

Establishing mutual understanding in interaction: An analysis of conversational repair in psychiatric consultations

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Abstract

The therapeutic relationship is the greatest predictor of treatment outcome, yet its relationship to communication is largely unevaluated. This study explored how psychiatrists and people with a diagnosis of schizophrenia establish mutual understanding in naturalistic communication, and associations with the therapeutic relationship, patient satisfaction and symptoms. In conversation analysis, the concept of repair focuses on how participants in interaction create mutual understanding and address misunderstanding. A standardized protocol measuring the frequency of repair was applied to 15 outpatient consultations. Correlations between repair and the therapeutic relationship, patients' experience of the consultation and symptoms were explored. Patients made most effort to make their contribution understandable, whereas psychiatrists made most effort to repair misunderstandings. The more positively psychiatrists rated the relationship, the more effort they made to understand patients. Although psychiatrists' efforts were not associated with patients' overall view of the relationship, patients felt better emotionally, despite, feeling less understood. Psychiatrists used fewer repairs when patients were more symptomatic. Both parties prioritized understanding similar topics but psychiatrists focused more on medication and patients on voices. Quantifying repair offers a new way of analyzing how mutual understanding is established in interaction, and links communication processes with treatment outcomes.

Keywords: professional-patient communication; schizophrenia; repair; satisfaction; therapeutic relationship; mutual understanding

1. Introduction

1.1. The therapeutic relationship

Research in psychotherapy has established the therapeutic relationship as one of the most important factors determining health outcomes (Horvath and Greenberg 1994). Similarly with people diagnosed with schizophrenia, a more positive relationship is consistently associated with better outcomes, as measured by engagement with services, medication adherence and global functioning (Weiss *et al.* 2002; Frank and Gunderson 1990).

It can be argued that the therapeutic relationship is primarily mediated by communication between patients and clinicians; with the most important determinant being talk. Talk is the vehicle by which diagnoses are made and therapeutic goals set (Roter and Hall 1992).

Good communication and therapeutic relationships may be particularly important for people diagnosed with psychotic illnesses as many disengage from services, and usually have poorer social functioning and are more likely to be readmitted than attendees (Killaspy *et al.* 2000). Engaging them has been prioritized by health service providers in the UK, e.g., in the 'National Service Framework for Mental Health' (Department of Health (DoH), 1999) and in the creation of specialist engagement teams. Therefore, creating a good therapeutic relationship with these patients is crucial but often more difficult to achieve.

1.2. Healthcare communication

As Drew *et al.* (2001) have noted professional-patient interaction is one of the most difficult aspects of healthcare delivery to study and measure. Most of the relevant research to date has focused

on communicative styles (Boon and Stewart 1998), e.g., ‘cure’ or ‘care’ styles (Ong *et al.* 1995). Positive associations between such styles and patient outcome has led to the recommendation of ‘shared decision making’ and ‘patient-centered’ approaches as ideal for medical interaction (Van Dulmen and Bensing 2002). However, it is unclear how these are operationalized. Moreover, they tend to focus on what the doctor does in interaction rather than on how doctor and patient communicate in a two-way process. Other research has identified ‘good communication’ by creating extensive lists of pre-defined behaviors, then determining the presence or absence of these by observing interactions (Ong *et al.* 1995). However, these do not take into account that the meaning and function of communicative behavior can change over time, place and at particular junctures of the interaction. For example, saying ‘hmm’ has been used both as a sign of active listening (patient-centered style) and to pass an opportunity to take up the content of the previous turn of talk, in some cases displaying avoidance rather than active listening (Jefferson 1993; McCabe *et al.* 2002).

Despite a number of methodological and practical issues that make clinician-patient communication difficult to study (Drew *et al.* 2001), conversation analysis (CA) has yielded promising results. CA micro-analyses how both parties in a conversation continually construct the interaction as each turn of talk builds upon the previous one (Maynard and Heritage 2005). In medical research CA has identified a range of strategies doctors use in their interactions, such as, how they communicate bad news (Maynard 2003). However, CA has rarely been utilized in psychiatry (Hassan *et al.* 2007).

