Abstract

Introduction: Auditory hallucinations are a commonly experienced phenomenon. Theories have been devised in order to help explain how and why this phenomenon occurs, some attributing its occurrence to stressful life events, other explaining it as originating from misattributed thoughts. This study tested the relation between patients who experience auditory hallucinations and their pattern of metacognitions and thought strategies.

Method: 12 participants suffering from auditory hallucinations from different parts of Norway were assessed by following instruments: categories of worry (AnTI), metacognitions (MCQ-30), strategies for thought control (TCQ), beliefs about auditory hallucinations (BAVQ-R) and metacognitions with regard to auditory hallucinations (MCQ-VH).

Results: Results revealed that participants scored high on positive and negative meta-beliefs in regard to auditory hallucinations. There was further an association between measure of meta-worry as indicated by AnTI and interpretation of voices as indicated by BAVQ-R Earlier research on coping with voices had proposed that distraction was used by voice hearers who cope poorly. Correlational analyses found no relation between beliefs about malevolence and omnipotence of voices and distraction, although participants used distraction as a thought control strategy in order to cope with their voices.

Conclusion: This study indicates that metacognitions might be an important factor in perpetuating auditory hallucinations and the discomfort this experience entails. The theoretical and clinical implications of these findings are discussed.

Contents

1 Introduction

1.1 An illness phenomenon?

When you hear something you do not wish to hear, that which makes you uncomfortable or even scared, you have a choice to walk away from the person speaking to you. You can at least close our ears, and escape the torment. What if you can do neither, because the voices seem to follow you no matter where you go, or what you do? Within the frame of disciplines of psychology and psychiatry, the phenomena of hearing or seeing things that have no external source are referred to as *hallucinations*. These phenomena are rudimentarily explained as a failure in reality testing, confusing subjective experiences with objective, and mixing reality with imagination (Leudar & Thomas, 2000). Voice hearing is not a modern phenomenon, historical records of people hearing voices stretch as far back as a couple of millennia. Several famous individuals were recognized as voice hearers, amongst which we find Pythagoras, Socrates, and Galileo (Leudar & Thomas, 2000).

Auditory hallucinations are closely, but far from exclusively, associated with the diagnoses of schizophrenia. People with other mental health problems, such as depression, mania, and PTSD, have also been found to experience auditory hallucinations (Bentall 1990). Within a given cultural framework, social influences allow some individuals to rapport having experiences of auditory as well as other hallucinations, without being categorized as mentally ill at all (Al-Issa, 1977). As mentioned above, hallucinations are a commonly experienced phenomenon, and are usually linked to stress (Turkington et al., 2009). Stressful life situations, in which the person feels that he/she lacks control, have been linked to provoking auditory hallucinations. Among such situations, we find bereavement (Frantz, 1984; Grimby, 1993), incest (Ensink, 1992), acts of terrorism (Siegel, 1984), etc.

2.2 Hearing voices

The quality of voices seems to resemble normal speech, and is diverse both in content as well as intensity and loudness. Voices can be experienced as coming from inside a person's head (situated in one's mind), other body parts (chest, etc.), or as coming from outside of the person (others speaking to the person) (Leudar et al., 1997). According to Romme et al. (1992), voices are initially perceived as an external source coming through the ears. Later on, this perception changes into an internal one, where voices are seen as coming from inside the head/body. Some people view their voices as pleasant memories or spiritual guides; others experience their voices as being generally unpleasant (Romme et al., 1989). They can be

demanding, demeaning, and frightening. Some people experience their voices as muffled whispers, others as yelling and screaming. Voices often manifest themselves in a negative manner as demands, persecutory communications, or criticisms (Bentall, 2000). The onset of voice hearing varies greatly, with some patients starting to hear voices in early childhood. There also seems to be a broad variation with regard to the length of voice hearing, episodes ranging from days, weeks, or years (Romme & Escher, 1989). According to Romme & Escher (1989), the process of successfully coping with one's voices can be categorized into three phases. Voices usually appear suddenly and in connection with some emotionally disturbing (stress provoking) experience. During this first phase, called the *startling phase*, the person experiences panic, anxiety and even anger. Those, whose hallucinatory experience lasts for weeks or years, go through an *organizational phase* where they are trying out different strategies in order to cope with their voices. Depending on the strategies applied, some individuals move on to the last phase, called the *stabilization phase*, where they perceive their voices as an integrated part of themselves.

Although it appears that auditory hallucinations vary in many respects, there seem to be some common denominators. The onset of voice hearing is often sudden, and usually accompanied by feelings of fear and apprehension. Most people seem to recall their first time experience clearly (Romme et al., 1989). Interestingly, voices typically comment on person's thoughts, and try to regulate ongoing activities in daily life (Leudar et al., 1997). Experience of emotional trauma, such as childhood sexual abuse, death of a loved one, surviving a natural disaster or accident, divorce, etc., is another variable voice hearers appear to have in common. Particularly, about 70 % of voice hearers relate their voices to traumatic events (Romme & Escher, 2005). Voice hearing is usually not recognized as part of one self, it is experienced as an ego-dystonic phenomenon.

1.3 Coping with voices: - A matter of control?

Research indicates that voice hearing falls within a continuum between normal and psychotic experiences (Johns & van Os, 2001). Romme & Escher (1996) propose viewing voice hearing as a coping mechanism to difficult life circumstances, as opposed to being a symptom of a particular illness. Their view is supported by findings that there seems to be no connection between particular qualitative characteristics of voice hearing and specific psychiatric disorders (Romme & Escher, 1996).

Voice hearers employ different strategies in their coping process. Research has tried to identify those factors that differentiate between people successfully coping with their voices, from those that do not (Romme & Escher, 1996). Some strategies appear to be more successful than others in enabling the person to cope with his/her voices. For instance, patients coping well use less distraction, ignore their voices more frequently, listen to the voices more selectively, and set more limits to the voices. The main differences between those who cope well and those that do not seem to reside in both applied coping method, and in percieved balance of power between the person and the voices.

Successful copers seem to be:

- experiencing themselves as stronger than the voices
- experiencing more positive voices and less imperative voices
- setting more limits to the voices
- listening selectively to the voices
- communicating more often about their voices to others

According to Romme & Escher (1996), the most relevant difference between successful and unsuccessful copers appears to lie in the percieved power structure between the voice hearer and the voices. Having beliefs that voices can not be controlled, that they are stronger then the person experiencing them, will most likely result in a distressful experience of not being able to cope with one's voices. In other words, coping well with voices seems to be a matter of percieved controllability. Taking all of this into consideration, it could be suggested that finding crucial aspects of voice hearing would lead to more successful treatment, by means of aiding patients in how to better cope with their voices. It would also contribute to a better understanding of psychotic experiences within non-patient population.

Following Romme et al's. (1996) arguments, voice hearing then could be conceptualized as a strategy to regain control, rather than being a symptome of a psychiatric disorder. This does seem to make intuitive sense, if we take into consideration, that most voice hearing seems to appear in connection with the experience of an emotional trauma (Romme & Escher, 2005). Research indicates that a higher incidence of traumatic events differentiates between patients who hear voices and non-patients who hear voices (Romme & Escher, 2005). Having had many experiences of adverse circumstances, not being able to change them or escape, the

person is made to feel powerless. This experience of powerlessness is eventually internalized, and generalized to all subsequent experiences, which is in accordance with the theory on learned helplessness (Seligman, 1975). The mechanism, by which a person tries to regain control with regard to voices, might be a matter of attributing internal events to external sources. This point related to the connection between control and voices will be revisited in section 'Metacognition and auditory hallucinations'.

1.4 Metacognition & CAS

It is not as much *what* we think as *how* we think which determines how we feel, and to which extent we are able to control our emotions (Wells, 2009). Metacognition is an aspect of our cognitive repertoire which is said to monitor, control, and appraise our thinking and mental processes in general. It can be simply described as our knowledge about and insight into our own thinking processes. Metacognition can be compared to a flash light that illuminates a certain area in space. It focuses our attention on something particular and accordingly selects factors that enter our consciousness. It further influences the strategies we select in order to regulate thoughts and feelings. In other words, metacognition guides our coping behaviors. Accordingly, metacognition can be divided into three interrelated factors, which will only be mentioned briefly (for an excellent overview, see Wells 2009). The first factor is metacognitive knowledge, and refers to beliefs and theories people have about their cognition. The second factor is metacognitive experiences, and refers to appraisals and feelings of one's mental status in a given situation. The third and final factor is metacognitive strategies, and refers to attempts to control and alter one's thinking in order to self-regulate emotion and cognition. According to Wells (2009), the base of the metacognitive approach lies in the assumption, that our metacognitions are responsible for thinking in a particular way which maintains emotions. This thinking style, called the cognitive-attentional syndrome (CAS), strengthens negative ideas, and ultimately prevents the person recovering from an emotional disturbance.

Wells & Matthews' (1994) self-regulatory executive function (S-REF) model predicts vulnerability to psychological dysfunction and maintenance of disorder to be associated with the CAS. CAS can be described as a style of thinking which locks a person into a persistent pattern of negative thinking and attention, and which is difficult to control.

