

# Acupuncture as a Complex Intervention: A Holistic Model

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## ABSTRACT

**Objectives:** Our understanding of acupuncture and Chinese medicine is limited by a lack of inquiry into the dynamics of the process. We used a longitudinal research design to investigate how the experience, and the effects, of a course of acupuncture evolved over time.

**Design and outcome measures:** This was a longitudinal qualitative study, using a constant comparative method, informed by grounded theory. Each person was interviewed three times over 6 months. Semistructured interviews explored people's experiences of illness and treatment. Across-case and within-case analysis resulted in themes and individual vignettes.

**Subjects and settings:** Eight (8) professional acupuncturists in seven different settings informed their patients about the study. We interviewed a consecutive sample of 23 people with chronic illness, who were having acupuncture for the first time.

**Results:** People described their experience of acupuncture in terms of the acupuncturist's diagnostic and needling skills; the therapeutic relationship; and a new understanding of the body and self as a whole being. All three of these components were imbued with holistic ideology. Treatment effects were perceived as changes in symptoms, changes in energy, and changes in personal and social identity. The vignettes showed the complexity and the individuality of the experience of acupuncture treatment. The process and outcome components were distinct but not divisible, because they were linked by complex connections. The paper depicts these results as a diagrammatic model that illustrates the components and their interconnections and the cyclical reinforcement, both positive and negative, that can occur over time.

**Conclusions:** The holistic model of acupuncture treatment, in which "the whole being greater than the sum of the parts," has implications for service provision and for research trial design. Research trials that evaluate the needling technique, isolated from other aspects of process, will interfere with treatment outcomes. The model requires testing in different service and research settings.

## INTRODUCTION

Our understanding of the patient's perspective of acupuncture treatment comes from a growing number of cross-sectional surveys and a few qualitative studies. From this we can describe the characteristics of people who seek acupuncture, list a number of motivations, and begin to categorise the perceived benefits. However our understanding is limited by a lack of inquiry into the dynamics of the process. Without longitudinal research it is not possible to understand

how the experience and the effects of a course of acupuncture evolve over time. This is especially important, as most people seek acupuncture treatment within the long and changing timescale of chronic illness. A better understanding of the dynamic and complex experience of acupuncture treatment will inform both research design and service provision.

Acupuncture is one of the most popular therapies and in Western countries between 0.5 and 2% of the population have consulted an acupuncturist in the last year (Harris and

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Rees, 2000). Most people who opt for acupuncture treatment have chronic health problems for which they have already sought treatment from a number of biomedical practitioners (Chapman et al., 2001; Kelner and Wellman, 1997; Vincent and Furnham, 1996). In this paper, we use the term biomedicine to denote Western scientific medicine or allopathic medicine. The factors that motivate people in the United Kingdom to use complementary medicine and acupuncture have been investigated by a number of quantitative (Chandola et al., 1999; Furnham and Forey, 1994; Richardson 1995; Vincent and Furnham 1997; Hills and Welford, 1998) and qualitative studies (Luff and Thomas, 2000; Murray and Shepherd, 1993; Paterson and Britten, 1999; Pawluch et al, 2000; Sharma, 1992). Motivations to use complementary medicine include a failure of biomedicine, National Health Service (NHS) deficiencies in care, the overtechnological nature of biomedicine, the desire to reduce or avoid medication, and the demand for more patient-centered and holistic health care. There is much less information published about the experience of acupuncture treatment from the user's perspective but two studies on acupuncture and Chinese medicine, one from England (Gould and MacPherson, 2001) and one from the USA (Cassidy, 1998) found that people valued aspects of the process of care and safety issues along with more symptomatic benefits. The effects of acupuncture included physical, emotional, spiritual, and behavioral changes, and the focus may move over time toward maintaining health and well-being. In addition respondents reported enjoying a close relationship with their practitioners and the opportunity that acupuncture gave them to reduce or avoid medication, learn new things, and feel more able to guide their own lives and care for themselves. The researchers concluded that these benefits could be equated with valuing the benefits of holistic care.

The variety of short- and long-term treatment aims and outcomes described by this research suggests that Chinese medicine acupuncture can best be investigated as a complex intervention. There is a growing recognition in the health services research community that, at least for complex interventions, preliminary descriptive and theoretical work is necessary before designing and performing full-scale efficacy and effectiveness trials (Campbell et al, 2000). We sought to explore the patients' perspectives of treatment with acupuncture, practiced as part of Chinese medicine in the United Kingdom and to delineate the components of the intervention and their relationships to each other. We used repeated indepth interviews in a sample of people who had chronic illness and were using acupuncture for the first time. Details of the perceived treatment effects have been published elsewhere (Paterson and Britten, 2003). This paper reports on the patients' perceptions of the process of their treatment and focuses on the dynamic interconnections between the process and outcome components and how these develop over time. It depicts these patients' perspectives of their treatment experience as a diagrammatic model.

