THE PHYSICAL ATTRACTIVENESS OF MENTALLY RETARDED PROGRAM CANDIDATES AS A DETERMINANT OF EVALUATION BY PROFESSIONALS OF VARYING TRAINING AND EXPERIENCE

Dissertation for the Degree of Ph. D.

MICHIGAN STATE UNIVERSITY

JOSEPH J. AUFFREY, Jr.

1975

This is to certify that the

thesis entitled

The Physical Attractiveness of Mentally Retarded Program Candidates as a Determinant of Evaluation by Professionals of Varying Training and Experience

presented by

Joseph J. Auffrey, Jr.

has been accepted towards fulfillment of the requirements for

Ph.D. degree in Counseling

James R. Bayles
Major professor

Date August 7, 1975

ABSTRACT

THE PHYSICAL ATTRACTIVENESS OF MENTALLY RETARDED PROGRAM CANDIDATES AS A DETERMINANT OF EVALUATION BY PROFESSIONALS OF VARYING TRAINING AND EXPERIENCE

By

Joseph J. Auffrey, Jr.

This study was designed to investigate determinants of evaluation of mentally retarded program candidates. The physical attractiveness of the mentally retarded individual as well as several characteristics of the evaluator were taken into account. The evaluation of the candidate consisted of judgments of personal qualities, diagnosis, prognosis and program placement.

Ninety-four subjects from three professional groups were selected as evaluators for this study. The work study coordinators, speech therapists, and counseling trainees, selected as subjects, represented a cross section of mental retardation rehabilitation professionals, with wide variation in training and amount of experience. The subjects were asked to evaluate program candidates when given a set of standard simulated materials including photographs of nine candidates which had previously been rated for physical attractiveness.

The evaluations by the professional subjects yielded nine dependent variable measures in the areas of personal qualities, diagnosis, prognosis, and program placement. Multivariate analysis of the nine measures

reveal

attrac

group

profes

higher

project

found b

trainin

the men

revealed significant differences in evaluation as a function of physical attractiveness of the candidate and also as a function of professional group of the subject. Univariate analysis of variance found that the professionals had assigned the more physically attractive retardates higher recommendations for program placement and higher scores on a projective diagnostic statement. Differences in evaluation were also found between two of the professional subject groups, suggesting that training and experience may play an important role in the assessment of the mentally retarded client.

THE PHYSICAL ATTRACTIVENESS OF MENTALLY RETARDED PROGRAM CANDIDATES AS A DETERMINANT OF EVALUATION BY PROFESSIONALS OF VARYING TRAINING AND EXPERIENCE

By

Joseph J. Auffrey, Jr.

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Counseling, Personnel Services and Educational Psychology

1975

ACKNOWLEDGMENTS

The author wishes to express appreciation to:

Dr. James R. Engelkes, Chairman of the dissertation committee, for his advice and assistance in conceptualizing the study, for his constant aid in organizing and writing, and for his unwavering support and motivational efforts which brought this research effort to fruition.

Drs. Richard Johnson, Norman Stewart and Ellen Strommen, dissertation committee members, for their constructive criticism of the proposal and their invaluable editorial remarks.

TABLE OF CONTENTS

Table of Contents - continued

Table of Contents - continued

LIST OF TABLES

List of Tables - continued

LIST OF FIGURES

CHAPTER I

INTRODUCTION

The human animal, despite sophisticated cognitive abilities, responds to his environment in a lawful, functional manner which assures survival of the organism and of the species (Skinner, 1969). The parameters of an individual's response repertoire are defined by his own needs and preferences as well as by the reinforcement potential of his environment. Hence, social interactive behavior may be cued by a complex process of stimulus recognition which signals the likelihood of mutual benefit for all individuals involved. What kind of process takes place in the perception of one person by another? What qualities or properties of the individual are ascertained in this process? The answers to these questions are of profound importance to all students of human behavior, particularly to those in applied areas who must make critical judgments of other individuals. The clinician, the teacher, and the counselor must have a clear knowledge of the human characteristics which significantly affect the perception of others. Those who work with the dependent client, the young, the old, the mentally retarded, or mentally ill, should be particularly aware, since the client may not provide direction or feedback without assistance.

Of the multitude of human characteristics which differ between individuals, the most obvious, perhaps, is the visual stimulus, the

physical appearance of one person as perceived by another. The relationship of this variable to the perceptions and actions of helping professionals is the subject of this research effort.

General Considerations

Visual observation is a prerequisite event for almost any form of human interactive behavior. The neonate learns in the first few days of life that visual orientation and the recognition of other human figures often signals the onset of nurturance. The developing person soon comes to rely heavily upon the physical appearance of other people as a source of immediate, meaningful information; information which cues further interaction. Despite democratic ideals which dictate, "beauty is only skin deep" and "don't judge a book by its cover", the physical countenance of a person remains as a most outstanding, identifiable and readily accessible characteristic. The person on the street has little difficulty in identifying some people as "beautiful" and others as "ugly". In fact, our society is so preoccupied with physical attractiveness that billions of dollars are spent every year on cosmetics, clothing and coiffures in an attempt to modify or mask almost every part of the body. Can there be any doubt that physical appearance is a major determinant in human interactive behavior? The social impact of physical attractiveness factors is dramatized by a study of facially disfigured prison inmates (Kurtzberg, Safor and Cavior, 1968). The results of this research showed that disfigured inmates who received corrective plastic surgery had a recidivism rate significantly less than a group of uncorrected counterparts.

The question of differential response to people of varying physical

attractiveness is a rather obvious one which could have profound implications. One could speculate that a person meeting another person forms an immediate "Homunculus" or initial global impression, based largely on physical appearance. Mischel (1970) suggests that once such an impression is formed, all future judgments are shaped to fit; the homunculus and physical attractiveness become major determinants of evaluative behavior.

Despite the seemingly endless ramifications of physical attractiveness determinancy, behavioral scientists seem somewhat reluctant to explore this area. Lindzey (1965) cited the psychological researchers neglect of "morphology" in general, which he took to encompass "any externally observable and objectively measurable attribute of the person (p. 344). Lindzey suggests that American psychology is so strongly entrenched in environmental determinism, that any hint of physiological determinancy is a source of dissonance. Aronson (1969) concurs with Lindzey, stating that: "It may be that at some level we would hate to find evidence indicating that beautiful women are better liked than homely women - somehow this seems undemocratic" (p. 160). He points out that most of us probably want to believe that beauty is only skin deep and that hard work and good qualities make all the difference. Despite these philosophical handicaps, an identifiable stream of research has emerged in the physical attractiveness area.

Early Research

During the Golden Age of Greece, physical appearance was considered as a visible representation of underlying personality

characteristics (Goffman, 1963). Physical beauty was seen as evidence of moral strength, wisdom and general goodness while physically unattractive or disfigured people were stigmatized and identified as possessing low moral fiber and a paucity of other desirable characteristics. Some semblance of this thought persisted through the multiphasic evolution of Western civilization, perhaps inspiring the investigations of early behavioral scientists such as Perrin (1921) and Kretschmer (1925). Perrin empirically identified a multitude of physical attractiveness components, carefully delineating the properties of nice looking noses, ugly ankles, etc. He then rated a number of subjects on these components and their general physical attractiveness. The physical attractiveness components and ratings were then correlated with personality characteristic ratings. Perrin's findings could be summarized as follows:

1. The anatomical component measurements (i.e., nose size) of subjects judged physically unattractive tended to deviate from the mean more than physically attractive subjects.
2. The components most strongly connected with physical unattractiveness were color of mouth and lips and proportion of legs and feet for women, proportion of arms and feet for men.
3. Physical attractiveness was significantly correlated with appeal to opposite sex, appeal to same sex, liking, energy, general social ability, good taste in dress.

In Germany, Kretschmer developed a complex classification system of physical characteristics and body types in an attempt to find physiological correlates of mental illness. His suggestions that head shapes and body configurations are characteristic of epilepsy, schizophrenia,

and manic depressive psychosis are less than convincing despite reams of demographic incidence data.

In the morphological area, behavioral scientists are probably most familiar with the work of S.H. Sheldon who devised a system of rating physical characteristics (Sheldon, 1940) and whose research related body type (somatotype) to a variety of personality variables (Sheldon, 1942). Using Sheldon's system, a person's physique could be readily identified as endomorphic (obese, soft muscled), mesomorphic (well proportioned, well muscled) or ectomorphic (slight build, light musculature). Sheldon's correlational data revealed that endomorphs tended to be jovial and easy going while ectomorphs were tense and moody. Unfortunately, Sheldon's research suffered from serious methodological flaws and his simplistic notion about the concert of body and mind has been discredited in the eyes of many behavioral scientists (Lindzey, 1965). His work may now be regarded as a suggestive influence for current research efforts.

Physical Attractiveness: Modern Research Efforts

Physical Attractiveness as a Determinant of Attribution

Recent research efforts in the area of physical attractiveness have drawn away from the trait-linked or biological determinance ideas of Sheldon and Kretschmer. Instead, emphasis has been upon an exploration of the perception of physical attractiveness and behavioral consequences of that perception. The assumptions of this approach are aptly characterized by Bruner, Shapiro and Tagiuri (1958):

> Attractiveness levels are perceptually related to certain psychological traits or dispositions. When physical appearance constitutes the initial

> stimulus input about another person, a set of expectancies regarding other aspects of that person may be activated by a process of trait inference. (p. 278)

These ideas are consonant with Mischel's theory of "Homunculus" determination of personality judgments (Mischel, 1970) cited previously. Current physical attractiveness research seems firmly based on the hypotheses that beautiful and ugly people are perceived differently, attributed varying traits, and judged with some discrepancy on the basis of their behavior.

Research by Miller (1970), Dion, Berscheid and Walster (1972), Berscheid and Walster (1972), and Dion and Berscheid (1974) seems to suggest that, indeed, people do carry a stereotyped notion of traits linked to physical attractiveness and that behavioral evidence seems to confirm the stereotype.

Miller asked undergraduate college students to rate yearbook photos on an adjective checklist. The photos had previously been rated on a nine point scale of physical attractiveness by a large group of independent judges. As hypothesized, Miller found that physically attractive stimulus photos received significantly higher ratings on fifteen out of seventeen positive traits and that physically unattractive photos were more likely to be ascribed negative trait labels. The good looking people were seen as confident, happy, active, humorous and amiable while their less attractive counterparts were viewed as insensitive, unsure, submissive, passive, and rigid. Dion, Berscheid and Walster (1972), in a similar study, asked students to rate previously judged stimulus photos on a number of traits and variables. The raters were told that the task was an accuracy of perception experiment in

which their untrained perceptions of the photos would be compared with those of clinical psychologists. The results of this study showed that physically attractive stimulus photos were rated significantly higher than physically unattractive subjects on:

1. Social desirability of personality
2. Occupational status
3. Marital competence
4. Social and professional happiness
5. Total happiness

Physically unattractive subjects were rated about the same in one area, projected parental competence. Bar-Tal and Saxe (1974) asked undergraduate students to rate slides of physically attractive and physically unattractive couples on a number of personality characteristics. They found that physically attractive males were viewed as possessing more socially desirable personality characteristics, being more socially successful, and more popular. The males, however, were also seen as unhappier in marriage, less trustworthy and less intelligent. Physically attractive females were perceived as superior to their unattractive counterparts in all areas except marital happiness.

