COVER SHEET

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BIONOTES

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ABSTRACT

The ability to empathise with patients is an important professional skill for doctors. Medical students practise this skill as part of their medical education and are tested on their use of empathy within their final examination. Evidence shows that appropriate training makes a difference but natural aptitude also plays a role. Most medical schools do, therefore, probe applicants' basic understanding of empathy at admissions interviews. The purpose of the project presented in this paper was to apply existing understanding of how empathy may be communicated in a clinical context (building on Pounds' literature review, 2011) to develop a new empathy-specific medical admissions interview station, probing applicants' empathic *communicative performance* (not just *theoretical knowledge*) and fitting in the widely used Multiple Mini Interview (MMI) format. The paper outlines how this tool was developed, trialled and implemented by:

1) conceptualising empathic communication in discourse-pragmatic terms, that is, as a set of specific but context-dependant *empathic speech acts*; and

2) formulating and trialling a written and two oral versions of a situational test, capable of probing the applicants' ability to communicate empathically in everyday conversation and suitable for use at Norwich Medical School and other similar educational institutions.

KEYWORDS: Medical education, admissions test, empathy, empathic speech acts, pragmatics.

1. Introduction

This paper is concerned with empathic communication skills and how these might be identified and assessed to inform the process of selection of applicants to medical schools (and, potentially, professional or educational training in a health or other contexts).

Several studies (e.g. Hojat *et al*. 2002; Piasecky 2003; Bonvicini *et al*. 2009) have demonstrated that, when clinicians show that they understand a patient's emotional state, patients feel less anxious and talk more freely about their conditions, making diagnosis easier and ultimately leading to higher recovery rates. Clinicians who understand and acknowledge their patients' concerns and perspectives are also likely to feel less stressed and make less errors. There is additionally ample evidence that an empathic approach may be learnt or enhanced through appropriate interventions (La Monica 1981; Alligood 1992; Spiro 1992; Stephan and Finlay 1999). Such interventions may include dedicated consultation skills training and/or involvement in the study of literature and the arts. In spite of targeted training, however, adopting an empathic approach proves too difficult for some students, possibly because of their constitutional makeup and/or early life experiences (Hojat 2007). Consequently, many medical school application processes in the UK and elsewhere now aim to probe applicants' basic understanding of empathy by asking questions such as: "How would you define empathy to someone who does not know what it means?" or "Why is it important for medical professionals to be empathetic towards their patients?" (Medic Portal, accessed 29-3-17). However, there is, currently, no validated tool to assess applicants' empathic *performance* (actual use of empathic expressions) that can be used as part of the interviewing process. At some UK institutions, situational judgement tests (SJTs) are used to measure empathy,

integrity and resilience of applicants to postgraduate medical training (Patterson *et al*. 2012) but the focus is not specifically on empathy. In the SJTs used, furthermore, applicants are asked what they would *do* in specific situations (e.g. agree with their interlocutor), rather than, more specifically, what they would *say*. Other existing measures (as discussed in Section 2) rely on familiarity with a medical consultation context and are, therefore, not suitable for use with medical school applicants.

The aim of the project presented in this paper was to use a linguistic (discourse-pragmatic) approach to design an empathy-specific entry test for applicants to medical schools, to be used within a Multiple Mini Interview (MMI) station. The objective was to provide the applicants with a realistic non-clinical context in which a variety of empathic speech acts would be appropriate and check the extent to which they are able to formulate them without explicitly being told to show empathy. Section 2 provides a brief overview of the concept of clinical empathy and its dimensions. Section 3 outlines the discourse-pragmatic approach (specifically, the speech act perspective) taken in our study. Section 4 explains how three variations of the test were produced and discusses their respective strengths and weaknesses. The final sections include further discussion of the tests, the overall practical significance of the study as well as potential further applications.

2. The dimensions of clinical empathy

Empathy is a highly complex concept. It comprises cognitive, affective, behavioural and semiotic dimensions and has been defined and measured according to very different criteria. Working definitions in a professional setting were developed, initially, in a counselling context, specifically client-centred counselling (Rogers 1951). Within this tradition, 'accurate empathy' is seen to crucially involve skilful

'reflective listening' (promoting the patient's awareness and expression of feelings) and acceptance and understanding without judgement (Miller and Rollnick 2002). These concepts were later integrated into the Cambridge-Calgary approach to clinical communication developed by Kurtz and Silverman (1996), which is now widely used as a basis for medical consultation skills training in many parts of the world.

A variety of rating scales have since been developed to assess health professionals' empathic communication. The most established scale, used specifically to assess empathy, is the Jefferson Scale of Physicians' Empathy (JSPE), elaborated by Hojat *et al*. (2001). As established by Sulzer *et al*'s (2016) recent systematic review of how empathy has been measured in a clinical context, however, the great majority of studies (72%) rely on medical students' or practitioners' self-report, which, clearly has its value in many contexts but assumes familiarity with medical practice. In the majority of the studies (78%) surveyed, moreover, empathy is rated as a global construct (to be measured in terms of presence, absence or degree) rather than in terms of the multiple components (e.g. cognitive, behavioural and emotional) that are, typically, included in the definitions of the concept.

