

A STUDY OF TWO HUNDRED AND SIX PARENTS' PERCEPTION
OF WAITING TIME IN A SELECTED PEDIATRIC
OUTPATIENT CLINIC

by

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A THESIS

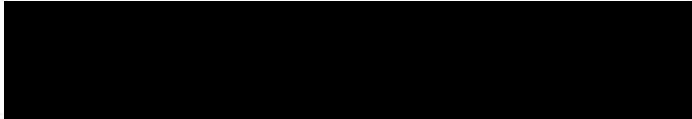
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CHAPTER I

INTRODUCTION

Statement of the Problem

A study conducted in the University of Oregon Medical School Pediatric Outpatient Clinic in early 1966 revealed that the most common complaint made by the parents about the clinic services was the amount of waiting time involved in a clinic visit. This complaint was voiced by 67% of the parents who participated in that study. (22)

A time study done in November, 1965, by the Nursing 501 Research class of the University of Oregon School of Nursing revealed that the average Pediatric Outpatient Clinic patient spent 128.6 minutes during an entire clinic visit. (22)

The Pediatric Outpatient Clinic is designed to care for patients in the lower socio-economic level. Eligibility requirements for admission to the clinic are that the family has an income of less than \$300 per month. Families who are in higher income groups are accepted, though, if the patient requires extensive medical investigation or needs prolonged medical treatment.

If the parent cannot tolerate the seemingly long wait to see the clinic doctor, the child may have to go without needed medical care.

Patients are seen in the Pediatric Outpatient Clinic on an appointment basis. They are booked for an appointment by the Outpatient Clinic Central Appointment Desk rather than by the individual clinics. Doctors in the Pediatric Outpatient Clinic may specify that parents be given certain dates and times for an appointment. Emergency appointments are given at the Central Appointment Desk, also.

There are degrees of usage of the Pediatric Outpatient Clinic by the parents. Some parent bring their children for only acute illnesses or emergency care; some parents bring children to a specialty clinic; other parents bring children to the clinic for almost all their medical needs.

It is possible that the reason for coming to the Pediatric Clinic may influence the parent's perception of the length of waiting time. Lower economic groups are more apt to attend clinics for an urgent reason. (1, 15). The lower class patients mainly go to the physician, when they go at all, for a felt complaint. They seek some explanation of "what is wrong" and want "something to fix it up." (18)

It appears that anxiety may be a motivating factor for bringing a sick child to the clinic for care. Anxiety and emotional state can be influential in the way that time is perceived. (5, 7) Time seems to hang heavy to people when they are bored or when nothing seems to be happening. (5)

Many factors influence the amount of time that the patient must

wait to see the doctor. Some of these factors are the efficiency of the clinic's appointment system, punctuality of the clinic doctors, punctuality of the patients, number of emergency patients, and efficiency of the clinic doctors. The majority of the studies state that patients should be seen by the clinic doctor within 30 minutes of their appointment time. (8, 13, 14, 16, 17, 21)

Purposes of the Study

The primary purpose of this study was to investigate parent's perception of waiting time in a selected Pediatric Outpatient Clinic and then make a comparison to the actual amount of time the parent waited to see a clinic doctor.

The parent's perception of the length of waiting time may be influenced by:

1. educational level of the parent.
2. number of visits to the clinic.
3. reason for bring the child to the clinic (urgent or non-urgent).

There are various reasons for bringing a child to see a clinic doctor, but almost all visits can be classified as urgent (e. g. , acutely ill child) or non-urgent (e. g. , follow-up visit for an illness or a routine physical examination).

The general hypotheses of this study were:

1. that there is a significant difference in the actual waiting time of the patient and the parent's perception of the length of the waiting time.
2. that the parent's accuracy of the perception of the waiting time will be influenced by her educational level.
3. that the parent's accuracy of perception of the waiting time will be influenced by the number of visits she makes to the clinic.
4. that the parent's accuracy of perception of the waiting time will be influenced by the urgency of the clinic visit.

Each hypothesis was applied to waiting time in the clinic waiting room and examining room separately to explore any differences in perception in these two situations.

This study further explored:

1. how long the parent felt she should have to wait before a clinic doctor saw the child.
2. how long the parent felt she usually must wait before a clinic doctor saw the child.
3. how long the parent actually waited before a clinic doctor saw the child.
4. where the parent felt that she waited longer; the clinic waiting room or the examining room.

5. where the parent actually waited longer: the clinic waiting room or the examining room.

Limitations of the Study

This study was limited to data collected at the University of Oregon Medical School Pediatric Outpatient Clinic. Participants were limited to 206 parents who brought children to the clinic between September 13, 1966, and September 26, 1966. Data were collected all day Monday through Friday and excluded the Saturday morning Allergy Clinic.

Parents coming to the Pediatric Outpatient Clinic for the first time were not included in the study.

Parents bringing children to the clinic for special treatments such as injections or to receive a prescription and did not see a clinic doctor were not included in the study.

Social workers bringing children to the clinic were not included in the study as they did not follow specified clinic procedure.

Assumptions

For the purposes of this study it was assumed that:

1. the parents had a measurable perception of their waiting time in the Pediatric Outpatient Clinic.
2. a valid time study of the waiting time of the participating

parent's clinic visit could be made.

Definitions

For the purposes of this study, the following definitions have been adopted:

1. Waiting time. The period of time waited by the parent and child from the time they reported to the Pediatric Outpatient Clinic receptionist until the time the patient was initially seen by a clinic doctor. This definition has been utilized in other studies. (8, 9, 13, 14, 17)
2. Parent. Every child attending the Pediatric Outpatient Clinic must be accompanied by a parent, foster parent, relative, or other responsible adult. That adult, regardless of actual status, was referred to as a parent in this study.
3. Clinic doctor. Medical student, pediatric resident, intern, or staff physician.
4. Urgent clinic visit. An appointment made at the Pediatric Outpatient Clinic within the 24 hours prior to the day of data-collecting or an emergency visit on the day of data-collecting.
5. Non-urgent clinic visit. Any appointment other than the urgent clinic visit.

6. Walk-in. A parent who comes to the clinic without making any previous appointment.

Procedure for the Study

The procedure for the development of this study was as follows:

1. Unstructured interviews were held with Pediatric Outpatient Clinic staff physicians to determine the area of research.
2. A general survey of the literature was conducted to discover reasons for waiting time and what factors would influence the perception of time. Related studies were sought to discover how waiting time was determined.
3. The purpose and scope of this study were formulated.
4. The limitations and assumptions were determined.
5. The data collecting instrument and proposed time study form were constructed. (Appendix A and B)
6. A pilot study was conducted involving 19 parents in the Pediatric Outpatient Clinic. Results indicated that some of the questions needed rewording for clarification.
7. Arrangements were made with the physician in charge of the Pediatric Outpatient Clinic to conduct the study during a specified time period.
8. A random sample of parents attending the Pediatric Outpatient Clinic was taken for a two-week period.

9. The parent was approached as she entered the clinic and checked in at the receptionist's desk. The parent was asked if she would participate in the study. The time study was done by the investigator and the opinionnaire was administered to the parent at the end of the clinic visit.
10. The findings were tabulated and interpreted. Tables were constructed from the data.
11. The findings were summarized, conclusions drawn, and recommendations for further study were made.

Presentation of the Study

This study is presented in four chapters:

Chapter I has presented the statement of the problem, defined the purpose of the study, and described the plan for procedure.

Chapter II presents the review of literature and related studies.

Chapter III presents the procedure used in the study, analysis and interpretation of the findings.

Chapter IV presents a summary of the study, findings of the study, conclusions drawn from the findings, and recommendations for further study.

CHAPTER II

REVIEW OF THE LITERATURE

Review of the Literature

The review of the literature and related studies was made to determine reasons for waiting time in outpatient clinics; to discover what other studies had been made concerning waiting time; and to ascertain what amount of waiting time in outpatient clinics could be considered reasonable. The literature was reviewed to determine what factors would influence the perception of time.

Welch and Bailey (20) made the following statements concerning the problem of waiting time in outpatient clinics:

Although very many hospitals now use some kind of appointment system for outpatients, anybody entering the waiting room of most outpatient departments will at once be impressed by the large number of people waiting. It is not uncommon to find that patients are there for over an hour before being seen by the doctor with whom they have an appointment. Much of the time the patient just sits and often under conditions which do not permit the time being usefully or even pleasantly occupied.

"Interminable waiting periods have characterized clinics for generations . . .," writes Durbin (4). He further states that private physicians are aware of the effect of waiting time on the patient.

They know that when a patient must wait too long, he will go

somewhere else for treatment. But, this is not always possible for most patients attending a public-supported outpatient clinic.

Letourneau (12) described the emotional aspect of waiting in an outpatient clinic: ". . . the overcrowded waiting room in the clinic presents a cheerless picture to the casual visitor and a forbidding one to the sick person."

Fosberg and Lemal (6) observed that patients in outpatient clinics can be made to feel like outcasts. "Add to the annoyance of unexplained waiting the fear and anxiety that caused the visit and it is possible to see how the outpatient clinic must appear to these patients even before they reach the doctor."

Most of the published materials and the studies done concerning waiting time in outpatient departments were related to the efficiency or effectiveness of the institution's appointment system. The studies generally agree that there are many factors that will affect the length of time that the patient must wait to see the clinic doctor. In spite of these factors, it is also to be recognized that most patients should be seen by the clinic doctor within 30 minutes of their appointment time. (8, 13, 14, 16, 17, 21)

A study done by Bagley and Furnal (2) revealed that the patient's waiting time in the clinic varied with the time of day. The waiting period for patients having appointments during the first half of the clinic's daily schedule averaged 15 minutes. In contrast, the

average waiting time for patients during the second half of the clinic's schedule was 25 minutes.

Millward (13, 14) states that an appointment system has been effective in reducing the amount of time that patients wait to see the clinic doctor.

