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The English Patient: A Model of Patient Perceptions of Triage in an Urgent Care Department in England

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We present research examining the role of organizational justice in the perceptions of patients visiting the urgent care department of a hospital. Patients' perceptions of uncertainty were found to mediate the relationship between waiting time and satisfaction and between waiting time and anger. Further, waiting time was significantly negatively related to procedural justice perceptions. Procedural justice perceptions were significantly positively related to distributive justice perceptions, which in turn, were significantly positively associated with satisfaction. We discuss the implications concerning managing the attitudes of waiting customers.

Waiting is generally considered a pervasive and arduous element of most customer service situations (Taylor, 1994). For many customers, waiting for service is viewed as a negative experience (Scotland, 1991). Thus, improving the speed at which services are delivered is increasingly becoming critical to service organizations (Katz, Larson, and Larson, 1991).

Hospitals have traditionally focused on delivering quality medical care according to some set of internally established standards. However, today it is recognized that patients' quality perceptions are equally important. At the same time, urgent care department overcrowding has become a national concern. As a result, increasing numbers of patients are experiencing prolonged waiting times, lower satisfaction, and delays in treating painful afflictions (Lowe, Bindman, Ulrich, Norman, Scaletta, Keane, Washington, and Grumbach, 1994). Given there are no indications that overcrowding will decrease, researchers have begun to recognize that it is important to better understand perceptions of patients waiting for treatment (e.g., Dansky and Miles, 1997). The procedure used to determine which patients see a doctor first, which have to wait, and how long they wait is called "triage" (George, Read, Westlake, Williams, Pritty, and Fraser-Moodie, 1993; Lowe et al., 1994; Llewellyn, 1992; Mallett and Woolwich, 1990; Teres, 1993; Yurt, 1992). The current study examines patients' perceptions of the triage process in an urgent care department of a hospital in rural England.

Research in one area of the service sector, the airline industry, offers some basis from which to make predictions. In a study of airline passengers waiting for delayed flights, Taylor (1994) found that delays were positively related to feelings of uncertainty and anger. She also found that uncertainty led to anger, and perceptions of anger led to lower overall service satisfaction levels. One purpose of the current study is to extend Taylor's (1994) research to patients waiting for medical treatment. Specifically, we examine the effect of actual waiting time on the uncertainty and anger perceptions of patients waiting for medical treatment in the urgent care department of a hospital. Another purpose of the current study is to add to the literature on waiting phenomena by presenting and testing a model of the organizational justice perceptions of patients waiting for treatment. Little research or theory has addressed the underlying psychological processes operating while individuals wait for service. In particular, we examine the influences of waiting, uncertainty, and anger on patients' procedural and distributive justice perceptions. Finally, we explore the influence of justice, uncertainty and anger on patients' overall satisfaction perceptions. In sum, this study identifies, in a single model, the underlying psychological perceptions that occur while patients wait for treatment in an urgent care department.

HYPOTHESES

Considerable research in the services marketing area has shown that the longer customers wait for service, the lower their satisfaction with service performance (e.g., Lovelock, 1988; Katz, Larson, and Larson, 1991; Clemmer and Schneider, 1993). Similar findings have been reported in a health care setting. For example, Mowen, Licata, and McPhail (1993) found that patients in the urgent care department who waited longer than their expected waiting times had significantly lower satisfaction levels than patients whose waiting-time expectations were met or positively exceeded. We define institutional satisfaction as patients' perceptions about the extent to which they are satisfied with their overall experience with the institution.

Hypothesis 1a: The longer the wait, the lower the patient's institutional satisfaction perceptions.

To examine patients' fairness perceptions of their experience in the urgent care department, two types of organizational justice will be examined: procedural and distributive justice. Procedural justice (Thibaut and Walker, 1975; Leventhal, 1976; Tyler and Caine, 1981) refers to the perceived fairness of the rules and processes used to deliver outcomes or resources. In the current study, procedural justice involves patients' perceived fairness of the triage procedures. Distributive justice (Homans, 1961), on the other hand, is concerned with the perceived fairness of outcomes themselves (e.g., Freedman and Montanari, 1980; Greenberg, 1982). In the current study, distributive justice refers to patients' perceived fairness of the outcomes of the triage procedure (e.g., how long the patient had to wait to see a doctor).

Waiting time has also been shown to influence customers' organizational justice perceptions. Research by Dansky and Miles (1997) found that delays in service had a negative influence on patients' organizational justice perceptions in emergency departments in the United States. Consequently we expect similar results to hold for patients in an urgent care department in England.