## METHOD

Eight (8) professional (nonbiomedical) acupuncturists were recruited to inform people about the study in their workplaces. They were all registered with the British Acupuncture Council and practiced acupuncture as part of the Chinese system of medicine. They worked in five different private clinics and at two NHS clinics. Thirty-five patients (35) responded to the invitation to take part and 23 of these met the inclusion criteria and were interviewed. Three inclusion criteria were adopted: a health problem of at least 6 months' duration; no previous acupuncture; and being available for interview within 5 weeks of starting their acupuncture. Each person was interviewed three times over 6 months (except the last 5 people, who were interviewed twice). The interviews were semistructured and based on an interview guide that included open questions about the persons' illnesses and treatment experiences, how the patients came to start acupuncture, and their experience of the acupuncture sessions and the effects of treatment. The interviews were between 50 and 90 minutes long and were audiotaped and transcribed.

Data collection and analysis, based on the grounded theory method (Strauss, 1987), were carried out together, each informing the other. Reflexive and analytic memos were written throughout the project and negative case analysis was used to test emergent analytical ideas. The methods developed in this study built on those used in a previous study (Paterson and Britten, 2000) and we used Atlas-ti software (Scientific Software Development, Berlin, Germany). The first level of coding was a descriptive one and the core category was identified as "the effects of acupuncture." Data in the core category were then coded in more detail using conceptual and theoretical frameworks. The data was summarized both across cases, as a summary of each descriptive category, and within-cases, as individual vignettes (Ely et al., 1991). A vignette is a systematic summary, using a temporal framework, of all the data in the three interviews from each person. This analysis uses the searching tool of Atlas-ti software to ensure that all the data are encompassed by the summary and the vignettes are kept as close as possible to the individual styles by writing the vignettes in the first person, using the interviewee's own words and emphasis as much as possible. Each vignette draws on between 15,000 and 30,000 words of original transcript and results in a summary between 1500 and 3000 words long. Immediately after writing each vignette Paterson made a one-page summary of it in her own words. The data in boxes 1-3 are constructed from these summaries. Finally, a thematic analysis drew on all these sources of data and analysis. A summary of the preliminary analysis was sent to the acupuncturists and 6 of them were interviewed about the results. These interviews were done to increase the rigor of the analysis by including another perspective and checking emerging hypotheses. The interviews were transcribed and

### Box 1 Part of the Summary of June's Vignette: "An Oasis in My Life"

June was 53 years old at the time she was treated, and worked full-time as a cook in a local school. She consulted the acupuncturist Ginny.

*June's headaches, which she had suffered from most of her life, had become increasingly debilitating so that she had to take days off work and go to bed. She was feeling generally depressed and at "rock bottom" and work was a struggle. She had taken a variety of tablets over the years, which gave a degree of short-term relief, but she worried about their effect on her stomach.*

*Her first acupuncture session, lasting nearly 2 hours, was mostly taken up with Ginny finding out everything about June and this interest in all aspects of her everyday life continued to be a valued part of every session. June found that acupuncture was a "very deep sort of thing" that "connected up all your body bits" and that Ginny looked at her "as a whole person." The headaches quickly became less severe and faded away. During the treatment, June had an immediate feeling of relaxation, sometimes going to sleep, and came out with a feeling of well-being. Ginny also sorted out an acute back problem with one treatment. Over time, June felt better, with more energy, and coped better and felt positive again at work.*

*June was interested in what Ginny was doing and why and, over time, June understood more and became more self-aware, for example, about how the needles felt when they were in the right place and about the effect of diet. She made the suggested changes in her diet, cutting out coffee, orange juice, and bananas.*

*After 7 months of treatment, now reduced to every 6 weeks, June planned to continue with acupuncture because it was doing her good and keeping her headaches under control. Other less-severe problems, such as her menopausal symptoms, had come to the fore and were being treated. Acupuncture was a place to go to be well.*

#### Relating June's vignette to the model depicted in Figure 1

June's experience exemplifies all of the components and most of the connections within the model. The process of acupuncture treatment involved the *therapy* itself, a warm and trusting *therapeutic relationship* and a growing *understanding of Ginny's holistic perspective* and treatment. She described the effects of acupuncture as a dramatic *reduction in her headache symptom* and both *relaxation* and *gradually increased energy*. She gave examples of *increased self-confidence*, for example, at work and *increased self-responsibility*, for example, reducing her caffeine and continuing acupuncture to prevent further problems.

