



Eating behaviours and the inner voice

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ABSTRACT

This study aimed to explore the extent to which an inner voice is present in a non-clinical population regarding eating and food behaviours. Whilst previous research has largely centred on clinical populations, subsequently pathologizing the inner voice, research investigating its prevalence in non-clinical populations is lacking. Thus, this research aimed to examine this occurrence and establish the qualities and functions of the inner voice. Utilising a mixed methods approach, surveys assessed participants' acceptance of an inner voice entity and qualitative, semi-structured observations of food shopping established the qualities and functions of the inner voice in action. Questionnaire data was subjected to statistical analysis and thematic analysis of observations found themes of; consultant, being healthy and self control as consistent with the inner voice. The findings suggest that females identify more greatly with an inner food voice whilst males were found to identify more so with resistance to the voice. It is concluded that although an inner voice is predominantly associated with clinical populations, it is also a 'normal' entity for non-clinical populations and warrants further explorative research in order to destigmatize the link between the inner voice and mental illness.

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|-------------------|------------------------------|-------------|------------------------|--------------------------|-----------------|
| KEY WORDS: | EATING BEHAVIOURS | FOOD | INNER VOICE | MIXED METHODS | ANOREXIA |
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Introduction

“Every normal human being, including deaf people, report hearing almost constantly a silent voice when they are not overtly speaking.” (Steels, 2003, p.174). It is safe to assume that it is not unusual to have an inner voice present to some extent for different aspects of our behaviours. Firestone (1997, p.2) also supports this view by saying “...all people are involved in an internal dialogue; that is, they are always talking to themselves about the ongoing events and experiences in their lives.” Whether this covert internalisation is identified as an inner voice or simply as general thought processes, will I assume, be varied between individuals and depend somewhat on the qualities and character of the voice. The majority of the literature regarding inner voice experiences is centred on mental illnesses such as schizophrenia, and experiences such as auditory verbal hallucinations whereby the voice is portrayed as being alien to the individual and is actually a fictitious occurrence though seemingly real to them. Such instances are classified as positive symptoms for schizophrenia and (as cited in Fernyhough, 2004) Schneider (1959) classified auditory verbal hallucinations as a first-rank symptom for the illness. In contrast to this there is also research to suggest that non-psychotic populations also experience auditory verbal hallucinations (e.g. Feelgood & Rantzen, 1994; Choong et al, 2007), but these tend to be predominantly positive and non-threatening in character rather than intrusive and distressing. Research investigating the phenomenology of the inner voice is somewhat limited in the non-clinical sense, but within the available research there is an acknowledgement that despite the inner voice being closely linked to the self e.g. ‘I’ ‘Me’ or ‘My’, it is also possible to hear someone else’s voice much like “when we imagine a dialogue or hear people speak in a dream” (Steels, 2003, p.174).

Alternative inner voice research includes accounts of an inner voice as a driving force in suicide. As discovered by Richard A. Heckler (1994, p.74) (as cited in Firestone, 1997) it is often the case in interviews that suicidal individuals talk about a voice that is set on destroying their self esteem and encouraging them to commit suicide. This account seems to be broadly recognised by a large proportion of suicidal individuals as Heckler goes on to say “In fact, mention of a voice is so common that I’ve learned to inquire directly about this during interviews.” The voice is usually described as getting louder with the stress of the suicidal ordeal and takes on an extremely malevolent character as it “demands increasingly to be heard above everything else, and it begins to occupy a greater part of the person’s psyche until it smothers more reasonable voices altogether.”, (Heckler, 1994, p.74) (as cited in Firestone, 1997, p.15). Some may argue however that this is more related to negative automatic thinking patterns rather than an inner voice.

Anorexia nervosa is a serious psychiatric illness with a high mortality rate. ‘Lifetime prevalence estimates of DSM-IV anorexia nervosa, bulimia nervosa, and binge eating disorder are .9%, 1.5%, and 3.5% among women, and .3% .5%, and 2.0% among men.’ (Hudson et al, 2007). With the number of eating disorder cases increasing rapidly (‘Child anorexia on the increase’, 2010) there are many theoretical frameworks available arguing for the aetiology of such disorders. Anorexia is considered a Western culture-bound illness, with particular influence from the media’s glamorisation of thin. But although it is clear that a relationship

exists between anorexia and media, it is argued that this is more interactional than causal. Williams et al (2003, p.131) argue that eating disorders "...are not solely a function of the media itself, but also of the way in which the message is used, manipulated or interpreted by the media consumer." An alternative cultural explanation shows a connection with 'religious idioms and symbols about the body, food and self.' (Banks, 1992). Similar findings were evidenced in an account from an anorexia sufferer, who described her struggle with anorexia as "a spiritual battle", (Sosin, 2008, p.72).

