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How do people experience metacognitive knowledge during periods of low mood? A qualitative study

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May 2016

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ABSTRACT

Despite the rich literature concerning information-processing models of emotional distress, there is a shortage of evidence evaluating the applications of metacognitive strategies in its management. The aim of this research was to gain a richer understanding of the process by which individuals who experience recurrent low mood contextualise and make sense of the associated effects of mood on cognition, by exploring their experience of metacognition during depressive episodes. Other objectives of this research were to explore Wells and Matthews (1996) claim that successful strategies for emotional distress are effective through being a combination of conferring a positive, meaningful context to the experience and through directly or indirectly producing a change in the individual's perspective from viewing their distressing thoughts as accurate representations of reality *(object mode processing)* to viewing them as transitory mental events *(metacognitive mode processing)*. Semi-structured interviews were conducted and audio-recorded, using four participants who have a history of low mood. Interpretive Phenomenological Analysis was used due to its centralising of contexts, meanings and perspectives. Three themes were generated, which are explored in relation to existing research: (1) A concern with fulfilling external expectations and pressures, and meeting personal standards, (2) A period of intense embodied emotional and perceptual experiences incongruous with the external environment, and (3) Making constructive sense of the embodied experiences.

KEY WORDS:	META-COGNITION	DEPRESSION	MEANING	EMBODIED COGNITON	IPA

Depression: A Cognitive Perspective

Since its initial explosion onto the scientific agenda (Beck, 1987), there has been a consistent interest within psychological research in conceptualising the structure and aetiology of depression from a cognitive theoretical standpoint. This broader conceptual approach toward studying the mind and mental phenomena is commonly used in several research disciplines including neuroscience, philosophy and artificial intelligence (Thagaard, 2008). Its must fundamental and unifying hypothesis is that mental processes and human cognition can best be understood as the operation of mental representations which are analogous to 'computational data structures' being acted upon by mental processes comparable to 'computational algorithms' (Thagaard, 2008).

Though their precise nature has been variously contested (Kriegel, 2014), it is generally considered that these mental representations are held internally in the mind as models, and are comprised of cognitive symbols which represent features of external reality (Morgan, 2013) as images, concepts, logical propositions or rules. On one level these models exist as simple abstract mental representations of objects, events or actions which are accessible through recall or recognition (Frank et al., 2014; Winn and Snyder, 2014). On a more advanced level these models can represent associative conceptual networks (Watier and Collin, 2012; Winn and Snyder, 2014), or complex sets of rules and propositions corresponding to the relative arrangement of objects and events such as those which are involved in determining the spatial relations of objects (Mani and Johnson-Laird, 1982) or an event's temporal duration (Ulrich et al., 2014).

These models and the information that they contain also provide a context for 'how we interpret new information, and even direct our attention to particular sources of information' (Winn and Snyder, 2014). Research in this area has evidenced that ambiguous information is interpreted in a biased manner according the context provided by well-developed models (Bransford and Johnson, 1972; Carey, Harste and Smith, 1981). Neisser (1976) has argued further that these structures not only affect an individual's interpretation of information within their environment, but also affect their anticipations and expectations which subsequently direct their actions within their environment.

In extending these theories towards a cognitive account of the psychopathology of depression and its relapse, Teasdale et al (1993, 1995) describe this phenomenon as the reinstatement and 'reactivation' of particular previously held models which are equivalent to the specific pessimistic and dysfunctional worldviews which characterise episodes of low mood (Gross, 2015). This is hypothesised to occur through encountering information which is interpreted to be associative, indicative or otherwise related to the negative or maladaptive forms of information held in these particular models such as by experiencing mild negative affect or having temporarily negative thoughts about the future. This analysis suggests that this configuration can become re-established by a wide range of information which is interpreted as having negative meaning, and that in the case of vulnerable individuals what would otherwise be a transient period of negative thought or feeling is instead 'transformed to a major depressive relapse'. It also suggests that this vulnerability to recurrent episodes of low mood may be associated with holding generally negative or 'dysfunctional attitudes' about oneself and the world, which as a prediction has been robustly supported by empirical evidence (Teasdale and Dent, 1987; Miranda and Persons, 1988; Miranda, Persons and Byers, 1990). Crucially, from the perspective of this model therapeutic interventions operate through effectively restructuring the individual's tendency to process and interpret negative thoughts or experiences according to the context provided by models related to this 'depressive configuration' (Teasdale et al., 1995).