Hypothese 1b: The longer the wait, the lower the patient's procedural justice perceptions.

Hypothese 1c: The longer the wait, the lower the patient's distributive justice perceptions.

Service customers often do not know how long their waits will be. As a result, they can experience anger and uncertainty while waiting (Maister, 1985). Uncertainty has been defined as «a lack of information about future events, so that alternatives and their outcomes are unpredictable» (Hinings, Hickson, Pennings, and Schneck, 1974: 27). Taylor (1994) examined the length of flight delays on passengers' perceived levels of anger and uncertainty. Taylor found that there was a significant, negative relationship between delay time and perceived levels of anger and uncertainty.

Hypothesis 2a: The longer the wait, the more uncertainty the patient will feel.

Hypothesis 2b: The longer the wait, the more angry the patient will feel.

Reasons for customers getting angry while waiting for services are numerous (Taylor, 1994). Maister (1985) and Osuna (1985) attribute much of the anger associated with waiting to uncertainty. For example, when a customer experiences uncertainty, he or she is less able to cope with the waiting by planning more effectively or better managing their waiting time. As the uncertainty increases, so does the inability of customers to plan and so increases a perceived loss of power in the situation (Taylor, 1994). Based on this logic, the following was hypothesized.

Hypothesis 3: The more uncertainty the patient feels, the more angry he/she will feel.

Taylor (1994) also found that the level of anger and uncertainty experienced by airline passengers while waiting for a flight influenced their subsequent overall satisfaction levels. The same result is expected here, and the following were hypothesized.

Hypothesis 4a: As uncertainty increases, satisfaction perceptions will decrease.

Hypothesis 4b: As anger increases, satisfaction perceptions will decrease.

Ideally, to improve patient satisfaction, hospitals should strive to reduce the actual amount of time that patients have to wait for treatment. In practice, though, reducing waiting times is unlikely with ever declining health care resources. We argue that a more plausible way to improve patient satisfaction is by treating patients fairly during the waiting process. Treating people fairly during a variety of service encounters has been shown to increase satisfaction with that experience (e.g., Tyler, 1987; Clemmer, 1993). We expect such findings to extend to a hospital setting.

Hypothese 5a: The higher a patient's procedural justice perceptions, the higher his or her overall satisfaction perceptions.

Hypothese 5b: The higher a patient's distributive justice perceptions, the higher his or her overall satisfaction perceptions.

Dansky and Miles (1997) found that waiting times influenced patients' organizational justice perceptions in U.S. emergency departments. Additionally, Taylor (1994) found that uncertainty and anger influences the relationship between delays and customer satisfaction perceptions. Combining these findings, it is hypothesized here that the levels of anger and uncertainty experienced by patients while waiting may mediate the relationship between waiting times and perceptions of organizational justice.

Hypothese 6a: Patients' perceived level of uncertainty will mediate the relationship between the actual waiting time and their procedural justice perceptions.

Hypothese 6b: Patients' perceived level of uncertainty will mediate the relationship between the actual waiting time and their distributive justice perceptions.

The relationships presented in the six hypotheses were integrated into a model (please see **Figure 1**).

METHODS

SUBJECTS

Participants were 195 patients who came to the urgent care department of a large, single-site district hospital offering a wide variety of services with more than 600 inpatient beds in southeastern England.

