SCIENTIFIC ARTICLES

An Exploratory Qualitative Study Examining the Social and Psychological Processes Involved in Regular Dental Attendance

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Abstract

Objective: *This study aimed to provide a description of the psychosocial process involved in regular dental attendance.* ***Methods:*** *The study design was a qualitative cross-sectional study using unstructured and semistructured interviews and observations of regular dental visits. The study participants included 12 men and 18 women attending general dental practices and six men and four women attending an emergency dental service. The data were systematically recorded and subjected to line-by-line grounded theory coding around the main concerns of those attending the dentist.* ***Results:*** *The main concern of those attending for a regular dental visit was checking their oral health. The six-month recall was conceptualized as a checking cycle in six phases: recalling, responding, inducing (i), waiting, inducing (ii), and telling. The possible outcomes of the cycle were maintaining oral health, sustaining oral health, and a further checking cycle. Variations in checking cycles resulted from reordering and normalizing pressures within participants' lifestyles.* ***Conclusions:*** *The findings of this study suggest that people's patterns of dental attendance are similar to those of other chronic illnesses. An understanding of the dynamic psychosocial processes involved in frequent dental attendance may be achieved when further research into this phenomenon is conducted. [J Public Health Dent 2000;60(1):5-11]*

Key Words: behavioral science, patient compliance, grounded theory.

Arguments concerning the scientific appropriateness and effectiveness of regular dental attendance have divided the dental profession (1). Some perceive attendance as a vital part of an individual's health routine and argue that a recall appointment every six months is appropriate (2,3). Followers of Illich (4) feel that regular attendance is a form of "medicalization" and propose that the scientific basis for a six-month recall appointment is weak (1). It has been argued that frequent attendance ensures that the patient remains a patient—is unable to take responsibility for his or her own oral health and is dependent on the dentist (1,4). Epidemiologic findings (5,6) repeatedly have illustrated the conundrum that people who attend on a routine basis have fewer sound and more filled teeth compared with those who attend while in pain. Pain-only attenders tend to have more missing teeth.

To address the reasons people attend for frequent regular care, it is necessary to return to the nature of dental attendance by considering it within a chronic illness framework (7). By doing so, it may be possible to gain a greater understanding as to why people attend on a regular and frequent basis. Although attendance has been considered to some degree in relation to the psychosocial impacts of dental health (7,8), little research has been conducted to understand (9,10) the psychosocial processes involved in dental attendance. The aim of this work is to understand the processes involved when people attend for regular and frequent dental care.

Methods

The sample included 12 men and 18 women attending three general dental practices for a check-up and six men and four women attending for emergency dental treatment at emergency dental services in two dental hospitals. One of the dental hospitals provided free treatment, the other provided treatment where normal National Health Service (NHS) fees applied. People attending for emergency dental care were included to sensitize the researchers during the data analysis. For purposes of this paper, concern was only with regular dental attendance.

The sample framework was not designed to achieve a statistically representative sample, but to achieve the greatest variety of observations of dentists, practices, and patients (11-14). All informants (patients, dentists, and the dental team) were interviewed and observed during patients' dental examinations. Formal written consent was obtained from each informant. The study received ethical approval from the research ethics committee at the Queen's University of Belfast.

The Interview and Observations. All informants were encouraged to speak freely and openly using an unstructured interviewing format. They were asked to focus on their experiences, behaviors, and responses with regard to dental care. For instance, informants were queried whether they had to make adjustments to their lifestyles to accommodate their dental appointments. The emergency attenders

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were asked to describe their attendance behavior, including why they attended for emergency treatment and, if in pain, the history of their presenting complaint. Observational data (notes) were recorded by the researchers during the clinical examinations for regularly attending and emergency patients.

The Analysis of the Data. The data were analyzed using the coding techniques of grounded theory (11-16), which is concerned with developing or discovering a theory about a particular problem. The theory is therefore "grounded" in the perspective of participants (11,12,17-20). These data are the participants' or informants' feelings and beliefs about their behaviors; in this sense, the data "speak[s] for itself" [*sic*] (12). In this way, grounded theory identifies a core category that explains the behavior from the informants' perspective.