1.3. Repair

The term ‘repair’, introduced by conversation analysts (Sacks *et al.* 1974; Schegloff 1987), refers to a variety of systematic devices people use to resolve problems in understanding, and re-establish the flow of conversation. It can be used for many reasons including; error correction (Zahn 1984) or when quiet talk renders speech inaudible or the listener may be momentarily distracted and so not attend to all of the speech or simply misunderstand the content of what was said (Schegloff 2000).

A pre-requisite to understanding repair is awareness of some of the systematic structures of language. A fundamental conversational structure that allows talk to develop is ‘turn taking’. When a

person completes a turn of talk, it then becomes the other person’s turn to speak (Sacks *et al.* 1974). Another important convention stipulates that what a speaker says is related to what the previous speaker has said in the preceding turn. Schegloff (1992) described how the next time a person speaks is paramount as it indicates to the first speaker whether the second speaker has understood. If not, then the second speaker may take steps to remedy the misunderstanding by conducting repair in their next-turn of talk or provide the first speaker with further opportunities to clarify or revise their original utterance.

Schegloff *et al.* (1977) distinguished between three aspects of repair:

1. The *initiator* of the repair who identifies the turn as troublesome. This can be either the speaker of the problematic talk (self-initiated) or the listener (other-initiated).
2. The person who *completes* the repair by clarifying the misunderstanding. This may be accomplished by either the speaker (self-repair) or the listener (other-repair).
3. The *position*¹ of the repair refers to where in the conversation these events occur – either within the same turn of talk as the problem (position 1) or in any of the subsequent turns of talk (positions 2, 3) (Schegloff *et al.* 1977); when the first person speaks (position 1) or when the second person speaks (position 2) or when the first person speaks again (position 3).

We now illustrate some of these repairs with examples from the current dataset. In extract 1, the doctor replaces ‘they don’t’ with ‘they’re not’.

Extract 1 (Transcript 11): Example of self-initiated, self-repair in position 1²

Position 1 Dr: ... if you look at the different people who have the diagnosis of schizophrenia
(.) they don’t (.) they’re not all alike

It is self-initiated as the doctor did not need the patient to point out the trouble. It is self-repair as the speaker of the trouble is also the person who repaired it. Finally, the doctor repaired the trouble in the same turn of talk as he created it, i.e. before finishing his turn.

Extract 2 illustrates an example of a position 2 other-initiation that prompts a position 3 self-repair. Here the doctor does not understand the ‘he’ that the patient refers to.

Extract 2 (Transcript 36): Example of other-initiation in position 2 followed by an other-initiated, self-repair in position 3

- Position 1 P: ... he sleeps normal of a night time and comes in during the day
 Position 2 Dr: Who's he?
 Position 3 P: My next door neighbor

The first instance is 'other initiated' as it is the doctor not the speaker of the trouble (the patient) who identifies a problem with the previous turn. The doctor does this in the next-turn after the trouble source. Therefore, the question 'who's he?' is classed as a position 2 other-initiation. The second repair classification is when the patient obliges and repairs his utterance in his next-turn in position 3. This is other-initiated as the doctor prompted the patient to repair, but it is self-repair as the patient, who was the original speaker, actually repaired the utterance.

Sometimes a problem with a turn may not become evident until someone has responded to it. For example, in the following extract the doctor realizes that his initial question about dose needs to be rephrased because the patient's response illustrates that he did not understand it.

Extract 3 (Transcript 35): Example of self-initiated self-repair in Position 3

- Position 1 Dr: You were going to stop this (.) how many do you take at the moment?
 Position 2 P: ehhm (.3) no I didn't take it this morning
 Position 3 Dr: Er an- how many would you usually take?
 Position 4 P: ((?)) >One morning< (.) and one night

It is self-initiated and self-repair as the doctor initiates and completes the repair of his original talk without the patient indicating (in position 2) there had been a problem. The repair occurs in position 3, as it is after the patients' response in position 2 that the doctor is made aware that the patient misunderstood the doctors' original talk.

