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## CHAPTER ONE

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# EXPLANATIONS FOR REDUCED LEVELS OF EXPRESSION AND ACTIVITY IN PSYCHOSIS

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This chapter provides a critical account of the different ideas and theories that have been offered to explain the reduced levels of expression in thoughts, feelings and activity that are frequently observed with psychosis. Much of the literature has been founded on the premise that psychosis is largely a biological problem. This book, however, is based on the principles that (1) this is only one way of thinking about reduced levels of expression and activity and (2) thinking about it in this way has both advantages and disadvantages (Cooke, 2014). Some people find it helpful to think of their difficulties in expressing thoughts and feelings and/or of their limited activity levels as negative symptoms of psychosis or schizophrenia. Others, though, prefer to think of these experiences as a completely understandable response to their stressful life circumstances. Understanding that a reduction in levels of expression and activity is part of an illness can help companions and families avoid being critical of someone who has become inactive, but this may also lead to pessimism, not least because there have not been any major breakthroughs in developing effective drug treatments (Arango et al., 2013). At the same time, even in the medical literature, there is reference to the way that biology interacts with other factors such as impoverished environments (Strauss et al., 1974) and the psychological and social consequences of being diagnosed with a psychotic illness (Zubin, 1985). Indeed explanations for reduced levels of expression and activity are highly individualised and it is likely that biological, psychological and environmental factors overlap and interact in different ways for different people. This is the reason that we propose a formulation-based approach (explained in further detail below) when helping people to overcome their reduced levels of expression and activity in psychosis. For now, we consider some of the general theories that have been offered to explain reduced levels of expression and activity in psychosis. Notably only 10 per cent of people who were asked about their lived experience of reduced levels of expression and/or

activity explained them in biological terms as a symptom of a mental illness (Selten et al., 1993). Other explanations provided (which we will return to later in this chapter) included the effects of medication, the consequences of being detained in hospital and the attempts to cope with distressing voices, unusual or suspicious beliefs and worries about future well-being.

## Biological explanations

Biological theories are often based on the assumption that reduced levels of expression of thoughts and/or feelings are negative symptoms of a mental illness called schizophrenia or psychosis. While these terms (schizophrenia and psychosis) are often used interchangeably, there is now a preference to avoid the term 'schizophrenia'. This is for a number of reasons, not least because it has become highly stigmatising and is often associated with unhelpful myths about unpredictability and violent behaviour (Schizophrenia Commission, 2012). Consequently our preference is to use the term 'psychosis' wherever possible, although when referring to literature that has used the term schizophrenia (as in the Schizophrenia Commission report cited above) we may adopt this for the purposes of clarity.

Psychosis is usually diagnosed when an individual presents with negative symptoms and/or a second group of symptoms called positive ones (Johns & van Os, 2001). Not surprisingly the labelling of these experiences as positive or negative has generated some confusion, given their more usual definitions to denote either being constructive/helpful (positive) or undesirable and harmful (negative). The terms were actually borrowed from the field of neurology where they were used to describe the loss (negative) and excess (positive) of vital properties resulting in paralysis/anaesthesia or pain/spasms respectively (Messinger et al., 2011). When applied to psychosis, the term 'positive symptoms' refers to the experience of hearing voices (auditory hallucinations) and a preoccupation with unusual or suspicious thoughts (delusions), reflecting active processes considered to be in addition to usual human experiences. In contrast, negative symptoms are considered to reflect a loss of usual human functioning, resulting in a reduction in (1) the expression of thoughts and feelings (diminished expression) and (2) motivation to participate in meaningful activities (avolition). We have provided the medical terms for these experiences in brackets in the previous two sentences and agree with Buchanan that there is a 'substantial terminological conundrum in

the area of negative symptoms’ (2007, p1014), hence the need to consider terminology in further detail below.

### Learning activity

List all the negative symptoms you can think of and then compare your list with the detail in Table 1.1. Are there any striking similarities or differences?

## A word about terminology

The literature is peppered with divergent definitions and indeed different items have been identified as negative symptoms at different times. The recently updated *American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* included details of the five negative symptoms presented in Table 1.1.