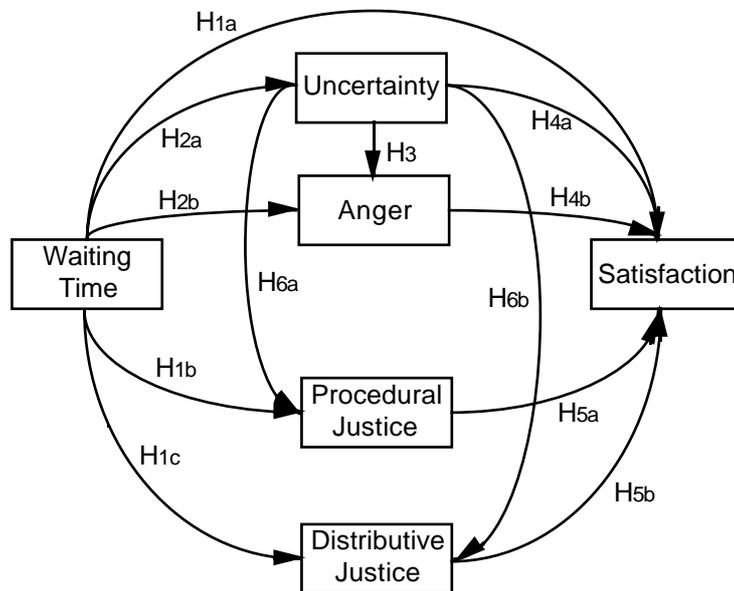


Figure 1. Hypothesized Path Model

Every adult patient who entered the urgent care department during a one-week period in April between the hours of 9:00 and 17:00 (day shift) and who was assessed as triage category 4 (standard Accident & Emergency case, but without immediate danger or distress) was given a survey to complete. Those patients classified as categories 1 through 3 were not included in the sample as their need for medical attention was imminent. The response rate was 45.4% for all individuals given a survey. All subjects were guaranteed confidentiality of their responses. Patients in the area had a choice of a number of alternative health-care facilities for treatment. The mean age of the participants was 36.77 years; 59.8% were male and 98.2% of the patients were White. Hospital staff indicated that the patients who visited the treatment facility tended to be higher in socio-economic status and educational level than many who visit other facilities. The data were specifically collected during a typical week without unusual activity or incident so as to represent a usual week in which patients arrived for treatment at this facility.

PROCEDURE

During the discharge process, patients were told by the triage nurse that a study was being conducted in order for the hospital to learn more about factors contributing to patient satisfaction. Participants were given a cover letter signed by the director of Health Services asking them to complete the survey before leaving the urgent care department. A reminder was placed on the check-out counter with a box for surveys.

MEASURES

PATIENT DEMOGRAPHIC INFORMATION

Data on age, gender, and race were provided by respondents.

ACTUAL WAITING TIME

In order to obtain objective patient information, a triage nurse provided the actual waiting times in minutes.

ANGER AND UNCERTAINTY

All perceptual measures ranged from 1 ("strongly disagree") to 7 ("strongly agree"). The anger and uncertainty measures were adapted from Taylor's (1994) study. A four-item scale ($\alpha = .91$) was used to measure anger (e.g., "To what extent did you get angry while waiting to see a doctor") and a four-item scale ($\alpha = .82$) was used to measure uncertainty (e.g., "To what extent did you feel uncertain about how long you'd have to wait to see a doctor?").

INSTITUTIONAL SATISFACTION

To assess patients' satisfaction with their experiences with the urgent care department, a scale was developed using items consistent with previous urgent care department satisfaction research (e.g., Gronroos,

1984; Ross, Steward and Sinacore, 1995). Twelve items ($\alpha = .92$) assessed patient institutional satisfaction (e.g., "How satisfied were you with your overall experience with the urgent care department?").

PROCEDURAL JUSTICE

A three-item ($\alpha = .88$) scale consistent with previous justice research (e.g., Greenberg, 1987) assessed procedural justice (e.g., "The procedures used for determining the order in which patients saw a doctor were fair.").

DISTRIBUTIVE JUSTICE

A six-item scale ($\alpha = .76$) consistent with previous justice research (e.g., Greenberg, 1987) assessed distributive justice (e.g., "The amount of time I had to wait in the waiting room was fair.").

RESULTS

Means, standard deviations, reliability estimates, and zero-order correlations appear in **Table 1**.

The hypotheses were tested using path analysis in Lisrel 8 (Joreskog and Sorbom, 1993). The chi-square ($\chi^2 = 6.87$; $p = 0.44$) and goodness of fit index (GFI = .99) suggested by Gerbing and Anderson (1993) indicated that the overall model fit the data well. The significant paths indicated by the data appear in **Figure 2**. The non-significant paths were removed and thus, we relied on the data of the trimmed model to establish model fit. An examination of the significant and non-significant hypotheses follows.

Hypotheses 1a through 1c examined the influence of waiting time on patients' satisfaction and organizational justice perceptions. Hypothesis 1a, which examined the influence of waiting time on patients' satisfaction perceptions, was not supported. As shown in **Figure 2**, the path from waiting time to satisfaction was not significant. Hypothesis 1b was supported: procedural justice perceptions were significantly, negatively related to waiting time ($\beta = -.16$, $p < .05$). The path from distributive justice to waiting time, however, was not significant. Thus, Hypothesis 1c was not supported.

