

University of Windsor

Scholarship at UWindor

Electronic Theses and Dissertations

Theses, Dissertations, and Major Papers

5-1-1980

ATTITUDE CHANGE OF THE NONDISABLED TOWARD DISABILITY AS A FUNCTION OF EXPOSURE TO DISABLED INDIVIDUALS ENGAGING IN ATHLETIC COMPETITION.

KATHLEEN NAVARRE

University of Windsor

Follow this and additional works at: <https://scholar.uwindsor.ca/etd>

Recommended Citation

NAVARRE, KATHLEEN, "ATTITUDE CHANGE OF THE NONDISABLED TOWARD DISABILITY AS A FUNCTION OF EXPOSURE TO DISABLED INDIVIDUALS ENGAGING IN ATHLETIC COMPETITION." (1980).

Electronic Theses and Dissertations. 7186.

<https://scholar.uwindsor.ca/etd/7186>

This online database contains the full-text of PhD dissertations and Masters' theses of University of Windsor students from 1954 forward. These documents are made available for personal study and research purposes only, in accordance with the Canadian Copyright Act and the Creative Commons license—CC BY-NC-ND (Attribution, Non-Commercial, No Derivative Works). Under this license, works must always be attributed to the copyright holder (original author), cannot be used for any commercial purposes, and may not be altered. Any other use would require the permission of the copyright holder. Students may inquire about withdrawing their dissertation and/or thesis from this database. For additional inquiries, please contact the repository administrator via email (scholarship@uwindsor.ca) or by telephone at 519-253-3000ext. 3208.

49236



National Library of Canada

Bibliothèque nationale du Canada

CANADIAN THESES ON MICROFICHE

THÈSES CANADIENNES SUR MICROFICHE

NAME OF AUTHOR/NOM DE L'AUTEUR Kathleen Navarre

TITLE OF THESIS/TITRE DE LA THÈSE Attitude change of the nondisabled toward disability as a function of exposure to disabled individuals engaging in athletic competition.

UNIVERSITY/UNIVERSITÉ The University of Windsor

DEGREE FOR WHICH THESIS WAS PRESENTED/ GRADE POUR LEQUEL CETTE THÈSE FUT PRÉSENTÉE Ph.D.

YEAR THIS DEGREE CONFERRED/ANNÉE D'OBTENTION DE CE GRADE May, 1980

NAME OF SUPERVISOR/NOM DU DIRECTEUR DE THÈSE Dr. Henry Minton

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

DATED/DATÉ Oct 7, 1979 SIGNED/SIGNÉ Sr. Kathleen A. Navarre

PERMANENT ADDRESS/RÉSIDENCE FIXE _____



National Library of Canada
Collections Development Branch

Canadian Theses on
Microfiche Service

Bibliothèque nationale du Canada
Direction du développement des collections

Service des thèses canadiennes
sur microfiche

NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us a poor photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30. Please read the authorization forms which accompany this thesis.

THIS DISSERTATION
HAS BEEN MICROFILMED
EXACTLY AS RECEIVED

AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de mauvaise qualité.

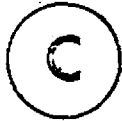
Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30. Veuillez prendre connaissance des formules d'autorisation qui accompagnent cette thèse.

LA THÈSE A ÉTÉ
MICROFILMÉE TELLE QUE
NOUS L'AVONS REÇUE

ATTITUDE CHANGE OF THE NONDISABLED TOWARD DISABILITY
AS A FUNCTION OF EXPOSURE TO DISABLED INDIVIDUALS
ENGAGING IN ATHLETIC COMPETITION

By



Kathleen Navarre

B.A. Saginaw Valley State College, 1971
M.A. University of Windsor, 1975

A Dissertation
Submitted to the Faculty of Graduate Studies
through the Department of Psychology
in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy at the
University of Windsor

Windsor, Ontario, Canada
1979

© Kathleen Navarre, 1979

730907

APPROVED BY:

Henry P. Minton
Chairman

Martin Wolf

James H. Outbre

Larry Carmichael

Frank Schneider

ABSTRACT

The purpose of the present study was to investigate the possible effects the Ontario Games may have on the community in which they are held. The Ontario Games are athletic competition for physically disabled individuals. It was proposed that exposure to the Ontario Games will result in an attitude change in nondisabled persons in their beliefs regarding disabled persons. A review of the literature shows that information about disability, plus contact with disabled persons, results in effective positive attitude change in the nondisabled. The Ontario Games provide both information about and contact with the disabled for the host community. Therefore, a positive attitude change, as measured by the Attitude Toward Disabled Persons Scale (ATDP), was predicted in the host community.

In the summer of 1978 four hundred and fifty disabled athletes participated in the Ontario Games held in Windsor, Ontario. Six weeks prior to the Games, a sample of 2,000 Windsor residents were randomly selected from the phone book to act as subjects. Each subject received an ATDP scale by mail and was asked to fill out and return the survey within ten days. Follow-up surveys were sent one month after the Games to all those subjects who returned the first questionnaire, creating a repeated measures sample. In addition a new random sample of 2,000 subjects was selected from the phone book to receive a post-Games-only ATDP scale.

Sarnia, Ontario was chosen as a comparison community on the basis of its being an industrial, border city as is Windsor. Also, Sarnia had not been host to the Games at any time in the past. Sarnia is slightly less

than one half the population of Windsor, therefore, 1,000 pre- and 1,000 post-Games surveys plus the appropriate repeated measures surveys were sent to Sarnia. All other conditions, including time sent and content of the survey were identical for Windsor and Sarnia. Volunteers helping with the Ontario Games were also surveyed by pre- and post-games ATDP scales.

The major hypothesis was that attitudes toward the disabled as reflected in ATDP scores would be more positive in the host community of Windsor in post- as opposed to pre-games measures. Also for volunteer subjects it was hypothesized that ATDP scores would be more positive in post- as opposed to pre-game measures.

The major hypothesis was not upheld. A 2 X 2 X 2 (sex X city X time) analysis of variance with repeated measures on the last factor indicated no significant difference between ATDP scores after the Games than before the Games in the random sample of subjects. However, the predicted positive attitude change was found for volunteer subjects.

ACKNOWLEDGEMENTS

There are many people who deserve special recognition for their efforts and assistance during the period of research of which this dissertation is a product.

First, appreciation to the Ministry of Culture & Recreation and Mr. Robert Coughlin for giving me the opportunity to carry out this research project. Next, appreciation to my committee members: Dr. Henry Minton for the confidence and support he has given me in this project and throughout my graduate career; Dr. Frank Schneider for expert editing and advice; Dr. Martin Morf for his statistical expertise; and Dr. James D. Dineen, and my outside reader, Dr. Larry Carmichael from Michigan State University, for insightful input from another academic field. I would also like to mention Dr. Meyer Starr, though not a committee member, his coffee room conferences were most helpful. A special thanks to Kermit Kranz, Saginaw Valley State College, for computer assistance and for his patience, loyalty, and laughter.

Deep appreciation is felt for my sister, Mary, who renewed my mind and spirit at points alpha and omega and all my family and friends for stuffing, stamping, sealing and unsealing, coding, counting, and most of all, caring. Also, thanks to Janet, Joan, and Judy for help in bringing what seemed like an endless task to completion. Special appreciation to Beth Gough for bringing order to chaos by typing the dissertation in such fine form. And last of all, for any degree of sanity I may have left, I thank, Beth, Lisa, Irene, Mary Anne and Dorothy for adding a touch of humanity when I needed it most.

TABLE OF CONTENTS

		Page
	ABSTRACT	vi
	ACKNOWLEDGEMENTS	viii
	LIST OF TABLES	xi
	Chapter	
I	INTRODUCTION	1
II	METHOD	16
	Overview	16
	Subjects	16
	Measures	19
	Attitude Toward Disabled Persons Scale	19
	Demographic Data	27
	Procedure	28
III	RESULTS	30
	Scores on Attitude Measure	30
	Preliminary Analyses of Demographic Data	30
	Analyses of Random Sample Data	31
	Analyses of Volunteer Data	37
IV	DISCUSSION	46
	Conclusion	52
	Appendix	
A	Information Regarding Community Exposure to the Games	55
B	Budget	56
C	Information Regarding Volunteer Exposure to the Games	57
D	Attitude Toward Disabled Persons Scale	58
E	Normative Data ATDP	59
F	MacDonald and Hall Disability Scale	60
G	Demographic Information	61
H	Cover Letter for Community Sample	62

TABLE OF CONTENTS CONT'D

	Page
Appendix	
I Cover Letter for Repeated Measures	63
J Awareness Information	64
K Volunteer Information Regarding Involvement in Games	65
L L-1 to L-3 Coding for Demographics	66
M M-1 to M-2 Analyses of Variance for Disabled Friend	69
N N-1 to N-2 Analyses of Demographic Data and Pre-game ATDP Scores: Pre-game Only versus Pre-game Repeated Measures	71
O Demographic Analyses for Aware versus Not Aware Subjects	73
P P-1 to P-2 Analyses of Variance for Degree of Awareness	74
Q Analyses of Demographic Data and Pre-game ATDP Scores: Pre-game Only versus Pre-game Repeated Measures: Volunteers	76
REFERENCES	77
VITA AUCTORIS	83

LIST OF TABLES

Table		Page
1	Demographic Data	32
2	Analyses of Demographic Data for Male and Female Subjects: Windsor versus Sarnia	33
3	Analyses of Variance of ATDP Scores by Sex, City, and Time	35
4	Means and Standard Deviations for ATDP Scores	36
5	Analyses of Variance of ATDP Scores by Aware, Sex, and Time	38
6	Means and Standard Deviations for ATDP Scores	39
7	Analyses of Variance of Post-Games ATDP Scores by Sex, City, Aware, and Pretested-Unpretested	40
8	Means and Standard Deviations for ATDP Scores	41
9	Demographic Data for Volunteer Subjects	43
10	Analyses of Variance of Volunteer Subjects' ATDP Scores by Sex	44
11	Means and Standard Deviations for Volunteer Subjects' ATDP Scores	45

To my Parents
who have given me the two things I need in life -
both "roots and wings"

This paper is submitted in faith that attitude change can be made a reality. Regarding society's attitude toward the disabled, Jean Vanier has stated:

The tragedy of our World today is that man is afraid of man. Far from seeing other individuals and peoples as collaborators in the mystery of universal human growth, we see them as enemies of our own growth and development.

CHAPTER I

INTRODUCTION

The purpose of the study was to investigate attitudes towards the physically disabled as influenced by the engagement of disabled people in out-of-role behavior. Out-of-role behavior is behavior that is not commonly associated with a person or a particular group of people. In this study the out-of-role behavior of the disabled refers to their being actively involved in athletic competition, a phenomena commonly seen as alien to those with physical disabilities. Such sporting events for the physically disabled expose the general public to the fact that physically disabled persons are able to participate in competitive sports that demand both strength and endurance. It is proposed that for many nondisabled persons the new awareness brought about by exposure to the disabled in such out-of-role behavior as competitive sports events may lead to a change in their attitudes about the capabilities of disabled individuals and the role of the disabled in society.

The question of how people in general respond to disabled persons who engage in out-of-role behavior will be considered by reviewing the literature in three areas: (1) the nature of attitude and attitude change; (2) the nature of disability; and (3) research on changing attitudes toward disabled persons.

Nature of Attitude and Attitude Change

Attitude is a difficult concept to define. Gordon Allport (1937)

pointed out that attitudes are easier to measure than they are to define. Dawes (1972) states that although attitudes have been defined in many different ways, in general, all definitions center on a core concept. Dawes sees this concept as a preparedness to respond in a certain way towards an object or person. The preparedness involves an evaluative aspect seen as an acceptance or rejection of the object of the attitude.

Rosenberg and Hovland (1960) organize the study of attitude into three components: (1) measurable independent variables, (2) intervening variables of attitude broken down into the component parts of affect, cognition, and behavior, and (3) measurable dependent variables specific to each component of attitude. The affect component of attitude is measured by sympathetic nervous system response and/or verbal statements of affect; cognition is measured by perceptual responses and verbal statements of beliefs; and behavioral components of attitude are measured by overt actions and verbal statements concerning behavior.

A consistent problem in attitude research is that it cannot be assumed that one's attitudes are always expressed in one's behavior. Wicker (1966) found attitudes typically unrelated or only slightly correlated with behavior. Guttentag (1975) points out that negative or prejudiced feelings are much easier to express when answering a mailed questionnaire than when acting in the presence of the stigmatized individual. Guttentag further points out that the defined stereotype of an individual seldom resembles the actual individual so that expressed attitude in the absence of the stereotyped person can be vastly different than behavior in the presence of that individual. Guttentag concludes that behavior is multiply determined with attitude being only one component

of such a determination. Kiesler, Collins, and Miller (1969) point out that paper-and-pencil tests often measure attitude toward a general other (for example, Blacks), while behavior is usually in response to a specific person. Other situational differences that affect the relationship between attitude and behavior are norms and expectations that may vary between situations calling for an expression of attitude and situations calling for actual overt behavior.

