CHAPTER 7

Negotiating explanations: a qualitative analysis of doctor-patient communication in a general practice clinic for patients with medically unexplained physical symptoms

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Submitted
ABSTRACT

Background
Patients with persistent medically unexplained physical symptoms (MUPS) seek explanations for their symptoms, but often find general practitioners (GPs) unable to deliver these. Different methods of explaining MUPS to patients have been proposed for use by GPs. Little is known about how doctor-patient communication evolves around these explanations.

Objective
We aimed to examine the dialogue between GPs and MUPS patients related to explanations for symptoms and categorised dialogue types and dialogue outcomes.

Methods
We analysed transcripts of 112 audio-recorded consultations (39 patients, 5 GPs) from two studies of the Symptoms Clinic Intervention, a consultation intervention for patients with MUPS in primary care. We used constant comparative analysis to code and classify dialogue types and outcomes in relation to the explanations.

Results
We extracted 115 explanation sequences. We identified four dialogue types, which differed in the extent to which the GP and/or patient controlled the dialogue. We categorised eight outcomes of the explanation sequences, ranging from acceptance to rejection by the patient. The commonest outcome was holding (in which the conversation was suspended in an unresolved state) followed by acceptance. Few explanations were directly rejected. Explanations that were negotiated or co-created by patient and GP were most likely to be accepted.

Conclusion
We developed a classification of dialogue types and outcomes in relation to explanations offered by GPs for MUPS patients. While it requires further validation, it provides a framework of dialogue types and outcomes, which can be used for teaching, evaluation of practice, and research.
Patients with persistent physical symptoms may experience limitations due to their symptoms, have an impaired quality of life and incur substantial health care costs (1,2). They seek an explanation for their symptoms (3,4), but in the absence of disease they often find doctors unwilling or unable to provide comprehensible explanations (5). When explanations for medically unexplained physical symptoms (MUPS) are provided, they often follow a psychosocial model of causality, for example in early versions of the reattribution approach where symptoms are taken to represent indicators of psychological distress (6). Such explanations are not fully compatible with current models of symptom generation or persistence (7,8) and are commonly rejected by patients (9,10). Rational explanations have recently been proposed, which attempt to make sense of symptoms in a way that is plausible to patients and doctors, blame free, leads to therapeutic action, addresses causation, and ideally is co-created (11).

Relatively few studies have examined how explanations for MUPS are delivered. Burbaum et al, studying reattribution in extended consultations, concluded that patients often interpret psychosocial attributions of the therapist as threats to their self-identity (9). Peters et al, studying reattribution in routine primary care consultations, identified several barriers, such as patients’ unwillingness to discuss (as opposed to acknowledge) the emotional aspects of their problems (10). Furthermore, Aiarzaguena et al examined how GPs presented an explanation in terms of a hormonal imbalance as a means to initiate a discussion on psychosocial aspects, as well as patients’ responses to these explanations (12). Patient responses were classified according to the amount of work patients carried out to verbalize a response. One of their main findings was that all responses were either wait-and-see or positive and that resistance was rare. They concluded that symptom explanations paved the way for a psychosocial exploration.

The Symptoms Clinic Intervention (SCI) was developed as a consultation-based intervention for patients with persistent MUPS (13), which emphasizes the role of explanations in making sense of symptoms, thus moving forward to the therapeutic phase. The SCI is designed for patients with moderately severe symptoms and comprises a structured set of four consultations by a trained GP. While substantially longer than conventional consultations, the SCI has a shorter duration and is less psychologically oriented than cognitive behavioural therapy. It seeks to provide patients with:

- Recognition that their symptoms are legitimate and understood,
- Explanation of symptoms in terms of biological and psychological processes,
- Actions to manage or control symptoms and
- Learning about what they find effective (14).

The SCI was developed and preliminary tested in two studies (13,14) in which all consultations were audio-recorded and transcribed for analysis. To examine how
symptom explanations were negotiated between GPs and patients with MUPS, we carried out
detailed analysis of the dialogue structure of symptom explanations.

