a “*safe environment where everyone could open up*” (Participant 4) was important and encouragement from others was appreciated. In responses, it was relayed that the group environments were a safe space, which was instrumental in whether participants felt comfortable discussing their thoughts and feelings as a part of the session. Participants also stated that the resources that other members and the facilitators could offer (in the form of experiences from other members, informative

handouts, and information given in the sessions from facilitators) were beneficial for participants to understand themselves and their disorder better. For example;

“When someone shared and felt emotional, others were supportive and let the person know they weren’t alone.” (Participant 5)

“Found (being a part of a group) to be more beneficial than getting advice from “biased” family and friends.” (Participant 6)

“It is a safe supportive space where you can say whatever with no judgement from others in the group” (Participant 7)

“The CBT model was a HUGE break for me – I no longer felt weak, stupid and inadequate for being stuck in the cycle; I saw for the first time how crazy and complicated the web is and that it is ok to need help to break free; I actually have hope for the first time in years” (Participant 16)

### *3.4.3 Camaraderie*

The camaraderie theme emerged from responses that valued building friendships and being accountable to those in the group. As some of these participants had undergone individual-CBT in the past, direct comparisons could be made in regards to the impact having others in the group can have. Particular responses focused on how the ‘accountability to others’ factor of group-CBT is unique and can directly influence the rate of attendance, with comments describing that being accountable to other members in the group and not just a therapist changed their behaviour. Participants mentioned that the opportunity to meet new people and have these people be a part of the group made the experience more memorable and successful. As a symptom of atypical depression is interpersonal rejection sensitivity, which can result in avoidance, some of these participants had experienced this isolation and

commented on how the opportunity to make friends with others who experience the same symptoms has “*helped their mental state*” (Participant 17). Further examples are well illustrated below.

“Being accountable while the course was going... it helps you to follow through more... being accountable to someone else helps” (Participant 8)

“The group setting was good because... it’s so good to make friends and see others open up because people trusted each other.” (Participant 5)

“I liked meeting new people and it was an enjoyable experience – I’m sad about (the program) ending.” (Participant 9)

### **3.5 How Group CBT can hinder**

Participants were also given the opportunity to discuss any negative experiences that they had during their time in group-CBT. In these responses, it was found that the loss of individual attention, reliance on other group members, and anxiety inducing moments were negative aspects.

#### *3.5.1 Loss of individual attention*

A main concern was that group-CBT does not allow for any facilitator-to-individual interactions to occur. Loss of individual attention was raised in cases where sessions evoked emotions, resulting in “*reflections or thinking about self increased depression*” (Participant 11) which couldn’t be addressed with one-on-one discussions with the facilitator afterwards. For one participant, the experience of opening up and discussing their feelings resulted in them falling into a ‘deep slump’, as they normally avoided thinking about their problems and just stayed busy (Participant 18). Unfortunately, as it is difficult to debrief in group-CBT

situations, circumstances like this aren't further pursued, which can impact the individuals' wellbeing, as illustrated below.

“Sometimes the group was quite big which made it hard to have your say – a few people dominated the discussion periods.” (Participant 12)

“Some things you can't bring up in front of a group.” (Participant 5)

“There's a lack of one-on-one time so you can't dig in on one issue – can't individualise.” (Participant 13)

### *3.5.2 Reliance on other group members*

A component of CBT is to complete homework between sessions, and it was found that this aspect caused some adverse reactions from those who completed the homework towards those who didn't. Responses regarding the homework factor were divided into 'those who completed it', and 'those who did not complete homework', and it appeared as though there was some resentment towards those who did not complete homework from those who did. As homework was discussed at the beginning of each session, it would take longer to explain concepts if people did not complete homework, and therefore, start taking up the session time dedicated to the next issue. As shown in extracts below, members who completed the homework were upset at this and would suggest that sessions last longer to ensure that facilitators did not have to rush.

“It must be hard for you when people don't do their homework – sorry that was me most of the time.” (Participant 14)



“I think the program and participants would benefit more if homework was done. There were many instances where homework was not done, but as we had to move on, there was no way to complete the assignment.” (Participant 15)

“I think the program and participants would benefit more if homework was done; participants have depression so there are barriers to completion of assignments.” (Participant 19)

### *3.5.3 Anxiety inducing moments*

Participants commented that there was some anxiety when revealing personal information as a part of a group and due to this, there was apprehension towards discussing ideas as a part of the group. Members commented that there was discomfort before the intervention began, as individuals had not met other members prior to the first session. The first session was an introduction session, however goal setting was completed in this session and therefore personal goals of members had to be raised. This provoked feelings of anxiousness as the group was new and unfamiliar and these goals were personal. There were also moments of anxiety and hesitation when individual attention was given to certain members during a session, and some of these are outlined below.