Clifford and Walster (1973) focused specifically on physical attractiveness as a predetermining factor in expectations. In their study, elementary school teachers were given a bogus report card with one of twelve different physically attractive or physically unattractive photographs attached. The teachers were then asked to rate the student on a variety of performance, personality, and family characteristics. Results of this study indicated that physically attractive photos were attributed higher I.Q., better family life, and more educational

achievement.

Dion, Berscheid and Walster (1972) suggest that the physical attractiveness stereotype as revealed above, may have a degree of "functional validity", i.e., good looking people may actually be more capable and more likeable. They speculate that certain personality traits may influence physical attractiveness, exemplified by the facial appearance differences of a tense, irritable person and a calm, relaxed one. The hypothesis is also offered that established cultural stereotypes lead to generally held expectations about a person's behavior which results in a subtle shaping process toward the expected end. Hence, the physically attractive person would be accorded a high degree of respect and would inevitably become a respectable person.

Berscheid and her colleagues have further explored physical attractiveness determinancy in two studies with young children. Berscheid and Walster (1972) asked a group of nursery school teachers to rate their students on physical attractiveness, their personal characteristics and their behavior in the classroom. They found that actual academic performance almost directly paralleled physical attractiveness ratings and that the physically attractive youngsters were perceived as being significantly better liked and better behaved than their unattractive counterparts. The distinct inference of this study is that the physical attractiveness stereotype may be linked to a behavior shaping process which starts in early childhood. This notion is reinforced by Dion's research (Dion, 1972) in which young women were asked to interpret descriptions of children's behavior. Each woman was given an information packet containing a photo of a child (previously rated for physical attractiveness) and a narrative account of "naughty"

behavior by the child, supposedly taken from the records of a classroom teacher. The behavioral descriptions included accounts of the child deliberately injuring another child with a hard packed snowball and a story of the child throwing rocks repeatedly at a helpless dog. The subjects were asked to complete an evaluation form in which they offered an assessment of the child and an interpretation of the child's transgressions. Dion's results showed that the young women attributed different motives to the behavior of physically attractive and physically unattractive children. The physically attractive child, observed in an aggressive, destructive, or sadistic act, is described as "having a bad day" while the physically unattractive child doing the same thing is labeled as "mean and vindictive". The author concludes that the physical attractiveness stereotype is a significant determinant, and that in "who did it" situations the physically unattractive child is more likely to be blamed.

In a recent extension of Dion's work, Seligman, Paschall, and Takata (1974) asked high school students to attribute responsibility for actions to physically attractive and physically unattractive stimulus photos. Each student was given a description of a fictitious event in the life of an adult female photo subject, with good or bad outcomes ascribed to the decisions she made. The students were then asked to evaluate the amount of responsibility which should be borne by the subject, for the outcome achieved. The results showed that, in general, the physically attractive person was seen as more responsible for good outcomes while the physically unattractive person was viewed as responsible for bad outcomes. Dion (1974), in a similar study, had adult subjects view a videotaped interaction scene between the

experimenter and a child of pre-rated high or low physical attractiveness. The subject then monitored the child on a picture naming task and administered a penalty for each incorrect response. The results showed that female subjects administered significantly more punishment to less physically attractive children; there were no differences for male subjects. Efran (1974) found that college students in a simulated jury trail situation favored high physical attractiveness defendants in terms of guilt and suggested punishment. In a similar situation, however, Friend and Vinson (1974) found that the juries assigned significantly lighter sentences to physically unattractive defendants, a finding which they characterize as "leaning over backwards".

Dion and Berscheid (1974), in attempting to consolidate the physical attractiveness determinancy data, have offered a theoretical model as follows:

1		2		3		4
Expectation by peers, teachers, etc. that physically unattractive kids will exhibit negative behavior	→	Rejection of physically unattractive	→	Physically unattractive reacts by antisocial, aggressive or withdrawal behavior	→	Stereotype reinforced

Physical Attractiveness and Liking

Several research efforts (Pope, 1953; Sigall and Aronson, 1969; Cavior and Dockecki, 1969) have identified physical attractiveness as a determinant of liking or popularity. Pope (1953) used the "Guess Who" type test to ascertain how twelve-year-old school children assessed the reputations of their fellow students. The student was given a verbal characterization of a personality trait and asked which fellow

classmates most closely fit the description. The author found that physical attractiveness of the children, as identified by their peers, was related more strongly to popularity and interpersonal attraction than twenty other personality variables which were assessed. Sigall and Aronson (1969) found that students, who were interviewed by an attractive or unattractive female experimenter, reported liking and feeling good significantly more under the attractive condition. In this study the same experimenter was used for both treatments with cosmetic modifications. Cavior and Dockecki (1969) asked fifth grade boys to rate and rank the physical attractiveness of several of their classmates. The students then were asked to assess the relative popularity of the students in each of the stimulus photos. Results showed a statistically significant correlation between rated physical attractiveness and perceived popularity. The physical attractiveness ratings, done by acquaintances, differed only slightly from those of independent raters.

In a related study, Raff and Brody (1953) attempted to predict sorority and fraternity pledges on the basis of spot judgments of physical attractiveness. Their results showed a high degree of inter-rater agreement with the spot judgments and a significant predictive validity coefficient.

Physical Attractiveness and Choice of Partner

If liking and popularity are related to physical attractiveness, one might expect dating choice and marital choice to have a similar physical attractiveness determinancy. In fact, a large body of research evidence supports this contention. Stroebe, Insko, Thompson and Layton (1971), Walster, Aronson and Abrahams (1966), Byrne, Ervin and Lamberth

(1970), Brislin and Lewis (1968) and Berscheid, Dion, Walster and Walster (1971), have all shown physical attractiveness as a strong determinant of dating preference and choice. The Walster, Aronson and Abrahams study used several other independent variables including personality traits but found that physical attractiveness was the only important determinant. Murstein (1972) found that physical attractiveness is also linked strongly to marital choice. However, the data of Stroebe, Insko, Thompson and Layton (1971) indicate that this relationship is attenuated somewhat in comparison to dating; apparently other factors receive greater consideration, i.e., attitude similarity.

Several research efforts have displayed that physical attractiveness is an important factor in other, less intimate, human interactions. Mills and Aronson (1965) and Howard, Cohen and Cavior (1974) have identified physical attractiveness as a significant positive component in the ability of a communicator to persuade or change opinion. In the same area, Soble and Strickland (1974), found physical deformity to be a detracting factor. Their study had a female student, in a normal condition or with a deformed back disguise, approach housewives to arrange interviews. The results showed significantly lower compliance with interview requests under the deformed condition.

Physical Attractiveness and Decision Making

Apparently, physical attractiveness is an important determinant of interpersonal attraction and social choice in society at large. The question remains, however: how does physical attractiveness influence the behavior of institutional decision makers, the teacher, the clinician? Several research efforts have shown that teachers and psychologists,

valued by society for their judgment of others, are liable to subtle predeterminant processes. Rosenthal and Jacobsen (1966) stunned the professional sensibilities of many teachers with their discovery of a "Pygmalion" effect in the classroom. They issued false reports to elementary teachers, labeling some of their pupils as "bloomers" and others as not having much potential. Intelligence measures taken at a later date matched the expectancies of the teachers very closely, even when the expectancies were based on false information. These results were supported, using a first grade population, by Palardy (1969). Several researchers have criticized the Rosenthal study (Barber and Silver, 1968; Gephart and Antonophos, 1969) but their objections seem more a matter of methodology than of substance. In a similar study, Sattler, Hillix and Neher (1970) studied the scoring bias of clinicians using the Wechsler intelligence tests for children and adults. Subjects who had been previously identified as "bright" (no basis in fact) received significantly higher vocabulary scores than those who had been labeled "dull".

If highly trained professionals, using standardized, reliable assessment tools, are susceptible to expectation bias, what are the implications for physical attractiveness determinancy in relatively unstructured judgment or treatment situations? Nash, Hoehn-Saric, Battle, Stone, Imber and Frank (1965) found that psychotherapists have more success with attractive clients than with unattractive ones. Forty neurotic outpatients were rated after their initial interview on attractiveness and ability to relate. Age, education level and other demographic data was also recorded. Data compiled at a later date, on progress in therapy, showed that attractive clients had done

significantly better, with none of the other independent variables being a significant determinant. In a similar vein, Ehrlich and Bauer (1967) discovered that a therapist's liking for the client (which is strongly governed by physical attractiveness according to Sigall and Aronson above) seems to be a substantial determinant of the client's initial and final prognosis.

In the area of client treatment, several investigators have found significant physical attractiveness bias effects. Magnussen and Homann (1972), using a child guidance clinic population, found that physically attractive clients were likely to recieve more extensive treatment. The authors have labeled this phenomenon the "Yavis" syndrome (Schofield, 1964) which is defined as the impression that the "youthful, attractive, verbal, intelligent, and successful person is more likely to receive psychotherapy." Cavior and Glogower (1973) confirmed these results in a study using an adult mental health clinic population. They hypothesized that therapists offer more and better service to clients that they like, i.e., physically attractive clients. They found that average and high physically attractive therapists offer their physically attractive clients significantly longer duration of treatment. Barocas and Vance (1974) found that undergraduate clients at a university counseling center received differential evaluation in conjunction with physical attractiveness. The counselors were asked to keep an evaluative notebook reflecting clinical status and prognostic judgments of clients seen during a nine month period. Subsequently, the counselor and clinic receptionist rated the physical attractiveness of the clients. Results of this study showed that physically attractive clients were consistently assigned a more favorable prognosis than their homely colleagues. The

authors speculate that the differential prognoses are valid, reflecting the differential responding of society at large. Choban, Cavior and Bennet (1974) lend support to this idea with a study which relates physical attractiveness, in a functional manner, to an ongoing therapeutic process. The study scrutinized a group of institutional schizophrenic adults who were rated and ranked by direct care staff for physical attractiveness. All of the subjects were involved in an ongoing token economy program administered by direct care staff. Results showed that physically attractive patients received significantly more tokens although behavior ratings of the individuals did not differ significantly. It was also noted that the physically attractive subjects were discharged from the institution on a more frequent basis.

Summary

In concert, the studies cited above seem to suggest the following conclusions:

1. Physically attractive individuals are perceived as possessing more desirable traits and qualities than their physically unattractive counterparts.
2. Physically attractive individuals are more liked and seen as more desirable partners, companions, dates, or mates.
3. Social interactive responses to physically attractive individuals are generally more positive than to physically unattractive individuals.
4. The processes cited in 1, 2 and 3 above may produce physically attractive individuals who are more pleasing, likeable, and competent than their physically unattractive counterparts,

lending a circular validity to the original stereotype.