Some indication is given, in the existing criteria, of how empathy may be communicated linguistically. According to the ECCS (Empathic Communication Coding System), for example, a statement that 'indicates that the doctor is sharing the patient's emotion or has had a similar experience, challenge or progress' is considered very empathic (Bonvicini *et al*. 2009: 5). No explicit and systematic reference is made, however, to empathic communicative features. A greater focus on verbal assessment criteria would, arguably, both strengthen the behavioural measure of empathy and draw attention to its componential nature, at the expressive level at least.

Doctor-patient interaction has long been the object of linguistic analysis (discourse analysis and conversation analysis) but relevant studies have mainly focused on three main dimensions of discourse organization: its sequentiality, its genre features (e.g. interview vs. conversation) and its wider constitutive speech activities or communicative acts (particularly, questions). The aim is typically to explore examples of asymmetry in the interactional encounter, specifically dominance by the health professional (for a wider overview of these studies, see Ainsworth-Vaughn 2001). As argued by Wynn and Wynn (2006: 1387), this means that expression of empathy has typically been dealt with only indirectly, to the extent that a strongly asymmetrical consultation is unlikely to be empathic. In order to develop an interactive non-medical context in which applicants to medical schools are able to identify and demonstrate empathic expression, a more precise qualification of empathic communication is needed. The basis for such a qualification is outlined in the following section.

3. Empathic speech acts

No empathy-specific speech act types (or *empathic speech acts*) have been identified within traditional speech act theory (Searle 1969, 1976), which focuses on general categories such as 'representative', 'directive', 'commissive' and 'expressive'. Empathic speech acts may be conceptualized as a specific type of 'expressives' to the extent that they express the interlocutors' feelings about themselves or the world (according to Searle's initial definition 1976:12) or the state of mind, the attitudes and the feelings of speakers (following Taavitsainen and Jucker's more recent definition 2010: 159). Thanking, apologising, congratulating and greeting are generally included under expressives. The wider conceptualization developed by Guiraud *et al.* (2001)

highlights the emotive basis of expressives by distinguishing the following types: Being delighted/saddened, (dis)approving, being sorry and sympathizing. *Empathizing* may be added to these types but this would still need further qualification.

Relevant expressive categories may, additionally, be derived from existing classifications of politeness dimensions, specifically within first-generation theory linking politeness to face-work (Brown and Levinson 1987). From this perspective, expression of empathy may be included in the range of politeness strategies addressing speakers' 'positive face', that is addressing speakers' need to be acknowledged and valued. Further qualification would, however, still be needed.

Within a Systemic Functional approach to discourse analysis, empathic communication may be conceptualized in terms of a set of interpersonal/attitudinal expressive choices, specifically speakers' elicitation of and responses to feelings and positive evaluation of each other. Such attitudinal choices are included in the Appraisal framework developed by Martin and White (2005) under the categories of 'affect' (expression of feelings), 'judgement' (evaluation of people) and 'appreciation' (evaluation of things and events including people's behaviour).

All the above classifications are, however, non-empathy-specific and theoretically derived without taking specific discourse into account. Ronan (2015) is the first to investigate expressives through corpus analysis (a corpus of spoken Irish English) but her analysis is also carried out on the basis of existing (theoretically-derived), though adapted, expressive categories, including (dis)agreement, volition, thanks, apologies, exclamations, sorrow and greetings.

In our study, we have taken a discursive and function-specific approach to speech act identification and analysis. This approach was initially proposed by

Sinclair and Coulthard (1975) for the description of classroom discourse. It was more recently advocated by others, including O'Keeffee, Clancy and Adolphs (2011: 96–8). It requires consideration of the main communicative goals within specific discourse, e.g. teachers' initiating acts, responding acts and follow-up acts in classroom discourse. A similarly function- and goal-oriented approach to analysis has been taken in much research of doctor-patient interactions, most specifically, studies that adopt a 'theme-oriented discourse analysis', as introduced and practised by Roberts and Sarangi (2005).

It is possible to specifically select empathy as one of the communicative goals to be achieved at relevant points within medical consultations. A review of medical consultation skills training manuals (particularly, Piasecky 2003; Moulton 2007; Silverman, Kurtz and Draper 2005: ch 5) and the few existing linguistic studies of clinical empathy (particularly, Suchman *et al*. 1997; Wynn and Wynn 2006: 1387; Martinovski, Traum and Marsella 2007) highlights the following core expressive dimensions of clinical empathy (Pounds 2011: 148-149):

- Eliciting patients' feelings and views (directly and indirectly)
- Interpreting patients' feelings and views from available cues (explicit and implicit)
- Responding to patients' cues (explicit and implicit) by:

    a) Expressing explicit understanding and acknowledgement of patients' feelings and views

    b) Expressing acceptance as: Unconditional positive regard (or praise); 'neutral support' (support even when approval cannot be granted and) and withholding of judgement of patients as people.