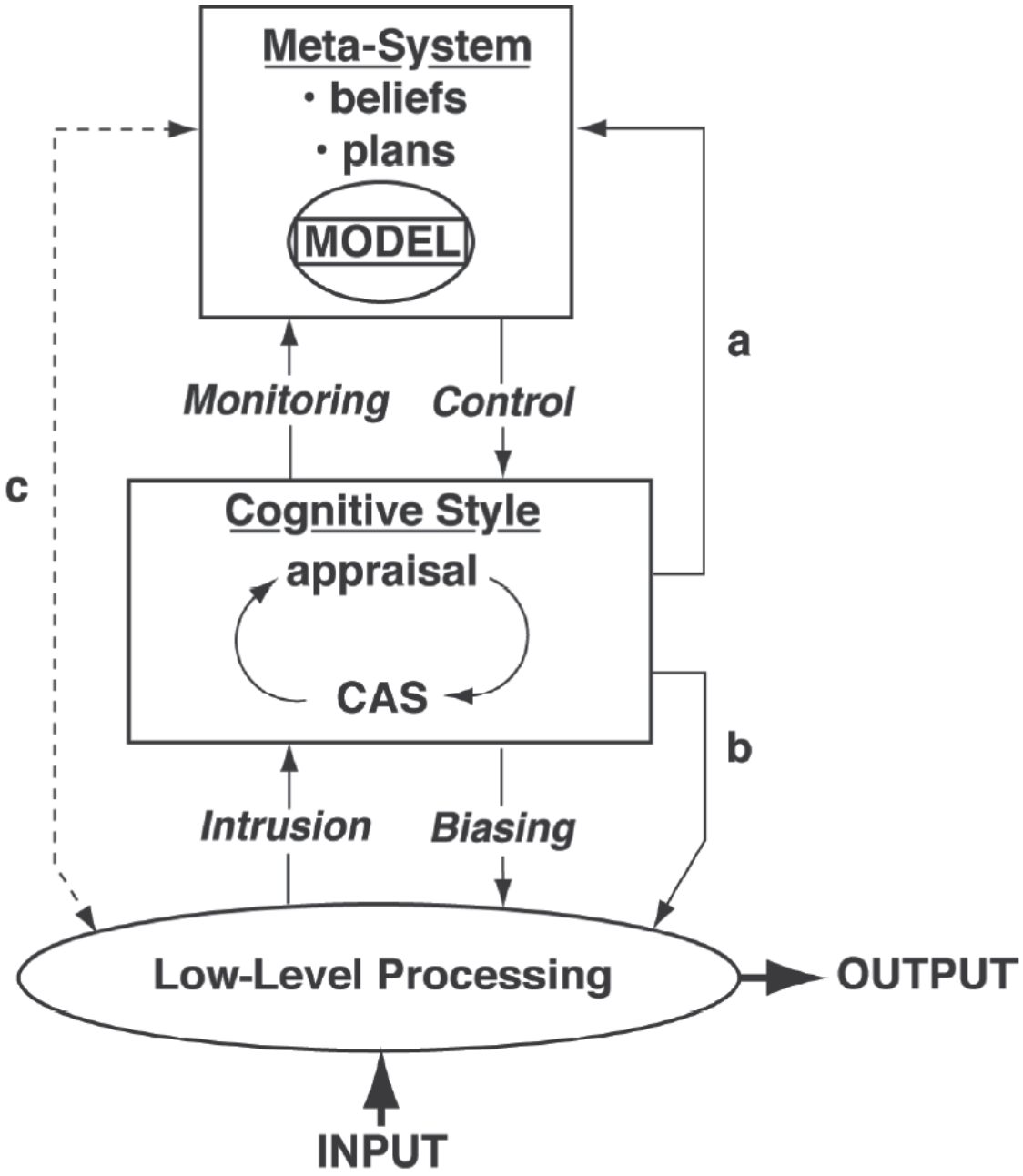

Figure 1: Wells & Matthews' (1994) self-regulatory executive function (S-REF) model

Some of characteristics comprising the CAS are; heightened self-focused attention, excessive threat monitoring, dysfunctional belief activation, worry/ rumination, and perseverance of maladaptive self-knowledge due to malfunction of self-regulation strategies. Metacognitive beliefs contribute to CAS, and can be divided into positive and negative beliefs. Positive metacognitive beliefs are beliefs about benefits/ advantages of cognitive activities

characteristic of CAS. The S-REF model proposes that having positive metacognitive beliefs about worry would lead to vulnerability towards development of CAS. Negative metacognitive beliefs can be described as assumptions regarding the uncontrollability on one side, and meaning, importance and dangerousness of thoughts on the other. It is proposed that negative metacognitive beliefs are responsible for perseverance of the CAS. Presumably, CAS persists because negative metacognitive beliefs about uncontrollability abolish attempts to regain control over thinking, while negative metacognitive beliefs about meaning, importance, and dangerousness, lead to negative and threatening interpretations of thoughts (Wells 2009).

1.5 Metacognition and auditory hallucinations

Research has shown that having certain beliefs about one's voices, and not the mere presence of voices, constitutes the core problem (Chadwick & Birchwood, 1994). Consistent with the S-REF model are indications that patients hearing voices exhibit both positive and negative beliefs about their voices (Morrison et al. 2004). Patients with established psychotic disorder show higher levels of positive metacognitive beliefs, compared with non-patients and patients meeting at risk mental state criteria. Compared with non-patients, voice-hearers seem to exhibit higher levels of negative beliefs about their voices (Morrison et al., 2007). Regarding auditory hallucinations, the S-REF model would suggest that positive metacognitive beliefs about worry and negative metacognitive beliefs about uncontrollability and danger will influence the occurrence of hallucinations. Auditory hallucinations could be conceptualized as intrusive thoughts (Morrison et al., 1995), which are mediated by self-beliefs. Believing that one's voices are dangerous and uncontrollable, it is likely that patients will experience more discomfort in relation to them. Indeed, Chadwick and Birchwood (1994) emphasize the importance of beliefs concerning voices. They suggest that believing one's voices are omnipotent renders the person lacking in control (powerlessness). The S-REF model further suggests that the attempt to control intrusions, will most likely contribute to an escalation of frequency of intrusions. Experiencing voices that are believed to be malevolent compels the person to try to resist the voice, which is particularly true when it comes to severe, life-threatening commands (Chadwick & Birchwood, 1994). Following the S-REF model, the suggestion could be made that the more a person tries to resist his/her voices, the more frequently they will occur.

Several other authors have also indicated that metacognitions are an important factor with regard to auditory hallucinations (Morrison, Haddock, & Terrier, 1995; Lobban, Haddock, Kinderman, & Wells, 2002; Larøi & Van der Linden, 2005). Morrison, Haddock & Terrier

(1995) suggest that metacognitive beliefs concerning controllability influence occurrence of auditory hallucinations. According to Morrison et al. (1995), having a metacognitive belief that one should always have control over one's thoughts, leads one to misattribute unwanted cognitive intrusions to external sources. The mechanism mediating this attribution is so-called cognitive dissonance, where unwanted intrusive thoughts conflict with person's metacognitive beliefs, thereby creating an uncomfortable state of mind (distress). Attributing thoughts to an external source reduces such cognitive discomfort, and at the same time reinforces misattribution. The results of this source misattribution are hallucinatory experiences, among which we find auditory hallucinations.

Rachman (1978) defines intrusive thoughts as repetitive thoughts, images or impulses that are unacceptable or unwanted. A study was designed to test weather patients who experience auditory hallucinations also have more intrusive thoughts, feel more distressed by them, and experience them as more uncontrollable and unacceptable. Morrison and Baker (2000) found more anxiety- and depression-related intrusions in patients with auditory hallucinations, compared with non-hallucinating psychiatric patients and non-patient control group. Further, these patients felt sadder, felt that intrusions were difficult to stop, and disapproved of them to a higher degree compared with the other two groups. These results seem to suggest that there might be a connection between intrusive thoughts and hearing voices, given that patients with higher incidence of distressing intrusive thoughts might to a higher degree misattribute those thoughts to an external source. Given that patients felt unable to stop their intrusive thoughts, we might assume that the same applies for hearing voices (which are misattributed thoughts). Accordingly, having a metacognitive belief that one should be able to exercise control over one's private events, and not being able to control one's voices, leads to a state of distress. Metacognitive beliefs about controllability appear to be a significant factor with regard to auditory hallucinations.

1.6 Assessing metacognition in auditory hallucinations

A study by Morrison & Wells (2003) underlines the importance of metacognitions when it comes to vulnerability factors for psychological disorders. They suggested that psychotic patients who experience auditory hallucinations would score higher then patients with persecutory delusions, panic, and non-patient control group, on measures of metacognition as suggested in Meta Cognitions Questionnaire-65 (MCQ-65; Cartwright-Hatton & Wells, 1997). Their results indicate that patients, who experience auditory hallucinations, indeed show higher levels of dysfunctional metacognitive beliefs compared to other groups. These

include positive beliefs about worry, negative beliefs about uncontrollability and danger and cognitive confidence. It also gives further evidence for the idea that metacognitions are generally associated with psychological problems (Wells, 1997), as indicated by patients with delusions and panic scoring higher than non-patient control group.