There are several consistency theories discussed by Kiesler et al. that are relevant to a consideration of attitude change. These theories emphasize a need to maintain consistency between attitudes and behavior and also among attitudes and among behaviors in themselves. The basic postulate of all consistency theories is that if consistency is not successfully achieved, the resulting inconsistency creates a state of psychological tension that motivates an individual to rearrange his psychological world to produce consistency.

Festinger's (1957) cognitive dissonance theory is a type of consistency theory and has received more prominence and generated more research over the years than any other consistency approach. Dissonance theory is used to investigate what factors may influence an individual to change his/her attitude about an object or person. Festinger uses the term cognitive elements to include beliefs, opinions, and attitudes. Relationships between cognitive elements can be relevant or irrelevant to each other. Relevant relationships are also of two types, they are either consonant or dissonant, that is, in harmony with each other or not in harmony. The central assumption of Festinger's dissonance theory is that human beings cannot tolerate dissonance and are motivated to

reduce the tension created by such inconsistency. An example of cognitive dissonance can be seen in a person who views himself/herself as a logical individual and believes that disabled individuals are passive, dependent, and depressed in nature. If the person is exposed to the disabled engaging in behavior that is not in accord with his/her perception of disabled people, such as active, competitive sports, he/she may experience cognitive dissonance. Such an individual would be motivated to change either his/her beliefs about sports (they do not really demand strength and endurance) or change his/her beliefs about the disabled (they are capable individuals), thus achieving consistency in his/her beliefs regarding both sports and disabled people. McGuire (1960) suggests that most beliefs tend to be related to other beliefs, and, therefore, in order to maintain consistency among beliefs a new perception, such as seeing the disabled as capable athletes, may change beliefs on related issues. For example, the altered perception of the disabled athlete may lead to the perception of normalcy in other areas, such as school and social life.

Nature of Disability

The nature of disability has not only physical aspects to it, but psychological and social aspects as well. The social psychological view of disability is widespread among theorists in the rehabilitation field. Some writers, for example, Gordon Allport (1937), see the physical attribute of an individual as one of the major principle raw materials that influence the development of one's personality. Meyerson (1948) suggests that general physique, varying on such dimensions as shortness and tallness, affects personality development. He further states that the

pathological deviation of a physical disability can be a potent influence affecting the personality of a physically impaired individual. Barker and Wright (1956) point out that a physical disability in itself is not necessarily psychologically disabling but can become so through society's reaction to the physically disabled person. Hamilton (1950) uses social reaction of the nondisabled to persons with a disability to differentiate between the definition of disability and handicap. He sees disability as a physical impairment as opposed to handicap which includes not only the physical aspects of a person but also the psychological, social, and physical environment in which such a person lives. Dembo (1973) agrees with Hamilton when she states that both the physical environment and the psychological environment add to the incapacity of disability. Dembo further suggests that it is best to view handicaps as not only properties of the specific person but also properties of the physical and psychological environment in which the disabled person lives. The psychological environment for disabled individuals is created to a great extent by attitudes of those with whom they come in contact. Because the world in which the handicapped person lives is built by and for the nonhandicapped and the power to maintain present conditions or to change is in the hands of the nonhandicapped, it is important to understand the nondisabled person's view of disabled people. Whatever form the nondisabled person's attitude toward disabled individuals takes, it has a major effect on the psychological well being of the handicapped individual.

Society's reaction to the disabled and its subsequent influence on the personality adjustment of a disabled person can be seen as a type of

social conditioning wherein society defines a certain role for such a person who in turn learns to behave in accordance with this role (Gellman, 1959). Many authors (Barker & Wright, 1956; Comer & Piliavin, 1975; Gellman, 1959; Haber & Smith, 1971; Meyerson, 1948) see the role that nondisabled society defines for its disabled members as an ambiguous one. The social role can be in the form of inferior social status for the disabled due to society's emphasis on "body-whole" and "body-beautiful" as valuable attributes, yet the socially desirable attributes of kindness, patience, understanding and sensitivity are also used to describe the disabled. Nondisabled society's responses to disabled persons range from pity, support, and trust to fear and devaluation (Barker & Wright, 1956). Doob (1970) found both cooperation and aversion toward handicapped confederates. In his study subjects were more willing to fill out questionnaires for a disabled as opposed to a nondisabled individual only if no further contact with the confederate was implied. The role society defines for the disabled is often constricted, passive, dependent, and protected to the extent that it imposes further handicaps on the individual (Gellman, 1959).

There are two related concepts that are critical to the understanding of attitudes toward disability: (1) stereotype and (2) stigma. Stereotyping is an anti-individualistic view of a person or group of people in which people are seen as having the same characteristics in common by virtue of the fact of group membership (Goffman, 1963). As with other minority groups, disabled persons are often seen in stereotypical ways. For example, a paraplegic is not seen as an individual with impaired mobility but as a member of a group of disabled people

sharing not only physical characteristics but, also, similar personalities, outlooks, likes and dislikes, and so on. Stigma is a special kind of relationship between attribute and stereotype (Goffman, 1963). Stigma refers to a discrediting attribute where a wide range of imperfections are imputed to the individual on the basis of an original imperfection, such as a physical disability. Wright (1960) refers to a phenomenon similar to stigma called "spread" in which one aspect of a person is seen as affecting all aspects of that person. In this way a disabled person loses his/her identity as an individual and is labeled with the stereotype of the particular disability.

The use of labels, such as "crippled" or "retarded," encourages stereotyping and stigmatization (English, 1978). Meyerson (1948) suggests that there is a tendency for people to see the disability itself rather than a person who has a disability. In this way a person is viewed as "a spastic" or "a paraplegic," instead of using the disability as an adjective to describe just one specific aspect of the individual, that is, the "spastic child," or the "paraplegic man." Brown (undated), in his book on "General Semantics and Physical Disability," suggests that avoidance of labeling does change the perception of others and consequently lessens the tendency to stereotype, thus maintaining the disabled person's individuality.

Stereotyping and stigmatization, which include the concept of spread and the use of labels, affect the way in which disabled and nondisabled people interact. The disability per se can be seen as a "signal reaction" (Meyerson, 1948) or "behavior elicitor" (Kleck, 1966) which keeps the interaction between the disabled and nondisabled participants at a

superficial level. As a "signal reaction" the disability is seen as a sign that elicits behavior that is thought to be appropriate in the presence of a disabled person. The lack of spontaneity in such a situation helps keep interaction at a superficial level. Goffman (1963) sees this superficial level as a way to cope with the "interactional strain" (Lewin, 1951) felt by the nondisabled person when confronted with, what Goffman refers to as, a "faulty interactant." According to Goffman, familiar signs of discomfort are shown in guarded references and the fact that common words and phrases suddenly become taboo (for example, saying "walk in" to a paraplegic or "see this" to a blind person). Other signs of tension on the part of the nondisabled person can be seen in artificial levity, compulsive talking, or awkward solemnity. Such behavior reinforces the discomfort and helps keep the relationship at a strained level.

Davis (1961) calls the coping mechanism of superficiality a technique of tension management. Davis cites three stages of development in an interactional situation involving disabled and nondisabled individuals: (1) rationalization of acceptance, (2) breaking through, and (3) normalized relationship. Rationalization of acceptance is a cognitive act without any real emotional commitment of acceptance. Breaking through occurs when disabled and nondisabled interactants find a common ground to share interests and experiences. By communicating on this common interest level normalization of the relationship takes place wherein awareness of the disability fades into the background of the relationship for both persons, and real acceptance occurs. If the sequence of stages is not successfully dealt with by either participant, the

relationship does not go beyond the first stage, and little is gained in terms of diminishing stereotypes and stigma. Kleck (1966) expresses a concern that the disabled person receives false feedback in such superficial relationships. Kleck found that subjects distort their own opinions to agree with the assumed opinion of a disabled partner.

Langer, Fiske, Taylor, and Chanowitz (1976) have proposed a novel-stimulus hypothesis to account for the tension created for the nondisabled person when confronted with a disabled individual. Langer and his colleagues see the disabled individual as a novel stimulus that elicits anxiety on the part of the nondisabled person who has had little or no contact with disabilities. Sometimes the nondisabled tend to stare at the disabled to try and find cues as to how one should act toward the disabled individual in what seems to be an ambiguous situation. The phenomenon of staring is in agreement with Kleck's finding that nondisabled persons look at a disabled person who is speaking to them more than they look at a nondisabled speaker. Langer et al. (1976) found that nondisabled subjects stare at a stimulus picture of a disabled person only if they can do so without being socially unacceptable. Also Langer et al. found that nondisabled subjects who had prior visual exposure, by looking through a two way mirror at a disabled person, showed less avoidance and less discomfort when confronted with that disabled person in an interactional setting. It is suggested that tension dissipates by exposure to the novel stimulus of a disabled person, and, therefore, discomfort and avoidance on the part of the nondisabled are not based on degradation, as Goffman would suggest, but rather on unfamiliarity. This view is in line with Davis' (1961) statement that the nondisabled

person may feel inundated by an overwhelming impulse to stare at the disabled person, which in turn causes increased tension in the nondisabled. This atmosphere of tension often becomes reciprocal with the disabled feeling the anxiety of the nondisabled. Goffman (1963) sums up the situation when he states "anxiety is created when the nondisabled person is aware that the stigmatized person is aware of the 'normal's' awareness of the stigma" (p. 18).

The social environment in which a disabled person lives affects his/her adjustment to the physical limitations of the particular disability. English (1978) sees the responsibility of helping the disabled cope with the social reality as a major task in rehabilitation. He states that negative attitudes on the part of the nondisabled in the form of stigmatization and stereotyping limit the life style of the disabled and increase the task of the rehabilitation worker far beyond the physical properties of the individual disability. When stigmas and stereotypes are internalized by the disabled person a negative self concept develops, thus creating a psychological as well as physical problem (Barker & Wright, 1956; Dembo, 1973). Anthony (1972) calls for "social rehabilitation" to change the attitudes of the nondisabled. He sees the task of the rehabilitation worker as involved in social change by working with the nondisabled as well as the disabled individual. With less stereotyping by society the probability of a physical disability becoming a psychological problem is diminished. English (1978) states "the existence of social stigma, which changes disabled persons into handicapped persons, is symptomatic of a diseased society" (p. 184).

It appears that the role of the disabled in our society is an issue not only for those with physical impairments but for society as a whole in that society is a product of all its members and to some extent all people are a product of society.

Changing Attitudes Toward Disabled Persons

In the discussion of the nature of disability it was concluded that nondisabled persons' perceptions of the disabled as different and apart from "normal" individuals can be a destructive psychological influence on the disabled. Changing such negative attitudes of the nondisabled has been a subject of research during the past 20 years. Anthony, in a 1972 review article, looked at both contact with and information about disabled persons as means of changing the attitudes of nondisabled persons. Contact studies were of two kinds: (1) nondisabled subjects are divided according to self-reported amount of contact with disabled persons and (2) there is experimental control over the amount of contact. Anthony reported most studies using self-report amount of contact showed inconsistent or minimal results. Under experimentally controlled contact, Anthony reported studies "consistently found no consistent attitude change." Palmerton and Frumkin (1969), for example, found college counselors who had a high amount of contact with disabled persons (100 to 500 or more contacts) had significantly greater intensity scores on the Attitude Toward Disabled Persons Scale (ATDP) than did counselors with low contact (0-49 contacts). Intensity is seen as either an extremely positive or extremely negative score on the ATDP, thus lending support to Anthony's statement of ambiguous results in studies involving contact

with disabled persons. Bell (1962) found no significant difference in positive attitude scores on the ATDP between rehabilitation workers (high contact group) and persons with no experience with disability. A study by Urie and Smith (1970-71) looked at the possible effects of the increasing number of disabled students on university campuses. The results showed positive attitude change as expressed in ATDP scores only in nondisabled female university students on campuses with a large number of disabled students. The positive attitude change was found for nondisabled females with or without previous contact with disabled persons. The results were not replicated for nondisabled male university students.

Anthony also reviewed studies where information regarding disability was presented to nondisabled persons. The information was in the form of books, lectures, discussion, films, or institutional tours. It was found that while some studies reported an increase in knowledge about disabled people there was no positive attitude change toward disabled persons due to an increase in information (Semmel & Dickson, 1966; Staffieri & Klappersack, 1960).