METHODS

Study Design
We conducted a qualitative study using audio-recorded consultations from two earlier studies of the
SCI (Multiple Symptoms Studies One and Two). Detailed information is described elsewhere (13,14).
Here we provide a brief summary.

Multiple Symptoms Study 1 (MSS1)
This was a pilot randomised controlled trial (RCT) of the SCI (13). It was carried out by the main
developer of the intervention among patients with moderate MUPS. The pilot was conducted in
Edinburgh, Scotland between August 2009 and May 2010. Patients (n=32) were systematically
identified and randomised to attend the intervention group (Symptom Clinic) or to usual care.
Consultation recordings were available from 16 patients from the intervention group who attended
one to four SCI consultations. From this study we retrieved 43 consultations.

Multiple Symptoms Study 2 (MSS2)
This was an observational non-randomised study (14) in which four GPs who had received two days
of structured training on the SCI delivered the intervention to five or six patients in their own
practice who met the entry criteria used in the first study. The study took place between August
2014 and June 2015. From MSS2 we retrieved 69 consultations held with 23 patients attending for
one to four SCI consultations.

Participating patients
All participating patients were adults (age ≥18) with inclusion criteria designed to represent MUPS of
moderate intensity. Inclusion criteria were 1) at least two referrals to specialists in the preceding
three years, 2) presence of at least one functional syndrome/symptom code in their medical records,
3) current moderate multiple physical symptoms, defined as a score ≥10 on the Patient Health
Questionnaire-15 (PHQ15) (15), and 4) GP’s judgement that symptoms were unlikely to be explained
by an underlying disease. Exclusion criteria were (a) symptoms of such severity that individuals were
not able to leave the house independently and/or (b) active involvement in a programme of
rehabilitation or psychotherapy.
Explanations

Explanations for symptoms are central to the SCI and seek to make sense of symptoms (11) in ways which emphasise their “bodily nature and cultural meaning” to patients (16). GPs in the SCI constructed, provided and negotiated explanations, which were built around existing models and which tried to avoid psychosocial causality (7,8). A detailed taxonomy of the explanations themselves has been completed separately (Burton, personal communication) and is not considered further here.

Method of analysis

All audio-recorded consultations were anonymously transcribed verbatim and entered into the qualitative software package Atlas.ti, Version 7. First, after reading all transcripts, two researchers (MB, DH) independently extracted all sequences in which symptom explanations were given from each consultation. We defined the beginning of an explanation sequence as the point where the GP started to give an explanation. We defined the end of an explanation sequence when the dialogue about that explanation reached a conclusion (agreement, disagreement or something less clear-cut) or terminated for another reason (e.g. change of topic). Contradictions between the researchers were discussed with a third researcher (CB). We restricted analysis of explanation sequences to those that included speech by both the GP and patient and comprised a minimum of four utterances (i.e. statements separated by silence or a change of speaker). When consultations contained several explanation sequences each sequence was extracted and analysed separately.

Second, two researchers (MB, DH) independently read the explanation sequences in detail while developing line-by-line codes, with a focus on the dialogue structure and the content of the explanation sequences. We used a constant comparative approach to identify common thematic features within the codes of the explanation sequences. Following this we identified categories for the explanations at two levels: first a categorisation of the way in which the GP and patient discuss an explanation, which we refer to as dialogue type, and second a categorisation of the outcome of each explanation sequence.

In classifying the explanation sequences into dialogue types, we considered speech as an active dialogue between participants rather than just a means of conveying information from the GP to the patient. Thus, we focused less on the explanation itself and more on the process and outcomes of the interaction around the explanation, and the negotiation of meaning that this entailed. For this, we drew on the idea from Bhaktin of dialogic space (17), meaning the space in which communication around possible explanations occurs. We used this idea of space in two ways. First we considered occupancy or ownership of the dialogic space by patient or GP; this was represented by both the
time spent speaking and the apparent control over the content which the patient and doctor exhibited. Second, within this space, we considered the dialogue as either moving towards a common, shared account (“centripetal”) or away from this, towards multiplicity of accounts and disagreement (“centrifugal”) (17). We used these concepts of ownership of the dialogic space and the centripetal or centrifugal direction of the dialogue to differentiate explanation types. We applied them to each whole explanation sequence rather than to individual parts; where sequences included subsections suggestive of different types we selected the most prominent one.

