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SCIENTIFIC SECTION

A qualitative study of orthognathic patients' perceptions of referral to a mental health professional: Part 1—questionnaire development

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Objectives: The aim of this study was to develop a measure to assess orthognathic patients' perceptions of referral to a mental health professional.

Design: Prospective qualitative study.

Setting: UCLH Foundation Trust.

Subjects and methods: The study was divided into two parts. The first phase involved developing a patient-centred questionnaire by carrying out semi-structured interviews with 10 orthognathic patients and 10 clinicians involved in orthognathic treatment provision. The transcripts from these interviews were then analysed using the N6© software package for qualitative research and thematic content analysis was carried out. As key themes and theories of patients' perceptions of referral to a mental health professional began to emerge from the data, this directed the source of further interviews, allowing exploration and validation of all theories. When new themes ceased to arise, it was assumed that data saturation was reached, and no further interviews were undertaken. A questionnaire was then developed using the key themes from the interviews and this was piloted.

Results: Analysis of the interviews revealed that patient views could be divided into two main themes: service provision and perceptions of mental health professionals. These themes were incorporated into a questionnaire.

Conclusions: A new measure of patients' perceptions of referral to a mental health professional is presented.

Key words: Qualitative, questionnaire, orthognathic, mental health professional

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Introduction

The psychological profile of patients seeking orthognathic treatment has been the subject of scrutiny for a number of years. Studies of patients undergoing cosmetic surgery, carried out mostly in the 1960s, revealed a high level of psychological disturbance.[1–4] As most orthognathic procedures involve aesthetic changes, and thus can be termed in some part 'cosmetic', researchers have also investigated whether orthognathic patients exhibit the same psychological characteristics as cosmetic surgery patients.

A number of studies have been undertaken to establish the psychological profile of patients seeking orthognathic treatment on the basis that understanding the psychological make-up of patients may help to identify expectations, motives and thus affect potential outcomes. Most authors have found that patients who seek orthognathic treatment are well-adjusted psychologically and do not exhibit the same psychological disturbances attributed to other cosmetic surgery patients.[5–11]

It has been stated that the majority of patients seeking cosmetic-type surgery are unhappy with some aspect of their appearance.[12] Indeed, the primary motivating factor for undergoing treatment is often aesthetic improvement, but can involve numerous psychosocial factors.[8] Orthognathic treatment can produce marked aesthetic changes which may lead to an improvement in emotional well-being and it may, therefore, also be considered as a form of psychological intervention.[12]

Patient satisfaction rates following orthognathic treatment are generally high and a review of the literature suggested that 92–100% of orthognathic patients are satisfied with the results.[10] However, Cunningham and colleagues discovered that patients frequently underestimated the impact of the treatment with respect to overall 'life changes', general appearance and