**Table 1.1** Negative symptoms included in DSM-5 criteria for schizophrenia

Negative symptom terminology	Definition
Diminished emotional expression, affective flattening or blunted affect	An absence or limited expression of feelings or emotions
Avolition	A reduced level of drive or motivation to participate in a range of tasks/ occupations
Alogia or poverty of speech	Reduced levels of conversation believed to result from disruptions in normal thought processes
Asociality	A reduction in the desire to spend time with other people including close family and friends
Anhedonia	A reduction in the ability to experience pleasure from activities which were previously enjoyed

Source: DSM-5. American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders*, 5th edn. Washington DC: American Psychiatric Association.

The first two symptoms listed (affective flattening and avolition) are the most commonly seen in practice.

As with the schizophrenia diagnosis, these terms are controversial and there are a number of reasons why we will avoid, where possible, using them. The first reason is that they imply passivity and reflect a purely biological explanation. The second reason is that they are rarely used by service users, or their friends and families, even when they accept a biological explanation for reduced expression of thoughts/feelings and activity levels. We have never heard service users or their companions refer to problems as affective flattening, *alogia* or *avolition*. For these reasons, and to allow for a range of different explanations, we will use the more neutral description *reduced levels of expression and activity* wherever possible. However, as with the term ‘schizophrenia’, it will be necessary to refer to the term ‘negative symptoms’ when citing literature that has relied upon biological or medical conceptualisations of these experiences.

## Reduced levels of expression

The first category of negative symptoms focuses on the limited display of emotions or feelings and the restricted levels of speech and conversation thought to reflect disruptions in cognitive and thought processes.

The limited expression of emotions is often described in the literature (Wright et al., 2008) as the ‘flattening’ or ‘blunting’ of affect (mood). People with reduced levels of expression may not, for example, laugh at jokes, show sadness when something upsetting happens or become angry when faced by injustice (Andreasen, 1984). The observed reduction in speech or levels of conversation is sometimes referred to as a ‘poverty of speech’ or ‘*alogia*’ (Wright et al., 2008). Translations of *alogia* include ‘without speech’ and ‘no thoughts’. People with such reduced levels of expression may offer little in the way of spontaneous conversation and only reply to questions in brief and concrete ways (Andreasen, 1984).

It is still the subject of some debate in the literature as to whether these reduced levels of expression reflect a complete absence of thoughts and feelings, or instead, whether people have the usual (or indeed more intense) range of thoughts and emotions but experience difficulty in expressing what they think and feel to other people (Horan et al., 2011). Recent reports suggest that people with psychosis do have the ability to experience emotion in the moment, but that they can have difficulty anticipating that they will enjoy or derive pleasure from participating in future events and activities (Kring & Caponigro, 2010).

## Reduced activity levels

The reduction in activity levels that is often observed in psychosis is sometimes referred to as ‘avolition’ (Wright et al., 2008). This often impacts on all areas of a person’s life; they may spend extended periods of time in bed or alone, take little care of their personal hygiene and struggle to engage with both routine tasks and educational or employment opportunities. Another term that is also used, ‘asociality’, describes reduced levels of interaction or desire to spend time with other people, including close family and companions (Andreasen, 1984).

It has been noted that limited engagement with activities might reflect a lack of opportunity rather than an absence of intrinsic motivation (Horan et al., 2011). As far back as 1974, there were acknowledgements that the institutional settings in which many people with mental health problems resided may have contributed to the reduced levels of activity observed (Strauss et al., 1974). We will, therefore, return to the role of institutions and impoverished environments in the maintenance of reduced activity levels later in the chapter.

## Positive and negative symptoms in everyday life

Some people reading this chapter may be thinking that they can recall times when they have had problems thinking clearly or were unable to express their emotions or get on with the things that they needed to do. Indeed it is now widely accepted that both positive and negative symptoms are common in people who have not been diagnosed with a mental health problem (Konings et al., 2006). Hearing voices, for example, is a relatively common experience and many people who hear voices do not need or do not choose to seek help (Corstens et al., 2014). Furthermore these experiences are highly prized in some settings. It has been well documented that Moses, Jesus, Mohammed and Joan of Arc (to name a few) heard voices. In some cultures, people believe that voices and visions bring reassuring messages from ancestors or spiritual guides and that those who hear voices should be revered (Laroi et al., 2014). For example, in India, Sadhus, a group of holy people, are treated with significant respect and are often worshipped as gods themselves because of their voice-hearing abilities. While there has been more limited exploration of reduced levels of expression and activity within the general population (as researchers have traditionally focused on positive symptoms) parallels

between reduced levels of activity and long-term unemployment (Morrison et al., 2004), the period of recuperation post-surgery (Wright et al., 2008) and difficulty in expressing thoughts and feelings clearly when under periods of intense stress have all been noted. We will return to the value of normalising reduced levels of expression and activity in Chapter Two of the book, but for now we will consider biological explanations in further detail.

