

Poor emotion regulation as risk factor in the development of mood disorders: a rapid review

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Table of contents

Acknowledgements.....	i
Summary	ii
Opsomming.....	iv
Permission to submit.....	vi
Declaration by researcher	vii
Declaration by language editor	viii
Author Guidelines	ix
Chapter 1: Literature Review	12
Introduction.....	12
Mood Disorders	12
Mood and Emotions.....	12
Classification and Clinical Features of Depressive and Bipolar and Related Disorders	13
The Prevalence of Mood Disorders	14
Aetiology of Mood Disorders	15
Emotion Regulation	16
Emotion Regulation Strategies	18
Situation selection.....	18
Situation modification.....	19
Attentional deployment.....	19

Cognitive change.	20
Response modulation.	20
Poor Emotion regulation.....	20
Conclusion	21
References.....	23
Chapter 2: Manuscript for submission.....	29
Poor emotion regulation as a risk factor in the development of mood disorders: A rapid review	30
Abstract.....	30
Introduction.....	31
Methodology	34
Research design	34
The search strategy	34
Keywords.	34
Databases	35
Inclusion and exclusion criteria	35
Critical Appraisal.....	36
Data extraction.....	38
Data analysis	46
Ethics Issues.....	46
Results.....	47
Theme 1 – Maladaptive emotion regulation strategies	47

Rumination and brooding.	47
Suppression.	48
Blame.	49
Catastrophising.	50
Avoidance.	50
Theme 2: Adaptive emotion regulation strategies	51
Reflection/reflexive pondering.	52
Emotional clarity.....	53
Putting into perspective.....	53
Refocus on planning.	53
Theme 3: Strategies not clearly adaptive or maladaptive	54
Acceptance.	54
Theme 4: Factors that influence the choice or effects of emotion regulation strategies	54
Social support/connectedness.	54
Self-esteem.....	55
Discussion	55
Limitations	60
Recommendations.....	61
Conclusion	61
References.....	63
Chapter 3: Critical reflection	74

Reference list	76
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List of figures

Figure 1: Critical appraisal process.....	34
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List of tables

Table 1: Data extraction	35
--------------------------------	----

Annexure 1: Ethical clearance	91
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Summary

The aim of this study was to review and provide a synthesis of available research on poor emotion regulation as a risk factor in developing a mood disorder. Furthermore, the study aimed to contribute to the current body of literature pertaining to emotion regulation and mood disorders by attempting to answer the following questions: (1) to what extent is poor emotion regulation a risk factor in the development of mood disorders? and (2) exactly *how* does poor emotion regulation contribute to the risk of developing mood disorders?

In order to answer the two research questions above, a rapid review was used to collate data. Keywords were identified from the vast and encompassing research available within the EBSCO Discovery services (EDS) search engine to identify possible studies for this review. Initially, 302 studies were identified, but after applying the inclusion and exclusion criteria, as well as the critical appraisal that was informed by the National Institute for Health and Care Excellence (NICE, 2012), the Quality Criteria Checklists (QCC) (American Dietetic Association [ADA], 2008), and the Joanna Briggs Institute (JBI QARI) (2017), only 18 studies were selected for the final sample. The data were then analysed using thematic synthesis.

The core findings of the study suggest that poor emotion regulation can serve as a risk factor for developing a mood disorder. More specifically, certain maladaptive emotion regulation strategies were identified as exacerbating this risk. These strategies include rumination, brooding, suppression, blame, catastrophising and avoidance. Surprisingly, certain adaptive emotion regulation strategies, such as acceptance, appraisal and reflection, could also increase the risk for a mood disorder under certain conditions. The available research did not, however, offer a conclusive finding on the extent to which poor emotion regulation plays a risk. Rather, a complex array of processes plays a role here. Findings from

the review studies suggest that context, gender, culture, and current stressors may play a mediating role – none of these, however, produced strong or consistent results.

For a full understanding of the causal relationship between poor emotion regulation and mood disorders, it is recommended that more experimental and longitudinal studies are done to fully examine their cause-effect relationship. In addition, meta-analyses should be done to synthesize the findings of these studies before any final conclusions should be made.

Keywords: Mood disorders, risk factor, poor emotion regulation, rapid review

Opsomming

Die doel van hierdie studie was om 'n oorsig oor en sintese van die beskikbare navorsing oor swak emosieregulering as 'n risikofaktor by die ontwikkeling van gemoedsversteurings te bied. Verder het die studie ten doel om 'n bydrae tot die bestaande literatuur rakende emosieregulering en gemoedsversteurings te maak deur die volgende vrae te beantwoord: (1) tot watter mate is swak emosieregulering 'n risikofaktor by die ontwikkeling van gemoedsversteurings? en (2) presies *hoe* dra swak emosieregulering by tot die risiko om 'n gemoedsversteuring te ontwikkel?

Ten einde die bogenoemde navorsingsvrae te beantwoord is 'n snelloersig gedoen om data te vergelyk. Sleutelwoorde is geïdentifiseer uit die breë en omvattende navorsing beskikbaar binne die EBSCO Discovery-dienste (EDS) soekenjin om moontlik studies vir hierdie oorsig te identifiseer. Aanvanklik is 302 studies geïdentifiseer, maar nadat die insluitings- en uitsluitingskriteria toegepas is, tesame met die kritiese beoordeling soos ingelig deur die *National Institute for Health and Care Excellence* (NICE, 2012), die *Quality Criteria Checklists* (QCC) (American Dietetic Association [ADA], 2008), en die *Joanna Briggs Institute* (JBI QARI) (2017), is slegs 18 studies by die finale steekproef ingesluit. Die data is geanaliseer met die gebruik van tematiese sintese.

Die hoofbevindinge van die studie toon dat swak emosieregulering kan dien as 'n risikofaktor by die ontwikkeling van gemoedsversteurings. Sekere wanaangepasde emosiereguleringsstrategieë is geïdentifiseer as faktore wat die risiko verhoog. Hierdie strategieë sluit in oorpeinsing, broei oor sake, onderdrukking, blaam, katastrofisering en vermyding. Dit is verrassend dat sekere aanpassende emosiereguleringsstrategieë, soos aanvaarding, waardebeplanning en reflektering, in sekere omstandighede ook die risiko vir gemoedsversteurings kan verhoog. Die beskikbare navorsing het egter geen afdoende bevindinge getoon oor die mate waartoe swak emosieregulering 'n risiko is nie. Daar is eerder

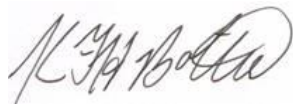
'n komplekse reeks prosesse wat 'n rol speel. Die bevindinge van die studies wat oorweeg is suggereer dat die konteks, geslag en die stressore wat 'n persoon ervaar 'n bemiddelingsrol speel – geen een van hierdie faktore het egter sterk of konsekwente resultate getoon nie..

Ten einde 'n volle begrip te kry van die kousale verband tussen swak emosieregulering en gemoedsversteurings, beveel die studie aan dat meer eksperimentele en longitudinale studies gedoen word om die oorsaak-effek verhouding te bepaal. Verder moet meta-analise gedoen word om die bevindinge van hierdie studies te sintetiseer voor enige finale gevolgtrekkinge gemaak word.

Sleutelwoorde: Gemoedsversteurings, risikofaktore, sneloorsig, swak emosieregulering

Permission to submit

I, the supervisor of this study, hereby declare that the mini-dissertation titled “Poor emotion regulation as a risk factor in the development of mood disorders: A rapid review”, written by Paul Ebersohn, does reflect his research regarding the subject matter. I hereby grant permission that he may submit the mini-dissertation for examination purposes and I confirm that the dissertation submitted is in fulfilment of the requirements for the degree Magister of Arts in Clinical Psychology at the Potchefstroom Campus of the North-West University. The article may also be sent to the *South African Journal of Psychology* for publication purposes.



Prof Karel Botha

Declaration by researcher

I hereby declare that this research titled “Poor emotion regulation as a risk factor in the development of mood disorders: A rapid review” is entirely my own work and that all sources have been fully referenced and acknowledged.



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I, Christina Maria Etrecia Terblanche, hereby declare that I edited the
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initials of all authors, year of publication in brackets, title of the article, name of the publication, volume number, issue number (if provided), inclusive page numbers and digital object identifier (DOI). References to books should include the following:

Surname and initials of all authors, year of publication in brackets, place of publication and publisher's name. Examples of references are presented below:

Journal article

Hansell, P. L., Thorn, B. E., Pretnic-Dunn, S., & Floyd, D. L. (1998). The relationships of primary appraisals of infertility and other gynecological stressors to coping. *Journal of Clinical Psychology*, 5(2), 133-145. doi: 10.1023/A:1026238530050

Book

Lazarus, R. S., & Folkman, S. (1984). The coping process: An alternative to traditional formulations. *Stress, Appraisal, and Coping*. New York, NY: Springer.

Chapter in a book

Cronkite, R. C., & Moos R. H. Life context, coping processes, and depression. In E. E. Beckham, & W. R., Leber WR (Eds.), *Handbook of depression* (pp. 569–587). New York: Guilford Press.

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Chapter 1: Literature Review

Introduction

This chapter serves as an introduction to the various key concepts central to this study. This introductory literature review begins by defining and discussing mood disorders, more specifically depressive, bipolar and related disorders. This is followed by a definition for and a discussion of emotion regulation as a concept. Thereafter, the development of emotion regulation and strategies of, are defined and discussed.

Mood Disorders

In the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM 5)(APA, 2013), mood disorders are classified into two categories, namely depressive disorders and bipolar and related disorders. As an overarching classification, mood disorders can be identified when “a person feels depressed and or elated, and outwardly shows signs (affect) of depression and/or mania for a significant period of time” (Burke, 2014, p. 155). Although mood disorders encompass an element of disruption in an individual’s mood (Sadock, Sadock, & Ruiz, 2015), certain definable features exist that delineate the two different classes of disorders from one another. These are discussed below.

Mood and Emotions

Before distinguishing between depressive and bipolar disorders, two concepts that require clear delineation are mood and emotion. Mood is often referred to as affective states that are diffuse and not focused on a specific object (Burke, 2014; Lischetzke, 2014). Mood or affective states are consistently present and are sustained emotional states that might even surface without a particular trigger (Burke, 2014; Lischetzke, 2014) and which can influence behaviour and a person’s view of the world (Burke, 2014; Sadock et al., 2015).