This approach is founded on the theoretical assumption that these models are not 'immutable' or fixed (Winn and Synder, 2014), and are continually verified and modified in response to new information in a process described by Piaget as 'assimilation and accommodation' (Inhelder et al., 1976) in order to reach a state of coherence or 'equilibrium' (Winn and Synder, 2014) between the meaning held in these internal structures and the external environment so that effective plans for action and goal-facilitation can be made based on their content (Cohen et al., 2011). Rumelhart and Norman (1989) have proposed that learning effectively takes place either through the creation of new models, as well as through the adjustment of existing cognitive structures and processes through either exposure to new information or 'conscious restructuring'. The same authors additionally hypothesise that this 'conscious restructuring' implies a level of selectivity in examining and

evaluating thoughts and beliefs which necessarily implicates metacognition as a skillset involved in this process. Overall, this has contributed to a shift in current research towards investigating recurrent episodes of low mood through exploring the relationship between ruminative thinking behaviours and metacognition (Wells and Papageorgiou, 2003).

Metacognition and Depression

Metacognition can best be conceptualised as the capacity and associated skills necessary to assess, monitor, evaluate or change one's own cognitive strategies. Flavell (1979) proposes an initial distinction between two key aspects; metacognitive experiences and metacognitive knowledge. Metacognitive experiences are 'cognitive or affective experiences unrelated to current activity', such as the common dissociative phenomenon of mind-wandering, day-dreaming or 'zoning out'. It is proposed by Schooler et al (2011) that this particular aspect of metacognition functions as the 'cyclical activity' of two main sub-processes, the capacity to disengage attention from perception (perceptual decoupling) and the capacity to 'take explicit note of the current contents of consciousness' (meta-awareness).

Metacognitive knowledge has been defined as 'what we know about our own cognitive processes' (Young and Fry, 2008), and is considered to be constitutive of three modes of knowledge (Jacobs and Paris, 1987; Pressley, Borkowski and Schneider, 1987; Garner, 1990; Schneider and Artelt, 2010); propositional knowledge regarding one's capabilities and the conditions which influence thinking (declarative knowledge), an awareness of the processes involved in thought and action (procedural knowledge) and an awareness of when to use particular strategies in order to maximise efficiency (conditional knowledge).

Most contemporary research supports Flavell's (1979) classic view that metacognition is a multidimensional construct, but contends that these do not necessarily precisely align with his original distinctions. Scraw (1998) for example has proposed the addition of metacognitive regulation as a third aspect, it being equivalent in Flavell's (1979) work to metacognitive knowledge that specifically concerns the monitoring, evaluation and appropriate selection of cognitive strategies to take effective action. This three component model of metacognitive regulation,

metacognitive knowledge and metacognitive experiences is supported by Pintrich, Wolters and Baxter in their review (2002).

Whereas there is a rich body of literature relating to the potential applications of metacognition in an educational context (e.g. Hacker, Dunlosky and Graesser, 1998; Pintrich, 2002; Coderre, Wright and McLaughlin, 2010; Sherbino et al., 2011), there is a lack of research on its potential applications in managing emotional distress despite its usage being previously implicated as being a necessary condition for autonomous 'cognitive restructuring' of the maladaptive schematic models associated with periods of low mood (Rumelhart and Norman, 1989; Teasdale et al,1993).

Wells and Matthews' (1996) S-REF model attempts to explain the role of metacognition and ruminative thinking behaviours in the onset and maintenance of low mood and anxiety. Wells and Papageorgiou (2003) have argued elsewhere in support of a metacognitive based approach in focusing on targeting ruminative thinking behaviours in the treatment of low mood, on the basis of several comprehensive reviews as well as longitudinal and correlational studies which have associated rumination with more severe and longer-lasting periods of low mood (Teasdale and Barnard, 1993; Nolen-Hoeksema, 2000; Lyubomirsky and Tkach, 2004; Nolen-Hoeksema, Wisco and Lyubomirsky, 2008). The S-REF model assimilates previous research and posits that emotional disorder such as low mood is provoked and maintained through a dysfunctional configuration of cognitive processing. In the cognitive architecture proposed by this model, 'self-regulatory processing' serves two functions; it appraises significance towards specific information received from the body and external environment, but also serves a 'metacognitive function' by additionally appraising significance and therefore biasing the allocation of processes such as attention and memory retrieval on the basis of existing self-beliefs and metacognitions. This is an extension of the cognitive hypotheses originally put forward that existing models and beliefs affect an individual's interpretation and allocation of attention toward information (Winn and Snyder, 2014), or that this phenomenon can result in the maintenance or recurrence of low mood (Teasdale et al, 1993). In practise, from the perspective of this model episodes of low mood are maintained through maladaptive metacognitive beliefs