We conducted the analysis iteratively with meetings to discuss coding and evolving classifications between all members of the research team actively involved in the analysis. Once the classification had been developed, two researchers (MB, CB) re-coded all explanation sequences separately, with differences in coding resolved by discussion with a third coder (LM).

**Ethical approval**

All participating GPs and patients provided written informed consent. MSS1 was approved by the Lothian Research Ethics Committee (reference 09/S1102/34) and MSS2 by the North of Scotland Research Ethics Committee (reference 14/NS/1014). Both studies were performed in accordance with the ethical standards of the Declaration of Helsinki.

**RESULTS**

**Patient characteristics and elements of analysis**

The patients participating in MSS1 (n=16) had a mean age of 50 years. Nine were female. The mean PHQ-15 score was 14. The patients participating in MSS2 (n=23) had a mean age of 51 years. Twenty-one were female. The mean PHQ-15 score was 15. We extracted 115 explanation sequences suitable for analysis (61 from MSS1 and 54 from MSS2).

**Dialogue type**

Our final categorisation included four dialogue types: lecture, storytelling, contest, and deliberation. These are described below, with reference to their relationships to dialogic space. Examples are provided in Table 1.

Lecture: The lecture was the simplest dialogue type; indeed it was almost a monologue, as the GP talked in blocks of speech with minimal input from the patient. The GP occupied the majority of the dialogic space in terms of amount of speech and number of words, but also controlled the content.
The GP made little effort to customise the explanation to the patient. There was too little interaction to describe the direction of dialogue as centripetal or centrifugal.

Storytelling: Storytelling was, like the lecture, primarily GP-led. However, compared to the lecture it proceeded in a more interactive way and was more often customised to the patient. The interaction and customisation included (a) inclusion of personally relevant details from the patient’s account in the explanation (b) checking back by the GP, thereby ensuring that the patient followed the explanation and (c) more informal language than used in the lecture dialogue type, with popular and sometimes slang terms. While the GP tended to keep control of the direction of the dialogic space, and there was a centripetal drive towards the GP’s own interpretation, the patient’s responses were more active and the patient appeared to be a willing and interested participant in the dialogic space.

Contest: Contest, on the other hand, represented a struggle for control of the dialogic space. In contrast to the lecture, there was dialogue but it was largely centrifugal. GP and patient both contributed ideas and strove to occupy the dialogic space, putting forward ideas that mattered to them but often were incompatible with the ideas of their interlocutor. For instance the doctor would persevere with the explanation while the patient responded with statements, which emphasised (or protected) their moral status as a legitimate patient (9). Utterances included explicit counter statements and blocking techniques.

Deliberation: Deliberation (18,19) involved greater engagement between GP and patient with both contributing ideas. There was evidence of centripetal forces within the dialogue as both parties worked to find a mutually acceptable explanation.

Table 1 Examples of dialogue types and final outcomes

<table>
<thead>
<tr>
<th>Sequence 1: dialogue type “lecture” and outcome “passive receipt”</th>
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<tbody>
<tr>
<td><strong>GP</strong></td>
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<tr>
<td><strong>PT</strong></td>
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</table>
GP: It’s almost like you tighten up, you tighten up here and tighten up there, and you tighten up at the back of the neck. And that, kind of, secondary pain can sometimes just get things running, that you know, you need, not an awful lot of trigger because those sinuses are sensitive enough without being messed around with. But your brain, kind of, doesn’t like tampering with those, and the reaction is just then progressively other stuff to lock down.

I always say, you know, nature does this, kind of, tortoise thing, my head’s sore, pull it in, scrunch up your neck, tighten everything up there, start this, kind of, secondary so that you end up with what should have been a pain that went being a pain that starts something and then is self-perpetuating. And again, one of the simple ways of looking at managing that, of this appointment is to maybe look at ways of, kind of, separating the trigger from the cascade of things that happen downstream, and that might be worth, kind of, concentrating on.