“Initially I was scared and negative... I came in thinking I would get nothing out of it.” (Participant 9)

“It can be uncomfortable until you know who you can share with.” (Participant 3)

“(The worst thing about the course is) the anxiety before every session and when the spotlight is on me.” (Participant 10)

## **Discussion**

### **4.1 Overview**

The purpose of this research was to explore the role of social identity theory in group-CBT for individuals suffering from atypical depression. The specific aims for this study were to determine whether group-CBT results in a decrease of atypical depression symptoms in participants, and to explore whether there was evidence that group identity formation and verification had occurred in this group-CBT setting. Using a mixed methods design, individuals' depression and self-esteem levels were measured at three time points; two weeks prior to the intervention, two weeks post intervention, and three months post intervention. Participants' weight data were collected at all three time points to determine the effectiveness of group-CBT in regards to weight management. At the three months post intervention time point, participants in Group 2 were invited to partake in a short interview, discussing their experiences of the intervention, which formed the qualitative aspect of this study and assisted with identifying if the self-verification factor of social identity theory had occurred. This is the first study to explore the role of social identity theory in group-CBT, using participants who have AD.

### **4.2 Summary of Findings**

Results from the current study revealed several insightful findings, in support of each hypothesis. First, it was found that depression scores significantly decreased from Time 1 to Time 2, indicating that the group-CBT intervention was effective in reducing atypical depression symptoms, and this result displayed a large effect, supporting hypothesis one. Depression results from Time 3 were lower than that of Time 2, indicating depression scores slightly improved three months after the group intervention had concluded, supporting hypothesis two. Finally, a major theme that emerged from interview responses was the

individuals' 'sense of belonging' in the group. This, in conjunction with self-esteem scores increasing from Time 1 to Time 2, results in the partial support of hypothesis three, proposing the importance of group involvement for increasing one's self-esteem. The implications of these findings are discussed below.

#### *4.2.1 Atypical Depression and Group CBT*

Results from this study highlight the advantages of group-CBT for treating individuals with atypical depression, in addition to providing initial knowledge to the literature regarding the benefits of this intervention for those with AD, an area previously unexplored. Implementing a group-CBT intervention for AD sufferers has resulted in several positive outcomes. This study was also able to identify the adverse features of group-CBT, as reported by participants who have experienced this form of intervention directly.

First, this study identified that group-CBT is significantly effective in reducing the symptoms of AD in diagnosed people. Prior to the intervention, participants presented with a 'moderate depression' average diagnosis score, with this score improving to be classified in the 'normal' range two-weeks after the intervention. It is noteworthy that this normal score diagnosis was maintained three months post intervention, indicating that three months after the group intervention had concluded, participants had not relapsed. This was a noteworthy outcome as it provides support for the efficaciousness of group-CBT in treating AD and provides evidence for the benefits of implementing a similar intervention in future practice. Similar to previous literature, this study has been able to mirror results indicating that group-CBT is significantly effective in reducing symptoms of depression (Nielsen, 2015; Sochting, 2014; Lockwood et al., 2004), and that participants undertaking group-CBT are less likely to experience depressive symptoms upon ceased treatment (Hollon, 2011). This was observed in

the maintenance of the normal diagnosis of depression in participants three months after the intervention had completed in this study.

Observing participants' weight results in this study, an increase is seen from pre—intervention, to post-intervention, to 3-month post-intervention, which was not expected. Due to the nature of the intervention, improvements in weight were expected as some sessions were designed to provide knowledge and strategies regarding losing weight and accepting the self. Although results did not reflect what was expected by this intervention, they do mirror other studies. Fabricatore et al. (2011) conducted a systematic review into weight loss and changes in symptoms of depression, with results indicating that reductions in symptoms of depression cannot be fully explained by weight loss, and instead could be due to the encouragement of self-acceptance. The current study reflects comparable results, as participants' symptoms of AD significantly reduced, even without a reduction in their weight, which could be explained through the promotion of self-acceptance during the group-CBT intervention. This outcome is promising and adds to the growing literature concerning body image perceptions and how important self-acceptance is in the reduction of symptoms of depression.

Qualitative responses from participants stated that the resources given throughout the intervention, through experiences from other members and information given by the facilitators, were all integral in fostering a better understanding of themselves and their depression. Participants felt more equipped at identifying and managing negative cognitions and feelings, and this could explain why there was no relapse three months after the conclusion of the group. Despite limited research being published regarding the use of group-CBT in treating atypical depression, it can be suggested that regardless of the depression diagnosis, melancholic or atypical, group-CBT is a beneficial form of treatment that is shown to prevent relapse in the future.