In this study, rather than trying to define 'good communication' in some abstract sense, we focus on the details of how participants work to sustain the mutual-intelligibility of an interaction using the concept of repair. It is in this sense that Schegloff (1992) describes repair as the primary site of intersubjectivity in conversation. Note that, all things being equal, the implication is that higher levels of repair are indicative of people working harder to establish mutual understanding.

One of the features of repair that make it a useful analytic tool is that people have considerable

discretion over whether and how to repair. Communication is always to some degree imperfect and people make choices about which issues to raise, and which to let pass. As Schegloff (1992) emphasized people also have choices about when they address a problem. For example, in Extract 2 the doctor waits until the patient has finished before requesting clarification of 'he'.

1.4. Schizophrenia and conversation analysis

McCabe *et al.* (2002) analyzed routine interactions between psychiatrists and patients with a psychotic diagnosis. They found that patients frequently tried to discuss the content of their psychotic symptoms, which led to explicit disagreement and breakdowns in understanding. Even in a primary care settings, finding common ground can be challenging, as two potentially different viewpoints must be brought together to agree upon a treatment plan (Stewart *et al.* 1995). This may be exacerbated in those diagnosed with schizophrenia due to the nature of psychotic experiences. Considering that our vocabulary is determined socially (Harré 1995) and describing psychotic experiences is not part of everyday talk, this may leave the patient ill-equipped to explain their experiences to others and others ill-equipped to understand them (McCabe and Quayle 2002). Despite this, there has been little research into communication with clients with psychotic illness except two experimental studies which specifically used the concept of repair.

The first compared self-repair in adults with a diagnosis of schizophrenia (with and without hallucinations) to people from the general population (Leudar *et al.* 1992). They showed that people with schizophrenia produced more errors in giving instructions but made just as many attempts to self-repair. These were discussed in relation to cognitive theories of hallucinations. They also found that people experiencing hallucinations self-repaired less than those without. The second study found that children with reported diagnoses of schizophrenia underutilized self-initiated self-repair compared to children without, which they suggest characterize the discourse deficits of children with schizophrenia (Caplan *et al.* 1996). However, the above research makes seemingly logical inferences about cognitive processes that precede the use of repair which are then used to support or refute theories. Heritage (2005) states that conversational markers may indicate that a mental process has occurred but we cannot actually know they have, so should target what we can find evidence for.

Second, cognitive assumptions locate problems within individuals so contradict a basic premise of repair as inter-subjective, by focusing on just one speaker. Furthermore, experimental designs may not accurately reflect the normal sequential nature of conversation.

1.5. Quantification and repair

Although conversation analysis has not traditionally been applied in a quantitative way, there is a growing interest in healthcare of evaluating practice using communication (e.g., Stivers *et al.* 2003; Heritage *et al.* 2007). Healey *et al.* (2005) developed a standardized protocol operationalizing the system of repair classified by Schegloff *et al.* (1977). It classifies who initiates and completes repair and in which position the repair occurs. The advantage is that it codes all parties' contributions to an interaction along with responses. Consistent with a conversation analytic approach, the protocol does not rely on the analyst's decision about whether a misunderstanding has occurred, but instead treats as problematic what participants in their talk treat as problematic.

1.6. Aims

The aim of this study is to overcome the limitations of assessing doctors' styles of interacting by looking at what patients and doctors do with each other's talk. It exploits the structure of repair to gain an understanding of how patients and psychiatrists attempt to understand and make their talk understandable to each other. It takes into consideration patients' symptoms as previous analysis suggested that psychiatrists may find it difficult to respond to psychotic symptoms (McCabe *et al.* 2002). It is also concerned with the validity of focusing on repair as a key communicative process that may link to traditional health outcomes.

The research questions are:

- What type of repair is most frequently used in establishing mutual understanding and what topics feature more or less for patients and psychiatrists?
- Is the frequency of repair associated with:
 - the therapeutic relationship as rated by patient and psychiatrist?
 - how understood the patient felt and how well the doctor felt they understood the patient?
 - the severity of patients' symptoms?