The increase in relaxation and energy was perceived to be a result of both the therapy itself and also a result of the reduction in her symptoms of violent sickness and headache. The treatment both boosted her self-confidence at work and was itself reinforced by coping better at work.

The reduction in symptoms was associated with the therapy itself and it reinforced her feelings of self-confidence through feeling in control of her symptoms, and increased her trust in the therapeutic relationship. This boost to the therapeutic relationship encouraged her to continue her treatment regularly and make lifestyle changes, thus forming a positive feedback loop to more symptom reduction.

subjected to a simple content analysis. All names and proper nouns were replaced by pseudonyms.

## RESULTS

We interviewed 18 women and 5 men, ranging from 26 to 83 years of age, with a total of 64 interviews. The interviewees had health problems of 1–40 years in duration (average was 11 years) including musculoskeletal problems, headaches, emotional problems, fatigue, psoriasis, asthma, subfertility, abdominal distension, and recurrent shingles. Most people had private acupuncture but 7 people received it free through the NHS. By the 6-month interview, participants had had between four to twenty treat-

ment sessions each and half of them were still receiving acupuncture.

### *Perceptions of the process*

People described their experience of acupuncture not only in terms of the acupuncturist's diagnostic and needling skills but also in terms of the therapeutic relationship and a new understanding of the body and self as a whole being. These three components of the process are shown on the left side of the model depicted in Figure 1.

*Diagnostic and needling skills.* The interviewees described the behavior of the acupuncturists within the treatment sessions in terms of the practitioners asking questions and listening; examining the subjects' pulses, tongue, and

### Box 2. Part of the Summary of Gwen's Vignette: "I just Want to Lead a Normal Life"

Gwen was 48 years old at the time of her treatment and she had acupuncture from Ralph in the National Health Service pain clinic. She was very disabled and had no income except her disability benefit.

*Gwen had severe pain in her back and neck, and required help from her 18-year-old son with nearly everything, including getting dressed. She was angry with herself for being dependent, for feeling tearful, and for not being strong. Her problems started years ago when she was a nurse and she injured her back, but the pain had become much worse in the last 2 years. She found it very difficult to talk to doctors, and explained that they do not inform her and do not believe or understand her, and that she does not think there is anything they can do. She took painkillers but worried about taking too many.*

*Gwen had found the nurses at the pain clinic supportive and she found her first acupuncture session interesting. She was supposed to have a session every 2 weeks but, in fact, had several long gaps in her treatment. The sessions themselves did not go well. They lasted for half an hour but only about 5 minutes of that time was spent with the acupuncturist and the rest of the time she sat by herself in a room. He was treating several people at a time and was very rushed. She did not understand the leaflet she was given about the acupuncture, found it difficult to talk, and when she did ask he did not say much. It was all very cold and clinical and uncomfortable. Sometimes she felt a draining or drawing sensation during and after the sessions and, to start with, she had some short-lived improvement in her legs and walking. However, when he started treating her neck she had a very bad reaction and from then on the pain in her neck and arms was worse. Over the 6-month period, she had eight treatments and her condition gradually worsened over that time. She adjusted her life and expectations a little and ended up increasing her strong painkillers. "I just want to lead a normal life," she said.*

#### Relating Gwen's vignette to the model depicted in Figure 1.

Gwen had no lasting benefit from the acupuncture and had deterioration in her symptoms that she attributed, at least temporarily, to the treatment. She had *no relationship* with the therapist, gained *no new understanding* or explanation for her symptoms, and experienced a *small draining of energy* and of optimism and *self-confidence*. The model, therefore, has relevance to her with respect to negative connections and feedback loops. She sought a therapeutic relationship and new explanations but did not find them and experienced no positive treatment effects. In addition, her story emphasized the importance of the context of the treatment, both in terms of the organization of the acupuncture treatment, and in terms of her own disability and paucity of other health care resources and support.

sometimes other parts of the body; the needling itself; and giving lifestyle advice.

Most of the first appointment was taken up with interviewees answering questions or having a "long chat" about

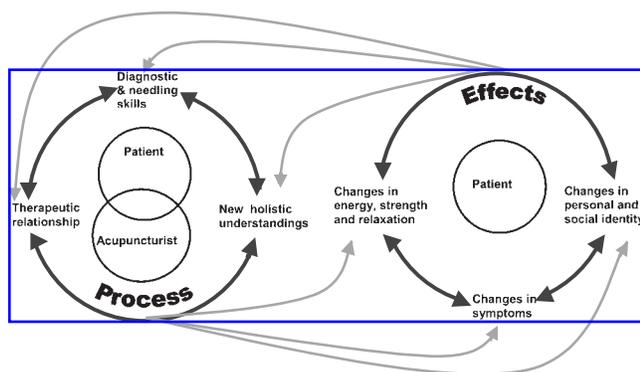


FIG. 1. Model of treatment by professional acupuncturist.

themselves. This included information about their whole lives and life courses, their current lifestyles, their emotions, and, sometimes, more, unexpected questions, such as what colors they liked best. In subsequent sessions, all interviewees described some initial inquiry about "how things were" and many people described more "social chat" as going on throughout the session. Several people remarked that the talking affected how the needling was carried out.