Another source relates its findings:

We found that whenever carefully planned and conducted appointment systems had been introduced, a revolutionary reduction in patient's waiting time had almost always ensued. . . . We found that in hospitals or clinics in which good systems were in force, the average wait before a patient sees a consultant is not more than thirty minutes. (21)

Durbin (4), Hardie (8), Lee (11), Letourneau (12), and others agree that the only way to maintain organizational efficiency in outpatient clinics is by the use of an appointment system. (2, 4, 8, 10, 11, 12, 16, 17, 20)

Punctuality of the outpatient clinic's doctor is essential in an effective appointment system states Collins (3). "Generally speaking, it is the physician who is late, not the patient. It has almost become a tradition with physicians to be late for clinic hours."

Welch and Bailey (20) mentioned that there is plenty of evidence that doctors on the whole are late for their clinics.

In contrast, however, Millward (13, 14) stated that the tendency to attribute waiting time in the outpatient department to the doctor who arrives late is exaggerated.

The Working Party of the Hospital Discussion Group (21) stated ". . . that there is no evidence that delays are due to avoidable unpunctuality on the part of consultants. "

The Nuffield Provincial Hospitals Trust study (16) revealed that doctors were generally an average of 15 minutes late in beginning to see their patients. It was hoped to find out reasons why doctors were late in starting to see patients. But, it was usually not possible to obtain reasons; therefore, no conclusions could be drawn from the limited amount of information collected.

In conjunction with doctors being late for clinic hours was the problem of clinics beginning on time. Hardie (8) stated that beginning clinics on time was one of the three factors contributing to the success of the appointment system.

The Nuffield Provincial Hospitals Trust study (16) concluded that if a clinic starts late, the delay is normally perpetuated throughout the whole clinic and the waiting times of virtually all patients were increased.

Millward (13) thought that clinics starting late were due to two causes: (1) the doctor being involved in work in the hospital, (2) the doctor not arriving on time. But, he also mentioned that undue waiting occurred as much in clinics which started promptly as in those which did not, because waiting was due to other causes.

One of those other causes was the failure of patients to arrive

on time for their appointments. Many of the studies indicated that patients must arrive on time for proper functioning of the appointment system. (3, 8, 9, 12, 13, 14)

Almost one-third of the patients in the Nuffield Provincial Hospitals Trust study (16) were late. Welch and Bailey (20) stated that investigations showed that patients were usually early rather than late, and that when clinics began to run efficiently, patients would get nearer to being punctual.

Efficiency of the clinic's doctors was another factor which contributed to the patients' waiting time. Millward stated:

A close study of waiting time shows that it is this factor (doctor unable to organize his work) combined with other difficulties such as the large amount of work the consultant has to get through on a hospital visit or the nature of a particular clinic or interruptions by an emergency case which usually cause a clinic to get badly behind.

It was also indicated in the literature that the 30-minute waiting period may well be exceeded in teaching hospitals by reason of the clinical factors in such hospitals. (8, 21)

Every clinic's appointment system must allow for emergency patients and other "drop-ins" of an urgent nature. This is a factor that upsets appointment systems as the emergency case must be fitted into the schedule at the last minute. It is another obstacle to be overcome in the success of an appointment system and the reduction of the clinic patient's waiting time. (3, 8, 13, 16, 21)

It has been established that waiting time does exist in outpatient clinics. An efficiently run appointment system and the reduction of any factors that affect the functioning of the appointment system subsequently influence the waiting period of the patient.

What factors might influence the perception of the waiting time? Studies were not available concerning the perception of waiting time in outpatient clinics.

Feifel's (5) article concerning the judgment of time stated:

There is mounting evidence that judgment of objective time can be changed by emotional experience and that psychological attitudes can influence the way in which we experience time. Observations indicate that when we experience many stimulations from the external world or when a time interval is filled with interesting activity, objective clock time seems to move fast. On the other hand, it seems to hang heavy when we are bored and nothing is happening.

Goody (7) postulated that there are two times: "the clock-on-wall time or radio time" and "personal time". "Personal time" is always individual and private; it can be altered by anything which disabled the individual from full normal activity.

Perception of waiting time could relate to the urgency of the visit to the outpatient clinic. Muller (15) wrote that families at the lowest socio-economic level were less likely to call a doctor and this was especially true when the patient was a child. It appeared that lower economic groups were more apt to attend clinics for an urgent reason, as this group of patients mainly go to the physician

for a felt complaint, and not as frequently for preventative care. (18)

Ambuel (1) stated that the urgency of the appointment was one of the most significant influences in keeping clinic appointments.

Could it be possible that the urgent reason for the visit coupled with the anxiety of the parent might influence the perception of time waited to see the clinic doctor? Collins (3) wrote that people who are ill or think that they are ill do not react to situations as they would if they were well. They are apprehensive, emotional, and easily upset. "Reactions may range from an unexplained overt action to a well-concealed stress and based on emotions rather than logic."

Review of Related Studies

Two studies were done in Bromley Group Hospitals, England, and reported by R. C. Millward. (13, 14) The scope of the studies was confined to finding out the period that patients waited for a consultation from the time of their appointment to the time they saw the doctor. For the first study records were kept from June 14, 1954, through July 2, 1954. All clinics except maternity and chest were utilized. The total number of patients who participated was 5069. For every 100 patients who attended by appointment:

45 were seen within 15 minutes
31 waited between 16-30 minutes

21 waited between 31-60 minutes
3 waited over 60 minutes.

The second study was done in the Bromley Group Hospitals at a later date. Five thousand three hundred fifty-eight patients participated in that study. For every 100 patients who attended by appointment:

54 were seen within 15 minutes
28 waited between 16-30 minutes
21 waited between 31-60 minutes
3 waited over 60 minutes.

In summary, 82% of the patients were seen within 30 minutes compared to 76% of the patients previously. Of the 82%, 55% were seen within 15 minutes. Millward recommended that under an appointment system, 50% of all patients attending the consultative clinics should have been seen within 15 minutes and another 25% between 16-30 minutes; 75% should be seen within 30 minutes.

T. A. Perkins' (17) study was undertaken at Royal Hampshire County Hospital, Winchester, England. The clinics were covered from November 22, 1954, through December 17, 1954. The purpose of the study was to study waiting time in the clinics and to assess how much fault could be placed with the hospital. Two thousand four hundred thirty-two patients participated in the four-week study. Each patient was asked to note his time of arrival, time called into a changing cubicle, and time called into the consulting room.

Analysis of the data showed that:

69.1% patients were seen early or within 30 minutes of their appointment time.

91.5% patients were seen within 60 minutes of their appointment time.

8.2% patients waited over 60 minutes.

Two surveys were done by M. C. Hardie (8, 9) in an outpatient department of a children's hospital in England. The object of the surveys was to assess the time spent by the patients waiting to see the doctor and to investigate and if possible eliminate the causes of delay. The procedure was as follows: the consultant noted on his appointment list the exact order and time at which he saw each patient; the reception clerk noted the exact time of arrival of each patient.

The first survey (1953-54) showed that the average waiting time was 23 minutes. The second survey (1954-55) showed that the average waiting time had dropped to 12 minutes. Hardie stated that the drop in waiting time was due to a more efficient and effective appointment system.

All the studies reviewed were done in Great Britain under various aspects of their National Health Program in a clinic setting. It is assumed that most clinics function similarly in the United States since there also are non- or partial-paying patients who attend outpatient clinics in publicly supported institutions.

Summary

It can be concluded that an effective and efficient appointment system can reduce the patient's waiting time in an outpatient clinic. Many of the studies state that patients should be seen within 30 minutes of their appointment time.

Factors that can affect the appointment systems and influence the length of the patient's waiting time are:

1. punctuality of the clinic doctor.
2. punctuality of the clinic starting time.
3. punctuality of the patient.
4. efficiency of the clinic doctors.
5. admission of emergency patients.

It has been postulated that anxiety or the urgency of the clinic visit may affect the parent's perception of the waiting time in the outpatient clinic.

No studies were available concerning the perception of waiting time by patients or parents in outpatient clinics.

CHAPTER III

REPORT OF THE STUDY

Procedure of the Study

The primary purpose of this study was to investigate parent's perception of waiting time in a selected Pediatric Outpatient Clinic and then make a comparison to the actual amount of time the parent waited to see a clinic doctor.

The general hypotheses of this study were:

1. that there is a significant difference in the actual waiting time of the patient and the parent's perception of the length of the waiting time.
2. that the parent's accuracy of the perception of the waiting time will be influenced by her educational level.
3. that the parent's accuracy of perception of the waiting time will be influenced by the number of visits she makes to the clinic.
4. that the parent's accuracy of perception of the waiting time will be influenced by the urgency of the clinic visit.

Each hypothesis was applied to waiting time in the clinic waiting room and examining room separately to explore any differences

of perception in these two situations.

This study further explored:

1. how long the parent felt she should have to wait before the clinic doctor saw the child.
2. how long the parent felt she usually must wait before a clinic doctor saw the child.
3. how long the parent actually waited before a clinic doctor saw the child.
4. where the parent felt she waited longer: the clinic waiting room or the examining room.
5. where the parent actually waited longer: the clinic waiting room or the examining room.

The study was developed according to the steps described in Chapter I. It was an exploratory study and used nominal data.

Arrangements were made with Robert Meechan, M. D., Director of the University of Oregon Medical School Pediatric Outpatient Clinic, to conduct the study on the selected dates.

A pilot study was conducted in the Pediatric Outpatient Clinic on August 16, 1966. Nineteen parents were asked to participate. It was found that the time study form used was workable, but the data collection instrument administered to the parents needed some items reworded for clarification. For example, the items concerning waiting time originally read:

My wait in the Pediatric waiting room today was approximately . . .

My wait in the examining room today was approximately. . .