Comparing patients with psychotic diagnosis, anxiety disorder, and non-patients, worry seems to be associated with some aspects of delusional ideation and general measure of psychotic experience (Morrison & Wells, 2006). Using the Anxious Thoughts Inventory (AnTI; Wells, 1994a), authors also found a relationship between the subscale meta-worry and distress associated with auditory hallucinations. These findings give further support to the notion that metacognition is an important factor when it comes to the experience of auditory hallucinations. Further, results indicate that both psychotic and anxiety disorder patients show elevated levels of meta-worry. This underlines the importance of dysfunctional metacognitive factors in CAS, which are contributing to maintenance of psychological distress across disorders.

Among other measures, Metacognitions Questionnaire-30 (MCQ-30; Wells & Cartwright-Hatton, 2004), was used in a study of non-clinical sample investigating the relationship between proneness to auditory verbal hallucinations, thought suppression, and a range of metacognitive beliefs (Jones & Fernyhough, 2006). The authors found that among 5 subscales of MCQ-30, the significant predictors of proneness to auditory verbal hallucinations were cognitive self-consciousness, cognitive confidence, and negative beliefs about uncontrollability and danger of worry. Cognitive self-consciousness was in effect found to be the strongest predictor, which in authors' opinion gives support to the idea that cognitive dissonance leads to misattribution of one's own thoughts, as suggested by Morrison et al. (1995). Other research has found similar connection between voice hearing and cognitive self-consciousness (Morrison & Haddock, 1997).

A study by Baker and Morrison (1998) compared a patient group with diagnosis of schizophrenia with hallucinations, a group of patients with diagnosis of schizophrenia without hallucinations and a group of non-patients. For this purpose MCQ-65 (Cartwright-Hatton & Wells, 1997) was used, among other measures. Their findings suggest that patients with hallucinations score higher on beliefs about danger and uncontrollability of thoughts than both other groups. In addition, hallucinating patients score higher on beliefs about benefits of

worry than the other two groups. It seems that both positive and negative metacognitions influence the occurrence of hallucinations.

1.7 Negative beliefs about danger and uncontrollability

Auditory hallucinations are for many patients a frightening and unpleasant experience. The fear of being punished or simply going mad seems to follow such experiences (Kingdon & Turkington, 1994). For many patients, AnTIpsychotic medication isn't effective, leaving many of their symptoms unattended. In addition, many drugs have adverse side effects, or there is a problem with poor or erratic medication compliance (Kingdon & Turkington, 1994). Finding alternative approaches to the treatment of auditory hallucinations would seem to be helpful.

Research on psychosis indicates that there exists a strong relationship between auditory hallucinations and metacognitions (Baker and Morrison, 1998; Garcia-Montes et al., 2006; Jones & Fernyhough, 2006; Kinderman, & Wells, 2002; Lobban, Haddock, Larøi & Van der Linden, 2005; Morrison, Haddock, & Terrier, 1995; Morrison & Haddock, 1997; Morrison & Wells, 2003; Morrison & Wells, 2006). However, there appears to be no general agreement as to what particular metacognitive factor seems to be of key importance with regard to auditory hallucinations.

Earlier research has urged for a measure of metacognitive beliefs that is specifically designed for patients experiencing auditory hallucinations (Lobban et al., 2002). As basis to develop such an instrument, the Metacognitions Questionnaire-30 was used (MCQ-30; Wells & Cartwright-Hatton, 2004). MCQ-30 is a self rapport questionnaire that taps into information on worry, attitudes, and metacognitive processes. An adaptation of this instrument was made in this study as an attempt to tap information on worry, attitudes, and metacognitive processes with regard to auditory hallucinations. The result of this effort is the Metacognitions Questionnaire - Voice Hearing (MCQ-VH; Hagen, Novic & Wells, 2009). Drawing upon results implicating metacognition in auditory hallucination, the study aimed to investigate key contributing metacognitive aspect of auditory hallucinations. Following the earlier research (Romme & Escher, 1996), the study set to investigate the relationship between coping strategies and perceived balance of power in relation to the voices.

More specifically, the hypotheses which were tested were:

- The first hypothesis was that there would be a strong positive relationship between negative metacognitions in voice hearing and beliefs about the power and intentions of voices. Specifically, we expected to find a strong positive relationship between negative beliefs about uncontrollability and danger of voices and omnipotence, and negative beliefs about uncontrollability and danger of voices and malevolence.

- A second hypothesis was that there will be a strong positive relationship between beliefs about the power and intentions of voices and meta-worry.

- The third and final hypothesis was that there will be a high prevalence of thought control strategies to cope with voices, such as distraction, which would have effect on the perceived power and negative intentions of the voices.

2 Method

2.1 Participants

Initially, necessary ethical approval was obtained. Participants were recruited from psychiatric wards and clinics in Mid-Norway area, Møre og Romsdal, Troms, Telemark and Norland. The participant selection was conducted on the basis of informant availability. The inclusion criterion was based on the prerequisite that the participants have experienced psychotic symptoms (hearing voices) for duration of minimum 6 months. In addition, the symptoms had to entail certain discomfort for the person experiencing them. Our study excluded those that were acutely psychotic and/ or acutely suicidal.

The sample in this study consisted of 12 men and women ages between 18 and 34. The participants were fairly young, with mean of 26.83 years. There were an approximately even number of males and females (41.7% and 58.3% respectively). These participants have been experiencing auditory hallucinations from a minimum of 1 year to a maximum of 23 years (mean 8.4 years, SD = 7.75). Two participants did not report on how many years they have been experiencing auditory hallucinations.

2.2 Procedure

Participants were given a folder containing five self-rapport questionnaires along with one schema on demographics. Participant consents were obtained. The five questionnaires were:

- Anxious Thoughts Inventory (AnTI; Wells, 1994)

- Metacognitions Questionnaire (MCQ-30; Wells & Cartwright-Hatton, 2004)

- Thought Control Questionnaire (TCQ; Wells & Davies, 1994)
- Beliefs About Voices Questionnaire – Revised (BAVQ-R; Chadwick, Lees & Birchwood, 2000)
- Metacognitions Questionnaire – Voice Hearing (MCQ-VH; Hagen, Novic & Wells, 2009)

The questionnaires were in Norwegian language, which made it more accessible for the participants. Each participant completed the questionnaires and returned them to the researcher. The questionnaires took about 30 minutes to complete. The questionnaires are enclosed in the appendix in their Norwegian version.

2.3 Measures

A schema on demographic variables was used to collect the information regarding age, sex, the number of years of hearing voices and the number of voices heard in the last week. The schema also taps information on how the voices address the person, and also the frequency, duration and intensity of the voices.

AnTI (Wells, 1994) consists of 21 items measuring three categories of worry: social worry (e.g. 'I worry about doing or saying the wrong things when among strangers'), health worry (e.g. 'I worry about having a heart attack or cancer') and meta-worry (e.g. 'I worry that I cannot control my thoughts as well as I would like to'). Items are scored from 1 to 4, where 1= 'almost never', 2= 'sometimes', 3= 'often', and 4= 'almost always'. Subscales are scored by summating individual subscale items. Cronbach alpha coefficients for the subscales range from .75 to .84, with test-retest correlations across a 6-week period: social worry = .76, health worry = .84 and meta-worry = .77 (Wells, 1994). In the current study the Cronbach alpha coefficient was .93 for scale total, and following for the subscales: social worry = .90, health worry = .78 and meta-worry = .90.

MCQ-30 (Wells & Cartwright-Hatton, 2004) is concerned with metacognitions and consists of 30 items with five subscales: positive beliefs about worry (e.g. 'Worrying helps me cope'), negative beliefs about uncontrollability and danger of worry (e.g. 'When I start worrying I cannot stop'), low cognitive confidence (e.g. 'I have a poor memory'), need to control thoughts (e.g. 'Not being able to control my thoughts is a sign of weakness'), and cognitive self-consciousness (e.g. 'I pay close attention to the way my mind works'). Items are scored from 1 to 4, where 1= 'do not agree', 2= 'agree slightly', 3= 'agree moderately', and 4=

‘agree very much’. Subscales are scored by summating individual subscale items. Cronbach alpha coefficients for individual subscales range from .72 to .93, with test-retest correlations across an interval of 22-118 days: total score = .75, positive beliefs = .79, uncontrollability/danger = .59, cognitive confidence = .69, need for control = .74 and cognitive self-consciousness = .87 (Wells & Cartwright-Hatton, 2004). In the current study the Cronbach alphas were: total score = .93, positive beliefs = .68, uncontrollability/danger = .82, cognitive confidence = .93, need for control = .82 and cognitive self-consciousness = .69.