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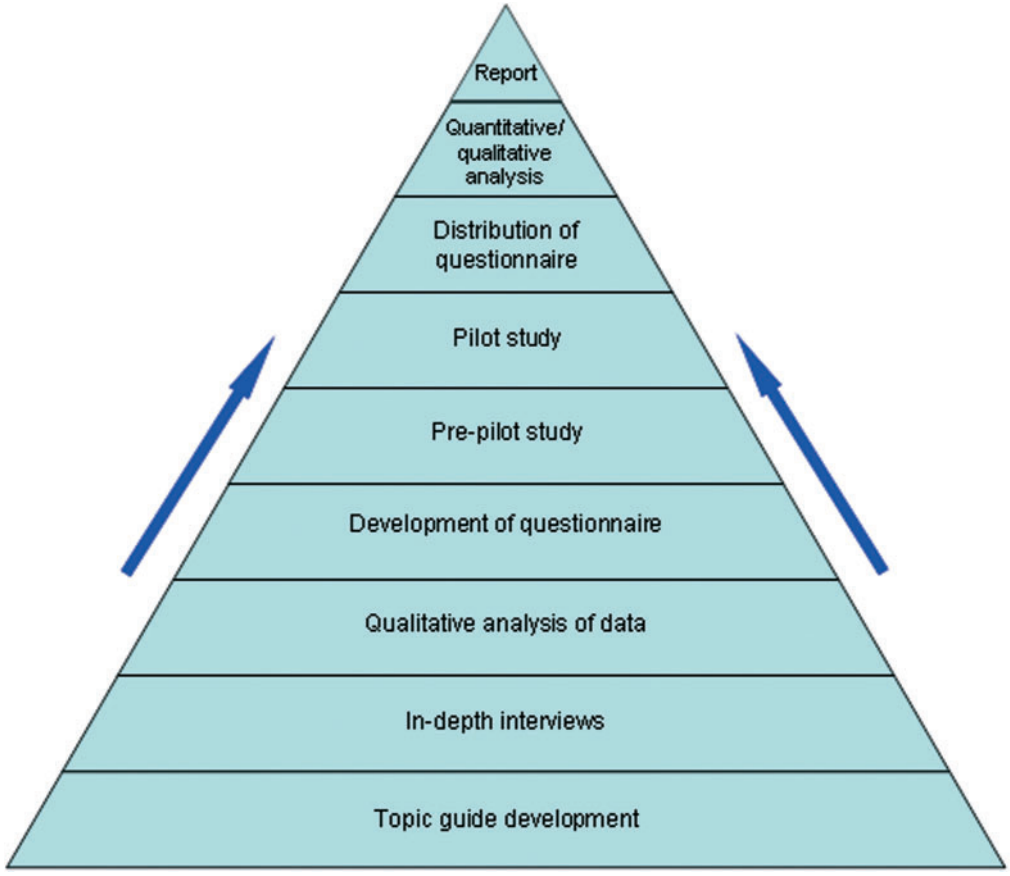

Figure 1 Structure of the project, starting at the base of the pyramid

performance at work or college.[13] The importance of understanding patients' motives and their psychological status before embarking on treatment should not be underestimated when considering post-operative satisfaction. Kiyak and colleagues found that the impact of orthognathic surgery continues long after the patient leaves hospital.[14] Therefore, good patient preparation and counselling are important in improving satisfaction and outcome.[13,15] A truly multidisciplinary team approach including orthodontist, surgeon, psychiatrist or psychologist, and general dental and medical practitioner before, during and after treatment is essential in providing the highest standards of care for all patients.

A recent national survey in the United Kingdom revealed that many orthodontists are reluctant to refer orthognathic patients for psychological assessment due to fears that patients will react badly to the suggestion of referral, leading to a breakdown in the professional relationship.[16] An extensive review of the literature revealed no information regarding patients' feelings about being referred to a mental health professional from any specialty to either support or refute these findings. Therefore, the aim of this study was to understand how patients perceive these referrals by developing a questionnaire which could be used on a wider population.

Subjects and methods

The study was divided into two stages: Part 1 involved the questionnaire development process (primarily qualitative) and is described in this paper. Part 2 involved questionnaire distribution and analysis of the data and is described in a later paper. The study was approved by the Joint Research and Ethics Committee of University College London Hospitals Foundation Trust (06/Q0505/17) and the Joint Research and Development Unit of UCL/UCLH. The purpose and methods of the study were explained to participants both verbally and via a written information leaflet. Figure 1 illustrates the structure of the project.

Questionnaire development

Interviews

As no measure existed in the orthodontic or psychiatry literature to assess patients' perceptions of referral to a mental health professional, a questionnaire was

developed *de novo*. A qualitative approach was used initially to ascertain themes of relevance to the research question, from both a clinician and patient viewpoint. The most common of these themes were then used in the final questionnaire, creating a patient-centred measure of perception.

Initially, the research team considered the main topics of interest to the research question. Two pilot interviews were then conducted to ensure the selected topics would yield constructive data. Following this process, semi-structured, open-ended, interviews were carried out with 10 orthognathic patients and 10 clinicians involved in orthognathic treatment provision. Interviews were conducted by one trained interviewer (FSR) in a non-clinical setting with no time constraints, using the list of topics from the topic guide developed by the research team. Topics were probed as necessary to ascertain all themes of interest regarding perceptions of referral to a mental health professional. All interviews were tape recorded and fully transcribed immediately afterwards.