For clarification, the wording was changed to the following:

I guess that I waited in the Pediatric waiting room today about . . .

Before the doctor came into the examining room today, I guess that I waited about . . .

The rewording of these questions answered the problems that had occurred with the parents during the pilot study.

The study was conducted for a two-week period beginning September 13, 1966, and was concluded on September 26, 1966. Data were collected all day Monday through Friday and excluded the Saturday morning Allergy Clinic.

A random sample of parents bringing children to the Clinic was done. Approximately every third parent checking into the Clinic at the Receptionist Desk was asked to participate.

The selected parent was approached after she had checked into the clinic. The parent was asked if she would participate in the study and was then issued a number to wear. A corresponding number was recorded on the time study form. The parent was asked to check with the investigator when the clinic visit was concluded in order to fill out a short opinionnaire about the Pediatric Outpatient Clinic visit. The investigator was careful not to mention the words

"time study" to the participants.

The following times were noted on the time study form for each participating parent:

1. time checked in at the receptionist's desk.
2. time called to the examining room.
3. time a clinic doctor first entered the examining room.
4. time dismissed from the clinic.

Since the investigator was able to watch only one of the two corridors of examining rooms, it was necessary for the clinic doctors to sign in the parent's number and time that the doctor entered the examining room along the second corridor.

At the conclusion of the clinic visit each parent was given a form for supplying data for the study. A sample of the instrument used in the collection of the data can be found in Appendix A. A sample of the time study form can be found in Appendix B.

The first two items on the form used by the parent concerned the parent's educational level and the number of visits she had made to the Pediatric Outpatient Clinic within the last year. The third and fourth items involved the determination of the urgency or non-urgency of the clinic visit. Item 5 asked the parent to indicate how soon she felt that the clinic doctor should see the child after arriving in the clinic. Item 6 asked the parent to indicate how long she felt she usually waited before the child was seen by a clinic doctor.

Items 7 and 8 asked the parent to estimate the amount of time that she waited in the clinic waiting room and in the examining room during that day's visit. Item 9 concerned the parent's expectation of the length of the clinic visit.

Two hundred and seventeen parents were approached to participate in the study. Eight of these parents failed to check out with the investigator at the conclusion of the clinic visit; consequently, they did not fill out the opinionnaire. Only one parent refused to complete the form. She stated that "it was too long" and she did not "have time to bother. "

During the first day, two parents coming to the clinic for the first time were asked to participate in the study. They were unable to complete items 5 and 6, thus were excluded from the study. No other first visit parents were asked to participate in the study.

The final number of usable instruments was 206.

Findings, Tabulation, and Interpretation of the Data

Two hundred and six parents were used in the study to investigate the parent's perception of waiting time in the University of Oregon Medical School Pediatric Outpatient Clinic. The general hypothesis of the study stated that there is a significant difference in the actual waiting time and the parent's perception of the length of the waiting time. Three factors were thought to influence the parent's

perception of waiting time: (1) educational level of the parent; (2) number of clinic visits made by the parent; (3) urgency of the clinic visit. The hypotheses were applied to waiting time in the clinic waiting room and examining room separately to explore any differences of perception in these two areas.

On the opinionnaire (Appendix A) the parent was asked to mark one of five time categories to estimate the amount of time waited in the Pediatric Outpatient Clinic waiting room and the examining room before being seen by a clinic doctor. The time categories were divided into 15-minute increments as follows: less than 15 minutes, 16-30 minutes, 31-45 minutes, 46-60 minutes, and over 60 minutes. The investigator tabulated the actual number of minutes waited in the clinic waiting room and examining room on a separate form (Appendix B).

The chi-square was used to determine any significant difference between the perceived and actual waiting time in the clinic waiting room and examining room. It was also used to test the significance that the selected variable had on the perception of the length of waiting time.

Since $N > 100$, the following formula for chi-square was used:

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

In the waiting room 134 (65.1%) parents felt that they waited less than 15 minutes; coincidentally, 134 (65.1%) parents actually waited less than 15 minutes. These 134 responses are not necessarily the same parents. Table 1 shows the distribution of 206 parents in each of the five time categories comparing perceived waiting time to actual waiting time in the clinic waiting room. The statistical analysis of the data showed that the difference in the perceived and actual waiting time was not significant at the 0.05 level. Therefore, it is necessary to reject the hypothesis:

that there is a significant difference in the actual waiting time of the patient and the parent's perception of the length of waiting time in the clinic waiting room.

These findings are shown on Table 1.

Table 1. Distribution of 206 responses according to time categories comparing perceived waiting time to actual waiting time in a Pediatric Outpatient Clinic waiting room.

Minutes (1)	Perceived		Actual	
	n (2)	% (3)	n (4)	% (5)
< 15	134	65.1	134	65.1
15-30	48	23.3	59	28.6
31-45	11	5.3	8	3.9
46-60	7	3.4	3	1.5
> 60	6	2.9	2	0.9
Total	206	100.0	206	100.0

$$\chi^2 = 5.25 \quad df = 4 \quad P > 0.05$$

In the examining room 132 (64%) parents felt that they waited less than 15 minutes as compared to 98 (47.6%) who actually waited less than 15 minutes. In the next category, 50 (24.2%) parents felt that they waited 15-30 minutes as compared to 75 (36.4%) parents who actually waited 15-30 minutes in the examining room before being seen by a clinic doctor.

Table 2 shows the distribution of 206 parents in each of the five time categories comparing perceived waiting time to actual waiting time in the clinic examining rooms. Statistical analysis of the data showed that the difference in perceived and actual time was significant at the 0.01 level. Therefore, it is necessary to accept the hypothesis:

that there is a significant difference in the actual waiting time of the patient and the parent's perception of the length of waiting time in the clinic examining rooms.

These findings are shown on Table 2.

It can be postulated that the perception of waiting time in the waiting room was not significant as there was a clock available so the parent could check the amount of time spent in that room. In the examining room the parent was kept busy while the child to be seen by a doctor was undressed, weighed, temperature, pulse, and respirations taken. There were no clocks in the examining rooms for the parent to keep track of the time.

Table 2. Distribution of 206 responses according to time categories comparing perceived waiting time to actual waiting time in a Pediatric Outpatient Clinic's examining rooms.

Minutes (1)	Perceived		Actual	
	n (2)	% (3)	n (4)	% (5)
< 15	132	64.2	98	47.6
15-30	50	24.2	75	36.4
31-45	13	6.3	17	8.3
46-60	6	2.9	12	5.8
>60	5	2.4	4	1.9
Total	206	100.0	206	100.0

$$\chi^2 = 13.68 \quad df = 4 \quad P < 0.01$$

The responses were compared according to three categories of under-perception, correct-perception, and over-perception of waiting time in both the waiting room and the examining rooms. Twenty-two (10.7%) parents under-perceived the waiting time in the waiting room as compared to 73 (35.4%) parents who under-perceived the waiting time in the examining room. The highest number of parents correctly perceived their waiting time in the waiting room (74.7%) as compared to the 53.0% who correctly perceived their waiting time in the examining room.

The findings are shown on Table 3.

The second hypothesis stated that the parent's perception of waiting time would be influenced by her educational level. The hypothesis was tested by determining the highest school grade completed by each parent. The parents were then classified into three

Table 3. Distribution of 206 responses according to perception of waiting time in a Pediatric Outpatient Clinic waiting room and examining rooms.

Perception (1)	Waiting Room		Exam Room	
	n (2)	% (3)	n (4)	% (5)
Under	22	10.7	73	35.4
Correct	154	74.7	109	53.0
Over	29	14.1	23	11.1
No response	1	0.5	1	0.5
Total	206	100.0	206	100.0

groupings: elementary and junior high (grades 1-9), senior high school (grades 10-12), and any education above grade 12 (i. e., college, business school.)

Comparisons were made of 204 responses according to under-perception, correct-perception, and over-perception of waiting time in the clinic waiting room and the three educational groups. Two hundred and four responses were used as one parent failed to mark her educational level and one parent stated that since she was 30 minutes early for her appointment, she did not have any waiting time.

It was interesting to note that a higher percentage of parents in each of the three educational groups overestimated their waiting time in the clinic waiting room rather than underestimated the length of waiting time. In the Grade 1-9 grouping, 9.1% under-perceived as compared to 24.2% who over-perceived their waiting

time. In the Grade 10-12 grouping, 11.8% under-perceived as compared to 12.5% who over-perceived. In the last grouping, 8.6% under-perceived as compared to 11.4% who over-perceived their waiting time in the clinic waiting room. The largest percentage in all three educational groups did perceive the length of waiting time in the clinic waiting room correctly.

Statistical analysis showed that there was no difference in perception of waiting time in the clinic waiting room attributable to the educational level of the parent at the 0.05 level of significance. Accordingly, it is necessary to reject the hypothesis:

that the parent's accuracy of perception of the waiting time in the clinic waiting room will be influenced by her educational level.

The findings are shown in Table 4.

Table 4. Distribution of 204 responses according to perception of waiting time in a Pediatric Outpatient Clinic waiting room comparing educational levels.

Perception (1)	Grades 1-9		Grades 10-12		Grades > 12	
	n (2)	% (3)	n (4)	% (5)	n (6)	% (7)
Under	3	9.1	16	11.8	3	8.6
Correct	22	66.7	103	75.7	28	80.0
Over	8	24.2	17	12.5	4	11.4
Total	33	100.0	136	100.0	35	100.0

$$\chi^2 = 3.51 \quad df = 4 \quad P > 0.05$$

The three categories of perception of waiting time in the examining room were then compared to the three educational groups. In

contrast to Table 4, it was interesting to note than in Table 5 a higher percentage of parents in each of the three educational groups underestimated their waiting time in the clinic examining room rather than overestimated the length of waiting time. In the Grade 1-9 grouping, 33.3% under-perceived as compared to 12.1% who over-perceived their waiting time. In the Grade 10-12 grouping, 33.8% under-perceived as compared to 11.0% who over-perceived their waiting time. In the third grouping, 42.9% under-perceived as compared to 11.4% who over-perceived their waiting time in the clinic examining rooms. The largest percentage in all three educational groups did perceive the length of waiting time in the clinic examining rooms correctly.