When further assessing qualitative responses from participants in regards to their experience of group-CBT, it is evident that the influence of other members in the group has had an effect on the results of this study. A major theme that emerged was ‘camaraderie’, where individuals expressed that accountability to others in the group was what helped them continue with the intervention. One participant commented on how being accountable to someone else in the group is what has made them follow through with the commitment (Participant 8), a feature of group-CBT that is unique to this intervention. This notion has been explored in past literature regarding the treatment of melancholic depression with group-CBT, with Brown et al. (2011) and Lockwood et al., (2004) reporting no significant difference in rates of participant dropout between group-CBT and individual-CBT in their research. The results from these studies could be explained by the ‘accountability to other members in the group’ comments that have been discussed by participants in the current study, and can explain the underlying reason explaining the limited dropouts in group-CBT; however, further research regarding dropout rates between individual-CBT and group-CBT concerning AD participants is required to gain a thorough understanding.

Conversely, participants commented on the challenges experienced due to the group format. Aligning with the literature, a theme that was recognised in this study was the lack of individual attention, a major hindrance to group-CBT when treating depression. Previous literature has revealed that due to the loss of individualisation that occurs in a group-CBT setting, participants involved can become irritated when discussions are monopolised by individuals (Tucker & Oei, 2007); participants in this study disclosed identical feelings identified in the ‘loss of individual attention’ theme. Tucker and Oei (2007) also recognised that a disadvantage associated with group-CBT is the reluctance towards discussing disturbing thoughts or experiences due to others being present. Consistent with this, ‘anxiety inducing moments’ was a theme that emerged from participants’ qualitative responses. More

specifically, participants explained that there can be moments of discomfort before knowing who you can share with, but also there were other times where cognitions weren't voiced at all to the potential detriment of their wellbeing. On these occasions, group members were not exploring these thoughts and feelings that would otherwise be explored in individual-CBT. Opportunities to debrief after sessions would be beneficial to the individual, and with further research into group-CBT, the most appropriate way to address debriefing as part of a group can hopefully be identified.

#### *4.2.2 Social Identity Theory and Group CBT*

Literature exploring the role of social identity theory in group therapy is minimal, with only one study present exploring the experience of adults in a group therapy format (Aviram & Rosenfeld, 2002). For this reason, comparing results from the current study to those of previous investigations is difficult, however, the current study provides compelling evidence, and can guide future research, exploring the role social identity theory has in group-CBT, and the benefits of a group format for individuals who experience AD.

First, focusing exclusively on the description of social identity theory, it can be deduced that what has been experienced by those in this study mirrors the basis of this theory. Social identity theory proposes that the group an individual belongs to, and whether this group demonstrates group cohesiveness, acts as a source that helps establish an individuals' self-esteem (Tajfel & Turner, 1979). Group cohesiveness is determined through the mutual liking between members and through the indication that the individual feels a sense of belonging in the group (Abrams & Hogg, 1988). Most prominently aligning with this concept was the theme 'sense of belonging' that was identified from the qualitative data in this study. Participants identified that they 'weren't alone' (Participant 3), they could identify with others and they saw similarities with each other, all suggesting that participants felt like they

belonged to the group. Qualitative responses also demonstrated that the process of self-verification, an important component of forming a group identity and increasing one's self-esteem, had taken place. Cast & Burke (2002) and Burke & Strets (1999) explained that group identity is developed through self-verification, which is determined through reflected appraisal and social comparisons from others in the group. In the current study, the themes identified under 'how group CBT can help' included comments regarding reflected appraisal and social comparisons. For example, comments about seeing 'commonalities' with others (Participant 2) and being in a group with 'like minded people' (Participant 1) demonstrate social comparisons and reflected appraisal. Group cohesiveness and self-verification are therefore suggested to have occurred, which lends support to the applicability of social identity theory in group interventions. However, it is essential to explore further whether these concepts impacted positively on the self-esteem of participants, as what would be expected based on social identity theory.

In terms of quantitative assessment, self-esteem was found to increase from prior to the intervention to two weeks post intervention, and while this was not a statistically significant improvement, it is interesting to explore why this occurred. Examining this result from the perspective of social identity theory, it could be suggested that it was the presence of the group that influenced the increase in self-esteem. The idea that the presence of a group can influence self-esteem is further reinforced when observing Time 3 self-esteem data, which were collected three months after the conclusion of the group-CBT intervention, showing a decrease in self-esteem levels from Time 2 data. Again examining this result from the perspective of social identity theory, it could be reasoned that this result was influenced by the absence of the group. Although this discussion provides evidence to support social identity theory in group-CBT, it is important to acknowledge that alternative aspects of this study could have produced these results. Crocker and Park (2003) established that depression