These components are presented in Figure 1.

[INSERT Figure 1 ABOUT HERE]

The expressive dimensions listed in Fig 1 may be considered core empathy-expressing speech functions (*empathic speech acts*) relevant to a clinical setting, against which individual formulations can be measured as to their potential empathic value. The challenge, however, is to develop contextual scenarios in which equivalent formulations could be chosen or produced by the applicants to match the same empathic functions but, crucially, in a different non-medical everyday context.

In the next sections we explain how the scenarios for the initial written version of the empathy test were produced and further oral and semi-oral versions of the test were developed.

4. Methodology: Test development stages

The identification of the communicative dimensions through which empathy is expected to be expressed by medical professionals during consultations with patients makes it possible to: i) design situational activities that require such communication; and ii) check the extent to which it is present or not. The challenge, however, as mentioned above, is that applicants to medical schools have not been trained in consultation skills yet. In order to develop the entry-specific empathy test, we, therefore, needed to devise non-medical situational activities that still tested for the required type of empathic skills. The activity also needed to fit the Multiple Mini Interview (MMI) format now used at many medical schools in the UK and across the world. This format includes a number (generally five to eight) of interview stations lasting five to seven minutes each. In some of the stations, applicants are asked to discuss information that was provided on their application form; in others they are

expected to discuss a scenario or question to demonstrate abilities such as ethical reasoning, self-evaluation, communication skills and problem solving.

Our test had to be designed in such a way that it would be possible for the examiners to assess the candidate within the very short allocated time and using the same scoring system and evaluation dimensions as for all the other stations.

Instead of medical consultations, we needed to consider everyday situations in which applicants to medical schools, typically aged 18 to 25, may be required to express empathy in the form relevant to the consultation settings they would experience during their medical education. The role of the patient affected by illness and pain was replaced by that of a close friend who is sharing a piece of bad news, including negative feelings about the occurrence and themselves. This provides the necessary cues for the applicants to elicit further expression of feelings (showing interest in and concern for their friend's predicament), recognize and acknowledge the feelings expressed, communicate acceptance and reassurance and withhold negative judgment. Paradoxically, the fact that the 'friends' in the scenarios are not really known to the applicants, is closer to the medical consultation context, which students will prepare for.

4.1. Development of the written test

Two written discourse completion tasks were initially developed to be trialled with a group of student volunteers at the University of East Anglia, following full ethical approval for the project. Humanities rather than medical students were invited to trial the task to exclude the potential effects of any prior empathy training, which medical students would have received. The tasks were designed to provide the trigger for the relevant empathic communicative acts. The trigger was a friend sharing a distressing

experience: the death of their pet dog and the failing of a relationship. The scenarios were divided into four sections (see Table 1), reflecting the different dimensions of empathic communication presented in Section 3 and Fig 1.

TABLE 1 NEAR HERE

Because *acknowledging feelings* is identified as the core expressive dimension of an empathic response (Pounds 2011: 149), two of the sections (2 and 3) were meant to assess this same component. This provided two opportunities for the participants to demonstrate understanding of the value of this response and for the researchers to check that the initial triggers were sufficiently clear.

Four potential responses were listed in each case to reflect various degrees of empathic communication. The options were agreed upon by the four members of the research team, following extended discussion. It was clear, however, that the level of empathic value attached to each of the options, the medium two ones in particular, was open to interpretation and that the respondents' explanation of their choices was needed to determine whether any changes might be required, should the test be used as intended. The respondents were, therefore, asked to briefly explain their rating in the appropriate spaces provided. An OTHER option was also included to elicit responses that may have appeared more suitable and natural to the respondents but were not included in the main four options. In other words, this first version of the test was developed and tried, mostly, to check the legitimacy of the identified empathic communicative dimensions in a non-medical context.

The options for scenario 1 (failing of a relationship) are presented and clarified for all dimensions below.

The options for *eliciting feelings* were as follows:

TRIGGER: My girlfriend/boyfriend and I have just broken up and s/he asked me to take my things and leave

RESPONSES to choose from:

a) I'm really sorry. Are you still coming to the Farmhouse pub tonight?
b) I'm really sorry but I'm not surprised…I never thought s/he was right for you
c) I'm really sorry… What happened?
d) I'm really sorry…I can give you a hand with the moving if you like

OTHER….

All eliciting options include the same expression of sympathy but vary in other respects. Option (c) is fully empathic because it has a clear eliciting function: It allows the friend to say more about the situation, showing interest and concern. Option (d) is, arguably, the second most empathic because it includes an offer to help even though elicitation is lacking. Option (a) is in third place because a lack of elicitation is combined with a change in the subject. Option (b) is the most un-empathic because it not only fails to elicit any further information or feelings, it also questions the friend's judgement.

