



1979

## Interview Intake Procedures: A Client Satisfaction and Cost-Effectiveness Evaluation

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INTERVIEW INTAKE PROCEDURES: A CLIENT  
SATISFACTION AND COST-EFFECTIVENESS EVALUATION

by

Elicia J. Herz

A Thesis Submitted to the Faculty of the Graduate School  
of Loyola University of Chicago in Partial Fulfillment  
of the Requirements for the Degree of  
Master of Arts

April

1979

#### ACKNOWLEDGMENTS

I am indebted and grateful to Dr. Emil Posavac and Dr. John Edwards for their time, and for the helpful comments and suggestions they offered during the writing of this manuscript.

## VITA

The author, Elicia J. Herz, was born February 21, 1954, in Kansas City, Missouri.

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## TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS . . . . .	ii
VITA . . . . .	iii
LIST OF TABLES . . . . .	iv
LIST OF ILLUSTRATIONS . . . . .	vi
CONTENTS FOR APPENDICES . . . . .	vii
INTRODUCTION . . . . .	1
Client Satisfaction and Health Care Evaluation . . . . .	1
Influence of Expectations on Client Satisfaction . . . . .	8
The Validity of Positive Consumer Evaluation of Health Care . . . . .	10
Application of Results to Present Patient Satisfaction Evaluation . . . . .	13
Other Indices of Quality of Care: Cost- Effectiveness Analyses . . . . .	17
Client Satisfaction, Cost-Effectiveness, and the Present Evaluation Study . . . . .	20
Research Site: Description of the Clinic Operation and Clientele . . . . .	21
Overview and Purpose of the Project . . . . .	23
METHOD . . . . .	26
Selection of Participants: The Client Satisfaction Assessment . . . . .	26
RESULTS . . . . .	28
The Two Intake Procedures and Patient Satisfaction . . . . .	28
Open-ended comments . . . . .	29
Expectations, Satisfaction and the Two Intake Procedures . . . . .	30
Within group comparisons: expectations and clinic evaluations . . . . .	47
Are Evaluations Consistent Across Time? . . . . .	49
General Discussion of the Intake Procedure Client Satisfaction Evaluations . . . . .	50
The Two Intake Procedures: A Cost-Effectiveness Analysis . . . . .	55
Intake procedures summary . . . . .	55
Costs per completed interview . . . . .	58
Costs per completed surgery . . . . .	61

	Page
Problems with these cost-effectiveness calculations . . . . .	61
Drop-out rate and cost-effectiveness . . . . .	64
DISCUSSION OF RESULTS AND CONCLUSIONS . . . . .	67
SUMMARY . . . . .	71
FOOTNOTES . . . . .	72
REFERENCES . . . . .	73
APPENDIX A . . . . .	76
APPENDIX B . . . . .	79

## LIST OF TABLES

Table	Page
1. Interview Procedure Groups by Expectations of Surgical Discomfort . . . . .	33
2. Interview Procedure Groups by Expectations of Post-Operative Discomfort . . . . .	34
3. Patients Who Reported More Pain Than Anticipated and Percentage of Favorable Interview Assessments . . . . .	36
4. Patients Who Reported Pain Experiences Equal to Expectations and Percentage of Favorable Interview Assessments . . . . .	37
5. Patients Who Reported Less Pain Than Anticipated and Percentage of Favorable Interview Assessments . . . . .	38
6. Patients Who Reported More Pain Than Anticipated and Percentage of Favorable Staff Evaluations . . . . .	40
7. Patients Who Reported Pain Experiences Equal to Expectations and Percentage of Favorable Staff Evaluations . . . . .	41
8. Patients Who Reported Less Pain Than Anticipated and Percentage of Favorable Staff Evaluations . . . . .	42
9. Patients Who Reported More Pain Than Anticipated and Percentage of Favorable Responses to Open-Ended Items . . . . .	44
10. Patients Who Reported Pain Experiences Equal to Expectations and Percentage of Favorable Responses to Open-Ended Items . . . . .	45
11. Patients Who Reported Less Pain Than Anticipated and Percentage of Favorable Responses to Open-Ended Items . . . . .	46
12. Within Group Comparisons: Relationships Between Discomfort Expectations and Clinic Experience Evaluations . . . . .	48

Table

Page

13. Description of Intake Procedures for a Cost-Effectiveness Analysis . . . . .	56
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LIST OF ILLUSTRATIONS

Figure	Page
1. 1975-78 Mean Number of Surgeries per Completed Interview Plotted Over Months . . . . .	59
2. 1975-78 Mean Number of Surgeries per Hour of Staff Interview Time Plotted Over Months . . . . .	60
3. 1975-78 Mean Total Clinic Time per Completed Surgery Plotted Over Months . . . . .	62
4. 1975-78 Mean Interview Salary Total Costs per Completed Surgery Plotted Over Months . . . . .	68

CONTENTS FOR APPENDICES

	Page
APPENDIX A Post-surgery Clinic Evaluation Form . . . . .	76
APPENDIX B Pre-surgery Group Interview Evaluation Form . . . . .	79

## INTRODUCTION

Evaluation research can play a major role in policy decision-making for social interventions, such as remedial education programs or health care delivery services and the like. The aim of such research is to provide program planners or managers with the information they need to decide whether to implement, change or expand a particular social program. In a typical evaluation study, the impact of a social program on specific problem behaviors in a certain population is assessed. Recommendations or judgments are made regarding the measured program impact.

### Client Satisfaction and Health Care Evaluation

Frequently, the role of client satisfaction within a particular program or various sub-components of that program, is underplayed or regarded as a minor issue in evaluation. For example, Levine (1970) stated that mental health service clients are seldom asked any consumer satisfaction questions such as what services are most useful and/or most important to them. Levine indicated that clients should have some say in how and what services are provided and that measures of client satisfaction are one of a number of criteria for program efficiency assessments. In addition, Fleming (1978) suggested that the measurement of quality of care involving only treatment and cure rates is not enough. It is also important to evaluate patients' feelings and satisfaction with their health care experiences.

Reeder (1972) speculated on a number of interesting changes

that have occurred over the years in the physician-patient relationship which help explain recent concerns with client satisfaction. Doctors and clients alike have changed their views of the patient from a passive recipient of care with no voice in the medical decision-making process to an active participant or consumer with certain rights and with the capability of making contributions to decisions regarding diagnosis and treatment. Reeder attributed the client role change to a recently developed shift in the orientation of medical care from treatment or cure to one of prevention. He noted that when a system operates in a curative mode, a "seller's market" exists. When prevention is emphasized, clients must be persuaded that they are in need of some type of medical intervention (i.e., a 6-month check-up), which transforms the system into a "buyer's market." Under the latter circumstance, clients become consumers, capable of making certain demands and, within this framework, they have more bargaining power than they had within the traditional "passive patient" role of the past.

Reeder (1972) noted that medical consumerism has manifested itself in the recently developed concerns over client satisfaction within health care delivery services. He stated that, as of yet "In the usual practice of medicine, patient satisfaction is particularly difficult to express in a way designed to produce change in the system....With the system undergoing structural change, however, there may be greater opportunity for producing change through such expressions" (p. 410).

It seems reasonable to assume that if a large proportion of

clients are dissatisfied with certain aspects of a program they deem important, not only will these dissatisfied customers stop participating in the program, but they are probably not getting the help they seek and "word of mouth" advertisement may be adverse. Obviously, this assumption may only be a major concern for those programs which serve clients on a voluntary basis and/or rely on these clients for financial support and profit (i.e., in a "buyer's market" situation). In such circumstances, it can be argued that measures of client satisfaction along with behavioral impact should be included in a program evaluation study, especially if one goal of the evaluation is to produce an index of program efficiency.

Bard (1971) noted that "the practice of giving the recipients a voice in the evaluation of programs usually results in more effective programs. After all who can better judge the effectiveness of programs than people receiving the service" (p. 81). Fleming (1978) suggested several uses of consumer evaluations of medical care delivery services, including: (a) documentation of a need where monies may be available for the development of new programs, (b) evaluation of existing services in terms of present functioning and effectiveness, and (c) development of public relations policy for a given service, and so forth.

Because of the increasing concern with client satisfaction, Harris (1978) stated that organizations must begin to emphasize the importance of client satisfaction in the overall delivery of service and that an ongoing patient information and feedback system "which the staff can act upon" be integrated into the organization. Like Reeder

(1972), Harris emphasized that the feedback be in a useable, coherent form.

Harris contended that a positive relationship exists between what he termed "organizational patient orientation" (i.e., the extent to which the organization is aware of and is responsive to the patient as a "whole" person) and client satisfaction with care received. He hypothesized that dissatisfaction is the result of three primary features of an organization: (a) inappropriate staff attitude toward patients, (b) staff information deficiencies about patient evaluations of satisfaction and/or (c) inappropriate staff behavioral responses to patients.

A set of guidelines reflecting these issues was implemented within eight ambulatory care clinics in two U.S. Naval Regional Medical Centers, to determine whether patient satisfaction could be changed or improved with ongoing feedback to staff. Results indicated that the degree to which staff were involved in the evaluation survey development and/or the review of patient satisfaction data (feedback) was positively related to: (a) the extent to which staff found such data to be valuable and useful, (b) the extent to which staff reported positive changes in staff attitudes and behavior toward patients and (c) the extent to which patient satisfaction changed positively over time.

Like Harris, Sears (1977), who conducted an evaluation of the physical design of hospital nursing units, noted that information about user attitudes can contribute to the assessment of need for change and

provide guidance regarding what kinds of change would be most satisfactory to various user groups. He also stated that it is important for planners (or program managers) to receive feedback about the consequences of their policy decisions, and that such feedback should include measures of consumer satisfaction.

A number of studies have also been conducted in hospital, ambulatory care and medical specialty clinics examining client satisfaction and quality of care issues. Fleming (1978) reported the findings of a national consumer evaluation of hospital care. One aspect of this project examined the concerns of persons with illness episodes of recent onset (within a year of data collection) in 1976. Results indicated that most participants were either completely or mostly satisfied with the medical care received. People were found to be least critical of doctors' courtesy. Quality of care to hospitalized patients was judged on the basis of nursing care (e.g., courtesy) received, interactions with other hospital personnel and information received about illnesses. Other findings indicated that respondents were not as critical of nurses in ambulatory care settings as they were of nurses in hospital settings.

In another ambulatory care setting, Sung (1977) conducted a study of patient satisfaction in 12 Detroit family planning clinics serving lower-income black women. "Acceptability" was defined as "the extent to which clinic service is considered by patients to be attractive or popular; that is, acceptable in the patients' terms" (p. 131). After a review of the literature, a number of criteria were identified

as indicators of acceptability: professional competence, care provider's interest and concern, humaneness or the caring aspect, respect for the patient, privacy, time spent with the patient by the care provider, extent to which the patient was informed about diagnosis and procedures, waiting time, accessibility to the clinic including distance and travel time, convenience of attending the clinic at the appointed time, help received on the telephone, and the facilities themselves. It was found that the personal aspects of care (courtesy, respect) were more important determinants of satisfaction than the physical aspects of care (waiting time, accessibility, comfortableness of facilities, and so forth).

Stewart and Crafton (1975) also compiled a literature review regarding provisions and delivery of general health care services to the poor, which supports some but not all the conclusions drawn by Sung (1977). One major conclusion of the review offered by Stewart and Crafton was that "patient participation levels (in the majority of studies) were influenced overwhelmingly by variables within the structure of the delivery system rather than by personal motivation variables" (p. 9). Factors influencing patient participation or successful delivery of service included: (a) clinic location convenience, (b) hours open for patients' convenience (i.e., not just 8 to 5, but evenings and weekends), (c) out-reach and follow-up work, (d) employment of neighborhood personnel throughout the system, (e) involvement of consumers in planning and delivery of service, (f) quality of both the physical surrounding and personnel-patient relationships such as a



"non-hospital" atmosphere, short waiting times, friendly attitudes of personnel, bilingual personnel where needed, and personalized service, (g) few restrictive eligibility requirements, and so forth.

In terms of hospital care, Wriglesworth and Williams (1975) conducted a quality of care evaluation with hospitalized male surgical patients and found that confidence in the doctor was related to satisfaction. In addition, feelings of being well-informed were not strongly related to such confidence.