## Biological markers of negative symptoms

Much of the research attempting to locate a biological marker for negative symptoms has focused on the changes in brain structure that have been observed in some people with psychosis. A number of studies published in the last 50 years have found that people with psychosis and negative symptoms have enlarged ventricles in the brain (Sayo et al., 2012). Ventricles are spaces in the brain filled with cerebrospinal fluid. Studies using brain scanning and imaging procedures and post-mortem results have found that people with a diagnosis of schizophrenia and negative symptoms often, but not always, have larger lateral ventricles than those who do not have this diagnosis (Galderisi & Maj, 2009). These findings have led some to argue that it is these enlarged ventricles that explain the disease process underlying negative symptoms. However, it is important to remember that there is a big overlap between the groups (those with a diagnosis and those who do not have this diagnosis) in the studies, so some people who do not have a mental health problem also have enlarged ventricles and some with a schizophrenia diagnosis do not. In addition, it is unclear from these findings whether enlarged ventricles cause negative symptoms or whether the reverse may be the case: that negative symptoms cause enlarged ventricles. To complicate the picture further, there are other explanations for these changes in brain structure. One alternative explanation is that the enlargement of the ventricular space is due, at least in part, to the (anti-psychotic) medication that is usually prescribed as a treatment for schizophrenia.

Anti-psychotic medications are a group of medicines which are thought to help reduce psychotic symptoms by altering the effects of chemicals (neurotransmitters) in the brain on people's thoughts, feelings and behaviours. There are two groups of anti-psychotic drugs. The older drugs are usually described as first-generation or typical drugs in contrast to the newer drugs which are called second-generation or atypical

medicines. While both first- and second-generation drugs are commonly prescribed as treatments for psychosis, many people do not take the medication as prescribed for a number of reasons including the fact that they do not always work in reducing the distress associated with voices or unusual thoughts (Leucht et al., 2009) and can have a number of unpleasant and even life-threatening side effects including rapid weight gain (Foley & Morley, 2011). This is relevant to the current discussion because when studies include people with a schizophrenia diagnosis who have not taken their medication or have taken only small doses of it, their ventricles are not as enlarged as those who have taken their anti-psychotic medication (Moncrieff & Leo, 2010). So, another explanation is that these changes in brain structure are an effect of taking the medication prescribed for psychosis. It is also important to note that life experiences, distress and trauma can also leave physical traces on the brain (Cooke, 2014), highlighting again how environmental factors can influence an individual's biology.

We have suggested above that one of the reasons that people do not take anti-psychotic medication is because it does not always work in reducing the positive symptoms for which the drugs are prescribed. Indeed there is no clear evidence that any of the anti-psychotic drugs, whether first- or second-generation, are effective treatments for reduced levels of expression and activity (Arango et al., 2013). Indeed researchers (Lewander, 1994) and people with psychosis (Selten et al., 1993) have observed how the drugs prescribed as remedies for positive symptoms can actually induce negative symptoms where they are not already present, or make them worse. Observations of people prescribed the first of the anti-psychotic drugs called chlorpromazine, see Box 1.1, illustrate this well.

Box 1.1 Description of some of the first people to take one of the earliest anti-psychotic drugs – chlorpromazine

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‘Seated or lying down, the patient is motionless on his bed, often pale with lowered eyelids. He remains silent most of the time. If questioned, he responds after a delay, slowly in an indifferent monotone, expressing himself with few words and quickly becoming mute ... but he rarely takes the initiative of asking a question.’