which predispose an individual towards engaging in cyclical and cognitively demanding coping strategies such as compulsively ruminating on the cause of their distress, and a further failure in terms of metacognitive regulation to evaluate the usefulness of existing beliefs and strategies. This precise configuration constitutes a 'cognitive-attentional syndrome' which maintains low mood and complicates recovery once established due to its pervasive and cognitively-demanding nature, meaning that it depletes available resources for processing 'information which is incompatible with dysfunctional beliefs' (Wells and Matthews, 1996).

Wells et al (1996, 2003) also distinguish between two forms of cognitive processing; object mode processing and metacognitive mode processing. In object mode processing negative thoughts about the self and future are accepted as 'accurate representations of reality and coping responses are mobilised to deal with the negative situation', whereas in metacognitive mode processing these thoughts are experienced as 'events in the mind that should be treated as objects, and efforts should be [instead] devoted to changing one's relationship with them'. Wells and Papageorgiou (2003) propose that it is in metacognitive mode processing of maladaptive or dysfunctional beliefs that it is possible to question the validity of these beliefs. The implications of this analysis are therefore that the effective resolution of low mood involves both examining and challenging existing maladaptive metacognitions regarding the usefulness of dysfunctional strategies, as well as attempts to increase flexibility in modes of processing negative thoughts in order to bring about the possibility for 'conscious restructuring' of the overall dysfunctional 'processing configuration' which facilitates and maintains episodes of low mood.

Embodiment and Phenomenology

It has been argued that previous cognitive models have been hindered by conceptual limitations due to their consideration of 'only limited elements of cognition' (Wells and Matthews, 1996). Contemporary models have gradually evolved to become more complex in order to increasingly accommodate the role of elements of abstract thought (such as metacognitions) and more sophisticated nuances of emotion (Barrett, 2006) in our cognitive processes. Whereas this evolution can be seen as a general progression within cognitive psychology, it is also

useful to note that this transition can be appreciated within the context of a general revival of scientific and philosophical interest during the late 20th century in phenomenal consciousness and the structure of conscious experience prompted by major contributions from Nagel (1974), Flanagan (1992), Dennet (1993), Marcel and Biseach (1998), Searle (1992) and Chalmers (1995).

This was a substantial development in that it remains in stark contrast to the approach generally taken in cognitive science, which has traditionally been predominantly concerned with the 'functional, dynamic or structural properties' (Weisberg, 2008) of mental phenomena. This emphasis on functionalism within the context of cognitive science in enormously significant in that it allows for individual components in a multi-component system such as the human mind to be 'discussed in the abstract, without commitment to any particular physical entity' (Quinlan and Dyson, 2008), meaning that this shifting of analysis from the level of physical structure to the functional level allows for an explanation of how two different physical instantiations (i.e. human brains) may underlie the same mental state. Furthermore, this emphasis on the functional level of analysis is critical in that it also allows mental states, processes and representations within the mind to be specified and investigated without a requisite full understanding of the physical structure of the brain. Functionalism is therefore critical to the information-processing view of human cognition where 'the mind is to the brain as the program is to the computer' (Searle, 1994), which underlies the central hypothesis of mental representation in cognitive science (Marr and Vaina, 1982).

However the leading charge against this point of view is that a functional description alone does not present a sufficient explanation for the subjective experience of phenomena, or 'how and why' the mechanisms of sensory processing should give rise to a conscious 'rich inner experience' at all (Chalmers, 1995). Far from this requirement to address phenomenological experience being, as Dennet has criticised (1993), an 'irrelevant concern'; Marcel and Bisiach (1998) have argued that the primary data psychologists examine, as well as the phenomenon which we call 'mental life' is in fact 'conscious mental life' and therefore phenomenological.