Conversely, emotions are object-specific and spontaneous, but tend to dissipate as soon as the moment has passed (Frijda, 1993; Gross & Thomas, 2007; Lischetzke, 2014). Just

like a person's mood, emotions are outwardly expressed. However, these expressions happen more consciously than those of mood, and tend to be momentary psychological reactions to experiences (Weiten, 2013; Zastrow & Kirst-Ashman, 2013). Therefore, the biggest definable feature that distinguishes mood from emotion is the duration; where mood constitutes a longer, more consistent affective state, emotions are experienced in the moment, are phasic, and reduces in intensity once the situation or trigger has passed (Burke, 2014; Frijda, 1993; Gross & Thomas, 2007; Lischetzke, 2014).

Classification and Clinical Features of Depressive and Bipolar and Related Disorders

Bipolar and related disorders have a slightly different clinical presentation to that of depressive disorders. Where depression only consists of a depressed mood or episode, bipolar disorders typically include both manic and depressive episodes (APA, 2013; Sadock et al., 2015; WHO, 2019). According to the APA (2013), depressive disorders include:

disruptive mood dysregulation disorder, major depressive disorder (including major depressive episodes), persistent depressive disorder, premenstrual dysphoric disorder, substance/medication-induced depressive disorder, depressive disorder due to another medical condition, other specified depressive disorder, and unspecified depressive disorder (p. 155).

The defining features of the different depressive disorder subtypes include the presence of a depressed, sad or irritable mood, as well as feelings of emptiness (APA, 2013). Depressive disorders can also include feelings of tiredness, guilt or low self-worth, anhedonia, disruptions in a person's sleep, disturbances in appetite and poor concentration (WHO, 2019). Therefore, these disorders often include cognitive, somatic and behavioural changes that may cause impairment in an individual's day-to-day functioning (APA, 2013). What seems to distinguish the different disorders, however, are the etiological factors, timing, duration and severity of symptoms (APA, 2013; Burke, 2014). In contrast with the depressive disorders, bipolar disorders include manic or hypomanic episodes, which are characterised by

an elevated or euphoric mood, increased psychomotor activity, rapid and uninterrupted speech, inflated sense of self/self-esteem, and a decreased need for sleep (WHO, 2019).

The different disorders included in the classification of bipolar and related disorders are bipolar I and II, and like the classification of depressive disorders, it also includes substance/medication-induced, specified and unspecified bipolar and related disorders (APA, 2013). Additionally, this classification also includes bipolar and related disorders due to another medical condition and cyclothymia (APA, 2013; Burke, 2014).

The Prevalence of Mood Disorders

Worldwide, depression is viewed as a leading cause of disability (WHO, 2019; Kessler et al., 2003) and a growing public health concern due to its recurrence rates and substantial prevalence globally (Kessler et al., 2003; The Global Health Metrics, 2018). The prevalence rates of depression appear to be higher than that of bipolar and related disorders, but both seem to present as a common global phenomenon. The Global Health Metrics (2018) estimates that depression affects approximately 264 million people globally, while bipolar and related disorders affect approximately 45 million people. Statistics released by the World Health Organization (WHO) in 2017 show that 29.19 million people in the greater African region suffers from depression, which accounts for 9% of the total cases worldwide (WHO, 2017). The South African Depression and Anxiety Group (SADAG) (2017a) launched a survey in 2017 and found that depression affects 4.5 million, or 9.7% of the South African population. Bipolar and related disorders, on the other hand, appear to affect only 1% of the population (SADAG, 2017b). The aforementioned statistics indicate that on both a national and international level, depression and bipolar and related disorders are of concern and relatively common. The WHO (2019) further suggests that depression and bipolar disorders, as well as suicide attributed to these disorders, are on the increase.

Aetiology of Mood Disorders

Research increasingly indicates that certain individuals are at greater risk for developing a mood disorder than others, and numerous factors have been identified (DeRubeis, Strunk, & Lorenzo-Lauces, 2016). It is clear that no one causal factor can be singled out and that it is rather a complex interaction between various factors that places certain individuals at greater risk (Burke, 2014; DeRubeis et al., 2016; Sadock et al., 2015).

The American Psychiatric Association (APA) (2020a) reports numerous risk factors for depressive disorders, including environmental factors, personality factors, biochemistry and genetic factors. Environmental factors that increase the likelihood of developing a depressive disorder include poverty, exposure to violence, experiencing losses, changes in health or economic stability (APA, 2020a; DeRubeis et al., 2016). With regard to genetics, research suggests that those who have family members with depression might be at greater risk for developing a mood disorder than those who do not (APA, 2020a; Burke, 2014). The same seems to hold for bipolar and related disorders – that both environmental and genetic factors play a role (APA, 2020b). However, genetic factors appear to be a stronger predictor in the development of a bipolar disorder than in depressive disorders (APA, 2020b). Most often, mood disorders are understood from integrated models (e.g. biopsychosocial model, the gene-environment reciprocal model or the diathesis-stress model) (Burke, 2014), indicating that genetic and other biological factors, as well as psychological factors like personality and social factors like poverty contribute to vulnerability (latency), while stressors, either large in extent or managed inefficiently, then trigger the vulnerability or latency (Burke, 2014).

The role emotion regulation plays in the aetiology of mood disorders is not widely researched and reported. However, it is clear that emotion regulation is increasingly being included in models of psychopathology (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Sloan

et al., 2017). Individuals experiencing difficulty with managing their emotions in day-to-day circumstances may be at a greater risk of developing a depressive disorder (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). Emotion regulation difficulties are also implicated in multiple other diagnoses, such as eating disorders, substance abuse and anxiety disorders (Carl, Soskin, Kerns, & Barlow, 2013; Sloan et al., 2017).

Emotion Regulation

Emotion regulation is a relatively new term in the field of psychology, but it has early roots in the work of Freud on psychological defences, of Lazarus on psychological stress and coping, of Bowlby on attachment theory and lastly, the work of Frijda on emotion theory (Gross & Thomas, 2007). Despite its early uses, emotion regulation as a distinct construct first found its use in developmental literature in the 1980s (Gross, 1999; Gross & John, 2003; Gross & Thomas, 2007). It gained further momentum when James Gross described the term in the late 1990s (Aldao, 2013). Despite this momentum, attention to emotion regulation in developmental and adult literature today is still lacking (Gross & Thomas, 2007).

Defining emotion regulation is quite challenging as literature provides no consistent definition (Putnam & Silk, 2005; Gratz & Tull, 2010). Emotion regulation as a construct is quite ambiguous and, in most literature, twofold (Gross & Thomas, 2007). Emotion regulation could refer to how emotions regulate thoughts, behaviour and physiology, or conversely, it could refer to how emotions in themselves are regulated (Gross & Thomas, 2007). The latter is often the preferred description, where emotion regulation constitutes the “heterogeneous set of processes by which emotions are themselves regulated” (Gross & Thomas, 2007, p. 7).

Gratz and Roemer (2004) state that emotion regulation involves the awareness, understanding and acceptance of emotions. Moreover, they report that emotion regulation involves the capacity to engage in goal-directed behaviours and minimising impulsive

behaviours in the face of negative emotions. This involves the capacity to use context-appropriate strategies to modify emotional responses in terms of their intensity and duration (Carl et al., 2013; Gratz & Roemer, 2004). This modification of one's emotional responses then leads to changes in experiential, behavioural and physiological domains (Gross & Thomas, 2007). Therefore, emotion regulation helps people to manage their emotional states and ensures that there is a suitable emotional response in the face of adversity or stress (Koole, 2009).

Koole (2009) posits that emotion regulation has numerous functions, including facilitating goals and tasks, satisfying hedonic needs, and optimising personality functioning. How these functions are fulfilled often depends on the specific strategies deployed. Moreover, the process of emotion regulation to fulfil a particular function could be conscious or unconscious, controlled or automatic, and occurs as a means to respond to external environmental demands (Aldao et al., 2010; Compas et al., 2014; Gross & Thomas, 2007). The APA (2018) refers to implicit and explicit emotion regulation to distinguish between conscious or unconscious modification of emotions. The former suggests that emotions are regulated in the absence of deliberate monitoring, therefore, a process that is unconscious in nature. In contrast, explicit emotion regulation includes conscious tracking of emotions and involves techniques that are learned to assist in managing, changing, and producing more desired responses in the face of an experienced emotion (APA, 2018). Gross and Jazaieri (2014) provide a different explanation for intrinsic and extrinsic emotion regulation. They suggest that emotion regulation could be intrinsic/intrapersonal, relating to the regulation of one's own emotions, or extrinsic/interpersonal, relating to the regulation of someone else's emotions.

It is also important to note that emotion regulation can be adaptive or maladaptive. If appropriately applied, emotional regulation is adaptive. However, deficits in this ability could

be maladaptive as it may have implications for the development of psychological disorders (Gratz & Tull, 2010).

Emotion Regulation Strategies

Emotion regulation strategies are the concrete steps individuals take in the management of their emotions to achieve a specific psychological outcome and to derive some benefit from it (Koole, 2009; Tamir, 2016). This can include reducing negative emotions or increasing positive ones (Larsen, 2000), but more often than not, it is to get rid of or to manage unwanted emotions (Koole, 2009).

The process model of emotion regulation was introduced by Gross and Thomas (2007) to offer a way of understanding how individuals may generate emotional responses. As such, it is most commonly used to understand emotional regulation (Jazaieri, Morrison, Goldin, & Gross, 2015). Gross and Thomas (2007) explain that according to the process model of emotion regulation, individuals can alter their affect or situations that elicit a particular affect based on the strategies they have at their disposal. The model introduces five families of emotion regulation strategies. Antecedent-focused strategies include situation selection, situation modification, attentional deployment and cognitive change. These strategies are employed prior to the emotion taking place (Aldao & Nolen-Hoeksema, 2013; Gross & Thomas, 2007). Response modulation, in contrast, is a response-focused strategy, which suggests that this strategy is deployed after the emotion has occurred to provide some ratification of sort (Aldao & Nolen-Hoeksema, 2013). These strategies are discussed in more detail below.

Situation selection. This strategy suggests that individuals take action to create a situation that will increase the likelihood of a desirable or undesirable emotion (Gross & Thomas, 2007). Simply put, individuals will select situations based on how cognitively and emotionally taxing they may be (Webb, Lindquist, Jones, Avishai, & Sheeran, 2018). It

places people in a position to either approach or avoid certain situations that may cause unpleasant emotions (Webb et al., 2018). Gross (2015) posits that situation selection often relies heavily on other strategies, such as attentional deployment, suppression and cognitive change. Situation selection can include behavioural activation or avoidance.