and low self-esteem are influenced by negative thought patterns in the individual, and the concepts of self-esteem and depression are highly interdependent in regards to treatment. Previously, studies have indicated that when treating depression using therapies such as CBT, self-esteem levels in individuals improve concurrently with the decrease of depression (Chatterton et al., 2007; Wegener et al., 2015; Gardner & Oei, 1981). In the current study, changes in depression scores indicated a significant decrease, which provides an explanation for the increase in participants' self-esteem. In conclusion, results from this study display a potential explanation for the effectiveness of group-CBT by identifying aspects of social identity theory linked to increasing self-esteem; however, to better understand the position of social identity theory in group-CBT, further research into effectively measuring and detecting the construct is required. The increase of self-esteem from T1 to T2 is interesting to observe in this current study, but as there is no statistical significance further research will need to be explored to provide more evidence.

#### **4.3 Strengths and Implications**

The major strength of this study is that this is the first study to explore the relationship between AD, group-CBT and social identity theory. Results gathered have been able to successfully explore the role that social identity theory can play in the treatment of atypical depression through group-CBT, and have contributed to the knowledge-base regarding the benefits of group-CBT as an intervention for atypical depression. Due to minimal research exploring the relationship of social identity theory, atypical depression and group-CBT, it was imperative to find congruency between the results of this study and past literature concerning the three aspects separately. This has been successfully accomplished. Results from this study exhibit meaningfulness, accuracy, offer insights into the treatment of AD,



thus, providing a preliminary trustworthy option for treating AD, in conjunction with guiding future research into this previously unknown area.

Further, this study adheres to the guidelines of a good thematic analysis that have been established by Braun and Clarke (2006), through ensuring participant accuracy, extensive coding of the data and the use of extracts to illustrate each theme chosen. The current study also adheres to the qualitative research guidelines as determined by Tracy (2010), demonstrated through; the presence of triangulation, shown by using a quantitative and qualitative method to increase credibility, and ensuring an audit trail was kept by the researcher during the interview and data analysis phases to enhance authenticity and sincerity of the research.

The current study can be used to guide evidence-based practice in regards to treating atypical depression, as results have indicated group-CBT significantly reduces depression. Due to this, in future group-CBT can be implemented with a reduced concern regarding its effectiveness in treating depression. Specific insights and understandings concerning the positive and negative factors of group-CBT have been identified through qualitative analysis, and how these can help or hinder the group experience. Thus in future application of group-CBT, facilitators can identify hindrances early and act accordingly, ensuring factors such as individuals monopolising discussion and emotionally provoking instances, do not contribute to further distress among group members.

#### **4.4 Limitations and Future Recommendations**

First, the absence of a control group undertaking individual-CBT alongside this group-CBT study means no direct comparisons can be made between participant results. It would be beneficial for future research to explore individual-CBT and group-CBT simultaneously, to determine whether one is more effective in treating AD than the other.

Due to the lack of literature guidance, the presence of social identity theory was measured through the researchers' interpretation of how it could be measured based on Tajfel and Turner's (1979) description of social identity theory; self-esteem scores combined with qualitative responses. As a result, there is a chance this did not capture what is intended by theoretical constructs. Future research on social identity theory would benefit from outlining a comprehensive guideline for identifying aspects of this theory in group-CBT interventions.

Additionally, this study only included participants between the ages of 28-64 (M=46.39), therefore results cannot be generalised to other age populations, for example, adolescents. It would be beneficial to explore the role of social identity theory in group-CBT for adolescents with AD as meta-analysis research indicates adolescents with depression perform well in group-CBT (Keles & Idsoe, 2018) and because this type of study would add to the limited research exploring AD in adolescents and children. This will also provide further external validity for the role of social identity theory in group-CBT when treating AD.

A recommendation for future investigation, identified in the qualitative responses of participants, is for group-CBT interventions to have individual sessions last longer, so further discussions can be explored, and for facilitators to provide an option for debriefing after an emotion-provoking session. This consideration, in further studies and in clinical practice, could result in the improvement of participants' mental health and wellbeing, while reducing the chance of relapse.

#### **4.5 Conclusion**

The current study sought to explore the outcomes of group-CBT when implemented in groups with members who have atypical depression, and to explore the potential role that social identity theory has in this environment. Through investigation, it has been demonstrated that group-CBT is effective in reducing the symptoms associated with

depression, and aspects of social identity theory, such as group cohesiveness, become present in these settings. These findings have strong implications for future research in the areas regarding group-CBT and the benefits this form of intervention has for people with depression.

