

Using interpretative phenomenological analysis for public health nutrition and dietetic research: a practical guide

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The present paper introduces interpretative phenomenological analysis (IPA) as a framework for analysing qualitative research data collected for public health nutrition and dietetic research studies. The theoretical roots of IPA have been set out briefly in order to help researchers decide whether the approach is relevant for them and their particular research questions. IPA can be used to analyse data from one-to-one interviews in order to develop 'thick descriptions' that may help illuminate human experience. IPA can also be used to develop theories and/or models, which could help inform policy. The main body of the paper describes the analytical techniques and procedures used to achieve both outcomes in a practical way, using examples from the author's own research. In the following paper Krueger's methods for analysing focus group data are set out for comparison. It is hoped that these papers will empower researchers with little experience of qualitative research to develop confidence with qualitative data analysis. In addition, it is hoped that the material will stimulate debate amongst more experienced qualitative researchers from a public health or dietetic background.

Interpretative phenomenological analysis: Qualitative research: Nutrition: Dietetics

It is important that qualitative research reports give enough methodological details to enable readers to understand what has been done and so make a judgement about the quality and usefulness of the work. However, qualitative research techniques are complex and full explanations are often difficult to achieve within the constraints of the word limits set by journals. Using a recognised framework can be helpful as long as readers understand what the framework entails (Fade, 2003). Interpretative phenomenological analysis (IPA) is one such framework, which was developed and described by Smith *et al.* (1995, 1997, 1999). IPA can be used to develop in-depth descriptions of human experience. The techniques can also be taken further to develop theories, models and explanations that help us understand human experience better. The present paper seeks to describe IPA for nutritionists and dietitians, drawing on the author's experience of using it.

Theoretical roots

IPA has its origins in health psychology (Smith *et al.* 1995, 1997, 1999) and is theoretically rooted in critical realism (Bhaskar, 1978) and the social cognition paradigm (Fiske

& Taylor, 1991). Critical realism accepts that there are stable and enduring features of reality that exist independently of human conceptualisation. Differences in the meanings individuals attach to experiences are considered possible because they experience different parts of reality. The social cognition paradigm is founded on the premise that human speech and behaviour reflects these differences in meaning either directly or indirectly. Hence, analysis of interview data is considered to be a reasonable method of accessing and developing an understanding of these differences.

The label 'IPA' is interesting and has been the cause of some debate (Willig, 2001). Phenomenology is concerned with human understanding and originated in the ideas of Edmund Husserl, first put forward in 1936 (Husserl, 1970). He rejected the view that empirical science is the basis for achieving an understanding of the world, stressing instead the importance of the 'life world' or lived experience. He believed that the core meaning of entities in the world can be understood by intuition. In other words, what is really there in the world can be understood by perceiving it in a manner that is uncontaminated by an individual's past experiences and viewpoints. It is this thinking that has

Abbreviation: IPA, interpretative phenomenological analysis.

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inspired much recent research in healthcare, in which the focus is on exploring individual 'lived experiences'.

Traditionally, researchers carrying out phenomenology studies have aimed to 'bracket out' their preconceptions (Colaizzi, 1978; Moustakas, 1994) using formal reflexive techniques (Heron, 1990; Duck, 1992). It has been argued that true phenomenological research should also require respondents to engage with these reflexive techniques in order to give a more accurate representation of the way in which they see the world pre-cognitively (Caelli, 2001). From this standpoint it could be argued that IPA has been wrongly labelled as 'phenomenological'. Smith *et al.* (1999) stress that the purpose of IPA is to attempt as far as possible to gain an insider perspective of the phenomenon being studied, whilst acknowledging that the researcher is the primary analytical instrument. The researcher's beliefs are not seen as biases to be eliminated but rather as being necessary for making sense of the experiences of other individuals. Reflexivity is viewed as an optional tool, enabling the researcher to formally acknowledge his or her interpretative role, rather than as an essential technique for removing bias. Based on a Husserlian view it could be argued that analysis cannot be both interpretative and phenomenological. However, it is important to understand that phenomenological thought has been developed in a variety of different ways. For example, in 1927 Heidegger (1962) stressed the importance of 'being in the world' and, hence, the inevitability of the world being perceived through the lens of historical context and socio-cultural background. Gadamer (1976), too, presented the past as productive, shaping the interpreter's present understanding. IPA is phenomenological in that it seeks an insider perspective on the lived experiences of individuals, and interpretative in that it acknowledges the researcher's personal beliefs and standpoint and embraces the view that understanding requires interpretation.

