Available online at www.sciencedirect.com

ScienceDirect

Current Opinion in Psychology

Core beliefs and self-schematic structure in depression

David JA Dozois and Katerina Rnic

This article reviews recent research on core beliefs (i.e., early maladaptive schemas; EMS) and self-schema structure in depression. The empirical research supports these variables as vulnerability factors for depression. Whereas EMS operate independently of stress, cognitive organization appears to influence depression in a manner consistent with a diathesis–stress model. Recent research has also explored predictors of EMS and schema structure. Specifically, childhood adversity (e.g., emotional maltreatment, peer rejection) is associated with negative self-schemas and core beliefs. Schema beliefs and structure also mediate the relation between early adversity and subsequent depression. Fortunately, these deeper cognitions appear to be modifiable by psychological and pharmacological treatments. Future research is needed to elucidate the mechanisms by which self-schemas become consolidated over time and how they are optimally changed.

Addresses
University of Western Ontario, Canada

Corresponding author: Dozois, David JA (ddozois@uwo.ca)

Current Opinion in Psychology 2015, **4**:98–103

This review comes from a themed issue on **Depression**

Edited by **Christopher G Beevers**

For a complete overview see the Issue and the Editorial

Available online 20th December 2014

http://dx.doi.org/10.1016/j.copsyc.2014.12.008

Introduction

Beck proposed a hierarchical classification of cognition, ranging from deeper structures to more surface-level thoughts [1,2•,3]. Schemas represent the deepest level of thinking and are purported to play a critical role in the development of depression. Self-schemas — well-organized, internal representations of self — consist of both propositional (content) elements, such as core beliefs, and structural (organization) properties. Through experience and interpretation of past and ongoing events, such content becomes increasingly consolidated in the belief system of individuals vulnerable to depression, and influences the subsequent appraisal and organization of new experiences. Once activated by life-stress, self-schemas also impact the emergence of more proximal cognitions (e.g., negative automatic thoughts). Insecure attachment experiences and maltreatment encompass some of the early predictors of the development of a negative belief system [4•,5••,6].

A number of variables have been studied in the context of cognitive vulnerability to depression [7••]; however, we focus on the content and structure of self-schemas. Recent research on early maladaptive schemas (i.e., deeper core beliefs) and the structure of self-referent content is reviewed. After defining the specific construct of interest, we discuss the current empirical status, highlight predictors and outline the potential modifiability of each vulnerability factor. We conclude with suggestions for further research.

Early maladaptive schemas

Early maladaptive schemas (EMS; [8]) represent an extension of Beck's cognitive theory of depression and account for the developmental origins of core beliefs. EMS are rigid and pervasive absolutist beliefs about self that originate in childhood in response to ongoing aversive relational patterns, and are elaborated on throughout life. EMS, which serve as templates for processing later experiences, are organized into five domains (see Table 1). These self-defeating cognitive patterns vary in severity and increase risk for developing psychopathology. Factor analytic studies of the Young Schema Questionnaire generally support the original conceptualization (e.g., [9]), although the number and structure of these domains is somewhat inconsistent across studies.

Status of EMS as a vulnerability factor

Cross-sectional studies indicate that all five EMS domains are positively associated with depressive symptomatology, although findings are most consistent for Impaired Autonomy and Disconnection/Rejection (see [10]). EMS predict depression severity [11••,12] and episodes, with follow-up intervals as long as 9 years [13]. Furthermore, there is increasing evidence for transactional relationships between EMS, stress, and depression (e.g., [12]). A recent multiwave study of adolescents found that Disconnection/Rejection and Impaired Autonomy predicted increases in depression and stress over time, which in turn predicted greater endorsement of EMS [14••].

Vulnerability factors should predict psychopathology prospectively *and* evince stability over time. EMS demonstrated high temporal stability over a 4-week interval in 8–13 year old children [15] and moderate to high stability over a six-month period in 9–10 year olds [16]. Similar findings have been shown in adult populations (e.g., [9]) and with intervals ranging from 2.5 to 5 years [17] and 9 years [18].

Several studies have investigated whether EMS interact with stress to predict depression (diathesis–stress model)

Table 1

Early maladaptive schemas

Disconnection and rejection
Difficulty forming secure and satisfying relationships with close others and a belief that needs for stability, nurturance, love and belonging will not be met
- Abandonment/instability
- Mistrust abuse
- Emotional deprivation
- Defectiveness/shame
- Social isolation/alienation

Impaired autonomy and performance
Low perceived ability to function independently and having a poorly developed sense of identity
- Dependence/incompetence
- Vulnerability to harm or illness
- Enmeshment/underdeveloped self
- Failure

Impaired limits
Beliefs that one is superior and entitled to special privileges and that one lacks self-discipline and an ability to delay gratification
- Entitlement/grandiosity
- Insufficient self-control/self-discipline

Other-directedness
Meeting the needs of others before one's own needs in order to gain conditional acceptance
- Subjugation
- Self-sacrifice
- Approval seeking/recognition-seeking

Overvigilence and inhibition
Sacrificing relationships, relaxation, and happiness in order to meet strict self-imposed standards
- Negativity/pessimism
- Emotional inhibition
- Unrelenting standards/hypercriticalness
- Punitiveness

Source: Young *et al.* [8].

or function independently of stress (main effect model). In a study of 12–18 year olds, an interaction of EMS and stress was only found in late adolescents who experienced peer (as opposed to parental) rejection [19]. With the exception of a subsample of males who reported high Disconnection/Rejection and Other-Directedness, no significant interactions between EMS and stressors emerged in the prediction of depressive symptoms in a multiwave study of adolescents [11••]. Findings in adult samples follow a similar pattern, with some reporting no evidence of diathesis–stress interactions [20,21] and others reporting moderation only in subsamples or for specific EMS [12,22,23]. Schmidt *et al.* [23] suggest that the schemas of individuals with high EMS are chronically activated by a broad array of environmental events, such that these individuals are always in high distress. This may create a ceiling effect such that life events can exert less of an influence on symptomatology. This interpretation is most consistent with the extant literature, such that EMS largely appear to operate independently of stress levels in predicting depression, consistent with a main effect vulnerability model.

Factors contributing to EMS

Several cross-sectional studies have reported significant associations between EMS and parental maltreatment, particularly emotional maltreatment in childhood (e.g., [24]). Children exposed to emotional maltreatment may internalize the critical and demeaning messages from their abuser(s). Over time, these messages may form core beliefs which predict later psychopathology. Aside from emotional maltreatment [25,26], however, EMS account for the relation between other forms of childhood maltreatment (e.g., poor parenting styles [27], general parental abuse [28], attachment with parents and peers [29]) and depression.

Young *et al.* [8] posited that parents or major caregivers have the greatest influence on schema development; however, as children mature, peers and intimate partners become increasingly important. For example, emotional maltreatment perpetrated by adolescent peers (not parents) made EMS worse, which mediated the prospective relation of peer emotional abuse and depressive symptoms [11••]. Adolescents who experience peer victimization also score higher on the Mistrust EMS [30]. This suggests that by adolescence, peers have a greater influence on EMS change. However, in adulthood romantic relationships may be relatively more influential in shaping EMS. In a sample of women, emotional maltreatment by a romantic partner was positively associated with Disconnection/Rejection and Impaired Autonomy, and these EMS