Until recently very little research thoroughly addressed the issue that one of the factors motivating anorexia is the inner voice that patients report as controlling them and coordinating their destructive lifestyle. Although this is not an unknown phenomenon in anorexia, it is overlooked somewhat in place of more mainstream qualities of the illness. Tierney & Fox (2010) acknowledged the inner voice as a prominent driving force behind anorexia. Written accounts of living with an anorexic voice were obtained from sufferers who had identified with such an entity. From this, ten common categories for qualities of the voice were found to be persistent in driving the illness. These included; "feeling part of something, giving a steer to life, providing comfort and safety, constant presence, entrapped in an undesirable situation, attacking sense of self, demanding and harsh task master, powerful entity, dangerous state of being, breaking free" (Tierney & Fox, 2010, p. 246). An important quality to consider is the individuals' perception of their relationship with the inner voice. This is perceived as positive initially ('motivator, protector and friend') but as the relationship develops the voice turns on them to become more negative ('tyrant, manipulator and captor'), trapping the individual and bullying them to remain within the vicious cycle of destructive behaviour. Much like descriptions of the inner voice of suicide, participants reported the voice became "confining and wearing as it became stricter and louder; having to tolerate its abuse, in particular, was draining" (Tierney & Fox, 2010, p. 247). The voice is often reported to be controlling and dictating over eating behaviours and holds a powerful restraint over the individual, causing them to question the motives of those who interact with them. It has a malicious nature that attacks and belittles the victim should they stray from the 'rules' of the voice, creating greater dependence on it. One participant reported "The voice did not congratulate me for obeying anything, nor did it ease off if I did...There was always something I did not do well enough..." (Tierney & Fox, 2010, p. 248).

A limitation of this study is that participants were self-defined rather than objectively measured to determine a diagnosis of anorexia therefore it could be speculated that they may not meet criteria for diagnosis but have disordered eating. Also, the research reports that the voice enters the individual's life when they are vulnerable, but it may be that the voice was present to some extent before this feeling of vulnerability and then progressed when these feelings began. This would support Steels (2003), suggesting that everyone has an inner voice. A criticism towards inner voice entities in cases such as suicide and anorexia would be the suggestion that these 'voices' are actually cognitive distortions maintaining their suicidal or anorexic thoughts. Cognitive distortions have been found to maintain behaviour in anorexia as "A belief system develops and acts as a Procrustean mold to which incoming information is shaped to fit; data that are inconsistent with the system are either disregarded or distorted in the interest of the predominant belief." (Garner & Garfinkel, 1985, p. 109).

However, previous research by Kaplan (1984) is consistent with inner voice entities and supports the idea that anorexia sufferers are not acting of their own free will; one girl reported “A little man screams at me when I think of eating” (p. 269). Tullett & Inzlicht (2010) also provide evidence to suggest that your inner voice is activated in self control. This in turn supports the control aspect of the inner anorexic voice. Using the Go/No Go task they evidenced that we can use our inner voice to ignore and resist temptation which may help us to obtain goals.

Rationale for study

In light of the research regarding the inner voice, particularly with regard to its quality as a self control function and the research highlighting its importance in anorexia, this investigation sought to address the extent to which an inner voice is present in a non-clinical population with regards to eating and food behaviours. Thus the main objectives are; (1) ascertain if non-clinical individuals engage with an inner food voice that plays a role in eating and food related behaviours. (2) Establish the qualities and functions of the inner voice if present.

By assessing participants' acceptance of an inner voice entity via surveys and observation of their food behaviours, a mixed methods design should expand the research in this area to account for direct influences of the inner voice on everyday activities with particular relevance to eating behaviours. Prior to data collection it was anticipated that participants would identify to varying extents with an inner food voice. With regards to the qualities of the voice, it was expected that some of the qualities reported for the anorexic voice would be present but not to such an unbearable extent. Female participants were also predicted to indicate greater acknowledgement of and greater difficulty with an inner food voice as ‘80-90% of patients with anorexia are female.’ (Morris & Twaddle, 2007).

Method

Methodology utilised a mixed methods design with greater emphasis on qualitative data. This was necessary as ‘collecting diverse types of data best provides an understanding of a research problem’ (Creswell, 2003). As not all individuals may be consciously aware of having an inner food voice, surveys first established if participants actually identified with such an entity. “Through participant observation, it is possible to describe what goes on, who or what is involved, when and where things happen, how they occur, and why – at particular situations.” (Jorgensen, 1989). Thus qualitative semi-structured observations were employed to establish the thoughts and behaviours of participants whilst food shopping, determining if the inner voice is active in eating related behaviours. This method aimed to provide greater insight regarding inner voice qualities by asking questions relating to participants' behaviours throughout observation. This type of qualitative observation data makes no claims for generality and thus provides rich data on the specific phenomenon. Ethics forms are attached detailing full ethical procedures for this study (Appendix A).

Participants

Fifty students took part in the survey aspect of the study. As methodology utilises a mixed methods design, this small sample size for survey data is justifiable. Participants were selected opportunistically and contact was made by requesting

around campus that students complete surveys as part of my dissertation project. From this sample, five participants were selected for observations by asking participants to indicate on surveys if they would be willing to take part in an observational study, and to leave their email address as a point of contact. In total fifteen participants said they would be willing to take part in the study (males = 2, females = 13). Five participants were then randomly selected from this group and emailed to arrange suitable times for observation. Five participants was the minimum number for observations as this aspect of the research is much more detailed and time consuming due to the qualitative method and analysis. Therefore this was a good number to use to gain sufficient data within the time constraints. Students were used for this research as this is a large and easily accessible population to obtain a sufficient quantity of data.