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## Appendix A – Hamilton Depression Rating Scale (HDRS)

# Hamilton Depression Rating Scale (HDRS)

**Reference:** Hamilton M. A rating scale for depression. *J Neurol Neurosurg Psychiatry* 1960; 23:56–62

**Rating** Clinician-rated

**Administration time** 20–30 minutes

**Main purpose** To assess severity of, and change in, depressive symptoms

**Population** Adults

### Commentary

The HDRS (also known as the Ham-D) is the most widely used clinician-administered depression assessment scale. The original version contains 17 items (HDRS<sub>17</sub>) pertaining to symptoms of depression experienced over the past week. Although the scale was designed for completion after an unstructured clinical interview, there are now semi-structured interview guides available. The HDRS was originally developed for hospital inpatients, thus the emphasis on melancholic and physical symptoms of depression. A later 21-item version (HDRS<sub>21</sub>) included 4 items intended to subtype the depression, but which are sometimes, incorrectly, used to rate severity. A limitation of the HDRS is that atypical symptoms of depression (e.g., hypersomnia, hyperphagia) are not assessed (see SIGH-SAD, page 55).

### Scoring

Method for scoring varies by version. For the HDRS<sub>17</sub>, a score of 0–7 is generally accepted to be within the normal

range (or in clinical remission), while a score of 20 or higher (indicating at least moderate severity) is usually required for entry into a clinical trial.

### Versions

The scale has been translated into a number of languages including French, German, Italian, Thai, and Turkish. As well, there is an Interactive Voice Response version (IVR), a Seasonal Affective Disorder version (SIGH-SAD, see page 55), and a Structured Interview Version (HDS-SIV). Numerous versions with varying lengths include the HDRS<sub>17</sub>, HDRS<sub>21</sub>, HDRS<sub>29</sub>, HDRS<sub>8</sub>, HDRS<sub>6</sub>, HDRS<sub>24</sub>, and HDRS<sub>7</sub> (see page 30).

### Additional references

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### Address for correspondence

The HDRS is in the public domain.

## Hamilton Depression Rating Scale (HDRS)

PLEASE COMPLETE THE SCALE BASED ON A STRUCTURED INTERVIEW

Instructions: for each item select the one “cue” which best characterizes the patient. Be sure to record the answers in the appropriate spaces (positions 0 through 4).

- 1 DEPRESSED MOOD** (*sadness, hopeless, helpless, worthless*)
- 0  Absent.
- 1  These feeling states indicated only on questioning.
- 2  These feeling states spontaneously reported verbally.
- 3  Communicates feeling states non-verbally, i.e. through facial expression, posture, voice and tendency to weep.
- 4  Patient reports virtually only these feeling states in his/her spontaneous verbal and non-verbal communication.

- 2 FEELINGS OF GUILT**
- 0  Absent.
- 1  Self reproach, feels he/she has let people down.
- 2  Ideas of guilt or rumination over past errors or sinful deeds.
- 3  Present illness is a punishment. Delusions of guilt.
- 4  Hears accusatory or denunciatory voices and/or experiences threatening visual hallucinations.

1

**3 SUICIDE**

- 0  Absent.
- 1  Feels life is not worth living.
- 2  Wishes he/she were dead or any thoughts of possible death to self.
- 3  Ideas or gestures of suicide.
- 4  Attempts at suicide (any serious attempt rate 4).

**4 INSOMNIA: EARLY IN THE NIGHT**

- 0  No difficulty falling asleep.
- 1  Complains of occasional difficulty falling asleep, i.e. more than 1/2 hour.
- 2  Complains of nightly difficulty falling asleep.

**5 INSOMNIA: MIDDLE OF THE NIGHT**

- 0  No difficulty.
- 1  Patient complains of being restless and disturbed during the night.
- 2  Waking during the night – any getting out of bed rates 2 (except for purposes of voiding).

**6 INSOMNIA: EARLY HOURS OF THE MORNING**

- 0  No difficulty.
- 1  Waking in early hours of the morning but goes back to sleep.
- 2  Unable to fall asleep again if he/she gets out of bed.

**7 WORK AND ACTIVITIES**

- 0  No difficulty.
- 1  Thoughts and feelings of incapacity, fatigue or weakness related to activities, work or hobbies.
- 2  Loss of interest in activity, hobbies or work – either directly reported by the patient or indirect in listlessness, indecision and vacillation (feels he/she has to push self to work or activities).
- 3  Decrease in actual time spent in activities or decrease in productivity. Rate 3 if the patient does not spend at least three hours a day in activities (job or hobbies) excluding routine chores.
- 4  Stopped working because of present illness. Rate 4 if patient engages in no activities except routine chores, or if patient fails to perform routine chores unassisted.