TCQ (Wells & Davies, 1994) is a 30 item questionnaire concerning use of strategies for thought control, consisting of five subscales measuring distraction (e.g. ‘I do something that I enjoy’), social control (e.g. ‘I ask my friends if they have similar thoughts’), worry (e.g. ‘I focus on different negative thoughts’), punishment (e.g. ‘I punish myself for thinking the thought’), and reappraisal (e.g. ‘I try to reinterpret the thought’). Items are scored from 1 to 4, where 1= ‘almost never’, 2= ‘sometimes’, 3= ‘often’, and 4= ‘almost always’. Items 5, 8 and 12 have reversed scores. Subscales are scored by summating individual subscale items. Cronbach alphas for the subscales range from .64 to .79, with test-retest correlations across a 6-week period: distraction = .72, social control = .79, worry = .71, punishment = .64 and reappraisal = .67 (Wells & Davies, 1994). In the current study the Cronbach alphas were: total score = .57, distraction = .63, social control = -.04, worry = .23, punishment = .81 and reappraisal = .57.

BAVQ-R (Chadwick, Lees & Birchwood, 2000) measures people’s beliefs about auditory hallucinations and emotional and behavioral reactions to these. It is a 35 item measure consisting of three subscales relating to belief; malevolence (e.g. ‘My voice is punishing me for something I have done’), benevolence (e.g. ‘My voice wants to protect me’), and omnipotence (e.g. ‘My voice is very powerful’). There are further two subscales relating to emotional and behavioral aspects; resistance (e.g. ‘My voice frightens me’ and ‘When I hear my voice I usually tell it to leave me alone’), and engagement (e.g. ‘My voice reassures me’ and ‘When I hear my voice usually I listen to it because I want to’). Items are scored from 0 to 3, where 0= ‘disagree’, 1= ‘unsure’, 2= ‘agree slightly’, and 3= ‘agree strongly’. Subscales are scored by summating individual subscale items. The mean Cronbach’s α for the subscales was 0,86, with α correlations for individual scales measuring: malevolence = .84, benevolence = .88, omnipotence = .74, resistance = .85 and engagement = .87 (Chadwick, Lees, & Birchwood, 2000). In the current study the Cronbach alphas were: total score = .93,

malevolence = .88, benevolence = .76, omnipotence = .87, resistance = .85 and engagement = .91.

MCQ-VH (Hagen, Novic & Wells, 2009) is an adaptation of MCQ-30 with regard to auditory hallucinations. It is a 30 item measure with five subscales: positive beliefs about voices (e.g. 'My voices help me cope'), negative beliefs about uncontrollability and danger of voices (e.g. 'When I start hearing voices I cannot stop them'), low cognitive confidence (e.g. 'I have a poor memory'), need to control voices (e.g. 'Not being able to control my voices is a sign of weakness'), and cognitive self-consciousness with regard to voice hearing (e.g. 'I pay close attention to the way my mind works when I am hearing voices'). Items are scored from 1 to 4, where 1= 'do not agree', 2= 'agree slightly', 3= 'agree moderately', and 4= 'agree very much'. Subscales are scored by summating individual subscale items. In the current study the Cronbach alphas were: total score = .92, positive beliefs about voices = .76, negative beliefs about voices concerning uncontrollability and danger = .79, low cognitive confidence = .93, need to control voices = .71 and cognitive self-consciousness = .86.

3 Results

The tables are provided in the Tables section.

In order to examine the internal consistency of the MCQ-VH, a reliability analysis was conducted. In the current study the Cronbach alpha coefficient was .92, showing good internal consistency of the MCQ-VH (Hagen, Novic & Wells, 2009). The results are provided in table 1 in the Tables section.

Descriptive statistics for MCQ-30, MCQ-VH, BAVQ-R, TCQ and AnTI subscales are provided in table 2 in the Tables section. As can be seen, both on the MCQ-30 and MCQ-VH, low cognitive confidence has the highest mean score followed by negative beliefs about uncontrollability, thereafter need to control thoughts, cognitive self-consciousness and finally positive meta-beliefs. On the BAVQ-R the participants felt that their voices were mostly omnipotent and malevolent. The emotional and behavioral aspects of BAVQ-R are not considered to be of importance to the present study, and are as such excluded from the results. The thought control strategies mostly used by the voice hearers were distraction and reappraisal. And finally, the participants reported higher scores on social and meta-worry, as measured by the AnTI.

In order to investigate the relationship between metacognitions in voice hearing and beliefs about the power and intentions of voices, Pearson's correlations were computed between MCQ-VH subscales and BAVQ-R subscales on meaning of the voices. The correlation coefficients are shown in table 3 in the Tables section. As can be seen, there are strong and significant correlations between beliefs about malevolence of the voices and negative beliefs about uncontrollability and danger of voices (r = .872, p < .01), cognitive confidence (r = 699, p < .05) and need to control voices (r = .703, p < .05). Further, there are strong correlations between beliefs about omnipotence of the voices and negative beliefs about uncontrollability and danger of voices (r = .755, p < .01), cognitive confidence (r = .723, p < .01) and need to control voices (r = .644, p < .05). There was a strong relationship between benevolence and positive beliefs about voices (r = .805, p < .05). The strongest correlations were found between malevolence and negative beliefs about uncontrollability and danger of voices, and omnipotence and negative beliefs about uncontrollability and danger of voices.

In order to examine the relationship between measures of worry and beliefs about intentions and power of voices, Pearson correlations were computed between AnTI subscales and BAVQ-R subscales. The results are provided in table 4 in the Tables section. It can be seen that there are strong correlations between meta-worry and beliefs about malevolence (r = .802, p < .01) and omnipotence (r = .818, p < .01).

The present study also wanted to investigate the relationship between strategies for thought control and beliefs about intentions and power of voices. For this purpose, Pearson correlations were computed between TCQ and BAVQ-R. The results are provided in table 5 in the Tables section. There were significant correlations between thought control strategy using punishment and beliefs about malevolence (r = .867, p < .01) and omnipotence (r = .707, p < .05) of voices.

Finally, in order to investigate the relationship between meta-cognitions regarding voices and meta-cognitions regarding thoughts, Pearson correlations were computed between these measures. The results are provided in table 6 in the Tables section. As can be seen from the results, the highest correlations were between positive beliefs about voices and positive beliefs about worry (r = .828, p < .01), negative beliefs about voices and negative beliefs about worry (r = .940, p < .01), cognitive confidence (r = .981, p < .01), need to control voices and need to control thoughts (r = .897, p < .01), and cognitive self-consciousness (r = .774, p < .01).

4 Discussion

4.1 Results revisited

The study set to investigate the occurrence of metacognitions with regard to thoughts as well as voices, measured by the subscales of MCQ-30 (Wells & Cartwright-Hatton, 2004) and MCQ-VH (Hagen, Novic & Wells, 2009). The first hypothesis sought to investigate whether there was a strong positive relationship between negative metacognitions and perceived power structure and intentions of voices, measured by the subscales of MCQ-VH and BAVQ-R. Among other, a strong positive relationship was found between negative beliefs about uncontrollability and danger of voices and omnipotence and malevolence. In support of the hypothesis, it was indeed the largest correlation. The second hypothesis, that there will be a strong positive relationship between a measure of meta-worry and beliefs about omnipotence and malevolence of voices, was supported. The third hypothesis predicted that there will be high incidence of use of distraction as a coping strategy, as indicated by the subscale of TCQ (Wells & Davies, 1994). The hypothesis was supported by the results of the study. The suggestion that distraction would have effect on the perceived power and negative intentions of the voices was not supported.

4.2 Importance of metacognitive beliefs

According to research cited earlier (Morrison et al., 2007), patients hearing voices seem to exhibit higher levels of metacognitions compared with non-patients. In the current study the scores on metacognitions concerning thoughts (MCQ-30), as well as voices (MCQ-VH) were high. There was a notable difference between positive beliefs and other meta-cognitive subscales, both on MCQ-30 and MCQ-VH measures. In our sample there was a lower prevalence of positive beliefs about worry, as well as positive beliefs about voices. The S-REF model (Wells & Matthews, 1994) suggests that positive metacognitive beliefs lead to a vulnerability towards auditory hallucinations, while negative metacognitive beliefs lead to persistence of hearing voices. Initially, having positive metacognitive beliefs about voices perpetuates preoccupation with hallucinatory phenomena, presumably in the same way as having positive metacognitive beliefs about worry perpetuates preoccupation with thoughts. Eventually, not being able to stop hearing voices, would lead to occurrence of negative metacognitive beliefs concerning uncontrollability and dangerousness of voices, much in the same respect as experience of apparently not being able to stop worrying, would lead to occurrence of negative metacognitive beliefs about worry. The results in this study might draw some explanatory power from the S-REF model with regard to difference in the

occurrence of positive and negative metacognitions. As suggested by the S-REF model, the occurrence of positive metacognitive beliefs would precede the occurrence of negative metacognitive beliefs. The current research does show some indication that there might be differences in the occurrence of positive and negative metacognitions with regard to voice hearing, as scores on positive metacognitions were lower than the scores on negative metacognitions. Possibly, positive metacognitions were high initially, which could help to explain the occurrence of auditory hallucinations, whereas subsequent high scores on negative metacognitions could help to explain the perpetuity of auditory hallucinations.