Data collection methods

Surveys

Survey data was collected via the Inner Voice Survey (IVS) and SCOFF questionnaire. These were put together to form one survey (Appendix B), with the SCOFF completed last to avoid demand characteristics influencing answers for the IVS. Age and gender data were also collected and consent forms were attached (Appendix C). Surveys were printed onto coloured paper (violet) as a visual indicator of importance which aimed to encourage participant completion. As surveys often involve little time for reflection (influencing quality of answers), participants were able to complete surveys at leisure and return to a collection box labelled appropriately if preferred. This intended to encourage participants to complete and return surveys and ensure sufficient data was obtained as 'many questionnaire surveys suffer because of low response rates' (Langdrige, 2004, p.73). Surveys were self-administered; they were used for this study as they are cheap to produce and allow large amounts of specific data to be gathered in a short space of time.

The SCOFF questionnaire (Morgan et al, 1999) is an established formal assessment screening for potential symptoms of eating disorders. SCOFF is an acronym derived from the core components of the questions i.e. 'Sick, Control, One, Fat, Food'. The questionnaire is a five question scale indicating if anorexia nervosa or bulimia may be present before further clinical assessments. Answers are scored via one point for every "yes" answer and a score of two or more points indicates a likely case of an eating disorder. As it is used to raise suspicion of eating disorders rather than for actual diagnosis, the questionnaire is ethically safe to use with participants and for the purpose of this study was used as a method of collecting background information about participants relating to eating behaviours.

The Inner Voice Survey was self developed to establish if participants identified with an inner voice in relation to eating behaviours. This also identified with some of the qualities found in the inner voices of anorexia nervosa sufferers (Tierney & Fox, 2010) to establish how prominent these qualities are in non-clinical individuals. Surveys were based on a cognitive-behavioural approach to assess how inner voice qualities impact on behaviours as it is suggested that anorexic patients have "...dichotomous reasoning, which involves thinking in extreme and

absolutistic terms. The tendency to divide food into “good” and “bad” categories...and the inability to deviate from a rigidly prescribed dietary regime without assuming complete failure”, (Garner & Garfinkel, 1985). Therefore using questions to establish if and to what extent these aspects impact on behaviour, it should establish if these thought processes are dominant in non-clinical individuals in a similar way.

The survey consists of a mix of questions in the style of a five point Likert scale rating Strongly Agree to Strongly Disagree for each statement, in addition to multiple choice questions. Sub-scales were developed to investigate; inner voice experience, malevolence, comfort, obedience, resistance, ownership and those without an inner voice. For questions that are inconsistent with the specific sub-scales, an answer of ‘Strongly Agree’ would score 1 and ‘Strongly Disagree’ would score 5. For questions consistent with the sub-scales, Strongly Agree would score 5 and Strongly Disagree would score 1. Thus higher scores indicate that the participant identifies with having an inner voice to a greater extent. The survey was piloted on a sample of 10 students to establish any aspects requiring improvement. Pilot studies are advantageous as they can provide ‘advance warning about where the main research project could fail, where research protocols may not be followed, or whether proposed methods or instruments are inappropriate or too complicated’ (van Teijlingen & Hundley, 2001). From this pilot study a few minor alterations were made to produce clearer instructions and survey format, but no drastic changes to survey content were made. Participants seemed able to understand and complete the survey in a short amount of time.

Observations

Five participants were involved in a semi-structured observation of food shopping. This was in a supermarket of their choice and the observation conversation was recorded via Dictaphone to allow production of transcripts. Participants were given a consent form prior to observation (Appendix D) explaining that they should act as normal when food shopping but to speak their thoughts out loud. Questions were asked regarding behaviours and spoken thoughts in relation to qualities of their thoughts and inner voice if this was active. Question content depended largely on behaviour but loosely centred on what they chose to buy, contemplated buying, decided not to buy, anything they put back and reasons for these actions in relation to qualities of their spoken thoughts and inner voice. An observation guide was also used, listing examples of behaviours to look for (Appendix E). This observation guide was developed from the existing literature regarding qualities of the inner voice of anorexia (Tierney & Fox, 2010), and listed examples of general food shopping behaviours to analyse and examples of mechanisms maintaining cognitive beliefs such as ‘should’ ‘must’ and ‘ought’ phrases or ‘if’ and ‘then’ consequential phrases. Phrases such as these are thought to maintain the dichotomous logic revolving around volitional issues relating to self-control in anorexia, e.g. “If I learn to enjoy sweets, I will not be able to restrain myself” (Garner & Garfinkel, 1985, p.117). Participants were debriefed upon observation completion (Appendix F). Observations utilised an ethnographic methodology which aimed to produce more meaningful, comprehensive data as “Ethnographic researchers learn through systematic observation...by interviewing and carefully recording what

they see and hear, as well as how things are done, while learning the meanings that people attribute to what they make and do.”, (LeCompte & Schensul, 1999).

Materials

Materials required for this research include the IVS survey combined with the SCOFF questionnaire to produce one survey. No permission was required to obtain the SCOFF questionnaire as it is widely available to the public. Coloured paper (violet) was also obtained for the surveys. A collection box labelled appropriately was produced for those participants wishing to complete and return surveys at leisure. The location of this box was indicated in the surveys. In addition, consent forms for both surveys and observations were produced, as well as debrief forms released upon completion of the study. A Dictaphone was used to record conversation throughout observations and observation guides were also used.