Source: Delay & Deniker (1952) reporting on a patient after taking chlorpromazine (pp. 503–4)

Further evidence that anti-psychotics can induce negative symptoms can be found in a study conducted in Spain (Artaloytia et al., 2006) where a number of people (without a history of mental health problems) received either placebo (dummy) medication or a single dose of haloperidol (a first-generation anti-psychotic medication) or a single dose of risperidone (a second-generation medication). Neither the participants nor those administering the assessments knew which of the three drugs each participant had been given. When the participants were assessed for negative symptoms using a standardised measure, those who had taken haloperidol or risperidone were much more likely to be rated as having negative symptoms than those who had been given the placebo drug. This led the study authors to conclude that these drugs could produce negative symptoms in people with no previous mental health problems, underscoring again the complex relationship between anti-psychotic medication and reduced levels of expression and activity.

A further dimension in the relationship between medication and reduced levels of expression and activity relates to some of the most common side effects of medication. There is now a wealth of evidence that living with and being treated for psychosis is associated with adverse physical and psychological consequences including poor physical health and premature mortality (Gates et al., 2015). While the reasons for this are likely to be multifaceted, it is clear that one key reason for this is the rapid weight gain associated with anti-psychotic medication (Foley & Morley, 2011). So another explanation for reduced levels of expression and activity could be related to the increased weight gain that is frequently observed after the prescription of anti-psychotic medication. At the same time, of course, reduced levels of activity may exacerbate levels of obesity. So weight gain can constitute both a cause and an effect of reduced levels of activity. We will return to this discussion in Chapter Two when we consider the risks inherent in not helping people to become more active.

In summary, then, there is no clear evidence for a biological mechanism underlying reduced levels of expression or activity (at the time of writing this book in any case), although biological factors cannot be excluded entirely, not least because we have considered the potential role that anti-psychotic medication can play.

### Learning activity

Before reading on, list all of the explanations you can think of as to why people with psychosis often express their thoughts and feelings less so than other people and/or struggle with their levels of motivation.

## Other explanations

As noted above, the explanation that reduced levels of expression and/or activity are symptoms of a mental health problem is only one way of thinking about these experiences. We go on to consider alternative explanations below. These include the role played by impoverished environments, the effects of early experiences and finally the explanation that reduced levels of expression and activity constitute, for some people, a completely understandable response to developing psychosis, and further an important first stage of the journey towards recovery.

## Under-stimulating and over-stimulating environments

One of the first accounts of reduced levels of expression and activity we can find in the literature is by the psychiatrist E. Bleuler in 1911. A translation of this is presented in Box 1.2.

### Box 1.2 An early description of reduced expression and activity

'[Patients] cease to show any affect for years and even decades at a time. They sit about ... with expressionless faces, hunched up, the image of indifference. They permit themselves to be dressed and undressed like automatons, to be led from their customary place of inactivity to the mess hall and back again without expressing any sign of satisfaction or dissatisfaction.'

*Source:* Bleuler (1911) translated by Zinkin (1950) p. 40.

Service users themselves have also noted the under-stimulating nature of many hospital settings. One person in the Selten and colleagues (1993) study referred to in the opening section of this chapter suggested that they did 'so little because, in this hospital, nothing is organised for me' (p. 195). Of course in many settings today, the focus of mental health service provision has shifted from hospital to community settings. Many assumed that this transition would provide a natural remedy (Watkins, 1996), although such assumptions failed to acknowledge that many community settings can also be under-stimulating. The Schizophrenia Commission report published in 2012 highlighted a number of environmental constraints to people's recovery. These included a limited access to

employment, in spite of the fact that many people with psychosis want to work, and the lack of appropriate housing to name just a couple. As well as being under-stimulating, some environments may be over-stimulating or potentially harmful. Alternatives to hospital may actually increase exposure to stigmatising messages and high expressed emotion. Further explanations as to why people may retreat and avoid interactions with other people are considered in more detail in the section that follows.