Following the initial talking, people described how the acupuncturists felt the pulses in the subjects' wrists, often examined their tongues, and sometimes took blood pressure and examined painful areas, such as the spine. Pulse taking was repeated during and after the needling and interviewees perceived it as giving information to guide both the initial needling and the choice of additional points and techniques. Several people noted that the acupuncturist seemed to "put everything together" or make "an analysis" of the talk and examination either before starting or during the needling treatment.

### Box 3. Summary of Sue's Vignette: A More Long-Term Solution

Sue was 40 years old at the time she was treated, worked as a housewife and mother, and had National Health Service treatment at her local clinic from the acupuncturist Mr. Long.

*Sue had suffered from rheumatoid arthritis for 16 years. Her knees were swollen and painful, which led to a restriction of most activities and poor sleep. She had episodes of stiffness in the neck, which caused severe headaches, and when these were bad she had to go to bed for several days. Physiotherapy helped the headaches a bit but they always recurred. Sue saw a rheumatologist regularly and took the drug penicillamine as well as steroids. She adjusted the dose of steroids herself but could never get below 5 mg because her arthritis would flare up. She was increasingly worried about the side-effects of drugs, especially long-term steroids.*

*When her doctor suggested acupuncture for her headaches, Sue was surprised, fearful, and skeptical, but she decided to give it a try. The first half-hour session was taken up with talk and examination. She was pleased that Mr. Long wanted to help the whole problem, not just the headaches, and his inquiries about her past and present personal circumstances and her feelings and emotions fitted with her own ideas about the causes of her arthritis. Sue found that subsequent sessions were relaxing and enjoyable, despite the insertion of needles. Following her first treatment, her neck felt much looser and she had no headaches in the following week nor has she had one since. By the next session, she had reduced her steroids and her knees had flared up, but Mr. Long's treatment was again helpful and she became keen to know more about acupuncture and have further treatments. Four (4) months later, Sue was having monthly treatments, and, after some "ups and downs," her knees were very much better, she was sleeping well, and she had reduced her steroid intake. Sue was delighted to have found a long-term treatment that she hoped could replace the "quick fix" of tablets. She was trying harder to change her diet and was more determined to help herself rather than relying on doctors.*

#### Relating Sue's vignette to the model depicted in Figure 1

The main effect of acupuncture for Sue was the *reduction in symptoms*. This allowed her to feel more *self-confident* about reducing her medication, and, when she was successful, in this she redoubled her efforts to attend to her diet and take *more responsibility* for her health. The reduction in disability had a direct effect on her *self-confidence* and happiness as well. The reduction in symptoms also allowed her to sleep better, and all these things made her feel *more energetic*. Her *relationship* with Mr. Long developed gradually; first, because of his interest in her as a whole person, especially her biography, and later as he reduced her pain and supported her to self-regulate her medication. This was never of prime importance to her, however, as she had other support and resources elsewhere. As her confidence in acupuncture developed, her *holistic understanding* was strengthened and deepened, and this increased her desire to replace biomedical treatments with alternative ones.

The insertion of acupuncture needles was anticipated with anxiety by several people but only a few people found it unpleasant. The site, number and type of needling varied both between interviewees and between sessions for each individual. Most people were asked to give feedback to the acupuncturist about the sensations that the needle gave them and many people experienced aching, tingling, or more dramatic shooting sensations from certain needles. People were amazed and impressed that some needles could not be felt at all while others produced strong sensations. On a few occasions, the treatment caused pain, which persisted for a few days or, in one case, exacerbated her pain for many months. Many people described with delight how a new acute problem, such as a bad back, a hemorrhoid, or high blood pressure, was treated successfully together their ongoing problems by inserting some extra needles.

Directive advice on lifestyle factors played a minor role

and some interviewees did not mention it at all. The initial talk usually included inquiry into lifestyle factors such as diet, exercise and sources of stress, and advice was sometimes given either then or later. Often, this was support and encouragement for healthy lifestyles, which were already being attempted, but sometimes more specific changes were suggested such as avoiding "damp" or cold foods and reducing caffeine. People were encouraged variously to rest and to make more time for themselves and to do gentle exercise or practice yoga, and some acupuncturists taught specific exercises for the problems in question. Medication was inquired about but rarely discussed in detail, unless it was a specific concern of the patient. Self-help techniques were sometimes offered, such as advice on using acupressure points. Also an audiotape on relaxation and visualisation techniques or a transcutaneous electrical nerve stimulation machine were loaned to the subjects.