Data analysis

For IVS data multiple choice questions regarding ownership of the voice and reasons for not having the voice are analysed separately. As there are several choices, these questions are analysed by answer content and are summarised. As the IVS is a self developed questionnaire, Cronbach's Alpha reliability analysis was employed to determine its overall and individual subscale reliability. A 2 x 2 independent ANOVA established any significant differences between age and gender of participants in relation to their scores for each of the subscales of the IVS. Independent T-tests also identified which gender had greater scores for IVS subscales and SCOFF scores.

Thematic analysis informed by Braun & Clarke (2006), was employed to identify the overarching themes from observation data. This involved reading through materials and making notes regarding the perceived core issues. A coding scheme was then developed from this which labelled certain aspects of the data. These codes were then grouped into smaller categories to outline consistent themes.

Results

Surveys

Analysis of the entire IVS (questions 1 – 26) provided an alpha coefficient value of 0.75. A value of 0.7-0.8 is an acceptable value for Cronbach's alpha; values substantially lower indicate an unreliable scale (Field, 2005). Cronbach's alpha was calculated (Appendix G) as this is a thorough method of assessing internal reliability of items with scaled responses and is more thorough than the split-half test (Langdrige, 2004). Subscale values are presented in Table 1.

Table 1

Cronbach's alpha coefficient values for subscales of the IVS

| | Cronbach's α |
|----------------------------|---------------------------------------|
| Experience of voice | 0.84 |
| Malevolence | 0.85 |
| Benevolence | 0.76 |
| Obedience | 0.74 |
| Resistance | 0.71 |

In total, fifty participants (males = 21, females = 29, M age = 21.98 years, SD = 2.82) completed the IVS. Age was re-coded to provide two groups; 18-21 years and 22-40 years. Only seven participants did not identify with having an inner voice, representing 14% of the total sample. The remaining participants all identified with having an inner voice to varying extents across the five subscales of; inner voice experience, malevolence, benevolence, obedience to voice and resistance to voice.

Of the seven participants that did not identify with an inner voice (males = 5, females = 2, M age = 25.00 years, SD = 5.42) reasons for this were established by question 28 of the IVS (Appendix H) and are presented in Figure 1. Please note that participants were able to provide their own reason in addition to selecting as many answers as required from a multiple choice selection.

Figure 1 Reasons for non-identification with an inner voice

- (1) "Because I don't worry about foods and buying/eating habits"
- (2) "I am able to cook all my meals from fresh unaided"
- (3) "I don't really think about it"
- (4) "I see it as my thoughts rather than a 'voice'"
- (5) "I don't have a voice in my head at all just my own thoughts as I think them"
- (6) "I always go shopping with a list"
- (7) "I always buy the same food"
- (8) "I think about the food but I don't hear a voice"
- (9) "I don't have voices in my head at any time!"

For those participants that identified as having an inner voice (86% of participants; males = 16, females = 27, *M* age = 21.49 years, *SD* = 1.83) independent t-tests (Appendix I) found non-significant effects for gender against the SCOFF scores, but significant effects for gender against each of the subscales of the IVS. The means indicate that females identified more greatly to the IVS subscales than males, except in the case of the resistance subscale in which males showed greater identification (Table 2). However, there were also non-significant effects for age against these scores (Table 3).

Table 2

T test values for gender in the SCOFF and IVS subscales

| | Males | | | Females | | | | |
|----------------------|----------|----------|-----------|----------|----------|-----------|-----------|----------|
| | <i>N</i> | <i>M</i> | <i>SD</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>df</i> | <i>t</i> |
| Scoff | 21 | .67 | .79 | 29 | 1.10 | 1.14 | 48 | 1.50 * |
| Exp. of voice | 21 | 17.29 | 4.48 | 29 | 22.48 | 4.18 | 48 | 4.21** |
| Malevolence | 16 | 8.44 | 3.12 | 27 | 11.56 | 4.09 | 41 | 2.62*** |
| Benevolence | 16 | 12.81 | 3.15 | 27 | 15.19 | 3.34 | 41 | 2.30*** |
| Obedience | 16 | 9.38 | 3.12 | 27 | 11.37 | 2.89 | 41 | 2.12*** |
| Resistance | 16 | 19.31 | 3.03 | 27 | 17.04 | 3.29 | 41 | 2.26*** |

* Values significant to $p > .05$ ** Values significant to $p < .01$

***Values significant to $p < .05$

Table 3

T test values for age in the SCOFF and IVS subscales

| | Younger (18-21) | | | Older (22-40) | | | df | t |
|---------------------|-----------------|-------|------|---------------|-------|------|----|------|
| | N | M | SD | N | M | SD | | |
| Scoff | 24 | 0.88 | 0.99 | 26 | 0.96 | 1.08 | 48 | 0.29 |
| Exp of voice | 24 | 21.50 | 5.13 | 26 | 19.19 | 4.68 | 48 | 1.66 |
| Malevolence | 22 | 10.82 | 4.01 | 21 | 9.95 | 4.09 | 41 | 0.70 |
| Benevolence | 22 | 14.59 | 3.05 | 21 | 14.00 | 3.85 | 41 | 0.56 |
| Obedience | 22 | 10.27 | 2.47 | 21 | 11.00 | 3.67 | 41 | 0.77 |
| Resistance | 22 | 18.09 | 3.35 | 21 | 17.67 | 3.41 | 41 | 0.41 |

All values significant to value of $p > .05$

Independent 2 X 2 ANOVA analysis (Appendix J) of IVS subscales also found a significant main effect that was consistent for gender across each of the IVS subscales (Table 4) and indicated that females identified to a greater extent with 'experience of the inner voice', 'malevolence', 'benevolence' and 'obedience to the voice' than males. Males were found to identify more greatly with 'resistance to the voice' than females, $F(1,39) = 5.623$, $p < .05$ (Figure 2).