In another study, Caplan and Sussman (1966) interviewed 400 randomly selected patients attending 15 chronic specialty clinics. A rank-order multiple regression analysis indicated that 11 variables were most important in explaining general satisfaction with outpatient services. This ranking, from most to least important, included: (a) satisfaction with medical care received, (b) difficulty in following instructions for home treatment, (c) total time spent in the clinic at the last visit, (d) actual time spent with the doctor, (e) view of the outcome of illness, (f) satisfaction with clinic charges, (g) level of patients' formal education, (h) satisfaction with transportation to the clinic, (i) convenience of clinic location, (j) comparison of clinic versus private care, and (k) opinions of the clinic doctors.

Caplan and Sussman (1966) concluded that the instrumental objective of clinic patients is to receive quality medical care. Satisfaction is dependent on the achievement of this objective. Evaluations of how successfully the goal is achieved are related to staff-patient relationships and interpersonal experiences in a clinic setting.

### Influence of Expectations on Patient Satisfaction

Korsch, et al., (1968) examined the nature of verbal interaction during initial encounters between doctors and patients and the influence of such interactions on patient satisfaction and response to medical advice. Two interviews were conducted with 800 mothers, one immediately following a visit to a pediatrics walk-in clinic at a Los Angeles hospital and another two weeks after the clinic visit. Generally, results indicated that 76% of the respondents were moderately or highly satisfied with their clinic visits.

Expectations regarding the doctor-patient encounter appeared to play a significant role in patient satisfaction in this study. It was found that the mothers expected the doctors to be friendly, concerned, sympathetic and to take the time to answer their questions. A positive relationship was found between reports that expectations were met and general satisfaction. However, it was also found that expectations were often not mentioned to attending physicians, especially by less educated clients. Doctors tended to handle or met a significantly larger proportion of the expectations and concerns of their more highly educated clients.

It appears that in many cases where expectations regarding various treatments were reportedly not met, these expectations may have been unreasonable, unrealistic or inappropriate, given the circumstances (i.e., expecting a chest x-ray for a diagnosed minor head cold). Two factors, length of waiting time and length of time spent with the doctor, typically found to influence satisfaction in other

studies, did not do so in this study. Korsch, et al., suggested that "the time the doctor and patient spend in the same room is of lesser import than how they spend this period of time." (p. 868).

In a related study, Vuori, et al., (1972) examined the experience of ambulatory care (treated by private physicians in their offices) versus hospitalized patients in Finland. "Success" of the doctor-patient relationship was measured by asking respondents whether they would be willing to return to the same attending physician in the future. Approximately 75% of all respondents had positive experiences and seemed to be at least fairly satisfied with the doctor-patient relationships they encountered. It was concluded that the willingness of ambulatory care patients to return to the same doctor was most strongly influenced by instrumental factors (i.e., perceived technical skills or competence of the doctor), while the same willingness in hospitalized patients was more strongly influenced by expressive factors (i.e., perceived interest in the patients' symptoms, etc.).

The above finding suggests that satisfaction and expectations regarding quality of medical care may be related to the chronic versus acute dimension of illness. Coe and Wessen (1965) noted that expectations may be different depending on whether a patient has an acute or chronic problem thus requiring a one-time treatment or long-term therapy. For example, ambulatory care problems are typically acute and can be alleviated in one or a small number of visits to a doctor. As noted in the study conducted by Vuori, et al., (1972) these short-term patients tend to have more expectations concerning the technical skills

of a physician rather than with his or her expressiveness.

A number of different health care evaluation studies (Korsch, et al., 1968; Coe & Wessen, 1965; Institute of Medicine, 1976) have indicated that satisfaction with a doctor-patient relationship is influenced by whether expectations are or are not met. A committee on a health care evaluation project for the Institute of Medicine (1976) stated that "satisfaction decreases when anticipated behavior (for example, giving injections) does not occur and when the physician is expected to be friendly and concerned and is not. When communication addresses the patient's anxieties, concerns, and expectations, satisfaction increases" (p. 106). It has also been noted that explicitness of expectations on the part of both doctors and patients may not always be clear, especially in terms of acute problems or illnesses (Korsch, et al., 1968). It appears that persons with acute medical problems, such as most ambulatory care patients, may have strong expectations in terms of a physician's competence, but expectations regarding doctor courtesy, attractiveness of medical facilities and so forth, are of lesser import in these situations. On the other hand, hospitalized patients have stronger expectations regarding doctors' expressiveness and interest in their symptoms.

#### The Validity of Positive Consumer Evaluation of Health Care

As noted by Sung (1977), when health service delivery evaluation studies do measure client satisfaction, such measures usually reveal positive results. Of interest here are the results of such studies in the area of family planning services, particularly vasectomy clinic

evaluations. After an extensive review of the literature on vasectomy, Ratnow (1973) concluded that large scale studies of surgical contraception, using a variety of evaluation methodologies, almost unanimously indicate overwhelming reported satisfaction with the procedure on the part of both husband and wife. In addition, subsequent general health, sexual satisfaction and desire, and marital harmony reportedly do not change or tend to improve after surgical contraception. Ferber, et al., (1976) also obtained uniformly positive evaluations from vasectomized males in terms of psychosocial, sexual and physical health concerns. However, it was noted that these positive results may have been due to a "high motivation factor" on the part of their subjects, given that these men were self-selected or voluntary clients.

Is there reason to suspect the validity of positive evaluations from health care service program participants, especially vasectomized clients? A number of researchers have explicitly stated or implied that such suspicions are legitimate concerns. The "high motivation factor" noted by Ferber, et al., (1967) has also been acknowledged in other studies, one by Lear (1972; cited in Ratnow, 1973) and one by Rodgers, et al. (1965). These researchers independently concluded that vasectomy clients may express post-operative satisfaction with the procedure as a consequence of having experienced painful surgery. This attitudinal phenomenon is typically referred to as the reduction of cognitive dissonance in the psychological literature. In other words, clients will defensively exaggerate their satisfaction with their vasectomies to reduce the negative arousal or experience of voluntarily

undergoing painful surgery.

Scheirer (1978) stated that cognitive dissonance and a variety of other social psychological theories and methodological artifacts could explain the uniformly positive results associated with client satisfaction measures in evaluation research. She proposed that "participants like social programs, evaluate them favorably, and think they are beneficial, irrespective of whether measurable behavioral changes take place toward stated program goals" (p. 55). In addition, Scheirer argued that such positive perceptions are the result of unconscious social psychological processes. A number of methodological artifacts such as social desirability response sets, the "Hawthorne" reactivity effect, and experimenter bias could produce these responses. Moreover, various social psychological theories, such as social exchange theory, operant conditioning theory, and cognitive consistency theories, would predict the positive client satisfaction results often found in program evaluations (see Scheirer, 1978, for a more detailed explanation of how these theories can explain these data). Scheirer concluded that "the belief that obtaining positive participant ratings is in itself a significant accomplishment is likely to be premature optimism. Though probably a necessary first step reflecting some degree of program implementation, positive participant ratings are not sufficient indicators of behavioral change toward substantive program goals" (p. 65). It should be added that such ratings are not sufficient indicators of program efficiency either.

Contrary to Bard's (1979) position noted earlier, and in cor-

respondence with that held by Scheirer (1978), Edwards, et al., (1978) found that therapists and clients, in two California community mental health centers, disagreed when rating treatment success. Therapists' mean ratings of treatment success were lower than similar ratings given by patients of treatment success for themselves. In other words, patients expressed more general satisfaction with therapy than did their therapists. Edwards, et al., suggested that perhaps therapists have different or more stringent criteria for judging a treatment outcome as successful than do their clients. Significant, but low, positive correlations were found between patient satisfaction and success of treatment; that is, a modest relationship between patients' ratings of satisfaction and success, and a weak relationship between patient satisfaction and therapists' ratings of success, were obtained. Edwards, et al., (1978) concluded that "satisfaction ratings cannot replace success or other outcome ratings, but they may provide a different sort of information about a service delivery system" (p. 190).

#### Application of Results to Present Patient Satisfaction Evaluation

One aspect of the present study is to evaluate client satisfaction regarding two different intake procedures (group versus individual interviews) at a vasectomy clinic in a midwestern city. Most of the research cited above dealt with the quality of medical care received, satisfaction with medical staff-patient interpersonal relationships and so forth.

Evaluation of intake procedure is indirectly concerned with the quality of medical care received in a clinic situation, given

that intake is a part of the structure of every health care delivery system. It can be argued that client satisfaction with various intake procedures could play a major role in the decision to continue participation in a program, especially if that program operates in a "buyer's market" (Reeder, 1972), emphasizing prevention rather than treatment or cure. In vasectomy clinics, prevention of unwanted pregnancy is obviously the major reason clients seek out such services on a voluntary basis. Therefore, clients are likely to be active participants with more bargaining power and perhaps will demand more in terms of general satisfaction than in a traditional medical service setting where illnesses beyond the control of the client are treated.

Not only is satisfaction with intake procedures in and of itself important in vasectomy clinics but such satisfaction may influence the evaluation of the quality of medical care received and judgments of overall clinic experiences. Research findings regarding satisfaction and quality of medical care from studies in ambulatory care service agencies seem to be most relevant to the vasectomy clinic setting, given basic similarities between the two circumstances. Ambulatory care clinics, like vasectomy clinics, typically require short-term treatment of minor or acute medical problems as compared to chronic care units or hospitals in general. In addition, vasectomy, as a surgical procedure, is a minor operation, usually requiring only local anesthesia and no more than an afternoon in a clinic.

There are some differences, however, between ambulatory care units and vasectomy clinics which may render the research results found



in the former non-generalizable to the latter setting. Vasectomy is a voluntary procedure for a very specific or specialized purpose (i.e., to prevent unwanted pregnancy) that does not encompass any type of illness per se. Ambulatory care clinics can cover the gamut of acute general health problems dealing with a variety of illnesses. Typically, clients do not voluntarily choose to be ill and therefore in one sense, must seek out ambulatory care services, although where they go for treatment or cure is a voluntary decision. Therefore, some factors influencing satisfaction with the quality of care received in ambulatory care settings may not be of equal import in vasectomy clinic settings.

In lieu of these limitations, some speculations regarding factors which may influence client satisfaction in vasectomy clinic settings, based on findings within ambulatory care settings, are possible. Vasectomy clients, like most ambulatory care clients with acute illnesses, know in advance that their contact with clinic personnel is likely to be short-term. Similarly, vasectomy clients may be more concerned with the technical competence or skill of their surgeons than with expressive factors, especially if they have come to the clinic with their minds made up regarding the choice of vasectomy as a form of birth control and are comfortable with that decision. However, if vasectomy clients are anxious or concerned about the procedure itself or fear some real or imagined side effects, they may be equally concerned with the expressive side (courtesy, helpfulness, reassuring quality) of physicians and nurses.

On the other hand, if potential vasectomy clients get or expect

to get the expressiveness they may need from an intake interviewer, such reassurances from professional staff (physicians and nurses) may not be expected or desired. The opposite circumstance is also plausible. If so, vasectomy clients may expect intake interviewers to provide them with the straight and simple facts (representing expectations concerning the technical skill and competence of the interviewer), while both competence and expressiveness may be expected of physicians and nurses. Whether major expectations or concerns revolve around the instrumental or expressive characteristics of physicians, nurses, or interview personnel, a number of researchers have pointed out that satisfaction with the clinic experience is likely to be influenced by whether or not expectations have been met.

The type of intake procedure utilized may also influence whether expectations regarding competence and expressiveness of clinic personnel are met. Potential vasectomy clients, for example, may be dissatisfied with a group interview situation if they feel the interviewer did not give them enough individualized attention and reassurance. More satisfaction, in this regard, may result with individual intake interviews. Perceptions of the competence of an interviewer (ability to provide clients with "the facts") may not be influenced by whether a client attended a group versus an individual intake interview, unless satisfaction with the interviewer's expressiveness (as noted above) affects such perceptions.

In the present project, some light was shed on the relationship between satisfaction and whether or not vasectomy clients' expectations

were met during their clinic experience.

Other Indices of Quality of Care: Cost-Effectiveness Analyses

If one is interested in assessing some aspect of a program not intended to result in specific behavioral changes in the usual sense, (i.e., intake procedures), it can be argued that client satisfaction measures also play a useful role in the overall evaluation of program efficiency. Intake procedures are not intended to evoke a "behavioral change" in the client; rather, they are simply an introduction or entry requirement of the program itself. As noted before, client satisfaction with various intake procedures could play a major role in the decision to participate in the program. Therefore, measures of such satisfaction are of obvious import in terms of program efficiency, rather than in terms of program benefit. Program effectiveness may also be determined by client satisfaction given that experiences during intake may influence whether clients decide to continue participation in a particular program. However, client satisfaction alone is not a sufficient index of either program efficiency or effectiveness.