Thus as a consequence of an increased scientific interest in conscious experience, phenomenology has received new interest as a potential methodology for

investigating this experiential dimension (Seidner, 1989; Langdridge, 2007; Gallagher and Zahavi, 2012). At the phenomenological level of analysis, the construction of any one conscious experience is conceptualised as a fluid and dynamic process of interpretation which is affected by abstract and material contexts which may be internal or external such as emotion, culture, embodiment, spatiality and temporality (Smith, 2013). Conscious experience then, in this sense, does consist of sensory input – but it is the sum total of all our possible sense, perceptions, contexts and experiences 'directed at, and responding to events and objects in the world' which comprises our experience of reality (Reynolds, 2004; Jensen and Moran, 2013; Low, 2013; Merleau-Ponty, 2014).

Interpretation and 'Meaning-making'

It has been variously proposed that the way we interpret our experiences and the meaning we invest in them – particularly abnormal or distressing ones such as anxiety, psychosis or low mood – deeply affects our experience of their features (Fulford and Jackson, 1997; Fallot, 2007; Phillips and Stein, 2007). The literature is rich with variance in the phenomenology of episodes of low mood, ranging from it being experienced as an incapacitating disease (Erskine, 2010), a source of recognition and hope (Karp, 1994), a source of spiritual insight (Smith, 1999) or containing the potential for powerful transformative growth (Karp, 1994).This variance suggests that it is possible to form a consistent internal interpretation of a period of distress which contains meaning which confers a purposeful or even positive context upon the experience, as opposed to a context which centralises pathology or abnormality.

Wells and Matthew (2003) argue that the mechanism behind the effectiveness of many of these different interpretations being contributive to recovery and resilience against future episodes of low mood is that they indirectly lead to metacognitive mode processing of distressing thoughts, as is the case with mindfulness-based interventions for managing emotional distress such as Attentional Training (Papageorgiou and Wells, 2000) or Mindfulness-Based Cognitive Therapy (Segal et al., 2001) which have received empirical support (Piet and Hougaard, 2011; Kuyken et al., 2015). It may be the case that adaptive and functional interpretations of recurrent periods of low mood are effective through a combination of conferring a

significant or meaningful context to the experience, and practical skills-training by leading to metacognitive mode processing of its related thoughts. However there are no studies in this area. Wells and Matthew's (1996) incorporation of metacognition in their work recognises the role of different modalities of thought and perception as contributive to our construction and experience of reality, which may help guide future approaches. However many other existing cognitive models which attempt to answer fundamental questions do not take into account all of the possible contexts which inform our conscious experience of the effect of mood on cognition and in that sense may be profoundly limited. This research therefore aims to gain a richer understanding of the means by which individuals who experience recurrent low mood contextualise and make sense of the associated effects of mood on cognition, by exploring their experience of metacognition during these episodes.

Methodology

Design

The aim of this study was to explore participant's experience of metacognition during episodes of low mood, and its relation to how these episodes are interpreted and subsequently contextualised. As this involves exploring the mental processes by which participants 'build, verify and modify mental models to account for a relatively novel set of events' (Cohen et al., 2011) such as the effect of mood on cognition, qualitative methods were considered the most appropriate methodology to explore the experience of low mood on cognition and the processes involved in interpreting this series of events (Brocki and Wearden, 2004; Smith, 2011).

Participants

Guided by Howitt and Cramer's (2011) suggestions and Smith and Osborn's (2008) recommendations for an IPA study, the purposive sampling method was used to recruit as homogenous a sample as possible that also satisfied the inclusion criteria (Chapman and Smith, 2002). Four individuals (between 19 and 26 years of age) participated in this study, within the guidelines recommended by Smith and Osborn (2008) for an undergraduate research project. It has also been suggested by Smith, Flowers and Larkin (2009) that a sample size in an IPA study is inversely proportional to the gathering of rich, complex data. Two of these participants were known previously to the researcher, which aided in discussing sensitive topics, the ethical implications of which are discussed elsewhere in this report.

All participants were of similar educational background, either currently studying at undergraduate level or having had graduated within the past year. There were no restrictions regarding participant's ethnicity, gender identity or sexual orientation as these factors did not relate to the aims of the research, which also meant that there were 'meaningful points of similarity and difference' amongst participants (Smith, Flowers and Larkin, 2009). A particular strength of this research was that there were an equal number of male and female participants, which suggests that the results are correspondingly equally meaningful when applied to both genders (Denmark et al., 1988). The inclusion criteria for this study were that individuals be an adult (over 18 years of age), have had experience with at least one period of low mood within

the past three years but not be experiencing current symptoms and that they are capable of providing a description of the effect of emotion on their thoughts during this period, and how they have interpreted the experience.