Physical Attractiveness and Mental Deficiency

If, as the above evidence suggests, physical attractiveness is a significant variable in the perception of normal individuals, what are the implications for identifiable disabled groups? Bulter, Tzuen and McCallister (1974) surveyed an extensive body of literature on childhood impairments and subsequent social adjustment. They concluded that factors such as intelligence and school achievement have a very low association with future independent adjustment while seemingly superficial factors such as physical attractiveness are important determinants. Siller and his associates (Siller, Chipman, Ferguson and Vann, 1967), in assessing reactions to a variety of disabilities, lend support to this contention. They have found that body and facial disfigurements and malformations evoke a distinct negative reaction from raters, a reaction disproportionate to the actual incapacitation involved. Their data, which was collected from attitude scales administered to college, high school, and junior high students, revealed that a child with severe facial acne was often viewed as more disabled than a comparable child who was deaf. MacMillan, Jones and Aloia (1974), suggest that much of the negative reaction, mentioned by Siller, may be transferred directly to those labeled mentally retarded. In discussing the disadvantages of the mental retardation label, the authors point out that the widely held mental retardation stereotype connotes biological disorder and physical stigmata. In fact, a study by Blatt (1958) showed that mentally retarded children have significantly more uncorrected or permanent physical defects than normal children. Since the thought of

bias toward physically unattractive retardates may be offensive to democratic and humanitarian ideals, it is not surprising to find a paucity of research evidence dealing directly with this topic. Soule (1972) investigated teacher bias effects with severely retarded children, using a modified Rosenthal expectancy-bias situation. In this study, the psychology department of an institution for the mentally retarded informed cottage parents that certain randomly selected residents were expected to show more progress than the other children. The psychologists subsequently assessed the progress of all residents involved, using several conventional psychometric techniques along with independent measures such as number of referrals to higher programs. Soule's study revealed no significant differences between "bloomers" and "non-bloomers". The results of this research may be seriously questioned regarding the adequacy and sensitivity of the dependent variable measures used to detect bias.

Several researchers including Saenger (1967) and Kolstoe (1967) have suggested that physical attractiveness is a significant factor in the vocational adjustment of mentally retarded individuals. Kolstoe, in discussing the employment problems of mentally retarded subjects, concluded that the appearance of a prosthetic device, such as a hearing aid, can be more detrimental to the individual's employment evaluation than the handicap which it supports. Saenger describes the plight of Down's Syndrome subjects in community adjustment. The obvious stigmata of mongoloid characteristics seems to exclude them from consideration for many jobs. He concludes that for many retardates in the community, personal appearance variables are more important than ability in acquiring employment. Butler and his colleagues (Butler, Tzuen and

McCallister, 1974) as cited previously, concur that the personal characteristics of mentally retarded individuals, and physical attractiveness in particular, are significant determinants.

The Problem

The wealth of research data cited above suggests that physical attractiveness is a primary determinant of evaluative judgment and subsequent responding in a wide variety of settings and situations. Physical attractiveness, it seems, may be indirectly responsible for a whole pattern of behavior development. To the mentally retarded individual, these findings have a special significance. By definition, the mentally retarded individual is less capable of self-determination and therefore more dependent upon a succession of professional decision makers. A critical judgment by a psychologist, a speech therapist, a special educator, or a rehabilitation counselor may determine diagnostic label, prognosis, program assignment, or work placement. The retardate, as much as any disabled person, grows or languishes at the behest of the helping professions. The question of evaluative bias linked to physical attractiveness assumes a paramount status for those in the business of judging in order to help.

The concept of the mentally retarded individual as a developing person and a full fledged member of society, regardless of disability, has recently spurred to action a large multidisciplinary professional effort toward rehabilitation (Gold, 1973; Morgenstern, 1973). The total development of the individual requires that one acquire an optimal level of skills in all areas related to independent functioning and individual productivity. The speech and language deficiencies of the impaired

person call for intense efforts on the part of the speech therapist. The special educator and the rehabilitation counselor become concerned with the development of maximally productive work skills. The mentally retarded person is not pitied or patronized, but rather regarded as a person of some potentials, who may need special training to compensate for particular disabilities. The benefit to society, of such an approach, is more than a humanitarian one. The productive retardate should display better community adjustment, and the non-institutionalized, working person may transfer from a debit to a credit on the fiscal tally sheet.

The first step of a comprehensive rehabilitation effort must certainly be a total assessment of the mentally retarded person. For the professional helper of the retarded, an assessment, based upon immediately available information, precedes a diagnostic and/or prognostic statement which then leads to recommendations for program placement. The present study attempts to simulate this information-assessment-judgment process in relation to physical attractiveness determinancy. The following questions are asked:

1. Is the physical attractiveness of mentally retarded program candidates a significant determinant of assessment by speech therapists, special educators, and counseling trainees?
2. Are mental retardates of differing physical attractiveness, assigned different diagnosis, prognosis, and program placement by speech therapists, special educators, and counseling trainees?

It is hypothesized that physical attractiveness is a significant determinant of the factors mentioned above and that, in fact, physically

attractive retarded persons will be assessed more favorably than their unattractive counterparts and that diagnosis, prognosis, and program placement will show the same differences.

CHAPTER II

METHODOLOGY

Subjects

Many helping professionals come in contact with mentally retarded individuals in an evaluative or therapeutic situation. For the purposes of this study, an attempt was made to select a representative cross-section of professionals, possessing varying degrees of training, work experience, and exposure to mental retardates. The evaluative role played by these professionals might be of an adjunct or consultative nature rather than utilizing direct contact. In any event, each of these professionals would be expected to utilize immediate sources of information to make diagnostic, prognostic, and program placement decisions about mentally retarded program candidates. Three different professional groups were sampled as subjects for this study.

Work Study Coordiantors (N = 29)

The Michigan Department of Education provides for comprehensive educational services to the mentally impaired through age twenty-five. The work study coordinator is employed by the local school system to integrate special education services with vocational development services in the community. A typical work study program combines an academic or pre-academic component with a workshop or training experience toward the

total development of the productive person. A total of forty-eight work study coordinators were identified from the registration rolls of a recent state-wide training conference. Two from the group were not considered as subjects because of probable direct acquaintance with the mentally retarded program candidates involved. Thirty-two of the remaining forty-six responded to the study with three eliminated for reasons of incompleteness or invalidation of the rating form.

The responding group could be generally described as well-trained, experienced in special education, and currently occupying leadership or supervisory roles in the special education system. Twenty-five of the twenty-nine coordinators possessed a master's degree with the remaining four possessing bachelor's level training. All twenty-nine of the subjects were experienced in work which involved primarily mental retardates; twenty-eight for three or more years, fourteen for ten or more years. The group consisted of twenty-three males and six females, a disproportion which is probably characteristic of educational leadership in general. The work study coordinators are representative of that part of the rehabilitation services delivery system which is most intensely involved with mental retardates.

Speech Therapists (N = 25)

Since the development of the total person involved the acquisition of functional communication skills, the speech and language specialist is an integral part of the rehabilitation services team. The twenty-five speech therapists involved in this study were contacted as members of the Western Michigan Speech and Hearing Association. The twenty-one males and four females in this group were employed as speech therapists in the schools, clinics, or institutions of the west Michigan

area. Eight members of the group possessed master's degree training in speech and hearing with the remainder having bachelor's preparation and varying amounts of graduate study. Work experience varied from less than one year to ten years or more, with mean work experience approximately three and one-half years. Only two members of this group were employed to service a predominantly mentally deficient clientele, the remaining twenty-three therapists served general school-age populations with at least occasional retarded clients. The speech therapists seem to represent a group of professionals who are moderately involved in the provision of total development services to the retardate.

Counseling Trainees (N = 40)

The twenty male and twenty female students involved in this study were volunteers enrolled in a graduate counseling class at Michigan State University during the Spring term of 1975. Forty-two trainees originally participated in the study, completing all research materials. However, two members of this group responded incorrectly to the evaluation form, necessitating their elimination from the study. All members of the group possessed bachelor's degrees and had completed between fifteen and forty-five graduate term hours. Two of the students possessed a master's degree but in an area not related to counseling, e.g., English Literature. Thirty-six of the forty claimed either work experience or a practicum experience in the teaching or counseling area. Twenty-four members of the group listed one or more years of work experience with the mean work experience approximately two years. Nine of the students had some degree of work experience with the mentally retarded; two listed rather extensive involvement, covering five years

or more. All subjects in this group were pursuing graduate degrees in some area of counseling. Twenty-eight of the group were majors in rehabilitation counseling with the remaining majoring in community college counseling or school counseling. For the purposes of this study, the counseling students represented a group of trainees many of whom will become at least adjunct members of the rehabilitation services delivery team. The counselor can be expected to make critical decisions involving the evaluation and training of mentally retarded program clients.

Incidence of Possible Confounding Variables in Professional Groups

Since the three professional groups involved were used as intact, representative subpopulations, there was little opportunity to control for variables such as sex, academic training, work experience, and work experience with the mentally retarded. The occurrence of these variables is depicted in Table 2.1 with chi square analysis as a measure of association.

Table 2.1

Incidence of sex, academic training, work experience and work experience with the mentally retarded among work study coordinators (WSC), speech therapists (SP), and counseling trainees (CT).

		WSC	SP	CS	
Sex	male	23	4	20	$\chi^2 = 21.52$
	female	6	21	20	$p<.001$
Training	M.A.	26	8	3	$\chi^2 = 50.38$
	B.A.	3	17	37	$p<.001$
Work experience	3 years or more	28	8	4	$\chi^2 = 63.31$
	less than 3 years	1	17	36	$p<.001$
Work with mentally retarded	1 year or more	29	2	4	$\chi^2 = 72.24$
	little or none	0	23	36	$p<.001$

It is evident from the incidence data that professional groups are strongly associated with these variables as follows:

Work Study Coordinators

1. Male sex
2. Master's level academic training
3. High degree of work experience
4. High degree of work with mentally retarded

Speech Therapists

1. Female sex
2. Low degree of work with mentally retarded

Counseling Students

1. Bachelor's level academic training
2. Low degree of work experience
3. Low degree of work with mentally retarded

Materials

Stimulus Photographs

The body of physical attractiveness research has utilized a variety of methods for presenting the attractive or unattractive stimulus to the subject. Since real life interaction situations would present multiple control problems, e.g., content of conversation, quality of voice, most researchers have opted for a stimulus which simulates the real life situation (Berscheid and Walster, 1974). The use of photographs, in standardized poses has found favor with many researchers (Dion, Berscheid and Walster, 1972; Miller, 1970; Bar-Tal and Saxe, 1974).