## Stigmatising and pessimistic messages

Back in 1985, Zubin suggested that negative symptoms could result as a 'social consequence of having been identified, labelled and treated as [having schizophrenia] by medical specialists, relatives, close friends and other members of the patient's network' (Zubin, 1985, p. 466). More recently, Henderson and colleagues (2012) found that more than 85 per cent of a sample of people with mental health problems (including a significant proportion of people with psychosis) had experienced negative discrimination, often being shunned by family, friends and mental health professionals. Other surveys have confirmed that other members of the general public, including those who work in mental health services, hold stigmatising and pessimistic views of people with a diagnosis of schizophrenia. In a survey of the British public (n=1737), Crisp and colleagues (2000) found that respondents perceived people with a diagnosis of schizophrenia to be more unpredictable and dangerous than those with other mental health problems such as depression. In studies of mental health professionals we found mental health workers were particularly pessimistic about recovery from reduced levels of expression and activity. One mental health practitioner very honestly reported in a focus group discussion that 'it's something we said at the beginning trying to motivate people with negative symptoms feels like something you do to them and they would really rather you left them alone' (Mairs, 2009, p. 145). Given the prevalence of these stigmatising and pessimistic messages, it is not surprising that people may retreat from social settings to protect themselves from the impact of these attitudes and views.

## The role of early experiences

Psychological explanations for reduced levels of expression and activity often focus on the beliefs that people develop about themselves and their own abilities to succeed as a result of their early experiences. Psychologists have

suggested that people with reduced levels of expression and/or activity have often experienced a significant number of setbacks and failures in their childhood and adolescence. For example, they may have struggled to make friends or maintain friendships, failed their school examinations, done less well than their siblings or peers, found it difficult to secure a job and so on. As a consequence of these obstacles, people go on to develop unhelpful beliefs about their ability to engage in a range of occupational tasks (Perivoliotis & Cather, 2009) and social activities (Lincoln et al., 2011). These beliefs are unhelpful because they are defeatist in nature (Rector et al., 2005) and lead to negative predictions about success and enjoyment in relation to day-to-day activities. Examples of the defeatist thoughts which people with reduced levels of expression and activity have been found to hold are presented in Box 1.3.

Box 1.3 Examples of defeatist thoughts observed in people with reduced levels of expression and activity

There is no point in trying because I will be unsuccessful.

I will be thought less of if I make a mistake.

If I do not do well all of the time, I will not be respected.

If you cannot do something perfectly, there is no point in doing it at all.

*Source:* Rector et al. (2003); Perivoliotis & Cather (2009)

A number of studies (for example, Rector et al., 2003; Perivoliotis et al., 2009) have found that people with negative symptoms often hold these defeatist beliefs about their ability to complete tasks successfully or derive satisfaction from day-to-day activities, hence the proposal that they may play a role in the development of reduced levels of expression and activity. Of course it is important to note that these studies, like the studies exploring the link between ventricular enlargement and negative symptoms we have already considered, are correlational studies, so it is not possible to draw any firm conclusions regarding causality. However, this explanation does offer an avenue for potential intervention and studies have shown that when people develop more realistic predictions about their abilities negative symptoms are reduced (Staring et al., 2013). So, talking to people about the thoughts that they have about themselves and their abilities may be a useful exercise. These cognitive strategies are outlined in more detail in Chapter Five and defeatist beliefs may well explain reduced levels of expression and activity for some people with psychosis.

## Depression and anxiety

Another explanation for reduced levels of expression and activity is that these problems are a result of depression or anxiety, other mental health conditions that are commonly experienced in addition to psychosis (Carpenter et al., 1988). It has been widely acknowledged that it is often difficult to differentiate between negative symptoms and the symptoms of depression because of the significant phenomenological overlap between the two conditions (Gozdzik-Zelazny et al., 2011). The prevalence of depression in schizophrenia has been estimated to be as high as 50 per cent (Buckley et al., 2009) and so a possible explanation for inactivity in psychosis is that a person has depression. While tools have been developed to help clinicians differentiate between depression and negative symptoms (for example, The Calgary Depression Scale for Schizophrenia: Addington et al., 1993), it can be difficult to discriminate between the two conditions in practice.

There are also potential overlaps with different anxiety problems. For example, social withdrawal (asociality) is a key feature of social anxiety and the numbing which may underpin the reduced expression of feelings is a feature of post-traumatic stress. Recent reviews suggest that rates of social anxiety and post-traumatic stress in psychosis may be as high as 25 per cent (Michail & Birchwood, 2009) and 67 per cent (Berry et al., 2013) respectively. An overview of the two anxiety conditions is presented in Boxes 1.4 and 1.5.