Inclusion criteria for patients were that they were 16 years of age or older, non-syndromic, and could be either pre-treatment, or in active orthognathic treatment. Patients who had completed treatment and were in retention were excluded as, even though their viewpoint would have been interesting, it was considered that they may introduce recall bias. Purposive sampling was used to select potential participants on the basis that they had been offered orthognathic treatment. The sample was heterogenous in that it included some patients who had seen a mental health professional and others who had not. After six patients had been interviewed, no new data emerged and it was assumed that saturation had been reached and no important viewpoints were missed. However, despite the fact that no new data emerged, there is no guarantee that data saturation had been reached, thus a further four participants were interviewed. Of the 10 patients interviewed; four participants had not commenced active treatment, four were in the pre-surgical orthodontic stage, and two were in the post-surgical orthodontic stage.

Even though the current study was interested in patients' perceptions of referrals, 10 clinicians were also interviewed at this stage of the research. The reason for this was that a previous study had revealed that clinicians involved in the provision of orthognathic treatment felt that patients view such referrals in a negative manner.[16] It was, therefore, believed to be important to include clinicians' viewpoints so that the patients completing the questionnaire could either agree or disagree. It would have been useful to analyse the clinicians and patient interviews separately and then compare them, however, this was outside the scope of the present study.

The clinicians who were interviewed were all actively involved in orthognathic treatment provision and included orthodontists, psychiatrists, and maxillofacial surgeons recruited from different hospitals in order to reduce selection bias.

Analysis of the interview data

The interviews were transcribed immediately after they were conducted and the data were examined, coded, and compared as they were collected and again once data collection was completed. This allowed additional concepts to be raised in future interviews.[17] The interview transcripts were entered into the N6© software program for qualitative data analysis. The information from the interviews was also analysed by hand on a large flow diagram to ensure that all elements of the interviews had been fully explored. The data were considered on the basis of the main questions asked from the topic guide and then together under thematic headings as these emerged. Each question or theme was explored further to ascertain the key responses of both the clinicians and patients. When analysing the data, themes were explored by reading the relevant section from each interview together, for example, *'the benefits of seeing a psychiatrist'*, and getting a 'feel' for the opinions. It was not the aim of qualitative research to numerically establish exactly how many people shared a particular thought, but rather to identify a range of ideas. The data were analysed using a form of content analysis, where the broad themes expected to arise from the interviews were identified initially, and these were investigated with each interviewee.

Questionnaire development

Based on the information derived from analysis of the interviews (Table 1), a questionnaire was developed to include the most salient features (Appendix 1). Thirteen questions were developed, similar to those used in the interviews and based on the topic guide, but this time, a comprehensive list of possible answers was also included. Close-ended multichotomous questions were posed, the answers of which, for some, were mutually exclusive and required one answer from the list provided, and other questions allowed several responses. Colourful logos were incorporated on the front page to attract attention and instructions on how to complete the questions were in bold print or italics throughout the questionnaire. Once the first draft of the questionnaire was developed, a coding method for the questions and

answers was devised and an SPSS© (statistics package, version 14, for Windows, SPSS Inc., Chicago, IL, USA, 1989–2006) spreadsheet was constructed to input and analyse the data generated.

Pilot process

The questionnaire was piloted on six orthognathic patients. The questionnaire was completed whilst the researcher was present, but without assistance. The time taken for each participant to complete the questionnaire was noted, as were any incorrectly answered or omitted questions. Participants were then invited to give any comments on the questionnaire and asked if there were any questions which were unclear or needed clarification. Minor wording changes were made as a result.

Assessing quality

Assessing rigour in qualitative research is just as important as in quantitative research, especially given the common criticism that qualitative results are anecdotal. The concepts of reliability and validity apply to qualitative research but should be assessed in different ways.[18] The reliability of qualitative research may be enhanced by demonstrating a transparent pathway of data collection, analysis, and theory generation. This was achieved by minimising the possibility that the sample was biased, and by including actual quotes from the interviews so that it was apparent how the theories arose.

Other methods, more specific to qualitative data, are also available.[19] The techniques of, reflexivity and fair dealing were used in this study. *Reflexivity* involves the researcher being aware of the way in which they may have influenced or shaped the results. During the interviews, the interviewer posed open non-leading questions and this technique was learned and practiced before conducting the interviews.