These diagnostic and needling skills were seen as part of an ongoing process of analysis and treatment, which was based on, and responsive to, their individuality. These professional activities interrelated with the other two major aspects of process: the therapeutic relationship and the development of new holistic understandings.

*The therapeutic relationship.* Most interviewees described a relationship characterized by confidence and trust, which was built on the acupuncturist's egalitarian and non-judgmental approach. People gained confidence in their acupuncturists at different stages of their treatment and to varying degrees. This confidence was built on several common factors, some of which are integral to acupuncture as a therapy and some of which relate to the personal qualities of the acupuncturist. The relationship and the factors relating to it were often described in contrast to that experienced within biomedicine. The factors that inspired confidence and trust were: feeling at ease and able to talk; being on an equal footing; explanation being provided; being "interested in me as a whole person"; and expert knowledge.

- *Feeling at ease and able to talk*—Some description of the relationship in terms of feeling at ease and able to talk was present in all of the interviews, with only one interviewee describing a lack of these attributes. Acupuncturists were described as approachable, "chatty," easy to talk to, sympathetic, genuine, positive, calm and soothing, and gentle in both manner and touch. Most interviewees talked a great deal to their acupuncturists but this was of varying importance to the subjects. For some people, much of the talk was thought of as "social chat" that was enjoyable but not central to their therapy. Others gave examples of discussions that had felt very supportive and useful in terms of strengthening their self-esteem, their ability to ask for help, their resolve to look after themselves with better diets or more rest, or their confidence in negotiating with biomedical practitioners. A few people found that the talk, often in combination with the acupuncture itself, was integral to their treatment and that, through this, they were able to open up, feel release, or find new understanding. The length of the treatment was experienced both as a luxury and as a critical factor in building the relationship and enabling talk and reflection. Being encouraged to talk about themselves to someone who was "wholly there" for them was a new and valued experience for some people but one interviewee who received acupuncture in an NHS pain clinic had a very rushed uncomfortable experience with no opportunity to talk as follows:

GWEN: And I do feel sometimes you know I would feel a lot better if someone was there. And I'm not very good at talking, I need someone to draw me out!

[Laughter] But I think sometimes that might, that might help a little bit. As well as the treatment. . . .

C: Yes

GWEN: It feels a bit cold, going in and having your treatment and coming out.

- *Being on an equal footing*—Many people experienced, and valued, an egalitarian relationship, sometimes with elements of reciprocity. This was often contrasted with their prior relationships with biomedical practitioners, especially M.D.s. Several people who compared their acupuncture to a previous experience of counseling said that they valued the lack of pressure to go into detail or explain and analyze everything and the nonjudgmental listening. One participant noted:

SALLY: Because she seems to be there for you. She's on your side. She's not judging in any way. And she's not, superior isn't the right word, um, she's on an equal footing if you like. She's not making any judgements.

Interviewees talked in terms of "getting to know one another" or "getting on well" as well as using the pronoun "we" in discussions and decision making and sometimes interviewees included examples of some two-way sharing of personal information.

- *Explanation.* This was important in both engendering and compromising confidence and trust. Some interviewees had a strong desire and need for full explanations on what the acupuncturist was finding and thinking and what result they expected. This was either because the biomedical diagnosis and treatment was unclear or unsatisfactory or because these subjects were seeking a more holistic understanding of their states of health and happiness. There were many instances in which meeting this requirement strengthened the relationship and some instances in which failure to meet it weakened the relationship, as follows:

ANN: towards the end if I'm honest now looking back I think I, I lost my confidence in it because I thought, well, you know, I want you to explain a bit more what you're doing and I asked him in different ways. And perhaps if I'd said to him bluntly "look, I'm losing my confidence because you're not explaining to me might have been better," but I didn't say that at the time.

Several people expressed no desire to understand the therapy, preferring to leave it to the expert, and others found the complexities of acupuncture overwhelming but remained keenly interested in information about their prognoses. Three interviewees described how interesting they had found it when their acupuncturist taught a student during one of their sessions, because it gave them some insight into how

acupuncturists were making sense of their problems and the choices of treatment.