Statistical analysis showed there was no difference in perception of waiting time in the clinic examining room attributable to the educational level of the parent at the 0.05 level of significance. Accordingly, it is necessary to reject the hypothesis:

that the parent's accuracy of perception of the waiting time in the clinic examining room will be influenced by her educational level.

The findings are shown in Table 5.

The third hypothesis stated that the parent's accuracy of perception of waiting time would be influenced by the number of visits the parent had made to the Pediatric Outpatient Clinic. This hypothesis was tested by determining the number of visits each parent had

Table 5. Distribution of 204 responses according to perception of waiting time in a Pediatric Outpatient Clinic's examining rooms comparing educational levels.

Perception (1)	Grades 1-9		Grades 10-12		Grades > 12	
	n (2)	% (3)	n (4)	% (5)	n (6)	% (7)
Under	11	33.3	46	33.8	15	42.9
Correct	18	54.6	75	55.2	16	45.7
Over	4	12.1	15	11.0	4	11.4
Total	33	100.0	136	100.0	35	100.0

$$\chi^2 = 1.12 \quad df = 4 \quad P > 0.05$$

made to the clinic within the last year. In order to establish any effect of numerous visits to the clinic, parents visiting a larger number of times (over 10 visits) were compared to the parents who had visited a few times (1-5 visits).

There were 96 parents who had made 1-5 visits to the clinic and 71 parents who had visited over 10 times. The remaining 39 parents were in the 6-9 visit category and were not included in this comparison.

Comparisons were made of 167 responses according to under-perception, correct-perception, and over-perception of waiting time in the clinic waiting room to the categories of few and many clinic visits.

Although the highest percentage of the parents did perceive their waiting time in the clinic waiting room correctly, more parents overestimated rather than underestimated the length of waiting time

in the clinic waiting room.

Statistical analysis showed that there was no difference in the perception of waiting time in the clinic waiting room attributable to the number of visits at the 0.05 level of significance. Therefore, it is necessary to reject the hypothesis:

that the parent's accuracy of perception of the waiting time in the clinic waiting room will be influenced by the number of visits she makes to the clinic.

The findings are shown in Table 6.

Table 6. Distribution of 167 responses according to perception of waiting time in a Pediatric Outpatient Clinic waiting room comparing few with many clinic visits.

Perception (1)	Few Visits		Many Visits	
	n (2)	% (3)	n (4)	% (5)
Under	10	10.4	11	15.5
Correct	73	76.1	48	67.6
Over	13	13.5	12	16.9
Total	96	100.0	71	100.0

$$\chi^2 = 1.52 \quad df = 2 \quad P > 0.05$$

The three categories of perception in the clinic examining rooms were then compared to the categories of few or many clinic visits.

More parents underestimated rather than overestimated the length of waiting time in the clinic examining rooms. The highest percentage of parents did perceive their waiting time in the examining rooms correctly.

Statistical analysis showed that there was no difference in the perception of waiting time in the examining rooms attributable to the number of visits at the 0.05 level of significance. Accordingly, it is necessary to reject the hypothesis:

that the parent's accuracy of perception of the waiting time in the clinic examining rooms will be influenced by the number of visits she makes to the clinic.

The findings are shown in Table 7.

Table 7. Distribution of 167 responses according to perception of waiting time in a Pediatric Outpatient Clinic's examining rooms comparing few with many clinic visits.

Perception (1)	Few Visits		Many Visits	
	n (2)	% (3)	n (4)	% (5)
Under	36	37.5	22	31.0
Correct	48	50.0	43	60.6
Over	12	12.5	6	8.4
Total	96	100.0	71	100.0

$$\chi^2 = 1.81 \quad df = 2 \quad P > 0.05$$

The fourth hypothesis stated that the parent's accuracy of perception of waiting time would be influenced by the urgency of the clinic visit. To determine the urgency of the clinic visit, each parent was asked to check one of the five reasons listed on the data collection instrument (Item 3) for bringing the child to the Pediatric Outpatient Clinic that day. She was also asked if the appointment for the clinic visit had been made within the last 24 hours (Item 4). A note was made on the investigator's time study form if the parent

was a "walk-in" (had not made an appointment). Those parents listed as "walk-ins" or who had made the appointment within the previous 24 hours were carefully screened as to the urgency of the visit. The remainder were considered non-urgent visits.

There were 64 visits classified as urgent and 141 visits classified as non-urgent. Two hundred and five responses were used as one parent stated that since she was 30 minutes early for her appointment, she did not have any waiting time.

The related literature stated that anxiety may be a motivating factor for bringing a sick child to the clinic for care. Anxiety and emotional state can be influential in the way that one perceives time. (5, 7)

The findings regarding under-perception, correct-perception, and over-perception of waiting time in the clinic waiting room were compared to the number of urgent and non-urgent clinic visits.

Statistical analysis showed that there was no difference in the perception of waiting time in the clinic waiting room attributable to the urgency of the clinic visit. Therefore, it is necessary to reject the hypothesis:

that the parent's accuracy of perception of the waiting time in the clinic waiting room will be influenced by the urgency of the clinic visit.

The findings are shown in Table 8.

Table 8. Distribution of 205 responses according to perception of waiting time in a Pediatric Outpatient Clinic waiting room comparing urgent and non-urgent clinic visits.

Perception (1)	Urgent		Non-urgent	
	n (2)	% (3)	n (4)	% (5)
Under	6	9.4	16	11.3
Correct	46	71.9	108	76.7
Over	12	18.7	17	12.0
Total	64	100.0	141	100.0

$$\chi^2 = 1.781 \quad df = 2 \quad P > 0.05$$

The perceptions regarding waiting time in the clinic examining room were then compared to the number of urgent and non-urgent visits.

Again, it is interesting to note that a higher percentage of parents in Table 8 overestimated their waiting time in the clinic waiting room than underestimated the length of waiting time. As shown in Table 9, a higher percentage of parents underestimated their waiting time in the clinic examining rooms than overestimated the length of waiting time. As in the comparisons of educational level and the number of clinic visits, the highest percentage of parents estimated their waiting time correctly in both the waiting room and examining rooms.

Statistical analysis of the data showed that there was no difference in the perception of waiting time in the clinic examining room attributable to the urgency of the clinic visit at the 0.05 level

of significance. Accordingly, it is necessary to reject the hypothesis:

that the parent's accuracy of perception of the waiting time in the clinic examining room will be influenced by the urgency of the clinic visit.

The findings are shown in Table 9.

Table 9. Distribution of 205 responses according to perception of waiting time in a Pediatric Outpatient Clinic's examining rooms comparing urgent and non-urgent clinic visits.

Perception (1)	Urgent		Non-urgent	
	n (2)	% (3)	n (4)	% (5)
Under	20	31.2	53	37.6
Correct	39	61.0	70	49.6
Over	5	7.8	18	12.8
Total	64	100.0	141	100.0

$$\chi^2 = 2.56 \quad df = 2 \quad P > 0.05$$

When computing the actual waiting time for the 206 parents, it was found that the mean waiting time in the clinic waiting room was 12.8 minutes and the mean waiting time in the clinic examining rooms was 18.8 minutes. The total average waiting time from the time the parent checked in at the receptionist desk until the child was seen by a clinic doctor was 31.6 minutes.

The studies related in Chapter II indicated that most patients should be seen by the clinic doctor within 30 minutes. (8, 13, 16, 17, 21) Accordingly, the participants in this study received services consistent with the recommendations of previous studies.

The findings showing the range and mean of minutes spent in the clinic waiting room, examining rooms, total waiting time, and total clinic visit are shown in Table 10.

Table 10. Range and mean of minutes spent in a Pediatric Outpatient Clinic's waiting room and examining room, total waiting time, and total clinic visit.

Time Spent (in minutes) (1)	Range (2)	Mean (3)
Waiting Room	0-70	12.8
Examining Room	0-123	18.8
Total Wait	5-124	31.6
Total Clinic Visit	12-162	68.2

N = 206

One area that the study attempted to explore was how long the parent felt she ought to have to wait before a clinic doctor would see the child (Item 5). The parent was asked to mark one of five time categories listed in 15 minute increments of time.

One hundred twenty-one (58.7%) parents responded that they should be seen by a clinic doctor within 15-30 minutes. Thirty-three (16%) thought that they should be seen within 31-45 minutes. Eighteen (8.8%) marked that it did not matter how long they had to wait. "Whenever it is convenient for the doctor" was the comment written by several parents. The average actual waiting time in the clinic was computed as 31.6 minutes.

Table 11 shows the distribution of 206 responses regarding

how long parents felt they ought to have to wait before a clinic doctor would see a child.

Table 11. Distribution of 206 responses regarding length of time parents felt they ought to wait in the clinic.

Waiting time (in minutes) (1)	n (2)	% (3)
< 15	27	13.1
15-30	121	58.7
31-45	33	16.0
46-60	4	1.9
>60	2	1.0
Doesn't matter	18	8.8
No response	1	0.5
Total	206	100.0

The next question that the study explored was how long the parent felt she usually must wait before a clinic doctor would see the child (Item 6). The participating parent was asked to mark one of five time categories listed in 15 minute increments of time.

Eighty-eight (42.7%) parents thought that they usually waited 15-30 minutes to see a clinic doctor; 47 (22.8%) thought that they usually waited 31-45 minutes.

Table 12 depicts the distribution of 206 responses regarding how long parents felt that they usually had to wait before a clinic doctor would see a child.

The actual time study of the parent's waiting time showed that 27 (13.1%) parents were seen in less than 15 minutes after arriving

Table 12. Distribution of 206 responses regarding how long parents felt they usually had to wait before a doctor saw the child in the clinic.