Application to research in the field of nutrition

Nutritionists and dietitians who wish to explore and/or develop theories for the shared meanings that a group of individuals attaches to a particular lived experience could make use of IPA as a framework for qualitative data analysis. In addition, the case-study approach to IPA (see p. 648) can be used to develop an in-depth description of just one individual's experience, where this seems appropriate. IPA may be particularly useful when the researcher's personal stance is that certain values and beliefs are likely to remain outside his or her consciousness (Luft, 1969), and that as a consequence it would be impossible to bracket them out even with the use of formal reflexive techniques. IPA is applied to interview data and so the researcher needs to have access to a pool of potential respondents who have experienced the phenomenon in question. For example, IPA could be used to explore the core meaning of 'healthy eating' from the perspective of a group of African Caribbean teenagers or to look at the experiences of UK Muslim women in relation to breast-feeding. IPA is also useful for carrying out research with healthcare professionals. For example, it could be used to explore nurses' perceptions of enteral

feeding for patients with cancer or house-officers' perceptions of the role of the dietitian in the multi-disciplinary team.

The method

Smith *et al.* (1999) describe two approaches to IPA. The first is the basic method, termed the ideographic case-study approach. This method is suitable for small samples of up to ten respondents and enables the researcher to write up a single case or an exploration of themes shared between cases. Additional procedures are recommended for larger sample sizes and for exploring patterns and relationships within and between conceptual groups. These procedures can be particularly useful when a theoretical explanation or model is the desired outcome of the research as opposed to in-depth description. For example, a researcher may wish to develop a model to explain the attitudes of UK Muslim women towards breast-feeding or nurses' perceptions of the role of enteral feeding. Both approaches will be introduced here.

The ideographic case-study approach

This approach is recommended for the exploration and development of in-depth descriptions from a single case or shared themes from up to ten cases (Smith *et al.* 1999). IPA is applied to interview data, which should be recorded (on audio tape) and transcribed verbatim. Set questions or pre-ordained lists of themes are not usually used, as the purpose of the research is to explore the respondents' perceptions of what is important in relation to the phenomenon in question, rather than to look at what the researcher deems important. It is helpful to keep field notes describing non-verbal communication and the researcher's general impressions of issues such as the tone of the interview and the respondent's ability to retrieve information for discussion. Non-verbal communication should be inserted into the transcript during transcription or immediately after transcription, whilst the experience is fresh in the researcher's mind, when the transcription has been carried out by a third party. These notes can be helpful when interpreting the data. It is important to carry out initial analysis of each transcript consecutively.

In order to offer a practical perspective the methods will be described in relation to a study from the author's own research, which explored the assessment experiences of student dietitians and their supervisors during pre-registration practice placements.

The first step in the analytical process is to read the transcript all the way through several times. Once the researcher has an overall sense of the data it should be possible to start making notes describing any striking issues. In order to facilitate this task the transcript should be set out with a wide margin down the left-hand side. It is also useful to number the lines to assist with identifying examples of different themes later. Once this process has been completed for the whole transcript, further review should enable the researcher to begin to name themes by a process of abstraction. These themes could be inserted in a margin on the right-hand side or in the text itself next to

Table 1. Extract from an interview with a dietetic student supervisor

(A false name (Susie) has been used to protect the confidentiality of the respondent, the researcher's coding is shown in italics and gestures and non-verbal communication are shown in bold)