- *“Interested in me as a whole person”*—The depth and breadth of the initial history taking pleased and impressed most people and built a trust based on “knowing so much about me.” In subsequent sessions, people continued to appreciate the acupuncturist being “interested in everything about me,” which was also seen as an interest in them as individuals with personal biographies. There were many instances in which such an explicitly holistic approach was less evident and it was not an issue for interviewees. Sometimes, personal history that may have been relevant to the present problem was never given. Two people, treated by different acupuncturists, did not feel treated as whole people and were disappointed.
- *Expert knowledge*—Several people acknowledged their acupuncturists as experts and others cited their professional knowledge and skill base as inspiring confidence and trust. Interviewees were especially impressed by the knowledge acupuncturists gained through their physical examinations of pulses, tongues, and sometimes spines, especially when their analyses fitted with the persons’ own experiences. For example,

LIZ: . . . but you don’t really have to tell him anything. I mean he just looks, he looks at your tongue, takes your pulse and then he tells you. Which is, it’s incredible. I’m simply in awe of the whole thing because I think he could probably tell me what I had for lunch before long! [Laughter].

Acupuncturists were also able to predict likely effects of treatment, including unwanted effects, such as emotional upset, and the practitioners inspired confidence when they were able to treat an unexpected acute problem, such as back pain, successfully.

*New or expanded ways of understanding the body and self as a whole being.* Most people used some aspects of their dialogues with acupuncturists to make sense of their problems or themselves in new or expanded ways. The most commonly mentioned concepts were, being understood and treated as whole, the body healing itself, balance, and energy. Interviewees often linked two or more of these concepts in their explanations, as illustrated in many of the quotes below. The use of these concepts and terms depended largely on which acupuncturist was giving the treatment, except for “being understood and treated as whole,” which was mentioned by more than half of the interviewees.

- *Being understood and treated as a whole*—The acupuncturist often made connections between past and present illnesses or life events or between various current symptoms that people found useful in making sense of their

conditions. Sometimes these fitted with the interviewees’ own, often previously unexpressed or only partly formed, views. For example:

ZOE: She said all your glands, all your energies, all of that, she said everything, it’s all connected, you know if you just see it as one whole thing we’ll treat the whole thing and that, and I knew then that I’d gone to the right place because that was how I felt, you know, it needed to be approached [13:1:72]

For other interviewees, it was a new way of looking at themselves and their problems, or explanations that had not previously been legitimized by a health professional. For example:

JUNE: Yes. Yes. I think she looks at you as, you know, as a whole person and how you’re affected by your life and your work and your attitude to things, everything, yeah, I’m sure she’s looking at you. Yes, as a whole person.

Some people were especially interested in the biographical dimension—the links the acupuncturist made for the whole embodied person throughout a lifetime, such as:

SUE: It was more to do with delving more into my personal history and what had happened around the time that the arthritis was diagnosed and that, that, sort of, um, there wasn’t specifically, the mechanics of, you know, bodily, how it worked, it was more emotions and feelings as well, which you don’t have with a normal doctor really.

Several people talked about the connections that the acupuncturist made between their different problems or different parts of the body and, sometimes, linked these to their own lay understanding of their symptoms or their bodies:

LIZ: I did say to him, “why the wrists?” So, he said well it’s all part of the circles or the, no, he doesn’t call them circles, what does he call them? What’s the word? Can’t think of the word now. But I, I imagine it to be like circuits or a circuit board . . . and I, sort of, see acupuncture, know nothing about acupuncture at all, as like a circuit board, and, if you, sort of, plug a bit in here, then it’s got to, sort of, ricochet somewhere or other, yes . . . because somebody said, well, it doesn’t make sense, so I said, “well I suppose it does really because everything’s joined up somewhere or other isn’t it?” I mean, it doesn’t, sort of, just, literally come to a dead end and stop. . . .

- *The body healing itself*—Another commonly expressed aspect of acupuncture treatment was that it led to the body,

or less commonly, the self or person being able to heal itself. This was often seen as a consequence of increased energy flow, cleared channels, or improved balance. This discourse on self-healing was generally couched in terms of the body healing itself, as follows:

SONIA: Well, I suppose, if there's a blockage, there's not energy getting to the part that's not well. So, if you clear that blockage, then, perhaps, the body can then heal itself as it were.

Some interviewees talked of both “me” and “my body” in the same breath:

MAY: It was much more for the whole person and make . . . helping you or your body to cope with itself so to speak. And I could really relate to that. I mean, I could understand what he was talking about there and, and I felt very much that that was happening to me even though I'd gone about the migraine. I felt better in myself so that, for instance, my toe got better quickly and things like that, you know.

Two people tried to make sense of acupuncture's healing effects by using more scientific terms. Charles, a veterinary surgeon, conversed with his acupuncturist “in professional terms” which shared anatomical and physiologic knowledge, whereas John mentioned balance, blockage, and holistic concepts as well as “chemicals,” but he failed to create a coherent explanation from his acupuncturist's remarks.