The options for *acknowledging feelings* were as follows:

TRIGGER: I <u>am really gutted</u> that it has ended like this

RESPONSES to choose from:

a) There is no point being upset now. You must accept the situation
b) You can't be that upset ... After all that s/he has put you through!
c) Yes, of course, you were not expecting this.
d) Try not to be upset. You will feel better soon.

OTHER….

Option (c) is fully empathic in that the feeling is fully acknowledged. We considered option (d) as second most empathic because the feeling is acknowledged but seen as modifiable. Option (a) follows in third place because the feeling is acknowledged but seen as unhelpful/unfitting. Option (b) is un-empathic in that the feeling is not acknowledged but questioned. As mentioned, a second set of options was included to test the same expressive dimension. The trigger was: 'I <u>really love</u> him/her. I don't

know how I'll cope'. The options similarly included full acknowledgment of the feeling expressed and responses in which the feeling was partially acknowledged or not at all.

The options for the *acceptance* dimension were triggered by the friend's expression of negative self-judgement, as follows:

> TRIGGER: I'm such an idiot…I should have listened to you
> RESPONSES to choose from:
> a) It's difficult to see things straight when you are in love.
> b) I know. I've been telling you for months!
> c) It's normal. You love him/her and wanted the relationship to work.
> d) Maybe s/he just took advantage of your good nature.
> OTHER….

Option (c) is fully empathic because the friend's behaviour is accepted in the form of neutral support and negative judgement is withheld. We considered option (d) as second most empathic because it contains some positive judgement but does not express neutral support. We set option (a) as second least empathic because it does not express any positive judgement and includes minimal neutral support. Option (b) is the least empathic as it confirms the friend's negative self-judgement.

As mentioned, the respondents were asked to: i) rank the responses in order of *suitability* (empathy was intentionally not mentioned) from 1 to 4; ii) add a more suitable choice under OTHER, if applicable; and iii) provide explanations for their choices in all cases. Fifty eight Humanities student volunteers aged between 18 and 21 (20 males and 38 females) were recruited, each responding to both scenarios. The responses were scored from 4 to 1, according to whether they matched our criteria (4 for a perfect match, 3 and 2 for responses that fell one or two levels below that expected, respectively, 1 for those that fell at the opposite end of what was expected). The full results are shown in Table A in the Appendix and are evaluated below.

4. 2. Results from the written test

The scoring ranged from 7 to 27 out of a potential 0 to 32 over the two scenarios. Only one student (0.58%) scored below 8 (the lowest quartile). Six students (3.38%) scored above 24 (the top quartile). Twenty nine students (16.24%) scored between 17 and 24 (second top quartile) and 22 students (13.34%) scored between 8 and 16 (second bottom quartile). Interestingly, none of the respondents provided an alternative choice under the OTHER option. No significant gender difference was detected. These findings showed that the majority of the respondents recognised and selected the most empathic choices, strengthening the legitimacy of the selected expressive dimensions. From the explanations provided by the respondents we could see, however, that the wordings for some of the choices needed to be modified to differentiate more clearly between their empathic values and that the difference between the two middle options was too subtle and context-dependent to be of real discriminatory value.

4.3. Development of the oral test

In order to add realism to the test, increase the respondents' expressive choice and include potential non-verbal expression of empathy, the same scenarios and cues were used to design and trial two role-plays in which two professional role players (the 'unlucky friends', one female and one male) tell the bad news and express their feelings to a student volunteer. Sixteen student volunteers (6 males and 10 females) were selected from the top and bottom performers in the written test and asked to perform this task (each student taking part in two different role plays). The students were instructed to imagine that the role player was a friend and to respond to them as

they would in a real situation (again empathy was deliberately not mentioned). We thought that it might be easier, overall, for the friends to be of the same gender and arranged for same-gender interactions. This aspect does, however, need further probing as preferences may differ depending on cultural background or other factors. It would be possible to ask applicants to select the gender of their 'friend' prior to taking the test.

The exchanges (lasting about 2 to 3 minutes each) were video-recorded and scored by all 4 research team members. The scoring criteria for the oral test were adapted from the written criteria to account for the fact that the scoring was to be carried out live by the assessors over the 5 minutes of a mini interview and to include non-verbal expression. The overall empathy value was assigned according to presence/ absence or frequency of expression. The role players were also asked to give an overall assessment of the responses on a Likert scale of 1 to 5 (from 'strongly agreed' to 'strongly disagreed' that 'the student demonstrated empathy to me'). The role plays were, in other words, used as much to check the students' responses as to test the appropriateness of the scoring system.

4.4. Results from the oral test

The scoring ranged from 2 to 28 out of a potential 1 to 28 over the two scenarios and, again, no noticeable gender difference was detected. While there was agreement across scorers on the highest and mid performers (3 to 4, respectively, in the top two percentiles), the scoring matched to a lesser extent for the lower performers (ranging from 0 to 6 in the lowest percentile and from 3 to 8 in the second lowest percentile). The role players' global scoring was in line with the researchers' scoring of the

highest and lowest performers. The variation in the assessment criteria may explain the noticeable variation in scoring for the same students in the written and oral tests.