Researcher's analysis of transcript	Transcription of interviewer's questions and interviewee's answers
1	Interviewer: This idea of helping the student to be self-directed . . . it sounds like it's a
2	problem for some of them. What sort of techniques do you use to try and get them to
3	self-assess?
4 Trying not to offer judgements	Susie: Well, usually I do it by asking: 'How do you feel that went?' (<i>vague questions</i>) And
5	I see what they come out with
6	Interviewer: What do they come out with?
7 Usually does something that doesn't	Susie: (laughs, shrugs shoulders) Not much usually. You know 'fine' or 'don't know'
8 work!	(<i>vague answers</i>) or awkward silence (<i>being unable to self-assess; ineffective questions</i>)
9	Interviewer: Can you tell me a bit more about how you feel when that happens and what
10	you do?
11 Usually does something that makes her	Susie: Annoyed, frustrated (<i>supervisor frustration</i>). When I feel like that I just tell them how
12 feel annoyed or frustrated	it went (<i>telling students</i>), you know, try and say well you did this well but this didn't go so
13 Wants students to self assess but ends	well, then try and say something good to finish (<i>criticism sandwich</i>). You know try and
14 up telling them her assessment	be positive (<i>trying to be positive</i>)
15	Interviewer: Do you ever try anything else . . . other questions?
16 Needs time. Needs to feel relaxed	Susie: Yeah, if I've got time and we're relaxed I try and ask more (<i>needing time</i>). I like to
17 If has time discusses causes and	ask, 'What do you think the patient will go away and do?' (<i>consequence questions</i>). You
18 consequences	know, get them to think about what influence they may or may not have had (<i>facilitating</i>
19 Helps students understand their actions	<i>student self-understanding</i>); and sometimes that works really well. It gets them thinking.
20	Or I ask 'What did you say when the patient said . . . whatever it was?' (<i>specific</i>
21	<i>questions</i>). You know, one of them said at the end of the consultation 'Just come back
22	in 3 months and don't worry if you haven't made any changes by then (raises eyebrows
23	and sighs). You know and when she remembered that she realised the effect it would
24	have. So that was good (<i>facilitating student self-understanding; valuing student</i>
25	<i>self-understanding</i>)

the specific section of data it relates to. An example is shown in Table 1.

Abstraction and naming of themes is a challenging process and requires considerable interaction with the data. It is important that the names given to events, objects, actions and interactions in the data reflect the context of the respondent's words. It is sometimes appropriate to name a theme exactly as it is found in the data, but usually the researcher moves to a higher level of abstraction and names themes based on asking questions about the nature of what is going on in the data and how the incident compares with other similar incidents in the data. For example, in lines 17–19 of Table 1 the respondent who is talking about the way she gives feedback to students says: 'You know, get them to think about what influence they may or may not have had (on patients)'. This piece of data could have been coded as 'getting students to think about how they influence patients'. However, by asking questions about what was actually going on and comparing this action with other actions described by the respondent it became evident that the questions the respondent asked her students had different purposes. This particular example was named 'facilitating student self-understanding'. Memos outlining analytical decisions should be kept to assist with further analysis and to enable the researcher to give a rationale for the analysis.

Once the entire transcript has been coded in this way the themes should be extracted and listed. Some researchers prefer to print out copies of the transcript and cut out the sections of text and codes. These pieces of data can then be laid out on a long table or stuck on a wall. If the researcher

is working with text on a computer screen the relevant sections can be cut and pasted into a separate document.

The next stage is to look for connections between the themes in order to cluster them together in a meaningful way. One way to approach this task is to ask questions about a theme and see if other themes answer those questions. For example, in relation to the code 'ineffective questions' (line 7 in Table 1), asking why the questions were ineffective and what were the consequences of ineffective questioning resulted in the following codes being clustered together: 'ineffective questions', 'vague questions', 'vague answers' and 'supervisor frustration'.

At this stage it should be possible to name the over-arching or 'super-ordinate' theme by looking at what the sub-themes have in common. A separate table should then be drawn up for each super-ordinate theme linking each sub-theme to sections of raw data as shown in Table 2.

This single-case study could then be written up as a narrative account, but more commonly it would be necessary to move on and collect more data from additional cases. In relation to the latter option the researcher would repeat the analysis of each case in turn. When carrying out subsequent interviews it is useful to have a list of the clustered themes to hand, together with a note of additional information that might help deepen the analysis. This material enables the researcher to pick up on themes that the respondent mentions and ask further probing questions. However, it is important to remember that phenomenological research is about exploring each respondent's perceptions of what is important in relation to

Table 2. Example of a super-ordinate theme table showing three sub-themes from one interview

Sub-themes	Quotation	Page and line number
Vague questions	I usually do that by asking, 'How do you feel that went?'	4.5
Supervisor frustration	Annoyed, frustrated	4.16
Vague answers	'Fine' or 'don't know'	4.11

the phenomenon being studied. For this reason the researcher should avoid asking questions about issues that the respondent does not mention.