Results of the present study indicate that dimensions of worry might be associated with beliefs about voices. However, there were fewer relationships between social worry and beliefs about voices. The strongest relationships were found between beliefs about omnipotence and malevolence of voices and meta-worry. The results indicate that meta-worry seems to be correlated with distress associated with hearing voices, adding to previous research implicating metacognitions in voice-hearing (Baker and Morrison, 1998; Garcia-Montes et al., 2006; Jones & Fernyhough, 2006; Kinderman, & Wells, 2002; Lobban, Haddock, Larøi & Van der Linden, 2005; Morrison, Haddock, & Terrier, 1995; Morrison & Haddock, 1997; Morrison & Wells, 2003; Morrison & Wells, 2006).

4.3 Negative metacognitive beliefs as a key factor

The state of distress arises out of particular meaning being given to a particular internal event, which bears significant implication for therapy. Metacognitive therapy addresses issues around assigning distress-provoking meaning to internal events, by helping the person change it into a less distressing meaning (Chadwick, Barnbrook, & Newman-Taylor, 2007). According to Romme & Escher (1996), the most significant factor differentiating between patients (coping poorly) and non-patients (coping well), seems to be a matter of perceived control over one's voices. Perceiving one's voices as omnipotent and malevolent (as indicated by BAVQ-R) is a source of distress for many patients (Chadwick et al., 2000), and would be indicative of not being able to cope well with one's voices. Following Romme et al.'s argument, this study expected to find a strong positive relationship between malevolence and negative beliefs about voices concerning uncontrollability and danger, as well as omnipotence and negative beliefs about voices concerning uncontrollability and danger. The results show a strong positive correlation between malevolence and negative beliefs about voices concerning uncontrollability and danger, as well as a strong positive correlation between omnipotence

and negative beliefs about voices concerning uncontrollability and danger. These results give further support to previous research (Romme & Escher, 1996) that suggests perceived control to be the key factor in perpetuating discomfort with regard to voice hearing.

4.4 Coping strategies in voice hearing

There seems to be a link between interpretations of internal events and coping strategies the person selects (Chadwick et al., 2007). Research concerning difference between successful and unsuccessful coping in auditory hallucinations, presents distraction as one of the key strategies employed (Romme & Escher, 1996). Present research has found distraction to be the most used strategy in order to control one's thoughts. Having to use distraction to prevent one self form thinking certain thoughts, implys that those thoughts are dangerous and must be avoided. According to Wells (1997), using distraction can be counterproductive. By means of avoiding exposure to an event in mind, it prevents disconfirmation of dangerousness of thoughts. Following the argument that voice hearing can be regarded as misattributed thoughts (Morrison et al., 1995), a presumption could be made that the strategies employed to controlling thoughts, will be the same ones applied to voices.

People who interpret their voices as evil/omnipotent chose to resist them to a higher degree (Chadwick & Birchwood, 1994). This might imply that voices are perceived as dangerous and something to be dealt with, in order to regain control over one's actions. Metacognitive theory proposes that having a need to deal with thoughts implies that thoughts are harmful (Wells, 2009). Involving oneself with one's thoughts, as if they pose a real danger, contributes to reoccurrence of those thoughts, and at the same time strengthens the belief that thoughts are uncontrollable and dangerous. As can be seen from the results, voice hearers that interpret their voices as omnipotent and malevolent, tend to use more self-punishment as a coping strategy. This might indicate that interpreting one's voices as something to be feared, induces the person to try to deal with the voices, much in the same way as one would deal with thoughts perceived to be dangerous. As mentioned earlier, the cognitive attentional syndrome (CAS) locks the person onto negative thinking and attention, strengthens negative ideas by preventing disconfirmation, and prevents the recovery from emotional disturbance (Wells, 2009). In much the same way as with thoughts, CAS locks the voice-hearers attention onto voices. When the coping strategies seem to fail (in this case punishment), the belief that voices are dangerous and uncontrollable is strengthened, and voices tend to persist.

4.5 Clinical implications

The results of the current study could bear implications with regard to clinical practice. There seems to be some indications, that having negative metacognitive beliefs regarding uncontrollability and danger of voices might influence perseverance of voices. Present research then suggests that negative metacognitive beliefs are to be made a subject to psychotherapeutic intervention. Challenging patient's metacognitive beliefs could aid his/her reattribution of voices to internal source (Lobban et al., 2002). Further, the reattribution might lead to an experience of having control over one's voices, thereby reducing distress. Other than reattribution, there are a couple of other techniques which have proven helpful in treatment of psychosis.

Distress reflects the particular way a person assigns meaning to events (Wells, 2009). Accordingly, distress reflects the particular way a person assigns meaning to events. Believing that one's voices are uncontrollable is an example of assigning distressing meaning to one's voices. Helping patients to try and perceive voices as events in one's mind, can help change the concept of need for control over one's private events.

In metacognitive therapy, *detached mindfulness (DM)* is a technique which focuses on developing meta-awareness "in the context of suspending conceptual processing and separating self from cognitive events" (Wells, 2009). By adopting a non-judgmental stance, thoughts and sensory experiences are viewed as events outside oneself.

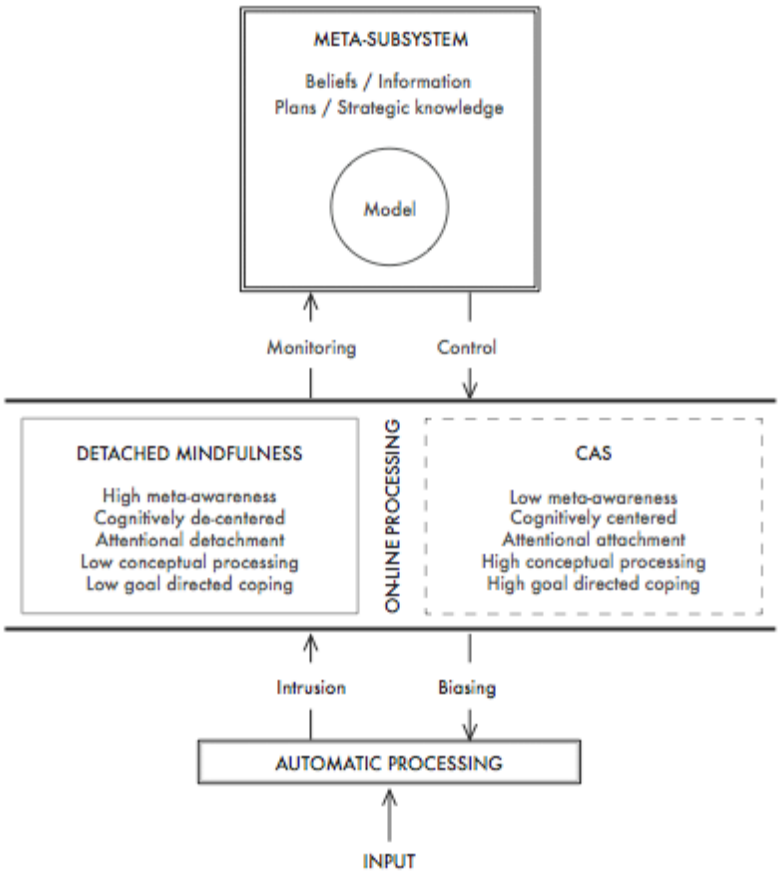

Figure 2: Metacognitive model of detached mindfulness (Wells, 2005).

DM consists of two related and simultaneously occurring features; mindfulness and detachment. Mindfulness refers to the process of being aware of inner cognitive events, and being able to shift focus of attention without locking onto any particular inner experience. According to Wells (2009), detachment is the opposite of the CAS, in that it stops any involvement with inner experiences, such as appraisal and coping. Detachment entails being aware of inner events as experiences independent from general consciousness of oneself.

As mentioned previously, the S-REF model suggests that attempts to control intrusions (voices), will increase the frequency of intrusions. DM therapy works towards being able to observe voices without getting engaged with them. At the same time the person learns that voices are only events in one's mind, and have no real control/power over the individual. Accordingly, the person will not need to engage in appraisal of voices, or coping strategies, which are the characteristics of the CAS.

In order to attain more flexible control of attention, and at the same time strengthen the ability to disengage from involvement with inner experiences characteristic of the CAS, Wells (2009) proposes a technique that directly modifies the control of attention. As previously mentioned, perceiving one's voices as uncontrollable is believed to be a consequence of locking the attention inward onto inner experiences (self-focused processing). *Attention training technique (ATT)* helps the person voluntarily attend to and shift attention between external sounds. By focusing and shifting the attention, the ongoing self-focused processing is interrupted. ATT is not meant to be used as another coping strategy, a point stressed in that occurring thoughts are to be allowed to flow freely, while doing the exercise. Wells (2007) study on auditory hallucinations has indicated that ATT contributes to experiencing one's voices as less intense. At the same time, the experience of being able to regain control over ones voices, contributes to alteration of metacognitive beliefs about uncontrollability and dangerousness of voices. A case-study by Valmaggia et al. (2007) has shown positive results in the treatment of auditory hallucinations by applying the ATT intervention. By increasing attentional control and awareness of one's own metacognitions, the patient experienced lower intensity of, and more control over, auditory hallucinations.