To discover the core category, the data are subjected to rigorous line-by-line coding (11,12). Each line of the interviews and observational notes is summarized with a word that best describes what is happening (incident) and how these incidents relate to one another (pattern out) (11-16). A specific incident is but one example of a typical happening that may be taken from a number of similar incidents found to exist within the data. Generalizations are not made about the informants, but are made with respect to the incidents. In this way, the unit of analysis for grounded theory is the incident and not the individual (11-16).

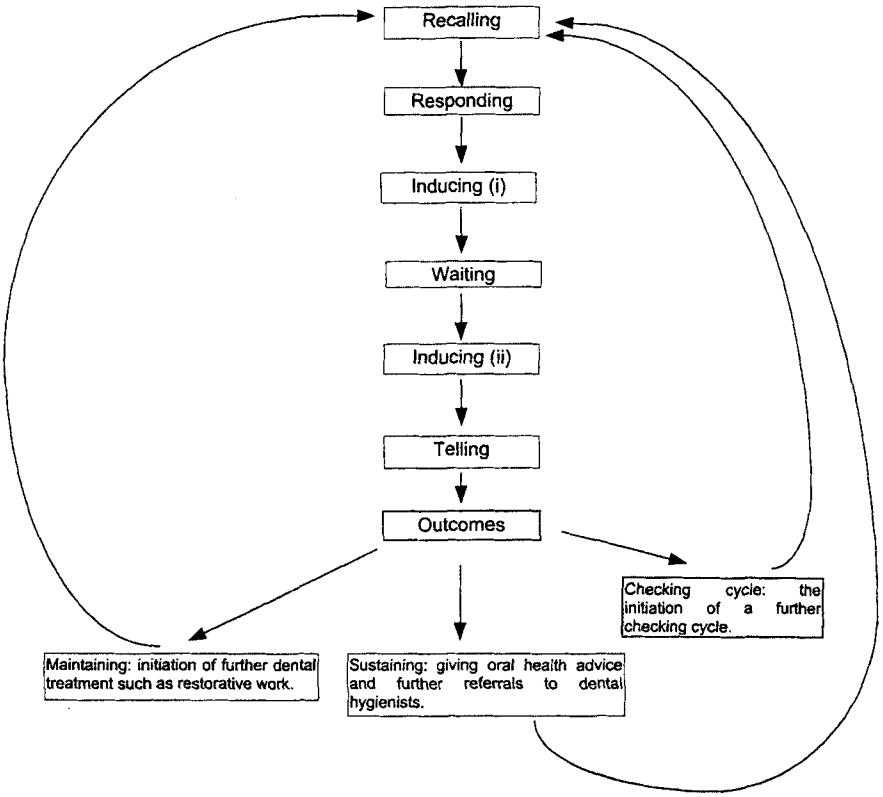
As the grounded theory analysis continues, subsequent occurrences of a specific incident will yield a category. Gradually, as no new categories are found, it becomes apparent that one overall concept or category groups all the other categories together. This grouping concept is the core category.

Results

The results are presented in the following format: first, a series of statements about each category and its properties are presented; second, a typical example of an incident or occurrence from which the category and its properties were derived is presented (11-13).

The Core Category: "Maintaining Oral Health." The core category that emerged from the data was maintaining oral health. It described the process involved in all dental health behaviors. Maintaining oral health included actions such as toothbrushing, removing plaque, mouth feeling fresh, looking good, remarking on appearance, maintaining oral health, and visiting for six-month recalls.