The technique of *fair dealing* was employed in this study where possible. Fair dealing is a term coined by

Table 1 Main themes and sub-themes of interest from interview analysis (MHP=mental health professional).

Perceptions of referral to a mental health professional	
1. Service provision	2. Perceptions of MHPs
Who should make the referral	**What is a psychiatrist/psychologist**
Orthodontist	Someone to talk to
Orthognathic team	Someone who studies the mind
Surgeon	Someone who helps you
GMP	Someone who understands you
GDP	
Where patients prefer to be seen	**Benefits of seeing a MHP**
Orthodontic department	Prepare the patients for treatment
Closer to home	Has more time to talk to patients
Somewhere different	Assess motivation for treatment
	Help focus on what patients want
	Identify psychological problems
	Someone neutral to talk to
	Give patients coping strategies
	Medicolegal
Appointments alone or in a group	**Drawbacks of seeing a MHP**
Alone	Label/Stigma
In a group	Extra visit
	Cost of travel
	Delay treatment
	Prevent patients getting treatment
	Extra hurdle to receive treatment
	Don't want to discuss personal issues
	Clinicians don't like to suggest it
Compulsory attendance	**Feelings about being referred**
Good idea	Happy to be referred
Would put patients off	Not happy to be referred

Questions posed by the interviewer are in **bold**. Interviewee responses are listed below each question.

Dingwall and involves a 'commitment to even handedness' by the researchers.[20] This was achieved by including patients at different stages of treatment and also those who had exposure to a psychologist or psychiatrist in the past as well as those who had not. In addition, clinicians from different units around the UK, with different training backgrounds, and different access to a mental health professional within their unit were interviewed.

With regards to questionnaire development, validity assesses whether a tool measures what it purports to measure.[21] *Content* and *face* validity were tested by both a panel of experts and the patients involved in the pilot study. *Criterion* validity could not be assessed, as there exists no 'gold-standard' measure to assess patients' attitudes towards referrals to a mental health professional.

Results

Results of the interviews

The interviews were initially organized on the basis of the questions in the topic guide and a number of themes surrounding perceptions of referral to mental health professionals were identified. These were grouped broadly under two main headings: *'service provision'* and *'perceptions of mental health professionals'*. Each theme was then further subdivided into four sub-themes that characterized the main theme (Table 1). On the following pages are examples of direct quotations from the interviews and following each quote are a letter and a number to identify each coded participant. 'C' indicates a clinician and 'P' indicates a patient.

Service provision

Who should make the referral?

The majority of clinicians and patients thought the referral should be made by someone on the orthognathic team, and most suggested that it should come from the orthodontist, as they tend to know the patient best and have most contact with them.

'*Probably the person they have had most contact with, usually the orthodontist*.'(C3)

'*I think the referrals come for the team rather than an individual because orthognathic surgery is a team process between surgeons and orthodontists*.'(C10)

Where patients would like to see the psychiatrist?

The majority of clinicians and patients said they would prefer to be seen in the same place that they are seen for their orthodontic treatment or orthognathic clinics as it is familiar. A minority suggested being seen closer to home would be more convenient.

'Here because you know the environment and you're used to it.'(P9)

'Better if it was somewhere more local, it might be a bit handier.' (P3)

Would patients prefer to be seen alone with the psychiatrist or in a group with other patients?

The majority of clinicians and patients felt it was more appropriate to be seen individually with the psychiatrist/psychologist, although most people also thought that there was a place for group sessions further along in treatment.

'One on one, I'd like to speak to him by myself - it's more private really.'(P2)

'In a group so that you can get an idea of what they are going through.' (P7)

Would patients object if referral was compulsory?

All of the patients said they would agree to see the psychiatrist/psychologist if it was compulsory and it would not put them off having treatment.

'Oh no, I'd just go with the flow.'(P2)

Perceptions of a mental health professional

What is a psychiatrist/psychologist?

The patients thought of a psychiatrist/psychologist as someone who is there to help, and a number of interviewees (including clinicians and patients) mentioned the word 'help' at some point in the interview. Other concepts that arose were that a psychiatrist/psychologist is someone to talk to, and someone who understands you. Interestingly, the definitions given by people were surprisingly similar. No negative comments were made with respect to defining what a psychiatrist/psychologist does, or is.