Waiting time (in minutes) (1)	n (2)	% (3)
< 15	40	19.4
15-30	88	42.7
31-45	47	22.8
46-60	17	8.3
>60	14	6.8
Total	206	100.0

in the clinic. Ninety-eight (47.6%) parents were seen in the 15-30 minute category. Therefore, a total of 60.7% parents were seen within 30 minutes after arrival in the clinic. Only 12 (5.8%) waited over 60 minutes to be seen.

Table 13 shows the distribution of 206 parents' actual waiting time in increments of 15 minutes.

Table 13. Distribution of 206 parents' actual waiting time in a Pediatric Outpatient Clinic.

Waiting time (in minutes) (1)	n (2)	% (3)
< 15	27	13.1
15-30	98	47.6
31-45	45	21.8
46-60	24	11.7
>60	12	5.8
Total	206	100.0

It has been shown that 27 (13.1%) of the parents felt that they should be seen by a clinic doctor in less than 15 minutes after their arrival in the clinic. Forty (19.4%) parents thought that they usually waited less than 15 minutes. The actual time study showed that 27 (13.1%) parents did wait less than 15 minutes to be seen by the clinic doctor.

One hundred and twenty-one (58.7%) parents felt that they should be seen by a clinic doctor in 15-30 minutes after arrival in the clinic. Eighty-eight (42.7%) parents thought that they usually waited 15-30 minutes. The actual time study showed that 98 (47.6%) parents did wait 15-30 minutes to be seen by a clinic doctor.

It was found that 71.8% of the parents felt that they ought to be seen within 30 minutes; 62.1% of the parents thought that they waited 30 minutes or less. The actual time study showed that 60.7% parents were seen within 30 minutes after their arrival in the clinic. It should be noted that the literature recommended a maximum wait of 30 minutes.

Comparisons are shown in Table 14.

The last item (Number 9) was "The amount of time I waited to see a doctor today was longer, shorter, or about what I expected."

Twenty-eight (13.6%) parents waited a longer time than they had expected; 100 (48.6%) parents waited a shorter time than they had expected; and 78 (37.8%) waited about the amount of time they

Table 14. Comparison of 206 responses regarding time parents felt they ought to be seen, time they usually wait, and actual waiting time in a Pediatric Outpatient Clinic.

Waiting time (in minutes)	Ought to be seen		Usually wait		Actual wait	
	n	%	n	%	n	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
< 15	27	13.1	40	19.4	27	13.1
15-30	121	58.7	88	42.7	98	47.6
31-45	33	16.0	47	22.8	45	21.8
46-60	4	1.9	17	8.3	24	11.7
>60	2	1.0	14	6.8	12	5.8
Doesn't matter	18	8.8	0	0	0	0
No response	1	0.5	0	0	0	0
Total	206	100.0	206	100.0	206	100.0

had expected.

Table 15 shows the distribution of responses.

Table 15. Distribution of 206 responses regarding length of waiting time in a Pediatric Outpatient Clinic on the day of data collection.

I waited:	n	%
(1)	(2)	(3)
longer than expected	28	13.6
shorter than expected	100	48.6
what I expected	78	37.8
Total	206	100.0

Summary

The analysis of the data showed that there was no significant difference in the parent's perception of the length of waiting time in the Pediatric Outpatient Clinic waiting room and actual waiting time.

The only significant finding was that there was a difference in the parent's perception of the length of waiting time in the Pediatric Outpatient Clinic examining room and the actual waiting time.

Using the three variables of educational level of the parent, number of clinic visits, and urgency of the clinic visit, no significant differences could be found in the parent's perceived waiting time and actual waiting time in either the clinic waiting room or the examining rooms.

It was interesting to note that a higher percentage of parents overestimated rather than underestimated the length of waiting time in the clinic waiting room. A higher percentage of parents underestimated rather than overestimated the length of waiting time in the clinic examining rooms. However, the majority of parents did perceive the length of their waiting time in the Pediatric Outpatient Clinic correctly in both the clinic waiting room and the examining rooms.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The primary purpose of this study was to investigate parents' perception of waiting time in a selected Pediatric Outpatient Clinic and then make a comparison to the actual amount of time the parents waited to see a clinic doctor. The general hypothesis of the study stated that there is a significant difference in the actual waiting time and the parent's perception of the length of the waiting time.

Waiting time was defined as the period of time waited by the parent and child from the time they reported to the receptionist in the Pediatric Outpatient Clinic until the time the patient was initially seen by a clinic doctor.

Three factors were thought to influence the parent's perception of the length of waiting time: (1) educational level of the parent; (2) number of clinic visits made by the parent; (3) urgency of the clinic visit. The hypotheses were applied to waiting time in the clinic waiting room and examining rooms separately to explore any differences of perception in these two areas.

The study was done in the University of Oregon Medical School

Pediatric Outpatient Clinic for a two-week period. A random sample of parents bringing children to the clinic was taken. A time study (Appendix B) was done on each participating parent. At the conclusion of the clinic visit, the parent filled out a data collection form (Appendix A).

Findings

The findings are summarized as follows:

1. There was no significant difference in the parent's perception of the length of waiting time in the clinic waiting room and actual waiting time.
2. There was a significant difference in the parent's perception of the length of waiting time in the clinic examining rooms and actual waiting time.
3. Using the three variables of educational level of the parent, number of clinic visits, urgency of the clinic visit, no significant differences were found in the parent's perceived time and actual waiting time in either the clinic waiting room or examining rooms.
4. The majority of parents did perceive the length of waiting time correctly in both the clinic waiting room and examining rooms.
5. A higher percentage of parents overestimated rather than

underestimated the length of waiting time in the clinic waiting room.

6. A higher percentage of parents underestimated rather than overestimated the length of waiting time in the clinic examining rooms.

Conclusions

The following conclusions are derived from the data collected from the study:

1. The average waiting time of 31.6 minutes was essentially consistent with what the literature suggests and what most of the parents expected.
2. The findings of this study seem to negate the most common complaint expressed by the parents, namely that they had "to wait too long" in the Pediatric Outpatient Clinic.
3. Educational level of the parent, number of clinic visits made by the parent, and urgency of the clinic visit have no effect on the parent's perception of waiting time.

Recommendations for Further Study

Based on the findings of this study, the following studies are recommended:

1. Make a study, using similar data collection forms, in other

clinics (e. g. , Medicine, Surgery, Orthopedics) where the system of appointments differs. Have patients, rather than parents, involved as participants.

2. Replicate the study in the Pediatric Outpatient clinic using other variables such as the effect of the patient being seen by a medical student versus a staff doctor; specialty clinics versus general clinics; distance travelled to the clinic (those who come from other parts of the state might have different perceptions of waiting time than those who live nearer the medical school).
3. Perform a study of how waiting time could be used effectively for both the parent and child. Such a study might well involve experimentation to the extent of determining what activities have the greatest appeal.

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APPENDICES

APPENDIX A

INSTRUMENT FOR DATA COLLECTION

1. CIRCLE your highest school grade completed:
1 2 3 4 5 6 7 8 9 10 11 12 over 12
2. CIRCLE the approximate number of visits that you have made to the Pediatric Clinic in the last year:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 more

CHECK ONE ANSWER FOR EACH OF THE FOLLOWING STATEMENTS.

3. The reason for bringing my child for care today was
- he has been sick for a few days. _____
 - to have a return check-up for a recent illness. _____
 - to have blood tests, x-rays, or shots. _____
 - for a routine check-up. _____
 - to attend a special clinic. _____
 - other reason: _____
4. Was your appointment made within the last 24 hours?
- yes _____
 - no _____
5. After arriving in the Pediatric Clinic, I think that a doctor ought to see my child within
- less than 15 minutes _____
 - 15-30 minutes _____
 - 31-45 minutes _____
 - 46-60 minutes _____
 - over 60 minutes _____
 - it doesn't matter _____

6. Before a doctor in the Pediatric Clinic sees my child,
I usually have to wait
- less than 15 minutes _____
15-30 minutes _____
31-45 minutes _____
46-60 minutes _____
over 60 minutes _____
7. I guess that I waited in the Pediatric waiting room today about
- less than 15 minutes _____
15-30 minutes _____
31-45 minutes _____
46-60 minutes _____
over 60 minutes _____
8. Before the doctor came into the examining room today,
I guess that I waited about
- less than 15 minutes _____
15-30 minutes _____
31-45 minutes _____
46-60 minutes _____
over 60 minutes _____
9. The amount of time I waited to see a doctor today was
- longer than I expected _____
about what I expected _____
shorter than I expected _____
10. Any comments may be written on the back of this sheet.