FIGURE 1
The Checking Cycle



The work presented here focused on one aspect of maintaining oral health—regular dental attendance, or the "checking cycle." The reason for conceptualizing regular dental attendance as the "checking cycle" is that the informants considered their dental examination as a means of checking their dental health status. The following statements are illustrative:

> "I go like that because you just never know, do you?"
>
> (Informant 1)

> "I go to be sure because I had the terrible pain once and now, well, I never want to have that again, and so I like to ... get a regular check-up."
>
> (Informant 6)

Closer examination of the data showed that the checking cycle (regular dental examination) had a six-phase structure (Figure 1). The phases of the checking cycle were recalling, responding, inducing (i), waiting, inducing (ii), and telling. Three possible outcomes of the cycle emerged. These were maintaining oral health, sustaining oral health, and a further checking cycle.

Phase 1: Recalling. The first phase in the checking cycle was recalling. Recalling was an organized and structured system that had been developed at the dental surgery. By using a recalling system, the practice was telling its patients that the time has come for another examination and reminding them to make an appointment. Each of the practices visited used some form of mailing recall system that was subject to practice and dentist variation. The number of patients that the dentists had on their lists determined variation in the recalling system:

> "Dentist A recalls his patients every six months and Dentist B recalls his every ten months. Dentist A is busier than Dentist B, and

so Dentist A can't see his patients so often. Most people tend to respond to the reminders, although if a patient has not been here in two years they are sent out three letters. If they don't respond, they are struck off the patient list.

When they come in for a check-up I write out and pre-date a six-month or a 10-month reminder card."

(Dental Practice 5)

Phase 2: Responding. Responding was the second phase of the checking cycle. In the responding phase, the patient took the initiative deciding on when and how to respond to the reminder that their check-up was due. Responding was subject to the patients' relative health priorities, perceptions of need, and current life experiences.

Three types of responding were observed. The first type was compliant responding. Compliant responses were active responses, replying immediately to the reminder. A 67-year-old retired patient stated that:

"I responded to my reminder card as soon as it came through the door. I have always attended the dentist every six months since I was at boarding school. I would never leave it any longer; in fact, I don't know why they don't have me in here every three months."

(Informant 2)

The second form of responding was problem responding. Problem responding was less active, with the reminder acting as a trigger by increasing the patients' perceptions of need for dental care. Due to the intermittent nature of dental pain, patients may therefore respond to the remainder because they were aware of some problem that may require treatment.

The following informant, while not in pain on attending her dentist, had responded to her six-month reminder because she had experienced some intermittent pain. In this incident of attendance, the pain acted in conjunction with the reminder to trigger a checking cycle.

"... the last time I went because I could feel this pain from time to time and so I went to ... check things ... Normally I would leave it and only go about once a year."

(Informant 10)

The following informant also had experienced some intermittent pain that had triggered his attendance at the dentist for a checking cycle.

"It has been longer than six months since my last appointment. I kept putting it off—ignoring the reminders. It wasn't because I didn't have the time; it was because it was too much hassle. Then I had some trouble with my teeth and thought I'd better come to the dentist, so I phoned and made an appointment."

(Informant 16)

The third type of responding was last-minute responding. Last-minute responses were similar to problem responses, with each response to the dentist's reminder being relatively passive. Last-minute responses occurred when the dental appointment was fitted into busy lifestyles "at the last minute." A 38-year-old male company director stated that:

"It's been two years since my last check-up. It's a matter of fitting the appointment into my busy schedule."

(Informant 3)

Each of these responses indicated that regular dental attendance had varying degrees of relative priority. For example, a compliant response indicated that dental attendance had a high relative priority—it was relatively high on the patient's current list of lifestyle and health priorities. Problem and last-minute responses were typical of dental attendance having a lower relative priority.

Responding types are not static states in which patients exist. Life commitments and priorities also affect the responding pattern. The responding pattern will be the resolution of the conflict between the need to reorder and the wish to normalize or maintain the status quo of one's lifestyle.

Reordering involves the patient reordering their lifestyle pattern to accommodate their dental attendance. Reordering has two dimensions: daily and strategic. Daily reordering relates to the restructuring of daily life to accommodate dental attendance. Strategic reordering involves a slow process of readjusting oral health routines. The following example illustrates daily reordering. A woman had reorganized her child care to accommodate a recall appointment:

"A young woman patient had waited for sometime for her recall appointment. She had organized her day so that she could attend [daily reordering]. Her children were with her mother, who lived north of the city. She had to travel by bus to get them before returning home, which was some distance from both the surgery and her mother's house. She was willing to do this because, as she stated, 'My teeth are important to me.'"