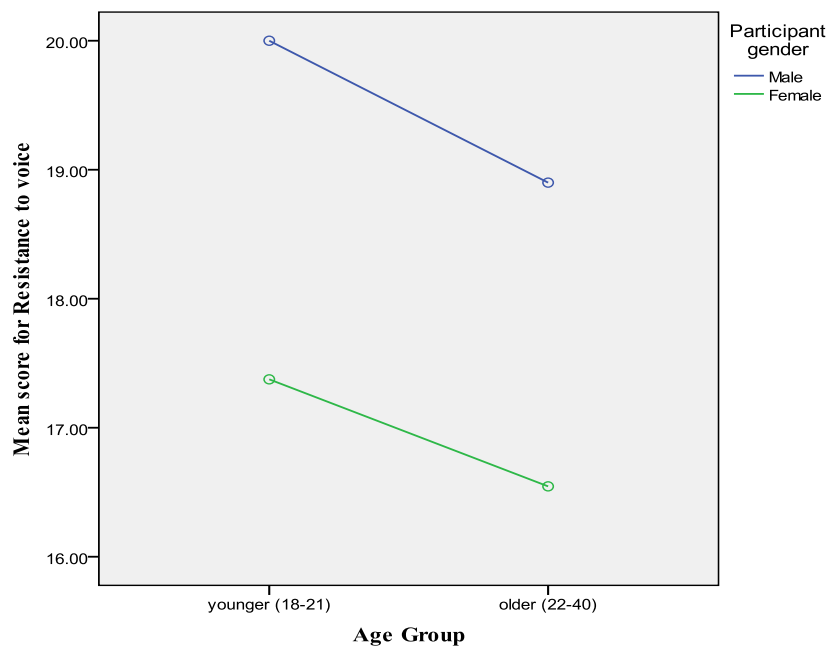
Figure 2 - Graph to show significant main effect of gender for IVS Resistance to voice subscale**Figure 2:** Plots illustrating males increased identification with resistance to the voice

Table 4

Results of 2-way ANOVA for gender with IVS subscales

| | Sum of squares | df | Mean square | F value | Sig. |
|----------------------|-----------------------|-----------|--------------------|----------------|-------------|
| Exp. of voice | 256.642 | 1 | 256.642 | 13.646 | .001* |
| Malevolence | 91.194 | 1 | 91.194 | 6.121 | .018** |
| Benevolence | 50.214 | 1 | 50.214 | 4.499 | .040** |
| Obedience | 47.373 | 1 | 47.373 | 5.294 | .027** |
| Resistance | 59.027 | 1 | 59.027 | 5.623 | .023** |

*Values significant to $p < .01$ **Values significant to $p < .05$

In relation to ownership and purpose of the voice, this was addressed by question 27 (Appendix H). For the purpose of this study, ownership refers to who the participant thought the voice sounded like. Participants were able to list as many people as they wished for this aspect, therefore some participants listed several different 'owners'. Results are summarised in Table 5.

Table 5

Results for ownership of the voice

| Owner of voice | % of participants listing owner in at least one answer |
|-----------------------|---------------------------------------------------------------|
| Me/Myself/My thoughts | 76.74% |
| Family members | 25.58% |
| Unknown | 16.28% |
| Friends | 13.95% |
| Partners | 11.63% |
| Health professional | 6.98% |
| Media | 2.33% |
| Colleagues | 2.33% |
| Housemates | 2.33% |

From the five functional roles of the voice the most prominent was 'Both' signalling that the voice served to encourage restriction of food choices and also encourage participants to eat what they wanted. Results for functions of the voices are summarised in Table 6 whereby functions have been attributed to at least one of the listed voice owners.

Table 6

Results for functions of the voice

| Function of voice | % of participants listing function in at least one answer |
|-------------------------------------------|------------------------------------------------------------------|
| Both | 72.09% |
| Encourages me to restrict my food choices | 32.56% |
| Encourages me to eat what I want | 37.21% |
| Other | 4.65% |
| Neither | 6.98% |

Observations

Five participants took part in the food shopping observation part of the study; all were female (M age = 21.20 years, SD = 0.84). Following thorough thematic analysis three major themes were identified in relation to qualities and functions of the inner voice; consultant, being healthy and self control. Observation transcripts are provided (Appendix K).

Consultant

The voice was found to play a role as a consultant as participants all sought its advice regarding various aspects of their food shopping behaviours before they acted these behaviours out. In this sense it's almost as if the approval of the inner voice is required in order to act out behaviours. As a basic function, advice was sought out regarding making decisions centred on choosing food items from a selection;

"Erm...fruit....what fruit shall I have?" - P1

"Ooh I need cereal. Ah two for £4, that looks good! Ah but which ones shall I get?" - P5

Here participants suggest that the voice seems to be in control of food choice selections. It was also involved when trying to navigate to a certain area of the store to find a desired item;

“I need some snack ‘o’ jacks...are they this way? I don’t know...no next one I think.” - P1

Here P1 is shown to be having a conversation with her voice in order to locate the desired item. These functions seemed to provide direction for participants’ food shopping behaviours and links with the suggestion of Vygotsky (as cited in Morin & Everett, 1990, p.347) that inner speech serves a positive function of cognitive self guidance. A subject that was of great importance to participants when shopping was the price of food. The voice was again consulted for this aspect of food shopping and served a purpose of keeping participants on a budget. This budget was not pre-defined in terms of exact amount of money they were allowed to spend but all participants had the intention of shopping in a cost effective manner, usually by buying cheaper alternatives of products.