2. Method

2.1. Data

Fifteen routine outpatient psychiatric consultations were recorded using digital video and transcribed verbatim using Jefferson's (1984) CA system. Self-report and observer-rated measures, described below, were also completed. Fifteen patients and five consultant psychiatrists took part. Patients had a DSM-IV or ICD-10 diagnosis of schizophrenia. They did not have any organic impairment or primary substance misuse. Seven of the patients were British, two were Asian, two were Caribbean, one was African and three stated other. Only consultations conducted in English were considered. Nine of the patients were male. All but one of the psychiatrists was male. The mean age of patients was 51.14 years (SD = 10.86).

2.2. Measures

The *therapeutic relationship* was assessed using the Helping Alliance Scale (HAS) (Priebe and Gruyters 1993). It is short and easy to understand, to include those who were unwilling or unable to complete more extensive questionnaires. Both therapist and client version were utilized. Items on the patient version inquire about; belief in the treatment, feeling understood and criticized, and extent to which they feel the therapist is committed and trustworthy. Items on the therapist version inquire; if the therapist gets along with and looks forward to meeting the patient, if they understand the patient, believe in the treatment and how active they feel in this. Responses were measured on an 11-point visual analogue scale, where 0 = not at all and 10 = entirely. The sum of the first five items of both questionnaires yielded a total mean score. Item 2 of the HAS (both versions) was also individually analyzed as it directly inquires about understanding each other which is the focus of this research. Higher scores indicate a better therapeutic relationship.

The *patient's experience* of the consultation was assessed using the Patient Experience Questionnaire (PEQ) (Steine *et al.* 2001). Three of the five subscales (i.e., 12 questions) were used; the others were irrelevant for non-primary care settings. These were 'communication experiences', 'communication barriers' and 'emotions immediately after the visit'. For the communication subscale, items were measured on a five-point Likert scale, with 1 = disagree completely and 5 = agree completely. The four items for the emotion scale were measured on a seven-point visual analogue scale, where opposing emotions were at either end. Authors report that items had higher

correlations within sub-scales than between (0.69 to 0.86). Good inter-item reliability correlations were reported (0.77 to 0.90). Scores were reversed so that all items measured in the same direction. Higher scores indicated higher satisfaction.

A researcher, not involved in the patients' treatment, and trained in the use of the instrument, assessed *patients' symptoms* on the 30-item Positive and Negative Syndrome Scale (PANSS) (Kay *et al.* 1987). It assesses positive, negative and general symptoms. Items are rated on a scale of 1–7 with higher scores indicating more severe symptoms.

All of the consultations were coded using the *repair protocol* (Healey *et al.* 2005). Each utterance in every consultation was analyzed to yield all instances of repair along with the position and specific type of repair. The protocol provides a series of yes/no questions which lead to 1 of 10 repair codes, e.g. 'position-2 self-initiated other-repair' and 'position-3 self-initiated self-repair'. The strength of this analysis

is twofold: the repair protocol can yield numeric data that allows comparisons to be made across consultations yet remains sensitive to the nuances and function of communicative problems. Good validity was demonstrated with the protocol correctly classifying 75% of 76 already classified instances of repair from the CA literature (Healey *et al.* 2005).

Content analysis (Holsti 1969) was also applied to the transcripts to identify which topics were repaired most frequently. Three stages of coding occurred before 17 topics were derived. Good inter-rater reliability in applying the codes to the original transcripts was obtained ($R = 0.85$).

3. Results

3.1. Frequency of repair types

Table 1 shows repair frequencies by position and participant.

Table 1: *Frequencies of position of repair*

Position of repair	Frequency of repair	
	Patient	Psychiatrist
Position 1 repairs	759	399
Position 2 and 3 repairs	49	68
Total	808	467

Table 2: *Frequency of repairs by topic*

Topics	Frequency of topic occurrence	Psychiatrist Repairs	Patient Repairs
Medication	105	159	141
Voices	88	70	229
Practical arrangements	40	26	42
Personal life	25	42	98
Physical health	19	7	21
Support	16	35	20
Other	14	28	28
Suspicious of others	12	15	27
Lifetime problem	12	15	8
Stigma	8	26	15
Coping well	8	11	15
Sleep problems	8	4	15
Low mood/suicide	7	6	8
Coping difficult	7	0	10
Work/study	6	21	30
Comments about psychiatrist	5	2	9
August and Economy*	4	0	92
	384	467	808

Note: * Idiosyncratic finding

There were overwhelmingly more position 1 repairs than positions 2 and 3 taken together, by all parties, but particularly by patients. However, there were more position 2 and position 3 repairs by psychiatrists than patients.