The evidence reviewed by Anthony (1972) seems to suggest that neither contact with disabled persons nor exposure to information regarding disability alone effectively changes nondisabled attitudes toward disabled persons. Anthony concluded that the only consistently effective way to produce a positive attitude change on the part of nondisabled persons toward disabled persons is to combine both contact and information regarding disability. In one of his own studies, Anthony (1969) found

nondisabled camp counselors who worked for ten weeks with handicapped children, had peer contact with disabled co-workers, and information sessions with the camp medical staff showed a positive increase in ATDP scores at the end of the summer. The positive effect of contact plus information was found for both new counselors and advanced rehabilitation workers. Anthony (1972) also found that students who engaged in a course in which contact with and information about disabled persons were part of a class assignment showed a positive attitude change toward disabled persons. The sessions included six 1-hour periods of contact with deaf and blind persons as well as information about these handicaps. The students had previously expressed negative attitudes toward disabled persons as measured by the ATDP.

Evans (1973) confirmed Anthony's finding regarding the interactive effect of contact and information in a study involving three groups of subjects under controlled conditions. The experimental group consisted of a subject and a blind confederate in a conversational setting where structured information regarding the confederate's blindness was revealed during the encounter. In the disability control group, the subject and blind confederate interacted with no information regarding disability being conveyed. The nondisability control group had a subject and nonblind confederate with no information regarding disability. In the experimental group, a significantly more positive ATDP score was found for subjects one to two weeks after contact with the blind confederate. There was no positive attitude change found for either the disability control (contact only) or the nondisabled control group on the ATDP. The findings

support the idea that structured contact with a disabled person plus information regarding that person's disability reduce tension, thus creating a positive attitude change on the part of the nondisabled person.

Statement of Purpose

The purpose of the present study was to investigate the possible effects of the Ontario Games on attitudes toward the disabled. The Ontario Games are an athletic competition for the physically disabled. In the summer of 1978, the Games were held in Windsor, Ontario. It was the first time the Games had been in Windsor which provided an opportunity for a pre- and post-Games measure of attitudes of the nondisabled toward the disabled in the host community of Windsor. Sarnia, Ontario was chosen as a comparison community because Sarnia is demographically similar to Windsor and has never been exposed to the Games.

Hypotheses

In the present study the experience of the Ontario Games provided both information regarding disability and a type of contact in the form of exposure to disabled persons. Because of the Ontario Games, the general public in the host community of Windsor received information about the disabled through mass media and had more exposure to disabled persons than usually experienced. Individuals volunteering to assist disabled athletes during the Games were exposed to information regarding disabilities in pre-game workshops. The volunteers also experienced intensive contact with disabled persons during the three day Game period.

In line with Anthony's (1972) conclusion that contact with and information about disabled persons interact to effect a positive attitude change

toward the disabled by the nondisabled, it was reasonable to predict that the presence of the Ontario Games in the host community of Windsor would affect such an attitude change. Further it was expected that such an attitude change would be greater for volunteers than for the general public due to the volunteers' extensive contact with and information sessions regarding disabled individuals. The predictions of attitude change are based on the assumption that information regarding disabled persons and exposure or contact with such persons in a situation of athletic competition emphasizing ability rather than disability may be incongruent with preconceived attitudes about the disabled. It is proposed that such incongruence leads to cognitive dissonance that is resolved by the nondisabled showing a positive attitude change toward the capabilities of the disabled. Therefore, it was specifically hypothesized that a random sample of nondisabled male and female Windsor residents would show a more positive attitude toward disabled persons, as reflected in increased Attitude Toward Disabled Persons (ATDP) scores in post- as opposed to pre-games measures. In the contrast community of Sarnia, Ontario (no Games) no difference between pre- and post-games scores on the ATDP scale was predicted.

It was further hypothesized that a sample of volunteers for the Ontario Games would show more positive ATDP scores in the post-games as opposed to the pre-games measures. It was expected that volunteer's attitude change would be greater than the attitude change of the random sample of the general public.

CHAPTER II

METHOD

Overview

The present study investigated the possible effects of the Ontario Games on the residents of Windsor, Ontario. The Ontario Games are sponsored by the Ministry of Culture and Recreation and involve athletic competition for individuals with varying types of disabilities, such as paralysis, amputation, cerebral palsy, and blindness. The Games involved approximately 350 disabled athletes from the Province of Ontario and were held at the University of Windsor from June 30 through July 3, 1978 (see Appendix A). In order for the effects of the Games to be determined, a random selection of Windsor residents was surveyed by mail regarding their attitudes towards disabled persons before and after the Games. Sarnia, Ontario was used as a comparison city, with Sarnia residents receiving surveys during the same time period as Windsor residents. A pre-game and post-game repeated measures and a pre- and post-games separate sample group were surveyed in both Windsor and Sarnia. The surveys were funded by the Ministry of Culture and Recreation for the Province of Ontario (see Budget, Appendix B).

Subjects

The goal was a sampling of 2,000 persons from the Windsor population and 1,000 persons from the Sarnia population for both pre- and post-games measures. Sarnia was chosen as the comparison city because the population

is similar to Windsor. Both Windsor and Sarnia have a large percentage of blue collar, and industrial workers, and both cities border on the United States. Sarnia had not been exposed previously to the Ontario Games. Except for possible media overlap of television and radio, it was reasonable to assume that Sarnia would not be affected to any large degree by the presence of the Games in Windsor. In both Windsor (population 200,000) and Sarnia (population 87,000) the sample of subjects is approximately 1% of the population; however, the sample represents more than 1% of the adult population with telephones, that is, the pool of persons that can possibly be chosen as subjects.

The phone book listings were the source of names and addresses. Approximately every 32nd person from the Windsor phone book and every 24th person from the Sarnia phone book were chosen to receive a survey. A random number between 1 and 32 for Windsor and 1 and 24 for Sarnia was used to pick the first name with the appropriate numerical sequence starting at that name. Whenever the name and address were not associated with a private residence, for example in the case of a business, industry, or government agency, the next listing which did appear to be a household address was chosen.

Using the procedure outlined above, pre-game surveys were sent to 2,019 Windsor residences and 980 Sarnia residences (see procedure section for specific dates related to each step of the study). For Windsor pre-game surveys the return rate was 457 (23%), and for Sarnia 280 (28%) valid surveys returned. Valid surveys were judged to be those with 3 or

less unanswered ATDP items. Also surveys received after the cut-off dates for returns were not considered useful data. Using this criterion of acceptance, 39 pre-game surveys were judged incomplete and 26 were received after the cut-off date.

All subjects that returned a pre-game survey were sent a post-game survey. The return rate of valid surveys for this repeated measures group was 275 (60%) for Windsor and 174 (62%) for Sarnia. Also a new independent random sample for Windsor and Sarnia was chosen to receive post-game surveys. This separate sample group of subjects was chosen in the same manner as the pre-game subjects; however, a different random number was used as a starting point for name selection from the phone book, insuring that no residence of either city would be surveyed twice. Post-game surveys were sent to 2,002 Windsor residences and 998 Sarnia residences. Return rates of valid surveys for the post-game separate sample group were 477 (24%) for Windsor and 238 (24%) for Sarnia. In the post-game samples 49 were incomplete and 43 returned after the cut-off date for returns.

There was also a sample of subjects that consisted of nondisabled residents of Windsor who volunteered to assist in the Ontario Games (see Appendix C). These subjects received surveys as part of their application for volunteer status. The survey was not used to select volunteers for the Games. Volunteers were solicited by the Volunteer Service Bureau of Windsor and Department of Parks and Recreation of Windsor. For volunteers, the return rate for valid pre-game surveys was 267 out of 332 or 80% return rate. Post-game surveys were mailed to all volunteers after their participation in the Games. All volunteers who filled out a pre-game survey

and a post-game survey constituted a repeated measures sample for volunteers with a return rate of 110 subjects (41%).

Measures

A standardized scale was used to determine attitude toward disabled persons: the Attitude Toward Disabled Persons Scale, form 0, developed by Yuker, Block, and Campbell (1960). In addition, demographic data were obtained.

Attitude Toward Disabled Persons Scale. The Attitude Toward Disabled Persons Scale (ATDP) is an objective instrument measuring attitudes toward disabled people as a group (see Appendix D, items 1 through 20). Specific disabilities are not defined for the subject so that each subject conceptualizes disability in his/her own frame of reference.

The format of the ATDP is a Likert-type scale ranging from +3, "I agree very much," to -3, "I disagree very much." There are three forms of the ATDP, Form 0, A, and B. Form 0 was selected for the present study as it is the original form and has been used in more research than have Forms A or B (Yuker, Block, & Young, 1970). Also, it is the shortest of the three forms, meeting the present study's need for brevity. Further reference to the ATDP will assume Form 0 unless otherwise stated.

Items for the ATDP scale were selected by obtaining a list of 300 statements describing disabled persons from reviewing the literature in the disability area. These items were screened by a panel of psychologists for face validity. The items chosen for face validity were rewritten to express a statement that could be put on a Likert-type

agree-disagree continuum. Items were selected for the final scale by obtaining data, using the preliminary scale, from undergraduate students at Hofstra University. The data were analyzed by using Edwards' (1957b) technique of dividing subjects into groups on the basis of high and low scores. Internal item analysis showed that the 20 items on Form 0 discriminated between high and low groups at the .01 level of significance or beyond.

The ATDP scale was constructed to include two types of items:

- (1) statements describing characteristics of disabled persons and
- (2) statements regarding how disabled people should be treated.

Subscales consisting of the ten "characteristic" items were compared to the ten "treatment" items. A positive correlation of .46 ($p < .01$) was found between subscale scores. Considering the positive correlation between subscales, separate scoring of each subscale is not recommended (Yuker, Block, & Young, 1970).

Factor analyses of the ATDP indicate factor loadings similar to the subscale items of characteristics of the disabled and treatment of the disabled. Siller and Chipman (1964), using a sample of college students as subjects, found factor loadings on two dimensions. Factor 1 was labeled hypersensitive-depressed and it described personality characteristics of the disabled. Factor 2 was labeled benevolent-inferiority, and it described how the disabled should be treated. Using an adult population, Siller and Chipman found four factors: (1) social distance, (2) hypersensitive-depressed, (3) affective feelings, and (4) negative atypicality. Siller, Ferguson, Chipman, and Vann (1967) conclude that

the ATDP scale is factorially mixed but is best thought of as a measure of the affect dimension of attitude.

A positive score on the ATDP results from endorsing statements that disabled people are not different from nondisabled people. A low score on the ATDP indicates that the respondent perceives disabled persons as different from physically normal persons.

The ATDP is used with both disabled and nondisabled subjects in measuring their attitudes toward the disabled. It is realized that scores for the disabled on the ATDP may reflect quite a different aspect of attitude than scores of the nondisabled. Therefore, separate norms and guides for interpretation have been established for each of the two groups. It is proposed that attitudes, as measured by the ATDP, of the nondisabled may be a reflection of the degree of rejection or prejudice toward disabled people, whereas attitude scores of the disabled may be seen more as a reflection of their self concept or self acceptance. The ATDP scores are not absolute and, therefore, must be interpreted in reference to a subject's normative group. Disabled persons have been found to express significantly higher (more positive) ATDP scores than nondisabled. Both disabled and nondisabled females show higher scores than either group of males. Separate norms have been set up for disabled males and females and also for nondisabled males and females (see Appendix E).

Reliability has been established for the ATDP by the test-retest and split-half methods. Eight studies on test-retest reliability, ranging from 2 week to 18 month intervals, have produced correlation coefficients

that range from .66 to .89 with a median of .73. Six split-half reliability studies, using the odd-even method, indicate correlation coefficients that range from .75 to .87 (Yuker, Block, & Campbell, 1960; Siller & Chipman, 1964).

Validity of the ATDP is considered separately for disabled and non-disabled persons as it is suggested that the ATDP may be measuring different concepts for the different groups. In the present study the main concern is with the validity of the ATDP for nondisabled subjects. Knittel (1963) found positive correlations ($r = .64$, $p < .01$) between the ATDP and Auvenshine's Attitude Toward Severely Disabled Students scale. Siller (1964) using three groups of subjects found all positive relationships between both the Social Distance Scale and the ATDP ($r = .16$, $p < .05$; $r = .34$, $p < .01$; $r = .30$, $p < .01$) and the Feeling Check List and the ATDP ($r = .19$, $p < .01$; $r = .32$, $p < .01$; $r = .21$, $p < .01$). Using an adult sample of subjects, Siller and Chipman (1964) found a positive correlation between the ATDP Scale and General Acceptance #1 ($r = .55$, $p < .01$), based on interview data from nondisabled subjects, and General Acceptance #2 ($r = .62$, $p < .01$), based on combined scores of the Social Distance Scale and Feeling Check List. Downes (1967 as cited in Block, 1974) developed the Disabilities Attitude Adjective Scale (DAAS), consisting of the stimulus phrase "disabled people are" and asked subjects to complete the sentence by choosing from a list of adjectives. Using two groups of subjects high positive correlations ($r = .69$, $p < .01$; $r = .80$, $p < .01$) were found between the DAAS and ATDP scale.