The inconsistencies in the scoring, however, appeared to be due to the number of expressive features that had not been appropriately defined or accounted for by the scoring criteria used and for which we had to use our discretion. By checking our scoring difficulties, it was possible to revise the scoring criteria accordingly. We found, for example, that, in the context of a conversation between friends, the elicitation dimension may best be described as *being open* to the friend's need to talk more about their distressing situation by *showing interest and concern* both verbally and non-verbally (e.g. nodding, leaning forward). We also needed to allow for the possibility that rejection of the friend's negative self-assessment might be expressed non-verbally (shaking of the head).

Further empathy-related aspects also emerged from the analysis, including not only the non-verbal signals but also expressions of *sympathy, reassurance* and *commitment to help*. Whilst these aspects are generally not included under the core dimensions of empathy (sympathy is actually counterposed to empathy), they appear to add to the empathic communication, when combined with the core expressions. We also noticed that it is necessary to distinguish between helpful remarks (e.g. encouraging words) and unhelpful considerations (e.g. unsolicited advice, insensitive comments or excessive reassurance). The revised criteria, examples and scoring values can be seen in Table B in the Appendix. Ultimately, the outcome of this trial confirmed, however, that the oral test, by providing additional potential for the expression of empathy, might be a more reliable indicator of aptitude than the written test, if appropriate scoring criteria are devised.

4.5. Development of a 'mediated' oral test

In order to standardise the interview station and assessment criteria and also to reduce cost (arising from employing professional role players for the interviews), it was decided (in consultation with the examiners involved) to produce a 'mediated' version of the oral test. The same role-players were hired to record new short videos (just over one minute each) in which they are sitting at a table at an imaginary café, recounting their distressing event as if to a friend (the interviewee), as shown in Fig 2.

FIGURE 2 NEAR HERE

Two versions, one with a male and one with a female actor, were prepared to be shown to male and female applicants respectively. The video was paused at the triggers and the applicants were asked how they would respond and why. In formulating the questions, the examiners were asked to draw attention to the trigger as in: 'In this first section your friend shared their bad news with you. How would you respond as their friend? Why?'. An additional question was included at the end to provide the applicant with a further opportunity to show that they appreciated the need for and the difficulty in taking somebody else's perspective, which is at the core of empathy: 'Have you been in a situation where a friend has shared some bad news with you? What did you find difficult about it?'.

A scoring sheet and instructions for the interview assessors were created. The scoring sheet includes examples of appropriate expression for each section, to help with the scoring. Examiners are also provided with a further separate list of examples of empathic and non-empathic responses for each question, which they can use to prepare for the interview. The scoring ranges from 0 (when the candidate 'is unable to demonstrate understanding' of the empathic dimension tested) to 3 (when the

candidate ‘clearly demonstrates understanding’). The examiners are also able to indicate their overall impression of the candidate’s suitability for medical study at Norwich Medical School (NMS) on a scale of four, from ‘excellent’ to ‘unlikely to thrive’, in line with the scoring system for the other interview stations.

Two more scenarios were devised following the same format and triggers. Further scenarios may be created to reduce potential ‘coaching’ and ‘practice’ effects – although Cullen *et al*. (2006) found that this is less likely to occur for context-specific situational judgement tests. The station was initially trialled on 10 applicants to NMS who accepted to take the test on a voluntary basis, separately from their official interviewing process. The scoring was carried out independently by two members of the research team and the volunteers were asked for their views of the station at the end. The main aim of this small pilot was to check that the scoring could be done comfortably in the time available and that the scoring was sufficiently consistent between raters.

4.6. Results from and trial of the ‘mediated’ oral test

The two members of the research team scored within two points of each other except for one case for which the discrepancy was greater (5 points) but there was agreement on the overall impression of the candidate. The scoring ranged from 10 to 1 out of a maximum total of 12. The sample was too small to be significant in terms of full validation but the pilot indicated that this test was able to highlight candidates who may have significant difficulties with empathy (at least one in our group). The pilot also showed that the wordings to define each performance level on the scoring sheet needed simplifying in order to facilitate more efficient scoring. It was further noted that drawing attention to the triggers did not need to happen in all cases and could be used as prompting, when necessary, thereby differentiating more accurately between

the candidates' empathic skills. These findings have informed further revisions of the scoring sheet (the final version can be seen in Appendix C). All candidates were openly positive about the test, stating that it allowed them 'to be themselves', compared to other stations and that it felt quite 'natural'. The drawback, however, is that the applicants' responses are communicated to the examiners rather than addressed directly at the friend in the clip and this reduces the realism of the situation and prevents the applicants from displaying non-verbal expressions of empathy.