Again it’s about dealing with the symptoms rather than the sinuses trigger, you know, if you say that you kind of accept that you’re going to have trouble with those from time to time, but if you can stop that spilling over into everything else, that’s containment and adaptation and stuff, yes?

PT: Yes.

GP: So that’s obviously reassuring. So what I’m thinking is that, you know, this represents a sort of chronic pain syndrome that you’re suffering from.

PT: Okay.

GP: So normally we experience pain when we damage our body, when we injure our body and what happens is that if you imagine you injured your knee, the pains in the knee would send messages initially up to the spinal column and then on up to the brain to say to the brain that the knee has been injured, but what can happen in some people is that the signals from the nerves become amplified, they become louder if you like in the brain, so that things that shouldn’t be uncomfortable become painful.

PT: Okay.

GP: And there are some theories as to why this happens. We think that some people have a genetic likelihood to experience this chronic pain, sometimes it follows some sort of trauma or physical insult and you mentioned that you thought a lot of this had started after you had your bowel operation which was obviously very traumatic the way it happened and the way it affected you for a number of years, so that may have been...

PT: A trigger.

GP: ...a trigger for this. The thought is that it’s due to chemical changes in the brain and as a result of those chemical changes, as I mentioned, the messages from the pain nerves are turned up, the volume is...
much louder than it should be, and there are a number of things that can help to turn it back down again. So one of the things that can help is Amitriptyline and obviously you're on that at night and that's one of the medications that can help make these chemical changes in the brain to try and turn down the volume and try and help with your pain. Normal painkillers like Paracetamol and Ibuprofen, things like that, they often are not very helpful in chronic pain. They're helpful in acute pain, you know, but if you have this pain that's nagging and there day after day, they sometimes don't help with that sort of pain.

PT Right.

GP What are your thoughts about the suggestion that this may be a chronic pain syndrome?

PT It's a possibility. I mean, the way I look at it is, I mean, my body at the time of the... oh my brain... the what d'you call it, my intestines, I suppose my body went through a trauma and so anything's possible. I'm willing to try anything just to start feeling normal again and start getting my memory back.

MSS2 Explanation 615.2.1

Sequence 3: dialogue type “contest” and outcome “self-affirmation”

GP I mean, again if you are a bit tense or you are feeling a little bit anxious or this false alarm system's kicked in, then you might be holding yourself a bit more tense and that might be contributing to the problems with the shoulder.

PT Yeah, cause my daughter was saying this morning, she said this shoulder blade was sticking way out and I can't get it to go down, it just won't!

GP No, and you've seen the physio haven't you?

PT Yeah, I mean, I haven't been visiting her for quite a while and I did get exercises, it's just when I get feeling so rotten it's very difficult to exercise, to make myself exercise when I feel oh [laugh]!

GP Yes, and what we know that these chemicals do in the brain, along with having an exaggerated response to these signals from the body, is that they can also contribute to fatigue and to memory problems and to low mood, but then if you're in pain every day your mood's likely to be low anyway.

PT Yeah, and I wouldn't necessarily say I am really low, when I feel sick and horrible I think 'oh god' you know, that does bring me down because you think 'oh I'm just not feeling well', I want to feel well and is it just... is there not an end, you know, I just want to think I'll come out this, you know, or is it just wear and tear and it's set everything off and I over respond to it, I don't know?

GP I mean, if it is wear and tear then there's a very good chance that it will settle down because what we think now is rather than wear and tear, is wear and repair. So if people do damage a joint what happens is that when new bone is laid down, it's laid down in a slightly unusual way, it can cause some pain and discomfort, but then when the joint repairs itself and that new bone is reabsorbed, things can settle down. So sometimes people can have a flare up of pain in a joint for two or three months maybe and then it can
settle down again.

PT  Okay, cause my fingers have been a bit numb, just those two. But I went out in the garden this morning cause I thought 'well I'm just not going to sit here and feel sorry for myself!'.