Table 1. Means, Standard Deviations, Reliabilities, and Intercorrelations^a

Variable	Mean	S.D.†	1	2	3	4	5	6
1. Waiting time‡	59.95	36.73	(—)					
2. Uncertainty	1.86	0.99	.31*	(.82)				
3. Anger	1.57	0.97	.20	.71**	(.91)			
4. Procedural justice	4.85	1.61	-.29*	-.32**	-.23	(.88)		
5. Distributive justice	5.56	1.47	.02	-.21	-.16	.65**	(.76)	
6. Satisfaction	5.99	1.23	-.08*	-.40**	-.44**	.40**	.62**	(.92)

^a N = 195. Higher scores reflect higher values for variables.

†: standard deviation; ‡: Waiting time was measured in minutes.

** $p < .01$; * $p < .05$

Hypothesis 2a, which examined the relationship between waiting time and uncertainty, was supported ($\beta = .28, p < .05$). However, the path from waiting time to anger was not significant; Hypothesis 2b was not supported.

Hypothesis 3 was supported. A significant, positive relationship was found between patients' anger and uncertainty levels ($\beta = .69, p < .05$). Hypothesis 4a was also supported. A significant, negative relationship was found between patients' uncertainty and satisfaction perceptions ($\beta = -.10, p < .05$). The more uncertainty patients felt, the lower their satisfaction levels. Hypothesis 4b was supported as well: a significant, negative relationship was found between patients' anger levels and satisfaction levels ($\beta = -.29, p < .05$). The more angry patients felt, the lower their satisfaction levels.

Hypotheses 5a and 5b examined the influence of organizational justice perceptions on patients' overall satisfaction perceptions. Hypothesis 5a was not supported: procedural justice did not exhibit a significant direct relationship with satisfaction. However, Hypothesis 5b was supported: the higher the distributive justice perceptions, the higher the satisfaction perceptions ($\beta = .55, p < .05$).

Hypotheses 6a and 6b examined the mediating role of patients' uncertainty levels on the relationship between waiting time and organizational justice perceptions. As shown in **Figure 2**, uncertainty did not mediate the relationship between waiting time and organizational justice perceptions. Interestingly, uncertainty instead mediated the relationship between waiting time and satisfaction perceptions and between waiting time and anger.

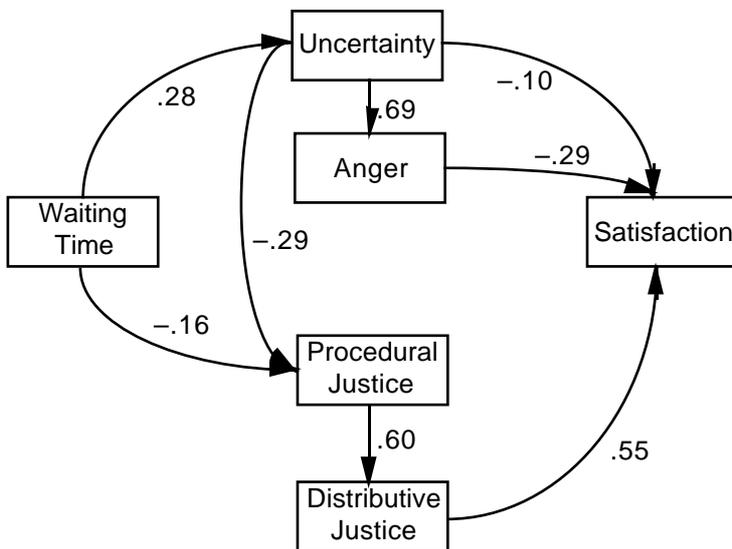


Figure 2. Results

DISCUSSION

The main purpose of the current study was to build on the growing body of research examining how people react while waiting for services. As noted earlier, little research or theory has addressed the underlying psychological processes operating while individuals wait for service. Another purpose was to examine the influences of those reactions on organizational justice and institutional satisfaction perceptions. As shown in **Figure 2**, several complex relationships emerged. More specifically, uncertainty was found to mediate the relationship between waiting time and satisfaction and between waiting time and anger. Further, waiting time was significantly negatively related to procedural justice perceptions. Procedural justice perceptions were significantly positively related to distributive justice perceptions, which in turn, were significantly positively associated with satisfaction.

This study provides additional support from customers that waiting times are related to service evaluations (e.g., Clemmer and Schneider, 1989; Katz, Larson, and Larson, 1991, Taylor, 1994). The present study suggests that healthcare managers can influence the satisfaction perceptions of their customers. The research indicates that lowering waiting times for services can diminish uncertainty which, in turn, enhances customer satisfaction. Unfortunately, with ever-declining resources, reducing waiting times may not always be possible. Indeed, waiting times may even increase as ever-shrinking medical staffs have to treat increasing numbers of patients. We identify a more plausible, indirect way to improve patient satisfaction: attention to patients' fairness perceptions during the waiting process. Treating patients fairly while they wait may reduce the influence of waiting time on institutional satisfaction. Managers who follow procedures and distribute outcomes in a manner that their patients perceive as fair may be able to increase the satisfaction levels of their patients, even if those patients have to wait longer than they expect for medical treatment.