Researcher

The researcher is a twenty-one year old male studying a BSc Psychology with Philosophy at Manchester Metropolitan University, and has experienced a period of low mood one year previous to commencing the study. The researcher has been interested in the psychological experience of low mood for four years, and had some basic previous knowledge. The researcher additionally has been similarly interested in the philosophical and historical foundations of psychology for the previous 18 months.

Materials and Apparatus

A seven question interview schedule was constructed (see Appendix D) was used as a guide during the interview process, which was based on theoretical knowledge of metacognition that addressed the aims of the study. Additional influences upon its construction were factors found by Cartwright-Hatton and Wells (1997), and supported by Spada and Wells (2008) and Papageorgiou and Wells (2001) to be of particular relevance to metacognition and emotional distress.

All interviews were audio-recorded using a digital recorder, and all recordings and transcripts were stored on a password-protected laptop and removed following completion of the journal report. Participants also received a Participant Information Sheet (see Appendix B) with an attached Informed Consent Form (see Appendix C) before the interview was conducted, and a Debriefing Sheet afterwards (see Appendix E).

Procedure

Data Collection

Semi-structured interviews were considered as the most appropriate method of data analysis for this study on the basis that they impose the essential structure necessary for generating appropriately valid data necessary for a rich analysis (Wengraf, 2001), whilst also allowing for the spontaneity to satisfy the philosophical aims of IPA, 'whereby initial questions are modified in the light of the participant's responses and the investigator is able to probe interesting and important areas which arise' (Smith and Osborn, 2008). Interview questions concentrate on the participant's experience of the effects of mood on cognition and metacognition during periods of low mood, as well as their retrospective experience of interpreting this series of events.

It has been suggested that depression and negative affect may negatively correlate with disclosing emotionally distressing experiences (Kahn et al., 2012). Therefore, in order to minimise the effect of this variable the interview setting was determined by where participants felt the most comfortable talking about sensitive and potentially distressing experiences. Three participants were interviewed in the Brooks Building of the university campus, and one participant was interviewed in the Student's Union building for Manchester Metropolitan University. Each interview lasted for around 45 minutes, so as to gain sufficiently rich and valid data for analysis.

Means of Analysis

Interpretative Phenomenological Analysis was used for this study, which aims to combine an idiographic method of interpreting and understanding a participant's experience whilst maintaining a critical and sceptical hermeneutic (Gill, 2014). This approach was considered to be the most appropriate towards the aims of this research on the basis of three justifications:

Phenomenological psychology, being intellectually connected to the sociological perspective of symbolic internationalism (Denzin, 2001) as a result of its influence on psychological research (Sheldon and Vyron, 2003), shares its central concern with exploring the construction of personal and social meaning (Bryman, 1988). In practise this concern with 'sense-making' (Smith, Osborn and Flowers, 1997) and

the construction of both kinds of meaning naturally emphasises the role of cognition and mental processes, in a manner consistent with Brunner's (1990) work in the same area. Therefore, phenomenology has a legitimate 'theoretical alliance' with cognitive psychology (Smith and Osborn, 2008).

Furthermore, the mental processes involved in interpreting and making sense of events and experiences have been suggested to be ongoing, social and affected by retrospection (Weick, 1995). Therefore, the phenomenological approach, whereupon the researcher is engaged in a double-hermeneutic of attempting to 'make sense of the participants trying to make sense of their world' whilst also adopting a critical approach (Smith, 1991), was deemed the most appropriate for investigating these phenomena. Finally, a quantitative approach is epistemologically limited in its ability to principally investigate and adequately address how mood and cognition contribute to meaningful experience. The phenomenological approach has a unique theoretical commitment to the individual as an embodied being, as well as affective and cognitive (Smith, 1996; Eatough and Smith, 2006), meaning that it is acknowledged that multiple internal and external, as well as abstract or material, inputs are integrated to produce an intricate and dynamic experience of reality (Merleau-Ponty, 2014). Thus given the aims of this research, the use of explorative, qualitative methods was preferred in order to gain an ideographic understanding of how participants experience the effects of mood and cognition (Biggerstaff and Thompson, 2008) as 'a complex act of interpretation according to context' (Gallagher and Zahavi, 2012).