APPENDIX B

FORM FOR TIME STUDY

TIME OF APPT	_____	NO.	_____
TIME ARRIVED	_____		
TIME TO EXAM ROOM	_____	ROOM	_____
TIME SEEN BY DR.	_____		
TIME DISMISSED	_____	CLINIC	_____
		DATE	_____
Chart			
yes	_____		
no	_____		
Seen by			
Res	_____		
Int	_____		
Med St.	_____		
MD	_____		

APPENDIX C

SUMMARY OF DATA

Actual Waiting Time

Date	Day	#	Wait Room	Exam Room	Total Wait Time	Total Visit
9/13	Tuesday	20	204	456	660	1195
9/14	Wednesday	22	360	384	744	1442
9/15	Thursday	26	309	481	790	1580
9/16	Friday	21	288	418	706	1223
9/19	Monday	19	247	552	807	1370
9/20	Tuesday	20	201	446	647	1535
9/21	Wednesday	22	367	375	742	1874
9/22	Thursday	22	367	293	667	1608
9/23	Friday	20	197	291	488	1188
9/26	Monday	<u>14</u>	<u>93</u>	<u>172</u>	<u>265</u>	<u>1002</u>
	Total	206	2633	3868	6516	14017
	\bar{X}		12.8	18.8	31.6	68.2
	Range		0-70	0-123	5-124	12-162

5. After arriving in the Pediatric Clinic, I think that a doctor ought to see my child within

less than 15 minutes	<u>27</u>
15-30 minutes	<u>121</u>
31-45 minutes	<u>33</u>
46-60 minutes	<u>4</u>
over 60 minutes	<u>2</u>
it doesn't matter	<u>18</u>
No response	<u>1</u>

6. Before a doctor in the Pediatric Clinic sees my child, I usually have to wait

less than 15 minutes	<u>40</u>
15-30 minutes	<u>88</u>
31-45 minutes	<u>47</u>
46-60 minutes	<u>17</u>
over 60 minutes	<u>14</u>

7. I guess that I waiting in the Pediatric waiting room today about

		<u>Actual</u>
less than 15 minutes	<u>134</u>	<u>134</u>
15-30 minutes	<u>48</u>	<u>59</u>
31-45 minutes	<u>11</u>	<u>8</u>
46-60 minutes	<u>7</u>	<u>3</u>
over 60 minutes	<u>6</u>	<u>2</u>

8. Before the doctor came into the examining room today, I guess that I waited about

		<u>Actual</u>
less than 15 minutes	<u>132</u>	<u>98</u>
15-30 minutes	<u>50</u>	<u>75</u>
31-45 minutes	<u>13</u>	<u>17</u>
46-60 minutes	<u>6</u>	<u>12</u>
over 60 minutes	<u>5</u>	<u>4</u>

9. The amount of time I waited to see a doctor today was

longer than I expected	<u>28</u>
about what I expected	<u>100</u>
shorter than I expected	<u>78</u>

Highest School Grade Completed

	1-6	7-9	10-12	>12
<u>Waiting Room</u>				
Under	0	3	16	3
Correct	3	19	103	28
Over	1	7	17	4
No Response	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>
Total	4	30	136	35
<u>Examining Room</u>				
Under	1	10	46	15
Correct	2	16	75	16
Over	1	3	13	4
No Response	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>
Total	4	30	136	35

Number of Clinic Visits

	1-5	6-10	11-15	>15
<u>Waiting Room</u>				
Under	10	3	4	7
Correct	73	32	28	20
Over	13	3	8	4
No Response	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	97	38	40	31
<u>Examining Room</u>				
Under	36	13	11	11
Correct	48	18	24	19
Over	12	7	5	1
No Response	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	97	38	40	31

Urgent and Non-urgent Clinic Visits

	Urgent	Non-urgent
<hr/>		
<u>Waiting Room</u>		
Under	6	16
Correct	46	108
Over	12	17
No Response	<u>0</u>	<u>1</u>
Total	64	142
<u>Examining Room</u>		
Under	20	53
Correct	39	70
Over	5	18
No Response	<u>0</u>	<u>1</u>
Total	64	142

APPENDIX D

RAW DATA

Tuesday 9/13/66
20 patients

PT.	Time Study				#1 School Grade	#2 No Peds Visits	#3 Reason	#4 Appt last 24 hr.	#5 Dr. should see	#6 Usual wait	Perceived			#9
	Waiting Rooms	Exam Room	Total Waiting Time	Total Visit							#7 Waiting Room	#8 Exam Room	#9	
1	10	35	45	110	12	2	NU	no	15-30	<15	<15	<15	S	
2	20	15	35	55	12	2	NU	no	<15	15-30	<15	15-30	S	
3	10	15	25	45	12	8	NU	no	15-30	31-45	<15	<15	S	
4	25	20	45	85	12	3	NU	no	15-30	15-30	15-30	15-30	E	
5	2	23	25	80	>12	15	NU	no	15-30	15-30	<15	15-30	S	
6	2	33	35	45	8	>15	Urg	yes	15-30	15-30	<15	<15	S	
7	45	55	100	115	12	1	Urg	yes*	15-30	31-45	31-45	15-30	L	
8	20	5	25	45	>12	4	NU	no	15-30	<15	15-30	<15	S	
9	10	15	25	35	12	15	NU	no	31-45	>60	15-30	<15	S	
10	1	9	10	45	11	>15	Urg	yes	31-45	31-45	<15	<15	E	
11	1	9	10	35	11	4	Urg	yes	15-30	46-60	<15	<15	S	
12	15	10	25	40	11	>15	Urg	yes*	dM	15-30	15-30	<15	S	
13	10	10	20	35	9	>15	NU	no	31-45	15-30	<15	<15	S	
14	5	50	55	75	>12	5	NU	no	15-30	31-45	<15	31-45	E	
15	2	43	45	95	8	11	NU	no	15-30	31-45	46-60	46-60	E	
16	5	55	60	80	10	12	NU	no	31-45	46-60	<15	46-60	S	
17	3	17	20	50	8	4	NU	no	31-45	31-45	<15	<15	S	
18	5	5	10	35	>12	4	NU	no	31-45	<15	<15	<15	S	
19	10	10	20	50	10	7	Urg	yes	15-30	15-30	<15	15-30	S	
20	3	22	25	40	12	8	NU	no	15-30	15-30	<15	<15	S	
	204	456	660	1195										

NU Non-urgent S Shorter
Urg Urgent L Longer
* Walk-in E Expected

Wednesday 9/14/66
22 patients

PT.	Time Study										Perceived			#9
	Waiting Rooms	Exam Room	Total Waiting Time	Total Visit	#1 School Grade	#2 No Peds Visits	#3 Reason	#4 Appt. last 24 hr.	#5 Dr. Should see	#6 Usual wait	#7 Waiting Room	#8 Exam Room		
1	15	50	65	85	8	5	NU	no	31-45	15-30	46-60	46-60	E	
2	15	10	25	40	12	15	NU	no	15-30	46-60	15-30	<15	S	
3	25	20	45	95	10	4	NU	no	15-30	31-45	<15	<15	S	
4	20	33	53	116	9	>15	NU	no	15-30	31-45	<15	15-30	L	
5	5	10	15	35	10	12	Urg	yes	15-30	<15	<15	<15	S	
6	10	10	20	50	12	10	NU	no	15-30	<15	<15	15-30	E	
7	25	5	30	65	10	3	Urg	yes	31-45	15-30	15-30	<15	S	
8	33	5	38	51	>12	13	Urg	yes	15-30	15-30	31-45	31-45	E	
9	15	40	55	90	NR	4	NU	no	15-30	15-30	15-30	15-30	E	
10	20	40	60	65	12	6	NU	no	15-30	31-45	31-45	15-30	L	
11	15	25	40	80	>12	15	NU	no	15-30	15-30	<15	<15	E	
12	30	5	35	50	12	3	NU	no	15-30	15-30	15-30	<15	E	
13	10	20	30	135	12	15	Urg	yes	15-30	31-45	<60	15-30	L	
14	5	25	30	50	8	3	NU	no	<15	>60	<15	<15	S	
15	20	35	55	80	11	5	NU	no	15-30	31-45	<15	31-45	E	
16	7	6	13	25	12	4	NU	no	46-60	>60	<15	<15	E	
17	10	15	25	35	11	5	NU	no*	31-45	<15	15-30	15-30	S	
18	30	5	35	90	8	15	NU	no	<15	15-30	15-30	<15	L	
19	20	0	20	45	11	>15	Urg	yes	<15	15-30	15-30	<15	L	
20	5	15	20	50	7	15	Urg	yes	31-45	31-45	<15	<15	S	
21	10	5	15	60	12	15	NU	no	15-30	31-45	<15	<15	S	
22	15	5	20	50	10	8	Urg	yes	<15	15-30	<15	<15	S	
	360	384	744	1442										

NU Non-urgent S Shorter
Urg Urgent L Longer
* Walk-in E Expected

Thursday 9/15/66
26 patients

PT.	Time Study				#1 School Grade	#2 No Peds Visits	#3 Reason	#4 Appt. last 24 hr.	#5 Dr. should see	#6 Usual wait	Perceived		#9
	Waiting Rooms	Exam Room	Total Waiting Time	Total Visit							#7 Waiting Room	#8 Exam Room	
1	12	18	30	60	>12	>15	NU	no	15-30	15-30	<15	<15	E
2	10	15	25	35	12	2	NU	no	<15	<15	<15	<15	S
3	2	10	12	92	11	10	NU	no	15-30	<15	<15	15-30	E
4	20	10	30	55	9	>15	NU	no	>60	15-30	<15	<15	E
5	7	18	25	55	>12	4	Urg	yes	15-30	15-30	<15	<15	S
6	25	20	45	110	>12	>15	NU	no	15-30	46-60	15-30	15-30	E
7	18	22	40	65	11	15	NU	yes	15-30	15-30	15-30	15-30	E
8	20	30	50	70	>12	2	Urg	yes*	15-30	46-60	46-60	15-30	E
9	5	23	28	65	12	12	Urg	yes*	15-30	>60	31-45	15-30	L
10	5	55	60	110	10	>15	Urg	yes*	15-30	31-45	15-30	46-60	E
11	15	15	30	50	12	3	Urg	yes	15-30	15-30	15-30	15-30	L
12	5	20	25	55	8	15	Urg	yes	<15	31-45	<15	<15	E
13	20	10	30	70	7	2	NU	no	15-30	>60	15-30	15-30	S
14	20	18	38	60	>12	3	NU	no	15-30	15-30	15-30	<15	E
15	15	35	50	60	11	15	Urg	yes*	46-60	>60	15-30	15-30	S
16	5	30	35	55	12	4	NU	yes	15-30	<15	<15	31-45	E
17	30	25	55	105	11	8	NU	no	15-30	15-30	15-30	<15	E
18	5	10	15	40	>12	1	NU	no	<15	<15	<15	<15	E
19	5	15	20	45	12	3	NU	no	15-30	46-60	<15	<15	S
20	5	5	10	13	12	>15	NU	no	15-30	15-30	<15	<15	S
21	15	17	32	60	10	>15	NU	no	31-45	15-30	<15	<15	E
22	10	10	20	40	12	2	NU	no	31-45	<15	<15	<15	S
23	5	20	25	60	12	8	NU	no	15-30	31-45	<15	15-30	E
24	10	5	15	35	10	3	NU	no	15-30	<15	<15	<15	S
25	10	10	20	70	12	2	NU	no	dM	15-30	15-30	<15	L
26	10	15	25	45	12	1	NU	no	15-30	15-30	<15	15-30	E
	309	481	790	1580									