(Informant 9)

In problem responding, daily reordering occurs as a result of a dental crisis. One informant, although registered with a dentist, attended an emergency dental clinic for treatment because her tooth had flared up during the weekend:

"I usually don't worry too much about the dentist ... I would go very sporadically, I would go for five years and then I would stop ... and then I just wanted to go, I thought, oh my God! I am nearly 40 and I want to keep my teeth...."

(Informant 30)

The above illustrates that oral health priorities expand (reordering) and contract (normalizing) throughout the informant's life. Normalizing pressures represent the wish to maintain the routine of everyday life. Regular and frequent dental attendance must jostle for position along with other lifestyle routines and be fitted in accordingly. Normalizing has daily and strategic dimensions. The examples of Informant 31 and Informant 21 are illustrative:

Informant 31 had always attended a dentist on a six-month basis [compliant response]. Since she moved work to a different town from her own dentist she now attended only when in pain (problem response resulting from normalizing pressure). She had intended to register with a new practice

located close to her work to allow her to attend on a regular basis as she had done in the past (strategic reordering).

> "I used to be a very good attender, ... I would go when the reminder came in ... but now ... for me to go to the dentist I have to take the whole afternoon off, and then it's the cost of going ... I did make an appointment to go, but when I took the time off something came up with the children and I had to look after them, so I didn't go. It was my last time with that dentist and so I made an appointment with this new dentist ... closer to work."
>
> (Informant 31)

Informant 21's central incisor fractured when he was eating sweets. He realized that he had not been to the dentist for years. This event compelled him to attend for emergency dental treatment. From this time on he resolved to change his dental attendance patterns (strategic reordering) and attempted to maintain a pattern of regular dental attendance (compliant responding resulting from strategic reordering). His resolution was short lived, as he only attended for one recall appointment. In retrospect, he said he would probably return when he had another problem (strategic normalizing).

> "I went to the hospital and they fixed it ... and they told me to go and register with a dentist, so I did and he fixed it ... he said that the tooth was dead or something ... then he gave me a temporary crown ... then sometime later a permanent one...."
>
> "Did you go back for your six monthly check-up then?"
>
> "You're right I did, but he keeps trying to get me ... to do more to me."
>
> "... and after that, how long was it until your next check-up?"
>
> "... You mean this one? About a year. It's not simply going, it doesn't always suit ... if there's trouble, I'll be back."
>
> (Informant 21)

The above examples suggest there is a contraction (normalizing process) and expansion (reordering process) of psychosocial priorities when checking one's oral health. Problems can act as a trigger (Informant 31) for a checking cycle, but more often lead to emergency dental care (Informants 30 and 21).

Phase 3: Inducing (i). On entering the dental surgery the patients underwent the first part of the process of inducing (see phase 5). Inducing behaviors occurred when the patient interacts with any member of the dental team. The first phase of inducing takes place in the reception and the waiting rooms, which were physically separated from the dental surgery and the dentist's chair. The patient in the inducing phase is made to feel comfortable and relaxed.

Phase 4: Waiting. In the waiting room patients may anticipate what will occur in the appointment. The character of this phase is affected by previous dental appointments, and by their current responding pattern and lifestyle events. For those maintaining a compliant responding pattern, waiting has become a routine:

> "I don't think about it much, I tend to be elsewhere thinking about the shopping or the housework."
>
> (Informant 25)

For those who had been maintaining a problem or last minute responding pattern waiting will be flavored with anxiety.