**8 RETARDATION** (slowness of thought and speech, impaired ability to concentrate, decreased motor activity)

- 0  Normal speech and thought.
- 1  Slight retardation during the interview.
- 2  Obvious retardation during the interview.
- 3  Interview difficult.
- 4  Complete stupor.

**9 AGITATION**

- 0  None.
- 1  Fidgetiness.
- 2  Playing with hands, hair, etc.
- 3  Moving about, can't sit still.
- 4  Hand wringing, nail biting, hair-pulling, biting of lips.

**10 ANXIETY PSYCHIC**

- 0  No difficulty.
- 1  Subjective tension and irritability.
- 2  Worrying about minor matters.
- 3  Apprehensive attitude apparent in face or speech.
- 4  Fears expressed without questioning.

**11 ANXIETY SOMATIC** (physiological concomitants of anxiety) such as:

gastro-intestinal – dry mouth, wind, indigestion, diarrhea, cramps, belching  
cardio-vascular – palpitations, headaches  
respiratory – hyperventilation, sighing  
urinary frequency  
sweating

- 0  Absent.
- 1  Mild.
- 2  Moderate.
- 3  Severe.
- 4  Incapacitating.

**12 SOMATIC SYMPTOMS GASTRO-INTESTINAL**

- 0  None.
- 1  Loss of appetite but eating without staff encouragement. Heavy feelings in abdomen.
- 2  Difficulty eating without staff urging. Requests or requires laxatives or medication for bowels or medication for gastro-intestinal symptoms.

**13 GENERAL SOMATIC SYMPTOMS**

- 0  None.
- 1  Heaviness in limbs, back or head. Backaches, headaches, muscle aches. Loss of energy and fatigability.
- 2  Any clear-cut symptom rates 2.

**14 GENITAL SYMPTOMS** (symptoms such as loss of libido, menstrual disturbances)

- 0  Absent.
- 1  Mild.
- 2  Severe.

**15 HYPOCHONDRIASIS**

- 0  Not present.
- 1  Self-absorption (bodily).
- 2  Preoccupation with health.
- 3  Frequent complaints, requests for help, etc.
- 4  Hypochondriacal delusions.

**16 LOSS OF WEIGHT** (RATE EITHER a OR b)

- |  |   |
|--|---|
| <b>a) According to the patient:</b>  | <b>b) According to weekly measurements:</b>                       |
| 0 <input type="checkbox"/> No weight loss.                                       | 0 <input type="checkbox"/> Less than 1 lb weight loss in week.    |
| 1 <input type="checkbox"/> Probable weight loss associated with present illness. | 1 <input type="checkbox"/> Greater than 1 lb weight loss in week. |
| 2 <input type="checkbox"/> Definite (according to patient) weight loss.          | 2 <input type="checkbox"/> Greater than 2 lb weight loss in week. |
| 3 <input type="checkbox"/> Not assessed.   | 3 <input type="checkbox"/> Not assessed.                          |

**17 INSIGHT**

- 0  Acknowledges being depressed and ill.
- 1  Acknowledges illness but attributes cause to bad food, climate, overwork, virus, need for rest, etc.
- 2  Denies being ill at all.

Total score:

This scale is in the public domain.

## Appendix B - Rosenberg Self-Esteem Scale

### Scale:

#### Instructions

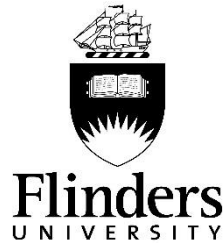
Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

1. On the whole, I am satisfied with myself.  
Strongly Agree      Agree      Disagree      Strongly Disagree
2. At times I think I am no good at all.  
Strongly Agree      Agree      Disagree      Strongly Disagree
3. I feel that I have a number of good qualities.  
Strongly Agree      Agree      Disagree      Strongly Disagree
4. I am able to do things as well as most other people.  
Strongly Agree      Agree      Disagree      Strongly Disagree
5. I feel I do not have much to be proud of.  
Strongly Agree      Agree      Disagree      Strongly Disagree
6. I certainly feel useless at times.  
Strongly Agree      Agree      Disagree      Strongly Disagree
7. I feel that I'm a person of worth, at least on an equal plane with others.  
Strongly Agree      Agree      Disagree      Strongly Disagree
8. I wish I could have more respect for myself.  
Strongly Agree      Agree      Disagree      Strongly Disagree
9. All in all, I am inclined to feel that I am a failure.  
Strongly Agree      Agree      Disagree      Strongly Disagree
10. I take a positive attitude toward myself.  
Strongly Agree      Agree      Disagree      Strongly Disagree

#### Scoring:

Items 2, 5, 6, 8, 9 are reverse scored. Give "Strongly Disagree" 1 point, "Disagree" 2 points, "Agree" 3 points, and "Strongly Agree" 4 points. Sum scores for all ten items. Keep scores on a continuous scale. Higher scores indicate higher self-esteem.