4.6 Methodological limitations and further research

The general idea behind current research project was to obtain a minimum of 30 participants, a presumably achievable task. The research began in April 2009, as the self-rapport questionnaire MCQ-VH was developed. Psychiatric clinics across Norway were contacted in order to obtain research participants, and many showed interest in the project. During the period of data collection, the project met with several obstacles. As it turned out, obtaining participants was not an easy task. Many clinics reported that very few of their patients met the inclusion criteria presented in the research protocol. The most surprising recruitment difficulty was encountered as several psychiatric wards specializing in treatment of psychosis, refused to be a part of the research project. No reasonable explanation was given. As a result, the research had to be based on an insufficient number of research participants.

The study was based on informant availability, no random selection was undertaken. The results were obtained from a selection of voice hearing patients with heterogeneous mental health problems. We did not differentiate between diagnoses. This constitutes a certain limitation on the generalizability of the findings. With regard to further research, it might be interesting to investigate whether there are any significant differences regarding beliefs about voices concerning uncontrollability and danger between different patient groups.

The research sample consisted of only 12 individuals, and though there was an approximately equal gender distribution (41.7% and 58.3%), such a small sample might pose limitations on generalizablility of research results. The same limitations apply with regard to the age sample, as our participants seem to be fairly young (maximum age was 34). In order to investigate whether current results apply, further research would benefit from using a larger sample of voice hearing patients with approximately even number of male and female participants.

Present study was conducted using exclusively individuals that are experiencing discomfort with regard to their auditory hallucinations. No comparison group was included. It might be interesting to investigate whether there are differences between those individuals that cope well with their voices, and those individuals that do not. Further research would benefit from using a comparison group consisting of non-patients that hear voices.

5 Conclusions

The hypothesis regarding the strong positive relationship between negative metacognitions and beliefs about the power and intentions of voices was supported by this study. The same applies to the hypothesis predicting strong positive relationship between beliefs about the power and intentions of voices and meta-worry. The results of this single study indicate that metacognitions, and negative metacognitions in particular, might be an important factor in regard to auditory hallucinations, and as such should be a subject to further investigation. The present study includes only 12 participants, a shortcoming which makes it particularly difficult to make a statement regarding generalizability of the results. However, as previous research indicates (Valmaggia et al., 2007), treatment of auditory hallucinations applying MCT interventions has shown satisfying results. In that regard, future treatment of auditory hallucinations could benefit from applying DM and ATT as a primary intervention. Additional knowledge, as well as overcoming methodological shortcomings, should be an objective for further research regarding negative metacognitions.

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Tables

Table 1

Case Processing Summary

		N	%
Cases	Valid	12	100,0
	Excluded (a)	0	,0
	Total	12	100,0

a Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,923	30

Item Statistics

	Mean	Std. Deviation	N
VH_1	1,5833	,79296	12
VH_2	2,0000	,85280	12
VH_3	3,0000	,85280	12
VH_4	2,5000	1,00000	12
VH_5	2,4167	,79296	12
VH_6	2,4167	1,24011	12
VH_7	1,8333	1,02986	12
VH_8	2,5833	,99620	12
VH_9	2,5000	1,08711	12
VH_10	1,2500	,45227	12
VH_11	2,8333	1,26730	12
VH_12	2,0000	,85280	12
VH_13	2,5000	,67420	12
VH_14	2,5833	,99620	12
VH_15	2,4167	,99620	12
VH_16	2,2500	,86603	12
VH_17	2,6667	1,15470	12
VH_18	2,0833	,66856	12
VH_19	1,1667	,38925	12
VH_20	2,3333	1,23091	12
VH_21	2,9167	1,08362	12
VH_22	2,1667	1,11464	12
VH_23	1,5833	,66856	12
VH_24	2,4167	1,31137	12
VH_25	2,9167	1,24011	12
VH_26	2,5000	1,08711	12
VH_27	2,2500	,86603	12

VH_28	1,1667	,38925	12
VH_29	2,5833	1,16450	12
VH_30	2,0000	,95346	12

Note. VH_1 = MCQ-VH item 1, VH_2 = MCQ-VH item 2 … VH_30 = MCQ-VH item 30.

Table 2

Descriptive statistics for total sample

	N	Min	Max	Mean	Std. Deviation
Total MCQ positive beliefs	11	6	12	9,45	2,296
Total MCQ negative beliefs	11	6	21	15,18	4,665
Total MCQ cognitive confidence	11	6	24	15,73	6,002
Total MCQ need for control	11	6	23	14,64	5,025
Total MCQ cognitive self-consciousness	11	8	19	13,09	3,081
Total VH positive beliefs	12	6	13	8,58	2,678
Total VH negative beliefs	12	7	22	15,17	4,448
Total VH cognitive confidence	12	7	23	15,33	5,758
Total VH need for control	12	6	21	14,58	4,144
Total VH cognitive self-consciousness	12	8	21	13,75	3,841
Total BAVQ benevolence	12	6	17	10,33	3,822
Total BAVQ malevolence	12	9	24	16,50	4,945
Total BAVQ omnipotence	12	6	22	16,58	5,518
TCQ distraction	11	10,00	17,00	13,4545	2,50454
TCQ punishment	11	7,00	17,00	11,4545	3,77793
TCQ reappraisal	11	9,00	17,00	12,5455	2,58316
TCQ worry	11	9,00	15,00	12,0000	1,89737
TCQ social control	11	9,00	14,00	11,7273	1,55505
AnTI social worry	12	12,00	34,00	23,0833	6,80185
AnTI health worry	12	6,00	20,00	11,0833	3,96481
AnTI meta worry	12	8,00	26,00	19,5000	5,38516
Valid N (listwise)	10				

Note. MCQ = MCQ-30, VH = MCQ-VH, BAVQ = BAVQ-R.

Table 3

Correlations between MCQ-VH subscales and BAVQ-R subscales

		Total BAVQ benevolence	Total BAVQ malevolence	Total BAVQ omnipotence
Total VH positive beliefs	Pearson Correlation	,805(**)	,196	,313
	Sig. (2-tailed)	,002	,542	,322
	N	12	12	12
Total VH negative beliefs	Pearson Correlation	,264	,872(**)	,755(**)
	Sig. (2-tailed)	,407	,000	,005
	N	12	12	12

Total VH cognitive confidence	Pearson Correlation	,428	,699(*)	,723(**)
	Sig. (2-tailed)	,165	,011	,008
	N	12	12	12
Total VH need for control	Pearson Correlation	,188	,703(*)	,644(*)
	Sig. (2-tailed)	,560	,011	,024
	N	12	12	12
Total VH cognitive self-consciousness	Pearson Correlation	,254	,342	,295
	Sig. (2-tailed)	,426	,276	,352
	N	12	12	12

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed
Note. VH = MCQ-VH, BAVQ = BAVQ-R.

Table 4

Correlations between BAVQ-R subscales and AnTI subscales

		AnTI social worry	AnTI health worry	AnTI meta worry
Total BAVQ benevolence	Pearson Correlation	,356	,658(*)	,283
	Sig. (2-tailed)	,257	,020	,373
	N	12	12	12
Total BAVQ malevolence	Pearson Correlation	,564	,540	,802(**)
	Sig. (2-tailed)	,056	,070	,002
	N	12	12	12
Total BAVQ omnipotence	Pearson Correlation	,534	,409	,818(**)
	Sig. (2-tailed)	,074	,187	,001
	N	12	12	12

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
Note. BAVQ = BAVQ-R.

Table 5

Correlations between BAVQ-R subscales and TCQ subscales

		TCQ distraction	TCQ punishment	TCQ reappraisal	TCQ worry	TCQ social control
Total BAVQ benevolence	Pearson Correlation	-,137	,220	,559	-,094	-,242
	Sig. (2-tailed)	,687	,515	,074	,783	,473
	N	11	11	11	11	11
Total BAVQ malevolence	Pearson Correlation	-,470	,867(**)	,561	,357	-,211
	Sig. (2-tailed)	,144	,001	,073	,281	,534
	N	11	11	11	11	11
Total BAVQ omnipotence	Pearson Correlation	-,368	,707(*)	,397	,221	-,324
	Sig. (2-tailed)	,266	,015	,226	,514	,331
	N	11	11	11	11	11

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Note. BAVQ = BAVQ-R.