> "When you are in there sometimes you are hoping that nothing will be wrong so that you won't have to go back. You may even try to tell yourself to get better—you know, do more."
>
> (Informant 23)

Phase 5: Inducing (ii). The second phase of inducing occurs when the patient enters the dental surgery. This phase involves the patient interacting, perhaps for the first time, with the dentist. As with the reception staff, the role of the nurse and the dentist in inducing (ii) is to put the patient at ease. The success of this phase was dependent on how well the dentist and patient knew each other, the type of responding pattern that was being maintained, the dentist-patient interaction, and daily normalizing pressures.

The inducing dialogue is dependent on how well the dentist knows the patient. If this is the patient's first appointment the dentist will use a cultivating interaction with the patient. The new patient may have been interviewed in another room away from the surgery and made to feel comfortable. The dentist by reducing the patient's dental anxieties is facilitating the patient's returning for further dental care.

When dentists know their patients, it is more likely that dentists and patients will talk about personal matters. The following dialogue took place between a female dentist and a male patient who had been maintaining a compliant responding pattern:

> "How are you?"
>
> "I'm doing very well, thanks, since the operation ... a prostate operation ... it's taken me sometime to get over it. I'm still off work. The golf's improved, so I must be getting better."
>
> "When are you back to work?"
>
> "Next week ... that's why I could come midmorning."
>
> "I wondered about that ... usually we have to rebook you ... how have your teeth been?"
>
> "Better than the rest of me!" [laughing].
>
> (Informant 8)

Inducing (ii) is dependent on the patients' pattern of responding. If the patient had been maintaining a problem (in pain) responding pattern, then the dentist's inducing dialogue is characterized by focused and closed questions:

> "What's wrong with the tooth?"
>
> (Dentist 6)
>
> "I told you it's that tooth you filled ... the one on the left ... it's sensitive to cold ... I'm going on holiday and I don't want a toothache."
>
> (Informant 11)

The inducing dialogue with a patient who has maintained a last-minute responding pattern tends to be characterized by using open questions:

"How are you ... it's been awhile since we saw you last. How are your teeth? Any problems?"

(Dentist 4)

"Yes, it's been awhile—some would say not long enough ... the teeth feel OK ... I think they need to be cleaned!"

(Informant 18)

The inducing dialogue is affected by the relative passivity and activity displayed by the dentist and the patient. When patients are in a more passive position than the dentist, they will respond to routine questions with routine answers. When the dentist is more passive than the patient, the dentist's responses are similar to the passive patient. In the following example, the anxiety of the dentist is reflected in his responses to the examination of an anxious and distressed patient:

"I started to feel really uncomfortable about treating this man. He was crying and I felt so embarrassed. I just wanted to retreat from the whole situation. I've never experienced anything like it. He just cried and cried. The more distressed he got the more quiet I became. I just didn't know what to say."

(Dentist 9)

The influence of normalizing pressures played an important role in the second phase of inducing. A usually chatty dentist or patient would react in a surprising way that the other did not expect as a result of pressures removed from the visit. It is therefore essential that the dentist read the mood of the patient. This patient had just received some bad news about her work situation, she had attended the dentist, but

"... didn't really want to come in today, things are very bad at the moment—she [the dentist] wouldn't stop talking to me—in the end I just got fed up and switched off—I've got more things to worry about than this place."

(Informant 29)

In another example, a child's grandmother going home upset the whole family. This current life event affected the child's reaction to dental treatment:

"You're on your own ... where's Mum today ?"

(Dentist 9)

[tears] "... Daddy's here ... I don't want my teeth looked at [more tears]...."

(Informant 5)

Phase 6: Telling. The telling phase is characterized by receiving and giving information. In the first part of the telling phase, the information passes between dentist and patient. In the second part, information flows between dentist and dental nurse.

Telling Phase: Part 1. In this phase the dentist starts to assess the patient's dental health status. At this stage the dentist knows something and the patient knows something. The patient's responses to the dentist's questions ensure that a number of facts are obtained and exchanged. The telling phase is characterized by how well the dentist and patient know each other, the dentist-patient interaction, the type of responding pattern, and normalizing pressures.