Situation modification. In contrast to situation selection, situation modification refers to actions taken to alter the emotional impact of a given situation (Torrence & Connelly, 2019). When employing this strategy, the aim is not necessarily to manage the emotion but rather to change the circumstances related to the situation causing the particular emotion (Torrence & Connelly, 2019). Gross (2002) states that this strategy is problem-focused as the person tries to manage the problem that causes the emotion rather than the emotion itself.

Attentional deployment. This strategy enables individuals to use attention in a multitude of situations to ultimately affect their emotions (Gross & Thomas, 2007; Gross, 2008). Attentional deployment can be selective as a person may broadly shift focus between different aspects of a situation (Wadlinger & Isaacowitz, 2011). Three attentional deployment strategies are identified: *Distraction* is twofold in nature – firstly, attention is focused on diverse aspects of a situation, and secondly, attention is shifted away from the given situation (Gross & Thomas, 2007). It is thus employed to redirect one's attention from the emotions inherent in the given situation (Webb, Miles, & Sheeran, 2012). *Concentration*, in contrast, is more concerned with how the focus shifts to the emotional aspects of a given situation (Gross & Thomas, 2007). It includes an element of choice because when individuals employ concentration, they can actively choose which aspects of a situation they would like to pay attention to in order to effectively regulate their emotion (Wadlinger & Isaacowitz, 2011). Finally, *rumination* is closely associated with concentration (Gross, 2008) and often included as a third attentional deployment strategy (Wadlinger & Isaacowitz, 2011). It is the process

through which an individual focuses his/her attention on the feelings and emotions related to a situation that is emotionally laden (Gross, 2008).

Cognitive change. Cognitive change as a strategy is concerned with how we modify the emotional significance and manage the demands of a situation by changing the way we think about it or appraise it (Gross & Thomas, 2007). One cognitive change strategy that holds significance in research is that of reappraisal, defined as the process through which the meaning of a situation is changed in a way that mediates the emotional effect it has (Gross & Thomas, 2007). Cognitive reappraisal is one of the main forms of cognitive change and is concerned with altering one's thoughts about a particular event (Gross, 2008) by means of the two core components of reinterpretation and perspective-taking (Webb et al., 2012). The use of these strategies can widen a person's perspective on different situations (Webb et al., 2012).

Response modulation. This is the only emotional regulation strategy that is response-focused and is concerned with directly affecting the behavioural, experiential and physiological responses after an emotion has occurred (Gross & Thomas, 2007; Jazaieri et al., 2015). Relaxation, exercise and substance use are examples of ways in which people modify emotional responses and experiences (Gross & Thomas, 2007). The two main response modulation strategies are expressive suppression and experiential avoidance (Jazaieri et al., 2015). Expressive suppression is defined as inhibiting the external expression of emotion, whereas experiential avoidance is a process through which unwanted thoughts and feelings are avoided or concealed (Jazaieri et al., 2015).

Poor Emotion regulation

In this study, poor emotion regulation refers to any ineffective, harmful, inadequate or inappropriate efforts by the individual to manage their emotions. It can therefore, to a certain

extent, be regarded as inefficiency or the absence of the use of any of the emotion regulation strategies discussed in the previous section.

Problems with emotion regulation and *emotion dysregulation* are often used interchangeably in literature, but it is suggested that they might mean different things (D’Agostino, Covanti, Monti, & Starcevic, 2017). Problems with emotion regulation refers to the absence of emotion regulation strategies, whereas as emotion dysregulation refers to the maladaptive use and application of emotion regulation strategies (D’Agostino et al., 2017). Due to the inconsistency in the literature and the lack of clearly defined constructs, the study uses the term poor emotion regulation to refer to both problems with emotion regulation and emotion dysregulation. What seems to be clear across the available body of literature is that emotion dysregulation is defined as the “inability to flexibly respond to and manage emotions” (Carpenter & Tull, 2014, p. 1), as well as a lack of awareness and understanding of emotions (Gratz & Tull, 2010). Emotion dysregulation also suggests that there is difficulty in differentiating and evaluating emotions (Paulus, Hogan, & Zvolensky, 2018). Moreover, the difficulty of observing, understanding, differentiating and evaluating one’s emotions can lead to difficulty in accessing strategies to control one’s behavioural responses and ultimately regulating one’s emotions (Tull & Aldao, 2015).

When an individual’s emotions are dysregulated, it impairs coping capacity and reasoning as emotions tend to spiral out of control, are expressed in unmodified and intense ways and tend to change rapidly (Bradley et al., 2011). It is also related to maladaptive behaviours and negative mood problems (Bakhshaie et al., 2019; Kring & Sloan, 2009).

Conclusion

Emotion regulation remains a poorly defined concept as evident from the literature review and there seems to be no consistency among researchers. This appears to hold for emotion regulation strategies as well as it is evident that emotion regulation and cognitive

emotion regulation strategies are often used interchangeably among different authors. Despite this inconsistency, the construct seems to be a popular tool for making sense of numerous psychological disorders, especially mood disorders as an encompassing component in this class of disorders.

Preview of chapters 2 and 3

Chapter 2 is presented as a manuscript that will be submitted for publication in an accredited journal. The manuscript is based on a rapid review in which the aim was to explore in scientific literature (1) the extent to which poor emotion regulation is a risk factor in the development of mood disorders; as well as (2) exactly *how* poor emotion regulation contributes to the risk of developing mood disorders. Chapter 3 provides a brief personal self-reflection on the research process.

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Chapter 2: Manuscript for submission

Poor emotion regulation as a risk factor in the development of mood disorders: A rapid review.

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Poor emotion regulation as a risk factor in the development of mood disorders: A rapid review

Abstract

The aim of this study was to determine to what extent poor emotion regulation is a risk factor in the development of mood disorders and exactly *how* poor emotion regulation contributes to the risk of developing mood disorders. A rapid review of eighteen studies, identified through searching EBSCO Discovery Services (EDS) according to international guidelines for review studies, was conducted. Thematic synthesis was used to analyse the data. The findings of the study suggest that although poor emotion regulation is associated with an increased risk for the development of depressive disorders, no clear picture emerged about bipolar mood disorders. It is further evident that care should be taken when considering whether a specific emotion regulation strategy is inherently adaptive or maladaptive as factors like context, gender, culture, and current stressors may play a mediating role. Further research and meta-analyses of research findings need to be done to get a clearer picture of the relationship between emotion regulation and mood disorders.

Keywords. Mood disorders, risk factor, poor emotion regulation, rapid review

Introduction

Mood disorders include depressive, bipolar and related disorders and appear to be one of the most common groups of psychological disorders (Burke, 2014; Sadock, Sadock, & Ruiz, 2015). According to the WHO (2019), depression affects approximately 264 million people worldwide and bipolar and related disorders approximately 44 million. Mood disorders can be identified when “a person feels depressed and or elated, and outwardly shows signs (affect) of depression and/or mania for a significant period of time” (Burke, 2014, p. 155). Depression and elation should be dysfunctional for it to be diagnosed as either a depressive or bipolar disorder, meaning that it should impair an individual’s functioning, social relationships and general effectiveness (APA, 2013; Burke, 2014).

Two central components related to mood disorders are mood and emotion. Mood refers to “a pervasive and sustained emotion or feeling tone that influences a person’s behaviour and colours his perceptions of the world” (Sadock et al., 2015, p. 347). Emotions, in contrast, refer to a complex arrangement of conscious feelings, followed by bodily arousal and psychological reactions that are overtly expressed by characteristic patterns of behaviour (Weiten, 2013; Zastrow & Kirst-Ashman, 2013). It is important to note that there is a clear distinction between the two concepts. While mood constitutes a long-lasting emotional state that is more internally experienced, emotions are brief and expressed outwardly (Burke, 2014; Zastrow & Kirst-Ashman, 2013).

Emotion regulation is defined as an array of processes through which individuals alter their emotions in relation to their nature, frequency and duration (Carl, Soskin, Kerns, & Barlow, 2013). It also allows individuals to adjust their emotions, either consciously or unconsciously, and to respond suitably to external environmental demands (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Compas et al., 2014). Strategies used to regulate and manage emotional responses, for example problem-solving, acceptance, reappraisal, avoidance,

rumination and suppression, can either be adaptive or maladaptive (Aldao et al., 2010). Poor emotion regulation can conversely be defined as ineffective, harmful, inadequate or inappropriate efforts by the individual to manage emotions (Gratz & Roemer and Tull & Aldao, as cited in Paulus, Hogan & Zvolensky, 2018). It also suggests that the person may have difficulty to understand and observe their emotions and may not have the ability to differentiate and evaluate them (Gratz & Roemer and Tull & Aldao, as cited in Paulus, Hogan & Zvolensky, 2018). Moreover, Gratz et al. state that this difficulty in observing, understanding, differentiating and evaluating emotions can lead to difficulty in accessing strategies to control behavioural responses and ultimately to regulate emotions.

According to Neacsiu, Smith and Fang (2017), the way in which people regulate their emotions has a substantial effect on several domains in their daily functioning. Where effective emotion regulation is related to psychological well-being, poor emotion regulation has conversely been found to be related to poor interpersonal functioning, reduced sociability and ambivalence (Garofalo, Velotti, Cesare Zavattini, & Kosson, 2017). Research therefore increasingly indicates that developing an understanding of emotion regulation aids the quest of making sense of mood, eating and anxiety disorders (Carl et al., 2013; Sloan et al., 2017) and is being used more and more in models of psychopathology (Aldao et al., 2010; Sloan et al., 2017).

Regarding the specific link between poor emotion regulation and the development of mood disorders, certain research findings are consistent and clear, for example: (1) mood disorders are characterised by an inability to effectively regulate emotions in the face of changing demands (Joorman & Vanderlind, 2014; Sadock et al., 2015), (2) emotional differentiation is beneficial to prevent severe depressive disorders (Kashdan, Barrett, & McKnight, 2016), and (3) emotion malleability beliefs, in contrast to the belief that emotion

is a fixed entity, are tied to more effective emotion regulation efforts and subsequently less risk to develop mood disorders (Kneeland, Dovidio, Joorman, & Clark, 2016).

Improving emotion regulation is increasingly becoming a focus in the treatment of mood disorders (Berking & Wupperman, 2012), despite this the exact nature of emotion regulation as risk factor is still not well understood. Ekman (2016, p. 32) further indicates that “...there are still many aspects of emotion that deserve further scrutiny to reduce the disagreements that still persist”.