A number of researchers have suggested that cost-benefit or cost-effectiveness analyses should be a part of most, if not all, program evaluations (Levine, 1968; Levin, 1975; Posavac & Carey, in preparation). In the example cited above such analyses would add a much needed dimension to a program efficiency evaluation which initially only included plans for client satisfaction measures. Posavac and Carey (in preparation) noted that "the outcomes of human service programs can only be fully evaluated when their costs are considered"

(p. 1). Similarly, Levin (1975) stated that even if a program is deemed successful in that it produced desired behavioral changes, it would not be an efficient approach to the stated problem if the same outcome could have been achieved through some less expensive alternative manner.

Because of cost concerns, cost-benefit analyses have been utilized in various evaluations, such that decisions could be made regarding the allocation of limited resources among competing requirements (Levine, 1968). In cost-benefit analysis, both costs and benefits are usually expressed in terms of dollar value and a benefit to cost ratio is computed. A ratio exceeding 1 indicates "worthwhileness from an investment point of view" (Levine, 1968, p. 174). "Cost" factors are those variables affecting service delivery. "Benefit" refers to what a particular service did for clients, plus whether and to what extent desired changes in the clients occurred. Klarman (1967) cited three typical categories of benefit in most health service cost-benefit analyses: (a) savings in the use of health resources, (b) gains in economic output, and (c) satisfaction from better health.

In social program evaluation, benefits are usually intangible products, such as client satisfaction, increases in self-esteem, and so forth. Therefore, the concept of cost-effectiveness was developed for those situations in which benefits are difficult to express in monetary terms (Posavac & Carey, in preparation). According to Levin (1975), the goal of cost-effectiveness analysis is to "maximize the desired result for any particular resource or budget restraint" (p. 89).

Levin distinguishes cost-effectiveness from cost-benefit analyses in that the former attempts to link the effectiveness of a program in achieving a particular goal to costs, rather than linking the monetary value of goal achievement to program costs, as in the latter case.

Levin (1975) defined cost as "that set of social sacrifices associated with any particular choice among social policy alternatives" (p. 98), implying that more than just direct monetary considerations should be included in an index of program cost. Levin noted that client considerations are important in this respect, for example, waiting and traveling time to obtain service in health care clinics. By omitting such indices from a cost-effectiveness analysis, one implies that the client has little or no value in these respects.

When measuring effectiveness, one must select and operationalize criteria to serve as outcome indices which will be obtained for each alternative program being considered. Essentially then, cost-effectiveness analyses involve a comparison of alternative strategies for achieving a particular goal with consideration given to cost per unit of "success" or effectiveness (i.e., program efficiency). According to Levin (1975), the three most common cost-effectiveness comparisons based on cost estimates, are: (a) total cost for obtaining a given level of effectiveness (i.e., used when two alternatives are approximately equal in effectiveness), (b) average costs per unit of effectiveness (i.e., used when programs differ in terms of effectiveness), and (c) marginal costs for additional units of effectiveness (i.e., used when the average cost per unit of effectiveness changes ac-

ording to program scale; for a more detailed explanation, see Levin, 1975).

Client Satisfaction, Cost-Effectiveness, and the Present Evaluation Study

The present project involved the comparison of two intake procedures, group versus individual interviews, in a vasectomy clinic. The comparison was based on client satisfaction and other cost-effectiveness measures. As previously noted, effectiveness is measured in terms of cost per unit of "success." For the present purpose, there were two immediate goals of the intake procedure, to produce positive client satisfaction and to maximize the number of completed interviews within any given time frame. It was expected that uniformly positive client satisfaction would be obtained, regardless of the intake procedure, in accordance with the findings of past studies reviewed above; therefore, when considering only client satisfaction as an indication of program success, the strategy involving the least cost would be the most efficient or effective. It was considered likely that client satisfaction, as a measure of program success, would become a minor component of the program (i.e., intake procedure) effectiveness evaluation. In order to shed more light on the efficiency of these intake procedures, an additional cost-effectiveness analysis was added to the research design.

The ultimate or long-term goal of the intake procedures was to maximize the number of completed surgeries within any given time frame. A comparison of intake procedure costs per unit of "success" or com-

pleted surgery is presented below. Costs in this case refer to personnel considerations such as number of staff, salaries, average clinic time requirements per intake procedure, and so forth.

Research Site: Description of the Clinic Operation and Clientele<sup>1</sup>

The vasectomy clinic which served as the setting for the present project opened to the public in 1971. This clinic provided one of several specialized services within a large family planning facility. The clinic itself operated only two to four evenings every month. Interviews and surgeries were typically conducted on an alternating schedule (i.e., every other clinic session was devoted to interviewing only) although, at times, surgeries and interviews were conducted during the same evening clinics. All staff were hired exclusively for the vasectomy clinic, except the receptionist, who was a full-time employee of the family planning facility.

Initially, individual intake interviews were conducted with all potential clients and their wives. During these interviews, clients were given information concerning vasectomy as a method of birth control and had the opportunity to have questions answered. The surgical procedure was described in detail, giving the client an idea of what a vasectomy involved. Also, a list of pre- and post-operative "dos and don'ts" were outlined, and clients were told what physiological changes to expect after surgery, what symptoms of proper healing and potential problems to watch for, and so forth. Interviews were scheduled every 15 to 30 minutes. Typically, two or three nurses, plus the clinic coordinator conducted the individual intake interviews. All interviewers

were trained by the coordinator and a checklist was used during each interview to ensure that all information was given to each client. After the interview, fees were set and clients were given a physical exam and blood test. Surgery was typically scheduled two to four weeks after the intake interview.

These personal interview sessions were evaluated by clients through the use of a survey developed by clinic personnel to assess client satisfaction. The surveys were received through the mail or given to clients at the time of their last sperm count test, six to eight weeks after surgery.

Early in 1977, personnel in charge of the vasectomy clinic decided to switch to a group interview format "to save staff and client time and to promote clinic efficiency." During these group interviews, new clients received the same information concerning vasectomy as did those who previously had had individual intake interviews. The coordinator of the clinic conducted all the group interviews and only one such interview was scheduled per evening clinic. Two or three assistants, usually nurses, were present at each group interview to help check application forms and answer questions at the end of the group sessions. Clients were also given an opportunity to privately meet with clinic personnel to discuss any problems they did not wish to bring up during the group interview sessions. In a sense, the group interview sessions actually consisted of a "group plus personal" intake procedure. (For the sake of simplicity, these sessions will be referred to as group intake interviews.) At the end of each interview



session, fees were set, physical examinations were administered and surgery was scheduled for approximately two to four weeks after the group interviews. Again, clinic evaluation forms were received through the mail or given to clients at the time of their final sperm count test, six to eight weeks after surgery.

During the 1971-78 period, the vasectomy clinic served a variety of clientele. According to clinic records, the majority of clients were married (90.6%) for an average of 8.43 years and had had two or three children (59.0%) at the time they came to the clinic for a vasectomy. Patients tended to be young (the mean age was 33.8 years old), caucasian (90.7%), well-educated (63.8% had attended college), and Catholic (39.0%) or Protestant (32.7%). The median gross annual income for 1971-78 clients was \$14,000 to \$15,999. Vasectomy clinic records noted that the substantial percentage of Catholic patients probably reflected the large Catholic population in the midwestern city where the clinic was located. Most clients reported they had learned of the clinic through public information (48.4%), a friend (10.9%), or from another patient (10.9%).

#### Overview and Purpose of the Project

The major purpose of the present project was to provide vasectomy clinic personnel with feedback concerning client satisfaction with and the cost-effectiveness of the individual versus group intake interview procedures.

Client satisfaction measures were obtained from two instruments. One measure consisted of a two-page evaluation form, developed by clinic

personnel shortly after the clinic opened in 1971 (see Appendix A). This form, completed by clients one to six months after surgery, was intended to assess not only the intake interviews but also experiences during surgery and post-operative recovery. The second client satisfaction measure was developed by the investigator after the initiation of the group intake procedure in 1977 (see Appendix B). This form was intended to assess, in greater detail, satisfaction with the group intake interview and also to gain a recall measure of information presented during the group interview sessions. Some client satisfaction scales for this instrument were patterned after items contained on the two-page clinic evaluation form. The remaining scales were developed by the investigator. Clients completed this form immediately following the group interview sessions, approximately two to four weeks before surgery.

Cost-effectiveness measures were based on clinic records and on information obtained from the clinic coordinator and other key staff. Indices of cost were calculated in terms of: (a) average total time per evening clinic, (b) average number of staff required per evening clinic, (c) average salary per staff member, (d) average number of separate interviews conducted during an evening clinic, (e) average number of clients processed per evening clinic, and (f) average drop-out rate from interview to surgery date. These indices were utilized to compare the group versus individual intake procedures in terms of total or average cost per unit of "success," that is, per completed interview and/or completed surgery.

It was expected that the client satisfaction and cost-effectiveness information obtained from this project would enable clinic personnel to make an empirically-based judgment concerning client intake procedures.

## METHOD

### Selection of Participants: The Client Satisfaction Assessment

Vasectomy clients "participated" in the present study only indirectly. The actual client satisfaction assessments utilized evaluation forms which were voluntarily completed and returned as a part of the established clinic procedure. These forms were separated into two groupings for the purpose of evaluating the impact of intake procedures (i.e., group versus individual interviews) on satisfaction.

Group I (n = 91) was composed of a sample of the post-surgery evaluation forms completed and returned by individual intake interview clients during 1975 and 1976. A total of 55 forms were returned in 1976, while 77 were returned in 1975. To minimize the influence of the passage of time, it was decided to utilize 1976 individual interview evaluation forms. In other words, individual interviews conducted in 1976 were expected to most closely resemble, in relevant ways, the group interviews carried out in 1977 and 1978, except, of course, in terms of the differences in interviewing procedures. Given the small number of forms returned in 1976, all of them were included in the Group I sample. To supplement the sample size, 36 (47%) randomly selected 1975 forms were also included, yielding a total of 91 evaluation forms for the individual intake procedure grouping.

Group II (n = 36) consisted of the post-surgery evaluation forms returned by group intake interview clients during 1977 and 1978. Specifically, these forms were among the first returned to the clinic,

within the data collection period, which could be identified, by date and name, as having been completed by group intake interview clients. This sample was unavoidably restrictive because many of the group interview clients had not had enough time to return their forms by the conclusion of the data collection period. Therefore, a random sample of the small number of returned forms was impractical and undesirable.

All clients, regardless of intake procedure, voluntarily completed and returned the clinic evaluation forms, usually through the mail. The sample of participants were not randomly assigned to attend either the individual or group intake interviews nor were their clinic evaluation forms randomly chosen as data for the study (with the one exception noted above). Such non-random samples can create problems for data interpretation (Campbell & Stanley, 1963); however, this circumstance was unavoidable in the present study. Thus, the conclusions to be drawn from this study are somewhat limited.

## RESULTS

### The Two Intake Procedures and Patient Satisfaction

In general, all clients who completed and returned a post-surgery evaluation form (36 group interview clients and 91 individual interview clients) were very pleased with the vasectomy clinic interview visit, regardless of intake procedure. Chi-square and t-test analyses revealed that the two intake procedure groups did not significantly differ in terms of reported satisfactions with, or evaluations of, the interview visit. The majority of clients in both intake procedure groups indicated: (a) they had been adequately prepared for what they experienced in surgery (91.7% of the group interview clients and 91.2% of the individual interview clients), (b) that the interview had not confused them in any way (97.2% and 97.8%, respectively), and (c) that the interview had included adequate in-depth counseling and exploration of their reasons for wanting a vasectomy (94.3% and 98.9%, respectively). Additionally, the interview visit as a whole was given an overall rating of "excellent" or "good" by 88.9% of the group interview clients and 80.9% of the individual interview clients.

Clients who completed and returned post-surgery evaluation forms were also requested to "evaluate the response of doctors and staff," in terms of courtesy, consideration and helpfulness, on 5-point scales ranging from poor to excellent. These evaluations, according to t-test analyses, did not significantly differ across the two intake procedure groups. Doctor and staff courtesy was given an excellent or

good rating by 94.4% of the group interview clients and 96.7% of the individual interview clients. The consideration shown by clinic personnel was rated excellent or good by 86.1% of the group interview clients and 88.6% of the individual interview clients. Lastly, 94.4% of the group interview clients and 92.1% of the individual interview clients rated staff helpfulness as good or excellent.