Table 2 illustrates breakdown of repair by topic occurrence.

Although patients generally did more repair than psychiatrists, the rank order of topics was similar. Based on frequency of total repairs, most were displayed when discussing voices, medication and personal life, with patients repairing more often when discussing voices and psychiatrists when discussing medication.

When the theme of medication was subcategorized it showed that patients did more repair than psychiatrists regarding the benefits of medication (patient = 21, psychiatrists = 12), the frequency, type and quantity (patient = 49, psychiatrist = 42) and side effects of medication (patient = 38, psychiatrist = 33). However, psychiatrists did more repair when they suggested a change in medication (patient = 16, psychiatrists = 20) and when patients spoke of changing their medication (patient = 14, psychiatrists = 35). Psychiatrists also displayed more repair when discussing blood tests (patient = 3, psychiatrists = 17).

When the theme of voices was subcategorized it revealed that patients did more repair than psychiatrists when discussing coping with the voices (patient = 43, psychiatrist = 12), feelings about the voices (patient = 34, psychiatrist = 12), triggers for the voices (patient = 53, psychiatrist = 7) and the content and/or description of the process of voices (patient = 29, psychiatrist = 9). Patients especially struggled to explain how voices affect their thinking (patient = 64, psychiatrist = 17). However, psychiatrists did more repair when discussing frequency of

voices (patient = 6, psychiatrist = 13). An assumption of content analysis is that the more frequently the topic occurs, the more important it is to the speakers (Holsti 1969). Consequently, this serves as a validity check for the assumption that repairs occur more in topics that are important to the speakers as topics with most repair were also generally the most frequently occurring.

Statistical analysis was conducted to test for associations between the various types of repair and the three questionnaires. Spearman's correlations were utilized as most of the data violated assumptions for use of parametric tests (Dancey and Reidy 2002), except for 'psychiatrist position 1 repairs', where Pearson's Product Moment correlation was used. Although a large number of possible associations were tested, a more stringent level of statistical significance (than $p < 0.05$) was not set, given that this was an exploratory study and it would increase the chance of making type 1 errors (Perneger 1998).

3.2. *Repair and the therapeutic relationship*

HAS: There was a significant positive relationship between the number of *psychiatrist* repairs (of all types) and the psychiatrist rated, therapeutic relationship score. There were no other significant associations between repair and the mean therapeutic relationship score as rated by either patient or psychiatrist.

There were significant associations between the following: The more *patient* position 1 repairs, the less the psychiatrist felt they understood the patient and his/her view. Similarly, the more position 1 repairs in total by either party, the less psychiatrists felt they understood their patients. The more psychiatrist position 2 and position 3 repairs, the less

Table 3: *HAS-T with repair*

Measure	Repairs	Spearman's rho correlation	Significance level Only those less than $p < 0.05$ $N = 11$
HAS-T	Psychiatrist repairs	0.689	0.019
HAS-T: do you understand the patient and his/her views?	Patient P1	-0.536	0.039
HAS-C: do you feel understood by your therapist?	Dr P2&P3	-0.558	0.031
HAS-C: do you feel understood by your therapist?	Total P3	-0.517	0.049
HAS-C: do you feel understood by your therapist?	Patient P3	-0.623	0.013

understood patients felt. Similarly, the more position 3 repairs by either party the less understood the patient felt but more so in the case of more position 3 repairs by patients.