### Box 1.4 Key features of social anxiety

Social anxiety is sometimes referred to as social phobia. It is a condition marked by excessive worries about certain situations such as social interactions, being observed and performing in front of other people. People with social anxiety worry that they will act in such a way, or show anxiety symptoms, that will be humiliating or embarrassing and lead to negative evaluation by other people. These fears lead people to avoid social situations and any attempts to engage in social encounters are often accompanied by physical signs of anxiety: breathlessness, increased heart rate and so on.

*Source:* Adapted from DSM-5 criteria, American Psychiatric Association (2013)

Recently, there has been growing interest in how symptoms related to psychosis and treatment experiences (including admission to hospital)

can contribute to increased rates of post-traumatic stress in people with psychosis (Berry et al., 2013). Again, given the overlap in key features it is plausible that for some people, reduced levels of expression and activity might be best explained by post-traumatic stress, particularly after a period of acute psychosis and possibly for many months later (Berry et al., 2013).

### Box 1.5 Key features of post-traumatic stress

Post-traumatic stress is usually diagnosed when a person has been exposed to an event involving the death or serious injury of another, serious injury to themselves, or the threat of death or serious injury to themselves or others, and is a response to the intense fear, helplessness or horror experienced at the time of the event. Signs include the re-experiencing of the event, avoidance and hyperarousal symptoms.

*Source:* Adapted from DSM-5 criteria, American Psychiatric Association (2013)

## **Problems internalising the points of view of other people**

A further psychological explanation for reduced levels of expression and limited social activity in particular has explored the problems some people with psychosis (and other conditions) have in understanding or inferring the intentions of other people (Penn et al., 2008). These problems are usually referred to as Theory of Mind (ToM) difficulties in the literature. Having a ToM allows us to predict what is on someone's mind and attributes thoughts and intentions to other people, allowing us to predict or explain their actions. These skills therefore facilitate successful interaction with other people. When people have problems with ToM this can disrupt their communication with others and so may explain, in some instances, reduced levels of expression and social interaction.

## **An understandable response to developing psychosis**

Another explanation for reduced expression and activity is that withdrawing from certain situations, particularly those that are perceived as stressful,

is a completely understandable and normal response in developing psychosis. The onset of psychosis is often preceded by stressful life events such as a relationship breakdown or the loss of a significant person or valued role (Zubin & Spring, 1977). Although we have suggested earlier in the chapter that hearing voices is a relatively normal human experience, it is often the case that the voices heard by people with psychosis are hugely distressing, frightening and demoralising (Corstens et al., 2014). We also know that it can be difficult for people with psychosis to differentiate between what they fear might happen and what is actually happening (Wright et al., 2008). So they may believe that they are under surveillance and retreat from everyday life to avoid being subject to such monitoring. Some people may fear for their future well-being and think that too much activity may trigger distressing psychotic experiences, a 'relapse' in medical terms. We noted above how there were increased rates of post-traumatic stress for people with psychosis and that this may be related to their treatment experiences, such as being detained in hospital against their will. In brief, the lead up to, experience and consequences of becoming psychotic can increase exposure to a range of intense stressors.

Some people have gone so far as to argue that reduced levels of expression and activity may be an important first step in the process of recovery (Strauss et al., 1974). Watkins (1996) provides a compelling account of how some people need to retreat and shut down, emotionally and cognitively, after an episode of psychosis. He draws a parallel between the suffering often experienced in psychosis and that of people in detention camps in the Second World War, noting how completely shutting down and retreating into a 'shell' has protected people from some of the most intolerable internal and external stressors. We have already highlighted some of the external stressors from which people may need or choose to retreat from, for example the responses of other people, and also emphasised the internal stressors that frequently accompany psychosis: suspicious and frightening thoughts, hearing critical and hostile voices and the pain associated with the external factors identified above. As well as detailing this emotional shutdown, Waktins (1996) describes a state of cognitive shutdown, an exaggerated form of when the mind goes blank or there is a mental block that may be experienced during an examination, for example. These ideas are, in some way, complementary to those derived from biological explanations which note the accepted period of recuperation and convalescence after a physical health problem or surgery and suggest that negative symptoms in some way constitute a period of recuperation after an episode of psychosis (Kingdon and Turkington, 2005).