Open-ended comments. On the post-surgery evaluation form, clients were provided with two opportunities for open-ended comments. Surgical comments could be made within the surgery evaluation section of the form. Also, at the end of the survey, clients were provided space to offer general remarks covering the total time from original contact with the institution through the follow-up visits (see Appendix A). Both items were coded in terms of positive versus negative evaluations.

The surgical comment section elicited remarks almost exclusively concerning the surgical experience and surgical staff. A chi-square analysis revealed no significant difference between the two interview procedure groups for this item. Positive surgical comments were given by 44.4% of the group interview clients (4 of 9 respondents) and 39.1% of the personal interview clients (9 of 23 respondents). Surprisingly, more negative than positive comments (59.4% versus 40.6%, respectively) were obtained with this post-surgery evaluation item. Some of these comments included negative staff ratings, reported anesthesia problems during surgery, that surgery took longer or was more painful than expected, that the surgery was too rushed, and that more privacy during

surgery was needed. Positive statements tended to reflect favorable staff ratings (i.e., the staff was perceived as being friendly, patient, courteous, understanding, etc.).

The second open-ended comment section elicited evaluations of the surgical procedure, the clinic organization in general, the interview visit, clinic personnel, and miscellaneous remarks. The frequency of responses within each of the above categories was too small for an adequate analysis; therefore, this general remarks item was recoded in terms of positive versus negative remarks. Again, a chi-square analysis revealed no significant difference between the two intake procedure groups for this item. Positive general remarks were given by 37.5% of the group interview clients (6 of 16 respondents) and 53.8% of the individual interview clients (21 of 39 respondents). This open-ended comment item elicited almost an equal number of positive and negative remarks overall (49.1% and 50.9%, respectively).

#### Expectations, Satisfaction, and the Two Intake Procedures

Expectations regarding the surgical and post-operative experiences should, in part, be based upon what is learned about the vasectomy procedure during the interview visit. Clients were specifically told, in both group and individual interview sessions, that the amount of pain they would experience, during and after surgery, would be minimal. It was also explained that post-surgical discomfort could be controlled if clients followed the post-operative instructions presented during the interview visit. Therefore, if the expectations generated were found to differ across intake procedure groups, it would necessar-



ily be due to interviewer differences or to differences in the mode of presentation (group versus individual intake setting).

Only one interviewer conducted all group interview sessions, while two to four interviewers typically processed clients during the individual interview sessions. Interviewers may have differed in the emphasis they gave to shaping the expectations of clients regarding surgical and post-operative discomfort and how to control such pain after surgery. The individual interview sessions may have produced more variability in clients' expectations than the group interview sessions, given that the former employed several interviewers while the latter did not. However, the directions that those expectations would take, for either intake procedure, is uncertain. In other words, it is difficult to predict which procedure would be more likely to produce more positive expectations, unless one believes that a group or personal interview setting is likely to somehow affect such expectations. For example, it might be predicted that the personal, private interview setting creates more "generally positive affect" than the group interview setting, and therefore, is more likely to produce positive expectations regarding discomfort during and after surgery.

Accuracy of expectations is an altogether different issue. In this case, accuracy may be defined as the degree to which discomfort experienced and the expectations regarding such discomfort match. Expectation accuracy may in turn affect interview evaluations. Whether one intake procedure is more conducive to producing accurate expectations is unknown. It seems more likely that interviewer differences,

an inherent feature of the intake procedures in this study, would affect such accuracy. These are empirical questions addressed below.

A number of comparisons were made to determine whether intake procedure affected expectations regarding the surgical experience. Chi-square and t-test analyses were performed, utilizing the responses of those group and individual intake interview clients who completed and returned a post-surgery evaluation form. No significant differences were found for the two groups of clients in terms of the expectations they had regarding surgical and post-operative experiences.

As evident in Table 1, surgical discomfort reportedly matched the expectations of 33.3% of the group interview clients and 43.3% of the individual interview clients, while 47.2% and 35.6%, respectively, indicated they had been more uncomfortable than expected during surgery. The remainder of both groups reported that their surgical discomfort was less than anticipated.

Similarly, 33.3% of the group interview clients and 40.7% of the individual interview clients indicated that their post-operative discomfort matched their expectations (see Table 2). On the other hand, 38.9% and 40.7%, respectively, reported that their discomfort had been more than anticipated. The remainder indicated that the post-operative pain experienced was less than expected. Apparently, the individual intake interview procedure tended to produce a slightly better match between expectations and discomfort than did the group intake interview procedure.

Interestingly, regardless of whether or not these expectations

Table 1

Interview Procedure Groups by Expectations of Surgical Discomfort

Group	Surgical Discomfort Expectations			
	Underestimated Discomfort Experienced	Matched Discomfort Experienced	Overestimated Discomfort Experienced	
Group Interview Clients	47.2%	33.3%	19.4%	n = 36
Individual Interview Clients	35.6%	43.3%	21.1%	n = 90

$$\chi^2(2) = 1.60, p < .45$$

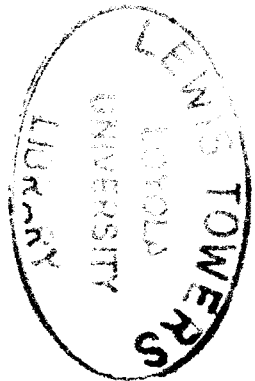


Table 2

Interview Procedure Groups by Expectations of Post-Operative Discomfort

Group	Post-Operative Discomfort Expectations			
	Underestimated Discomfort Experienced	Matched Discomfort Experienced	Overestimated Discomfort Experienced	
Interview Clients	38.9%	33.3%	27.8%	n = 36
Individual Interview Clients	40.7%	40.7%	18.7%	n = 91

$$\chi^2(2) = 1.38, p < .50$$

of surgical and post-operative discomfort were met, various satisfaction levels did not systematically differ (see Tables 3 - 5). Three-way chi-square analyses were computed on responses to the post-surgery evaluation form, comparing interview visit assessment items across the two intake procedure groups for each value of the surgical and post-operative discomfort expectation variables (i.e., expectations reportedly matched, underestimated, or overestimated the discomfort experienced). For example, of those clients who reported that their surgical discomfort was more than anticipated (47.2% of the group interview clients and 35.6% of the individual interview clients), 81.6% indicated the interview had adequately prepared them for surgery, 98.0% reported that the interview did not confuse them in any way, 98.0% felt the interview included adequate in-depth psychological counseling, and lastly, 77.1% rated the interview visit as excellent or good. A similar pattern of results emerged for those clients whose expectations of surgical discomfort matched or overestimated the pain experienced. Generally, patients who reported more pain than anticipated (see Table 3) tended to give less positive interview assessment ratings than did those patients whose expectations matched the experienced discomfort or whose pain was less than anticipated (see Tables 4 and 5).

Expectations of post-operative discomfort also did not significantly affect the interview visit assessments (see Tables 3 - 5). For example, of those clients whose post-operative discomfort was more than anticipated (38.9% of the group interview clients and 40.7% of the individual interview clients), 82.4% indicated the interview visit ade-

Table 3

Patients Who Reported More Pain Than Anticipated and  
Percentage of Favorable Interview Assessments

	Underestimated Expectations of Surgical Discomfort			Post-Operative Discomfort		
	Group Interview	Individual Interview	Combined <sup>a</sup>	Group Interview	Individual Interview	Combined <sup>b</sup>
Interview adequately prepared client for surgical experience	82.4%	81.3%	81.6%	78.6%	83.8%	82.4%
Interview did not confuse client in anyway	100.0%	96.9%	98.0%	100.0%	94.6%	96.1%
Interview included adequate indepth psychological counseling	100.0%	96.9%	98.0%	100.0%	97.3%	98.0%
Excellent or good overall evaluation of interview visit	82.4%	74.2%	77.1%	78.6%	75.7%	76.5%
	n = 17	n = 32		n = 14	n = 37	

a,b percentages reported in text are found in this column

Table 4

Patients Who Reported Pain Experiences Equal to Expectations  
and Percentage of Favorable Interview Assessments

	Surgical Discomfort			Post-Operative Discomfort		
	Group Interview	Individual Interview	Combined <sup>a</sup>	Group Interview	Individual Interview	Combined <sup>b</sup>
Interview adequately prepared client for surgical experience	100.0%	94.9%	96.1%	100.0%	94.6%	95.9%
Interview did not confuse client in anyway	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Interview included adequate indepth psychological counseling	81.8%	100.0%	96.0%	83.3%	100.0%	95.9%
Excellent or good overall evaluation of interview visit	100.0%	87.2%	90.2%	91.7%	88.9%	89.6%
	n = 12	n = 39		n = 12	n = 37	

Table 5

Patients Who Reported Less Pain Than Anticipated and  
Percentage of Favorable Interview Assessments

	Surgical Discomfort			Post-Operative Discomfort		
	Group Interview	Individual Interview	Combined	Group Interview	Individual Interview	Combined
Interview adequately prepared client for surgical experience	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Interview did not confuse client in anyway	85.7%	94.7%	92.3%	90.0%	100.0%	96.3%
Interview included adequate indepth psychological counseling	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Excellent or good overall evaluation of interview visit	85.7%	83.3%	84.0%	100.0%	75.0%	84.6%
	n = 7	n = 19		n = 10	n = 17	



quately prepared them for their surgical experience, 96.1% reported that the interview did not confuse them in any way, 98.0% felt the interview had included adequate in-depth psychological counseling, and 76.5% rated the interview visit as excellent or good. As previously noted, similar positive results were obtained for interview evaluations of those clients whose expectations regarding post-operative discomfort matched or overestimated the pain experienced. Again, people who reported more pain than anticipated tended to give less positive interview assessment ratings than did those patients whose expectations matched the pain experienced or whose pain was less than anticipated.

Additional comparisons were made of various clinic staff evaluation items and general clinic experience questions, across the two intake procedure groups, for each value of the surgical and post-operative discomfort expectation items (see Tables 6 - 8). Once again, regardless of whether or not expectations were met, satisfaction levels did not systematically differ across the intake procedure groups, according to three-way chi-square analyses. Of those clients who reported that their expectations underestimated the surgical discomfort experienced (47.2% of the group interview clients and 35.6% of the individual interview clients), over 80% rated the doctors' and staffs' courtesy, consideration, and helpfulness as excellent or good (see Table 6). As before, similar positive ratings were obtained from clients who reported that their expectations matched or overestimated the surgical discomfort experienced (see Tables 7 and 8).

Almost identical results were obtained for the relationship be-

Table 6

Patients Who Reported More Pain Than Anticipated And  
Percentage of Favorable Staff Evaluations

	Underestimated Expectations of					
	Surgical Discomfort			Post-Operative Discomfort		
	Group Interview	Individual Interview	Combined	Group Interview	Individual Interview	Combined
Excellent or Good Staff Courtesy Rating	88.2%	93.7%	91.8%	100.0%	97.3%	98.0%
Excellent or Good Staff Consideration Rating	82.3%	81.2%	81.6%	92.8%	88.9%	90.0%
Excellent or Good Staff Helpfulness Rating	94.1%	87.5%	89.8%	100.0%	94.5%	96.0%
	n = 17	n = 32		n = 14	n = 36	

Table 7

Patients Who Reported Pain Experiences Equal to Expectations  
and Percentage of Favorable Staff Evaluations

	Matched Expectations of					
	Surgical Discomfort			Post-Operative Discomfort		
	Group Interview	Individual Interview	Combined	Group Interview	Individual Interview	Combined
Excellent or Good Staff Courtesy Rating	100.0%	97.4%	98.0%	83.3%	97.3%	93.9%
Excellent or Good Staff Consideration Rating	91.7%	94.6%	93.4%	75.0%	88.6%	85.1%
Excellent or Good Staff Helpfulness Rating	91.7%	92.1%	92.0%	83.3%	88.9%	87.5%
	n = 12	n = 38		n = 12	n = 36	

Table 8

Patients Who Reported Less Pain Than Anticipated and  
Percentage of Favorable Staff Evaluations

	Overestimated Expectations of					
	Surgical Discomfort			Post-Operative Discomfort		
	Group Interview	Individual Interview	Combined	Group Interview	Individual Interview	Combined
Excellent or good Staff Courtesy Rating	100.0%	100.0%	100.0%	100.0%	94.1%	96.3%
Excellent or good Staff Consideration Rating	85.7%	88.9%	88.0%	90.0%	88.2%	88.9%
Excellent or Good Staff Helpfulness Rating	100.0%	100.0%	100.0%	100.0%	94.1%	96.3%
	n = 7	n = 18		n = 10	n = 17	

tween evaluations of staff, intake procedures, and expectations of post-operative discomfort (see Tables 6 - 8). Of those clients whose expectations underestimated the amount of post-operative discomfort experienced (38.9% of the group interview clients and 39.6% of the individual interview clients), over 90% rated the doctors' and staffs' courtesy, consideration and helpfulness as excellent or good. Again, similar positive results were obtained from clients whose expectations matched or overestimated the post-operative discomfort experienced.