Where new themes emerge it is helpful to look back at previous interviews to check whether these themes were missed on the first analysis. Once tables of clusters of themes have been developed using data from every interview in the data-set, a master list of themes for the group can be drawn up. Super-ordinate themes included in the final master list should be those that contain examples of sub-themes from each interview, i.e. they should represent themes shared across all the respondents' data. At this stage it may be necessary to drop some themes in order to keep the findings succinct enough for publication or presentation. If pruning is necessary, the decision should not be made on the basis of prevalence, but rather on the ability of the theme to illuminate other themes and on the richness and power of the extracts of data that the themes represent.

Each super-ordinate theme can then be written up as a narrative account, allowing the respondents' shared experiences to be described in considerable depth. One way of approaching this task is for the researcher to return to his or her original analytical memos describing the reasons for naming themes in a particular way and the type of

questions different themes answered; for example, how, when, why, where and with what consequences? In this way the researcher should be able to identify processes and so begin to tell the respondents' story. It is important to remember that this process is as much a part of analysis as any other, and new issues often come to light at this stage, which may necessitate a review of the table of themes.

An exploration of links with the extant literature could be woven into the narrative account or included in any write-up or presentation as a separate section.

The theory building approach

This approach is useful for evolving explanations from the data in the form of models or narrative. It is important to point out that these explanations do not set out cause-and-effect relationships as seen in quantitative research. An explanation embraces a set of well-developed themes that are systematically linked through statements of relationship. These explanations can be used by other researchers to help to illuminate the phenomenon to which they apply, but they should be continuously checked out against incoming data and evolved where necessary.

Again, the procedures will be illustrated with reference to a study carried out by the author. The study in question set out to explore the core meaning of 'effective assessment' from the perspective of supervisors working with student dietitians on pre-registration practice placements.

The initial processes used are the same as those described for the case-study approach. Each transcript is read and coded in turn and themes are grouped together in clusters with examples of raw data illustrating each theme linked to the transcript and line numbers. However, no attempt is made to name higher order themes at this stage. Once all the transcripts have been coded in this way the clusters can be copied into one document or laid out on a

Table 3. Clusters of themes from a study exploring the core meaning of effective assessment from the perspective of dietitians supervising students on pre-registration practice placements, showing six clusters from a total of twelve

Cluster one	Cluster two	Cluster three	Cluster four	Cluster five	Cluster six
Corroborating evidence in different documents	Giving attention to assessing:	Ensuring assessment is justifiable	Being prepared to confront	Supervisory caseload	Supervisory supervision
Corroborating evidence with patients	Ability	Transparency	Telling students how they have done	sharing	Mentoring
Corroborating evidence with other professionals	Suitability	Gaining student respect	Rigorous	Supervisory time management	inexperienced supervisors
Getting consensus amongst supervisors	Rationale		documentation of learning needs	Supervisors ensuring that feedback is timely	Supervisors learning as a team
Increasing supervisory confidence in assessment decisions			Students having a realistic understanding of how they are perceived by supervisors		Facilitating supervisory consistency
Protecting patient safety					Setting supervision rules
Close supervision					Improved supervisor familiarity with assessment tools
Tripartite handover					
Maintaining an over-view of student progress					

Table 4. Extracts from a table of quotes linked to the concept ‘supervisory control of placement assessment’*

Interview and line number	Quote	Code†
D74, 8	I think one of the most well more important things I’ve noticed recently is actually timing its writing in the diary right. I’ve got a student this week and blocking time through.	Prioritising supervisory time
D74, 11	I do now, yes, so blocking time certainly at the end of the week. I think what I struggle with more is I have students. . . I tend to have students later on in their training just because I work with palliative and cancer patients. Where possible we try to schedule it later on. So often the students are doing a lot more unsupervised experience on the wards and I’m very conscious because there have been problems. We had a couple of students recently that perhaps in the past I haven’t supervised or assessed as closely. . . we need to be assessing far more closely.	Close supervision <i>Managing risks of indirect supervision</i>
D79, 22	Well, what questions did they ask? I asked them questions about how they felt the advice they’d given would fit in with this patient’s lifestyle or whether they thought it was practical advice that they’d given. Things like that. Then, when they started to think about their lifestyle they kind of twigged, well actually it wasn’t going to work for that particular patient.	Asking powerful questions Asking consequence questions Facilitating student self-awareness
D79, 34	The British can be very modest about their achievements and things. So you get the students who say you know ‘rubbish, rubbish, rubbish.’ You know ‘I didn’t do anything right. That was horrendous.’ And then pulling from that, that rarely is an interview or something they’ve done completely rubbish. There’s always something good to take from it, whether it was only the time management or something like that. You know there’s always something to pull from it. You know the positive out of every situation.	Facilitating a balanced understanding of strengths and weaknesses <i>Managing student negativity</i>

*The full table contained >30 000 words of quotes with examples from every interview.