Telling Phase: Part 2. When the dentist examines the patient's mouth, the patient, dentist, and nurse enter the second part of the telling phase. In the telling phase (2) the dentist now "knows everything and the patient knows nothing." It is at this point that the dentist tells the patient about his dental health status. From this point, patients will be initiated into a maintaining oral health cycle, a sustaining oral health cycle, or a further checking cycle. These three clinical scenarios represent the outcomes of the checking cycle. Patients will be initiated into further restorative (maintaining), preventive (sustaining), and/or continuous dental care (checking).

Possible Outcomes of the Checking Cycle. *Outcome 1: Maintaining Oral Health.* Maintaining oral health is characterized by the dentist diagnosing dental disease. This phase represents another variety of dental attendance initiated by the dentist. It has similarities to the second phase of telling. The change between the checking cycle and maintaining cycle usually will be continuous, but may be abrupt, resulting in a preparation time for both the patient and the dentist. The switch from checking to maintaining appears to be dependent on five factors: how well the dentist and the patient know each other, the patient's current pattern of responding, the dentist-patient interaction, normalizing pressures, and the number of patients in the waiting phase at the surgery.

Outcome 2: Sustaining Oral Health. Sustaining oral health represents another situation in which "the dentist knows everything and the patient knows nothing" because the need for preventive care is based on normative need. Sustaining oral health relates to the dentist giving oral health advice or referring the patient for further appointments with a hygienist so that oral health behaviors may be maintained. Sustaining oral health is about sustaining the lifestyle priority status of dental health behaviors.

Outcome 3: Further Checking Cycle. If the patient was perceived by the dentist to be dentally fit, then sustaining oral health became subservient to recalling and the checking cycle was repeated. When the patient was unable to sustain his or her oral health, this phase was characterized by a reordering strategy that involved the dental team providing dental health education.

Discussion

This study was conducted in several general dental practices and two hospital emergency dental services within the United Kingdom. The United Kingdom has an extensive National Health Care system that in part is subsidized by the government (21). People attending the NHS system for regular and frequent dental care currently include 56 percent of the adult population and 67 percent of children (22). The NHS provides free dental treatment on a continuing care basis for students under the age of 19, pregnant women, nursing mothers, and people in receipt of income support or family credit (government benefits). All other adults are expected to make a monetary contribution to their dental health care (21).

To be part of the continuing care system, adult patients have to be registered with their dentists and must attend for a check-up after a period of 15 months. If an adult fails to attend on the basis of continuing care, he or she will receive treatment under the con-

ditions of "occasional treatment," which is similar to emergency dental care. Children and those under the age of 18 years are registered with their dentist under a capitation system that involves various fee scales for payment (21). Clearly, the existence of the UK National Health Care system may affect the applicability of the results of this study to other systems of care.

This study was based around exploring and developing an understanding of the psychosocial processes underlying regular and frequent dental care (continuing care). The sample was made up of 30 individuals attending for a regular NHS check-up. Evidence supports the thesis that the individuals in this study could be socialized (23) into this way of checking their oral health where they are passive in their response to the recalling system (1).

The method of grounded theory used in this study was useful in developing an understanding of some of the motives and processes involved in regular dental attendance. Regular dental attendance was conceptualized as a checking cycle (Figure 1) in six phases: recalling, responding, inducing (i), waiting, inducing (ii), and telling. The outcomes of the checking cycle were maintaining oral health, sustaining oral health, or a further checking cycle.

Some of the stages of the checking cycle have been mentioned in previous and earlier work (24). For instance, the idea that patients experience anticipatory anxiety in relation to dental attendance is not new. As would be expected, anticipatory dental anxiety was greatest in the waiting phase in patients who had adopted and maintained a problem response pattern. Other work has shown that various reminder systems can be used to improve patients' attendance (25). Telephone recall systems, for instance, generate more revenue from the treatment that follows than the cost of the calls themselves (25). Verbal and nonverbal communication between patient and dentist was located within the inducing (ii) and telling phases of the checking cycle (25-28).