Siller, Ferguson, Chipman, and Vann (1967) showed correlations of overall attitudes toward physically disabled persons are closely related to attitudes toward specific types of disabled individuals, such as amputees, cerebral palsied, and the blind. Smits, Conine, and Edwards (1971) looked at definitions of disability as determinants of scores on the ATDP scale. Results showed that the inclusiveness of a person's definition of disability is not predictive of ATDP scores, thus lending support to the uniformity of the concept of disability as a stimulus used in the ATDP scale.

The ATDP scale does not distinguish between different types of disabled persons, however, it does ask for reaction to disabled persons as opposed to disability per se. Lukoff and Whitman (1961) point out a distinction between attitudes toward disability and attitudes toward a person with a disability. They found subjects more negative toward blindness than toward blind people. Yuker, Block, and Youngg (1970) suggest that it is more socially acceptable to express negative feelings toward a physical impairment than to express these feelings toward a person.

The ATDP is based on the assumption that perception of the disabled as different or separate from the nondisabled shows a negative attitude toward disabled persons. Yuker, Block, and Campbell (1960) see this perceived difference as a general measure of prejudice toward the physically disabled. Wright (1960) supports Yuker et al.'s concept of perceived difference as negative when she suggests that in the language of interpersonal relations to be different or set apart often signifies

rejection. Attraction and friendship formation studies (Byrne, 1969; Rokeach, 1960) have found perceived similarity as a salient feature in personal attraction and friendship formation. On the other hand, Bell (1962) partially disagrees with Wright by stating that while perceived differences can be rejecting, leading to destructive segregation, it can also be in the form of benevolent inferiority, leading to constructive support. Yuker, Block, and Youngg (1970) disagree with Bell by making the point that stereotypical attitudes of pity, sympathy and special consideration function as socially acceptable forms of rejection that should be seen as negatively expressed attitudes on the part of the non-disabled. The effect of such benevolent attitudes of inferiority on the disabled can be devastating and degrading by encouraging the disabled to be locked into a dependent social role.

Comer and Piliavin (1975) and Weinberg (1976) investigated the kinds of perceived differences between the disabled and nondisabled. Findings showed that the able-bodied viewed the disabled as having different personality traits, moral characteristics, social abilities, and political attitudes than the nondisabled. Cameron, Titus, Kostin, and Kostin (1973) investigated actual as opposed to perceived differences between the disabled and nondisabled. The results showed no difference between the two groups in life satisfaction, frustration with life, and moodiness. Further results showed the disabled to be slightly less suicidal, more religious, and more conforming to social order than the nondisabled. It appears that some of the differences thought to exist between the disabled and nondisabled individual are more a product of the perceiver

than a reality. Garrett (1956) states, "people with handicaps differ from those without them and from each other, in about the same way and in the same proportion as each person differs from any other regardless of his characteristics."

Chesler (1965) suggests negative attitudes toward the disabled as measured by the ATDP should be related to general attitudes of prejudice toward any minority group. Chesler found a highly significant correlation ($r = -.52$, $p < .01$) between the Intergroup Relations Scale (IRS) and the ATDP. Further analysis showed the ATDP significantly related to each of the IRS subscales of race, religion, nationality, and social class. In a study by Anthony (1971), nonprejudiced counselors for the disabled, that is, those showing positive ATDP scores, also showed high ratings on Carkhuff's therapist communication levels and were found to be more effective in developing self exploration in their disabled clients.

Test taking attitudes and the possible effect on ATDP scores were studied for fakeability and social desirability. Fakeability was investigated on the ATDP by using disabled subjects applying for employment and a group of employed disabled persons. Presumably the subjects seeking employment may tend to "fake good," however, no significant difference was found between the two groups (Yuker, Block, & Campbell, 1960). Nondisabled psychology students were administered the ATDP under two conditions: (1) they were asked to be as truthful as possible in their answers, and (2) they were told to present themselves in as favorable a light as possible. No significant difference was found between the two scores (Yuker et al., 1960).

Correlations between ATDP scores and social desirability scores have been investigated by several different studies. Using Edwards (1957a) Social Desirability Scale (SD), Yuker et al. (1960) and Harrison (1965, cited in Yuker, Block, & Young, 1970) found no significant correlation between ATDP and SD. Ferketic (1964, cited in Yuker et al., 1970) found a non-significant correlation between ATDP and Marlowe-Crowne Social Desirability Scale. The only positive correlations between social desirability and the ATDP were found by Siller and Chipman (1963) and Siller (1964) using the Marlowe-Crown SD Scale and the Edwards SD Scale with junior and senior high school students as subjects. The correlation was quite low, .20 and .16, respectively, and accounted for less than six percent of the variance on ATDP scores. It is concluded that by using the present sample of adults, 18 year old subjects and older, social desirability is not a contaminating factor in ATDP scores.

Studies investigating the relationship of demographic variables to scores on the ATDP have been inconclusive in their findings. No consistent correlations have been found for the variables of respondent's age, marital status, urban versus rural residence, or race in both the disabled or nondisabled population (English, 1971). A relationship of occupation and ATDP scores was found by English and Oberle (1971). It was found that people in occupations that emphasize physique, such as stewardesses, are significantly more negative in ATDP scores than people in occupations wherein physique is not a relevant characteristic, such as typists. Sex is the only demographic variable found to be consistently correlated with ATDP scores. Both disabled and nondisabled females express more positive

attitudes than do males toward the disabled as reflected in higher ATDP scores.

For purposes of the present study five additional questions were added (items 21-25 in Appendix D) to tap specific areas designated by the Ministry of Culture and Recreation. The five areas include attitudes about disabled persons in public areas, in recreational facilities, as co-worker, as affected by hiring practices, and beliefs about the sexual behavior of disabled individuals. The same Likert-type, agree-disagree format was used for these five questions as is found in the standardized ATDP questionnaire. The five additional statements were phrased so as to appear similar to the ATDP statements. The responses to these statements were not included in the scoring of the ATDP scale.¹

Demographic Data. A third part of the questionnaire involved demographic data (Appendix G). The demographic data included sex, age, marital status, occupation, and occupation of spouse if married. Questions regarding the possibility of the respondent having a disability or a family member, friend or co-worker having a disability and the specific nature of that disability were included. If a family member was disabled the relationship of the family member to the respondent was also established.

¹The MacDonald and Hall Disability (1969) scale was also included in the present survey as part of the Ministry's effort to create a data bank of disability related material (see Appendix F). The data collected by the MacDonald and Hall Disability scale was not used in the present study, in that, it is not directly related to the hypothesis under investigation.

Procedure

Pre-game surveys were sent by mail on May 25, 1978 to both Windsor and Sarnia addresses. The survey packets consist of a cover letter asking the the recipient to complete and return the survey in an enclosed, stamped, envelope addressed to the Chairman, Psychology Department, University of Windsor (Appendix H). The survey packets were color coded for each city and also for pre- and post-test. A code number was placed on each survey corresponding to the name of the recipient so that each individual could be contacted again for repeated measures purposes. The survey questionnaire consisted of two pages. Page one was the Attitude Toward Disabled Persons Scale (ATDP) and the five Ministry questions. The second page asked for demographic data and also had the Modified MacDonald and Hall Disability Scale. Within a week of receiving the survey in the mail, each subject received a reminder postcard asking him/her to please return the survey as soon as possible. The cut-off date for pre-game surveys to be returned was June 20, 1978. The Games took place June 30 to July 2, 1978.

Post-game surveys were sent out July 26, approximately one month after the Games took place in Windsor. All subjects who returned a pre-game survey were contacted again with a post-game survey. A cover letter explained the necessity of filling out and returning the survey for a second time (see Appendix I). In addition, a separate sample of subjects randomly selected in the same manner as pre-games subjects were sent surveys. The content of the cover letter was the same as the pre-game cover letter (see Appendix H). The cut-off date for post-games surveys to be returned was August 20, 1978. The separate sample group was

selected to control for possible instrument effects in the repeated measures sample.

In addition to the demographic data asked for in the pre-game survey questions regarding awareness of the Ontario Games and the source of such information were included in the post-game survey (Appendix J).

A sample of volunteers was asked to fill out a survey at the time of application for volunteer status, thus creating a pre-game measure of attitude. A post-game survey was sent to volunteers one week after their involvement in the Games. In addition to demographic information, volunteers were asked which events they were involved in and the number of days of contact with the Games (Appendix K).

CHAPTER III

RESULTS

Scores on the Attitude Measure

The community sample of repeated measures mean pre-game Attitude Toward Disabled Persons (ATDP) scores for Windsor males and females were $\bar{X} = 71.58$ and 79.87 respectively. For Sarnia male and female pre-game ATDP scores were $\bar{X} = 76.78$ and 81.44 respectively. Mean post-games scores for Windsor males and females were $\bar{X} = 72.97$ and 80.40 respectively. For Sarnia male and female post-games scores were $\bar{X} = 76.76$ and 81.47 respectively. Norms means and standard deviations for males and females are $\bar{X} = 72.80$, $SD = 15.53$ and $\bar{X} = 75.42$, $SD = 13.48$ respectively (see Appendix C). Although for both Windsor and Sarnia all means were within one standard deviation of the relevant norm, Windsor means were closer to the norm in all cases. For Sarnia both males and females, pre- and post-games mean ATDP scores were higher than the equivalent Windsor scores.

For volunteer subjects, male and female pre-game ATDP scores were $\bar{X} = 79.62$ and 86.31 respectively. Mean post-games scores for volunteer males and females were $\bar{X} = 85.68$ and 93.23 respectively. Post-game females had ATDP scores one standard deviation above the norm. All other means were in the upper range of one standard deviation above the mean (see Appendix C for norms).

Preliminary Analyses of Demographic Data

A series of chi squares was carried out to compare Windsor and Sarnia males and females on the following demographic data: occupational

category², marital status³, presence or absence of disabled family member, presence or absence of disabled friend, and presence or absence of disabled co-worker. A t-test was carried out for comparison of the demographic variable of age (see Table 1 for marginals and Table 2 for chi squares and t-test). For males, none of the analyses was significant. For females, one significant association was found indicating Sarnia females had significantly more disabled friends than did Windsor females, $\chi^2(1) = 7.30, p < .01^4$.

Analyses of Community Sample Data

Unless otherwise specified analyses were carried out on the sample of Windsor and Sarnia nondisabled subjects of the repeated measures group and not on the separate sample group of subjects⁵. Only those ATDP scales in which all questions are responded to were used for analysis.

²Occupation was divided into four categories: (1) blue collar, (2) white collar, (3) homemaker, (4) other (see Appendix L for breakdown of categories).

³Marital Status was divided into three categories: (1) married, (2) single, (3) no longer living with spouse.

⁴To examine the possible effect of disabled friend on ATDP scores a 2 X 2 X 2 X 2 (sex X city X disabled friend X time) analysis of variance, with repeated measures on the last factor was performed. A trend for the interaction sex X city X disabled friend, $F(1,341) = 3.10, p < .08$ was found (see Appendix M).

⁵To examine possible differences between pre-game only versus pre-game repeated measures subjects, analyses were performed on demographic data and ATDP scores. For both Windsor and Sarnia males, it was found that pre-game repeated measures subjects had significantly more disabled friends than pre-game only, $\chi^2(1) = 3.11, p < .01$, and $\chi^2(1) = 2.50, p < .01$, respectively (see Appendix N).

TABLE 1
Demographic Data

	Age	Sex	Marital Status	Occupation ^a	Own Disability	Disabled Family	Disabled Friend	Disabled Co-worker
Windsor	\bar{X} = 41.88	Males = 144	Married = 77.9%	Professional-Technical = 21.0%	Yes = 8.0%	Yes = 21.0%	Yes = 34.1%	Yes = 12.7%
	SD = 14.70	Females = 132	Single = 17.0%	Homemaker = 21.0%	No = 92.0%	No = 78.0%	No = 64.9%	No = 86.2%
	Range = 62.00	Males = 52%	Separate = 0.7%	-----				
	Maximum = 80.00	Females = 48%	Divorced = 3.3%	Unclassified = 7.0%				
	Minimum = 18.00		Deceased = 1.1%	Transportation-Communication = 1.4%				
				Labor = 1.8%				
	\bar{N} = 275	\bar{N} = 276	\bar{N} = 276	\bar{N} = 269	\bar{N} = 276	\bar{N} = 274	\bar{N} = 273	\bar{N} = 273
Sarnia	\bar{X} = 42.24	Males = 92	Married = 75.4%	Professional-Technical = 26.3%	Yes = 7.3%	Yes = 25.7%	Yes = 49.2%	Yes = 14.5%
	SD = 15.41	Females = 86	Single = 11.7%	Homemaker = 17.9%	No = 92.7%	No = 74.3%	No = 50.8%	No = 84.4%
	Range = 60.00	Males = 51.4%	Separated = 3.9%	-----				
	Maximum = 78.00	Females = 48.6%	Divorced = 6.1%	Unemployed = .6%				
	Minimum = 18.00		Deceased = 1.1%	Transportation-Communication = .6%				
				Service = .6%				
	\bar{N} = 174	\bar{N} = 179	\bar{N} = 179	\bar{N} = 179	\bar{N} = 179	\bar{N} = 179	\bar{N} = 179	\bar{N} = 179

^aOccupational categories in the middle range are not shown.