The relationship between surgical and post-operative discomfort expectations, the two intake procedures, and the two open-ended comment items, was also examined (see Tables 9 - 11). Of those clients whose expectations underestimated the amount of surgical discomfort experienced, 7 of 17 or 41.2% gave positive surgical comments regarding that experience and 5 of 20 or 25.0% gave positive general remarks concerning various aspects of the clinic experience. Similarly, of those clients who experienced more post-operative pain than anticipated, 6 of 12 or 50.0% gave positive surgical comments and 8 of 18 or 44.4% gave positive general remarks about the clinic experience (see Table 9). These findings, along with similar results for clients whose surgical and post-operative pain matched or underestimated their expectations (see Tables 10 and 11), are notably less positive overall than the previously reported findings. Three-way chi-square analyses revealed no significant differences between the two intake procedure groups in terms of the relationship between discomfort expectations and the two open-ended comment items.

Table 9

Patients Who Reported More Pain Than Anticipated and  
Percentage of Favorable Responses to Open-Ended Items

	Underestimated Expectations of					
	Surgical Discomfort			Post-Operative Discomfort		
	Group Interview	Individual Interview	Combined <sup>a</sup>	Group Interview	Individual Interview	Combined <sup>b</sup>
Positive Surgical Comments	25.0% (1 of 4)	46.2% (6 of 13)	41.2% (7 of 17)	50.0% (1 of 2)	50.0% (5 of 10)	50.0% (6 of 12)
Positive General Remarks	0% (0 of 6)	35.7% (5 of 14)	25.0% (5 of 20)	42.9% (3 of 7)	45.5% (5 of 11)	44.4% (8 of 18)

<sup>a,b</sup>percentages reported in the text are found in this column

Table 10

Patients Who Reported Pain Experiences Equal to Expectations and  
Percentage of Favorable Responses to Open-Ended Items

	Matched Expectations of					
	Surgical Discomfort			Post-Operative Discomfort		
	Group Interview	Individual Interview	Combined	Group Interview	Individual Interview	Combined
Positive Surgical Comments	66.7% (2 of 3)	22.2% (2 of 9)	33.3% (4 of 12)	40.0% (2 of 5)	30.0% (3 of 10)	33.3% (5 of 15)
Positive General Remarks	66.7% (4 of 6)	80.0% (12 of 15)	76.2% (16 of 21)	33.3% (2 of 6)	63.2% (12 of 19)	56.0% (14 of 25)

Table 11

Patients Who Reported Less Pain Than Anticipated And  
Percentage of Favorable Responses to Open-Ended Items

	Overestimated Expectations of					
	Surgical Discomfort			Post-Operative Discomfort		
	Group Interview	Individual Interview	Combined	Group Interview	Individual Interview	Combined
Positive Surgical Comments	50.0% (1 of 2)	100.0% (1 of 1)	66.7% (2 of 3)	50.0% (1 of 2)	33.3% (1 of 3)	40.0% (2 of 5)
Positive General Remarks	50.0% (2 of 4)	40.0% (4 of 10)	42.9% (6 of 14)	33.3% (1 of 3)	44.4% (4 of 9)	41.7% (5 of 12)



Within group comparisons: expectations and clinic evaluations.

For supplementary information, the relationships between discomfort expectations and several staff and interview assessment items, within each intake procedure group, were examined. Expectations regarding surgical and post-operative discomfort were significantly related within each study group. That is, within each group of clients, those patients who reported more pain than anticipated during surgery also tended to report more post-operative discomfort than expected (within the group interview group,  $\underline{r}$  (36) = 0.53,  $\underline{p} < .001$ ; within the individual interview group,  $\underline{r}$  (90) = 0.53,  $\underline{p} < .001$ ).

For group interview clients, surgical discomfort expectations were somewhat related to ratings of staff courtesy and helpfulness ( $\underline{r}$  (36) = -0.24,  $\underline{p} < .08$ ;  $\underline{r}$  (36) = -0.24,  $\underline{p} < .08$ ; respectively), as indicated in Table 12. These results are consistent with findings from previous research which suggest that expectations are related to satisfaction levels. When surgical discomfort was more than expected, ratings of staff courtesy and helpfulness were less strongly positive for these group interview clients (however, there still were very few ratings other than "excellent" or "good"). Expectations of surgical discomfort were also related to the type of comments elicited by the general remarks item, at the end of the post-surgery evaluation form. Consistent with the results reported above, when surgical discomfort was more than anticipated, there was a tendency to provide more negative than positive remarks to this item ( $\underline{r}$  (16) = -0.45,  $\underline{p} < .04$ ; see Table 12).

Table 12

Within Group Comparisons: Relationships Between Discomfort Expectations and Clinic Experience Evaluations

	Group Interview		Individual Interview	
	Expectations of:		Expectations of:	
	Surgical Discomfort	Post-Operative Discomfort	Surgical Discomfort	Post-Operative Discomfort
Staff Courtesy	$\frac{r}{df} = \frac{-0.24}{36}$ $p < .08$	$\frac{r}{df} = \frac{-0.06}{36}$ $p < .36$	$\frac{r}{df} = \frac{-0.05}{90}$ $p < .31$	$\frac{r}{df} = \frac{0.08}{91}$ $p < .23$
Staff Consideration	$\frac{r}{df} = \frac{-0.11}{36}$ $p < .26$	$\frac{r}{df} = \frac{0.09}{36}$ $p < .30$	$\frac{r}{df} = \frac{-0.15}{87}$ $p < .08$	$\frac{r}{df} = \frac{0.01}{88}$ $p < .45$
Staff Helpfulness	$\frac{r}{df} = \frac{-0.24}{36}$ $p < .08$	$\frac{r}{df} = \frac{-0.06}{36}$ $p < .36$	$\frac{r}{df} = \frac{-0.15}{88}$ $p < .08$	$\frac{r}{df} = \frac{-0.02}{89}$ $p < .44$
Comments about Surgery	$\frac{r}{df} = \frac{-0.25}{9}$ $p < .26$	$\frac{r}{df} = \frac{0.00}{9}$ $p < .50$	$\frac{r}{df} = \frac{0.05}{23}$ $p < .42$	$\frac{r}{df} = \frac{0.16}{23}$ $p < .23$
General Remarks	$\frac{r}{df} = \frac{-0.45}{16}$ $p < .04$	$\frac{r}{df} = \frac{0.09}{16}$ $p < .38$	$\frac{r}{df} = \frac{-0.08}{39}$ $p < .32$	$\frac{r}{df} = \frac{-0.01}{39}$ $p < .49$
Overall Interview Evaluation	$\frac{r}{df} = \frac{-0.03}{36}$ $p < .43$	$\frac{r}{df} = \frac{-0.13}{36}$ $p < .23$	$\frac{r}{df} = \frac{-0.04}{88}$ $p < .36$	$\frac{r}{df} = \frac{0.03}{89}$ $p < .39$

Post-operative expectations, for the group interview clients, did not significantly relate to ratings of staff or to the type of remarks elicited by either open-ended comment item. Also, neither surgical nor post-operative discomfort expectations were related to the overall evaluation of the interview visit (see Table 12).

Individual interview clients closely resembled the group interview clients in terms of the within-group relationships found between discomfort expectations and various staff and interview evaluations (see Table 12). For individual interview clients, ratings of staff consideration and helpfulness were somewhat related to reported surgical discomfort expectations ( $\bar{r}$  (87) = -0.15,  $\underline{p} < .08$ ;  $\bar{r}$  (88) = -0.15,  $\underline{p} < .08$ ; respectively). These results are consistent with previous findings which suggest that satisfaction levels are related to expectations regarding the clinic experience. When surgical discomfort was more than expected, ratings of staff consideration and helpfulness tended to be less strongly positive (however, very few ratings were less positive than "excellent" or "good"). Expectations of post-operative discomfort were not significantly related to ratings of staff or to the types of remarks elicited by either open-ended comment item. Neither surgical nor post-operative expectations of discomfort were related to the overall evaluation of the interview visit, for these individual interview clients.

#### Are Evaluations Consistent Across Time?

Some limited information is available from this study regarding the consistency of evaluations at two different points in time.

Twenty-two of the group interview clients completed and returned two evaluation forms. As previously noted, one form, developed by the investigator, was completed immediately following the group interview session, prior to surgery, while the other form was completed one to six months after surgery. Both forms contained four interview assessment items which were almost identically worded. These items included assessments of how well the interview prepared clients for the surgical experience, whether the interview was confusing in any way, whether the interview provided adequate counseling, and an overall evaluation of the interview visit. Four chi-square analyses revealed no significant differences between responses to the same interview evaluation items, pre- versus post-surgery. These twenty-two clients revealed a good deal of consistency in their evaluations of the group intake interview. No other conclusions can be safely drawn from these results, especially with respect to the impact of surgery on interview evaluations, given the small sample from which the data were obtained and the lack of a comparison group.

#### General Discussion of the Intake Procedure Client Satisfaction Evaluations

Consistent with other client satisfaction studies, the results from this project were uniformly positive. Membership in either intake procedure group did not significantly affect the interview visit or staff assessments on any dimension. These results may be due in part to the fact that the information received, regardless of intake procedure, was the same. Only the mode of information presentation was

different (i.e., group versus individual setting). Tentatively, it is concluded that mode of presentation may not be an important determinant of vasectomy clinic client satisfaction. Given the remarks to the open-ended comment items, it appears that these clients are more concerned with the surgical experience as a whole and the surgical staff's responsiveness, rather than with interview visit experiences. Comments regarding surgery were much more frequent than comments about the interview visit.

Parenthetically, it should be noted that the uniformly positive results regarding client satisfaction were obtained only for the multiple- or forced-choice interview assessment items. Open-ended or free response comment items tended to elicit more negative than positive evaluations. It is unclear why this is the case. Perhaps open-ended items have less demand characteristics than forced-choice items. With free response questions, clients may be more likely to focus on what they personally believe to be important aspects of the clinic experience, good or bad. In the present study, less than half of the respondents completed the surgical comment item and the general remarks item (25.0% and 43.0%, respectively). Overall, their negative comments referred to relatively specific and some global experiences.

The difference in the results obtained from free- versus forced-choice items has obvious implications for future research concerning client satisfaction with service delivery programs. To increase the likelihood of obtaining positive and negative responses, both classes of items should be included. Each type of feedback is necessary to ef-

fectively improve various aspects of a program, from a client satisfaction standpoint.

Regardless of whether or not expectations of discomfort were met, such expectations did not systematically differ across intake procedures, nor did they significantly influence interview assessments. However, the trend of the relationship between reported expectation levels and different client satisfaction measures is of interest. For interview groups combined, those clients who reported that their surgical and/or post-operative pain was more than anticipated also had lower positive evaluations overall than those of the clients whose expectations and experiences of discomfort reportedly matched. Additionally, those clients who experienced less pain than reportedly anticipated tended to have the most positive evaluations (see Tables 3 - 11).

If the desire to reduce cognitive dissonance is influencing post-surgery evaluations, as some researchers have suggested, people who reportedly experience a good deal of pain, especially unanticipated pain (those with underestimated expectations) should give the strongest positive evaluations of an experience they voluntarily undergo. Such was not the case in this study; in fact, the opposite was found, however, the concept of dissonance may not apply in this circumstance given that the data deal with self-reported differences in pain. From a theoretical standpoint, more research is needed before a definitive conclusion on this topic can be drawn. The data does provide evidence of consistency, in that the same group of people

(those who experienced more pain than anticipated) gave more negative ratings and comments than the other groups of clients.

Lastly, it should be noted that the generalizability of these findings concerning client satisfaction is limited. All the data analyses were based on responses from a fairly small sample of clients. As previously noted, these clients were not randomly assigned to intake procedure groups, nor were study participants randomly selected for inclusion. All clients included in the study were in fact self-selected, in the sense that they voluntarily completed and returned the clinic's post-surgery evaluation form.