MSS2 Explanation 602.2.1

**Sequence 4: dialogue type “deliberation” and outcome “acceptance”**

GP  I'm not saying it's imagined, what I'm saying is that I think there is a physical reasons why you're feeling these aches and pains, that it's not imagined and that, you know, it's due to these chemicals in the brain that are making your brain more sensitive to messages it's receiving. So I'm not saying you're a hypochondriac or anything like that...

PT  I think it's because of my family and, you know, I'm always the... me and my other sister, we're the normal ones!

GP  Yeah but this can be normal, it's very common and I think it explains why you are sore in lots of different places and why you're getting some tummy symptoms and some nausea, you know, because your body is picking up the feedback in a more sensitive way.

PT  Yeah. I've often had the nausea before any pain because it was the nausea that started before, so is that just still the same thing?

GP  I think it probably is the same thing that, you know, if we have acid in the tummy sometimes you're not aware of it, but if you have this amplification, this increased volume in your brain of the messages, then you might be picking up changes in the stomach more acutely than somebody else.

PT  Yeah, okay. Yeah that makes sense [laugh].

MSS2 Explanation 602.3.1

The most commonly occurring dialogue types were storytelling, which occurred 46 times (40%) and deliberation, which occurred 44 times (38%). Contests occurred 18 times (16%) and lectures were least common with 7 occurrences (6%). The proportion of different dialogue types was similar between the two studies with only contests showing a difference of 5% or more (18% in the first; 13% in the second).

**Dialogue outcomes**

Our final classification of explanation outcomes took a branching structure. We defined outcomes as the state of the dialogue at the end of the explanation sequence. Some explanation sequences appeared complete (the dialogue had reached an obvious end, and moved on to a new topic) and had a clear conclusion (such as agreement or rejection). Others also appeared complete, but had no clear conclusion (such as one party electing to “hold” an idea for now while moving the conversation
Finally some sequences appeared incomplete (and the topic of conversation shifted without completing the current explanation sequence). The classification included eight outcomes, which are described below and shown graphically in Figure 1. Examples of some of the outcomes are also included in Table 1.

**Figure 1. Classification of dialogue outcomes**

![Diagram of dialogue outcomes](image)

**Explanation sequence complete, definite conclusion**

There were two outcome categories representing a definite conclusion: acceptance and rejection.

We categorised an explanatory sequence as ending with acceptance if the patient either (a) explicitly acknowledged the explanation as helpful or (b) expressed the possibility of adopting the ideas it contained (e.g. hypothetically describing future actions, which would be conditional on the explanation being true). We categorised an explanatory sequence as ending with rejection if the patient directly and effectively countered the GP’s presented explanation or assertion either by (a) explicit disagreement (e.g. “it is not like that”) or (b) providing an unarguable counterfactual (e.g. “this is not what happened, actually X happened”).

**Explanation sequence complete, no definite conclusion**
We identified three outcome categories for complete sequences with no definite conclusion: self-affirmation, mis-affirmation and holding. In self-affirmation, the patient responded to the explanation sequence with a positively framed statement, but this statement sidestepped the explanation and thus patients maintained their self-integrity (9). In mis-affirmation the patient also concluded the sequence in a positive, affirming way, but with a statement unrelated to the presented explanation. Finally holding represented an outcome in which the dialogue was suspended in an unresolved state. This implied the possibility of accepting the explanation in the future, but that was not yet settled.

**Explanation sequence not complete, with engagement**

We identified two final responses to explanation sequences, which suggested that, while GP and patient were engaged in the dialogue, the sequence was terminated before a conclusion had been reached. In jumping either patient or GP moved abruptly to a new and unrelated topic, effectively restarting the dialogue. In cueing, the patient or GP moved abruptly to a new topic but which was relevant and related to the presented explanation.

**Explanation sequence without engagement**

Some explanation sequences involved little patient participation. The patient mostly (or even only) used short affirmations or continuators during the dialogue (e.g. “right”, “hmm”, “okay”).