4.7. Overall results

All the three trials demonstrated that all the three tests, once appropriately revised as described, can provide some valuable indication of the applicants' natural ability (or lack of) to communicate empathically. Any of them could be successfully adapted to be used in the context of an entry interviewing process at medical or other educational or professional institutions. The 'mediated' oral empathy assessment 'station' has been used in the 2015-2016 academic year alongside the existing station in the admissions selection process at NMS to assess its viability. Although some revisions to the scenarios used may still be needed in order to reduce potential gender and ethnicity bias (suggested by the results in the case of the relationship scenario), the new station has proven more effective than the original one to the extent that applicants' scoring differences are considerably wider and low performers are, therefore, identified more clearly. There is, at the same time, no variation in terms of average distribution of scores, which is, arguably, reassuring for the overall functionality of the new station within the existing station framework. These results are summarised in Table 2.

TABLE 2 NEAR HERE

Given these overall positive results, the decision was taken to fully replace the existing station with the new one as from next year. The scoring system and the scenarios will, however, be adjusted following more detailed analysis of the results and of the examiners' evaluation. The outcome will continue to be monitored.

5. Discussion

Although the new empathy station does not provide a completely objective measure of the applicants' empathic aptitude in that (a) the situation is contrived and (b) the scoring may vary depending on the examiner's subjective interpretation of their responses, it is, nevertheless, an improvement on the current station to the extent that it assesses the applicants' ability to *perform* empathy through specific verbal behaviour in real time. The written and 'mediated' oral versions are closest to a situational judgment test (SJT) but with a specific focus on empathy and its communication.

Patterson *et al.*'s review of SJTs in medical and other professional contexts (2012) highlights their overall moderate to good level of reliability and validity, particularly in predicting interpersonal skills. One of the criticisms is that they are 'construct heterogeneous' in that one item may target several performance dimensions. For our test, this is arguably not the case as it was especially designed to target the specific dimensions of clinical empathy.

The full oral-play is preferable in that it affords candidates the opportunity to express empathy both verbally and non-verbally and in a more realistic situation. We would recommend that this version be implemented when the cost of hiring trained

role players (as used in medical examinations) can be borne by the relevant institution. The 'mediated' oral version has, however, proved to be sufficiently effective and manageable and could successfully be adopted by other medical schools. The fact that the applicants we interviewed liked this test is part of its value to the extent that the pleasantness or otherwise of the interview process may also impact on the institution's ability to attract the best students. Further adaptations of the written and oral versions may be devised to suit the needs of the particular interviewing process at other medical institutions. The written version (suitably revised to enhance the clarity of the responses) is amenable to machine-marking (which increases reliability) and may be administered to a large group of applicants at the same time (more cost effective). The oral versions are, arguably, more reliable measures of aptitude overall, although the full role-play is more expensive to implement. The realism of the 'mediated' oral version may be enhanced by producing a virtual interactive context in which the applicants communicate with an avatar programmed to react to their responses. For the oral tests, some time needs to be invested in familiarising the examiners with the applicants' potential responses and their empathic values. For the purpose of facilitating marking of the 'mediated' oral tests, we have produced illustrative clips in which an actor plays the role of a high and low-performing applicant.

The scores obtained from the entry test may be used not only to inform candidate selection at interviews but also to assess new entrants' training needs during medical school. Follow-up/audit activities could be devised to measure the relationship between admission interview performance and further performance during medical training and in the final examination.

6. Conclusion and limitations

The project presented in this work has demonstrated the theoretical and practical validity of conceptualizing the verbal expression of empathy in terms of core empathic speech acts that may be expressed through a variety of formulations. By mapping the basic framework derived from a medical context against interactions in similar or different contexts, it is possible to identify the areas of overlap as well as the context-specific realizations. This makes it possible to adapt the framework for the analysis and, potentially, the rating of verbal empathy in various (health) educational and professional settings, providing an additional useful measure of empathic communication. We, therefore, expect that our approach may have applications beyond selection in medical schools and be used and adapted more widely to support student and staff selection and training in other health educational and professional contexts.

The study further confirms Sulzer *et al.* (2016)'s observations that one-fits-all empathy scales are problematic and that context-specific behavioural (including verbal) dimensions need to be taken into account. It, additionally, sets the basis for the identification of non-verbal expressions of empathy that appear to realise similar or additional meaning to the ones expressed verbally, on their own or in combination with verbal means. One important non-verbal aspect that could not be investigated as part of this study, however, is touch, which may be used in many contexts to express understanding and acceptance but not in the contrived settings of a test.

The present study focused specifically on the behavioural/performative dimension of empathy, which is, arguably, relevant to professional contexts. Investigating how *emotive empathy* (not only acknowledging but actually sharing another's feelings) may be communicated verbally is a more challenging endeavour

and falls outside the scope of this study. Non-verbal and, particularly, physiological and neurological indicators are likely to provide more reliable measures in this case (Hojat 2007: 63-74).