- *Balance.* Balance was a concept closely related to the previous two concepts and it was used by some people who were treated by particular acupuncturists. Balance was related both to the body and to the self or whole person as follows:

RICHARD: . . . but his approach was more to do with my overall well-being, my overall bodily function . . . to try and restore the balance in order to fight the condition.

JEAN: . . . understanding that there are times when your body gets out of sync sort of thing, you know, and the acupuncture, you know, brings it back together again.

- *Energy*—Discourse about energy flow and blockage was common among the patients of some acupuncturists and not used by patients of other acupuncturists. Sometimes, although the word “energy” was not used, there were descriptions of channels and discussions about the need for a clear flow around the body.

ANN: I just think it's like having like a flow around your body, a thing of energy if you like, and some-

times you can get a blockage in a certain area and, um, I suppose I look at it that I don't quite know how the needle reduces the blockage but it does [laughter]. NANCY: Then the needle, sort of, open[s] the channels and suddenly everything, sort of, pumps through [you] and you feel much better.

A few people described how energy, or open channels, allowed blockages to drain, as a clearing out of waste or debris, and sometimes experienced this as a symptom such as catarrh. Gwen consistently used the metaphor of draining, although, for her, this included “feeling drained”:

GWEN: But it can help it. I could feel it draining, it drained me, well, I just could feel the draining sensation and I felt drained for about 3 days afterwards.

C: Mmm. Doesn't sound very nice.

GWEN: No, but it took the pain away. But I could walk. I found I could walk better. But, um, then it all went back to normal.

- *Chinese medical terms*—Whether or not specific Chinese medicine terms were used depended greatly on which acupuncturist was being seen but nearly half of the interviewees used them to some extent. These terms were meridians, *chi*, *yin*, *yang*, elements, organs, and “damp,” and, although their use was usually qualified by statements that they were not fully understood, people were often able to link the ideas to their own experiences or understanding of their illnesses. For example:

PAT: And I said to the acupuncturist, it was only recently, when this family thing had come up and I was very sad about it and upset, and I said the trouble is if, if I had any problems with my children I always feel it worse in my stomach, and when I was a child if I fell over I could have bleeding knees and be clutching my stomach! So it, it's always been a bit like that, and he said, I've been trying to treat your stomach and your spleen ever since you came here!

*Development of understanding over time.* Many of the interviewees indicated that they had become more interested in acupuncture as time went on, and some of these felt they understood more about it :

JUNE: Yes I think it, you know, over the, over a period of time it will make you self-aware. Mmm. Yeah, it's like with, with the needles, you know, and the feeling you get from the needles being in, you know, you can tell if it's doing some good.

A few people said it all remained a mystery. John was hoping that, over time, he would come to a new understanding about his illness but this did not happen and he stopped his

acupuncture and made an appointment with a new biomedical specialist:

JOHN: I would have liked more opinion from him as to what he thought may or may not be wrong with me. Rather than saying, well it's just the whole thing out of balance a little bit, a bit more scientific but, you know, I got the impression, you know, I was probably looking for a cut-and-dried answer and he was saying there are no cut-and-dried answers.

### *Perceived treatment effects and outcomes*

People experienced three types of treatment effects: changes in symptoms; changes in energy, strength and relaxation; and changes in personal and social identity. Many of these effects were felt simultaneously in the body and in the self. Not everyone experienced all of these types of effects and there was a complex temporal relationship between them. For example some people obtained quick relief from their symptoms and then went on to experience other effects and some people described an increase in energy or relaxation as preceding any symptomatic benefit. Adverse effects were rare and minor, such as pain on needle insertion or subsequent bruising. Some interviewees went with a specific problem and aim that remained the focus of attention throughout the course of treatment but, for many subjects, their initial aims changed over time. These three components of outcome are described in detail elsewhere (Pater-son and Britten, 2003) and they are shown on the right side of the model depicted in Figure 1.

### *Distinct but not divisible: connections between the components*

The process and outcome components were distinct but not divisible because they were linked by complex and mutually reinforcing connections. The model depicted in Figure 1 illustrates not only the components and connections but also the cyclical nature of the intervention (i.e., that, over a number of treatment sessions there was mutual reinforcement among components). That this model is an accurate representation of the data is most clearly evidenced by the analysis of each individual experience as summarized in the vignettes. These vignettes showed the complexity and the individuality of the experience of acupuncture treatment. Although each individual experience did not encompass all the components and connections in the model, analysis of all the vignettes yielded several examples of all aspects of the model and of the feedback loops that happen over time. Examples of how the individual vignettes contributed to the analysis are given in Boxes 1, 2, and 3. These three vignettes have been chosen for their richness and variety of experience and include both positive and negative experiences.