In order to introduce physical attractiveness as a variable in this study, a set of stimulus photographs was developed representing a wide range of physical attractiveness levels within a mentally retarded population. Thirty male residents of the Muskegon Developmental Center, who had been designated as rehabilitation program candidates[1] comprised the initial population. An attempt to include females in the photograph population failed since only a small number of female program candidates were available and it was not felt that a representative sample could be derived. The thirty male subjects were between the ages of eighteen and thirty-five, were clinically diagnosed as being mentally retarded, and lacked noticeable physical handicaps. Subjects were

[1] Rehabilitation program candidates were those who had been recommended for sheltered work, work activity programs, and community residential placement by a multidisciplinary staffing conference. The staffing conference considered all aspects of the individual's functioning including adaptive behavior skills, visual motor task behavior and incidence of maladaptive behavior.

prepared for photographing so that quality of dress and neatness of grooming were not substantial variables. Photographs, taken in two standardized poses (portrait and full front figure) were obtained for all members of the group using a high quality thirty-five millimeter single lens reflex camera and color print film. The two photos of each subject, in the form of three and one-half by five inch color prints, one of each pose, were then mounted on individual five by eight inch index cards and numbered from one through thirty. Assignment of numbers to photo sets was accomplished using a table of random numbers.

Judges

The thirty stimulus photo sets were subsequently rated by judges to empirically determine the degree of physical attractiveness exhibited by each. Judges of the photos were thirty undergraduate college student volunteers (fifteen males, fifteen females) who were enrolled in psychology classes at Grand Valley State College and Muskegon Community College. The judges were completely unfamiliar with any of the individuals in the stimulus photos and claimed no close acquaintance or relationship to any mentally retarded person. Individuals who did not meet these criteria were dismissed prior to judging. The judges were presented with all thirty stimulus photo sets and asked to perform the following judgment tasks:

a. Rank order each of the thirty photo sets from most physically attractive (one) through least physically attractive (thirty), using a form provided (Appendix A).

b. Rate each one of the stimulus photo sets on the following physical attractiveness scale:

1	2	3	4	5	6	7	8	9
Handsome Good looking				Average looking				Ugly

using a form provided (Appendix B).

c. Rate each photo set on the presence or absence of stigma using the following scale:

1	2	3	4	5	6	7	8	9
No Stigma				Some Evidence of Stigma				Marked Stigma

using a form provided (Appendix C).

In judging the photos, the students were asked to use the following criteria:

Physically Attractive (Appendix B)

In judging the degree of attractiveness of these people, look at both photographs and take every aspect of appearance into account (dress, grooming, features, proportion, etc.). Judge the person on total effect, not on any single aspect of appearance.

Stigma (Appendix C)

The degree of stigma should be judged by your recognition of a visible characteristic or sign which identifies or signifies something unusual or undesirable in a person. The degree of stigma in these photographs should be judged by your recognition of unusual or characteristic features in the person's appearance which signify something to you. Any abnormal or unusual aspects of a person's appearance might be considered as stigma.

Definition: Stigma - Any mark, peculiarity or body abnormality which aids in the identification or diagnosis of a condition.

The photo sets were thoroughly shuffled before each rating to assure random order of appearance and each judge completed the ratings individually to avoid group influence.

On the basis of judged physical attractiveness and stigma ratings, each of the thirty photo sets were assigned a composite physical attractiveness score (derived from combined rating and ranking, mean scores) and a stigma score derived from stigma rating means. For example, photo A might be assigned a mean physical attractiveness rating of 4.0 by the thirty judges, and a mean rank of fifteen. The final physical attractiveness score would be a combination of these.[2] The stigma score for photo A would simply be the mean stigma rating score of the thirty judges. An analysis of these scores revealed that stigma scores closely paralleled physical attractiveness scores (Pearson $r = .69$), suggesting that judges saw a high relationship between the two concepts. The stigma scores were subsequently dropped from consideration as an independent variable since there was no apparent incremental information value. Using the composite physical attractiveness scores, nine sets of stimulus photos were selected from the group of thirty as representative of low, medium, and high degrees of physical attractiveness. The three photo sets designated as low physical attractiveness were selected from a group of four which scored seven through nine in composite attractiveness (nine equals least attractive). The three medium attractiveness photo sets were selected from a group of eleven which scored between four and six on composite attractiveness.

---

[2]The ranking scores were converted to scores of 1 through 9 with the combined score being the simple arithmetic mean of the ranking and rating score.

High attractiveness photo sets were three of a group of five which scored between two and three (one equals most attractive).

The empirical method of rating physical attractiveness, used above, without consideration to any particular features or components, is one which has been used extensively in physical attractiveness research (Dion and Berscheid, 1974; Miller, 1970; Choban, Cavior and Bennet, 1974). A strongly supported rationale for the use of this method, to the exclusion of others, is presented by Berscheid and Walster (1974). They point out that the identification of particular good or bad looking parts of the body, or the use of specified criteria, are not useful methods of rating physical attractiveness. Their extensive review of the literature shows that an individual's perception of the physical attractiveness of another seems to be a matter of immediate impression of the "Gestalt" rather than any form of systematic process. Consequently, the "truth by consensus" method of determining physical attractiveness is used by researchers almost without exception, assuming that a person who is rated physically attractive by a significant number of judges is, in fact, physically attractive.

Program Candidate Information Form

A single, two page, candidate information form (Appendix D) was developed to accompany the stimulus photographs. The information form, with photos attached, was designed as a simulation of an actual case history summary of an institutionalized mentally retarded person. The form presented abbreviated social and clinical history information along with a short inventory of current functioning in a number of behavioral areas. The information on the form was completely fictitious

and was formulated by the experimenter to give vague, non-directive information about the client. The same information form accompanied all of the stimulus photo sets at all levels of physical attractiveness.

Program Candidate Evaluation Form

Dependent variable scores related to diagnosis, prognosis, and program placement were derived from subjects' responses to an evaluation and recommendation form which accompanied each set of stimulus photos and attached information form. The three page evaluation form (Appendix E) was designed by the experimenter, using professionally generic terminology. Items were presented in multiple choice or checklist fashion to gather information in four basic areas:

a. Diagnosis -

"How do you judge this individual's present functioning?"

b. Prognosis -

"What are this individual's prospects for the future?"

c. Program Placement -

"What type of residential and vocational programs do you think this individual needs?"

d. Personal Qualities -

"What kind of person is this?"

A group of fifteen professionals (psychologist, social workers, speech therapists, special education teachers) in the Muskegon, Michigan area were asked to rate items in terms of legitimacy as measures of the four areas. The Personal Qualities Checklist on page three of the form was weighted numerically using data from a forced distribution card sort, i.e., Q sort. The resulting evaluation form yielded the following dependent variable scores (specific derivation information, Appendix F):

1. Diagnostic Index (composite of four diagnostic items)
2. Prognostic Index (composite of four prognostic items)
3. Personal Qualities Indices
   a. Positive attributes
   b. Negative attributes
   c. "A" Quality Index (composite of five quality attribution items) (derived from qualities checklist)
4. Program Placement Recommendations
   a. Vocational Program
   b. Residential Program
5. Diagnostic Statement
   (asks how "person on the street" would view candidate)
7. Prognostic Statement

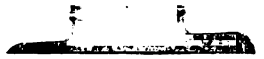
These ten scores were derived from each evaluation form with each of the thirty-one items also being considered individually for analysis.

Post-Evaluation Questionnaire

A one page questionnaire (Appendix G) accompanied each set of stimulus materials. The form was designed as a post-evaluation inquiry regarding the basis for judgment by the evaluator-subject. In an open-ended fashion, the subject was asked to specify the personally meaningful source of information for decision making in five areas. Space was also provided for general comments on the stimulus materials and the experiment.

Materials Summary

Each subject involved in this study received a packet of stimulus materials which included:



a. Two page program candidate information form, the same for each packet.

b. Two photographs, one portrait and one full figure, of a high, medium or low physical attractiveness program candidate. The photos were stapled side-by-side on the front of the information sheet.

c. Three page program candidate evaluation form which asked subjects to evaluate the candidate in terms of prognosis, diagnosis, personal qualities and program placement.

d. One page post evaluation questionnaire.

Stimulus packets containing the information form, the evaluation form, and the post-evaluation questionnaire were assigned one of the nine photo sets on a rotation basis. The total packet was then inserted in a manila envelope and the envelopes were numbered one through one hundred, consecutively. Envelopes one through nine, then, represented a complete array of the high, medium and low program candidates, with envelopes ten through eighteen, nineteen through twenty-seven and so on, following the same cycle.

Procedure

Experimental procedure varied somewhat between subject professional groups as a matter of convenience, availability, or physical distance. Speech therapists received the materials and completed the experimental procedure while collectively assembled for a meeting of the local speech and hearing association. The counseling students participated while assembled in the classroom, either just prior to or just following the class period. Work study coordinators, whose work stations were

scattered over a radius of several hundred miles, were solicited by mail for participation in the study. All subjects received the following introductory statement and instructions prior to participation.

Introductory Statement

With the advent of many new programs to service mentally deficient individuals, I am interested in assessing the utility of various information forms which could be used in assessment of program candidates. The goal of this project is to find efficient, abbreviated, personal data summary forms which are meaningful for screening mentally retarded program candidates.

Instructions

1. Separate seats as far apart as possible and refrain from observing the forms of others. Any questions will be answered by the experimenter.
2. Turn to the blank page on the back of the packet and list the following information about yourself:
   - Sex, male or female
   - Current job title or student status
   - Educational history
   - Work experiences, description and length of service
3. Section 1, at the front of the packet, contains information about a mentally retarded program candidate.
4. Pages 4, 5, and 6 of the packet are evaluation forms regarding your judgments of this individual. Fill out these forms carefully, selecting the one best possible answer for each question.
5. Page 7 is a form which asks for information regarding the process which you used to make your evaluative decisions. I am looking

for your impressions of which factors were important. Any additional comments regarding these materials or this study would be welcomed.

6. Each participant will be receiving a summary of the results of this study.

One envelope, containing the complete stimulus packet, was distributed to each subject. In the speech therapy and counseling student groups, packets were distributed so that all subjects in close physical proximity received different photo sets. Since envelopes were handed to subjects consecutively, an even distribution of high, medium and low physical attractiveness packets was assured. For the work study coordinators group, which received materials by mail, the packets used represented consecutively numbered envelopes and an even distribution of the physical attractiveness variable.

In accordance with standard ethical research practice, the subjects who participated in this study received a brief summary of the study, following the final analysis of results. The summary (Appendix H) detailed the purpose of the research, the ruse upon which the experimental method was based, and the results of the data analysis.

Design and Analysis

The goal of this study was to examine the relationship between physical attractiveness and a number of dependent variable measures embodied in the program candidate evaluation form. The variable professional group, although not of prime interest, was included in the analysis, particularly in consideration of the strong association between group membership and variables such as sex and work experience.