“I just go for Asda’s own where I can just to save money.” - P3

This cost efficient manner was kept in check by the inner voice as it prevented the likelihood of participants overspending through its ideals of what constitutes as a reasonable price. For example, P1 was concerned about the price of food enough to allow it to act as a restrictive function;

“Right I’m looking for cheese that’s on offer. I only ever buy cheese when it’s on offer...and that’s the only good deals they have so I might just get it another time.”

This financial advice aspect of the voice may also link with an intended restriction of money or ‘overspending’ in order to avoid having a larger amount of food more accessible to eat, especially treat items as this was shown to play on participant’s minds when they go against their financial ideals. P2 illustrates this point;

“Erm I usually feel more guilty because...when I buy treats it tends to be money and I’ve not got enough money to buy myself treats at the moment.”

“I’d just sort of try and convince myself and think ‘they’re too expensive, they’re £3 a packet’ – P3

However, participants did note that they found the financial aspect of their voice could make them feel happy when they stuck to its ideals, thus showing both the rewarding and punishing effects of the voice as an advisor.

“...sometimes when you get a really good like meal and it’s a good price then you’re like ‘yeahhhhh! You did good there, got yourself a good deal!’” – P4

Another aspect that influenced the advice given by the inner voice was a ‘need vs. want’ dilemma. This acted as a justification of decisions and behaviours by providing somewhat of a pep talk for participants when faced with temptation to buy things they ‘wanted’ in addition to or instead of things they actually ‘needed’;

“I always avoid erm chocolate bars and crisps... I’ve avoided going down there already just cos I thought about it as we walked past and was like ‘no, don’t bother you don’t need it!’” – P5

This ‘need vs. want’ dilemma was also resolved via conversation with the voice;

“I said I’d get pizza didn’t I...or did I? Hmm do I need it?... I don’t think I really need one” – P4

Being healthy

Ideals of what it means to be healthy were a key motivator of the voice when making decisions about food. Healthy eating was important to all participants to varying levels and the voice seemed, for some, to be socially influenced;

“...from watching things on the TV I’d just be really aware of like, you can get things so much fresher better quality, better value for your money or something that’s not got too much MSG, salt and flavourings in and stuff.” – P5

“...when I go home my mum always makes me eat really healthily so sometimes if I see stuff I’ll be like, it might come into my head that like my mum would never do that or buy it for me” – P3

Ideals of ‘good’ and ‘bad’ foods served an informative purpose relating to what was perceived as healthy and unhealthy. This tendency to divide food into ‘good’ and ‘bad’ categories is based on dichotomous reasoning which is said to maintain the maladaptive thinking patterns in eating disorders (Garner & Garfinkel, 1985). This again served as a rewarding and punishing function as the consequences of giving in to ‘bad’ foods were viewed as not being worthy of the guilt of the inner voice, whereas purchasing ‘good’ foods allowed participants to feel more relaxed as they had not strayed from this important ideal. P1 is an example of this reward-punishment function as this created more rigid rules of restriction based on ideals of ‘good’ and ‘bad’ content of food. When explaining that she never buys added sugar fruit juices and thinking about the prospect of what would happen if she accidentally bought it she said;

“If I bought it I wouldn’t drink it...I did that with erm squash... I’d just think I’d rather not have it and not feel guilty... so like last time I gave it to my housemate.”

This shows for P1, the guilt induced by the inner voice is not worth actually drinking the ‘bad’ product. These ‘good’ and ‘bad’ ideals were largely connected with restriction of food and treats in particular were associated as ‘bad’ foods to avoid. If participants felt they’d behaved ‘badly’ by eating these foods this played on their mind a lot and some would make up for this with compensatory behaviours such as eating better the following week.

“...if I was to get like a McDonalds’ or a Burger King in consecutive days like throughout the week, I can feel a bit naughty then like ‘oh you’ve eaten bad this week!’” – P4

“I’d just feel a bit like it’s bad for my teeth and crisps are bad for your skin... I just avoid it all together yeah I just avoid that aisle just to try and be healthy.” – P5

Self control

To varying extents, for all participants the inner voice served a function in maintaining a level of self control. Some participants actively acknowledged the important role they felt this played when food shopping;

“...yeah I have to have good will power and like, I’ll pick something up that I want but...I sort of argue it out in my head a little bit if I know I shouldn’t really get it.” – P1

It seems this self control aspect of the voice served a function in decreasing potential guilt by reducing the likelihood that participants gave in to temptations. The use of a shopping list aided the maintenance of self control as this pre-defined the items that participants were ‘allowed’ to buy before they even entered the supermarket. Participants acknowledged the self control purpose of their lists by detailing shopping events without it;

“I don’t bring one for small shops or if I just need a couple of things and that’s when I tend to buy things I want rather than need.” – P1

Furthermore, use of a list allowed one participant to increase chances of avoiding temptation as ‘bad’ items were not listed in order to focus on shopping that was ‘needed’ rather than ‘wanted’. This avoidance of thinking about these ‘bad’ items by not listing them also serves to avoid guilt.