Variations Across Checking Cycles. The checking cycle is dissimilar to emergency dental attendance. Because this was an exploratory study, 10 informants were included who had attended in an emergency. These data were collected for comparative purposes to help theoretically sensitize the researchers to the differences between the two types of attendance and thus to develop the properties relevant to the checking cycle.

Responding was found to be an important phase in the checking cycle and was the chief source of variation within and between cycles. An understanding of the disharmony between reordering and normalizing pressures may be the first step in understanding why people attend the dentist on a regular basis.

The disharmony between reordering and normalizing pressures has already been explored in research of other chronic illness (29). The lifestyles and everyday activities for those with chronic illness are modified in accordance with the severity of their symptoms. People with chronic illnesses experience disruptions to daily routines and reorder their lifestyles accordingly, using a process of time management. The struggle to maintain a normal existence has been called "normalizing."

Despite the tussle between reordering and normalizing, many people with chronic illness experience a downward trajectory with regard to function. Chronically ill persons maintain regular contact with their health professionals because they need to know "where they are." With greater deterioration in physical health, the chronically ill person gradually accepts and becomes resigned to a restricted lifestyle. New, lower levels of normality develop and remain stable for considerable periods of time, leading to statements such as: "I can live with my symptoms" (29).

Living with Oral Disease. The findings of this study suggest that those with patterns of regular dental attendance have health behaviors reminiscent of chronic illness behaviors. Regular dental attenders and those who had compliant response patterns seemed to need to know "where [their dental disease status] is now" (28). These findings suggest that reordering and normalizing pressures are also active and may interact on a daily as well as a strategic basis. Our findings suggest that when the impacts of dental disease become incorporated into the patient's lifestyle, the individual's dental health behaviors parallel those with chronic illness. For instance, dental patients may take on the "sick role" and become dependent on the dentist for their dental health. Alternatively, a patient may experience a continuing downward spiral of dental functioning (normality), adapting to fewer teeth or ill-fitting dentures and learning to "live with [the] symptoms."

The notion that people normalize symptoms as a way of reducing their impact has important implications in the use of functionally based measures of impact (30-32). If people with chronic oral health problems normalize these problems, they will experience fewer functional impacts. Thus, the oral health-related quality-of-life measures may not provide a stable or reliable scale of oral health, rather (33):

> ... a crude method for summarizing the feelings, thoughts, and symptoms of groups of individuals. They tend to make the dangerous assumption that quality of life for one person is much the same as it is for another.

Further consideration of the dynamic nature of oral health and the impacts of oral disease may be required before the instruments are put into widespread use.

Problems and Concerns. With regard to the limitations of this study, greater variation in patterns of checking could be detected if the social and cultural context and the basic system of care were more extensive (34,35). A recent study in the United States has looked at the frequency of dental check-ups and characteristics of frequent and infrequent attenders at the dentist (36). Factors such as sex, income, having a usual place for care, and level of dental care were found to be associated with having dental check-ups. The present study provides evidence of the dynamics underlying patterns of regular dental attendance found in the US study.

The data in this study yielded a cyclical and largely descriptive process—the checking cycle. Going beyond the first appointment into the social worlds of informants to subsequent dental appointments would yield a fuller understanding of the dynamics and social impacts of attending the dentist. Future study designs should take account of this factor by following up with informants after further dental appointments have occurred. This follow-up would require

a longitudinal dimension of up to four months subsequent to the first appointment. In this way, an understanding of the full social impact of the checking cycle could be realized.

Because the checking cycle appeared to pattern out over time, future work should contain a larger number of informants. Studies that include a larger range of services than this one and those located within an area with increased cultural complexity also should have a larger sample size.

It would seem that the characteristics of the checking cycle found in this study conducted in the United Kingdom support the view that dental disease and the need to attend on a regular and frequent basis have the quality of chronic illness behavior. While acknowledging the limitations and cross-sectional nature of the study and the possibility of the informant reporting bias, this work nevertheless affords dental health professionals with an awareness that patients who maintain a compliant responding pattern depend on them to preserve their oral health (4).

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