## Appendix C – Consent Form



### CONSENT FORM FOR PARTICIPATION IN INTERVIEWS

Group Psychological Intervention for People with Depression and Overweight/Obesity

I .....

being over the age of 18 years hereby consent to participate in being interviewed about the course that I have partaken in.

The questions that will be asked are open-ended, and you will be given the opportunity to verbally express your experience of the course to an Honours Student and their Supervisor. You are free to decline to the interview if any questions cause discomfort.

The questions that will be asked are:

1. What can you tell me about your time during the course?
2. What was the best thing about the course?
3. What was the worst thing about the course?
4. How did you overcome any challenges you experienced during the course period?
5. Tell me about your experience of doing the course as part of a group?
6. What are some of the pros and cons to a group formats based on your personal experience?

1. I have read the information provided.
2. I am aware that I should retain a copy of the Consent Form for future reference.
3. I understand that:
  - I may not directly benefit from taking part in this interview.
  - I am free decline to answer particular questions.
  - While the information gained in this study will be published as explained, I will not be identified, and individual information will remain confidential.

**Participant's signature**.....**Date**.....

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

**Researcher's name**.....

**Researcher's signature**.....**Date**.....



## Appendix D – Audit Trail

### Interview 1:

- Nervous considering my supervisor said the first interviewee would be a male – from experience they don't like talking about their feelings or experiences much – wasn't sure whether they would be accepting of my questions and would provide rich feedback
- Conducted right at the beginning of the appointment – felt this worked well as I could leave for them to go through their personal questionnaires and measurements with my supervisor (lead researcher), however upon reflection of the interview with my supervisor, she said that the participant continued to talk about the interview questions after I had left and the interview had ended – We are now going to conduct the interviews at the end of the appointment
- Happy that I kept it to a time limit of 10-15 minutes
- Happy that even though it was not a recorded question, that I asked if there was anything else they wanted to add before I left – will do for future interviews
- Felt I did not rush them, let them answer their questions as much or little as possible, and it didn't feel awkward when I would ask the next question
- Could have explained more about what data I am collecting (program evaluations) and how I wish to collate it for the improvement of the program – will do next interview
- Felt I may have been leading, not towards what my research is on, but rather on other questions when they mentioned the worst things about the course. I felt I was trying to guess what they were saying/meaning as they were explaining it e.g. they mentioned that talking about reflecting on bad experiences wasn't good to do in only a short time frame and hadn't known the researcher for long, and I said, 'so it would be better if

you had more time to develop a relationship with them first, before exploring those feelings.’

- Also, because this is the 3-month post intervention point, it felt that the participant found it difficult to reflect to the intervention time – try to cast their mind back before I start interviews for the future
- Next time:
  - Will explain my position there and what data I’m gathering before I start the interview
  - Won’t assume/suggest possible explanations for their feelings like I did in the first interview – let them speak and come to their own conclusions – talk to my supervisor and ask for feedback to see whether the comments I was adding were clarifying or prompting as I want to avoid major prompting comments to remain unbiased
  - Comment on the fact that it has been a while since they have gone through the program, and allow them to take some time to reflect on what happened before I start asking questions

### **Interview 2:**

- The interview was very quick (maybe 5 minutes)
  - I felt I may have not prompted enough for further information as I still felt awkward giving the interview
    - This may have resulted in the participant not giving as much information as what they could have

- Is it too long since the intervention and due to that they can't remember the program— however, I believe that because of this length of time, whatever is mentioned in interviews is prominent in their mind therefore, more meaningful
- I felt less nervous and believe I created a welcoming environment
- I mentioned the length of time before the first interview but need to talk about it more – get them to think back first
- I was happy in my ability to clarify the questions I was asking if they were unsure of what I asked
- Next time:
  - Make sure to give time before asking the first question for them to reflect on the program
  - Prompt for further information if I feel the interview is going too quickly by using prompts such as “can you tell me more about that?” or “can you give me some specifics?”