“Cos I, I never list bad things... so I don’t think of them as much, so I’m less tempted to buy them... and cos it’s not on my list it doesn’t seem like...it’s as bad!” – P3

For many participants self control seemed to be a strong aspect of shopping, whether they gave into temptation or not. The consequences of giving in to temptation resulted in guilt, and where some participants would use strong will power to avoid this feeling, others were less affected by its possibility and would rather have their ‘treat’. This is demonstrated by the contrast of P1 whose self control extends to when she gets her products home and P2 who would rather have her treat and feel a bit guilty. If P1 accidentally buys added sugar juices, her self control kicks in to prevent the guilt of drinking this and she will give it to someone else rather than let herself drink it. In contrast to this P2 says about giving in to treat items;

“After I’ve eaten it I’m always, I always regret it. Or I’ll think “crap what have I just eaten?!”

However, despite the guilt of giving in to temptation, P3 detailed a coping mechanism of reassurance of the inner voice as she explained;

“I’ll just feel really guilty when I’m eating them over my limit but then even though I feel guilty about it I’m sort of reassuring myself like “it’s alright ,it doesn’t matter, they don’t have cream eggs the whole year round.”

Perhaps it is this reassurance feature of the inner voice that allows some individuals to indulge in treat items more often than others.

Discussion

This research aimed to explore the extent to which an inner voice is present in a non-eating-disordered population regarding eating and food behaviours. The findings suggest that to varying extents, an inner voice as previously mentioned in the literature (Steels, 2003; Tierney & Fox, 2010; Tullett & Inzlicht, 2010) is also involved with eating and food related behaviours for non-clinical populations. More specifically, the qualities and functions of this voice include but are not restricted to; consultant, being healthy and self control. This self control feature particularly, links in with research by Tullett & Inzlicht (2010) demonstrating that the inner voice can serve to help ignore and resist temptation. This was evidenced by the accounts of participants involved in the observation part of this study regarding avoidance of treat items. Although self control was also a function of the anorexic voice (Tierney & Fox, 2010), for non-eating-disordered individuals this aspect was less demanding and harsh, allowing them to give in to temptation without strong fear of personal attack from the voice.

Survey data found that 86% of participants identified as having an inner voice and overall females identified to a greater extent with experience of the inner voice, its malevolent and benevolent qualities and obedience to the voice. Males identified more greatly with resistance to the voice. This perhaps is partly connected with research highlighting that '80-90% of patients with anorexia are female' (Morris & Twaddle, 2007) thus it may be that females are more preoccupied with food and eating behaviours than males, so one could conclude that females may identify less with resistance to their inner voice. Media representations of the ideal female body may also play a role in this and encourage restrictive behaviours. However, the disproportionate number of males (N= 21) and females (N = 29) involved in the study may also account for this gender difference. In relation to ownership of the voice, "me/myself/my thoughts" was most popular with 76%. Following on from this, significant others such as family, friends and partners, in addition to health professionals were also named as 'owners'. This supports research by Steels (2003) suggesting that it is possible to hear someone else's voice much like "when we imagine a dialogue or hear people speak in a dream" (p.174). The most prominent function of the voice was 'Both' (72%) signalling that the voice served to both encourage restriction of food choices and also encourage participants to eat what they wanted. This suggests that these individuals abide by a model of what they consider as appropriate eating. With regards to the anorexic voice (Tierney & Fox, 2010) there is a significant difference between this and the inner voice of the non-clinical participant sample as the anorexic voice served a sole purpose in encouraging and maintaining the restriction of food.

For those participants that did not identify with an inner voice some mentioned this was because they 'always go shopping with a list'. In this case it may be that the dialogue between the inner voice and the individual has already served its purpose by pre-defining which items they have 'permission' to buy, therefore the voice no longer needs to be consulted. Non identification with an inner voice may also partially relate to connotations that voice hearing is associated with mental illness. For example;

"I don't have voices in my head at any time!" – P50

This reluctance to be acknowledged as someone who hears voices may be a result of the pathologization of voice hearing. Parker et al (1995) recognize this stigma and explain 'Voice hearing has a definite social stigma, whether it is influenced by the fate of famous voice hearers...or simply by the convention that talking to yourself or to voices is not acceptable' (p.123). Research by Romme et al (1992) (as cited in Parker et al, 1995) opposes this medical model that views voice hearing as a mental illness, as a third of the sample were able to cope with their voices without psychiatric interventions and in addition it was suggested that the voices served as a positive function in coping with life events. Perhaps if medical models provided a greater acknowledgement of the positive aspects of voice hearing rather than categorizing individuals as mentally ill based on the presence of these entities alone, voice hearing would be more widely accepted as a 'normal' occurrence and much more would be known about this phenomenon.

Although this study provides a fresh insight into the inner voice, future research would benefit from an equal proportion of male and female participants to truly determine significant gender differences. It would also be interesting to study the alternative cognitions of those participants who did not identify with an inner voice in more depth; an expansion of this research could use these participants for observations. More importantly, continuing research into the purpose of the inner voice outside of eating behaviours would also encourage greater acknowledgement of and insight into inner voice entities.