The majority of clients did not complete or return this post-surgery evaluation form. For example, of the individual interview clients who had surgery in 1975 and 1976, approximately 39% (77 of 195) and 26% (55 of 212), respectively, returned a post-surgery clinic evaluation form. Roughly 22% (61 of 281) of those clients who had vasectomies in 1977 also returned their clinic evaluation forms. As previously noted, group interviews began in June of 1977. It is not possible to determine exactly how many of the 1977 forms were returned by individual as opposed to group interview clients, given that no interview procedure identification was placed on the evaluation forms.

Lastly, of the group interview clients who had surgery in 1978, approximately 20% (26 of 129) returned a post-surgery clinic evaluation form.

Overall, it is evident that those who completed and returned evaluation forms were a small minority of the 1975-78 vasectomized clients. The sample of these forms utilized in the present project is

probably representative of clients who voluntarily returned such forms. However, this sample may be somewhat unrepresentative, in unknown ways, of vasectomy patients in general, especially in terms of those who did not return a post-surgery evaluation form. Perhaps only individuals who feel strongly about their clinic experiences, in either a positive or negative sense, are motivated enough to complete and return evaluation forms. The results would suggest that individuals with strongly positive experiences are more likely to return evaluation forms than others with less positive, somewhat negative, or strongly negative experiences. As Scheirer (1978) indicated, these results and their implications are in accord with predictions from social exchange theory and based on methodological artifacts such as social desirability response sets.

Additional research, utilizing true-experimental procedures, is necessary, not only to strengthen generalizability, but also to confirm or disconfirm the tentative conclusion that group versus individual intake procedures do not differentially affect client satisfaction. Moreover, intake procedures did not differentially influence expectations of surgical and post-operative discomfort. The individual intake interview procedure tended to produce a slightly better match between expectations and discomfort than did the group intake interview procedure, however, this result was not statistically significant. The correlational analyses produced results consistent with findings from previous research which suggest that expectations tend to be related to satisfaction levels. That is, the more closely ex-



pectations match or overestimate the discomfort experienced, the more positively clients tended to evaluate their clinic experience.

#### The Two Intake Procedures: A Cost-Effectiveness Analysis

There are a number of differences and a few similarities between the group versus individual intake interview procedures. Obviously, the differences play a key role in a cost-effectiveness analysis based on a cost per unit of "success" criterion of assessment. As previously noted, success, for the present purpose, has been defined in terms of completed interviews and, more importantly, completed surgeries. Prior to such an analysis, descriptive data concerning general program efficiency is examined.

Intake procedures summary. A brief summary of each intake procedure is provided in Table 13 to augment and facilitate the cost-effectiveness analysis presented below. In 1975 through May of 1977, individual intake interviews were conducted at the vasectomy clinic utilized in the present study. Private interviews with potential clients and their wives were typically scheduled every 15 to 30 minutes and a single evening clinic would last an average of 7½ hours. Approximately 19 separate interviews (a single couple per interview) were usually conducted per evening clinic. Each interview typically took a maximum of 30 minutes. On the average, 2.5 clients were processed each hour.

As of June, 1977, group intake interviews were conducted in the vasectomy clinic. Potential clients attended a one-hour group lecture and then privately met with counselors. A single evening clinic usu-

Table 13

Description of Intake Procedures  
for a Cost-Effectiveness Analysis

	Individual Intake Procedure	Group Intake Procedure
Average Time per Clinic	7½ hrs.	2½ hrs.
Average Number of Clients Per Interview	1 (couple)	9
Average Number of Separate Interviews per Clinic	19	1 (group lecture)
Average Number of Clients Processed per Hour	2.5	3.6
Clinic Coordinator's Salary Per Hour	\$25	\$25
Nurses' Salary Per Hour	\$8 to \$10	\$8 to \$10
Receptionist's Salary Per Hour	\$4	\$4
Average Total Salary Costs Per Clinic	\$352.50 to \$420	\$117.50 to \$140

ally lasted approximately 2½ hours and, on the average, 9 potential clients attended the group interview (i.e., lecture). Typically, 3.6 clients were processed each hour.

The number of staff required to conduct the vasectomy clinic interview sessions did not substantially vary over the 1975-78 period. Regardless of intake procedure, the clinic coordinator, two or three nurses, and one receptionist processed potential clients. When the individual intake procedure was utilized, the coordinator conducted most of the interviews and the nurses assisted by interviewing the remaining clients. The receptionist initially processed all clients as they arrived for the clinic. When the group intake procedure was instituted, the coordinator conducted each group interview and subsequently met individually with almost all clients for personal questions. The nurses helped clients fill out forms and individually met with a few patients immediately after the group interview. Again, the receptionist processed all patients upon their arrival at the clinic.

Interview staff salaries included approximately \$25 per hour for the coordinator, \$8 to \$10 per hour for the nurses and the receptionist received about \$4 per hour. Because of the difference in time requirements between the group versus individual intake procedures (2½ hours and 7½ hours, on the average; respectively), the average total interview salary costs per evening clinic varied. Total salary costs ranged from \$352.50 to \$420 for a typical 7½-hour individual interview clinic, while similar costs ranged from \$117.50 to \$140 for an average

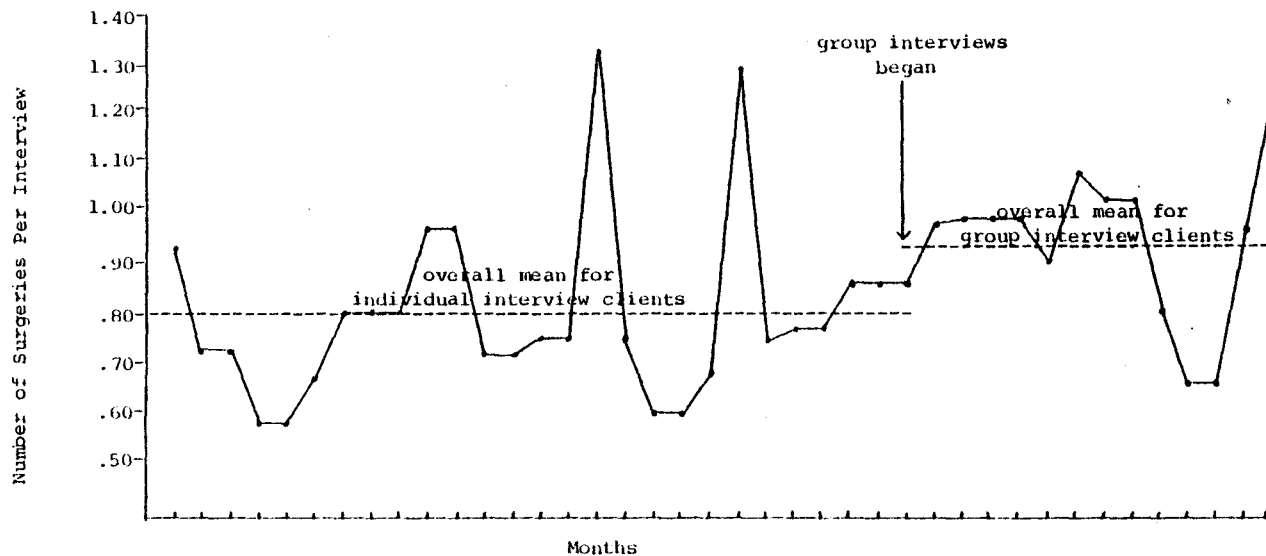
2½-hour group interview clinic.

Based on the descriptive information present above, the group intake procedure appears to be more efficient than the individual intake procedure, in terms of several factors including: (a) average total time per clinic, (b) average number of clients per interview, (c) average number of separate interviews required per clinic, (d) average number of clients processed per hour, and (e) average total salary costs per clinic. These indices are revealing; however, they do not provide the whole picture. Information concerning costs per unit of "success," in this case, per completed interview and completed surgery are presented below.

Costs per completed interview. Two indices of cost per completed interview were calculated from the vasectomy clinic records for each month. Figures 1 and 2 indicate that the group intake procedure is more efficient than the individual intake procedure, in terms of completed interviews.

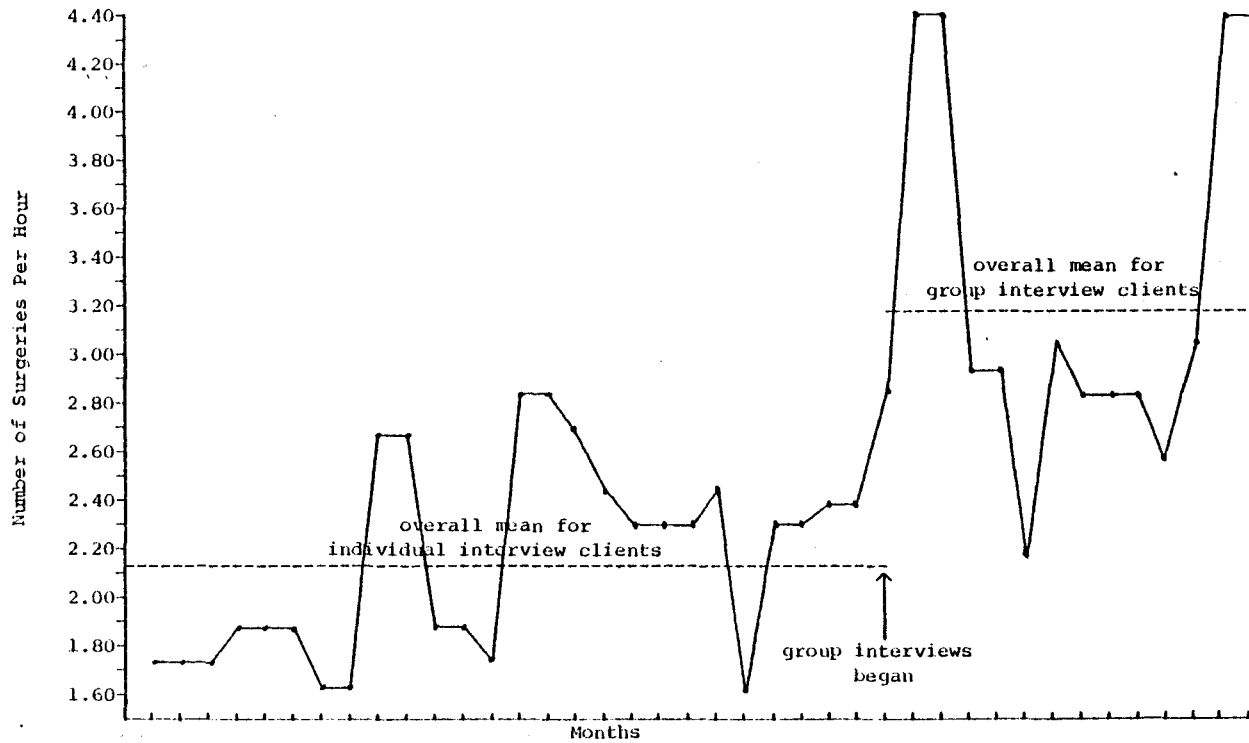
As evident in Figure 1, the group intake procedure yielded a higher average number of surgeries per completed interview (a mean of .93) than did the individual intake procedure (a mean of .80). Similarly, as Figure 2 shows, the group intake procedure appeared to be even more successful when the average number of completed surgeries per hour of staff interview time was examined. The mean for the group intake procedure was approximately 3.23 surgeries per interview hour, while the mean for the individual intake procedure was 2.13 surgeries per interview hour. This finding is obviously a reflection of the fact

Figure 1  
 1975-78 Mean Number of Surgeries per Completed Interview Plotted over Months



Note. Points represent medians of three adjacent monthly means (procedure suggested in Tukey, 1977).

Figure 2  
 1975-78 Mean Number of Surgeries per Hour of Staff Interview Time Plotted Over Months



Note. Points represent medians of three adjacent monthly means (procedure suggested in Tukey, 1977).

that, on the average, group interview clinics required considerably less time than did the individual interview clinics (see Table 13).