TABLE 2

Analyses of Demographic Data for Male and Female Subjects:

Windsor versus Sarnia

	Age		Marital Status		Occupation		Disabled Family		Disabled Friend		Disabled Co-worker		Sex
	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	
Male													
Windsor	42.02	130	1.19	130	6.52	127	1.82	130	1.69	129	1.84	128	
Sarnia	42.66	85	1.27	85	5.06	84	1.79	85	1.58	85	1.82	84	
	$t(213) = .23$		$\chi^2(2) = 2.20$		$\chi^2(3) = 2.93$		$\chi^2(1) = .40$		$\chi^2(1) = 2.88^*$		$\chi^2(1) = .08$		
													$\chi^2(1) = .00$
Female													
Windsor	39.50	123	1.40	124	9.29	120	1.76	123	1.64	123	1.90	123	
Sarnia	39.40	78	1.72	79	8.75	77	1.70	80	1.45	80	1.89	79	
	$t(199) = .10$		$\chi^2(2) = 5.85^*$		$\chi^2(3) = 2.17$		$\chi^2(1) = .78$		$\chi^2(1) = 7.30^{**}$		$\chi^2(1) = .14$		

* $p < .10$ ** $p < .01$

The major hypothesis in the present study was that male and female Windsor residents would show more positive attitudes toward disabled persons after the Ontario Games took place in Windsor than they showed before the Ontario Games. The positive attitude would be reflected in increased ATDP scores. To test the hypothesis a 2 X 2 X 2 (sex X city X time) analysis of variance, with repeated measures on the last factor was performed on the ATDP scores. Inspection of the results in Table 3 indicates that the predicted interaction between city and time was not significant, nor was the main effect of time significant; therefore, the hypothesis was not upheld. The only significant result was a main effect of sex, $F(1,346) = 15.00$, $p < .01$. In both Windsor and Sarnia females had higher ATDP scores than did males on both pre- and post-games measures (see Table 4 for means).

An assumption underlying the major hypothesis was that a substantial amount of Windsor residents would receive exposure to the Games and that Sarnia residents would receive substantially less exposure than would Windsor residents. To investigate this assumption the frequency of subjects in Windsor and in Sarnia that were aware of the Games was established. It was found that 79% of the Windsor subjects and 57% of the Sarnia subjects reported an awareness of the Games. A chi square analysis revealed that both males and females in Windsor were significantly more aware of the Games than were males and females in Sarnia, $\chi^2(1) = 5.20$, $p < .01$ and $\chi^2(1) = 3.64$, $p < .01$ respectively.

Although Windsor subjects were significantly more aware of the Games than were Sarnia subjects, the amount of awareness of Sarnia subjects was more than expected. To examine the possible role of awareness of the

TABLE 3
 Analyses of Variance of
 ATDP Scores
 by Sex, City, and Time

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Sex	1	6,548.06	15.00**
City	1	1,403.56	3.22*
Sex X City	1	418.94	.96
Error	346	436.54	
Time	1	38.60	.64
Time X Sex	1	6.75	.11
Time X City	1	37.31	.62
Time X Sex X City	1	8.32	.14
Error	346	59.93	

* $p < .10$

** $p < .01$

TABLE 4
Means and Standard Deviations for
ATDP Scores

	PRE			POST		
	\bar{X}	SD	N	\bar{X}	SD	N
Windsor						
Male	71.58	16.51	113	72.97	17.63	113
Female	79.87	16.03	100	80.40	16.19	100
Sarnia						
Male	76.78	12.90	71	76.76	15.97	71
Female	81.44	13.87	66	81.47	14.16	66

Games regardless of city of residence, a new independent variable consisting of awareness of the Games versus unawareness of the Games was created.⁶

To examine the possible effect of awareness of the Games on ATDP scores, a 2 X 2 X 2 (sex X aware X time) analysis of variance was performed with repeated measures on the last factor (see Table 5). A significant main effect for awareness, $F(1,336) = 3.88, p < .05$, was found. Male and female aware subjects had higher mean ATDP scores than did unaware subjects in both pre- and post-games measures (see Table 6 for means).⁷ Also, as was found earlier, a main effect for sex was shown.

To investigate the possible effects of pretesting on post-game ATDP scores, a 2 X 2 X 2 X 2 (sex X city X aware X pretested-unpretested) analysis of variance was performed. As the pretested-unpretested factor indicates, data from the separate sample was used in the analysis. As in previous analyses, a significant main effect for sex was found. No further significant main effects or interactions were found (see Table 7 for analysis and Table 8 for means).

Analyses of Volunteer Data

Unless otherwise specified analyses were carried out on nondisabled

⁶Analyses were carried out to compare male and female aware versus unaware subjects on demographic data. None of the analyses were significant (see Appendix O).

⁷A 2 X 4 X 2 (sex X degree of awareness X time) repeated measures analysis of variance was also performed on ATDP scores. The degree of awareness factor was represented by the following levels: (1) not aware, (2) low, (3) medium, and (4) high level of awareness. A trend for the main effect degree of awareness was found, $F(3,342) = 2.53, p < .06$ (see Appendix P).

TABLE 5
 Analyses of Variance of
 ATDP Scores
 by Aware, Sex, and Time

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Aware	1	1,686.02	3.88*
Sex	1	5,045.50	11.60**
Sex X Aware	1	162.81	.37
Error	336	435.06	
Time	1	2.47	.04
Time X Aware	1	144.55	2.42
Time X Sex	1	0.07	.00
Time X Aware X Sex	1	39.70	.66
Error	336	59.81	

* $p < .05$

⊗ ** $p < .01$

TABLE 6
Means and Standard Deviations
for ATDP Scores

	PRE			POST		
	\bar{X}	SD	N	\bar{X}	SD	N
Aware						
Male	73.97	16.39	132	75.66	17.83	132
Female	81.70	14.31	115	82.36	14.57	115
Not Aware						
Male	73.11	12.37	45	71.64	13.92	45
Female	77.56	17.18	48	77.23	16.51	48

TABLE 7
 Analyses of Variance
 of Post-Games ATDP Scores
 by Sex, City, Aware, and Pretested-Unpretested

Source	df	MS	F
Sex (A)	1	3,925.75	14.26**
City (B)	1	430.69	1.56
Aware (C)	1	352.63	1.28
Pretested-unpretested (D)	1	405.69	1.47
A X B	1	806.63	2.93*
A X C	1	43.44	.16
B X C	1	59.00	.21
A X D	1	169.44	.62
B X D	1	282.75	1.03 ³
C X D	1	530.94	1.93
A X B X C	1	80.75	.29
A X B X D	1	159.94	.58
A X C X D	1	173.81	.63
B X C X D	1	1.38	.00
A X B X C X D	1	109.81	.40
Error	929	275.22	

* $p < .10$

** $p < .01$

TABLE 8
Means and Standard Deviations
for ATDP Scores

	Post-Games					
	Windsor			Sarnia		
	\bar{X}	SD	N	\bar{X}	SD	N
Male						
Aware						
Unpretested	71.77	18.31	162	74.53	15.44	53
Pre-tested	73.96	17.89	103	79.25	17.23	40
Not Aware						
Unpretested	72.86	16.59	42	77.27	14.51	44
Pre-tested	71.13	16.08	15	74.35	14.51	34
Female						
Aware						
Unpretested	80.46	17.33	148	76.91	13.97	67
Pre-tested	82.28	15.72	85	81.95	12.81	41
Not Aware						
Unpretested	78.63	18.45	30	76.26	13.59	23
Pre-tested	77.40	18.58	25	81.21	15.43	33

volunteer subjects of the repeated measures sample.⁸ Table 9 shows demographic data for volunteer subjects.

To investigate the hypothesis that male and female volunteer subjects for the Ontario Games would show more positive attitudes toward disabled persons after the Games than before the Games, a 2 X 2 (sex X time) analysis of variance, with repeated measures on the last factor, was performed on the ATDP scores. Inspection of the results in Table 10 indicates that the predicted main effect for time was significant for both males and females, $F(1,107) = 26.19, p < .01$. The change in volunteer subjects' ATDP scores was in the predicted direction; therefore, the hypothesis was upheld (see Table 11 for means). As in all previous analyses, there was a significant main effect for sex with females being higher in all cases:

⁸To examine possible differences between pre-game only versus pre-game repeated measures Volunteer Subjects, analyses were performed on demographic data and ATDP scores. For females, it was found that pre-game repeated measures subjects had significantly more disabled friends than pre-game only, $\chi^2(1) = 2.69, p < .01$ (see Appendix Q).

TABLE 9
Demographic Data
for Volunteer Subjects

Age	Sex	Marital Status	Occupation ^a	Own Disability	Disabled Family	Disabled Friend	Disabled Co-worker
<u>X</u> = 21.33	Males = 34.0%	Married = 14.5%	Student = 63.3%	Yes = .9%	Yes = 20.9%	Yes = 30.0%	Yes = 5.5%
<u>SD</u> = 9.28	Females = 76.0%	Single = 82.7%	Professional-Technical = 14.7%	No = 99.1%	No = 79.1%	No = 70.0%	No = 94.5%
Range = 58.00	Males = 31.0%	Separated = 1.8%	Service = 6.4%				
Maximum = 71.00	Females = 76.0%	Deceased = .9%	-----				
Minimum = 13.00			Homemaker = 1.8%				
			Unemployed = .9%				
			Retired = .9%				
<u>N</u> = 109	<u>N</u> = 110	<u>N</u> = 110	<u>N</u> = 109	<u>N</u> = 110	<u>N</u> = 110	<u>N</u> = 110	<u>N</u> = 110

^aOccupational categories in the middle range are not shown.

TABLE 10
 Analyses of Variance of
 Volunteer Subjects' ATDP Scores
 by Sex

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Sex	1	2,371.54	9.76*
Error	107	242.95	
Time	1	1,970.36	26.19*
Time X Sex	1	8.67	.12
Error	107	75.23	

* $p < .01$

TABLE 11
Means and Standard Deviations
for Volunteer Subjects' ATDP Scores

	PRE			POST		
	<u>\bar{X}</u>	<u>SD</u>	<u>N</u>	<u>\bar{X}</u>	<u>SD</u>	<u>N</u>
Male	79.62	11.92	34	85.68	15.60	34
Female	86.31	13.28	75	93.23	10.57	75

CHAPTER IV

DISCUSSION

The hypothesis that attitudes toward the disabled would be affected by the presence of the Ontario Games in the host community of Windsor was not upheld by the results of the present study. A randomly selected sample of nondisabled residents of Windsor showed no significant difference in their attitudes toward the disabled in pre- as opposed to post-games measures. Also, in the contrast community of Sarnia, no attitude change was found.

In the present study, Sarnia was used as a contrast community for purposes of comparison with Windsor. The Windsor and Sarnia samples appeared to be well matched on the demographic variables of age, sex, occupation, presence or absence of a disabled family member, and presence or absence of a disabled co-worker. The main demographic difference between the two populations was in the area of presence or absence of a disabled friend. In Sarnia, one half of the subjects reported having a disabled friend and in Windsor about one third of the subjects reported having a disabled friend. The presence of more disabled friends in the Sarnia population of subjects is reflected in the significant difference between Windsor and Sarnia females on the disabled friends variable and in the trend of a difference for males. The relationship between the presence of a disabled friend and an individual's ATDP score has not been clearly established in the present study. However, it appears that in most cases people with disabled friends have more positive attitudes toward the disabled as

reflected in high ATDP scores, than those people without a disabled friend.

Although demographically similar on most variables, the Sarnia population could not be used as a control group per se for direct comparison with Windsor because Sarnia subjects had higher ATDP scores than did Windsor subjects both before and after the Games. The difference between Windsor and Sarnia was shown in a trend for the main effect of city. Relative to Windsor scores and also to the norm, Sarnia scores reflected a more positive attitude toward the disabled in both before and after the Games measures. The highly positive attitudes expressed by the Sarnia subjects may in part be due to the disabled friend factor discussed earlier.

Anthony (1972) suggests that the only consistent findings regarding attitude change toward the disabled are in those situations in which both contact with and information regarding the disabled are present. In light of Anthony's findings, it is important to consider whether the criterion of contact and information was met in the random sample of the present study. In regard to the results of the present study it appears that this criterion for attitude change was not effectively met by the presence of the Ontario Games in the host community of Windsor. The subjects who were aware of the Games had only minimal information about disability and minimal exposure to disabled individuals presented by way of the mass media (see Appendix A for details). The opportunity for extended exposure in the form of actual interpersonal contact with the disabled was lacking. Therefore the limited exposure to the Games may not have been intense enough to

affect attitude change. Also, the hoped-for integration of the 450 disabled athletes into the business and social life of Windsor (shopping, restaurants, entertainment lounges, etc.) was extremely limited by four days of rain during the athletes' stay in Windsor. The inclement weather also discouraged possible spectators and caused the cancellation and rescheduling of some outdoor events.