'A psychiatrist is somebody you talk to.' (P1)

'Someone who helps you and answers your questions and helps with your problems.' (P4)

'…arranges different disorders. A psychologist is someone who studies the mind.' (P10)

Benefits of seeing a mental health professional?

This question was posed to both patients and clinicians. The majority of the benefits were patient-centred; the clinicians also felt that the outcome of treatment may be more successful if patients had seen a psychiatrist or psychologist. Both groups felt that seeing a psychiatrist or psychologist would help prepare patients psychologically for the treatment.

'I think it would give you an idea of what you're going to face in the future with the changes.' (P5)

'In this day and age of 'plastic fantastic' people are aspiring to be more perfect and I think if people get that side of their head sorted, their expectations won't be so high, because I think you can put too much emphasis on what the surgery will do for you. It won't change your life. I'll be honest; I did fall into that trap. I did think it was going to do other things and it suddenly was going to change and I was going to be really popular and none of those things happened, nothing changed, you're still you on the inside.' (P10)

Drawbacks of seeing a mental health professional?

Many of the drawbacks listed by the clinicians were what they assumed that patients would perceive as drawbacks, such as being stigmatized or labelled. However, the majority of patients did not mention these and, if they did, they mentioned it as something other people may perceive, but that they themselves did not see as being an issue.

'I suppose some people might worry about being labelled as ''mad''.' (P2)

'..there's the expense of another visit to the hospital, because for some patients they live a long way away and there's the time off work as well as the actual travelling expenses.' (C13)

'Can lead to problems with your relationship with the patient. If you are not able to help them yourself that might undermine their confidence in you.' (C17)

Feelings about being referred?

Most patients said they would not mind, or they would be happy, to be referred to a psychiatrist/psychologist. Two patients admitted that they were afraid that the psychiatrist might prevent them getting treatment or tell them they did not need it.

'My honest reaction was 'oh no, they're going to find a reason why I can't have it done, I've got to have this done, I've got to have this done.' (P10)

'The way that it was put forward to me was don't be concerned by the term psychiatrist, you may have pre-conceived ideas, all it is a talk and if you have any concerns put them forward and he or she will be able to help you. I didn't think oh my God a psychiatrist. I was happy to do it.' (P7)

Results of the pilot study

Using the results from the interviews, the first draft of the questionnaire was developed. This was pre-piloted informally on colleagues and members of the research team and minor ambiguities which were identified were amended. The questionnaire was then piloted formally on patients for ease of administration, time taken to complete it, and readability.

Participants

Six patients participated in the pilot study, all were female, and the mean age was 23.8 years (range 17–41 years), one patient was post-surgery, and the other five pre-surgery. One patient had seen a psychiatrist as part of their treatment.

Time to complete

The time taken to complete the questionnaire ranged between 4 minutes and 22 seconds and 8 minutes 46 seconds, the mean time was 6 minutes and 22 seconds.

Readability

Two patients queried what was meant by question 5 (*What do you understand by the term psychiatrist/psychologist?*) and wording changes were made following this. The response section for question 8 was also adjusted. The questionnaire was tested for readability using the Flesch software package available through Microsoft Word© software. The Flesch Reading Ease Score was 61.4 and the Flesch-Kincaid Grade Level was 6.5, which were both within the acceptable range.[22,23] The Fog Index (FI) was also calculated for the questionnaire, as this is a measure more commonly used in the UK. The FI was 15, which indicates easy readability.

Discussion

This study presents the development of a questionnaire for assessing orthognathic patients' perceptions of referral to a mental health professional. The reason for using this medium was to increase generalizability and validity of the results by including as large a target population as possible. Questionnaires are relatively inexpensive, and are familiar and acceptable to most people.[19] Importantly, a questionnaire can be also used again by other researchers to assess other populations. However, there are disadvantages to using self-report questionnaires to collect information, the most frequent being that they can be intrinsically manipulative.[24] These criticisms are often based on a lack of knowledge of the process involved in constructing a questionnaire as there are ways of limiting these drawbacks in the early design stage. Qualitative methods can be used as the first stage in questionnaire development to reduce researcher bias, and to ensure that all points of view are included

and that the measure is patient-centred.[25] By using this approach in the current study, the validity of the questionnaire developed was improved by basing it on the opinions of the population to be studied.