NU Non-urgent S Shorter
Urg Urgent L Longer
* Walk-in E Expected

Friday 9/16/66
21 patients

PT.	Time Study										Perceived			#9
	Waiting Rooms	Exam Room	Total Waiting Time	Total Visit	#1 School Grade	#2 No Peds Visits	#3 Reason	#4 Appt. last 24 hr.	#5 Dr. should see	#6 Usual wait	#7 Waiting Room	#8 Exam Room		
1	13	12	25	45	11	2	NU	no	15-30	<15	<15	<15	E	
2	5	10	15	50	12	>15	Urg	yes	15-30	15-30	<15	<15	S	
3	6	14	20	40	>12	6	NU	no	15-30	15-30	<15	<15	E	
4	15	10	25	55	10	1	Urg	yes	15-30	46-60	<15	<15	S	
5	15	10	25	40	12	3	Urg	yes	15-30	46-60	<15	<15	S	
6	15	5	20	40	>12	6	NU	no	dM	15-30	<15	<15	S	
7	25	20	45	60	11	>15	NU	no	15-30	15-30	<15	<15	E	
8	5	50	55	65	12	6	NU	yes	15-30	31-45	<15	31-45	S	
9	45	9	54	71	10	12	Urg	yes	31-45	31-45	46-60	<15	E	
10	25	17	42	60	>12	6	Urg	yes	31-45	46-60	15-30	<15	S	
11	5	10	15	45	9	>15	NU	yes	<15	15-30	15-30	<15	S	
12	15	15	30	54	12	3	NU	no	31-45	31-45	<15	<15	S	
13	17	19	36	126	>12	4	NU	no	<15	<15	<15	<15	E	
14	5	25	30	55	11	6	NU	no	15-30	<15	<15	<15	E	
15	50	10	60	80	12	12	NU	yes	31-45	46-60	46-60	<15	L	
16	8	27	35	55	11	15	NU	no	dM	15-30	<15	15-30	E	
17	5	10	15	25	10	3	Urg	yes	15-30	<15	<15	<15	S	
18	5	55	60	85	12	2	NU	no	15-30	15-30	<15	>60	L	
19	2	43	45	55	>12	2	Urg	yes	15-30	15-30	<15	15-30	E	
20	5	9	14	62	12	12	Urg	yes	15-30	31-45	<15	<15	S	
21	2	38	40	55	12	>15	Urg	yes	15-30	31-45	15-30	31-45	E	
	<u>288</u>	<u>418</u>	<u>706</u>	<u>1223</u>										

NU Non-urgent S Shorter
Urg Urgent L Longer
* Walk-in E Expected

Monday 9/19/66
19 patients

PT.	Time Study										Perceived			#9
	Waiting Rooms		Exam Room	Total Waiting Time	Total Visit	#1 School Grade	#2 No Peds Visits	#3 Reason	#4 Appt. last 24 hr.	#5 Dr. should see	#6 Usual wait	#7 Waiting Room	#8 Exam Room	
1	1		123	124	140	10	4	NU	no	31-45	31-45	<15	>60	L
2	5		68	73	103	11	4	Urg	yes	15-30	31-45	<15	31-45	E
3	7		23	30	45	12	3	Urg	yes	15-30	<15	<15	<15	E
4	5		10	15	50	12	6	NU	no	15-30	15-30	<15	<15	E
5	5		80	85	115	10	2	NU	no	31-45	15-30	<15	31-45	E
6	2		3	5	12	12	>15	Urg	yes	15-30	<15	<15	<15	S
7	20		45	65	90	11	3	NU	no	15-30	15-30	<15	>60	L
8	75		30	105	140	12	12	Urg	yes	15-30	31-45	>60	15-30	L
9	4		41	45	75	12	4	NU	no	<15	<15	<15	<15	E
10	9		11	20	40	12	3	NU	no	<15	<15	<15	<15	S
11	7		23	30	95	9	3	Urg	yes	31-45	15-30	<15	15-30	S
12	10		15	25	150	10	5	NU	no	15-30	<15	<15	<15	E
13	8		32	40	50	11	3	NU	no	15-30	46-60	<15	<15	S
14	20		7	27	50	12	15	NU	no	31-45	31-45	15-30	<15	S
15	1		19	20	45	5	>15	NU	no	31-45	46-60	<15	<15	S
16	15		10	25	40	11	>15	NU	no	31-45	46-60	<15	<15	S
17	35		0	35	47	8	3	NU	no	15-30	31-45	<15	<15	S
18	8		15	23	38	11	10	Urg	yes	<15	15-30	<15	<15	S
19	10		5	15	45	11	4	Urg	yes	<15	15-30	<15	<15	S
	247		552	807	1370									E

NU Non-urgent S Shorter
Urg Urgent L Longer
* Walk-in E Expected

Tuesday 9/20/66
20 patients

PT.	Time Study										#9		
	Waiting Rooms	Exam Room	Total Waiting Time	Total Visit	#1 School Grade	#2 No Peds Visits	#3 Reason	#4 Appt. last 24 hr.	#5 Dr. should see	#6 Usual wait		#7 Waiting Room	#8 Exam Room
1	5	30	35	60	11	2	NU	no	31-45	>60	<15	15-30	S
2	10	10	20	50	12	12	NU	no	<15	<15	<15	<15	E
3	10	60	70	85	12	5	Urg	yes	15-30	>60	15-30	31-45	L
4	6	14	20	55	10	5	NU	no	15-30	15-30	<15	15-30	E
5	6	14	20	105	10	2	NU	no	15-30	15-30	<15	15-30	E
6	10	45	55	85	>12	3	NU	no	15-30	15-30	<15	15-30	E
7	25	30	55	80	11	12	NU	no	dM	<15	15-30	<15	E
8	10	15	25	40	12	6	NU	no	31-45	15-30	<15	<15	E
9	13	47	60	100	10	14	NU	no	15-30	15-30	15-30	15-30	E
10	30	20	50	85	12	>15	NU	no	dM	15-30	31-45	15-30	E
11	10	15	25	45	11	1	NU	yes	15-30	15-30	<15	<15	S
12	25	45	70	85	11	12	Urg	yes	15-30	15-30	<15	15-30	S
13	5	10	15	35	>12	6	Urg	yes*	15-30	15-30	<15	<15	S
14	5	27	32	85	>12	>15	Urg	yes	31-45	31-45	15-30	<15	S
15	2	28	30	55	10	4	NU	no	15-30	31-45	<15	15-30	E
16	2	13	15	115	11	12	Urg	yes	<15	15-30	<15	<15	E
17	15	5	20	83	8	3	NU	no	dM	46-60	31-45	<15	E
18	1	12	13	83	12	2	Urg	yes	15-30	15-30	<15	<15	S
19	0	5	5	125	10	7	Urg	yes	dM	15-30	<15	<15	S
20	11	1	12	79	10	2	Urg	yes	dM	<15	<15	<15	S
	201	446	647	1535									

NU Non-urgent S Shorter
Urg Urgent L Longer
* Walk-in E Expected

Wednesday 9/21/66
22 patients

PT.	Time Study				#1 School Grade	#2 No Peds Visits	#3 Reason	#4 Appt last 24 hr.	#5 Dr. should see	#6 Usual wait	Perceived		#9
	Waiting Rooms	Exam Room	Total Waiting Time	Total Visit							#7 Waiting Room	#8 Exam Room	
1	48	10	58	88	>12	2	NU	no	NR	<15	46-60	15-30	L
2	15	20	35	140	>12	3	NU	no	dM	15-30	15-30	<15	S
3	1	4	5	65	12	>15	NU	no	dM	<15	<15	<15	E
4	1	6	7	112	>12	>15	Urg	yes	15-30	31-45	<15	<15	S
5	5	5	10	35	11	15	Urg	yes	31-45	15-30	<15	<15	S
6	5	0	5	65	3	5	NU	no	15-30	31-45	<15	<15	S
7	25	15	40	65	10	6	NU	no	15-30	15-30	15-30	<15	L
8	15	0	15	65	12	2	NU	no	31-45	15-30	15-30	<15	S
9	50	5	55	90	12	15	NU	yes	15-30	31-45	31-45	<15	L
10	10	10	20	65	11	2	Urg	yes	15-30	31-45	15-30	<15	S
11	25	15	40	65	12	>15	NU	no	15-30	15-30	15-30	<15	E
12	30	10	40	75	9	6	Urg	yes	31-45	15-30	15-30	<15	E
13	5	70	75	135	7	13	Urg S	yes	15-30	15-30	<15	<15	E
14	7	58	65	170	9	>15	NU	no	15-30	>60	<15	31-45	E
15	8	27	35	70	12	2	NU	no	15-30	31-45	<15	31-45	E
16	15	5	20	27	11	12	NU	no	<15	31-45	<15	46-60	L
17	2	30	32	162	11	11	NU	no	15-30	31-45	31-45	<15	S
18	5	30	35	100	9	2	NU	no	dM	31-45	<15	>60	L
19	45	5	50	70	9	1	NU	no	15-30	>60	>60	<15	E
20	5	20	25	50	11	8	NU	no	<15	46-60	<15	<15	S
21	45	20	65	135	11	6	NU	no	15-30	>60	31-45	15-30	E
22	0	10	10	25	8	10	NU	no	46-60	31-45	<15	<15	S
	367	375	742	1874									