The interviews were transcribed by the researcher, before being analysed for meaning according to the phenomenological approach. The transcripts were read several times in order to establish a close understanding of the text as a whole, whilst documenting and coding initial associations, interpretations, comments, contradictions and similarities in the data (see Appendix F). These codes formed initial units of meaning which were then assembled into clusters, taking into account meaningful variance as well as convergence, resulting in a coherent list of preliminary themes (see Figure 1):

Altered, confusing or seemingly irrational perceptions

Attempts to control self and emotions

Concern for fulfilling expectations and responsibilities

Concern for maintaining personal standards and external appearances

Cyclical internal discourse

Disparity between embodied psychological and emotional needs and demands of external environment

Embodied emotional sensations containing valuable suggestions or indicators

Embodied emotional sensations not as something to be controlled or restricted

Embodied emotional sensations as something that should be listened to

Environment full of threats and external pressures

Episode of low mood containing transformational meaning

Identification of recurrent, consistent negative embodied emotional sensations as holding ontological meaning

Identifies and invests value in self-management

Increased capacity for psychological resilience

Intense, dysphoric sensations during episodes of low mood

Journey or process towards making sense of embodied emotional sensations

New perspective of positive metacognitions towards embodied emotional sensations

Period of intense conflict between internal experiences and external environment

Realisation and acceptance of limitations of trying to control emotional sensations

Time experienced as a series of chaotic, rapid changes

Time experienced as a series of progressive changes

Figure 1 – List of Preliminary Themes

At this point, themes which were not rich in evidence were eliminated in order to provide a list of subordinate themes (see Figure 2) which are discussed elsewhere in this report in relation to existing theoretical and experimental research.

Ethical Considerations

This research has conformed to the code of ethics outlined by the British Psychological Society which details the core principals of ethical psychological research, and was approved in accordance with these guidelines by the MMU Psychology department based on information supplied in the Application for Ethical Approval Form (see Appendix A).

Participants who expressed interest through email and social media were sent a formal Participant Information Sheet (see Appendix B) via email, and were invited to choose a time and date for an appointment. This document explains their rights as a participant should they decide to take part, the purpose and aims of the research, the conditions of anonymity and confidentiality regarding their data and confirms their consent to participation. It also explicitly states that any data provided cannot be treated as confidential, as it must be shared with the research supervisor, and quotes from the interview will be used in the journal report. Participants are also reminded that they will be allocated a pseudonym, and that any data shared during the data collection process which could be used to identify the participant (such as the name of a friend or family member) will be omitted from the transcription process. All copies of the interviews and other materials were destroyed upon completing the research.

Upon completion of the interview, participants were given a formal Debriefing Sheet (see Appendix E), which reiterates their rights to withdraw their data and the conditions of confidentiality and anonymity regarding their data. This document also recognises the possibility of strong emotions being evoked during the interview and following participation. In order to protect participants from any potential harm as a result of their taking part, they are referred to several organisations including the universities' Counselling and Wellbeing Service if the feel they require psychological support in the future.

Analysis & Discussion

The analytic process involved in IPA generated overarching patterns of meaning for each transcript. As a feature of the interpretive process, subordinate themes which emerged as a result from verbatim transcripts were appraised priority on the basis of several considerations. These include the prevalence of available evidence, as well as the richness of this evidence in terms of its ability to communicate the meaning held in participant's experiences and its association to other accounts.

In doing so, three main superordinate master themes emerged from the data which offer an introductory, descriptive account of the processes by which participants contextualise and make sense of the effects of mood on cognition in recurrent episodes of low mood: (1) A concern with fulfilling external expectations and pressures, and meeting personal standards, (2) A period of intense embodied emotional and perceptual experiences incongruous with the external environment and (3) Making constructive sense of the embodied experiences:

Code	Master Theme
1.1	A concern with fulfilling external expectations and pressures, and meeting personal standards
2.1	A period of intense embodied emotional and perceptual experiences incongruous with the external environment
3.1	Making constructive sense of the embodied experiences

Figure 2 – List of Master Themes

Theme One: A concern with fulfilling external expectations and pressures, and meeting personal standards

All participants strongly identified an overwhelming sensation of intense pressure as a feature of their environment, either as an antecedent or property of their episode of low mood. However, between the four participants opinion differs significantly as to the origin of these sensations.