Therefore, a number of questions still remain. For example, Joorman and Vanderlind (2014) clearly indicate that more work is needed to clarify the role of habitual strategies like suppression, distraction and reappraisal in mood disorders. According to these authors, most studies on habitual strategies (before 2014) are cross-sectional and relied on self-report only. Further, whereas several studies increasingly show the benefit of emotional differentiation, Kashdan et al. (2016) indicate that the role language plays in the act and the experience of emotional differentiation is not yet clear. According to Kneeland et al. (2016), it is also not clear along what lines emotion malleability beliefs influence regulatory behaviour, specifically the directionality of the relationship between emotion beliefs, emotional experience and emotion regulation in relation to the risk of developing anxiety and mood disorders.

Finally, it is also not clear to what extent these questions are the result of limited knowledge and to what extent research findings (especially over the past three years) have not yet been synthesised into a review study. This study is therefore motivated by the fact that although a number of studies have been conducted on emotion regulation and mood disorders, no studies could be found that have synthesised the information to provide a clear delineation of exactly *how* poor emotion regulation could increase the risk of developing a mood disorder. Therefore, the hope is that this study will contribute to the current body of

literature on emotion regulation and mood disorders by answering the following questions:

(1) to what extent is poor emotion regulation a risk factor in the development of mood disorders? and (2) exactly *how* does poor emotion regulation contribute to the risk of developing mood disorders?

Methodology

Research design

This study selected the process of a rapid review concerned with synthesising information in a timeous manner (Khangura, Konnyu, Cushman, Grimshaw, & Moher, 2012; Ganann, Ciliska, & Thomas, 2010) as a research design. Irrespective of the time acceleration inherent to a rapid review, this approach provides a descriptive condensation of the findings and it remains systematic in its approach (Khangura et al., 2012; Schünemann & Moja, 2015). The researchers are however aware of the possible limitations of a rapid review and will take care not to inform large scale decisions or guidelines. As such, this study should be viewed as a method to complement other evidence syntheses.

The search strategy

Keywords. The keywords for this study were determined by reviewing relevant literature in the field of psychology related to the research topic. Literature from journal articles and textbooks was included. The following keywords were identified:

“Self-regulation failure” OR “mis-regulation” OR “emotion regulation” OR “poor self-regulation” OR “ineffective self-regulation” OR “ineffective self-regulation” OR “self-regulation failure” OR “inefficient self-regulation” OR “dysregulation” OR “emotion dysregulation”

AND

“Mood disorder” OR “depression” OR “affective disorder” OR “bipolar disorder” OR
 “bipolar depression” OR “mania” OR “depressive episode” OR “manic episode” OR
 “anhedonia”

AND

“Risk” OR “aetiology” OR “cause” OR “causal” OR “determine” OR “risk factor”
 OR “predictor”

Databases. This study used the electronic EBSCO Discovery Services (EDS) to conduct the search. The EDS platform includes the following databases: Academic Search Premier, Google Scholar, PsycArticles, PsycInfo, and Science Direct. The search was conducted in conjunction with the study leader and a librarian at the North-West University.

Inclusion and exclusion criteria

In order to answer the research questions, the following inclusion criteria were used: firstly, studies had to have a sample age of 18 years and older as the average age of onset for bipolar disorders is 30, and 40 for depressive disorders (Saddock et al., 2015). Additional research suggests that on average, depression surfaces for the first time in late adolescence or early adulthood (mid-20s). The same seems to be true for the onset of a first manic episode, which appears to surface on average at the age of 18 (APA, 2013). A second reason for including participants older than 18 is the fact that emotion regulation still develops throughout childhood and adolescence (Sabatier, Cervantes, Torres, De Los Rios, & Sanudo, 2017). During this time, children and adolescents acquire skills for managing their emotional responses. This process is argued to be closely related to the maturation of numerous biological and neurophysiological structures (Sabatier et al., 2017). Focusing on participants younger than 18 could therefore have misdirected the study to a focus on developmental aspects rather than on aspects related to poor emotion regulation.

Secondly, only studies published from 1990 to 2018 were included as the construct of emotion regulation only seemed to gain prevalence in research in the late 1990s when James Gross (1999) provided a description of this term from a social psychology perspective. Furthermore, only full-text, peer-reviewed journal articles published in English that followed a qualitative, quantitative or mixed method research design were included. Studies excluded were non-peer reviewed articles, systematic and rapid reviews, master's and mini-dissertations, as well as conference proceedings.

Critical Appraisal

The two authors of the article independently appraised the identified studies for possible inclusion. We reviewed the titles and abstract of each study to determine the relevance to this study, and to ensure that no duplicates were present. Studies were then appraised according to the inclusion and exclusion criteria. As this study is more explorative in nature, a combination of different criteria was then used as informed by the following institutional guidelines: the National Institute for Health and Care Excellence (NICE, 2012), the Quality Criteria Checklists (QCC) (American Dietetic Association [ADA], 2008), and the Joanna Briggs Institute (JBI QARI) (2017) to appraise the scientific quality of each study. Upon completion of this process, the final list of articles was compiled for data extraction.

Figure 1 below presents the outcome of the critical appraisal process.

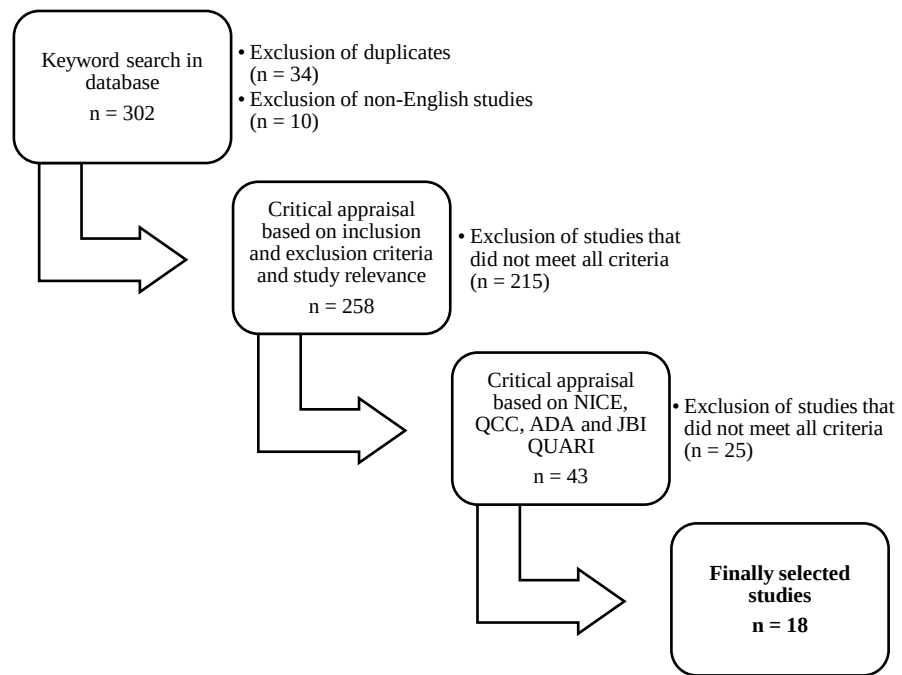


Figure 1. Critical Appraisal Process

Data extraction

Table 1: Data extraction

No.	Title of article	Authors & Publication date	Methodology / Measures	Participants	Data analysis	Ethics
1	Autobiographical memory characteristics and emotion regulation strategy in depression.	Pasipanodya, E. T. T. M., Arya, Y. K., Singh, T., Pasipanodya, S. K. M., & Srivastava, M. (2015).	The Beck's Depression Inventory II (BDI-II), Autobiographical Memory Test, Rating Scale for Autobiographical Memory Specificity, and the Emotion Regulation Questionnaire (ERQ) were used.	There were 38 participants, 19 of which were male and 19 were female. The ages of the participants ranged from 18 to 45 years.	Pearson correlation was used, as well as multiple regression.	Consent was obtained.
2	Characteristics of emotion regulation in recovered depressed versus never depressed individuals.	Ehring, T., Fischer, S., Schnülle, J., Bösterling, A., & Tuschen-Caffier, B. (2008).	The following instruments were used: The Beck's Depression Inventory (BDI), Structured clinical interview for the DSM-IV (SCID), The Cognitive Emotion Regulation Questionnaire (CERQ), Difficulties in Emotion Regulation Scale (DERS) and the Positive and	The sample included 84 currently non-depressed university students. Forty-two of those students have experienced at least one a depressive episode in the past. The ages ranged from 20 to 45.	T-tests and ANOVAs were used, as well as the Bon-Ferroni procedure and the logical regression analysis.	Informed consent was obtained after the individuals met the inclusion criteria.

			Negative Affect Scale (PANAS)			
3	Cognitive emotion regulation in the prediction of depression, anxiety, stress, and anger.	Martin, R. C., & Dahlen, E. R. (2005).	The Cognitive Emotion Regulation Questionnaire (CERQ) and the State-Trait Anger Expression Inventory-2 (STAXI-2) were used, as well as the Depression Anxiety Stress Scales (DASS).	The study included 286 female and 76 male student volunteers. The ages ranged from 18 to 55.	Multivariate Analysis of Variance (MANOVA) was used, along with Alpha coefficients and partial correlations. Four hierarchical multiple regressions were used.	Informed consent was obtained prior to the completion of questionnaires.
4	Cultural and gender differences in emotion regulation: Relation to depression.	Kwon, H., Yoon, K. L., Joormann, J., & Kwon, J. (2013).	The study made use of the Emotion Regulation Questionnaire (ERQ), Ruminative Responses Scale (RRS), State-Trait Anger Expression Inventory-2 (STAXI-2), and the Centre for Epidemiological Studies Depression Scale (CES/D).	The study included 764 university students; 380 of which were Korean (181 females and 199 males) and 384 of which were American (130 males and 254 females).	AMOS. ANOVA. Multi-group confirmatory analysis. Coefficient alphas.	Written informed consent was obtained.
5	Depression and interpersonal stress: The mediating role of emotion regulation.	Moriya, J. & Takahashi, Y. (2013).	The following measures were used: Difficulties in Emotion Regulation scale, Self-rating Depression scale, and the Daily Stress Scale in	The study involved 152 Japanese undergraduate students (96=female, 56=male). The age range was from 17 to 35.	Bootstrapping method.	Ethics were not indicated.