Given the prefabricated nature of any situational tests (whether pre- or post-training), we cannot, overall, argue that the tests presented here can provide an uncontroversial measure of applicants' empathic aptitude, nor that they can reliably predict selected students' future performance. Their main value is that, as mentioned in Section 4.7., the tests appear to be considerably better at drawing attention to low and, potentially, concerning performance, which the institution may be able to probe further. A further advantage is that 'correct' responses are more difficult to prepare in advance than simple answers to questions, provided the scenarios are changed frequently and are not made publicly available.

7. Funding and acknowledgements

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APPENDIX

Table A: Performance on written test. 4 shades of grey corresponding to each percentile from darkest (highest) to white (lowest).

Student Number	Gender	SCENARIO 1 As expected	SCENARIO 2 As expected	Total Responses in expected order (out of 32)
1	F	10	8	18
2	M	5	12	17
3	F	9	7	16
4	F	10	10	20
5	**F**	**15**	**12**	**27**
6	**F**	**13**	**12**	**25**
7	F	9	7	16
8	F	6	4	10
9	F	3	4	7
10	M	6	11	17
11	F	9	10	19
12	F	12	11	23
13	**M**	**14**	**14**	**28**
14	F	12	8	20
15	F	5	8	13
16	F	8	11	19
17	F	6	10	16
18	F	10	6	16
19	F	10	14	24
20	M	9	13	22
21	M	8	11	19
22	M	8	10	18
23	**F**	**14**	**12**	**26**
24	F	11	10	21
25	**F**	**8**	9	17
26	F	10	11	21
27	F	13	11	24
28	F	15	7	22
29	M	6	7	13
30	M	7	8	15
31	M	6	6	12
32	F	8	10	18
33	F	10	12	22
34	F	10	11	21
35	M	6	9	15
36	F	3	10	13
37	F	8	11	19
38	F	9	9	18
39	M	8	11	19
40	F	8	10	18
41	M	5	9	14
42	F	3	8	11
43	F	4	10	14
44	F	6	10	16
45	M	9	9	18
46	F	12	9	21
47	**M**	**13**	**14**	**27**
48	F	10	6	16
49	F	4	10	14
50	M	12	12	24
51	F	8	7	15
52	F	8	6	14
53	F	5	7	12
54	F	3	9	12
55	F	4	5	9
56	F	12	12	24
57	**F**	**14**	**13**	**27**
58	M	7	11	18

Table B: Scoring sheet for the oral test

EMPATHIC EXPRESSION	EXAMPLES
Expresses CONCERN: **Verbally or non-verbally** **Strong: 2 Weak: 1 None: 0**	**Emotive tokens, sympathy:** *Oh no; how awful; I'm so sorry to hear that*; good wishes (*I hope you'll feel better*); Listening, nodding, leaning forward, maintaining eye contact, mirroring feelings on face
Expresses INTEREST: **Verbally or non-verbally** **Strong: 2 Weak: 1 None: 0**	**Encourages further clarification/ exploration of problem:** *Are you ok? ; What happened?; Have you spoken to her?/* Interested expression
Refers to/ ACKNOWLEDGES friend's expressed or imagined FEELINGS/VIEWS: **Verbally or non-verbally :** **Strongly: 2** **Weakly: 1** **Dismisses feelings: 0**	*That must have been a shock* *Yeah /*Nodding *It's no use getting all depressed; it's not that bad*
REJECTS friend's NEGATIVE SELF-EVALUATION: **Verbally or non-verbally: 2** **Expresses POSITIVE JUDGEMENT/SUPPORT: 2** **Expresses explicit or implicit NEGATIVE JUDGEMENT: -2**	*You can't blame yourself; it's not your fault; you're not stupid/* Shaking head *You were a really loving boyfriend ; you deserve better; it's normal to feel/think X* *You will listen to me in future.*
Making HELPFUL CONSIDERATIONS: 2 **Making UNHELPFUL CONSIDERATION:** **Overly reassures: -1** **Makes insensitive comments: -2**	*You have all the memories; you had a great time* *Everything will be just fine* *You'll get somebody more beautiful next time*
EXPRESSING AVAILABILITY: 2	*Get in touch anytime; Ring me whenever*

Table C: Scoring sheet for the semi-oral test

Candidate's ability to understand the importance of listening to and showing concern for others.	**QUESTION 1: In this first section Emma/John shares their bad news with you. How would you respond as their friend? Why?**	
Evidence: Indicates that they would ask Emma/John how they are feeling and express concern as in: • *I am sorry, how are you feeling?* • *I am sorry, this must be really upsetting*	Is **unable** to demonstrate an understanding of the importance of listening to and showing concern for others	0
	With **much** prompting demonstrates a very limited understanding of the importance of listening to and showing concern for others	1
	With **some** prompting demonstrates a reasonable understanding of the importance of listening to and showing concern for others	2
	Clearly understands the importance of listening to and showing concern for others.	3
Candidate's ability to understand the importance of acknowledging and validating others' feelings	**QUESTION 2: In this second section Emma/John appears to express their feelings to you. How would you respond to them? Why?**	
Evidence: Indicates that they would acknowledge Emma/John's feelings (grief, upset, irritation… for what happened) as in: • *Of course you are upset/ annoyed* • *This is very upsetting/ annoying*	Is **unable** to demonstrate an understanding of the importance of acknowledging and validating others' feelings	0
	With **much** prompting demonstrates very limited understanding of the importance of acknowledging and validating others' feelings.	1
	With **some** prompting demonstrates a reasonable understanding of the importance of acknowledging and validating others' feelings.	2
	Clearly understands the importance of acknowledging and validating others' feelings	3
Candidate's ability to understand the importance of expressing acceptance of others	**QUESTION 3: In the third and final section Emma/ John appears to blame themselves for what happened. As their friend, how would you respond? Why?**	