For some participants this originates clearly from the external environment:

> 'I knew that I'd obviously had have to maintain my grades to get there and stuff. […] It got to the point where I was crying my eyes out to sleep at night, and obviously I thought, 'This is not right, I've still got to be here' and stuff. […] I essentially wanted to be in isolation, but my life couldn't accommodate that – I had to be here, I had responsibilities that made me stay here.' (Philippa, 29-30; 39-40; 80-82)
>
> And, like, I kind of got depressed when, like, everyone sort of grew up a bit more than I did – and, like, accepted adult responsibilities and went and did adult things and, like, like – just, erm, just sort of did things that I didn't want to do yet and it kind of got quite depressing.' (Dorian, 20-24)

It is of interest to note that in Dorian's account these are experienced as both involuntary and existential, in that they cannot easily be resisted or ignored:

> 'Everyone's growing up and you still don't want to grow up yourself, and there's not a lot you can do in that situation.' (Dorian, 69-71)

These experiences are felt as inescapable, or as critical but meaningful struggles in which it is unacceptable to fail in ('I still maintained a base level standard, that people wouldn't essentially pick up on, or know quite significantly – unless I told them.' Philippa, 228-230).

Across all accounts, the intensely negative emotional sensations related to experiencing low mood pose a significant obstacle to meeting these expectations and pressures ('I missed a lot of college […] It was a spiralling staircase really.' Dorian 150-152).

In some accounts participants react to this by attempting to exercise more control over their actions and emotions ('I knew […] I'd actually have to address the situation.' Philippa, 31-32). Philippa's account illustrates how in practise this strategy was particularly conflicting for participants who valued self-care ('I needed time to recuperate alone and collect my own thoughts, and just be myself but it just wasn't possible at the time.' Philippa, 46-48). This extract exemplifies her wish for withdrawal which she feels her environment does not allow her to act on, effectively creating a disconnect between exercising self-care towards her embodied needs for occasional withdrawal and rest.

Contrastingly, Alice's account describes how some participants attempted to exercise control over their experience through ruminating on the cause of their distress as to minimise its impact ('And I'd try to see why I became like that.' Alice, 115). However, the precise way in which Alice initially perceives her distress as a recurrent ontological feature of her embodied mental life ('They told me I had depression […] and I put myself in that category.' Alice, 81-86) also enables this type of learned knowledge to be used heuristically as an 'implicit belief about the case of negative events' (Chaiken, Liberman and Eagley, 1989), leading to a sense of frustration related to her perception of not being in control of her emotions.

Furthermore Clarkson et al (2011) argue that confidence in the validity of thoughts is a mediating variable at the metacognitive level in determining their overall believability (Brinol, Petty and Rucker, 2006; Rucker, Petty and Briñol, 2008), and is primarily affected by the perceived credibility of the information source (Briñol and Petty, 2005; Tormala, Briñol and Petty, 2006; Tormala, Briñol and Petty, 2007) such as a medical professional.

Theme Two: A period of intense embodied emotional and perceptual experiences incongruous with the external environment

The experience of low mood prompted intensely dysphoric emotional sensations. In addition to the anhedonia and alienation which typically distinguish low mood, this response is characterised by feelings of disorder, incongruity and internal confusion, consistent with descriptions in the literature (Lane and Terry, 2000):

> 'When it came to my art I couldn't express myself […] I saw myself as being extremely different to everyone else […] I wasn't stable at all. Like, not even my thoughts, or my reactions or my actions – none of it was stable.' (Alice, 78-79; 128-129; 157-158)

> 'I felt like everything was false […]? Like, a lot of the things that people express are false, like certain concepts like people feeling affection towards one another; people being generous and so on, that these things were false.' (Wendy, 80-83)

Most participants also identify a sense of disparity or distortion between their perceptions and external reality. ('But afterwards, when I'd rationalised it, I'd come back into my own, logical thinking – I was fine.' Philippa, 179-180) ('Yeah I guess, erm, b-because it almost, it just felt like there was two different ways of looking at the world.' Wendy, 47-48).