It is important to note that another factor that would be expected to influence patients' procedural justice perceptions would be patient perceptions that they have been "bumped" (i.e., the perception that another patient who arrived later is being treated before him/her). The vast majority of patients in our sample did not report the perception of being "bumped". However, this is an important variable to consider in future research with different samples that might experience varying degrees of this perception as it would likely have a significant impact on patients' procedural justice perceptions.

Our findings regarding organizational justice add to the growing body of research in this area. Our findings are consistent with a recent meta-analytic review of 25 years of justice research that suggested that both procedural and distributive justice contribute incremental variance to individual's fairness perceptions (Colquitt, Conlon, Wesson, Porter, and Ng, 2001). This review argued that procedural justice is more likely to exhibit a direct relationship with system-referenced variables (e.g., waiting time in the present study) than distributive justice. In addition, consistent with our study, the review suggested that distribu-

tive justice is more likely to demonstrate a direct effect on satisfaction than procedural justice (Colquitt et al., 2001).

This study also provides evidence that customers or patients may experience anger and uncertainty while waiting. The results indicate that steps managers take toward reducing uncertainty may reduce customers'/patients' levels of anger. Further research should examine cost-effective methods through which organizations can reduce the uncertainty levels experienced by customers or patients waiting for services. For example, Dansky and Miles (1997) examined the methods of keeping patients occupied while they were waiting and also telling patients how long their expected wait times might be. Future research might explore the role of voice (i.e., the degree to which patients are vocal toward getting their needs met during the waiting process) in the waiting time–satisfaction relationship.

The current study both extends and builds on Taylor's (1994) research on U.S. airline passengers waiting for delayed flights. The present findings extend Taylor's research to hospitals; in addition, other variables not measured by Taylor (e.g., organizational justice) were added to the model. Interestingly, it appears that the attitudes formed while waiting may not be limited to only passengers in the United States, given the similar results found with hospital patients in England. Further research might examine whether the same waiting phenomena occur in other countries dissimilar to the U.S. and England.

In summary, extended waiting times can cause patients to have higher uncertainty levels about what is going to happen to them and when. The uncertainty levels then can lead to higher anger levels and lower levels of justice and satisfaction perceptions. Clearly a key way to improve patients' satisfaction and fairness perceptions is by lowering waiting times for treatment. When that is not possible, the current study supports that managers should have their staffs focus on reducing uncertainty and anger levels in customers, which may result in higher satisfaction and fairness perceptions of triage processes.

LIMITATIONS

It is important to caution that the findings of the present study occurred under a specific set of conditions beyond which generalization may not be possible. The data were collected during a one-week period from a single hospital urgent care department in a rural setting in England. Recall that the patients who visited the treatment facility tended to be higher in socio-economic status and educational level than many who visit other facilities. As such, the findings reported here may not directly apply to other types of medical treatment facilities or other service providers (such as non-medical ones), or to other types of patient groups. In addition, future research should examine different times of day (e.g., night) and different times of year to determine if there are differences in waiting perceptions. Despite these generalization concerns, given the findings of Taylor (1994), more confidence can be placed on the present results.

Other potential limitations concern the use of survey data. Acquiescent response bias, defined as the tendency to agree with the items independently of the content of the items (Wiggins, 1980), can result in inflated scores, narrow standard deviations, and artificially high reliability values. This problem is minimized somewhat in our study by the characteristics of the sample since highly acquiescent respondents tend to be older, less educated, and in poor health (Ross et al., 1995). In contrast, our sample involved was relatively young, highly educated, and higher socioeconomic status. Further, the standard deviations observed were not particularly narrow and are consistent with similar research.

Whenever survey data are employed, common method bias is also often a concern. However, the fact that the key independent variable, actual waiting time, was measured by objective data provided by triage nurses reduces the likelihood that common method bias explains the current results. In conclusion, despite some limitations, the present study points to the potential value of treating people fairly while they wait for services. It also provides additional evidence that the attitudes and reactions of customers and patients waiting for services should be managed in ways that result in higher evaluations of organizational justice and overall service satisfaction.

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