†Italics indicate additional codes developed on closer examination of text, linked to the core concept of ‘supervisory control’.

Table 5. Coding scheme from a study exploring the core meaning of effective assessment from the perspective of dietitians supervising students on pre-registration practice placements

1. Supervisory time management	2. Supervisory team management	3. Governance of summative assessment (showing nine of seventeen codes)	4. Facilitation of competence development (showing eight of twenty codes)	5. Facilitation of evidence generation (showing three of eight codes)
1.1 Prioritising supervisory time	2.1 Supervisory supervision	3.1 Close supervision	4.1 Asking powerful questions:	5.1 Ring fencing time for:
1.2 Sharing caseload	2.2 Mentoring inexperienced supervisors	3.2 Managing risks of indirect supervision	4.1.1 Consequence questions	5.1.1 Orientation
	2.3 Learning as a team	3.3 Corroboration:	4.1.2 Specific contextual questions	5.1.2 Evidence respite
	2.4 Setting supervision rules	3.3.1 With documentation	4.2 Ring fencing time for:	5.2 Developing manageable assessment criteria
		3.3.2 With patients	4.2.1 In depth discussion	5.3 Facilitating opportunities for evidence generation
		3.3.3 With other professionals	4.2.2 Reflective self-assessment	
		3.4 Giving attention to suitability as well as ability	4.3 Giving students contextually relevant reflective cue questions	
		3.5 Giving attention to rationale as well as behaviour	4.4 Increased student self-awareness	
		3.6 Transparency	4.5 Students having a realistic understanding of how they are perceived by supervisors	
		3.7 Increased supervisory confidence in assessment decisions	4.6 Student reassurance	
		3.8 Protection of patient safety	4.7 Student realism	
		3.9 Maintaining an overview of student progress	4.8 Managing student negativity	