In surveying the physical attractiveness literature, Berscheid and Walster (1974) suggested that the sex of physical attractiveness raters may be a significant variable in some situations. Wright (1960) claims that work exposure to disabled persons, in the case of the rehabilitation worker, renders one impervious to the biases experienced by others. The data matrix below was conceived in an effort to probe the determinancy of the physical attractiveness variable while eliminating or defining the influence of professional group and the variables associated with it. Figure 2.1 illustrates the design used:

Professional Group of Subject	Levels of Physical Attractiveness		
	LOW	MEDIUM	HIGH
Work Study Coordinators Associated Variables - Males - M.A. training - High work experience, M.R.	N = 10	N = 9	N = 10
Speech Therapists Associated Variables - Females - Low work experience, M.R.	N = 9	N = 8	N = 8
Counseling Students Associated Variables - B.A. training - Low work experience - Low work experience, M.R.	N = 13	N = 13	N = 14

Figure 2.1. Data matrix for multivariate analysis with physical attractiveness level and professional group membership as independent variables.

A multivariate analysis of covariance with nine dependent variable measures was utilized for analysis, considering the main effects of physical attractiveness and professional group as well as interaction

between these two. The multivariate analysis utilized the combined information of all dependent variables to detect trends in mean vectors as a function of independent variables. In addition, univariate analysis of variance F tests were performed for each individual dependent measure in relation to physical attractiveness, professional group and physical attractiveness by professional group interaction. Due to unequal cell size (see Figure 2.1), the multivariate and univariate analyses were conducted a second time with reordering of the physical attractiveness and professional group variables. This method assured that the main effects of physical attractiveness and professional group would be considered independently (Finn, 1974). An alpha level of .05 was selected for each multivariate significance test. The nine univariate tests within each multivariate test required a partitioning of the original level so that each univariate test required a $p < .0056$ for statistical significance (Dunn, 1961).

Method Summary

Subjects of this study were three professional groups who might be expected to have varying degrees of contact with mentally retarded program candidates: speech therapists, counseling graduate students and work study coordinators. Members of the three professional groups were each given a stimulus packet containing photos of mentally retarded individuals which had been rated previously as high, medium, or low physical attractiveness. Attached to the photos was an abbreviated fictitious information form about a mentally retarded young man. They were told that the purpose of the study was to gain information about new types of data summary forms. Subjects were asked to complete an

evaluation form in which they rated the program candidate in terms of diagnosis, prognosis, program placement, and personal qualities.

Dependent variable measures, gathered by the methods described herein, comprise the data of this study, to be analyzed in the following chapter.

CHAPTER III

RESULTS

The findings of this study are presented in terms of:

1. Multivariate analysis, measuring the combined effects of nine dependent measures.

2. Univariate analysis, concentrating on the variation of particular dependent indices.

The univariate analysis was designed to explore systematic variation in any of the multiple dependent measures used, representing several areas of possible evaluative bias. The multivariate procedure was utilized to detect more generalized trends in the evaluative process, not necessarily connected to any single dependent measure.

The means and standard deviations of the nine dependent variables, across levels of physical attractiveness, are displayed in Table 3.1

Table 3.1

Mean scores and standard deviations for quality attribution, diagnosis, prognosis and program placement at low, medium, and high levels of physical attractiveness.

Dependent Variable Scores	Levels of Physical Attractiveness		
	low	medium	high
Qualities			
PQ Positive Qualities	$\bar{x}$ = 3.258 s = 3.40	$\bar{x}$ = 3.097 s = 2.412	$\bar{x}$ = 3.312 s = 2.943
NQ Negative Qualities	$\bar{x}$ = 2.194 s = 1.921	$\bar{x}$ = 2.064 s = 1.928	$\bar{x}$ = 1.903 s = 1.870
AQ Quality Index	$\bar{x}$ = 16.55 s = 2.437	$\bar{x}$ = 15.87 s = 2.554	$\bar{x}$ = 16.12 s = 2.20
Diagnosis			
DX Diagnostic Index	$\bar{x}$ = 12.50 s = 1.780	$\bar{x}$ = 12.13 s = 1.449	$\bar{x}$ = 12.84 s = 1.728
DX Diagnostic Statement	$\bar{x}$ = 2.888 s = .970	$\bar{x}$ = 2.630 s = .758	$\bar{x}$ = 3.079 s = 1.052
PRS Projective Statement	$\bar{x}$ = 1.011 s = .076	$\bar{x}$ = 1.344 s = 1.00	$\bar{x}$ = 2.624 s = 1.712
Prognosis			
PX Prognostic Index	$\bar{x}$ = 13.77 s = 1.20	$\bar{x}$ = 12.97 s = 1.868	$\bar{x}$ = 13.97 s = 1.634
Program Placement			
RES Residence Recommendation	$\bar{x}$ = 2.806 s = .40	$\bar{x}$ = 2.926 s = .530	$\bar{x}$ = 3.109 s = .669
VOC Vocational Recommendation	$\bar{x}$ = 2.936 s = .538	$\bar{x}$ = 3.066 s = .603	$\bar{x}$ = 3.545 s = .633

Table 3.2 below represents the mean scores and standard deviations of the nine dependent variable measures across the three professional groups of subjects.

Table 3.2

Mean scores and standard deviations for quality attribution, diagnosis, prognosis and program placement among work study coordinators (WSC), speech therapists (SP), and counseling trainees (CS).

Dependent Variable Scores	Professional Groups WSC	SP	CS
Qualities			
PQ Positive Qualities	$\bar{x}$ = 3.318 s = 3.014	$\bar{x}$ = 2.375 s = 2.418	$\bar{x}$ = 3.780 s = 2.989
NQ Negative Qualities	$\bar{x}$ = 2.553 s = 2.076	$\bar{x}$ = 1.764 s = 1.608	$\bar{x}$ = 1.921 s = 1.858
AQ Qualities Index	$\bar{x}$ = 15.070 s = 2.508	$\bar{x}$ = 15.962 s = 2.154	$\bar{x}$ = 17.100 s = 2.013
Diagnosis			
DX Diagnostic Index	$\bar{x}$ = 11.754 s = 1.698	$\bar{x}$ = 12.221 s = 1.512	$\bar{x}$ = 13.183 s = 1.742
DS Diagnostic Statement	$\bar{x}$ = 2.789 s = 1.041	$\bar{x}$ = 2.885 s = .904	$\bar{x}$ = 2.914 s = .848
PRS Projective Diagnostic Statement	$\bar{x}$ = 1.655 s = 1.470	$\bar{x}$ = 1.222 s = .968	$\bar{x}$ = 1.942 s = 1.576
Prognosis			
PX Prognostic Index	$\bar{x}$ = 13.282 s = 1.618	$\bar{x}$ = 12.956 s = 1.411	$\bar{x}$ = 14.15 s = 2.753
Program Placement			
RES Residence Recommendation	$\bar{x}$ = 2.820 s = .453	$\bar{x}$ = 2.984 s = .624	$\bar{x}$ = 2.960 s = .754

Table 3.2 (con't.)

VOC Vocational Recommendation	$\bar{x}$ = 3.137 s = .676	$\bar{x}$ = 2.960 s = .439	$\bar{x}$ = 3.350 s = .564

The data analysis results presented in this chapter will be offered to highlight the following findings:

1. Level of physical attractiveness and professional group membership were found to be significant determinants of overall program candidate evaluation.
2. High physically attractive program candidates received significantly higher evaluation scores than their less attractive counterparts in the areas of projective diagnosis, residential recommendations and vocational recommendations.
3. Among professional groups, the counseling trainees group rated program candidates, of all physical attractiveness levels, higher on a qualities index and a diagnostic index, when compared with the work study coordinators group.

Multivariate Analysis

A multivariate analysis of covariance (Finn, 1974) was used to test the equality of mean vectors for the main effects of physical attractiveness and professional group and the interaction of physical attractiveness and professional group. Table 3.3 represents the findings of the multivariate analysis.

Table 3.3

Two-way multivariate analysis of covariance test for equality of mean vectors as a function of physical attractiveness and professional group.

Source	df	Multivariate F Ratio		
Physical attractiveness	18	2.5218	$p < .0012$	significant differences
Professional groups	18	2.2912	$p < .0035$	significant differences
Physical attractiveness X professional group	36	.8212		not significant

The results from the multivariate analysis indicated that, when the nine dependent measures were analyzed concurrently, there were significant differences in the subjects' ratings of program candidates as a function of the candidates physical attractiveness and the subjects' professional group membership. These results may be viewed as characterizing the variation of the evaluation process as a whole since the nine dependent measures represent a cross-section of the program candidate evaluation form. The analysis did not detect the probability of interaction effects between physical attractiveness and professional groups.

Univariate Analysis

A more specific appraisal of the effects of physical attractiveness and professional group was gained by the use of two factor analysis of variance techniques and post hoc comparisons procedures.

Positive Qualities Index (PQ)

Table 3.4 below represents the results of a two factor analysis of variance testing the equality of PQ mean scores across levels of physical attractiveness and professional groups.

Table 3.4

Analysis of variance for PQ scores as a function of low, medium or high physical attractiveness and professional group membership as a work study coordinator, speech therapist, or counseling trainee.

Source	Sums Squares	df	Means Squares	F
Physical attractiveness	1.504	2	.7519	.0866 not significant
Professional group	29.313	2	14.6566	1.6686 not significant
Physical attractiveness X professional group	26.399	4	6.5997	.7599 not significant
Error	738.204	85	8.6847	

The F ratio of .0866 did not suggest the probability of PQ differences across levels of physical attractiveness. In like fashion, the F value of 1.6686 for professional group effects and the F of .7599 for interaction were not indicative of significant differences.

Negative Qualities Index (NQ)

Table 3.5 below represents the results of a two factor analysis of variance testing the equality of NQ mean scores across levels of physical attractiveness and professional groups.

Table 3.5

Analysis of variance for NQ scores as a function of low, medium or high physical attractiveness and professional group membership as a work study coordinator, speech therapist, or counseling trainee.

Source	Sums Squares	df	Means Squares	F
Physical attractiveness	12.746	2	6.8682	.2353 not significant
Professional group	36.336	2	18.1679	.6186 not significant
Physical attractiveness X professional group	83.896	4	20.9746	.7187 not significant
Error	2480.801	85	29.1859	

The obtained values of .2353, .6186 and .7187 for physical attractiveness effects, professional group effects and interaction effects, respectively, were all below the level of statistical significance. There was no evidence of differences in NQ scores attributable to these variables.

"A" Qualities Index (AQ)

Table 3.6 below represents the results of a two factor analysis of variance testing the equality of AQ mean scores across levels of physical attractiveness and professional group.

Table 3.6

Analysis of variance of AQ scores as a function of low, medium or high physical attractiveness and professional group membership as a work study coordinator, speech therapist, or counseling trainee.

Source	Sums Squares	df	Means Squares	F
Physical attractiveness	10.542	2	5.2709	1.0412 not significant
Professional Group	70.126	2	35.0630	6.9002 p <.0056 significant
Physical attractiveness X professional group	8.370	4	2.0926	.5734 not significant
Error	430.270	85	5.0620	

The F ratio of 1.0412 for physical attractiveness effects and the F of .5734 for interaction effects failed to indicate significant differences with regard to these factors. However, the F value of 6.9002 obtained for professional group effects gave evidence of significant differences in AQ scores as a function of professional group membership. The Scheffe post hoc comparisons technique (Glass and Stanley, 1970) was employed to determine the location and magnitude of differences. The results of this test are presented in Table 3.7 below.