			University Students – interpersonal stress.			
6	Emotion regulation and depressive symptoms: close relationships as social context and influence.	Marroquín, B. & Nolen-Hoeksema, S. (2015).	The measures that were used in this study included the Beck Depression Inventory – Short Form, the UCLA Loneliness Scale – Revised, Ruminative Response Scale, and the COPE Inventory – Short Version.	The sample included 1132 individuals, of which 625 were men and 694 women at Time 1. The mean age of this group was 47 and they were of varied backgrounds and educational levels. At Time 2, there were 722 participants, of which 407 were women and 300 were men, with a mean age of 34.1.	Hypotheses were tested using descriptive statistics and correlational associations. First, group differences were tested, then the context hypothesis, and finally the influence hypothesis.	Ethics were not indicated.
7	Emotion regulation and mania risk: differential responses to implicit and explicit cues to regulate.	Ajaya, Y., Peckham, A. D., & Johnson, S. L. (2016).	An experimental design was used and the following methods were employed: Retrorunner video game, Mind ware software, the emotional expressive behaviour system and the facial action coding system. The Hypomanic Personality Scale was used and mood checks were done.	There were 66 participants (40=Female, 26=Male) with a mix of ethnicities.	Three separate hierarchical multiple regressions were conducted, One each for the three dependent variables.	Informed consent was obtained.

8	Emotion regulation in bipolar disorder: Profile and utility in predicting trait mania and depression propensity.	Van Rheenen, T. E., Murray, G., & Rossell, S. L. (2015).	The study made use of the Difficulties in Emotion Regulation Scale (DERS) and the General Behaviour Inventory (GBI).	The clinical sample comprised of 17 males and 33 females diagnosed as having bipolar disorder. There was a control sample of 20 males and 32 females with no diagnosis. Participants were English-speaking and ages ranged between 18 and 65.	Multivariate analyses of variants (MANOVA), post-hoc bivariate correlations, correlation analyses, and regression analyses.	The study obtained approval from the Human Ethics Review Boards from an Australian hospital and university respectively. Additionally, the study complied with the Declaration of Helsinki. Before the commencement of this study, written informed consent was obtained.
9	Emotion regulation in depression: Reflection predicts recovery from a major depressive episode.	Arditte, K. A., & Joormann, J. (2011).	The study included a six-month follow-up study with the use of the Structured Clinical Interview for the DSM-IV, Determination of Recovery Status, Beck's Depression Inventory – Second Edition (BDI-II), Emotion Regulation Questionnaire (ERQ), and Ruminative Responses Scale (RRS).	There were 40 English-speaking participants between the ages of 18 and 60. They were of Caucasian and non-Caucasian descent and they are currently experiencing a major depressive episode.	Zero-order correlations, logistic regression analyses and factor analyses were used.	Informed consent was obtained.
10	Emotion regulation predicts symptoms of depression over five years.	Berking, M., Wirtz, C. M., Svaldi, J., & Hofmann, S. G. (2014).	The measures used included the German version of the Emotion-Regulation Skills	There were 116 participants of which the majority were female with a mean age of 35.2.	T-tests were used as well as a cross-lagged panel design.	Informed consent was obtained. All procedures followed the Helsinki Protocol and were approved

			Questionnaire and the German version of the Center of Epidemiological Studies Depression Scale.			by the Marburg University Ethics Committee.
11	Inefficiency of emotion regulation as vulnerability marker for bipolar disorder: evidence from healthy individuals with hypomanic personality.	Heissler, J., Kanske, P., Schönfelder, S., & Wessa, M. (2014).	An experimental procedure was used, together with a control group. The German version of the Emotion Regulation Questionnaire and the Structural Clinical Interview for the DSM-IV were used.	Participants included 22 in the high-risk group and 22 in the non-high-risk group, of which the mean age was 20–22 years.	Statistical analysis and ANOVAs, as well as PSAW.	Written informed consent was obtained from the participants and the study received approval from the Medical Faculty Mannheim at Heidelberg University.
12	Is self-esteem mediating the relationship between cognitive emotion regulation strategies and depression?	Yalçinkaya-Alkar, Ö. (2017).	The Symptom Check List-90 Revised was used to investigate the depressive symptoms, as well as the Rosenberg Self-Esteem Scale.	Participants included 274 students, of which 45 were males and 229 were females. The ages ranged from 17 to 28 years old.	Sample t-tests, multivariate analysis and hierarchical regression analyses were used.	Informed consent was obtained. The study received written approval from the ethics committee at the institution where the author is affiliated.
13	Mapping the interplay among cognitive biases, emotion regulation, and depressive symptoms.	Everaert, J. E., Grahek, I., Duyck, W., Buelens, J., Van den Bergh, N., & Koster, E. H. W. (2017).	The cross-sectional study included the Beck's Depression Inventory-II, The Ruminative Response Scale, Cognitive Emotion Regulation Questionnaire, Scrambled	There were 119 participants who showed minimal to severe depression levels.	Path and bootstrapping analyses were used.	Informed consent was obtained and the study protocol was approved by the institutional review board.

			sentences, and experimental tasks.			
14	Reward and punishment sensitivity and emotion regulation processes differentiate bipolar and unipolar depression.	Weinstock, L. M., Chou, T., Celis-deHoyos, C., Miller, I. W., & Gruber, J. (2018).	The Structured Clinical Interview for the DSM-IV, Drug Use Disorders identifications test, the Behavioural Inhibitions Scale and the Behavioural Activation Systems Scale, the Response Style Questionnaire, the Responses to Positive Affect Scales, Behavioural Activation for Depression Scale and the Acceptance and Action Questionnaire-II.	There were 90 participants 18 years and older who had to meet the inclusion and exclusion criteria.	Preliminary multiple regression and Chi-square were used, as well as the Benjamin-Hochberg procedure. Cohen's D statistics were calculated.	Informed consent was obtained.
15	Transdiagnostic emotion regulation processes in bipolar disorder and insomnia.	Gruber, J., Eidelman, P., & Harvey, A. G. (2008).	Several measures used in this study: The Structured Clinical Interview for the DSM-IV, the Insomnia Diagnostic Interview (IDI), Duke Structured Interview for Sleep Disorder (DSISD), Beck's Depression Inventory (BDI), Beck's Anxiety	Three different groups were recruited for the sample. They were as follows: 21 bipolar I, 19 with primary insomnia, and 20 non-clinical participants.	The researchers used four univariate ANOVAs, post-hoc analyses with a Bonferroni correction.	Ethics were not indicated.

			Inventory (BAI), Global Rumination Scale (GRS), Penn State Worry Questionnaire (PSWQ), Cognitions Checklist (CCL).			
16	The association between childhood maltreatment and emotion regulation: Two different mechanisms contributing to depression?	O'Mahen, H. A., Karl, A., Moberly, N., & Fedock, G. (2015).	The Structured Clinical Interview for DSM-IV, The Beck's Depression Inventory-II (BDI- II), Childhood Trauma Questionnaire, the Ruminative Responses Scale and the Behavioural Activation for Depression Scale were all used in this study.	The study included 140 pregnant women, of which all were 18 years older.	Data were analysed using Pearson correlations, multiple regressions and tested hypotheses using nested path models in AMOS 18.	The Institutional Review Board at the University of Michigan Medical Center provided ethics approval for this study.
17	Emotion regulation protects against recurrence of depressive symptoms following in-patient care for major depressive disorder.	Ebert, D. D., Hopfinger, L., Bockting, C. L. H., & Berking, M. (2017).	The research involved a quantitative study with follow-ups at three and twelve months.	There were 193 participants with a mean age of 47.4 who had been diagnosed with depression.	Hierarchical linear regression models were used.	Written informed consent was obtained. The Institutional Review Board of Leuphana University Lueneburg provided ethics approval for the primary study.
18	Perceived stress reactivity, rumination, and cognitive emotion regulation as predictors of depression.	Arshad, T. (2016).	The following measures were used: Symptom Checklist – Revised, Perceived Stress Reactivity	There were 72 participants of which 35 were men and 37 were women. These patients had all been diagnosed with	Multiple regression, Pearson Product Movement and multiple hierarchical linear regression	Written informed consent was obtained.

Scale, Ruminative Response Scale and the Cognitive Emotion Regulation Questionnaire. major depressive disorder. were used to analyse the data,

Data analysis

This study involves a thematic synthesis that consolidates the research findings of different types of studies (Thomas & Harden, as cited by Thomas, O'Mara-Eves, Kneale, & Shemilt, 2017). This process includes three stages of data analysis: (1) coding text, (2) developing descriptive themes, and (3) generating analytical themes. According to Thomas et al. (2017), stage one is concerned with identifying themes from the findings of the selected studies. This is achieved by highlighting text that contain similar concepts or meanings and grouping those texts that have similarities together. In doing so, descriptive themes can be established (Thomas et al., 2017). During stage two the identified themes obtained in stage one are grouped into descriptive themes, which entails finding interchangeable relationships between the identified themes (Thomas et al., 2017). The last stage is concerned with establishing analytical themes by developing new explanations and conceptualisations so that the review questions can be addressed (Thomas et al., 2017). For this study, these steps were followed to identify, group and establish descriptive and analytical themes.

Ethics Issues

Human participants were not involved in the study as existing literature was used to collate data, suggesting minimal risk. Despite this, the study adhered to principles of ethics inherent in research. Additionally, before the commencement of this study, a proposal was submitted to the scientific committee, Community Psychosocial Research (COMPRES) of the North-West University. The Human Resource Ethics Committee (HREC) also gave ethics clearance for the study with ethics number NWU-00403-20-A1. Furthermore, this study adhered to the principles noted by Wager and Wiffin (2011), which include avoiding plagiarism, ensuring transparency in the findings and ensuring accuracy of results.

Results

In total, 18 articles met the inclusion criteria and provided relevant insights into the topic of the study. Four main themes emerged from the review, namely maladaptive emotion regulation strategies, adaptive emotion regulation strategies, strategies not clearly adaptive or maladaptive, and factors that mediate the effects of emotion regulation strategies.

Theme 1 – Maladaptive emotion regulation strategies

It is evident from the review that specific emotion regulation strategies appeared to be quite prominent among the vulnerability markers for depressive and bipolar disorders. They are rumination and brooding, suppression, blame, catastrophising, and avoidance. These are discussed in further detail below.