3.3. Repair and patients' experience

PEQ: There were no significant relationships between the overall patient experience and the number of repairs. Significant correlations were only found in the emotions subscale. There was a positive association between the number of *psychiatrist* repairs and 'emotions immediately after the visit' especially when psychiatrists utilized position 2 and position 3 repairs. That is, the more psychiatrist repairs, the better patients felt after the visit. Also, more *patient* position 3 repairs were significantly associated with feeling better after the visit. Contrastingly, there was a significant correlation between patients feeling worse after the visit when they used more position 1 repairs.

3.4. Repair and symptoms

PANSS: The more positive ($-0.664, p = 0.01$) and negative symptoms ($-0.592, p = 0.02$) a patient displayed, the fewer position 1 repairs psychiatrists conducted. There were no other significant relationships between other types of repair and symptoms.

4. Discussion

4.1. Repair types used in establishing mutual understanding

Position 1 repairs were the most frequent and predominately undertaken by patients. This is consistent

with the well-established finding of there being a preference for self-repair, particularly in position 1 (Schegloff *et al.* 1977). Moreover, patients displaying more position 1 repairs might be expected in medical consultations where they are updating the doctor on the problem and their experience of treatment. The results contradict those of Caplan *et al.* (1996) who found children with diagnosis of schizophrenia underutilize self-repair but are more in line with Leudar *et al.* (1992) that people diagnosed with schizophrenia, self-repair as often as those without. Differences may be due to the experimental nature of previous research.

Psychiatrists engaged in more repair when they had misunderstood or recognized that the patient had misunderstood one of the psychiatrist's previous turns. Patients repaired their own talk almost every time the psychiatrists misunderstood and prompted the patients to complete a repair. This suggests that psychiatrists work harder at establishing mutual understanding, which may be seen as fitting with their provider role. Simultaneously, it may be that given the context of power re-created in the talk, patients may not feel empowered to repair the doctor's talk, as it may be interpreted as questioning the expert status of the doctor. In addition, other-initiated repair highlights errors in others' talk and people generally seek to avoid this in attempts to 'save face' (Brown and Levinson 1978).

4.2. Challenging topics in creating mutual understanding

Both patients and doctors prioritized understanding the same three topics – voices, medication and personal life – which suggests some degree of communicative alignment. However, there were some

Table 4: *Patient Experience Questionnaire and repair*

PEQ	Total repairs	Spearman's Correlation	Significance level <i>N</i> = 11
PEQ: Emotion	Psychiatrist	0.694	0.018
PEQ: emotion	Psychiatrist position 2 + 3	0.686	0.020
PEQ: emotion	Patient position 1	-0.688	0.019
PEQ: emotion	Patient position 3	0.657	0.028
PEQ: emotion	Psychiatrist position 3	0.777	0.005
PEQ: emotion	Total position 2 + 3	0.662	0.026

differences within these, in that patients' primary concerns were to create mutual understanding of their voice hearing experiences which supports findings of McCabe *et al.* (2002) who showed that patients repeatedly tried to discuss psychotic symptoms. Patients focused more on the effect voices had on their thinking, whereas doctors' efforts focused on medication. This is consistent with medical expectations, where patients are responsible for presenting their problems and doctors are responsible for intervention (West 1984). Differences between patient and psychiatrist repair were observed when they discussed the subcategory of blood tests.³ Psychiatrists may find it more difficult to communicate about blood tests as it may be experienced as a drawback to the intervention they offer. Differences were also observed when the patient suggested a change in their medication. This may be problematic in cases where the psychiatrist is not in agreement with these suggestions.

It is not surprising that patients make more effort and have most difficulty when discussing their voice hearing experience and that effort is invested in creating understanding about the experience. If participants' realities are to some extent different, more effort is required to make the experience understandable to others. Furthermore, looking at the most frequently repaired sub-topic, 'effects on thinking', it requires great reflexivity, for people use the thing that is affected (thinking) to discuss how it is effected (thinking). Persistent attempts to repair talk about psychotic experiences is consistent with the literature, stating that people attempt to find meaning and understand their experiences, and those who do so successfully are less distressed by them (Romme and Escher 2000).