In the volunteer condition, Anthony's information-plus contact criterion for attitude change was met and did indeed bring about a positive attitude change toward the disabled. The effect of intense contact with the disabled athletes of the Ontario Games and information sessions regarding disability was shown in the attitude change toward the disabled by volunteers who helped with the Games. The positive attitude change toward disabled persons shown by both male and female volunteers supports Anthony's findings that information-plus-contact is an effective vehicle for change. Volunteers for the Games gave three to four days of their time for close and constant interaction with the disabled athletes. The volunteers' attitude change, as reflected by the ATDP scale, indicated that the attitude change is in the form of viewing the disabled as not different from the nondisabled, in that the concept of similarity between disabled and nondisabled persons is the basis of positive attitude scores on the ATDP. Rather than the helper-helpee interaction between volunteers and athletes creating a patronizing relationship it appears that the relationship is based on a healthy realization of the similarity between people be they disabled or nondisabled. However, findings of positive attitude change for volunteers after the Games must be interpreted with

some qualifications in mind. Volunteers are a select group of individuals that are probably not representative of the average population. In the present study, volunteers for the Games were mostly young females, many of whom were students. Motivation and personality characteristics of volunteer subjects may also be very different from that of the general public. This initial difference between volunteers, and the general public, was demonstrated by the relatively high pre-game scores as compared to the random sample and also in comparison to the norm for ATDP scores. Expressed attitudes on the post-games measures may also have been affected by the demand characteristics of the volunteers trying to show themselves to be consistent with their perception of the "good volunteer." However, studies investigating the fakeability and social desirability factors in relation to ATDP scores have shown the scale to be mostly free of these contaminants. The change scores for volunteer subjects can be seen as substantiating evidence that the ATDP scale is an effectively sensitive instrument for measuring attitude change.

The attitude change of the volunteers resulting from the Games supports Park's (1975) suggestion that "normalization" for the disabled can be achieved by elimination of the "sanitized life" which is free of risk and challenge for the disabled. The Ontario Games provide the disabled with what Park refers to as the "dignity of risk" wherein there is both the possibility of failure and the possibility of great reward. The positive attitude change by volunteers helping with the Games is also in line with Kleck's (1975) suggestion that normalization for the disabled is created in social contexts where contact is a positive experience emphasizing the abilities of the disabled.

It is proposed that the experience of the volunteers in seeing the disabled participants as capable athletes may have further reduced any perceived differences the volunteers may have thought existed between disabled and nondisabled persons. Further attitude change may have occurred by experiencing disabled individuals as socially adept, intelligent people sharing common concerns and goals with all people as opposed to the stereotyped view of the depressed, social outcast with which society often labels the disabled. The cognitive dissonance that can result from an incongruence between what may have been somewhat stereotyped views and new experience may be resolved by changing attitudes to be in line with current experience. Further studies should focus on the internal dynamics that lead to such positive attitude change.

An interesting finding of the present study is seen in the analysis of those subjects who became aware of the Games as opposed to those subjects not aware that the Games took place. The main effect for the awareness factor found in the present study indicated that those subjects who became aware of the Games showed more positive attitudes toward the disabled both before and after the Games. No demographic differences between aware and unaware subjects were found to account for this generally more positive attitude toward the disabled by those subjects who became aware of the Games. Perhaps these aware individuals as opposed to unaware were the type of people who seek information through media, have current interest, and are more active in civic affairs; thus accounting for what can be viewed as an enlightened view of the disabled.

With respect to research on attitude change, there are many issues involved in a consideration of the advantages and disadvantages of the more controlled laboratory setting as opposed to the more naturally occurring field setting. Field studies of attitude change have the advantage of being more applicable and relevant to "real life" situations than laboratory studies, on the other hand in field studies there is a loss of control in manipulating the actual conditions under study. Reichel (1975) supports the field approach of the present study by encouraging such research for attitude-change studies. She suggests that because attitude change in field studies is a result of naturally occurring phenomena, changes are of a more permanent nature than the temporary attitude change that may occur as a consequence of a laboratory manipulation. However, a major problem in the present study was the difficulty in controlling conditions in the naturally occurring field setting. The following three difficulties were encountered: (1) Sarnia could not be used as a control group as pre-game ATDP scores in Sarnia were not equivalent to pre-game ATDP scores in Windsor, (2) Sarnia received more exposure to the Games than was expected, and (3) the exposure of Windsor to information regarding the disabled and contact with the disabled due to the presence of the Games in their community was much less than expected. Perhaps in a smaller city the impact of the presence of the Games being held in the community would be stronger than in a city as large as Windsor.

It is suggested that the phenomenon of attitude change toward the disabled can be studied in a laboratory setting, not as a means of permanent attitude change for the subjects, but rather as a way to investigate

what specific kinds and amounts of exposure and information are most effective in producing positive attitude change. For example, a group of subjects can be exposed to films of disabled athletes in the "out-of-role behaviour" of engaging in competitive sports as opposed to a film of a more conventional nature, such as an interview with a disabled individual. In such a setting both the kind and amount of exposure can be controlled. Information derived from such studies regarding effective means of attitude change can then be applied to the more naturally occurring field setting to hopefully create more permanent kinds of change.

Further studies are also suggested using the data gathered in the present study. The relationship between the presence of disabled friends, family members and co-workers to attitudes of the nondisabled toward the disabled is certainly an area worth pursuing. Also, in regard to the attitude change of the volunteer subjects, a follow-up study is suggested to investigate the stability of the noted attitude change. Suggestions for further studies of the Ontario Games include examining the impact of the Games on the self-concept of new participants and also on disabled nonparticipants who are aware of or attend the Games for the first time.

Conclusion

Although the Ontario Games did not produce a positive attitude change toward the disabled in a random sample of subjects in the host community of Windsor, the Games did affect such a change on a sample of volunteers who were in direct contact with the disabled participants in the Games. The present study investigated only one aspect of the Games, that is,

nondisabled attitude change toward the disabled. It is hoped that perhaps the Games are one element in eventual attitude change as society moves from perceiving the disabled as a group of people to be pitied and taken care of to a more realistic view of the disabled as capable individuals contributing to the society in which they are a part.

Support for the concept of the Ontario Games is given by Boyd and Hartneth (1975) in their statement that the best way to change attitudes toward the disabled is by repeated local demonstrations of the abilities of the disabled. Boyd and Hartneth see recreation for the disabled not as therapy or a substitute for vocational activity, but rather as a normal life experience. They state that normalization of the disabled into the athletic recreation of the Canadian culture eradicates the "special" thinking that dominates most recreation programs. The purpose of the Ontario Games is to provide disabled athletes the same opportunity of competitive demonstration of their skills as is provided for nondisabled athletes. The purpose of the Games is not primarily to change the attitude of nondisabled observers regarding the capabilities of disabled individuals. If as a consequence of the Games, such attitude change occurs all the better; however, one should not lose sight of the primary purpose of the Games. They are for the benefit of the disabled athlete him/herself.

The present study takes a macro as opposed to micro view of the phenomenon of disability. Rynder and Kong-ming New (1976) support the macro approach which takes into consideration the conditions and constraints in society that are relevant to disability. It has been

established, as cited in the literature review of the present study, that the view society has of the disabled individual, expressed in attitudes of the nondisabled, affects the disabled person's self concept and defines his/her role in society. Therefore, it is important to be aware of the current conditions and constraints society places on its disabled members.

It is not uncommon for nondisabled people in our society to have stereotyped views of the disabled in which all disabled people are perceived as alike based on the fact that they share the physical characteristic of a disability. In the present study the possibility of the Ontario Games being an avenue for attitude change away from stereotyped views of the disabled was investigated. It is ironic that the instruments used in attitude studies ask subjects to make judgments about people in stereotypical ways. For example, the AFDP scale used in the present study asked subjects to respond to such generalized statements as "Disabled people are ...". The fact that such statements appear to be legitimate by many people is a comment in itself on society's anti-individualistic view of its disabled members.

APPENDIX A
Information Regarding Community Exposure
to the Games

The host community of Windsor received information regarding the Ontario Games through the media of television, newspapers, radio, posters, and brochures. Specifically, local television and radio news and sports broadcasts, covered the Games in progress on the regularly scheduled news reports. Prior to the Games, a local television program presented Game officials with a short film coverage of previous Games.

In advance of the Games large, color brochures including pictures and information concerning the players and events, were widely distributed to supermarkets, malls and local stores throughout the city. The brochure contained a schedule of upcoming events. Support from the community was strongly encouraged.

APPENDIX B

Budget

Budget

Print Shop, University of Windsor	\$ 771.50
Post Office: 6,700 stamps 6,700 Business Reply Returns	1,037.45
Stuffing Envelopes	330.90
Data Coders (6 coders at \$2.85 per hr.)	556.75
Photocopying	97.44
Typing Addresses (3 typists at \$4.00 per hr.)	300.00
	<hr/>
TOTAL	\$ 3,094.04

APPENDIX C

Information Regarding Volunteer Exposure
to the Games

Volunteers for the Games received information and instructions regarding their participation and responsibilities in one of two training sessions. Some volunteers attended both sessions. The training sessions were two hours long and presented the volunteers with information about disability and how to help and work with different kinds of disability. A representative from each of the disability groups participating in the Games spoke on the possible problems that may be encountered when assisting athletes with their specific type of disability. Volunteers were given instructions on wheel chair handling and also given the opportunity to use a "sport type" wheel chair, such as the athletes use.

Volunteers were also shown a film of the Games and an explanation of the classification regulations for each category of disability. The volunteers who chose to be sports officials, referees, coaches, or judges, were given special instructions regarding the rules of their particular event. Other volunteer duties included personal care, food service, and transportation.

A medical staff consisting of a medical doctor, nurse and a physical therapist were also available to assist in answering questions from the volunteers.

APPENDIX D

ATDP

7



May 1978

I agree very much.
I agree pretty much.
I agree a little.
I disagree a little.
I disagree pretty much.
I disagree very much.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Circle +1,+2,+3, or -1,-2,-3, depending on how you feel in each case.

- +3 +2 +1 -1 -2 -3 Parents of disabled children should be less strict than other parents.
- +3 +2 +1 -1 -2 -3 Physically disabled persons are just as intelligent as non-disabled ones.
- +3 +2 +1 -1 -2 -3 Disabled people are usually easier to get along with than other people.
- +3 +2 +1 -1 -2 -3 Most disabled people feel sorry for themselves.
- +3 +2 +1 -1 -2 -3 Disabled people are the same as anyone else.
- +3 +2 +1 -1 -2 -3 There shouldn't be special schools for disabled children.
- +3 +2 +1 -1 -2 -3 It would be best for disabled persons to live and work in special communities.
- +3 +2 +1 -1 -2 -3 It is up to the government to take care of disabled persons.
- +3 +2 +1 -1 -2 -3 Most disabled people worry a great deal.
- +3 +2 +1 -1 -2 -3 Disabled people should not be expected to meet the same standards as non-disabled people.
- +3 +2 +1 -1 -2 -3 Disabled people are as happy as non-disabled ones.
- +3 +2 +1 -1 -2 -3 Severely disabled people are no harder to get along with than those with minor disabilities.
- +3 +2 +1 -1 -2 -3 It is almost impossible for a disabled person to lead a normal life.
- +3 +2 +1 -1 -2 -3 You should not expect too much from disabled people.
- +3 +2 +1 -1 -2 -3 Disabled people tend to keep to themselves much of the time.
- +3 +2 +1 -1 -2 -3 Disabled people are more easily upset than non-disabled people.
- +3 +2 +1 -1 -2 -3 Disabled persons cannot have a normal social life.
- +3 +2 +1 -1 -2 -3 Most disabled people feel that they are not as good as other people.
- +3 +2 +1 -1 -2 -3 You have to be careful of what you say when you are with disabled people.
- +3 +2 +1 -1 -2 -3 Disabled people are often grouchy.
- +3 +2 +1 -1 -2 -3 People with physical disabilities should not go to public places because they may be stared at.
- +3 +2 +1 -1 -2 -3 Separate recreation facilities, such as swimming pools and gyms, should be created for the disabled.
- +3 +2 +1 -1 -2 -3 It is difficult to have disabled people as co-workers.
- +3 +2 +1 -1 -2 -3 Disabled people do not lead as active a sex life as non-disabled people.
- +3 +2 +1 -1 -2 -3 When hiring a disabled person different factors should be considered than when hiring other people.