Rumination and brooding. In the reviewed studies, the terms rumination and brooding were often used interchangeably to refer to the same construct. Rumination is defined as “repetitive thinking about negative information” (Whitmer & Gotlib, 2013, p. 1036). It is an attentional deployment strategy with repeated focus on negative emotions and their causes and precipitants (McRae & Gross, 2020; Pena-Sarrionandia, Mikolajczak, & Gross, 2015). It also includes cognitive representations of stressors that are preservative and are unconstructive for the psychological health of an individual (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; Smyth, Zawadzki, & Gerin, 2013). The content of ruminative processes is generally imagined of real stressors that are distorted and negative (Smyth et al., 2013). Brooding, in comparison, is perceived to be a specific type of rumination, defined as “a passive comparison of one’s current situation with some unachieved standard” (Treynor, Gonzalez, & Nolen, 2003, p. 256).

In this review, a number of studies found that rumination as an emotion regulation strategy increases the likelihood of an individual developing a depressive (Arditte & Joorman, 2011; Arshad, 2017; Ehrling et al., 2008; Everaert et al., 2017; Kwon et al., 2013;

Martin & Dahlen, 2005; Moriya & Takahashi, 2013; Weinstock et al., 2018; Yalcinkaya-Alkar, 2017) or bipolar disorder (Gruber et al., 2008; Weinstock et al., 2018). One study found that rumination as a stand-alone strategy is enough to predict depression (Arshad, 2017), whereas, in bipolar disorders, an array of different strategies appeared to be implicated. Of all the strategies that were identified in the review, rumination seemed to be the most significant predictor for developing a mood disorder.

Like rumination, brooding was also found to be related to depression (Arditte & Joormann, 2011; Everaert et al., 2017; Kwon et al., 2013). Interestingly, one study found that brooding can mediate the effect of childhood maltreatment on depression and therefore decrease the risk (O'Mahen et al., 2015). No study, however, investigated the risk of brooding in bipolar disorders.

Suppression. Suppression is a response modulation strategy in which one's physiological and behavioural responses to emotions are adjusted to minimise the intensity of feelings and emotional experiences (Lawyer & Jenks, 2019). Three reviewed studies (Kwon et al., 2013; Marroquin & Nolen-Hoeksema, 2015; Pasipandoya et al., 2015) found that suppression and its subtypes, emotion and thought suppression, can increase the incidence of depression. Pasipandoya et al. (2015) found suppression to be the greatest predictor of depression overall compared to other emotion regulation strategies.

Emotion suppression/Expressive suppression. Expressive suppression is defined as a response-focused strategy during which there is a conscious inhibition of an outward expression of emotions (Gross & John, 2003; Wang & Hagger, 2017). The aim of this strategy is to hide unwanted emotions (Pena-Sarrionandia et al., 2015). This form of suppression appears to be associated with increased negative emotions, and conversely a decrease in positive emotions (Gross & John, 2003). Moreover, it leads to an increase in the experience of a depressed mood and ultimately influences overall wellbeing (Gross & John,

2003; Soto, Perez, Kim, Lee, & Minnick, 2011). Two reviewed studies reported that expressive suppression is related to an increase in depressive symptomology (Kwon et al., 2014; Marroquin & Nolen-Hoeksema, 2015). Interestingly, it was also found that cultural factors can influence the use of this strategy (Kwon et al., 2014; Marroquin & Nolen-Hoeksema, 2015). Although Arditte and Joorman (2011) did not clearly indicate a link between expressive suppression and depression vulnerability, they found that expressive suppression does not aid recovery from depression. Neither of these studies, however, referred to the influence that expressive suppression might have on bipolar and related disorders.

Thought suppression. Thought suppression is the deliberate act of removing harmful or unwanted thoughts from one's consciousness (Wang & Hagger, 2017). In the review, only Marroquin and Nolen-Hoeksema (2015) suggested that thought suppression is a maladaptive emotion regulation strategy, but failed to report the unique role this strategy plays in predicting depression symptomology. This study found that overall, numerous maladaptive strategies and not just thought suppression plays a role in depression, and no specific strategy was singled out as being more predictive than the other.

Blame. From the review, two types of blame were identified, self-blame and other blame. Self-blame as a strategy was implicated in three reviewed articles. Two studies reported that self-blame positively correlates with and leads to an increased experience of depression (Arshad, 2017; Yalcinkaya-Alkar, 2017). Yalcinkaya-Alkar's (2017) found that self-blame resulted in more prolonged depressive periods, and that higher levels of self-esteem can mediate and lessen the effect that self-blame might have on the depressed individual. A third study found that using self-blame predicted depression (Martin & Dahlen, 2005) as opposed to only increasing the experience of this strategy. Other-blame was also found to be relatively high among depressed individuals (Ehring et al., 2008).

Catastrophising. Catastrophising, a cognitive emotion regulation strategy (Garnefski & Kraaij, 2005), is defined as a cognitive process where an individual's notion of negativity is exaggerated and the worst outcome is always expected (Okifuji & Turk, 2016). Two studies reported that catastrophising could result in depression (Martin & Dahlen, 2005; Yalcinkay-Alkar, 2017). According to Martin and Dahlin (2005), catastrophising indirectly contributes to the experience of depressive symptoms through an increase in the experience of negative emotions. Ehring et al. (2008) further found that despite recovering from depression, some individuals still employed catastrophising as a strategy. None of the reviewed studies implicated catastrophising in bipolar and related disorders.

Avoidance. Avoidance, which is a situation selection strategy, is defined as escaping from a situation that brings no future benefits (Pena-Sarrionandia et al., 2015). The review studies distinguish between experiential (Marroquin & Nolen-Hoeksema, 2015; Weinstock et al., 2018) and behavioural avoidance (Marroquin & Nolen-Hoeksema, 2015).

Experiential avoidance. Experiential avoidance is considered a pathological process (Haves, Wilson, Gifford, & Follette, 1996) where an individual avoids the experience of unpleasant *internal* emotions, thoughts, feelings, memories or bodily sensations (Hayes et al., as cited in Kashdan et al., 2014). This avoidance brings some sort of relief but is generally short-lived and not sustainable (Kashdan et al., 2014). One of the reviewed studies found that the use of experiential avoidance appeared to be higher in those who have bipolar disorder than those suffering from major depressive disorder (Weinstock et al., 2015). Despite this, however, it was concluded that experiential avoidance could be a transdiagnostic consideration in depression (Weinstock et al., 2015). The second study found experiential avoidance, which they considered a maladaptive strategy, to be mediated by social connectedness, which led to lower levels of depression (Marroquin & Nolen-Hoeksema, 2015).

Behavioural avoidance. Behavioural avoidance is defined as the act of avoiding internal and external stimuli that are generally difficult to cope with, achieved by occupying oneself with activities that delay engaging with the unpleasant stimulus (Rigi, Amini, Honormand, & Beshlideh, 2018). One of the reviewed studies found it to be of diagnostic value in both unipolar and bipolar depression (Weinstock et al., 2018). What they found was that the use of avoidance behaviours serves different functions in mood disorders. In bipolar disorder, avoidance behaviours might serve as a protective factor against mania, whereas in unipolar depression, the purpose could be to maintain mood congruence (Weinstock et al., 2018). Interestingly, one study found that avoidance can play a role in mediating childhood emotional neglect and the experience of depression (O'Mahen et al., 2015).

Theme 2: Adaptive emotion regulation strategies

Adaptive strategies that might mitigate the risk of developing a mood disorder were identified as cognitive reappraisal, reflection, emotional clarity, putting into perspective, and refocus on planning

Cognitive Reappraisal. Cognitive reappraisal is a cognitive change strategy in the process model of emotion regulation (Pena-Sarrionandia et al., 2015) and is defined as the process through which goals and situations are re-evaluated and reinterpreted (McRae & Gross, 2020). It does not necessarily refer to *positive* appraisal (see later), but to any change in how one thinks about certain negative situations or stressors (Cutuli, 2014). Cognitive reappraisal was implicated in a few studies: Kwon et al. (2013) found that cognitive reappraisal mediated the effects that rumination had on individuals, and, interestingly, also that those who ruminate, but fail to reappraise, experienced increased depressive symptoms. Pasipanodyam et al. (2015) surprisingly found that those who used cognitive reappraisal as a strategy reported increased levels of depression, especially when used in conjunction with suppression. Additionally, the study found that cognitive reappraisal might prevent healthy

individuals from developing depression but does not hold benefits for those who are depressed and have ruminative tendencies. This is supported by Arditte and Joorman (2011), who found that cognitive reappraisal is not necessarily associated with recovery from a major depressive episode. Ehring et al. (2008) however, found that a lack of cognitive reappraisal and focus on cognitions of blame implicated in and limited to acute depression.

Positive reappraisal. Positive reappraisal, a specific type of cognitive reappraisal, refers to “reappraising a situation or one’s response to it in a more positive way” (Pena-Sarrionandia et al., 2015, p. 4). Furthermore, it is considered to be a meaning-based form of coping, where a situation is viewed as beneficial and valuable (Garland, Gaylord, & Park, 2009). In contrast to general cognitive reappraisal, it entails looking at things specifically from a positive point of view and changing one’s negative response to situations by reinterpreting it in an adaptive way. Two studies indeed found that that low positive appraisal could lead to increased experiences of depression (Martin & Dahlen, 2005; Everaert et al., 2017). However, both brooding and emotional attention reduced the frequency of positive reappraisal, which inadvertently leads to an increase in depressive symptoms (Everaert et al., 2017).

Reflection/reflexive pondering. These two constructs were used interchangeably in the reviewed articles. Reflection is viewed as an adaptive subtype of rumination (Cristea, Matu, Tatar, & David, 2013) and defined as the process of turning inward to participate in problem-solving to address certain issues (Treyner et al., as cited in Garcia & Duque, 2017). Reflection was implicated in two studies (Arditte & Joorman, 2011; O’Mahen et al., 2015). Interestingly, both studies found that reflection initially correlated positively to depression, but on further exploration it was found that over time the continuous use of this strategy appears to predict recovery from a major depressive episode (O’Mahen et al., 2015). The aforementioned was similar to the findings of Arditte and Joorman (2011), who found that

reflection predicted recovery from a major depressive episode. However, they stated that individual differences in the application of specific emotion regulation strategies should be understood when trying to make sense of the maintenance of symptoms. One study examined the adaptive function of reflexive pondering and found that in contrast to brooding, it allows individuals to engage in problem-solving (Kwon et al., 2013).