The third most repaired topic was personal life. When mental health problems are viewed from a bio-psychosocial perspective, the focus on the topic becomes reasonable and necessary; however, even in general medicine, research has shown that worse person-centered outcomes were reached when patients tried to talk about their life and were stopped by doctors (Barry *et al.* 2001). This is even more crucial to psychiatry than medicine, as the person's social world and seeing the patient as a whole person is so intricately woven into the understanding and development of mental illness (Barry *et al.* 2001). The high number of repairs for voices and personal life may suggest that psychiatrists are moving away from traditional notions limited by collusion and biomedical models, towards wider conceptions of schizophrenia.

4.3. *Repair and the therapeutic relationship and understanding*

The more repairs psychiatrists engaged in, the better they judged the therapeutic relationship to be. This suggests they make more effort to repair talk when they experience the therapeutic relationship as positive. Alternatively, more repairs may lead to better relationships, as more effort is made to create mutual understanding. The more position 2 and position 3 repairs by either party, the less understood the patients felt and the less psychiatrists felt they understood the patient. Similarly, the more position 1 repairs, especially by patients, the less the doctors felt they understood. This might be taken to suggest that repairs are ineffective at making speech understandable. However, it seems more likely that these measures of 'understanding' encompass a number of factors beyond the intelligibility of the turns as indexed by repair. It seems intuitive that the harder people have to work to communicate the less 'understood' they would feel. In contexts where it is possible to obtain a direct (task-oriented) measure of the impact of repair on communication the evidence is that it has a positive effect (e.g. Brennan and Schober 2001).

Another explanation for psychiatrists feeling they understood the patient less when they utilized more position 1 repairs is that the sheer frequency of false starts and attempts to articulate oneself make the whole turn sound incomprehensible. When talk is transcribed, it is simple to 'delete' the false starts and other position 1 markers, thus the final version of the repaired talk makes sense as a stand-alone utterance. However, in real time, the enormity of talk makes it more difficult to 'delete' the false starts as what is heard is the whole turn and so it appears very unclear. As can be seen in the following extract it takes the patient 5 lines to explain that he would not like anyone to experience what he has been through and that he cannot use people as witnesses of his experience.

Extract 4 (Transcript 53):

- Dr What does it mean?
P It's effects me (.) because I- if the people aint true in there (.) I get different vibes I (.) I get different waves (.) I feel things (.) I've been in places where I aint b (???) there and I wouldn't like no one to stop there (.) in the respec of (.2) and that is not from the people's mouth (.) that's from (.) what is (.) I'm hearing my voices (.)
Dr uh-hum
P and I can't draw these people as witnesses (.) to hear what I'm hearing
Dr (.) okay

An interesting finding was that despite more psychiatrist repairs, especially position 2 and position 3, being associated with feeling less understood, it was linked with patients feeling better emotionally after the visit. Similarly when patients engaged in more position 3 repairs they felt better emotionally after their visit. We would expect feeling understood to be linked to feeling better emotionally as this is a basic prerequisite to most therapies. Perhaps participants expected few misunderstandings when going to see an expert and thus be unprepared for the additional effort needed to achieve communicative alignment. However, patients may have felt their psychiatrist was truly engaged in attempting to understand them, which may have led them to have more positive emotions after the visit despite not actually feeling understood. Conversely, when patients displayed more position 1 repairs the worse they felt emotionally. This may suggest that when people experience more extreme negative emotional states it is more difficult to communicate, or negative emotions may be a function of struggling to communicate about their experiences. Regardless, it seems that position 1 repairs can be used as an index of the difficulty in making oneself understood. Largely, repairs by psychiatrists had a stronger effect on the therapeutic relationship, than repairs by patients.

4.4. Repair and symptoms

Psychiatrists made less effort to create mutual understanding when patients experienced more symptoms. This may be linked to traditional psychiatric notions where discussions about the content of psychotic symptoms are regarded as counterproductive because they might involve colluding with the illness (Turkington and McKenna 2003), despite developments showing that discussions about psychotic experiences can be helpful as demonstrated by the effectiveness of Cognitive Behavior Therapy for delusions (Kuipers *et al.* 1997). This is a particular challenge in short consultations, although it is patients who are more symptomatic that require more effort to engage.