APPENDIX E
Norms for ATDP

Normative Data ATDP^a

Form 0

	Disabled	Nondisabled
Males	\bar{X} 78.84 Sd. 16.44 N 1,079	\bar{X} 72.80 Sd. 15.53 N 1,689
Females	\bar{X} 78.86 Sd. 15.66 N 219	\bar{X} 75.42 Sd. 13.48 N 1,410

^a Norms derived from subjects tested by Human Resources Center, combined with data sent to the Human Resources Center by other researchers (Yuker, Block, and Young, 1970).

APPENDIX F

MacDonald and Hall Disability Scale

Please make a check mark in the appropriate space to show the degree of seriousness with which you view the following disabilities:

Internal disorders (back condition, diabetes, heart condition, etc.)

very serious _____ _____ _____ _____ not very serious

Sensory disorders (blindness, deafness, speech loss, etc.)

very serious _____ _____ _____ _____ not very serious

Paralysis (loss of use of legs, arms or both)

very serious _____ _____ _____ _____ not very serious

Amputation (amputated leg, hand, arm)

very serious _____ _____ _____ _____ not very serious

Cerebral Palsy (involuntary movements of limbs and possible slurred speech)

very serious _____ _____ _____ _____ not very serious

APPENDIX G
Demographic Information

Male _____ Female _____

Age _____

Married _____ Single _____ Separated _____ Divorced _____

Occupation : _____
(Be specific, i.e., if a salesman, what kind of salesman)

If married, occupation of spouse (be specific) _____

Are you disabled? Yes _____ No _____

If so, what is the nature of your disability? _____

Is anyone in your family disabled? Yes _____ No _____ If so, what relation(s)? _____

What is the nature of their disability(ies)? _____

Are any of your friends disabled? Yes _____ No _____

If so, what is the nature of their disability(ies)? _____

Are any of your co-workers disabled? Yes _____ No _____

If so, what is the nature of their disability(ies)? _____

APPENDIX H

Cover Letter for Community Sample

3

The Province of Ontario and the University of Windsor are asking for your help in evaluating the needs of disabled people in your community. We are asking any adult over 18 yr. of age living in your household to complete the enclosed questionnaire and to return it to the University of Windsor by using the enclosed, addressed and stamped envelope. Please respond before June 5, 1978. Your name is not needed on the answer sheet. A code number appears on the form for research purposes only, so that confidentiality is insured.

We sincerely hope you will take the 10 minutes necessary to complete and return the enclosed form as it will aid us in meeting the needs of the handicapped in your community more effectively. A few select households may be contacted by mail again in a follow-up study.

Thank you for your time
and interest.

Henry L. Minton, Ph.D.
Chairman
Department of Psychology
University of Windsor

APPENDIX I
Cover Letter for
Repeated Measures

July, 1978

Dear Survey Participant:

A few months ago you completed and returned a questionnaire to the University of Windsor to help in evaluating the needs of disabled people in your community. We thank you for your time and interest in this important matter.

Due to the design of the present study, we are again asking your assistance. We are asking the same member of your household that completed the first survey to fill out the enclosed survey expressing his/her present opinion. It is important that the enclosed survey be filled out expressing his/her current opinion without regard to his/her responses to the first survey. Again confidentiality is insured by using code numbers to identify each participant.

Information about the purpose of the study and results, which will be available toward the end of the year, can be obtained by writing to:

Disability Survey
c/o Department of Psychology
University of Windsor
Windsor, Ontario N9B 3P4

Your cooperation is very much appreciated.

Sincerely,



Dr. Henry L. Minton
Chairman, Department of
Psychology

APPENDIX J
Awareness Information

Please place a check mark in the appropriate space for each of the following questions: ✓

Were you aware of the Ontario Games for the physically disabled that were held in Windsor June 30 through July 3? YES _____ NO _____

If you answered yes, indicate the way(s) in which you were made aware of the Games:

T.V. _____
Radio _____
Newspaper _____
Posters _____
Brochure _____
Personal Communication _____
Other (specify) _____

In general (combining all of the above) approximately how many times were you exposed to media coverage of the Ontario Games?

1 or 2 times _____
3 to 5 times _____
6 to 9 times _____
10 or more times _____

Did you attend any of the Games at the University of Windsor or St. Clair College?

YES _____ NO _____

If yes, which events did you attend?

If no, did any of the following reasons prevent you from attending?

not aware of the time _____
no transportation _____
poor health _____
poor weather _____
lack of time _____
out of town _____
not interested _____
other (specify) _____

Do you have any comments or questions regarding the Ontario Games?

APPENDIX K
Volunteer Information
Regarding Involvement in Games

Please indicate with a checkmark the group(s) of disabled athletes with whom you worked:

Blind Athletes
 Amputeed Athletes
 Wheelchair Athletes
 Cerebral Palsy Athletes

Please indicate with a checkmark the specific events of the Games on which you worked:

<input type="checkbox"/> High Jump	<input type="checkbox"/> Wrestling
<input type="checkbox"/> Long Jump	<input type="checkbox"/> Soccer
<input type="checkbox"/> Shotput	<input type="checkbox"/> Table Tennis
<input type="checkbox"/> Discus	<input type="checkbox"/> Weight Lifting
<input type="checkbox"/> Javelin	<input type="checkbox"/> Rifle Shooting
<input type="checkbox"/> Archery	<input type="checkbox"/> Snooker
<input type="checkbox"/> Slalom	<input type="checkbox"/> Basketball
<input type="checkbox"/> Track Events	<input type="checkbox"/> Volleyball
<input type="checkbox"/> Swimming	<input type="checkbox"/> Goalball
<input type="checkbox"/> Fencing	<input type="checkbox"/> Murderball

APPENDIX L

Coding for Demographics

APPENDIX L-1

Key for Interpretation
of Demographic Analysis

SEX

male = 1

female = 2

MARITAL STATUS

married = 1

single = 2

separated = 3

divorced = 4

spouse deceased = 5

OCCUPATION

White Collar

proprietary and managerial = 01

professional and technical = 02

clerical = 03

sales = 04

Blue Collar

manufacturing and mechanical = 05

construction = 06

skilled trade = 07

labourers = 10

transportation and communication = 09

services = 10

APPENDIX L-2

OCCUPATION cont'd.

Blue Collar cont'd.

fishing, logging, mining = 11

agriculture = 12

housewife = 13

unclassified = 14

student = 15

retired = 16

unemployed = 17

ALL YES AND NO QUESTIONS

yes = 1

no = 2

SERIOUSNESS OF DISABILITY

very = 1

somewhat = 2

not very = 3

not at all = 4

APPENDIX L-3

OCCUPATIONAL CATEGORIES

White collar = 01 to 04

Blue collar = 05 to 12

Homemaker = 13

Other = 14 to 17

MARITAL STATUS CATEGORIES

Married = 1

Single = 2

No longer living with spouse = 3 to 5

APPENDIX M
Analyses of Variance
for Disabled Friend

APPENDIX M-1
Analyses of Variance
of ATDP Scores

by Sex, City, Disabled Friend and Time

Source	df	MS	F
Sex	1	4,453.94	10.24**
City	1	720.31	1.66
Disabled Friend	1	839.00	1.93
Sex X City	1	137.00	.31
Sex X Disabled Friend	1	207.13	.48
City X Disabled Friend	1	33.50	.08
Sex X City X Disabled Friend	1	1,347.25	3.10*
Error	341	434.99	
Time	1	91.69	1.53
Time X Sex	1	4.11	.07
Time X City	1	50.40	.84
Time X Disabled Friends	1	3.85	.06
Time X Sex X City	1	14.09	.24
Time X Sex X Disabled Friend	1	40.42	.68
Time X City X Disabled Friend	1	119.41	2.00
Time X Sex X City X Disabled Friend	1	98.28	1.64
Error	341	59.85	

* $p < .10$

** $p < .01$

APPENDIX M-2

Means and Standard Deviations
for ATDP Scores

	<u>Windsor</u>					
	PRE			POST		
	\bar{X}	SD	N	\bar{X}	SD	N
Disabled Friend						
Male	75.85	19.40	33	78.39	18.75	33
Female	78.22	18.69	37	80.41	19.58	37
No Disabled Friend						
Male	69.72	15.01	79	70.77	16.86	79
Female	80.84	14.32	63	80.40	14.06	63

	<u>Sarnia</u>					
	PRE			POST		
	\bar{X}	SD	N	\bar{X}	SD	N
Disabled Friend						
Male	76.48	14.66	31	77.13	16.59	31
Female	83.84	14.68	38	82.16	14.59	38
No Disabled Friend						
Male	77.00	11.55	40	76.48	15.68	40
Female	78.18	12.18	28	80.54	13.77	28

APPENDIX N

Analyses of Demographic Data and Pre-game ATDP Scores
Pre-game Only versus Pre-game Repeated Measures

APPENDIX N-1

Analysis of Demographic Data and Pre-game ATDP Scores for Male and Female Subjects:
 Pre-game Only versus Pre-game Repeated Measures
 Windsor

	Age		Marital Status		Occupation		Disabled Family		Disabled Friend		Disabled Co-worker		ATDP Scores		Sex
	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	
Male															
Pre-only	43.35	74	1.45	75	6.33	75	1.85	73	1.87	75	1.86	73	70.17	64	
Pre-repeated measures	42.02	130	1.19	130	6.52	127	1.82	130	1.69	129	1.84	128	71.94	116	
	$t(202) = .98$		$\chi^2(2) = 1.98^*$		$\chi^2(3) = 1.06$		$\chi^2(1) = .09$		$\chi^2(1) = 3.11^{**}$		$\chi^2(1) = .12$		$t(174) = 1.43$		
															$\chi^2(1) = .73$
Female															
Pre-only	37.39	87	1.56	87	8.86	80	1.67	86	1.59	81	1.96	71	76.72	71	
Pre-repeated measures	39.50	123	1.45	124	9.29	120	1.76	123	1.64	123	1.90	123	79.83	106	
	$t(198) = 1.47$		$\chi^2(2) = .56$		$\chi^2(3) = 1.63$		$\chi^2(1) = 1.03$		$\chi^2(1) = .76$		$\chi^2(1) = .49$		$t(167) = 1.73$		

* $p < .10$

** $p < .01$

APPENDIX N-2

Analyses of Demographic Data and Pre-game ATDP Scores for Male and Female Subjects:

Pre-game Only versus Pre-game Repeated Measures

Sarnia

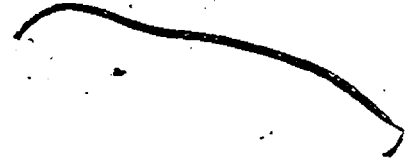
	Age		Marital Status		Occupation		Disabled Family		Disabled Friend		Disabled Co-worker		ATDP Scores		Sex
	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	
Male															
Pre-only	38.91	58	1.26	58	6.23	57	1.86	58	1.78	58	1.87	55	75.31	51	
Pre-repeated measures	42.66	85	1.27	85	5.06	84	1.79	85	1.58	85	1.82	84	77.65	78	
	$t(141) = 1.61$		$\chi^2(2) = .07$		$\chi^2(3) = 1.61$		$\chi^2(1) = 1.18$		$\chi^2(1) = 2.50^{**}$		$\chi^2(1) = .83$		$t(129) = 1.89$		(1) = 1.02
Females															
Pre-only	35.41	39	1.28	39	7.08	37	1.80	39	1.60	37	1.84	39	83.69	35	
Pre-repeated measures	39.40	78	1.72	79	8.75	77	1.70	80	1.45	80	1.87	79	81.19	72	
	$t(115) = 1.71^*$		$\chi^2(2) = 2.67^*$		$\chi^2(3) = 1.79$		$\chi^2(1) = .83$		$\chi^2(1) = .91$		$\chi^2(1) = .29$		$t(105) = 1.92$		

* $p < .10$

** $p < .01$

APPENDIX O

Demographic Analyses for
Aware versus Not Aware Subjects



APPENDIX O

Analyses of Demographic Data for Male and Female Subjects:
Aware versus Not Aware

	Age		Marital Status		Occupation		Disabled Family		Disabled Friend		Disabled Co-worker		Sex
	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	
Male													
Aware	42.90	152	1.18	152	6.16	152	1.80	152	1.67	151	1.83	149	
Not Aware	39.10	55	1.36	55	5.02	55	1.02	55	1.60	55	1.84	55	
	$t(205) = 1.68^*$		$\chi^2(2) = 2.75$		$\chi^2(3) = 2.87$		$\chi^2(1) = .13$		$\chi^2(1) = .60$		$\chi^2(1) = .03$		
Females													
Aware	39.79	132	1.50	135	5.89	135	1.71	135	1.56	135	1.88	134	
Not Aware	37.89	64	1.68	63	5.01	82	1.76	63	1.57	63	1.92	63	
	$t(194) = .38$		$\chi^2(2) = 2.34$		$\chi^2(3) = 2.82$		$\chi^2(1) = .56$		$\chi^2(1) = .01$		$\chi^2(1) = .72$		$\chi^2(1) = 1.52$