Theme Three: Making constructive sense of the embodied experiences

It is of interest that participants across all accounts create a narrative allowing them to make sense of their experience. A number of participants expressed their perception that retrospectively, their experience of low mood can best be understood as part of a series of progressive changes contributive to the development of their current perspective:

> 'At the end of the day, you're evolving […] that's the whole point, of […] wanting to become something better. […] When you're moving forward, you're becoming something new. And when I realised that thought, I wanted to be better.' (Alice, 355-369)

Following their experience of low mood, all participants also felt a profound difference in their relationship to their emotional needs and limitations in their embodied experience:

> 'I can judge my emotion and how that makes me feel, erm, it helps me know what's good and bad for me, essentially.' (Philippa, 300-301)

Philippa's account shows how she no longer perceives these needs as something to attempt to exercise control over. This perspective of viewing these embodied sensations as something to be listened to is expressed in all accounts, with participants feeling appreciative of their function and role in embodied mental life ('I'll always listen to what I'm feeling, and take it all on board.' Dorian, 103-104) ('It's a bit more strategic now than it is emotional. I would still put my emotion in, but in a more strategic. Alice, 618-619).

Some participants also perceive the root cause of their distress as being in previously attempting to impose control on these sensations:

> 'It's thinking you can control something when you can't, and whether that's, like controlling someone's attachment to you […], or controlling the world in some way. Erm, that's where it seems to come from, I think.' (Wendy, 239-243)

Also of interest is that participants express that this perspective relates to a wider sense of ownership regarding their emotional wellbeing ('Also if I know that something's having a negative […] impact on me, erm, and then on my mood – I will withdraw from that.' Philippa, 285-287) ('Emotion is […] the basic thing you should look at, at the end of the day, because that affects your logic.' Alice, 554-555)

As a result of this development, all participants express feeling more equipped to interpret difficult thoughts and situations constructively. In practise, most participants perceive themselves to be more resilient as a consequence of their experience ('I still have similar problems to what made me feel that way in the first place, […] and I don't care because I'm better than the situation.' Dorian, 247-250) ('I don't care why something happened, […] I just see if I can fix it and if I can't I just ignore it […] I would accept that it happened.' Alice, 524-528). Furthermore, through being more sensitive towards their own embodied sensations they are more able to practise self-care, especially in difficult situations ('But when you actually learn how to speak to yourself, you organise your thoughts a little bit.' Alice, 593-594) ('I think it's important – that you can recognise your own emotions […] and to understand yourself, as and to when you are going into low mood.' Philippa, 366-370).

This description is consistent with cognitive flexibility, an established psychological correlate associated with resilience (Major et al., 1998; Dumont and Provost, 1999; Steinhardt and Dolbier, 2008; Genet and Siemer, 2011) associated with a decreased risk of recurrent low mood (Edward, 2005; Smith, 2009). These findings can be interpreted as support for Wells and Matthews (2003) claim that functional interpretations of episodes of low mood are effective through a combination of conferring a significant or meaningful context to the experience, and practical skills-training by leading to metacognitive mode processing of its related thoughts.

Limitations

One of the most important limitations of this study is that it did not assess participants for measurement of individual differences in metacognitive beliefs and monitoring strategies, even though according to Wells et al (2004) the MCQ-30 is a reliable measure of these constructs. It would have been beneficial to collect information regarding participant's metacognitive beliefs before the interview stage, as this would have limited the amount of inferences made during the data analysis stage and contributed to a more accurate understanding.

It has also been suggested previously that a limitation of studies which employ Interpretive Phenomenological Analysis is that they are simply 'too descriptive' (Langdridge, 2007) and that this avoidance of making definite claims restricts the value of their findings. However, other research has evidenced that IPA studies have directly contributed to advancements in theory and practise within public health and nursing (Brocki and Wearden, 2006; Langdridge, 2007; Biggerstaff and Thompson, 2008; Pringle et al., 2011; Smith, 2011). Furthermore as Smith (2011) argues, one of the aims of IPA is to 'illuminate and illustrate' existing fields and areas of research, in order to deepen understanding.

Reflexive Analysis

Whereas I was always certain that my own emotional history would pose no implications towards this study, it was initially my concern that any preconceived ideas I had arrived at through my basic previous knowledge would impose themselves upon the data, which is contrary to the means of analysis in IPA.

However, through a process of personal reflection and journaling (Moustakas, 1994) I was able to make clear these initial assumptions, as well as acknowledge and reflect on their possible interaction in the 'intersubjective dynamic between researcher and data' (Rathwell and Young, 2015). In doing this, I was able to eliminate this concern and fully embrace the interpretive nature of IPA (Larkin, Watts and Clifton, 2006).

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