Evidence: Indicates that they would accept that Emma/ John may feel guilty/ stupid but refer to that fact that this is normal under the circumstances and/or refers to the friend's good qualities as in: • *It is normal to feel like this but you are a very thoughtful person* • *This could have happened to anyone.*	Is **unable** to demonstrate an understanding of the importance of expressing acceptance of others.	0
	With **much** prompting demonstrates a very limited understanding of the importance of expressing acceptance of others.	1
	With **some** prompting demonstrates a reasonable understanding of the importance of expressing acceptance of others.	2
	Clearly understands the importance of expressing acceptance of others.	3
Candidate's ability to demonstrate a genuine understanding that it is about considering somebody else's needs	**QUESTION 4: Have you been in a situation where a friend has shared some bad news with you? What did you find difficult about it?**	
Evidence: Refers to the difficulty of knowing what others would like to hear when sharing bad news as in: • *I don't think he/she would have liked to hear…* • *This might have made him/her feel worse/ better.*	Is **unable** to demonstrate an understanding of the importance of acknowledging and validating others' feelings	0
	With **much** prompting demonstrates very limited understanding of the importance of acknowledging and validating others' feelings.	1
	With **some** prompting demonstrates a reasonable understanding of the importance of acknowledging and validating others' feelings.	2
	Clearly understands the importance of acknowledging and validating others' feelings	3

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FIGURES

Figure 1: Main components of empathic expression in a clinical context

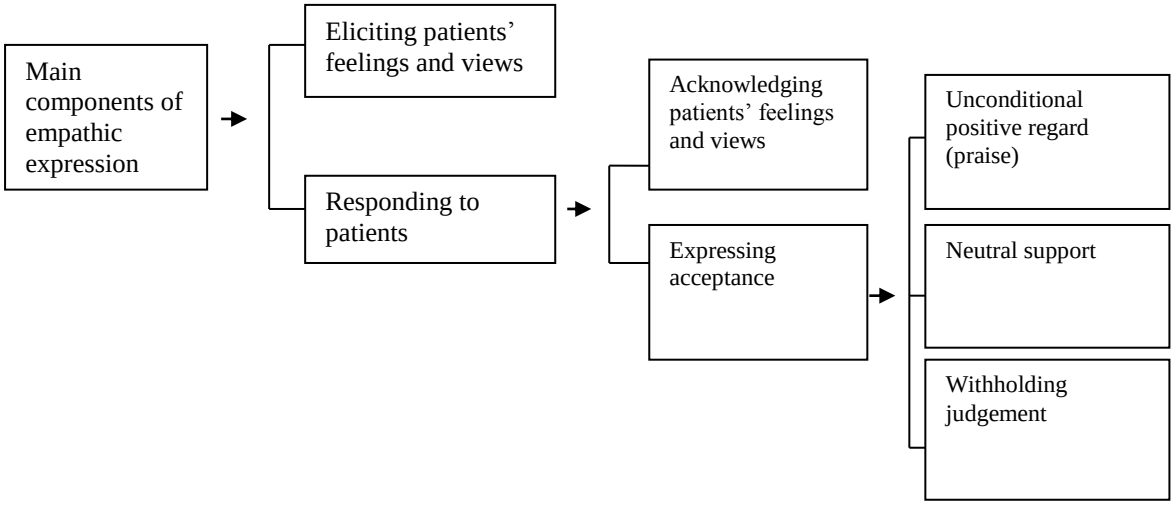

Fig 2: Screen shot from one of the video-clips used for the semi-oral test.

TABLES

Table 1: Written discourse completion task: Scenario structure

Section	Trigger	Sought response
1	Friend's reporting of loss	Eliciting feelings
2	Friend's explicit expression of feelings (sadness and/or anger) no 1	Acknowledging feelings
3	Friend's explicit expression of feelings (sadness and/or anger) no 2	Acknowledging feelings
4	Friend's expression of self-blame and self-deprecation	Expressing positive regard and neutral support

Table 2: Showing the overall average scoring distribution for the original and the new empathy station

Station	Mean (range)
Original	8.1 (0, 12)
Video	8.1 (2, 12)
Difference	0 (-10 , 11)