NU Non-urgent S Shorter
Urg Urgent L Longer
* Walk-in E Expected

Thursday 9/22/66
22 patients

PT.	Time Study										Perceived			#9
	Waiting Rooms	Exam Room	Total Waiting Time	Total Visit	#1 School Grade	#2 No Peds Visits	#3 Reason	#4 Appt. last 24 hr	#5 Dr. should see	#6 Usual wait	#7 Waiting Room	#8 Exam Room		
1	1	14	15	55	12	4	NU	no	15-30	15-30	<15	<15	S	
2	70	5	75	95	12	9	NU	no	31-45	>60	>60	<15	S	
3	17	35	52	78	10	12	NU	no	31-45	15-30	15-30	15-30	E	
4	15	5	20	70	12	5	Urg	yes	15-30	15-30	<15	<15	S	
5	1	7	8	30	10	8	NU	no	15-30	15-30	<15	<15	S	
6	5	10	15	45	>12	9	Urg	yes	15-30	15-30	<15	<15	E	
7	23	27	50	65	10	>15	Urg	yes	<15	15-30	<15	<15	S	
8	10	30	40	95	12	5	NU	no	15-30	15-30	<15	15-30	E	
9	17	28	45	55	12	4	NU	no	15-30	15-30	15-30	<15	S	
10	8	7	15	80	12	>15	NU	no	15-30	15-30	<15	<15	E	
11	5	20	25	75	5	9	Urg	yes	dM	<15	<15	15-30	L	
12	10	0	10	80	11	4	NU	no	15-30	15-30	<15	<15	E	
13	8	7	15	50	12	4	Urg	yes	31-45	31-45	15-30	15-30	E	
14	7	18	25	55	10	3	NU	no	31-45	15-30	<15	<15	S	
15	10	20	30	60	11	11	NU	no	15-30	<15	<15	<15	E	
16	7	3	10	60	12	2	NU	no	<15	<15	<15	<15	S	
17	15	10	25	75	12	3	NU	no	15-30	31-45	15-30	<15	S	
18	30	15	45	95	11	9	NU	no	15-30	15-30	15-30	<15	E	
19	30	2	32	85	>12	1	NU	no	15-30	46-60	15-30	<15	S	
20	30	5	35	115	>12	3	NU	no	15-30	31-45	31-45	<15	L	
21	30	10	40	90	12	2	NU	no	15-30	>60	>60	<15	S	
22	25	15	40	100	10	10	NU	no	15-30	31-45	46-60	46-60	L	
	367	293	667	1608										

NU Non-urgent S Shorter
Urg Urgent L Longer
* Walk-in E Expected

Friday 9/23/66
20 patients

PT.	Time Study				#1 School Grade	#2 No Visits	#3 Reason	#4 Appt. last 24 hr.	#5 Dr. should see	#6 Usual wait	Perceived			#9
	Waiting Rooms	Exam Room	Total Waiting Time	Total Visit							#7 Waiting Room	#8 Exam Room	#9	
1	15	46	61	115	8	8	NU	no	dM	<15	<15	15-30	S	
2	3	37	40	55	12	1	NU	no	15-30	15-30	<15	15-30	S	
3	11	25	36	86	12	5	NU	no	15-30	15-30	<15	15-30	S	
4	10	20	30	75	12	2	NU	no	<15	<15	<15	<15	S	
5	15	7	22	50	11	12	Urg	yes	<15	15-30	<15	<15	S	
6	40	5	45	65	>12	6	NU	no	15-30	46-60	31-45	15-30	E	
7	7	13	20	80	>12	2	NU	no	<15	<15	<15	15-30	E	
8	6	9	15	25	8	4	NU	no	>60	15-30	15-30	<15	S	
9	10	2	12	75	5	6	NU	no	<15	15-30	15-30	31-45	L	
10	5	2	7	85	12	12	NU	no	<15	31-45	<15	<15	L	
11	8	2	10	57	12	10	NU	no	dM	15-30	<15	<15	S	
12	15	15	30	55	>12	4	NU	no	15-30	<15	15-30	<15	L	
13	25	15	40	70	12	2	NU	no	15-30	<15	<15	<15	S	
14	5	15	20	40	12	>15	NU	no	15-30	15-30	<15	<15	S	
15	5	35	40	90	10	13	NU	no	15-30	>60	>60	>60	L	
16	5	10	15	30	12	2	NU	no	<15	<15	<15	<15	S	
17	5	10	15	30	9	2	NU	no	31-45	15-30	<15	<15	S	
18	1	4	5	25	10	4	NU	no	dM	31-45	<15	<15	S	
19	5	10	15	30	>12	>15	NU	no	15-30	15-30	<15	<15	E	
20	1	9	10	50	8	12	NU	no	<15	31-45	<15	<15	S	
	197	291	488	1188										

NU Non-urgent S Shorter
Urg Urgent L Longer
* Walk-in E Expected

Monday 9/26/66
14 patients

PT.	Time Study										Perceived			#9
	Waiting Rooms		Exam Room	Total Waiting Time	Total Visit	#1 School Grade	#2 No Peds Visits	#3 Reason	#4 Appt. last 24 hr.	#5 Dr. should see	#6 Usual wait	#7 Waiting Room	#8 Exam Room	
1	1	14	15	40	12	10	NU	no	15-30	31-45	<15	<15	E	
2	6	19	25	70	11	4	NU	no	15-30	<15	<15	<15	E	
3	10	0	10	20	10	12	Urg	yes	46-60	15-30	<15	15-30	S	
4	5	5	10	95	12	3	Urg	yes	15-30	31-45	<15	15-30	S	
5	18	7	25	135	12	8	NU	no	15-30	31-45	15-30	15-30	L	
6	5	10	15	70	9	>15	NU	no	15-30	<15	<15	15-30	E	
7	10	5	15	127	>12	4	Urg	yes	15-30	15-30	<15	<15	E	
8	5	5	10	70	8	6	Urg	yes	15-30	15-30	<15	<15	S	
9	5	10	15	70	9	12	Urg	yes	15-30	15-30	<15	<15	S	
10	5	20	25	70	12	4	Urg	yes*	15-30	15-30	<15	<15	S	
11	3	22	25	55	>12	1	NU	no	15-30	<15	<15	<15	S	
12	5	20	25	50	10	3	NU	no	dM	<15	<15	<15	S	
13	5	20	25	65	11	1	Urg	yes	dM	<15	<15	15	E	
14	10	15	25	65	7	13	Urg	yes	31-45	15-30	15-30	15-30	S	
	93	172	265	1002										

NU Non-urgent S Shorter
Urg Urgent L Longer
* Walk-in E Expected

Typed by Barbara Glenn

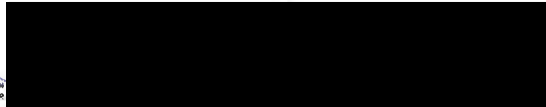
AN ABSTRACT OF THE THESIS OF

MARY SUE KING KIRK

For the MASTER OF SCIENCE in NURSING EDUCATION

Date of receiving this degree: June 6, 1968

Title: A STUDY OF TWO HUNDRED AND SIX PARENTS'
PERCEPTION OF WAITING TIME IN A SELECTED
PEDIATRIC OUTPATIENT CLINIC

Approved: 

(Associate Professor in Charge of Thesis)

ABSTRACT

The primary purpose of this study was to investigate parents' perception of waiting time in a selected Pediatric Outpatient Clinic and then make a comparison to the actual amount of time the parents waited to see a clinic doctor.

The study was limited to 206 parents bringing children to the University of Oregon Medical School Pediatric Outpatient Clinic.

Information was obtained by the use of a time study done by the investigator and a form completed by the parent at the conclusion of the clinic visit.

Waiting time was defined as the period of time waited by the parent and child from the time they reported to the Pediatric Outpatient Clinic receptionist until the time the patient was initially seen by a clinic doctor.

1. Findings

The findings are summarized as follows:

1. There was no significant difference in the parent's perception of the length of waiting time in the clinic waiting room and actual waiting time.
2. There was a significant difference in the parent's perception

of the length of waiting time in the clinic examining rooms and actual waiting time.

3. Using the three variables of educational level of the parent, number of clinic visits, urgency of the clinic visit, no significant differences were found in the parent's perceived time and actual waiting time in either the clinic waiting room or examining rooms.
4. The majority of parents did perceive the length of waiting time correctly in both the clinic waiting room and examining rooms.
5. A higher percentage of parents overestimated rather than underestimated the length of waiting time in the clinic waiting room.
6. A higher percentage of parents underestimated rather than overestimated the length of waiting time in the clinic examining rooms.

2. Conclusions

The following conclusions are derived from the data collected from the study:

1. The average waiting time of 31.6 minutes was essentially consistent with what the literature suggests and what most of the parents expected.

- 2.. The findings of this study seem to negate the most common complaint expressed by the parents, namely that they had "to wait too long" in the Pediatric Outpatient Clinic.
3. Educational level of the parent, number of clinic visits made by the parent, and urgency of the clinic visit had no effect on the parent's perception of waiting time.

3. Recommendations for Further Study

Based on the findings of this study, the following studies are recommended:

1. Make a study, using similar data collection forms, in other clinics (e. g. , Medicine, Surgery, Orthopedics) where the system of appointments differs. Have patients, rather than parents, involved as participants.
2. Replicate the study in the Pediatric Outpatient Clinic using other variables such as the effect of the patient being seen by a medical student versus a staff doctor; specialty clinics versus general clinics; distance travelled to the clinic (those who come from other parts of the state might have different perceptions of waiting time than those who live nearer the medical school).
3. Perform a study of how waiting time could be used effectively for both the parent and child. Such a study might well involve experimentation to the extent of determining what activities have the greatest appeal.