Table 3.7

Scheffe post hoc comparisons for differences in AQ among work study coordinators, speech therapists and counseling trainees.

Comparison I	
Work Study Coordinators $\bar{x}$ = 15.07	S = 1.448 no significant differences
Speech Therapists $\bar{x}$ = 15.96	
Comparison II	
Speech Therapists $\bar{x}$ = 15.96	S = 1.987 no significant differences
Counseling Trainees $\bar{x}$ = 17.10	
Comparison III	
Work Study Coordinators $\bar{x}$ = 15.07	S = 2.699 significant differences $p < .01$
Counseling Trainees $\bar{x}$ = 17.10	

The test statistic of comparison number three (S = 2.699) indicated significant differences in the AQ scores of work study coordinators and counseling trainees. The counseling trainee group assigned significantly higher AQ scores to the program candidates than did the work study coordinators.

The Scheffe method did not show the speech therapists' group as differing significantly from either the work study coordinators or the counseling trainees.

Diagnostic Index (DX)

Table 3.8 below represents the results of a two factor analysis of variance testing the equality of DX mean scores across levels of physical attractiveness and professional groups.

Table 3.8

Analysis of variance for DX scores as a function of low, medium or high physical attractiveness and professional group membership as a work study coordinator, speech therapist, or counseling trainee.

Source	Sums Squares	df	Means Squares	F
Physical attractiveness	9.483	2	4.7414	1.6647 not significant
Professional group	39.638	2	19.8188	6.8941 p <.0056 significant
Physical attractiveness X professional group	9.367	4	2.3418	.8222 not significant
Error	242.106	85	2.8483	

The F statistics of 1.6647 for physical attractiveness and .8222 for interaction effects were not indicators of significant differences. The F ratio of 6.8941 for professional group effects indicated the probability of differences as a function of that variable. The Scheffe post hoc comparisons method was employed to determine the location and magnitude of DX differences among the three professional groups. The results of these comparisons are presented in Table 3.9 below.

Table 3.9

Scheffe post hoc comparisons for differences in DX among work study coordinators, speech therapists and counseling trainees.

Comparison I	
Work Study Coordinators $\bar{x}$ = 11.75	S = 1.020 no significant differences
Speech Therapists $\bar{x}$ = 12.22	
Comparison II	
Speech Therapists $\bar{x}$ = 12.22	S = 2.2299 no significant differences
Counseling Trainees $\bar{x}$ = 13.18	
Comparison III	
Work Study Coordinators $\bar{x}$ = 11.75	S = 3.473 significant differences $p < .01$
Counseling Trainees $\bar{x}$ = 13.18	

The Scheffe value of 3.473 for the comparison of work study coordinators and counseling trainees indicated significant differences in DX scores for these groups. The counseling trainees assigned higher DX scores to program candidates than did the work study coordinators. Speech therapists did not differ significantly from either of the other groups on this measure.

Diagnostic Statement (DS)

Table 3.10 below represents the results of a two factor analysis of variance testing the equality of DS mean scores across levels of

physical attractiveness and professional groups.

Table 3.10

Analysis of variance for DS scores as a function of low, medium or high physical attractiveness and professional group membership as a work study coordinator, speech therapist, or counseling trainee.

Source Source	Sums Squares	df	Means Squares	F
Physical attractiveness	3.255	2	1.06277	1.9350 not significant
Professional group	.277	2	.1383	.1636 not significant
Physical attractiveness X professional group	4.186	4	1.0466	1.2442 not significant
Error	71.502	85	.8412	

The obtained F values of 1.9350, .1636 and 1.2442, for the effects of physical attractiveness, professional group and interaction, respectively, did not indicate significant differences for any of these variables in regard to DS scores.

Projective Diagnostic Statement (PRS)

Table 3.11 below depicts the results of a two factor analysis of variance testing the equality of PRS mean scores across levels of physical attractiveness and professional groups.

Table 3.11

Analysis of variance for PRS scores as a function of low, medium or high physical attractiveness and professional group membership as a work study coordinator, speech therapist, or counseling trainee.

Source	Sums Squares	df	Means Squares	F
Physical attractiveness	45.131	2	22.5654	18.0232 $p < .0056$ significant
Professional group	5.798	2	2.981	2.4603 not significant
Physical attractiveness X professional group	9.018	2	2.2547	1.8017 not significant
Error	106.369	85	1.2514	

The F ratio of 18.0323 for physical attractiveness effects indicated significant differences in PRS scores across levels of physical attractiveness. The F values of 2.4603 and 1.8017 for professional groups and interaction, respectively, were not significant. The Scheffe post hoc comparisons technique was employed to more precisely delineate the differences among physical attractiveness levels. The results of the Scheffe method are listed in Table 3.12 below.

Table 3.12

Scheffe post hoc comparisons for the differences in PRS across low, medium, and high physical attractiveness levels.

Comparison I	
Low physical attractiveness $\bar{x}$ = 1.011	S = .8398 no significant difference
Medium physical attractiveness $\bar{x}$ = 1.344	
Comparison II	
Medium physical attractiveness $\bar{x}$ = 1.344	S = 3.309 significant difference p < .01
High physical attractiveness $\bar{x}$ = 2.6224	
Comparison III	
Low physical attractiveness $\bar{x}$ = 1.011	S = 4.020 significant difference p .01
High physical attractiveness $\bar{x}$ = 2.624	

The S value of 3.309 for comparison II is significant, indicating that high physical attractiveness candidates were scored significantly higher on the PRS measure than their medium physical attractiveness counterparts. In like fashion, the S value of 4.020 for comparison III indicated significant differences between the high physical attractiveness and low physical attractiveness groups with the high group receiving higher PRS scores. The S value of .8398 for comparison I indicated no significant differences between the low and medium physical attractiveness groups on the PRS measure.

Prognostic Index (PX)

Table 3.13 below represents the results of a two factor analysis of variance testing the equality of PX scores across levels of physical attractiveness and professional groups.

Table 3.13

Analysis of variance for PX scores as a function of low, medium or high physical attractiveness and professional group membership as a work study coordinator, speech therapist, or counseling trainee.

Sources	Sums Squares	df	Means Squares	F
Physical attractiveness	20.384	4	10.1920	4.2507 not significant
Professional group	28.206	2	14.1032	5.8204 not significant
Physical attractiveness X professional group	1.684	4	.4209	.1755 not significant
Error	203.80	85	2.3977	

The F value of 4.2507 for physical attractiveness, the value of 5.8204 for professional groups and the value of .1755 for interaction all were not significant at the chosen level of probability.

Residence Recommendation (RES)

Table 3.14 below represents the results of a two factor analysis of variance testing the equality of RES mean scores across levels of physical attractiveness and professional groups.

Analysis of variance for RES scores as a function of low, medium or high physical attractiveness and professional group membership as a work study coordinator, speech therapist, or counseling trainee.

Source	Sums Squares	df	Means Squares	F
Physical attractiveness	1.490	2	.7450	6.3130 p <.0056 significant
Professional group	.396	2	.1981	1.6674 not significant
Physical attractiveness X professional group	1.012	4	.2530	2.1316 not significant
Error	10.098	85	.1188	

The obtained statistics for the effects of professional group and interaction were 1.6674 and 2.1316, respectively. These values did not indicate the probability of significant differences. The F value of 6.3130 for the physical attractiveness variable indicated significant differences in RES scores as a function of physical attractiveness level. Table 3.15 below depicts the Scheffe post hoc comparisons test of differences among physical attractiveness levels.

Table 3.15

Scheffe post hoc comparisons for differences in RES across low, medium, and high physical attractiveness levels.

Comparison I	
Low physical attractiveness $\bar{x} = 2.806$	S = 1.3605 no significant difference
Medium physical attractiveness $\bar{x} = 2.926$	
Comparison II	
Medium physical attractiveness $\bar{x} = 2.926$	S = 2.1254 no significant difference
High physical attractiveness $\bar{x} = 3.109$	
Comparison III	
Low physical attractiveness $\bar{x} = 2.806$	S = 3.4867 significant difference $p < .01$
High physical attractiveness $\bar{x} = 3.109$	

The Scheffe comparisons yielded an S value of 3.4867 for the comparison of high and low physical attractiveness groups, indicating that high physical attractiveness program candidates were given significantly higher residential recommendations than their low physical attractiveness counterparts. The medium physical attractiveness group did not differ significantly from the high or the low on this measure.

Vocational Recommendation (VOC)

Table 3.16 below depicts the results of a two factor analysis of variance testing the equality of VOC mean scores across levels of physical attractiveness and professional groups.

Table 3.16

Analysis of variance for VOC scores as a function of low, medium or high physical attractiveness and professional group membership as a work study coordinator, speech therapist, or counseling trainee.

Sources	Sums Squares	df	Means Squares	F
Physical attractiveness	6.614	2	3.307	5.918 $p < .0056$ significant
Professional group	2.425	2	1.2126	2.1662 not significant
Physical attractiveness X professional group	2.617	4	.6542	1.1744 not significant
Error	47.583	85	.5598	

The F values of 2.1662 for professional group effects and 1.744 for interaction were not indicators of significant differences. The F ratio of 5.918 for physical attractiveness indicated the presence of a significant difference in VOC scores as a function of level of physical attractiveness. Table 3.17 depicts the results of a Scheffe comparisons technique used to ascertain the magnitude and location of differences.

Table 3.17

Scheffe post hoc comparisons for differences in VOC across low, medium, and high levels of physical attractiveness.

Comparison I	
Low physical attractiveness $\bar{x}$ = 2.935	S = 6.847 no significant differences
Medium physical attractiveness $\bar{x}$ = 3.066	
Comparison II	
Medium physical attractiveness $\bar{x}$ = 3.066	S = 2.5656 no significant differences
High physical attractiveness $\bar{x}$ = 3.545	
Comparison III	
Low physical attractiveness $\bar{x}$ = 2.935	S = 3.252 significant difference $p < .01$
High physical attractiveness $\bar{x}$ = 3.545	

The Scheffe comparisons yielded an S value of 3.2352 for the comparison of high and low physical attractiveness groups. This test indicated that high physical attractiveness program candidates were assigned significantly higher recommendations for vocational programs than their low physical attractiveness counterparts. No differences were found for the medium physical attractiveness group when compared to the high or the low group.

Subject Response to Post-Evaluation Questionnaire

The post-evaluation questionnaire (Appendix G) was designed to elicit information about how the subject viewed the experiment and how

the evaluative judgments therein were made. It was also inserted as a guard against the possibility that subjects would discover the ruse upon which the experiment was based. A comprehensive survey of responses to the post-evaluation questionnaire revealed that three of the ninety-four subjects, two speech therapists and one work study coordinator, mentioned the physical attractiveness of the subject as a possible determinant of judgment. None of the three suggested that their own judgment had been affected by the photographs. One subject noted that bias might be present in others and therefore the photograph should not be included in the packet.