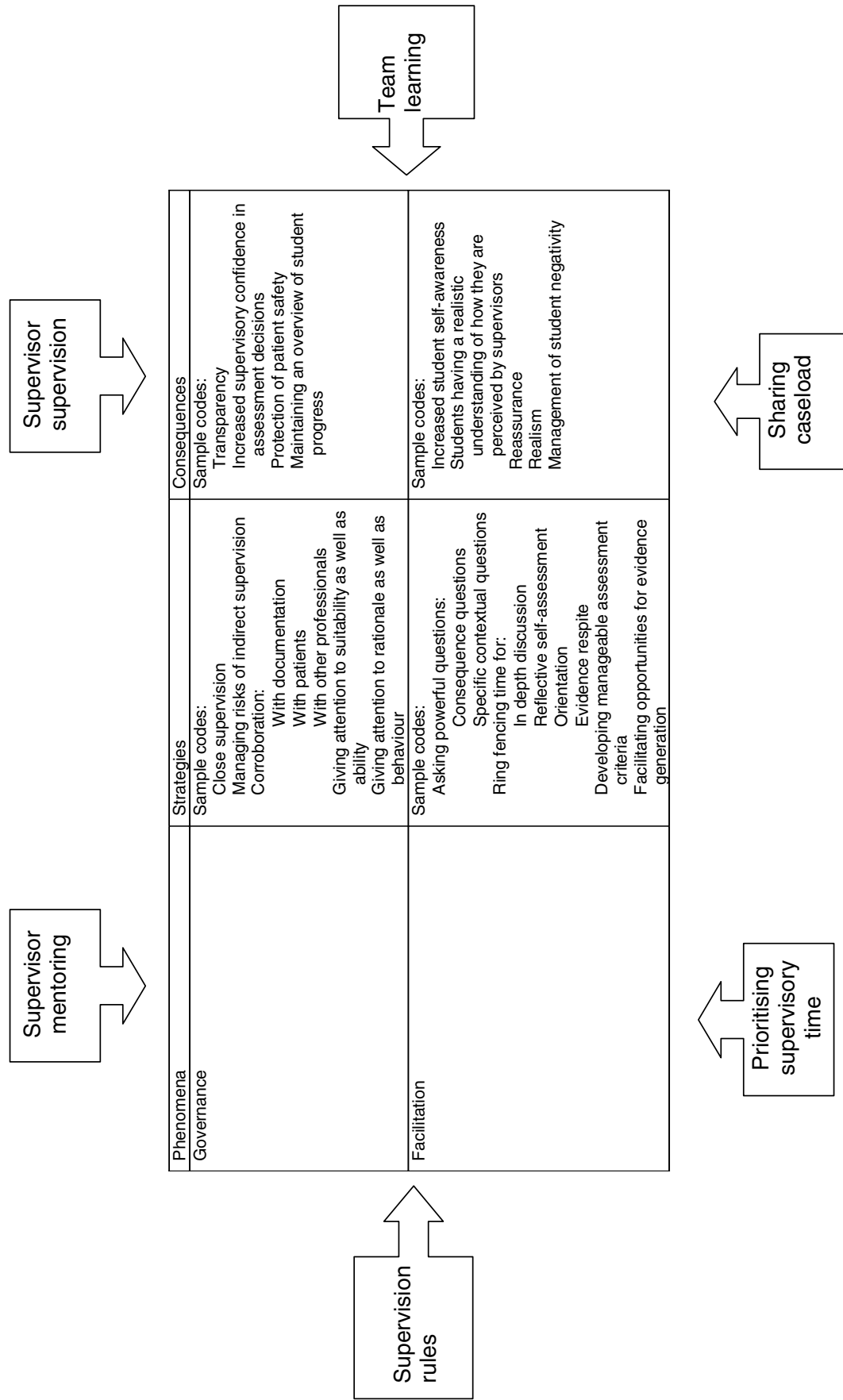


Fig. 1. Model of effective practice placement assessment as perceived by dietetic supervisors. (Please note only sample codes are shown, the full model was more detailed.)

long table and reviewed with the aim of identifying one broad over-arching theme. Themes from a selection of the clusters found in the author's study are shown in Table 3. As with the case-study approach, asking questions about the themes can help illuminate an over-arching theme. In the example given in Table 3 asking questions about why the supervisors acted as they described highlighted a sense that supervisors were driving the processes whereby students developed and demonstrated their competence. The theme that connected the clusters together seemed to be 'supervisory control.'

Once this over-arching theme has been identified the researcher needs to return to each transcript and cut out every example of the theme either manually or using the cut and paste function on a computer. This process is time-consuming but ensures that the fullest possible body of relevant data is available for closer analysis. Each example of text from the raw data should be placed in a table, linking it to the original interview and line number. Each extract can then be examined and re-coded in more detail, new codes and relevant codes from the previous analysis being typed into a blank column on the right-hand side. A few examples from the study exploring effective assessment are shown in Table 4.

The resultant codes should then be cut out and examined to see if they can be linked together to create a list of super-ordinate themes and sub-themes, as with the case-study approach. Part of the coding scheme from the author's study is shown in Table 5.

The next step is to explore connections within and between these conceptual groups in order to begin to generate an explanation. Smith *et al.* (1999) have suggested that this process can be facilitated by borrowing techniques from another qualitative research framework, known as grounded theory (Strauss & Corbin, 1998). This approach encourages researchers to link structure with process by focusing on themes that represent underlying conditions, key phenomena, key actions and interactions and their consequences. Memos and diagrams can be used to explore the relationships between themes in this way. Examination of each diagram and memo should enable the researcher to develop an explanatory narrative or diagrammatic model. Memos from the author's assessment study have illuminated the importance of supervisory self-management as an underpinning condition, which enabled supervisors to implement strategies that ensured assessment governance and facilitation. These strategies had knock-on effects relating to patient safety as well as both student and supervisor confidence in the system and themselves as assesses and assessors respectively. Examination of these links has enabled the researcher to develop the explanatory model and a narrative explanation of the findings. Space precludes inclusion of the full model here, but Fig. 1 shows the basic structure and a few examples of the codes linked to the different elements of the model. Once again, links with the extant literature can either be woven into the account or explored in a separate section.

Conclusion

As with many practical skills qualitative analysis is best learned from experience, but it is hoped that the explanation given in the present paper will inspire practitioners in particular to make a start with qualitative data analysis. IPA is just one approach, and readers are encouraged to compare it with Krueger's techniques for analysing data from focus groups (see Rabiee, 2004) and other qualitative data analysis frameworks.

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