Reflexivity

'Reflexivity requires critical self-reflection of the ways in which researchers' social background, assumptions, positioning and behaviour impact on the research process' (Finlay & Gough, 2003). As researcher in this study it is important to be aware that my own preconceptions may influence the direction of the results both through the ways in which they are obtained and also through their analysis. My position is as an undergraduate psychology student with a keen interest in clinical psychology and mental health. The existing research associated with inner voices largely portrays this entity as a mental illness, to which I largely disagree with. Due to this standpoint, my emotional investment in this issue may have influenced my role as researcher. These issues may in turn influence others interpretations of the data, particularly participants involved in the study as they may do so in an independent manner whereas I have done so as a student educated in the disciplines of psychology via referring to relevant literature. Thus the significance I have attached to different aspects of the inner voice during analysis may be perceived as more or less significant by those actually experiencing this entity.

In acknowledging the assumption that all human beings are unique, this encouraged me to recruit a sample of five individuals for observation in order to report a wider range of accounts. It should be noted however, that that these individuals were all of the same ethnic background as myself (white, British, females) and this will have undoubtedly influenced the direction of the research. As the research question explores people's experiences I am aware that quantitative methods alone would not have sufficed in addressing this and thus semi-structured qualitative observations were also employed to establish the true

experiences and meanings attributed to this entity. Thematic analysis of this data has produced novel findings and encourages further exploration to improve understandings of the role of the inner voice in everyday life.

References

Banks, C. G. (1992). 'Culture' in culture-bound syndromes: The case of anorexia nervosa. [Electronic version]. *Social Science & Medicine*, 34(8), 867-884.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.

Child anorexia on the increase, (2010, 14 November). *Mail Online*. Retrieved 17 November 2010 from www.dailymail.co.uk/health/article-206894/Child-anorexia-increase.html

Choong, C., Hunter, M. D. & Woodruff, P. W. R. (2007). Auditory hallucinations in those populations that do not suffer from schizophrenia. *Current Psychiatry Reports*, 9, 206-212.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Sage Publications.

Feelgood, S. R. & Rantzen, A. J. (1994). Auditory and visual hallucinations in university students. *Personality and Individual Differences*, 17(2), 293-296.

Fernyhough, C. (2004). Alien voices and inner dialogue: towards a developmental account of auditory verbal hallucinations. *New Ideas in Psychology*, 22, 49-68.

Field, A. P. (2005). *Discovering statistics using SPSS: (and sex, drugs and rock 'n' roll)* (2nd ed.). Sage Publications.

Finlay, L. & Gough, B. (2003). *Reflexivity: A practical guide for researchers in health and social sciences*. Blackwell Science Ltd.

Firestone, R. W. (1997). *Suicide and the inner voice: Risk assessment, treatment, and case management*. Sage Publications.

Garner, D. M. & Garfinkel, P. E. (Ed.) (1985). *Handbook of psychotherapy for anorexia nervosa & bulimia*. The Guilford Press.

Hudson, J. I., Hiripi, E., Pope, H. G. Jr. & Kessler, R. C. (2007). The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biological Psychiatry*, 61(3), 348-358.

Jorgensen, D. L. (1989). *Participant observation: A methodology for human studies*. Sage Publications.

Kaplan, L. J. (1984). *Adolescence The farewell to childhood*. New York: Simon & Schuster.

Langdridge, D. (2004). *Introduction to research methods and data analysis in psychology*. Pearson Education Limited.

LeCompte, M. D. & Schensul, J. J. (1999). *Designing and conducting ethnographic research*. Walnut Creek, CA: AltaMira.

Morgan, J. F., Reid, F. & Lacey, J. H. (1999). The SCOFF questionnaire: assessment of a new screening tool for eating disorders. *British Medical Journal*, 319(7223), 1467-1468.

Morin, A. & Everett, J. (1990). Inner speech as a mediator of self-awareness, self-consciousness, and self-knowledge: An hypothesis. [Electronic version]. *New ideas in psychology*, 8(3), 337-356.

Morris, J. & Twaddle, S. (2007). Clinical review: Anorexia nervosa. [Electronic version]. *British Medical Journal*, 334, 894-898.

Parker, I., Georgaca, E., Harper, D., McLaughlin & Stowell-Smith, M. (1995). *Deconstructing psychopathology*. Sage Publications Ltd.

Sosin, L. (2008). *The cell keys are turning: Spiritual integration in the treatment of Christian women with anorexia nervosa*. [Electronic version]. Unpublished dissertation, Liberty University.

Steels, L. (2003). Language re-entrance and the 'inner voice'. [Electronic version]. *Journal of Consciousness Studies*, 10(4-5), 173-185.

Tierney, S. & Fox, J. R. E. (2010). Living with the 'Anorexic Voice': A Thematic Analysis. *Psychology and Psychotherapy: Theory, Research and Practice*, 83(3), 243-254.

Tullett, A. M. & Inzlicht, M. (2010). The voice of self-control: Blocking the inner voice increases impulsive responding. [Electronic version]. *Acta Psychologica*, 135, 252-256.

van Teijlingen, E. R. & Hundley, V. (2001). The importance of pilot studies. [Electronic version]. *Social Research Update*, 35, 1-4.

Williams, M. S., Thomsen, S. R. & McCoy, J. K. (2003). Looking for an accurate mirror: A model for the relationship between media use and anorexia. [Electronic version]. *Eating Behaviors*, 4(2), 127-134.