Table 6

Correlations between MCQ-VH subscales and MCQ-30 subscales

		Total VH positive beliefs	Total VH negative beliefs	Total VH cognitive confidence	Total VH need for control	Total VH cognitive self-consciousness
Total MCQ positive beliefs	Pearson Correlation	,828(**)	,483	,736(**)	,441	,302
	Sig. (2-tailed)	,002	,132	,010	,175	,367
	N	11	11	11	11	11
Total MCQ negative beliefs	Pearson Correlation	,203	,940(**)	,579	,735(*)	,413
	Sig. (2-tailed)	,549	,000	,062	,010	,207
	N	11	11	11	11	11
Total MCQ cognitive confidence	Pearson Correlation	,613(*)	,680(*)	,981(**)	,661(*)	,426
	Sig. (2-tailed)	,045	,021	,000	,027	,191
	N	11	11	11	11	11
Total MCQ need for control	Pearson Correlation	,411	,839(**)	,748(**)	,897(**)	,191
	Sig. (2-tailed)	,209	,001	,008	,000	,574
	N	11	11	11	11	11
Total MCQ cognitive self-consciousness	Pearson Correlation	,196	,413	,404	,109	,774(**)
	Sig. (2-tailed)	,563	,207	,218	,749	,005
	N	11	11	11	11	11

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Note. MCQ = MCQ-30, VH = MCQ-VH.

Appendices

Appendix A:

Alder: …….

Kjønn: **Mann** ☐ 0 **Kvinne** ☐ 1

Hvor lang tid har du hørt stemmer (antall år)? …….

Hvor mange ulike stemmer har du hørt <u>den siste uken</u>?

Antall stemmer: **1** ☐ 1 **1-3** ☐ 2 **3-5** ☐ 3 **5-10** ☐ 4 **>10** ☐ 5

Stemmenes tiltaleform:

1.person (jeg, meg, oss…). **ja** ☐ 1 **nei** ☐ 2

2.person (snakker direkte til en). **ja** ☐ 1 **nei** ☐ 2

3.person (snakker om en). **ja** ☐ 1 **nei** ☐ 2

Enkle ord eller fraser uten pronomen. **ja** ☐ 1 **nei** ☐ 2

<u>Frekvens</u>

Hvo ofte opplever du å høre stemmer?

0 Hører ikke sremmer, eller hører stemmer sjeldnere enn en gang i uken . ☐

1 Hører stemmer minst en gang i uken. ☐

2 Hører stemmer minst en gang om dagen. ☐

3 Hører stemmer minst en gang i timen. ☐

4 Hører stemmer kontinuerlig eller nesten kontinuerlig. ☐

(Opphører bare i noen sekunder eller minutter)

<u>Varighet</u>

Når du hører stemmer, hvor ofte hører du dem?

0 Hører ikke stemmer. ☐

1 Stemmene varer i noen få sekunder, flyktige stemmer. ☐

2 Stemmene varer flere minutter. ☐

3 Stemmene varer minst en time. ☐

4 Stemmene varer flere timer om gangen. ☐

Lydstyrke/ intensitet

Hvor høy lydstyrke har stemmene?

0 Hører ikke stemmer. ☐

1 Svakere enn egen stemme, som hvisking. ☐

2 Omtrent samme lydstyrke som egen stemme. ☐

3 Høyere enn egen stemme. ☐

4 Ekstremt høye stemmer, roping. ☐

Appendix B:

MCQ-30 (VOICE -HEARING)

Denne undersøkelsen handler om forestillinger personer har om egne tanker omkring det å høre stemmmer. Under finner du et utvalg av forestillinger personer har uttrykt. Vennligst les hvert spørsmål og si hvor mye du vanligvis er enig ved å sette en ring rund det riktige tallet. Vennligst svar på alle spørsmålene.

Det finnes ikke noe riktige eller gale svar.

Kjønn:_____ Født:_____

	Ikke enig	Litt enig	Ganske enig	Svært enig
1. Mine stemmer hjelper meg å unngå problemer i fremtiden.	1	2	3	4
2. At jeg hører stemmer, er farlig for meg.	1	2	3	4
3. Jeg tenker mye om mine stemmer.	1	2	3	4
4. Jeg kan bli syk av å høre stemmer.	1	2	3	4
5. Jeg er oppmerksom på stemmene mine når jeg tenker gjennom et problem.	1	2	3	4
6. Dersom jeg ikke kontrollerte det stemmene sier, og det så skjedde, ville det være min skyld.	1	2	3	4
7. Jeg trenger å høre på mine stemmer for å fremdeles være organisert.	1	2	3	4
8. Det at jeg hører stemmer gjør at jeg ikke husker ting godt nok.	1	2	3	4
9. Mine stemmer går ikke bort uansett hvordan jeg forsøker å stoppe dem.	1	2	3	4
10. Å høre på mine stemmer hjelper meg å sortere tankene mine.	1	2	3	4

11. Jeg kan ikke ignorere mine stemmer.	1	2	3	4
12. Jeg holder oversikt over stemmene mine.	1	2	3	4
13. Jeg burde ha kontroll over stemmene mine hele tiden.	1	2	3	4
14. Min hukommelse kan fra tid til annen villede meg.	1	2	3	4
15. Mine bekymringer om stemmer kan gjøre meg gal.	1	2	3	4
16. Jeg er konstant oppmerksom på stemmene mine.	1	2	3	4
17. Jeg har en dårlig hukommelse.	1	2	3	4
18. Jeg er oppmerksom på hva som skjer med tankene mine når jeg hører stemmer.	1	2	3	4
19. Stemmer hjelper meg å holde ut.	1	2	3	4
20. At jeg ikke er i stand til å kontrollere stemmene mine, er et tegn på svakhet.	1	2	3	4
21. Når jeg begynner å høre stemmer, kan jeg ikke stoppe dem.	1	2	3	4
22. Jeg kommer til å straffes for at jeg ikke kontrollerer visse stemmer.	1	2	3	4
23. Å høre stemmer hjelper meg å løse problemer.	1	2	3	4
24. Jeg har lite tillit til min hukommelse for steder.	1	2	3	4
25. Det er ikke bra å høre visse stemmer.	1	2	3	4

26. Jeg stoler ikke på hukommelsen min.	1	2	3	4
27. Dersom jeg ikke kunne kontrollere stemmene mine, ville jeg ikke være i stand til å fungere.	1	2	3	4
28. Jeg trenger å høre stemmer for å arbeide bra.	1	2	3	4
29. Jeg har lite tillit til min hukommelse for handlinger.	1	2	3	4
30. Jeg gransker stemmene mine konstant.	1	2	3	4

Appendix C:

MCQ-30

Denne undersøkelsen handler om forestillinger personer har om egne tanker. Under finner du et utvalg av forestillinger personer har uttrykt. Vennligst les hvert spørsmål og si hvor mye du vanligvis er enig ved å sette en ring rund det riktige tallet. Vennligst svar på alle spørsmålene. Det finnes ikke noe riktige eller gale svar.

Kjønn:_____ Født:_____

		Ikke enig	Litt enig	Ganske enig	Svært enig
1.	Å bekymre meg hjelper meg å unngå problemer i fremtiden.	1	2	3	4
2.	At jeg bekymrer meg, er farlig for meg.	1	2	3	4
3.	Jeg tenker mye om tankene mine.	1	2	3	4
4.	Jeg kan gjøre meg selv syk av å bekymre meg.	1	2	3	4
5.	Jeg er oppmerksom på at måten sinnet mitt arbeider når jeg tenker gjennom et problem.	1	2	3	4
6.	Dersom jeg ikke kontrollerte en bekymringstanke, og det så skjedde, ville det være min skyld.	1	2	3	4
7.	Jeg trenger å bekymre meg for å forbli organisert.	1	2	3	4

8.	Jeg har lite tiltro til min hukommelse for ord og navn.	1	2	3	4
9.	Mine bekymringstanker går ikke bort uansett hvordan jeg forsøker å stoppe dem.	1	2	3	4
10.	Å bekymre meg hjelper meg å sortere ting i sinnet mitt.	1	2	3	4
11.	Jeg kan ikke ignorere bekymringstankene mine.	1	2	3	4
12.	Jeg holder oversikt over tankene mine.	1	2	3	4
13.	Jeg burde ha kontroll over tankene mine hele tiden.	1	2	3	4
14.	Hukommelsen min kan fra tid til annen villede meg.	1	2	3	4
15.	Mine bekymringstanker kan gjøre meg gal.	1	2	3	4
16.	Jeg er konstant oppmerksom på hvordan jeg tenker.	1	2	3	4
17.	Jeg har en dårlig hukommelse.	1	2	3	4
18.	Jeg følger nøye med på hvordan sinnet mitt fungerer	1	2	3	4
19.	Bekymringer hjelper meg å holde ut.	1	2	3	4

20.	At jeg ikke er i stand til å kontrollere tankene mine, er et tegn på svakhet.	1	2	3	4
21.	Når jeg starter å bekymre meg, kan jeg ikke stoppe.	1	2	3	4
22.	Jeg kommer til å straffes for at jeg ikke kontrollerer visse tanker.	1	2	3	4
23.	Å bekymre meg hjelper meg å løse problemer.	1	2	3	4
24.	Jeg har lite tillit til min hukommelse for steder.	1	2	3	4
25.	Det er dårlig å tenke visse tanker.	1	2	3	4
26.	Jeg stoler ikke på hukommelsen min.	1	2	3	4
27.	Dersom jeg ikke kunne kontrollerer tankene mine, ville jeg ikke være i stand til å fungere.	1	2	3	4
28.	Jeg trenger å bekymre meg for å arbeide bra.	1	2	3	4
29.	Jeg har lite tillit til min hukommelse for handlinger.	1	2	3	4
30.	Jeg gransker tankene mine konstant.	1	2	3	4

Appendix D:

BAVQ-R

Spørreskjema vedrørende antagelser om, og reaksjoner på å høre stemmer

Mange mennesker hører stemmer. Det ville hjelpe oss å forstå bedre hvordan du opplever det å høre stemmer hvis du kunne fylle ut dette spørreskjemaet. Vennligs les gjennom hvert utsagn nedenfor og grader i henhold til skalaen slik at det best beskriver hvordan du har opplevd den siste uken.