4.5. Implications

Overall, the findings suggest that more repairs of all types are associated with better therapeutic relationships, and patients' emotions. Based on the premise that common ground is needed to establish mutual understanding participants should prioritize understanding the same topics particularly about voices

and medication. Therefore, clinicians should be alert to the mechanism of repair and make sure that they are responded to when discussing key topics. Also perhaps position 1 repairs might be a useful signpost for clinicians of how difficult it is for patients to make themselves understood. Therefore, when patients struggle to formulate their experience (turns characterized by false starts, cut offs, etc), clinicians could use this as a prompt to address possible negative emotions.

It may be useful for clinicians to be aware that they use fewer repairs when patients are more symptomatic and that is when they need to use more repair to keep patients engaged in consultations.

4.6. Strengths and limitations

As this was an exploratory study with a small sample, the statistical results are to be interpreted with caution. Established methods were used in conjunction with innovative ones, whilst remaining sensitive to nuances and the function of communication (Healey *et al.* 2005) and retaining the richness of qualitative data.

A possible confounding variable was that some participants were not interacting in their native language thus it is not evident if misunderstandings were due to linguistic knowledge. There is little conversation analytic research using non-native speakers; however, what exists suggests that non-native speakers use repair in similar ways to natives (Wong 2000). Also the structure of repair has been shown to be stable across various languages (Schegloff 1992). Further support for the validity of the findings is that misunderstandings were noted to rarely progress further than position 3 (Schegloff 1992). However, this is only rare when both are native speakers (Wong 2000). Therefore, it is somewhat surprising that only one position 4 repair was identified in this corpus. This may suggest good proficiency in English or strong alignment/understanding between the parties, so extended repair was unnecessary. Also, a premise of conversation analysis is that context, e.g. non-native, cannot be assumed to be relevant but must be shown to be within the interaction (Schegloff 1991). For example if a native speaker corrects the non-native speakers' pronunciation of a word this would indicate the relevance of the context of native/non-native. Furthermore, the variety of non-native and native speakers is also likely to be representative of the types of interaction that occur in a large multicultural city where the current data was collected.

5. Future research

As this is a new area for research, there is much uncharted territory, repetitions with different patient-professional combinations and larger samples. A wider definition of communicative effort could be utilized that encompasses other ways of displaying effort (e.g. asking questions for elaboration) and research into the communicative mechanisms that enhance mutual understanding in clinical interactions. To increase validity, participants could be asked about what topics they struggled to discuss and understand. This could test the assumption of the repair protocol, i.e. that more repair means that participants had more difficulty achieving intelligibility. Also how repair is used in establishing mutual understanding by looking at what is achieved in the interaction in a qualitative way.

6. Conclusion

In summary, patients made most effort to initially make their contribution understandable, whereas psychiatrists made more effort to repair misunderstandings once they had occurred. The more positive the psychiatrists felt about the relationship, the more effort they made to understand the patients via the use of repair. Psychiatrists' use of repair was not associated with patients' overall view of the relationship but they did feel better emotionally after the visit. However, patients felt less understood and psychiatrists understood patients less when there was more repair. Overall, patients and psychiatrists prioritized understanding the same topics but psychiatrists focused more on medication and patients on voices. This suggests high communicative alignment but some discrepancies suggest scope for improvement. It seems the concept of repair is promising for studying how patients and clinicians understand each other and how mutual understanding is constructed on a turn-by-turn basis in healthcare interaction. Further work is indicated to identify communicative mechanisms that enhance mutual understanding in clinical interactions. This would aid progress in understanding what effective communication is in this context and how it influences healthcare outcomes.

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Notes

1. A distinction has not been made between turn and position for simplicity.
2. Transcription Notations:

.....	= Indicates that material has been left out of the extract
(.)	= The shortest audible pause
(.3)	= 0.3 second pause
:	= Stretched the preceding letter or sound
>sharp brackets<	= faster speech
<u>Underlined</u>	= emphasized speech
?	= unclear speech or indicates a rising tone
3. Psychiatrists monitor the physical side-effects of anti-psychotic medication using routine blood tests.

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