The responses of the remaining subjects to the post-evaluation questionnaire consisted predominantly of statements claiming a direct inferential link between the information form and their evaluative judgments.

Summary of Results

Dependent variable scores in the areas of quality attribution, diagnosis, prognosis and program placement were analyzed as a function of physical attractiveness levels and professional group of the subject. The results of these analyses can be summarized as follows:

1. Multivariate analysis showed that physical attractiveness and professional group were significant determinants of evaluation of program candidates.
2. Univariate analysis showed that high physical attractiveness program candidates received significantly higher evaluation scores than their less attractive counterparts in the areas of projective diagnosis, residential recommendation, and

vocational recommendation.

3. Univariate analysis showed that the counseling student subject group rated program candidates, of all physical attractiveness levels, significantly higher on a qualities index and a diagnostic index when compared with the work study coordinators group.

4. Analysis of the post-evaluation questionnaire showed that only three of ninety-four subjects noted the presence of the photograph or the importance of the physical attractiveness variable.

CHAPTER IV

DISCUSSION

Interpretation of Results

The goal of this research effort was to explore the role of physical attractiveness in the evaluation of mentally retarded program candidates. Three professional groups were used as evaluators and the subsequent data analyses explored the varying backgrounds of these groups as possible evaluative determinants. The results demonstrated that physically attractive program candidates were assigned higher scores than their less attractive counterparts on three of the nine measures used. Two of the professional groups, showed differences in their evaluations; counseling trainees scored the candidates higher than work study coordinators on two of the nine measures.

Physical Attractiveness as a Determinant

Six of the nine dependent measures failed to show significant differences between physical attractiveness levels. Scores for personal qualities, diagnosis, and prognosis were not affected by the relative attractiveness of the candidate. An inspection of the judgments involved primarily were academic or non-applied judgments. The process involved in making these judgments might have been one of comparing the candidate to others in a normalization group or labeling the individual as

possessing a non-operational personality trait or state of mind. In contrast, two of the three measures (RES, VOC) which were found to differ significantly may be viewed as having been comprised of operational or applied judgments. In these items, the evaluator was asked to specify the immediate recommendation for residential placement and vocational training. It seems possible that the significant and the non-significant measures represented distinctly different judgment processes. The evaluator, for example, may have been unaffected by physical attractiveness when rating the candidate on such intangibles as (Appendix E):

Independent				Dependent
1	2	3	4	5

However, the same evaluator may have responded differently when asked (Appendix E):

"What are your immediate recommendations for this individual?"

_____ Stay in institution

_____ Stay in institution with gradual increase in freedom

_____ Trial placement in supervised group home in the community

_____ Placement in supervised group home in the community

_____ Discharge to the independent living (on his own) with occasional supervision

_____ Discharge to community, independent living

In the case of the former item, the evaluator was not restricted in judgment by a pragmatic or reality orientation. The evaluator may have responded in an idealistic or academic framework. The latter item, however, required a judgment against some real life reference points. The evaluator was forced to respond according to an assessment of the candidates' actual possibilities, considering the placements available

and the probable response of the community. It seems plausible to suggest that the evaluations of professionals are affected by the physical attractiveness of the candidate to a greater extent in "nitty-gritty" situations where the immediate welfare of the candidate is at stake. The evaluator, on a conscious or unconscious level, may be judging the attractiveness of the candidate in the context of perceived societal stereotypes or expected societal responses. A belief operating may be that an unattractive candidate is much less likely to succeed in the workshop or the group home than the more attractive counterpart. In fact, the evaluator may use the physical attractiveness variable in a systematic fashion which is empirically validated by personal collective experience. However, since the more experienced work study coordinators group did not differ from their less experienced counterparts on this variable, a particularized process related to mental retardation was not indicated.

The significant differences in Projective Diagnostic Statements (PRS) results, as a function of physical attractiveness, may have resulted from a different type of evaluative process. The PRS (see Appendix E) was an item which asked the evaluator to speculate about how the "person on the street" would evaluate the program candidate. The response choices offered in this multiple choice question were as follows:

1. A mildly retarded young man with greater potential
2. Essentially normal, needs intensive training to make up for past deprivation
3. A mildly retarded young man who probably will never function any higher
4. A mixed-up young man but not really retarded

5. A mildly retarded young man who can continue to learn in spite of his handicap

These choices were identical to those of the Diagnostic Statement (DS) in which the evaluator was asked for a personal assessment of the program candidate. Differences in response to these questions would be anticipated, ostensibly because the "person on the street" would not have access to, or know how to use, information about the program candidate. However, the magnitude of the overall differences between the DS and PRS scores, and the grossly higher PRS scores received by the more physically attractive candidates, demands further explanation. The DS mean scores for the three physical attractiveness levels showed little variation, ranging from 2.630 for the medium group to 2.888 for the low group to 3.079 for the high group. Generally speaking, the subjects viewed the candidate as a retarded person with some hope for continued development. The mean PRS scores, however, showed that subjects expected the "person on the street" to evaluate the candidates quite differently. The "person" viewed the less attractive candidates of the low and medium levels as retardates with little hope of future development, typically choosing number three of the choices above. The high physical attractiveness candidate, however, received an optimistic evaluation such as choices one, two, four, or five; averaging just slightly lower than that assigned by the subjects themselves. The subjects of this study, who themselves gave no evidence of bias on the DS measure, strongly implicated the "person on the street" as a source of physical attractiveness bias toward mental retardates.

Several possible sources could be suggested for the "projected" physical attractiveness bias exhibited by the professional subject pool.

It might be that the PRS scores, along with the VOC and RES scores, reflected an acute awareness of societal stereotyping of retardates. The professional person may be constantly aware of the discrimination exhibited by the "person on the street", against those who "look retarded". This awareness might account for differences in PRS scores as well as the cautious residential and vocational recommendations for the less physically attractive retarded person when compared with a more attractive counterpart.

It also seems possible, however, that PRS differences, as a function of physical attractiveness, reflects an evaluative discrimination which is present in the professional person but surfaces only in a projective situation. The professional may unconsciously deny the existence of the physical attractiveness variable for the purpose of personal evaluation but willingly recognize its presence when attribution to a non-professional is possible. In the context of this study, the professional subject knew that personal responses were being monitored, but did not know the reason. This awareness could further accentuate the projective processes. If, in fact, a covert bias process exists, it would be expected to surface in more naturalistic evaluative settings. This bias could also account, directly, for the differences in RES and VOC scores as a function of physical attractiveness. An analogous situation for this process might be the northern United States urbanite who actively derides and belittles Southerners for stereotypic, white supremacy attitudes while at the same time moving to the suburbs to avoid integration of schools and neighborhoods. The professional person, engaged in rehabilitative services, may actively deny personal responses to physical attractiveness while attributing bias to

non-professionals. The professional person may also be responding to physical attractiveness variables personally, in many ways that do not indicate overt bias and thus do not produce cognitive dissonance.

The discussion of physical attractiveness bias, for the professional person or "the person on the street", is not meant to suggest negative value for that bias. It has been suggested (Berscheid and Walster, 1972) that physical attractiveness may be a valid indicator of a number of human properties and that, in fact, the physical attractiveness discrimination may have survival value for the human species. Dion and Berscheid (1974) as cited in Chapter I, have described a plausible model by which physically attractive people could develop into the "best of everything" by way of a self-fulfilling prophecy system. As an extension of this thought, Berscheid and Walster (1972) have cited the possibility that, at some earlier stage of evolution, the physical attractiveness of homo sapiens may have been a reliable indicator of health. If this were so, humans may still possess an instinctive nature to respond to the healthiest of available organisms, as cued by physical attractiveness variables. If a relationship does exist between physical attractiveness and certain human properties, for whatever reason, a bias towards the physically attractive might be considered as a pragmatic judgment system which may be empirically established.

Professional Group Membership as a Determinant

Significant differences between professional groups were noted on two of the nine dependent measures; the counseling trainee group assigned significantly higher scores than the work study coordinator group on the "A" Qualities Index (AQ) and the Diagnostic Index (DX).

The items comprising both of these indices tended, as mentioned previously, to be non-operational, non-applied considerations (see Appendices E and F). The evaluator was not asked for concrete recommendations but rather for placement of the candidate in broad, trait categories. It seems possible that these indices may have been particularly sensitive to group differences. The definable differences between these groups could be outlined as follows:

1. Sex

   Work study coordinators were predominantly male. Counseling trainees were evenly distributed between male and female.

2. Training

   Work study coordinators were generally master's level and beyond. Counseling trainees had predominantly bachelor's level training and partially completed master's training.

3. Work Experience

   Work study coordinators displayed long work experience, mostly in the mental retardation field. Counseling trainees were largely inexperienced with few having work experience in mental retardation.

4. Experimental Methodology

   Work study coordinators received materials by mail with a partial return rate. Counseling trainees were administered materials in person.

It is not believed that the sex or experimental methodology variables were determinants of variation in this study. The predominantly female speech therapist group displayed no differences when compared with the male work study coordinators, an ideal contrast for the variable.

Likewise, the lack of differences between work study coordinators and speech therapists, who received individual administration of materials, would seem to discount the effect of the variable. The most likely sources of variation between the work study coordinators and the counseling trainees would seem to be training and work experience. It seems plausible that the evaluative judgments of the work study coordinators were firmly based on maximal amounts of training and work experience with the mentally retarded while the counseling trainees were victims of "textbook idealism", without the benefit of actual work experience. An example of this phenomena might arise in the case of the following item (Appendix E):

> Based upon the information presented, what is your best judgment of this individual's current functioning:
>
> Independent Dependent
> 1 2 3 4 5

The counseling trainee, with limited training and work experience, might have tended to "halo" the candidate on this item. Conversely the work study coordinator brought a realistic perspective to this judgment based on a multitude of client contacts fused with relevant training experience.

The possibility exists that the evaluative differences of the work study coordinators and the counseling trainees reflected an unrealistically pessimistic evaluation on the part of the coordinators. It might be suggested that years of unrewarding experiences with retarded clients have hardened the outlook of the work study group and produced a somewhat dimmed perception of the abilities of their clients.

Parameters of Subject Response

The subjects' responses to the evaluation, when viewed as a whole, revealed an enlightened approach to the rehabilitation of the mentally retarded. On several of the items which dealt with recommendations for residence or vocational training, the subjects were offered choices which involved continued institutionalization for the candidate and/or training in self-care skills. In the recent past, these choices might have been seen as reasonable objectives for the training of the retardate, viewed as a quasi-animal or child-innocent. The subjects of this study, however, seemed to view the retardate as a developing person; not a single subject chose institutionalization or self-care training as program goals for the candidate. On the other hand, overall subject response did not reflect an unrealistic halo for the candidate. Mean scores in all recommendation areas reflected recommendations which would be considered realistic and beneficial for the candidate described, if viewed by many mental retardation professionals.