Emotional clarity. Emotional clarity refers to individual's ability to identify and delineate different types of emotions (Coffey, Berenbaum, & Kerns, 2003). Emotional clarity emerged in two studies only. Van Rheeën et al. (2015) found that a lack of emotional clarity can increase the experience of depression, especially for those at risk of a bipolar disorder, while those who experience challenges in delineating emotions pose a further risk. Moriya and Takashi (2013) found that clarity has a specific role in that it could prevent individuals from developing depression when faced with adversity.

Putting into perspective. Efforts to put things into perspective is considered a cognitive emotion regulation strategy (Domaradzka & Fajkowska, 2018). One study found that attempts to put matters into perspective as an adaptive strategy is underutilised in depressed individuals and they overall experienced difficulties in utilising adaptive strategies (Ehring et al., 2008). Marroquin and Nolen-Hoeksema (2015) suggested that putting into perspective is an adaptive strategy but failed to outline its relation to and relevance for mediating the symptoms of a mood disorder.

Refocus on planning. Refocusing on planning is also considered a cognitive emotion regulation strategy (Domaradzka & Fajkowska, 2018) and was mentioned in one study. The reviewed article found that this strategy negatively correlated with depression (Yalcinkaya-Alkar, 2017). This negative correlation suggests that the lower the use of this strategy, the higher the level of depression. It was further found that self-esteem mediated the effect of refocusing on planning had on the experience and level of depression - if people reported

having higher self-esteem and used refocusing on planning more often, depression symptoms decreased (Yalcinkaya-Alkar, 2017).

Theme 3: Strategies not clearly adaptive or maladaptive

Acceptance. Acceptance, which is an attentional deployment strategy, is defined as acknowledging and accepting negative situations and events, as well as one's inability to cope with it (Pena-Sarrionandia et al., 2015). Although acceptance is theoretically perceived as an adaptive strategy (Pena-Sarrionandia et al., 2015), contrasting results were found in the review. Arshad (2017), Martin and Dahlen (2005), and Yalcinkaya-Alkar (2017) found acceptance to be positively associated with depression, despite it usually being considered an adaptive strategy. Martin and Dahlen (2005), however, suggested that the adaptive value of acceptance has to be re-evaluated because accepting or tolerating what has happened may only be adaptive in particular situations and dependant on an individual's mood. In contrast to the findings of the three studies discussed above, Ehring et al. (2008) found that it is in essence a lack of acceptance that serves as a vulnerability marker for depression, while Ebert et al. (2017) found that when undesired emotions are accepted, both recurrence rates of depression and depressive symptoms seem to decrease. One study in particular found that low acceptance appears to be characteristic in those who have bipolar disorder (Van Rheen et al., 2015).

Theme 4: Factors that influence the choice or effects of emotion regulation strategies

The reviewed studies offer a clear indication that certain factors external to emotion regulation, like social connectedness (Marroquin & Nolen-Hoeksema, 2015) and self-esteem (Yalcinkaya-Alkar, 2017), may influence the choice of emotion strategy or the influence that maladaptive strategies can have on the risk for mood disorder.

Social support/connectedness. Marroquin and Nolen-Hoeksema (2015) found that social relationships have an effect on the type of emotion regulation strategies individuals

employ. The use of dysfunctional or maladaptive strategies decreased among those who were socially connected to others when compared to single or isolated people. It appeared from the study that social relationships can influence the choice of strategy used, rather than serving as a buffer to the effects that maladaptive strategies can have on an individual's mood.

Self-esteem. Yalcinkaya-Alkar (2017) found that higher levels of self-esteem mediated the impact that certain maladaptive strategies had on the depressed individual. The study concluded that self-esteem could be an important mediating factor in depression and its severity. The authors suggested that there should be an emphasis on self-esteem, and more importantly, adaptive strategies to alleviate symptoms of depression.

Discussion

This review aimed to determine (1) to what extent poor emotion regulation is a risk factor in the development of mood disorders, and (2) exactly *how* poor emotion regulation contributes to the risk of developing mood disorders. Regarding aim one, it is evident that ineffectual, deficient or maladaptive use of emotion regulation strategies is associated with an increased risk for the development of either a depressive or bipolar and related disorder (Ashad, 2017; Berking et al., 2014; Van Rhee et al., 2015; Weinstock et al., 2018). This finding, specifically in relation to depression, is supported by literature and theory that postulate that overall, deficiencies in emotion regulation predict not only depression, but also somatoform disorders, substance abuse, eating disorders and borderline personality disorder (Berking & Wupperman, 2012). Literature, however, appears to be unclear about the risk maladaptive emotion regulation holds for bipolar and related disorders. An interesting finding was that specific strategies that are theoretically perceived to be adaptive, for example acceptance, appraisal and reflection (Fernandez, Jazaieri & Gross, 2016), could even increase the risk for either depression or bipolar and related disorders under certain conditions (Ashad, 2017; Berking et al., 2014; Weinstock et al., 2018). The review further showed that adaptive

strategies like positive reappraisal (Martin & Dahlen, 2005; Everaert, 2017), putting into perspective (Marroquin & Nolen-Hoeksema, 2011), refocus on planning (Yalcinkaya-Alkar, 2017), and clarity (Van Rheeën et al., 2015; Moriya & Takahashi, 2013) conversely appear to decrease the risk for developing mood disorders and the overall experience of symptoms.

It is therefore clear from the review that poor emotion regulation is associated with the risk for developing a mood disorder, firstly, in terms of applying maladaptive strategies, and secondly, in terms of not being able to use adaptive strategies adequately, or not applying it at all. This, however, only shows a general association and not necessarily a cause-effect type of relationship, nor exactly how emotion regulation is involved in mediator relationships. This is due to the fact that, firstly, most of the reviewed studies did not test for cause-effect relationships; and secondly, most studies did not take into account the relationship between emotion regulation strategies and other variables like biological vulnerability, personality traits/temperament, culture, gender, past traumas and the exact nature of stressors.

Although some mediator relationships were indicated, they were not strong enough to warrant a conclusion regarding the strength or extent to which emotion regulation is a risk factor. Further, even though one expects poor emotion regulation to be a causal factor (Fernandez, Jazaieri, & Gross, 2016), this could not be convincingly confirmed in this review. It may also be possible that mood disorders increase poor emotion regulation – therefore, mood disorders could be a risk for the development of poor emotion regulation (poor emotion regulation as symptom of a mood disorder), or there could be a mutually influencing type of circular relationship. In conclusion, although there is a clear association between poor emotional regulation and mood disorders, its strength and direction are less obvious, specifically regarding bipolar and related disorders. Further research should be done to better reach this aim, including experimental or longitudinal studies and full systematic reviews.

Regarding the *how* (aim two), it is important to firstly note that it was quite difficult to isolate and separate emotion regulation and cognitive emotion regulation from one another as the studies often referred to them as interchanging constructs. This made the process of narrowing down which strategies (cognitive or emotion regulation strategies) were more clearly associated with mood disorders quite challenging. Furthermore, emotion regulation does not seem to function independently from cognitive emotion regulation, as it is evident that any process involving emotion includes some kind of cognitive component (Weiten, 2018). What was also quite interesting from the review was that most of the reviewed studies focused predominantly on depression and very few on bipolar and related disorders.

It is clear from the review that the application of certain strategies, specifically rumination, suppression, blame, catastrophising and avoidance, increases the risk for developing a mood disorder. If one looks at the results in totality, it is vital to note that although these strategies are widely considered to be maladaptive, in certain instances, they might assist individuals in a positive way. Literature confirms this and states that the functionality of a given emotion regulation strategy is highly dependent on the situation (Visted, Vollestad, Nielsen, & Schanche, 2018). Literature also suggests that rumination, brooding and avoidance in certain instances can protect individuals and lead to desired outcomes (Cristea et al., 2013). Therefore, labelling strategies as adaptive or maladaptive should not be viewed as absolute but rather as relative (Visted et al., 2018).

Unsurprisingly, in this review, rumination appeared to be the most significant vulnerability marker and symptom maintainer in depression (Arditte & Joormann, 2017; Everaert et al., 2017; Kwon et al., 2013; Martin & Dahlen, 2005; Moriya & Takahashi, 2013; O'Mahen et al., 2015; Yalcinkaya-Alkar, 2017) and bipolar and related disorders (Gruber et al., 2008; Weinstock et al., 2018). Brooding also predicted an increased risk for the

development of depression and the maintenance of symptoms (Arditte & Joormann, 2011; Everaert et al., 2017; Kwon et al., 2013; O'Mahen et al., 2015). The literature on rumination and brooding confirm the findings of the study, and it is suggested that these strategies not only predict depression, but might also exacerbate symptomology (Garnefski & Kraaij, 2006; Joorman & Gotlib, 2010). Moreover, rumination appears to have the strongest relationship with psychopathology overall when compared to other strategies (Aldao et al., 2010). Zawadski (2015) tried to provide explanations for the negative effects of rumination on overall health and found that rumination has a strong relation to poor health and stress, which suggests a causal relationship between the two. It is further reported that when an individual ruminates, it increases stress levels (Glynn, Christenfeld, & Gerin, 2007), leads to heightened negative emotion states (Rusting & Nolen-Hoeksema, 1998), and reduces the individual's ability to solve problems (McLaughlin, Borkovec, & Sibrava, 2007).

Surprisingly, literature does suggest that not all subtypes of rumination are maladaptive (Garcia & Duque, 2017). Reflection, even though it may increase distress in the short term, yields beneficial results for recovery from depression over the long term (Nolen-Hoeksema et al., 2008). This supports theory suggesting that reflection should lead to increased problem-solving (Martin & Tesser as cited in Cristea et al., 2013) and have benefits for depressive symptoms (Treyner et al., 2003). Avoidance, particularly behavioural avoidance, appeared from the review to be one of the emotion regulation strategies that, in certain instances, protects against adversity, particularly in the instance of childhood maltreatment (O'Mahen et al., 2015). However, the current findings are not substantially supported as literature generally suggests that behavioural avoidance can result in depression, anxiety and poor overall psychological adjustment (Rigi et al., 2018). Literature also indicates that engaging in avoidant behaviours is characteristic in many forms of psychopathology (Campbell, Marie-Bynion, Forte, Feldner, & Adams, 2020), not only depression.