## The impact of psychosis on self-efficacy beliefs

We have already noted that one explanation for reduced levels of expression and activity is that people develop defeatist beliefs as a result of regular setbacks in childhood and adolescence. Another explanation (which is not unrelated to the one suggesting this is an understandable response) is that these defeatist beliefs can also develop after the onset of psychosis. People may be particularly vulnerable to internalising some of the highly stigmatising beliefs that have been discussed above (Staring et al., 2013) and doubt their own ability to work towards their goals as a result of having experienced psychosis. Some examples of such beliefs are presented in Box 1.6.

### Box 1.6 Examples of the defeatist and asocial beliefs that may develop after a person has experienced psychosis

I changed when I became unwell, I don't enjoy things anymore.

I have no energy now. If I start to work again I will feel unwell.

I cannot concentrate on anything for very long any more.

*Source:* After Staring et al. (2013)

## Primary and secondary negative symptoms

The recognition that there are a number of different explanations for reduced levels of expression and activity has prompted a group of psychiatrists from the United States (Carpenter et al., 1988) to propose that the category of negative symptoms should be divided into two categories: primary negative symptoms, caused by an unspecified biological abnormality, and secondary negative symptoms, which, as the term implies, are secondary to factors other than this biological marker (Buchanan, 2007). So secondary negative symptoms might be activated in response to anxiety or depression, for example, or might constitute an attempt to cope with distressing voices or unusual/suspicious thoughts.

The degree to which the distinction between primary and secondary negative symptoms is a helpful development has been questioned. It has been argued that it is difficult to reliably diagnose those with primary or 'deficit' (as they are sometimes called) symptoms in both research studies

(Buchanan, 2007) and routine practice settings (Messinger et al., 2011). Staring and colleagues (2013) attempted to exclude people from their study of cognitive behavioural therapy (CBT) when their negative symptoms were judged to be secondary rather than primary. However, even after careful screening, they found a number of people recruited into the study had negative symptoms which could well be explained by secondary (distressing voices/beliefs) rather than primary factors. It seems likely that these people were reluctant to disclose this during assessment, waiting instead to talk about their voices and/or beliefs once they felt able to trust the cognitive behavioural therapist they were working with.

In an attempt to overcome this problem, Buchanan (2007) has suggested an alternative approach. He proposed a broader concept of persistent negative symptoms to include primary negative symptoms but also secondary negative symptoms which did not respond to treatment, interfered with a person's functioning over a prolonged period.

It could, however, be argued that in some ways these frequent reclassifications distract from one of the key limitations of assuming negative symptoms (or some of them at least) are part of an illness: the fact that a biological basis has not yet been established.

## A formulation-based approach

It is for these reasons that we propose a formulation-based approach to understand and to help people increase their levels of expression and activity (Mairs & Bradshaw, 2004). In straightforward terms, a formulation is an explanation, a way of making sense, of a person's problems. A full or case formulation (often referred to as a conceptualisation) provides a comprehensive theory and informed explanation of the factors that led to the development and maintenance of a person's problems (Kuyken et al., 2008). Formulations can also be developed at a problem or situational level and it is at this problem level (reduced levels of expression and/or activity) that we focus on for much of this book, although we will discuss the value of developing full case formulations within teams in Chapter Nine. We will return to the process of developing individual formulations of reduced levels of expression and activity in Chapter Four, where we move from the general theories that have been considered in this chapter to understanding the idiosyncratic reasons why some people find it difficult to express their thoughts/feelings or struggle with their levels of motivation.

## Summary

There are a number of different explanations as to why people with psychosis have reduced levels of expression and activity. Biological explanations are only one way of thinking about the problem and there are other explanations such as reduced levels of expression and activity being a completely understandable response to developing psychosis. It is likely that biological, psychological and environmental factors interact and overlap in different ways for different people, so explanations for reduced levels of expression and/or activity will be highly idiosyncratic.

### Learning activity

Review the list of explanations for reduced levels of expression and activity you generated before reading the main body of the chapter – are there any explanations you might now add or delete?

## Coming up in the next chapter

In Chapter Two we move on to consider ways of engaging people with reduced levels of expression and activity in positive working alliances.

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