The interviews raised several interesting points. In response to question 1 (what do you understand by the term psychiatrist or psychologist?) patients thought of a psychiatrist/psychologist predominantly as someone who is there to help, and this word came up frequently. In fact, the majority of interviewees (clinicians and patients) mentioned the word 'help' at some point in the interview. No negative comments were made with respect to defining what a psychiatrist/psychologist does, or is.

In response to question 2, patients suggested that orthognathic treatment would lead to physical, emotional, and mental changes and they felt that patients were referred to see a psychiatrist/psychologist to explain these changes and to help the individual come to terms with them. While this is commonly recognized as being the case by clinicians involved in orthognathic care provision, the fact that patients seem to recognize this is encouraging.[26] Regardless of whether or not they had seen a mental health professional as part of their treatment, patients seemed to have a good insight into the fact that orthognathic treatment may affect them psychologically as well as physically, and recognized the fact that they needed to be prepared for this.

Clinicians felt that there were many *benefits* in patients seeing a mental health specialist; they felt that the psychiatry/psychology service could act as both a screening service to identify patients who require additional support during treatment, and a means of educating and preparing patients as to what to expect. Patients saw the psychiatrist less as someone to screen patients and more as someone who is there to explain the treatment and the outcomes in more depth. They also felt that it would be good to talk to someone 'neutral' and objective who was not directly involved in their care.

Where drawbacks were discussed, a number of the clinicians were concerned that patients would be worried about being stigmatized or labelled. However, importantly, most patients did not mention these issues and, if they did, they mentioned them as something other people may perceive, but did not concern them directly. Almost all of the clinicians were worried about suggesting referral to a psychiatrist or psychologist as they thought this might lead to a breakdown in trust and in their relationship with the patient. Interestingly, of the clinicians who had access to psychological services, few actually had experience of a patient refusing to see a psychiatrist/psychologist or reacting badly to the suggestion.

The limitations of this study should be borne in mind when considering the results or applying these to other study populations. Selection bias may have been introduced as patients who were interviewed had already decided to proceed with treatment this may limit generalizability. The results may also have been influenced by the method of data collection as patients may be slightly intimidated by the one-to-one contact with the researcher, and it is possible they may give answers they think are expected of them. While every effort was made to remain neutral and objective using open and non-leading questions, it is accepted that an interviewer may influence participants during the interview process. Interestingly, some schools of thought consider the relationship between the interviewer and interviewee an essential part of qualitative research.[27] In addition, using patients at different stages of treatment may introduce confounding variables but it was felt importantly to include patients at different time points and not just at the start of treatment. Ideally, these subgroups could be analysed separately, but the small numbers involved precluded this at this stage. Also, including patients who had seen a psychiatrist in the past means that their responses may well be influenced by this experience. However, this study attempts to mimic real-life situations and their view-points were thought to be important to include.

From the detailed analysis of the information yielded from interviews with this cohort of patients, it would seem that clinicians may underestimate patients' knowledge of the scope of orthognathic treatment, and erroneously assume patients will not accept the psychological aspect of their care. Of course, there will be patients who do object to seeing a mental health professional but such patients appear to be in the minority and are potentially the very ones who would benefit from psychological intervention. A blanket approach of denying all patients the service because of the reactions of some should not be adopted, and indeed goes against current national guidelines proposed by the Royal College of Psychiatrists, in collaboration with The Royal College of Surgeons of England (1997).[28] A questionnaire survey of a larger cohort of patients is presented in article 2 of this series.

Conclusions

- This study presents a new questionnaire for assessing orthognathic patients' perceptions of referral to a mental health professional.
- Part 2 of this study will present the findings of this questionnaire when applied to a population of orthognathic patients.

Contributors

Fiona Ryan was responsible for patient recruitment, data collection, analysis, questionnaire design, and drafting of the manuscript. Susan Cunningham was responsible for the study design, expert advice, critical revision, and final approval of the manuscript. Justin Shute was responsible for critical revision of the manuscript and expert advice. Susan Cunningham is the guarantor.

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