Just like some maladaptive strategies might be adaptive in certain instances, the review showed that certain adaptive strategies might at times be maladaptive too. One strategy that provided contrasting results was that of acceptance. Despite some of the findings suggesting that acceptance might be maladaptive in certain situations, acceptance appears to be widely accepted as an adaptive strategy that is often underutilised by those who have a psychological disorder (Aldao et al., 2010). This review found that acceptance, in some instances, positively correlated with depression and increases symptomology (Arshad, 2017; Martin & Dahlen, 2005; Yalcinkaya-Alkar, 2017). However, the literature suggests that acceptance as a strategy yields positive benefits for health and psychological wellbeing (McCraken & Eccleston, 2003). Literature additionally suggests that acceptance can be effective in positively changing and alleviating negative emotions (Cristea et al., 2013), but this was only proven to some degree in the present review. This study does highlight that acceptance does not always ensure that a positive outcome will be obtained and that it is only adaptive given the situation it is used in. It is highly dependent on the mood in question (Martin & Dahlen, 2005). Literature suggests that acceptance appears to be particularly useful in instances where the reappraisal of the situation or event might not work, like child abuse or cases of terminal illness (Pena-Sarrionandia et al., 2015). Acceptance in instances where the outcome is unavoidable appears to yield better outcomes and to ultimately result in overall psychological benefits (Pena-Sarrionandia et al., 2015). This, however, leads one to question, namely whether this holds true to all situations and events, or only those outside of the individual's control.

Other strategies that were also implicated in depression and bipolar and related disorders, but not to the same extent as rumination and brooding, was that of suppression, avoidance, catastrophising and blame. The aforementioned strategies are largely defined as maladaptive in the literature, as they often lead to adverse outcomes (Gross & John, 2003).

Suppression appeared to be the second most significant predictor of depression (Watkins & Moulds, 2007), which is in line with literature that increasingly suggests a relationship between the two (Campbell-Sills, Barlow, Brown, & Hoffman, 2006).

To further answer the *how*, it appears that certain mediating factors can also alter the course and implication of some strategies for the risk of developing a mood disorder. From the review, it is evident that social support and connectedness and higher levels of self-esteem can decrease the effect the maladaptive strategies like blame, while not refocusing and experiential avoidance can have on an individual's experience of a mood disorder. This is in support of theory suggesting that social relationships (Wissing & Van Eeden, 2014) and higher levels of self-esteem (Carr as cited in Du Toit, Wissing, & Khumalo, 2014) serve as buffers or protective factors in many forms of psychopathology.

The findings reiterate that a complex array of factors should be considered in answering how emotion regulation can contribute to the risk of developing a mood disorder. It is, therefore, clear that (1) the risk of developing a mood disorder increases when particular maladaptive strategies are used, (2) the risk can further increase if specific adaptive strategies are used, (3) emotion regulation strategies should not be deemed either completely adaptive or completely maladaptive, (4) certain external factors can further mediate how and to what extent poor emotion regulation indeed poses a risk, and lastly, (5) factors like gender, culture, context, past traumas and stressors should also be considered to fully understand how these strategies can lead to an added risk for mood disorders.

Limitations

Before concluding, it is important to take note of a few limitations. In total, only eighteen studies met the inclusion criteria, limiting the amount of data available in answering

the research aims. This was further influenced by the fact that EDS was used as the only search engine for this study. Additionally, only studies published in English and Afrikaans were included, minimising the number of possible studies drawn for this review even further. Lastly, some concepts, specifically emotion regulation and cognitive emotion regulation, were often poorly differentiated and used interchangeably – subsequently, certain inferences had to be made by the researcher. Based on the limitations, results should be interpreted cautiously, and conclusions should not be viewed as definitive. Instead, these findings should, true to the nature of a rapid review, be used to further research in this field.

Recommendations

With the results and the limitations in mind, the following is recommended: Firstly, there should be a clearer distinction between and/or a better understanding of the relationship between emotion regulation and cognitive emotion regulation to determine how they are implicated in mood disorders. Secondly, studies that examine factors such as gender, cultural influences, past traumas and stressors on emotion regulation could provide greater insight into how these factors interact with poor emotion regulation to increase the risk for developing a mood disorder. Thirdly, studies that focus on bipolar and related disorders should be prioritised as these disorders appear to be under-investigated. Lastly, more experimental and longitudinal studies should be conducted to better understand cause-effect and change-over-time relationships between emotion regulation and risk to develop mood disorders. Meta-analyses should be done to synthesize the findings of these studies before any final conclusions should be made about the cause-effect relation between emotion regulation and mood disorders.

Conclusion

The aim of this study was to determine to what extent poor emotion regulation serves as a risk factor for developing a mood disorder and exactly how it can contribute to its

development. It is evident from the review that poor emotion regulation is associated with an increased risk for the development of mood disorders, more specifically for depressive disorders, while no clear picture emerges about bipolar and related disorders. Rumination and brooding seem to be the two most profound strategies that increased the risk of developing a mood disorder. In addition, strategies like positive reappraisal, putting into perspective, refocus on planning and clarity appear to decrease the risk, while social support and higher levels of self-esteem can mediate and decrease the risk of developing mood disorders as well as the effect maladaptive strategies have on mood disorders. An interesting finding was that certain strategies largely considered as adaptive, like acceptance, appraisal and reflection, appeared to increase depressive symptomology and in some instances did not yield the positive benefits so widely reported in literature.

In conclusion, although certain strategies seem to increase the risk of developing a mood disorder, care should be taken when considering whether a strategy is inherently adaptive or maladaptive. Factors like gender, culture, context, past traumas and stressors may influence the course and overall influence that certain strategies can have on developing a mood disorder. Further research and meta-analyses of research findings need to be done to get a clearer picture of the relationship between emotion regulation and mood disorders.

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Chapter 3: Critical reflection

Mood disorders have been a keen interest of mine ever since I started my journey to become a psychologist. I noticed that this group of disorders is common and widely diagnosed, but in my opinion, greatly misunderstood. In my professional and personal life, I have been exposed to individuals with a diagnosis in the mood disorder class regularly. Seeing the disheartening impact this group of disorders can have on an individual's everyday life, relationships, occupational growth and overall wellbeing has contributed to my interest in this field.

Mood disorders, particularly depression, is a diagnosis that more and more people in my social group talk about as they too are becoming aware of how many of their friends and acquaintances are diagnosed with this disorder and as it becomes okay to talk about it. I feel that social media has added to the normalisation of depression and has made it more acceptable for people to speak out and seek help. When starting the research process, it was quite evident that despite the prevalence of these conditions and the vast and encompassing amount of research that has been done to date, we still do not understand mood disorders and its causes in its entirety. However, engaging in the research process was enlightening and brought new insights to my expanding knowledge on the topic, more specifically the link between mood disorders and emotion regulation.

As I reflected on the process I realised that it had been an extremely overwhelming one. I not only had to navigate my way through a multitude of research, but I also had to familiarise myself with a research methodology to which I have had no previous exposure. In my honour's year, we received training in qualitative and quantitative methodologies, but there was little emphasis on methodologies like rapid reviews. This process in itself, trying to learn a new methodology and trying to read everything I can about my given topic, was quite daunting, but also enriching as I could expand my knowledge about research too. I came to

appreciate the value that rapid reviews can have in the field of psychology when instant results are needed.

My research, however, took longer than I initially planned, and at times I think I underestimated the amount of work that had to go into my dissertation. The biggest challenge while completing my dissertation was trying to balance writing up my dissertation with the added academic pressure that is inherent in M1 and then balancing these same demands with the demands of a very busy internship. My internship had unique challenges that made it difficult to find time to write up my dissertation. It came as a rude awakening that the route to becoming a psychologist is a constant juggling act. This juggling act was often met with frustration and anxiety, and at times I thought that this would never get done, but with great motivation and perseverance, I was able to pull through and complete my dissertation.

The process was made easier by the support systems of people in my life who constantly motivated and pushed me to keep going. I found value in my support systems and developed a newfound appreciation for them. My research supervisor also played a great part, and I appreciate his continuous support, guidance and effort throughout. His knowledge of the field helped me grow and develop an appreciation for research and its immense value, particularly in the field of psychology.

The last three years was by far the most testing, intimidating and prodigious experience, but also three years of rapid growth and maturation on both a professional and personal level. The last three years sparked my curiosity and interest in psychology even more, and I hope to further pursue my research interests in the near future. Immersing myself in this process was worth it and I would not have had it any other way. What a blessing it has been to be able to grow on a professional and academic level and to research something that is of interest. It brought new insights to add to my repertoire of knowledge.

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Annexure 1: Ethical Clearance

11 June 2020

RESEARCH ETHICS COMMITTEE LETTER OF DECISION: NO RISK

Based on the review by the North-West University Health Research Ethics Committee (NWU-HREC) on 11/06/2020, the NWU-HREC hereby clears your study as a no risk study. This implies that the NWU-HREC grants its permission that, provided the general conditions specified below are met, the study may be initiated, using the ethics number below.

Study title: Poor emotion regulation as risk factor in the development of mood disorders: A rapid review														
Principal Investigator/Study Supervisor/Researcher: Prof KFH Botha														
Student: PJ Ebersohn - 24223913														
Ethics number:														
N	W	U	-	0	0	4	0	3	-	2	0	-	A	1
Institution			Study Number				Year			Status				
<u>Status:</u> S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation														
Application Type: Single study										Risk:				
Commencement date: 11/06/2020										No Risk				

General conditions:

The following general terms and conditions will apply:

- The commencement date indicates the first date that the study may be started.
- In the interest of ethical responsibility, the NWU-HREC reserves the right to:
 - request access to any information or data at any time during the course or after completion of the study;
 - to ask further questions, seek additional information, require further modification or monitor the conduct of your research;
 - withdraw or postpone clearance if:
 - any unethical principles or practices of the study are revealed or suspected;
 - it becomes apparent that any relevant information was withheld from the NWU-HREC or that information has been false or misrepresented;
 - submission of the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and/or
 - new institutional rules, national legislation or international conventions deem it necessary.
- NWU-HREC can be contacted for further information via Ethics-HRECAppl@nwu.ac.za or 018 299 1206

The NWU-HREC would like to remain at your service and wishes you well with your study. Please do not hesitate to contact the NWU-HREC for any further enquiries or requests for assistance.

Yours sincerely,



Digitally signed by Prof
Petra Bester
Date: 2020.06.11
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NWU-HREC Chairperson



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Head of the Faculty of Health Sciences Ethics Office for Research, Training and Support

Current details: (13210572) G:\My Drive\My Documents 20190227\NWU-HREC\NWU-HREC_Approval Letters\9.1.5.4.3_LOD_NWU-00000-20-A1_2020mmdd.docm
13 February 2020

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