June's experience, in Box 1, exemplifies all of the components and most of the connections within the model. Gwen's experience, described in Box 2, describes negative connections and feedback loops, and illustrates the relevance of the model to negative experiences of acupuncture. Gwen sought a therapeutic relationship and new explanations but did not find them and experienced no positive treatment effects. Finally, Sue, whose vignette is in Box 3, starting as a skeptic, experienced a reduction in symptoms and medication use, and as time went on, this success led to increased confidence in acupuncture and its holistic basis. All of these developments led to increased self-confidence and self-responsibility and a move away from dependence on biomedicine.

### *Interviews with the acupuncturists*

The acupuncturists indicated that they recognized their own perspective within the model that we had constructed and that they saw the connections between the components as integral and complex. For example, they viewed the therapeutic relationship as basic to the ongoing diagnostic process and used reported changes in energy and symptoms to guide further diagnosis and treatment. This provided additional evidence about the interconnections between the process component "diagnostic and needling skills" and the other process and outcome components.

## DISCUSSION

This study showed that a series of acupuncture and Chinese medicine treatments, as experienced by people with chronic illnesses, is a complex intervention that is characterized by mutually reinforcing connections among the components of both process and outcome. The results are presented here as a diagrammatic model that is available for further testing and development in different contexts.

The design and conduct of this research has attended to many of the criteria suggested for increasing validity in qualitative research (Murphy et al., 1998): prolonged engagement and repeated contacts; clear exposition of methods of data collection and analysis (more details available from the authors); reflexivity; attention to negative cases; the involvement of two researchers in coding and analysis; and fair dealing (including both patients and their practitioners). In view of the repeated interviews with the respondents, and the opportunity that this gave to explore emergent themes, the analysis was not sent to them for respondent validation but, instead, was sent to the acupuncturists, thus eliciting a different perspective. The limitations of the study relate to the considerable recruitment problems that we had, which prevented any theoretical sampling and was likely to have resulted in a sample of subjects who were enthusiastic about their acupuncture. However, by involving acupuncturists in

many different settings, we achieved a sample with a wide range of age/gender characteristics and many different health problems, and the sample did include people who were disappointed with their treatment. This paper, and the model it depicts, is limited because it does not include the analysis of the wider context of peoples' lives and the institutional context of the intervention both of which were important to the interviewees and affected their treatment outcomes. We plan to publish other papers that explore these issues.

The results of this study confirm previous research findings about patients' perceptions of the process and outcome of Chinese medicine acupuncture (Cassidy, 1998; Gould and MacPherson, 2001) but the use of repeated interviews with new users enabled us to learn more about the development of both process factors and different treatment effects over time. Holism has been a key concept in previous research about patients' perceptions of Chinese medicine acupuncture (Cassidy, 1998) and our results confirmed this. Not only was holism a recurring theme throughout the analysis but it was also evident in the form of the overall model in which the interconnectedness of the components suggested that the "whole is greater than the sum of its parts."

After the analysis was completed, we were in a position to consider it in the light of previous work on complex interventions (Campbell et al., 2000; Wolff, 2001) and this provided a useful framework for considering the implications of the results and how this work should be taken forward. The model depicted in Figure 1 provided useful information for people who design research trials in the field of Chinese medicine acupuncture. The model defined the aspects of process that are linked to outcomes and indicated that, for a group of patients with chronic illness, all these process components are necessary in order to maximize the treatment effects. Based on the model presented here, any attempt, in the context of a placebo-controlled trial, to isolate the effect of the specific therapy, or "needling," is likely to interfere with it. The process and immediate experience of needling is intimately connected, over time, with the other components of the process as well as with the emerging treatment effects. Such a design is likely to result in reduced or absent treatment effects. In this respect, this paper adds empirical evidence to the philosophical and theoretical arguments for taking holism into account when evaluating complementary medicine (Mason et al., 2002). Opportunities are being sought to nest qualitative studies within acupuncture research trials to test this hypothesis. For example a study might test to what extent a design such as a placebo-controlled trial is able to provide the process components described here to all patients in the trial.

The results also have implications for service providers and policy makers. While the practitioners diagnostic and needling skills were an essential component of the intervention, the context in which they are given and received was integral to the effect they had, especially in terms of sufficient time, the therapeutic relationship, and the oppor-

tunity to discuss new holistic understandings. This study included both NHS and private provision of acupuncture and there was some limited evidence that these different institutional contexts affected the process and outcome of care. More research is required to determine what organizational and institutional factors are necessary to maximize the benefits of acupuncture treatment.

Future research will test the proposed model in different contexts, investigate the experience of people using different types of acupuncture in different institutional contexts and research trial settings, and explore to what extent such a model can be transferred to other complementary and holistic therapies.

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