The most commonly occurring outcomes were holding with 46 instances (40%); accepting with 27 instances (23%); and self-affirmation with 19 (17%) instances. Mis-affirmation occurred only once (<1%). The associations between the dialogue and conclusion types are summarized in table 1. Both lecture and storytelling had broadly similar patterns of outcomes, with holding being the most common (3/7 and 22/46 respectively). Deliberation types were more likely than others to end in acceptance (17/44). Frequencies are summarized in table 2.
Table 2 Association of dialogue type and outcome

<table>
<thead>
<tr>
<th>Dialogue type</th>
<th>Lecture</th>
<th>Storytelling</th>
<th>Contest</th>
<th>Deliberation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome</strong></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Accept</td>
<td>1</td>
<td>14</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>Cueing</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Hold</td>
<td>3</td>
<td>43</td>
<td>22</td>
<td>48</td>
</tr>
<tr>
<td>Jump</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Mis-affirmation</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Passive</td>
<td>3</td>
<td>43</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Receipt</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Self-affirmation</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7</td>
<td>100</td>
<td>46</td>
<td>100</td>
</tr>
</tbody>
</table>

DISCUSSION

**Main findings**
This study provides a new way of describing and classifying features of the dialogue focussing on the explanations provided by GPs to patients with persistent MUPS in an enhanced care setting. The classification includes a range of different dialogue types and outcomes that describes all episodes of explanation. While most dialogues were GP-led, deliberation, with its potential for co-creation of interpretation, occurred within 40% of explanations. Patients explicitly accepted approximately one quarter of explanations and rejected or blocked a similar proportion.

**Strengths and limitations**
This study has several methodological strengths. We systematically analysed a large sample of extracted sequences centring on explanations from structured, long, consultations with patients with persistent MUPS who were systematically identified. The analysis drew on iterative and reliable coding. Dual independent coding, after agreement of the classification, reduced the risk of bias. However, we should mention a number of limitations: the nature of the intervention meant that we had multiple explanations but that these came from a small number of GPs discussed with a relatively small number of patients. Another limitation of our analysis is that it takes place at the
level of explanation sequences rather than at the level of the whole consultation or even episodes of care comprising several consultations. However, by focusing on clearly defined explanation sequences we were able to examine key elements of the consultation in detail.

Comparison with the literature
A recent Cochrane review raised the possibility that more moderate intensive interventions might have added value in the management of MUPS (20) and the SCI was developed as such. It distinguishes itself from other moderately intensive interventions by its central element of the symptom explanations. We are aware of only one study that used symptom explanations as a central intervention for MUPS management (12). However, this study had a smaller sample of 11 patients, had a different methodological approach to analyse patients’ responses to symptom explanations and limited the explanations to emotional distress and stress hormones, while the SCI does not require a link with emotional distress.

Burbaum et al focused on responses to reattribution and found three recurring patterns where patients subtly refuted, dropped or undermined the attribution in their reply (9). Even though they used a different sample of patients and a different setting and methodology, we found some similar responses, namely self-affirmation, mis-affirmation and rejection, although these occurred relatively infrequently. Salmon et al found that some consultations involve a certain degree of contest between the patient’s authority resting on their knowledge of their own symptoms and the GP’s authority based on their professional knowledge (21). We also observed this contest several times in our analysis, where we found that the GP and the patient were occupying a separate dialogic space and did not find common ground.

Implications for further research
We have developed a classification of dialogue in response to explanations, which can be used in further studies. Further research and validation is needed to examine this classification of explanation dialogue types and outcomes in larger datasets beyond the SCI and in shorter consultations.

The relatively high rates of accepting and holding responses is encouraging and indicates that the explanations used in the SCI seem to be largely acceptable to patients in an area of practice where patients commonly feel that they are neither understood nor supported (3,4) and where other modes of explanation frequently fail (5, 9,10). Future studies should examine the associations between the elements of explanation dialogue described here and subsequent outcomes of treatment.
CONCLUSION

We developed a classification of dialogue types and outcomes in relation to explanations MUPS. While it requires validation in a larger observational study, it provides a framework of dialogue types and patient responses, which can be used for teaching, evaluation of practice, and research.

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REFERENCES