Hvis du hører mer enn en stemme, så krysser du av for den stemmen som er mest dominerende

Takk for hjelpen.

Navn .....

Alder .....

Jeg tror det følgende om stemmen jeg hører:		Ikke enig	Usikker	Litt enig	Sterkt enig
1.	Stemmen straffer meg for noe jeg har gjort				
2.	Stemmen ønsker å hjelpe meg				
3.	Stemmen har mye makt over meg				
4.	Stemmen forfølger meg uten grunn				
5.	Stemmen ønsker å beskytte meg				
6.	Stemmen ser ut til å vite alt om meg				
7.	Stemmen er ond				
8.	Stemmen hjelper meg med å bevare forstanden				
9.	Stemmen får meg til å gjøre ting jeg ikke ønsker				
10.	Stemmen ønsker å skade meg				

11.	Stemmen hjelper meg med å utvikle spesielle krefter eller evner i meg				
12.	Jeg kan ikke kontrollere stemmene mine				
13.	Stemmene vil ha meg til å gjøre dumme ting				
14.	Stemmen hjelper meg til å nå mine mål i livet				
15.	Stemmen vil skade eller drepe meg hvis jeg ikke adlyder eller jeg motarbeider den				
16.	Stemmen ønsker å forderve eller ødelegge meg				
17.	Jeg er takknemlig for stemmen				
18.	Stemmen styrer mitt liv				
19.	Stemmen beroliger meg				
20.	Stemmen skremmer meg				
21.	Stemmen gjør meg glad				
22.	Stemmen gjør meg trist				
23.	Stemmen gjør meg sint				
24.	Stemmen gjør meg rolig				
25.	Stemmen gjør meg enstelig				
26.	Stemmen gjør at jeg føler meg sikker				

Når jeg hører stemmen pleier jeg vanligvis:		Ikke enig	Usikker	Litt enig	Sterkt enig
27.	Jeg ber stemmen om å la meg være i fred				
28.	Jeg prøver å ignorere stemmen				
29.	Jeg prøver å stoppe stemmen				
30.	Jeg foretar meg noe for å få stemmen til å holde opp med å snakke				
31.	Jeg vil nødig adlyde stemmen				
32.	Jeg lytter til stemmen fordi jeg ønsker det				

33.	Jeg gjør villig det stemmen forteller meg at jeg skal gjøre				
34.	Jeg har engasjert meg for å komme i kontakt med stemmen				
35.	Jeg søker råd fra stemmen				

Appendix E:

Anxious Thoughts Inventory (AnTI)

Instruksjon: Nedenfor finner du en rekke utsagn som andre har brukt til å beskrive sine tanker og bekymringer. Vennligst les hvert utsagn og sett ring rundt det tallet som best angir hvor ofte du har hatt disse tankene og bekymringene. Bruk ikke for lang tid på hvert utsagn. Det finnes ingen riktige eller feil svar og din første innskytelse er ofte den mest riktige vurderingen.

	Nesten aldri	Noen ganger	Ofte	Nesten alltid
1. Jeg bekymrer meg for utseendet mitt	1	2	3	4
2. Jeg synes jeg er en taper	1	2	3	4
3. Når jeg tenker på fremtiden, tenker jeg mer på de negative fremfor de positive tingene som kan hende meg	1	2	3	4
4. Dersom jeg får uventede fysiske symptomer, pleier jeg å tenke det verste som kan feile meg	1	2	3	4
5. Jeg har tanker om å bli alvorlig syk	1	2	3	4
6. Jeg har vansker med å få tilbakevendende tanker ut av hodet	1	2	3	4
7. Jeg bekymrer meg for å få hjerteattakk eller kreft	1	2	3	4

8. Jeg bekymrer meg for å si eller gjøre noe galt når jeg er blant fremmede	1	2	3	4
9. Jeg bekymrer meg for at mine evner ikke møter andres forventninger	1	2	3	4
10. Jeg bekymrer meg for min fysiske helse	1	2	3	4
11. Jeg bekymrer meg for at jeg ikke kan kontrollere tankene mine så godt som jeg skulle ønske	1	2	3	4
12. Jeg bekymrer meg for at folk ikke liker meg	1	2	3	4
13. Jeg bryr meg så mye om skuffelser at jeg ikke kan få skuffelsen ut av hodet	1	2	3	4
14. Jeg blir lett flau	1	2	3	4
15. Når jeg har mindre alvorlige sykdommer, slik som utslett, tenker jeg at det er mer alvorlig enn det egentlig er	1	2	3	4
16. Jeg tenker ubehagelige tanker mot min egen vilje	1	2	3	4
17. Jeg bekymrer meg for mine feil og svakheter	1	2	3	4

18. Jeg bekymrer meg for å ikke være i stand til å mestre livet på en god nok måte, slik andre virker å klare det	1	2	3	4
19. Jeg bekymrer meg for døden	1	2	3	4
20. Jeg bekymrer meg for å dumme meg ut	1	2	3	4
21. Jeg tenker at jeg går glipp av mye i livet fordi jeg bekymrer meg for mye	1	2	3	4
22. Jeg har stadig tilbakevendende tanker, slik som å telle eller gjenta setninger	1	2	3	4

Vennligst kontroller at du har sirklet ett svar for alle utsagnene.

Navn: _____ Dato: _____

S H M Total

Skårer: ☐ ☐☐☐

Appendix F:

TCQ

Alder : Kjønn:

De fleste personer opplever ubehagelige og/ eller uønskede tanker (I form av ord eller bilder) som kan være vanskelige å kontrollere. Vi er interessert i teknikkene du vanligvis benytter for å kontrollere slike tanker.

Under følger et antall ting som personer gjør for å kontrollere disse tankene. Vennligst les hver uttalelse nøye, og vis hvor ofte du benytter hver teknikk ved å sette en sirkel rundt det tallet som passer. Det er ingen riktige eller gale svar. Ikke bruk mye tid på å tenke på hver enkelt.

(Ledd 5,8,12 har reverserte skårer)

Når jeg opplever en ubehagelig/ uønsket tanke:

	Aldri	Noen ganger	Ofte	Nesten alltid
1. Bevisstgjør jeg meg selv positive bilder I stedet.	1	2	3	4
2. Forteller jeg meg selv at jeg ikke skal være så dum.	1	2	3	4
3. Fokuserer jeg på tanken.	1	2	3	4
4. Erstatter jeg tanken med en mer triviell dårlig tanke.	1	2	3	4
5. Snakker jeg ikke om tanken til noen.	1	2	3	4

6. Straffer jeg meg selv for å tenke på tanken.	1	2	3	4
7. Dveler jeg ved andre bekymringer.	1	2	3	4
8. Holder jeg tanken for meg selv.	1	2	3	4
9. Holder jeg meg I stedet opptatt med arbeid.	1	2	3	4
10. Utfordrer jeg tankens gyldighet.	1	2	3	4
11. Blir jeg sinna på meg selv for at jeg har tanken.	1	2	3	4
12. Unngår jeg å diskutere tanken.	1	2	3	4
13. Kjefter jeg på meg selv fordi at jeg har disse tankene.	1	2	3	4
14. Analyserer jeg tanken rasjonelt.	1	2	3	4
15. Slår eller klyper meg selv for å stoppe tanken.	1	2	3	4
16. Tenker jeg hyggelige tanker I stedet.	1	2	3	4
17. Finner jeg ut hvordan mine venner håndterer slike tanker.	1	2	3	4
18. Bekymrer jeg meg om mindre viktige ting I stedet.	1	2	3	4
19. Gjør jeg et eller annet jeg liker.	1	2	3	4

20. Forsøker jeg å tolke tanken på nytt.	1	2	3	4
21. Tenker jeg på noe annet.	1	2	3	4
22. Tenker jeg mer på de mindre viktige problemene jeg har.	1	2	3	4
23. Forsøker jeg andre måter å tenke omkring det.	1	2	3	4
24. Tenker jeg på tidligere bekymringer I stedet.	1	2	3	4
25. Spør jeg vennene mine om de har liknende tanker.	1	2	3	4
26. Fokuserer jeg på andre negative tanker.	1	2	3	4
27. Stiller jeg spørsmål ved årsaken til at jeg har tanken.	1	2	3	4
28. Forteller jeg meg selv at noe dårlig kommer til å skje dersom jeg tenker tanken.	1	2	3	4
29. Snakker jeg med en venn om tanken.	1	2	3	4
30. Holder jeg meg selv opptatt.	1	2	3	4