* $p < .10$

APPENDIX P
Analyses of Variance
for Degree of Awareness

APPENDIX P-1
 Analyses of Variance
 of ATDP Scores
 by Sex and Degree of Aware

Source	<u>df</u>	<u>MS</u>	<u>F</u>
Sex	1	8,562.50	19.61**
Degree of Aware	3	1,106.25	2.53*
Sex X Degree of Aware	3	127.58	.29
Error	342	436.55	
Time	1	108.77	1.82
Time X Sex	1	1.11	.02
Time X Degree of Aware	3	108.70	1.82
Time X Sex X Degree of Aware	3	24.51	.41
Error		59.64	

* $p < .10$

** $p < .01$

APPENDIX P-2
Means and Standard Deviations
for ATDP Scores

	PRE			POST		
	\bar{X}	SD	N	\bar{X}	SD	N
Males						
Unaware	73.06	12.74	54	72.09	14.99	54
Low Level of Awareness	74.59	14.87	49	76.41	16.05	49
Medium Level of Awareness	71.30	16.84	47	73.15	17.04	47
High Level of Awareness	76.16	17.89	34	77.06	21.23	34
Females						
Unaware	78.32	16.70	57	76.65	16.11	57
Low Level of Awareness	83.42	14.47	36	83.25	15.27	36
Medium Level of Awareness	79.62	13.79	50	81.32	13.79	50
High Level of Awareness	83.22	15.04	23	86.32	15.28	23

APPENDIX Q

Analyses of Demographic Data and Pre-game ATDP Scores

Pre-game Only versus Pre-game Repeated Measures:

Volunteers

APPENDIX Q
 Analyses of Demographic Data and Pre-game ATOP Scores for Male and Female Subjects:
 Pre-game Only versus Pre-game Repeated Measures
 Volunteers

	Age		Marital Status		Occupation		Disabled Family		Disabled Friend		Disabled Co-worker		ATOP Scores		Sex
	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	\bar{X}	n	
Male															
Pre-only	27.82	35	1.69	35	8.08	35	1.86	35	1.77	35	1.97	35	78.69	35	
Pre-repeated measures	22.79	30	1.70	34	10.68	34	1.85	34	1.88	34	1.91	34	79.62	34	
	$t(67) = 1.93^*$		$\chi^2(2) = .14$		$\chi^2(3) = 1.83^*$		$\chi^2(1) = .05$		$\chi^2(1) = 1.21$		$\chi^2(1) = 1.05$		$t(67) = .85$		
Female															$\chi^2(1) = .67$
Pre-only	21.86	90	1.87	90	11.90	90	1.80	90	1.81	90	1.96	90	83.96	90	
Pre-repeated measures	20.76	74	1.99	75	11.99	75	1.76	75	1.63	75	1.96	75	86.31	75	
	$t(162) = .80$		$\chi^2(2) = 1.50^*$		$\chi^2(3) = .11$		$\chi^2(1) = .62$		$\chi^2(1) = 2.69^{**}$		$\chi^2(1) = .14$		$t(163) = 1.07$		

* $p < .10$
 ** $p < .01$

REFERENCES

- Allport, G. Personality. New York: Holt, 1937.
- Anthony, W. A. The effects of contact on an individual's attitude toward disabled persons. Rehabilitation Counseling Bulletin, 1969, 12, 168-171.
- Anthony, W. A. A methodological investigation of the minimally facilitative level of interpersonal functioning. Journal of Clinical Psychology, 1971, 27, 156-157.
- Anthony, W. A. Social rehabilitation: Changing society's attitudes toward the physically and mentally disabled. Rehabilitation Psychology, 1972, 19, 117-126.
- Anthony, W. A., & Carkhuff, R. R. Effects of training on rehabilitation counselor trainee functioning. Rehabilitation Counseling Bulletin, 1970, 13, 333-342.
- Barker, R. G., & Wright, B. A. The social psychology of adjustment to physical disability. In J. F. Garrett (Ed.), Psychological aspects of physical disability. Washington, D.C.: Office of Vocational Rehabilitation, Rehabilitation Service Series Number 210, U.S. Gov. Printing Office, 1956.
- Bell, A. H. Attitude of selected rehabilitation workers and other hospital employees toward the physically disabled. Psychological Reports, 1962, 10, 183-186.
- Bell, A. H. Measure for adjustment of the physically disabled. Psychological Reports, 1967, 31, 773-778.

- Block, J. R. Recent research with the Attitude Toward Disabled Person's Scale. Albertson, N.Y.: Human Resources, 1974.
- Boyd, W., & Hartnett, F. Normalization and its implications for recreation services. Leisurability, 1975, 2, 22-27.
- Bynder, H., & Kong-ming New, P. Time for a change: From micro to macro-sociological concepts in disability research. Journal of Health and Social Behavior, 1976, 17, 45-52.
- Byrne, D. Attitudes and attraction. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 4). New York: Academic Press, 1969.
- Cameron, P., Titus, D., Kostin, J., & Kostin, M. The life satisfaction of non-normal persons. Journal of Consulting and Clinical Psychology, 1973, 41, 207-214.
- Chesler, M. A. Ethnocentrism and attitude toward the physically disabled. Journal of Personality and Social Psychology, 1956, 2, 877-882.
- Comer, R. C., & Piliavin, J. A. As others see us: Attitudes of physically handicapped and normals toward own and other groups. Rehabilitation Literature, 1975, 36, 206-222.
- Davis, F. Deviance disavowal: The management of strained interaction by the visibly handicapped. Social Problems, 1961, 9, 123.
- Dawes, R. M. Fundamentals of attitude measurement. New York: Wiley, 1972.
- Dembo, T., Diller, L., Gordon, W. A., Leviton, G., & Sherr, K. L. A view of rehabilitation psychology. American Psychologist, 1973, 28, 719.
- Doob, A. N., & Payne Ecker, B. Stigma and compliance. Journal of Personality and Social Psychology, 1970, 14, 302-304.

- Edwards, A. C. Techniques of attitude scale construction. New York: Appleton-Century-Crofts, 1957.
- English, R. W. Correlates of stigma toward physically disabled persons. In R. P. Marinelli & A. Dell Orto (Eds.), The psychological and social impact of physical disability. New York: Springer, 1978.
- English, R. W. Combating stigma toward physically disabled persons. In R. P. Marinelli & A. Dell Orto (Eds.), The psychological and social impact of physical disability. New York: Springer, 1978.
- English, R. W., & Oberle, J. B. Toward the development of new methodology for examining attitudes toward disabled persons. Rehabilitation Counseling Bulletin, 1971, 15, 88-96.
- Evans, J. H. Attitude toward the disabled and aggression. Perceptual and Motor Skills, 1973, 37, 834.
- Evans, J. H. Changing attitudes toward disabled persons: An experimental study. Rehabilitation Counseling Bulletin, 1976, 20, 572-579.
- Festinger, L. Festinger's dissonance theory. In C. A. Insko (Ed.), Theory of attitude change. New York: Appleton-Century-Crofts, 1957.
- Garrett, J. F. Psychological aspects of physical disability. Washington, D.C.: U.S. Government Printing Office, 1956.
- Gellman, W. Roots of prejudice against the handicapped. Journal of Rehabilitation, 1959, 25, 4-6.
- Goffman, E. Stigma. Englewood Cliffs, N.J.: Prentice-Hall, 1963.
- Guttentag, M., Kiresuk, T., Oglesby, M., & Cahn, J. The evaluation of training in mental health. New York: Behavioral Publications, 1975.
- Haber, L. O., & Smith, R. T. Disability as a process: Disability and deviation: Normative adaptation of role. American Sociological Review, 1971, 36, 87-97.

- Hamilton, L. W. Counseling the handicapped in the rehabilitation process. New York: Ronald, 1950.
- Kiesler, C. A., Collins, B. E., & Miller, N. Attitude change. New York: Wiley, 1969.
- Kleck, R. Physical stigma and non-verbal cues emitted in face-to-face interaction. Human Relations, 1966, 19, 425-436.
- Kleck, R. Reaction to the handicapped - sweaty palms and saccharine words. Psychology Today, November 1975, pp. 122-124.
- Langer, E. J., Fiske, S., Taylor, S. E., & Chanowitz, S. Stigma, staring and discomfort: Novel-stimulus hypothesis. Journal of Experimental Social Psychology, 1976, 12, 451-463.
- Lewin, K. Field theory in social science. New York: Harper & Row, 1951.
- Lukoff, I. F., & Whiteman, M. Attitudes toward blindness; some preliminary findings. New Outlook for the Blind, 1961, 55, 39-44.
- McDonald, Jr., A. P., & Hall, J. Perception of the disabled by the non-disabled. Journal of Consulting and Clinical Psychology, 1969, 33, 653-660.
- McDonald, Jr., A. P., & Hall, J. Internal-external locus of control and perception of disability. Journal of Consulting and Clinical Psychology, 1970, 34, 338-343.
- McGuire, W. J. A syllogistic analysis of cognitive relationships. In M. J. Rosenberg, C. I. Howland, W. J. McGuire, R. P. Abelson, & J. W. Brehm (Eds.), Attitude organization and change. New Haven: Yale University Press, 1960.
- Meyerson, L. Physical disability as a social psychological problem. Journal of Social Issues, 1948, 4(3), 2-10.

- Palmerton, K. E., & Frumkin, R. M. Contact with disabled persons and intensity of counselors' attitudes. Perceptual and Motor Skills, 1969, 28, 434.
- Park, L. D. Barriers to normality for the handicapped adult in the United States. Rehabilitation Literature, 1975, 36, 108-111.
- Reichel, E. A. Changing attitudes toward the disabled. Journal of Applied Rehabilitation Counseling, 1975, 6, 188-192.
- Rosenberg, M. J., & Hovland, C. I. Cognitive, affective, and behavioral components of attitudes. In M. J. Rosenberg, C. I. Hovland, W. J. McGuire, R. P. Abelson, & J. W. Brehm (Eds.), Attitude organization and change. New Haven: Yale University Press, 1960.
- Semmel, M. D., & Dickson, S. Connotative reactions of college students to disabled labels. Exceptional Child, 1966, 32, 443-450.
- Siller, J. Personality determinants of reaction to the physically handicapped. American Psychologist, 1962, 17, 338 (abstract).
- Siller, J. Personality determinants of reaction to the physically disabled. American Foundation for the Blind Research Bulletin, 1964, 7, 37-52.
- Siller, J., & Chipman, A. Response set paralysis: Implications for measurement and control. Journal of Consulting Psychology, 1963, 27, 432-438.
- Siller, J., & Chipman, A. Factorial structure and correlates of the attitude toward disabled persons scale. Educational and Psychological Measurement, 1964, 24.

- Siller, J., Ferguson, L. T., Chipman, A., & Vann, D. H. Studies in reaction to disability, XI: Attitudes of the nondisabled toward the physically disabled. New York: New York University School of Education, 1967.
- Smits, S. J., Conine, T. A., & Edwards, L. D. Definition of disability as determinants of scores on the ATDP Scale. Rehabilitation Counseling Bulletin, 1971, 14, 227-235.
- Staffieri, M., & Klappersack, J. An attempt to change attitudes toward the cerebral palsied. Rehabilitation Counseling Bulletin, 1960, 3, 5-6.
- Vanier, J. The contributions of the physically and mentally handicapped to development. In R. P. Marinelli, & A. Dell Orto (Eds.), The psychological and social impact of physical disability. New York: Springer, 1978.
- Weinberg, N. Social stereotyping of the physically handicapped. Rehabilitation Psychology, 1976, 23, 115-124.
- Wright, B. Physical disability: A psychological approach. New York: Harper, 1960.
- Urie, R. M., & Smith, A. H. The effects of peer contact on attitudes toward disabled college students. Journal of Applied Rehabilitation Counseling, 1970-71, 1, 24-32.
- Yuker, H. E., Block, J. R., & Campbell, W. J. Scale to measure attitudes toward disabled persons. Human Resources Study No. 5. Albertson, N.Y.: Human Resources, 1960.
- Yuker, H. E., Block, J. R., & Young, J. H. The measurement of attitudes toward disabled persons. Rehabilitation Series 3. Albertson, N.Y.: Human Resources, 1970.

VITA AUCTORIS

Kathleen Navarre was born in Bay City, Michigan, February 15, 1946. She received her secondary education at St. Joseph High School in Bay City from which she graduated in June 1965. She graduated with an Associates Degree in Liberal Arts from Delta College, University Center, Michigan in 1969 and a Bachelor of Arts Degree from Saginaw Valley State College, University Center, Michigan in 1971. In 1975, she received her Masters Degree in Psychology at the University of Windsor.

Presently Kathleen is an instructor of Psychology at Delta College.