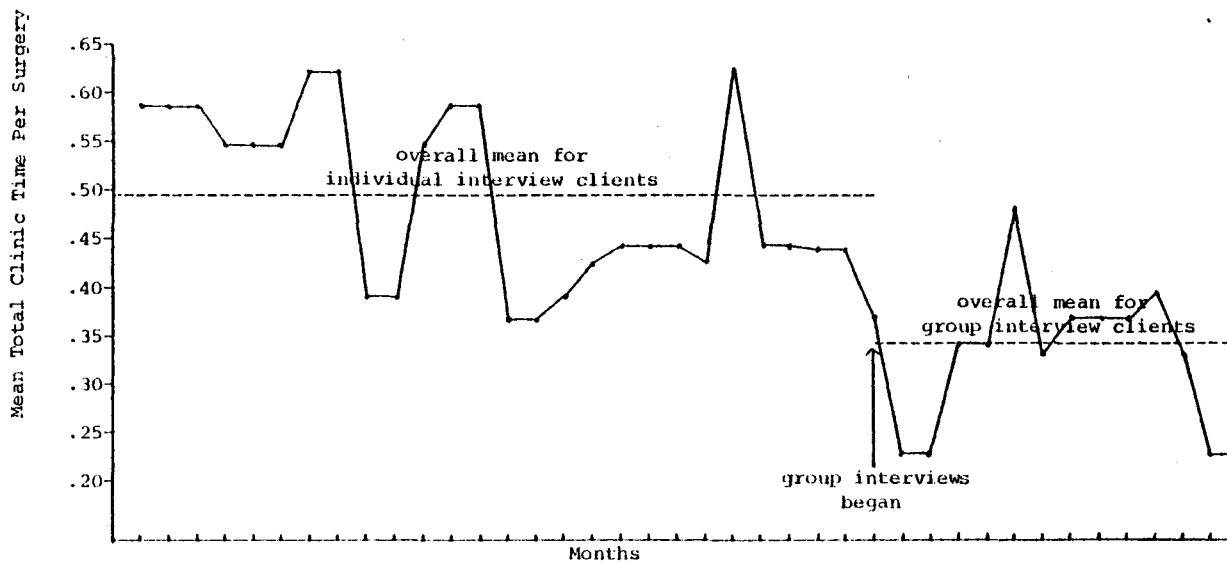
Costs per completed surgery. Two indices were also calculated, based on vasectomy clinic records, as estimates of cost per completed surgery. Average total clinic time per completed surgery across intake procedures for each month is plotted in Figure 3. Again, the group intake procedure was found to be more efficient (i.e., required less clinic time per completed surgery) than the individual intake procedure. The average total clinic time per completed surgery for the group versus individual intake procedure was .33 hours and .49 hours, respectively.

A plot of average interview salary total costs per completed surgery for both intake procedures can be found in Figure 4. This figure indicates that the group intake procedure is more efficient than the individual intake procedure; that is, the former technique, on the average, required less in terms of interview salary total costs per completed surgery (approximately \$7.18 per surgery) than did the latter technique (approximately \$23.08 per surgery).

Problems with these cost-effectiveness calculations. The switch from the individual to the group intake procedure occurred in June of 1977. The cost-effectiveness analyses based on clinic records are somewhat difficult to interpret, especially for the 1977 data. For example, some clients who had individual interviews during the early part of 1977 did not have their surgeries until after June of 1977 (when the group interviews began). This was true because most sur-

Figure 3

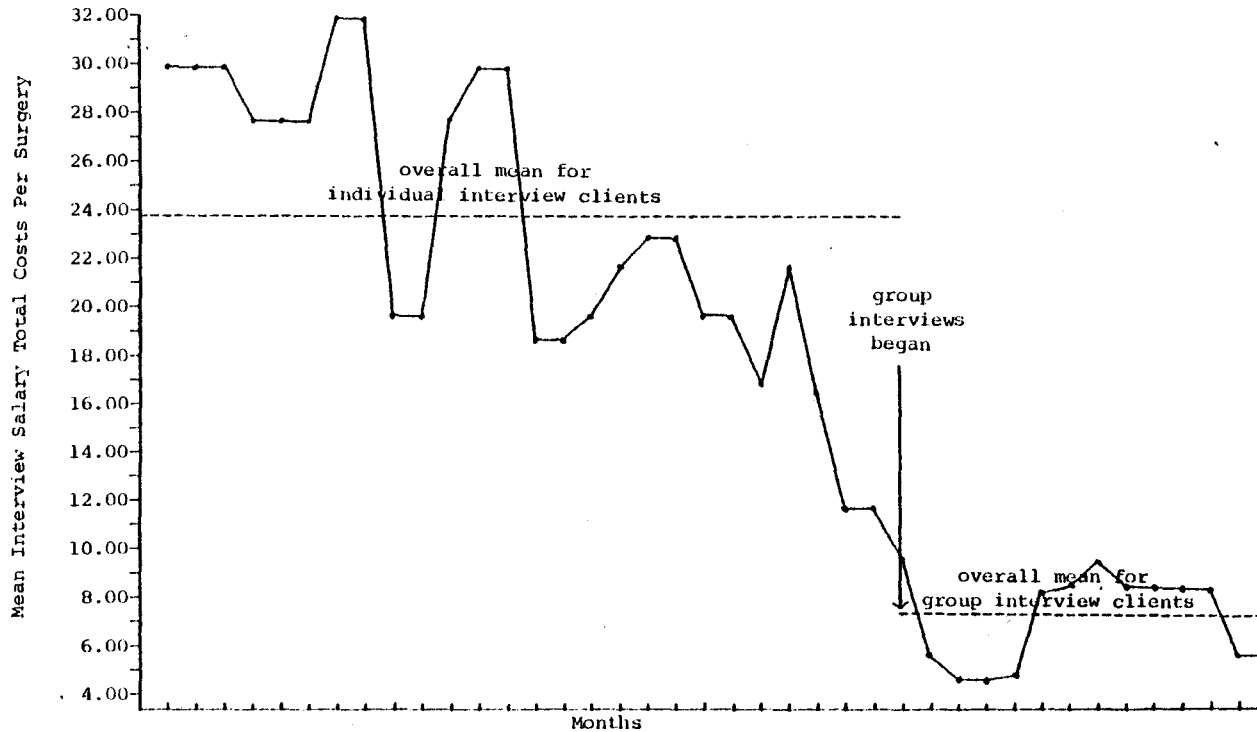
1975-78 Mean Total Clinic Time per Completed Surgery Plotted Over Months



Note. Points represent medians of three adjacent monthly means (procedure suggested in Tukey, 1977).



Figure 4  
 1975-78 Mean Interview Salary Total Costs per Completed Surgery Plotted Over Months



Note. Points represent medians of three adjacent monthly means (procedure suggested in Tukey, 1977).

geries were scheduled to occur from two weeks to two months after interviews. According to clinic records, approximately 20% (27 of 133) of the surgeries performed after (and including) the month of June in 1977 were for individual interview clients, while all but one surgery performed in 1978 were for group interview clients. The trend information presented in Figures 1 through 4 basically reflects differences in the effects of the group versus individual intake procedures for all the data except for the point which represents the beginning of the group interviews (June, 1977), and one or two months afterwards.

Drop-out rate and cost-effectiveness. Drop-out rates from actual interviews to actual surgeries may be an indication of interview efficiency and effectiveness. Such indices are only a rough indication of interview efficiency because a number of factors, in addition to satisfaction with or persuasiveness of an interview, could directly affect this drop-out rate. During the interim between their interviews and scheduled surgical dates, clients could change their minds about having a vasectomy for a variety of reasons including financial considerations, a renewed desire to have more children, and so forth. Still, an examination of this drop-out rate is somewhat informative, though limited.

With respect to the individual interviews conducted in 1975, 1976 and early 1977, there was a respective yearly drop-out rate of 20%, 14%, and 19%, in terms of the number of interviews conducted during each period and the number of surgeries performed. Likewise, with respect to the group interviews conducted in late 1977 and in 1978,

there was an overall yearly drop-out rate of 10% and 9%, respectively.

These figures are not direct measures of drop-out rate because some clients who had interviews late in each calendar year may not have received their vasectomies until the following year. As previously noted, the delay occurred because surgeries were typically scheduled for two weeks to two months after interviews. This "carry-over" effect creates an especially difficult data interpretation problem for the 1977 information, given that approximately 20% of the clients who had individual interviews in early 1977 also had their surgeries after the beginning of the group interviews in June. Therefore, an aggregated monthly or yearly comparison of interviews conducted to surgeries performed is a somewhat inaccurate indication of the actual drop-out rate. A direct comparison would require information concerning the actual interview and, if applicable, actual surgery dates for each interviewed client over the four year period. Unfortunately, such information was unavailable.

Given the limited accuracy of the data, it is tentatively concluded that the drop-out from actual interviews to actual surgeries was slightly less for those who had group interviews compared to those who had individual interviews. There are a number of plausible, competing reasons available for explaining this drop-out rate, including the possibility that the group interview was more "persuasive" than the individual interviews. Perhaps the group atmosphere made clients more aware that others, like themselves, were planning to take a "big step" and also get vasectomies. This proposed awareness may have helped

reduce anxieties about the decision which may have in turn affected the estimated drop-out rate reported above. Whether this proposed process even occurs or accounts for a significant proportion of the variance in the estimated drop-out rate is unknown.

## DISCUSSION OF RESULTS AND CONCLUSIONS

Uniformly positive results were obtained on the client satisfaction measures. Regardless of intake procedure, interview visit and staff assessments did not systematically differ. It was concluded that the mode of information presentation (group versus individual interview setting) may not be an important determinant of vasectomy client satisfaction.

It was also concluded that expectations of surgical and post-operative discomfort did not systematically differ across interview groups, nor did these expectations significantly influence interview and staff evaluations, regardless of whether or not they were fulfilled. There was a tendency for clients who reported more pain than anticipated to give lower positive evaluations than either those who reported that their expectations and discomfort matched or those who reported less pain than anticipated. Because of some methodological problems in the study, it was suggested that additional research be conducted to re-examine these issues, in order to confirm or disconfirm the present conclusions.

The group intake procedure was found to be more efficient than the individual intake procedure, in terms of all the cost-effectiveness analyses. Costs per unit of success, that is, per completed interview and completed surgery were the indices of major interest. Also, drop-out rate across time and intake procedures was examined. It was noted that these measures were probably somewhat inaccurate, due to an un-

avoidable time lag between completed interviews and completed surgeries. This lag affected the aggregated monthly and yearly data utilized in the analyses to an unknown degree. Only the cost-effectiveness data presented in Table 13 were unaffected by the time lag problem.

Based on the above results, it is concluded that the change from individual to group interviews was cost-effective and did not lead to an erosion in the perceived quality of service provided by the vasectomy clinic. As previously noted, this clinic was one of several services provided by the family planning facility. Viewing the facility as a "business," the owners or managers might be concerned with introducing new procedures for a variety of reasons, some of which include the desire to: (a) reduce total operating costs by becoming more cost-efficient, (b) increase turn-over or output, that is, increase the number of clients processed (change the absolute output level), and/or (c) increase monetary payoffs to the organization, the combined effect of achieving the two preceding goals. From such a business viewpoint, the facility as a whole also benefited from the reduced operating costs incurred by the change from the individual to the group intake procedure within its vasectomy service. In other words, the change was cost-effective for the entire facility.

On the other hand, the absolute or total output level of the vasectomy clinic, that is, the total number of clients obtaining vasectomies across the 1975-78 data collection period, did not substantially differ in a systematic way, regardless of intake procedure. In

other words, the switch to a group interview format was cost-effective in the sense that basically the same output could be produced in about half the time with a similar reduction in personnel costs; however, the absolute or total output level did not change.

In summary, both the vasectomy service and the facility, as a whole, benefited from the intake procedure change introduced in 1977 from a cost-efficiency standpoint, but not in terms of total output (number of surgeries performed).

In terms of client satisfaction, it is difficult to determine whether a group intake procedure would produce similar results in other health care settings. Such a generalization would depend on the similarities and differences between vasectomy clients and other individuals seeking solutions to various health-related problems. It is more likely that these results may apply to other birth control clinic settings, especially surgical contraception clinics, rather than to health delivery services concerned with other types of illness.

Differences in client goals and motivations for obtaining a particular method of birth control may play a major role in satisfaction with group versus individual intake procedures. Given the nature and content of the open-ended responses on the post-surgery evaluation form, it appeared that clients in the present study were more concerned with responsiveness of surgical staff rather than interview staff. Therefore, a group versus individual intake interview may not have been a major concern for these vasectomy clients.

On the other hand, clients seeking other, less permanent and

nonsurgical methods of birth control may have different motivations and goals. They may be more concerned with interview procedures, and this concern could in turn affect intake evaluations, especially if clients are relatively uncertain about the type of method they want. Continued research is needed before definitive conclusions can be drawn concerning the impact of intake procedures on client satisfaction in various health care settings.