### **Interview 3:**

- Another quick interview but felt that even though it was quick, they answered the questions to the extent they wanted to
  - Maybe I don't have enough questions? Too broad – and should have made them more specific (can't change now as it would require an amendment to the ethics application – try to combat by changing the wording of the question as I ask it to make it more specific)
  - I didn't feel that there was a point in the interview that I could prompt for further information as the participant finished their answers with a definitive stop

- In future interviews I could prompt for more information before they stop their answer – ensuring it doesn't sound like an interruption, more of a clarification for further information
- Happy with my introduction of what I'm doing there/what my aims are
- Happy that I mentioned that even though it has been a while, to try and think back to the program
- Feel more comfortable/confident in giving interviews
- Next time:
  - I'll try to prompt for further information where I feel comfortable/if it flows
  - Change the wording of the question slightly so participants are required to focus on more specific events instead of broad as it currently does not provide lots of verbal data

#### **Interview 4:**

- Felt comfortable administering the interview
- Felt I created a welcoming environment and I believe this is important as I was conducting the interview before their 3 month post intervention measurements
- Participant was great in expanding on ideas when I would encourage further discussion – prompting issue was addressed in this interview
- When I asked questions where previously the question was answered either too broad or narrow – I ensured to ask the question in a way that implied I wanted a broad or specific answer – previous issue was addressed in this aspect also
- Next time:
  - Conduct the interview in a similar manner to this one

### **Interview 5:**

- Again, felt more comfortable with the participant and ensured I was friendly from when I walked in to create a welcoming environment
- This was one of the longer interviews with the participant feeling comfortable enough to provide more information and constructive criticism
  - o Felt the environment that was created allowed for this to occur
  - o Happy that it was kept within the 10-15-minute time limit
- I felt my comments to clarify and sum up what the person was trying to explain were appropriate, helpful and showed them that I am listening and understanding what they are explaining
- Next time:
  - o Conduct the interview in a similar manner
  - o Use the clarifying comments to make the participant feel like they've been understood and appreciated

### **Interview 6:**

- Participant had experienced quite a difficult time between the end of the intervention and this point in time so came in feeling quite depressed and stand-offish. I found it quite difficult to build rapport in the short amount of time before I conducted the interview
  - o Wasn't as open and welcoming as past interviews so I found it difficult to prompt for further information as I was shut down quite quickly when I tried (would reply with a quick, "yep" or "no" to my prompting instead of providing further information or clarification to what they were saying)

- Participant commented at the end, after the interview was conducted, saying they were a 'failure' which I found quite difficult to hear as I haven't been exposed to depressed people in an interview setting before this year
  - o Found that I wasn't as happy or smiling as much and felt that it was noticeable when this comment was made – I felt sympathetic and sorry for this person and found saying thankyou and goodbye was rushed as I felt a little uncomfortable and that I was not wanted there
  - o I understand that depression is a difficult feeling to hide when it as overwhelmingly present like what was shown with this participant, and I feel I am not yet equipped with the skills to keep the interview going forward in a friendly and welcoming manner after hearing a comment like 'I'm a failure'.
  
- Overall, I believe the interviews that I conducted were professional and friendly which is something I am proud of as I have never conducted my own interviews before
  - o I now know how to create a welcoming environment and build a quick rapport with people which I am happy with
  - o I still need to learn strategies involving how to conduct interviews and build rapport with people who are going through a rough depressive patch which was evident in the last interview

## **Theoretical Thematic Analysis Process**

- Theoretical thematic analysis began with reading and re-reading the feedback forms from both groups and interview notes from Group 2, ensuring to read the notes my supervisor made for each participant as well in case I missed something during an interview.
- As this is a semantic theoretical thematic analysis, I was coding to identify features of the data set related to a predetermined research question, in my case, social identity theory and how participants felt about their experience of being a part of a group. Due to this, answers that were not related to experiences of being a part of a group or could not be related back to any part of the group dynamic was left out of analysis (e.g. comments thanking Mike and Taryn for doing the intervention, personal healthy eating, exercise and sleep comments).
- As responses were only written down with no auditory to accompany answers, the final notes we had from interviews and answers on the feedback form was all I could use in the coding process. This meant that there were not any underlying themes from answers that could have meant something else; whatever was taken down was exactly what they meant and so only this was coded.
- Data that was similar in its meaning (e.g. environment was supportive, supportive/safe space, felt safe to be out of comfort zone) were collated to be under the same code (e.g. 'a supportive and safe space'). This was done to reduce the amount of data and to see emerging patterns in overall codes that could fall under the same theme
- Once the data was collated into separate codes, initial themes that could relate to a group of codes as well as relating to the overarching idea of social identity theory were identified

- This resulted in four main themes emerging; positive group aspects, positive people aspects, negative because it happened, and negative because it didn't happen
- From here, it was important to make each theme more specific. For myself, I saw two main themes among the four mentioned above; positive and negative aspects of group CBT. I believed it was important to discuss the themes in a way that related to social identity theory (being a part of a group) so how group CBT can help or hinder participants were the final two themes chosen.
- The 11 codes that were either positive or negative from the initial four were refined further and I tried to identify the overarching idea of each code to collate into the final two themes that were recognised, with 6 being used (3 for help, 3 for hinder) in the final thematic map