## SUMMARY

Group versus individual intake procedures in a vasectomy clinic were evaluated in terms of client satisfaction and cost-effectiveness. Regardless of intake procedure, client satisfaction was uniformly positive. Expectations of surgical and post-operative discomfort did not systematically differ across intake procedures, nor did these expectations significantly influence staff and interview assessments. Indices of cost per completed interview and per completed surgery indicated that the group intake procedure was more efficient than the individual intake procedure. An index of the drop-out rate from actual interviews to actual surgeries also favored the group intake procedure. It was concluded that the group interview technique, was less expensive than the individual interview technique and did not lead to a reduction in the perceived quality of service. Implications concerning the impact of intake procedures on client satisfaction in related health care settings and methodological drawbacks of the study were discussed.

#### FOOTNOTES

<sup>1</sup>This section has been included not only for the reader's benefit, but as a first step in estimating program costs. Levin (1975) suggested that to estimate cost one needs to begin with a description of a program and its components so that a list of required resources can be compiled.

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APPENDIX A

## POST-SURGERY CLINIC EVALUATION FORM

Dear Sir:

As a recent patient in our Vasectomy Clinic, you are in a position to be very helpful to us and to the many others who are seeking our services. Your answers to the following questions will aid us in evaluation and improvement of our program. Please complete and return this form in the envelope provided at your earliest convenience.

Thank you for your time and assistance.

## INTERVIEW

1. Did the interview adequately prepare you for what you experienced in surgery? Yes \_\_\_ No \_\_\_ Explain: \_\_\_\_\_  
\_\_\_\_\_
2. Did the interview confuse you in anyway? Yes \_\_\_ No \_\_\_ If so, how? \_\_\_\_\_
3. Do you feel the interview should have included more in-depth psychological counseling and exploration of your reasons for wanting a vasectomy? Yes \_\_\_ No \_\_\_ Explain: \_\_\_\_\_  
\_\_\_\_\_
4. What would be your overall evaluation of the interview visit?  
excellent      good      average      fair      poor

## SURGERY

1. My vasectomy surgery was: ( ) more uncomfortable than I expected, ( ) less uncomfortable, ( ) about what I expected.
2. Please evaluate the response of the doctors and the staff:

Courtesy:	Excellent	Good	Average	Fair	Poor
Consideration:	Excellent	Good	Average	Fair	Poor
Helpfulness:	Excellent	Good	Average	Fair	Poor

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## POST-OPERATIVE

1. My post-operative discomfort was:  
 more than I expected  
 less than I expected  
 about what I expected
2. Did you contact \_\_\_\_\_ about a post-operative problem? Yes \_\_\_\_  
 No \_\_\_\_ Explain problem: \_\_\_\_\_

How was this problem treated? \_\_\_\_\_

I wanted to call about a post-operative problem, but did not.  
 Explain why: \_\_\_\_\_

3. After surgery,  
 a. how many days were you uncomfortable? \_\_\_\_\_  
 b. how many days did you wait before having intercourse? \_\_\_\_\_
4. The amount of swelling I experienced was:  
 very little  
 moderate  
 a lot
5. The amount of discoloration was:  
 very little  
 moderate  
 a lot
6. Did you experience any positive or negative psychological effects  
 after surgery? Yes \_\_\_\_ No \_\_\_\_  
 If yes, please explain: \_\_\_\_\_

Please use the remaining space to offer suggestions, criticisms,  
 and reactions you and your partner may have had covering the total  
 time from original contact with \_\_\_\_\_ through the  
 completion of semen analyses:

Date \_\_\_\_\_ Name (optional) \_\_\_\_\_



APPENDIX B

## PRE-SURGERY GROUP INTERVIEW EVALUATION FORM

DATE \_\_\_\_\_

## VASECTOMY QUESTIONNAIRE

We would appreciate your taking time to complete this form. We want to be sure we have given you adequate information about vasectomy. Your answers will help us improve our program. Please sign your names at the bottom of the last page. Thank you very much.

The questions below will be a review for you and a chance for us to be sure we have done our job correctly. They are designed to help us evaluate how successful we have been in stressing certain facts about vasectomy that we feel are very important.

1) Which one of you first conceived the idea of having a vasectomy?

Husband \_\_\_\_\_ Wife \_\_\_\_\_

2) How long did you discuss it before you came in?

\_\_\_\_\_ less than 1 month

\_\_\_\_\_ 1 to 6 months

\_\_\_\_\_ 6 months to 1 year

\_\_\_\_\_ more than 1 year

3) How sure are you that vasectomy is the right choice for both of you?

\_\_\_\_\_ very sure

\_\_\_\_\_ fairly sure

\_\_\_\_\_ somewhat unsure

\_\_\_\_\_ very unsure

- 4) Did the interview give you a clear picture of what to expect before, during and after surgery? \_\_\_\_\_ yes \_\_\_\_\_ no  
If no, please explain \_\_\_\_\_
- 5) Did you have specific questions in mind when you came in for the interview? \_\_\_\_\_ yes \_\_\_\_\_ no  
If yes, were they answered in the interview? \_\_\_\_\_ yes \_\_\_\_\_ no  
If your questions were NOT answered, what were they?  
\_\_\_\_\_
- 6) Did you think of any questions after the interview that you need answered? \_\_\_\_\_ yes \_\_\_\_\_ no  
If yes, what are they? \_\_\_\_\_
- 7) Did you feel free to ask questions during the interview? \_\_\_\_\_ yes \_\_\_\_\_ no
- 8) Did the interview confuse you in any way? \_\_\_\_\_ yes \_\_\_\_\_ no  
If yes, how? \_\_\_\_\_
- 9) Did the interview include adequate in-depth psychological counseling and exploration of your reasons for vasectomy?  
\_\_\_\_\_ yes \_\_\_\_\_ no  
If no, explain why \_\_\_\_\_
- 10) How sure are you that you know what the surgical procedure involves and how the vasectomy is performed?  
\_\_\_\_\_ very sure  
\_\_\_\_\_ fairly sure  
\_\_\_\_\_ somewhat unsure  
\_\_\_\_\_ very unsure

11) How sure are you that you know the preoperative and postoperative "dos" and "don'ts" outlined during the interview?

- \_\_\_\_\_ very sure  
 \_\_\_\_\_ fairly sure  
 \_\_\_\_\_ somewhat unsure  
 \_\_\_\_\_ very unsure

12) What is your overall evaluation of the interview visit?

Circle one - Excellent      Good      Average      Fair      Poor

13) A vasectomy is:      (check one)

- \_\_\_\_\_ a permanent, irreversible procedure  
 \_\_\_\_\_ an easily reversible birth control method involving minor surgery  
 \_\_\_\_\_ a birth control method which should be considered permanent; however reversals are successful in 70 - 85% of cases  
 \_\_\_\_\_ a topic not covered in the interview

14) A vasectomy will reduce the ejaculation fluid by: (check one)

- \_\_\_\_\_ 0%  
 \_\_\_\_\_ 3-5%  
 \_\_\_\_\_ 10%  
 \_\_\_\_\_ not discussed in interview

15) The vasectomy surgery will: (check one)

- \_\_\_\_\_ stop new sperm from developing  
 \_\_\_\_\_ provide a block so that sperm cannot travel above the vasectomy site

\_\_\_\_\_ cause newly formed sperm to remain immature, thus  
 eliminating the possibility of impregnation  
 \_\_\_\_\_ not discussed in interview

16) After vasectomy, a couple should not discontinue use of their  
 present birth control method until: (check one)

\_\_\_\_\_ there has been 10 ejaculations  
 \_\_\_\_\_ 2 weeks have elapsed  
 \_\_\_\_\_ 2 consecutive sperm counts are negative  
 \_\_\_\_\_ not discussed in interview

17) After vasectomy, the couple can resume sexual intercourse after:

(check one):

\_\_\_\_\_ 1 day  
 \_\_\_\_\_ 3 days  
 \_\_\_\_\_ 1 week  
 \_\_\_\_\_ not discussed in interview

18) When resuming intercourse after surgery, it is advisable to:

(check one):

\_\_\_\_\_ have the man on his back with his wife on top  
 \_\_\_\_\_ use the "missionary position" (man on top)  
 \_\_\_\_\_ not discussed in the interview

19) When the patient comes in for surgery, he should bring a semen  
 specimen not more than: (check one)

\_\_\_\_\_ 4 hours old  
 \_\_\_\_\_ 8 hours old  
 \_\_\_\_\_ 10 hours old

\_\_\_\_\_ not discussed in the interview

- 20) To produce the semen specimen, the patient should masturbate into a: (check one)

\_\_\_\_\_ condom ("rubber")

\_\_\_\_\_ clean baby food jar or glass jar

\_\_\_\_\_ plastic pill bottle

\_\_\_\_\_ not discussed in the interview

- 21) The first sperm count exam after surgery should be done:  
(check one)

\_\_\_\_\_ 3 weeks or 10 ejaculations after surgery

\_\_\_\_\_ 6 weeks or 20 ejaculations after surgery

\_\_\_\_\_ if patient thinks he needs one

\_\_\_\_\_ not discussed in the interview

- 22) A second sperm count after surgery should be done:  
(check one)

\_\_\_\_\_ only if the first one showed sperm present

\_\_\_\_\_ one week after the first

\_\_\_\_\_ two weeks after the first

\_\_\_\_\_ not discussed in the interview

- 23) Semen (sperm) specimens brought for testing after surgery, should be brought in: (check one)

\_\_\_\_\_ as soon as possible after collection and not more than 4 hours old

\_\_\_\_\_ 10 to 12 hours after ejaculation

\_\_\_\_\_ 12 to 14 hours after ejaculation

not discussed in the interview

24) The patient should not take aspirin or alcohol: (check one)

for 24 hours before and after surgery

for 48 hours before and after surgery

for 12 hours before and after surgery

not discussed in the interview

25) Which of the following symptoms should be reported to the

doctor following a vasectomy? (You may choose more than one)

moderate swelling of the testicles

slight discharge from the incision sites

moderate discoloration of the scrotum

heavy discharge from incision sites

a lump at incision site that becomes larger

any problem involving the vasectomy that worries  
you

not discussed in the interview

26) The patient should remain inactive after surgery for:

(check one)

10 to 12 hours

24 to 48 hours

3 to 5 days

not discussed in the interview

27) After surgery the patient will: (check one)

be driven home or take a cab home

drive himself if he wishes

\_\_\_\_\_ ride public transportation if necessary

\_\_\_\_\_ not discussed in the interview

28) After the vasectomy, the patient can expect: (check one)

\_\_\_\_\_ a slight decrease in sexual desire

\_\_\_\_\_ no visible change in color, taste, quantity or  
smell in liquid he ejaculates

\_\_\_\_\_ some difficulty in having an erection

\_\_\_\_\_ not discussed in the interview

29) When the patient comes in for surgery, he should bring a large or extra large jock strap with him. He will wear the jock strap home after surgery and continue to wear it for:

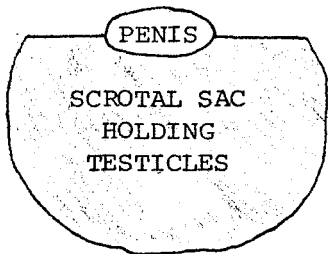
\_\_\_\_\_ the next 3 days

\_\_\_\_\_ 7 days

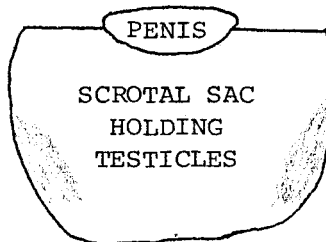
\_\_\_\_\_ as long as there is swelling

\_\_\_\_\_ not discussed in the interview

30) The night before surgery, someone other than the patient, is to shave the area with a safety razor. Check the correct drawing below. The area to be shaved has been shaded in.



\_\_\_\_\_  
Husband



\_\_\_\_\_  
Wife

If unmarried, sign here \_\_\_\_\_



## APPROVAL SHEET

The thesis submitted by Elicia J. Herz has been read and approved by the following committee:

Dr. Emil Posavac, Director  
Associate Professor, Psychology, Loyola

Dr. John Edwards  
Assistant Professor, Psychology, Loyola

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Masters of Art.

April 18, 1979  
Date

Emil J. Posavac  
Director's Signature