Limitations of the Present Study

The methodology of the present study, in attempting to assess physical attractiveness bias, was limited in several areas. The most obvious weakness involved the dependent variable measures and their source. The stimulus packet used in this experiment represented a simulation of an actual evaluation situation. In the interest of control, photographs were substituted for live persons, and standardized forms substituted for a wide variety of materials which might be used

in the evaluation process. The experimental method used for this study represented a compromise between laboratory control and the study of a real life phenomenon. This compromise must be considered in the interpretation of results.

There were several uncontrolled subject variables which must be considered. Berscheid and Walster (1974), in reviewing a large body of physical attractiveness literature, suggested that the sex of both evaluator and candidate may be a significant source of variation. This opinion is based largely on research involving dating and marital choice so that applicability to this study may be slight. The lack of significant differences, on any measure, between the male work study coordinator group and the female speech therapist group would seem to discount the importance of the subject sex variable. Since the candidates in this study were all male, it was impossible to assess the role of candidate sex as a variable.

The physical attractiveness of the subject may also be a substantive determinant. Berscheid and Walster (1974) report that physically unattractive people rate the physical attractiveness of others differently than physically attractive people do. The current study did not attempt to assess physical attractiveness of subjects.

Notation should also be made of the failure of the post-evaluation questionnaire to fully ascertain the motives of the evaluators. Several of the subjects made direct or indirect mention of the appearance of the candidate but a more precise interrogation would be needed to find out if physical attractiveness was noted consciously during the evaluation process.

In conclusion, the weaknesses defined above place limits upon the

information gained from this research and may limit generalizability. However, the basic results obtained from the data were not seen to be significantly attenuated.

Recommendations for Future Research

The results of this study yield rather tenuous evidence of processes which may influence the evaluation of mentally retarded program candidates. The physical attractiveness of the candidate and the training and experience of the evaluator seem to play a determining role in the judgments of some evaluators. The magnitude of the effects or the parameters of the processes involved remain unknown. The role of physical attractiveness in the evaluation of the mentally retarded needs clarification in at least three ways:

1. What is the effect, on life as a whole, of the physical attractiveness of a mentally retarded individual? The results of this study suggested that the influence could be profound.
2. Do professional people consciously regard physical attractiveness as a variable in making judgments about mentally retarded clients? The results of this study do not reveal such a process, but it may exist in a more naturalistic evaluation situation.
3. Are the recognized physical attractiveness stereotypes valid with regard to mental retardates? Are physically attractive retardates actually more capable, better workers and more likely to succeed in the community? The present research does not address this question.

To answer these questions, future research efforts should be directed to a micro-analysis of the mentally retarded client's natural environment. The analysis should follow groups of clients of all attractiveness levels with special attention to possibly confounding special characteristics, e.g., slanted eyes of the mongoloid. Such a research effort would monitor the responding of the helper (professional, paraprofessional, non-professional) as well as the client. Only with the aid of such a multi-variable study can the role of physical attractiveness and its impact be delineated more precisely.

Concluding Remarks

The implications of this study, for professional persons engaged in the rehabilitation of mentally retarded clients, are fairly clear. The awareness of physical attractiveness, as a possible mediator of judgment, should be fully established in all those serving the mentally retarded. Until the relationship of physical attractiveness to other characteristics becomes clarified, the professional must be conscious of and defend against, possible bias.

Training programs in counseling, special education, and allied fields may wish to include an element of awareness training for students with regards to physical attractiveness. In addition, the results of this study regarding professional groups should serve to underscore the primacy of supervised, relevant work experiences as an integral part of professional training programs. The developing member of the rehabilitation services team must become fully acquainted with all aspects of the client population which he or she serves. It is suggested that this acquaintance is not borne of textbook study but rather of multiple,

intense personal contacts and learning provided by on-the-job success or failure.

APPENDICES

APPENDIX A

Physical Attractiveness Ranking

Place the photo sets in rank order, from most physically attractive (1) to least physically attractive (30). Use the same global criteria which you used in the rating task just completed.

Most attractive

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____
26. _____
27. _____
28. _____
29. _____
30. _____

Least attractive

APPENDIX B

Physical Attractiveness Rating

Rate each of the photograph sets in terms of global physical attractiveness. In judging the degree of attractiveness of these people, look at both photographs and take every aspect of appearance into account (dress, grooming, features, proportion, etc.). Judge the person on total effect, not on any single aspect of appearance. Use the following scale of measurement:

	1 Handsome Good Looking	2	3	4	5 Average Looking	6	7	8	9 Ugly
1.	1	2	3	4	5	6	7	8	9
2.	1	2	3	4	5	6	7	8	9
3.	1	2	3	4	5	6	7	8	9
4.	1	2	3	4	5	6	7	8	9
5.	1	2	3	4	5	6	7	8	9
6.	1	2	3	4	5	6	7	8	9
7.	1	2	3	4	5	6	7	8	9
8.	1	2	3	4	5	6	7	8	9
9.	1	2	3	4	5	6	7	8	9
10.	1	2	3	4	5	6	7	8	9
11.	1	2	3	4	5	6	7	8	9
12.	1	2	3	4	5	6	7	8	9

13.	1	2	3	4	5	6	7	8	9
14.	1	2	3	4	5	6	7	8	9
15.	1	2	3	4	5	6	7	8	9
16.	1	2	3	4	5	6	7	8	9
17.	1	2	3	4	5	6	7	8	9
18.	1	2	3	4	5	6	7	8	9
19.	1	2	3	4	5	6	7	8	9
20.	1	2	3	4	5	6	7	8	9
21.	1	2	3	4	5	6	7	8	9
22.	1	2	3	4	5	6	7	8	9
23.	1	2	3	4	5	6	7	8	9
24.	1	2	3	4	5	6	7	8	9
25.	1	2	3	4	5	6	7	8	9
26.	1	2	3	4	5	6	7	8	9
27.	1	2	3	4	5	6	7	8	9
28.	1	2	3	4	5	6	7	8	9
29.	1	2	3	4	5	6	7	8	9
30.	1	2	3	4	5	6	7	8	9

APPENDIX C

Degree of Stigma Rating

Stigma is evidenced by a visible characteristic or sign which identifies or signifies something unusual or undesirable in a person. The degree of stigma in these photographs should be judged by your recognition of unusual or characteristic features in the person's appearance which signify something to you. Any abnormal or unusual aspects of a person's appearance might be considered as stigma.

Definition: Stigma - Any mark, peculiarity or body abnormality which aids in the identification or diagnosis of a condition.

Use the following scale of measurement:

	1 No Stigma	2	3	4	5 Some Evidence of Stigma	6	7	8	9 Marked Stigma
1.	1	3	3	4	5	6	7	8	9
2.	1	2	3	4	5	6	7	8	9
3.	1	2	3	4	5	6	7	8	9
4.	1	2	3	4	5	6	7	8	9
5.	1	2	3	4	5	6	7	8	9
6.	1	2	3	4	5	6	7	8	9
7.	1	2	3	4	5	6	7	8	9
8.	1	2	3	4	5	6	7	8	9
9.	1	2	3	4	5	6	7	8	9

10.	1	2	3	4	5	6	7	8	9
11.	1	2	3	4	5	6	7	8	9
12.	1	2	3	4	5	6	7	8	9
13.	1	2	3	4	5	6	7	8	9
14.	1	2	3	4	5	6	7	8	9
15.	1	2	3	4	5	6	7	8	9
16.	1	2	3	4	5	6	7	8	9
17.	1	2	3	4	5	6	7	8	9
18.	1	2	3	4	5	6	7	8	9
19.	1	2	3	4	5	6	7	8	9
20.	1	2	3	4	5	6	7	8	9
21.	1	2	3	4	5	6	7	8	9
22.	1	2	3	4	5	6	7	8	9
23.	1	2	3	4	5	6	7	8	9
24.	1	2	3	4	5	6	7	8	9
25.	1	2	3	4	5	6	7	8	9
26.	1	2	3	4	5	6	7	8	9
27.	1	2	3	4	5	6	7	8	9
28.	1	2	3	4	5	6	7	8	9
29.	1	2	3	4	5	6	7	8	9
30.	1	2	3	4	5	6	7	8	9

APPENDIX D

Program Candidate Information Form

XXXXXXXXXXXXXX State Home

XXXXXXXXXXX, Michigan

XXXXXXXXXXXXXXX, Director

Personal Data

David XXXXXXXXXXXXXXXX — Date of Birth: 7-7-48

Status: Resident Cottage 24 awaiting community residential placement and vocational program — Chronological Age: 26

I. Admission

David has been a resident here for 14 years. Prior to admission, he was involved in several school programs while residing at home. Admission data indicates that his father, a tool and die maker and his mother, a semi-invalid housewife, referred David for institutional placement when he ran away several times and started a small fire in a neighbor's garage. While Mr. XXXXXXXXXXXX worked during the day, Mrs. XXXXXXXXXXXX did not feel she could adequately control David's whereabouts or his behavior.

II. Medical History

David has always been a healthy person, both at home and in the

institution. He experienced a bout with hepatitis at the age of 16 and has been involved in several altercations with other residents which resulted in lacerations and mild concussion. Gross and fine musculature seem well controlled and sensory systems are intact for vision and hearing. David is not currently receiving medication.

III. Psychological Data

Psychometric examinations over the past 6 years have shown David to be functioning consistently in the mild deficiency range. Perceptual motor functioning is at the 8-10 year level with particularly good integration skills. Language abilities are somewhat less developed, in the 7-8 year range.

IV. Program Summary

At a recent staffing conference, David was described as full of energy and enthusiasm for almost any task or activity but willing to participate only on his own terms. He will accept direction and comply with demands but occasionally must be coddled and nudged to attain maximum performance. David has had days when he will mope around and respond half-heartedly to program efforts. Staff feels that David is capable of doing more for himself than he presently does.

Behavior Inventory

Ambulation

Walks easily and independently with a well-coordinated gait

Fine Motor Coordination

Handles and manipulates all sorts of objects easily, appropriately and independently

Eating Skills

Feeds self adequately using knife, fork and spoon appropriately and easily without help

Oral Care

Brushes teeth adequately, independently and adequately, but needs frequent reminding

Grooming

Grooms self independently but requires occasional supervision and direction

Money Recognition

Correctly makes change in small amounts using a combination of coins and paper currency

Expressive Language

Relates experiences; has a reasonable vocabulary; asks meaningful questions. Somewhat difficult to understand due to multiple articulation problems and rapid tempo

Purchasing and Budgeting

Shops for personal needs, occasionally saves money for a particular purpose

Pre-Vocational Skills

Performs complex tasks such as assembling nuts, washers and bolts in a prescribed pattern. Most times little supervision is needed

Socialization

Typically interacts with one or two other individuals but will participate in group activities with a reminder

APPENDIX E

Evaluation and Recommendations

Based upon the information presented, what is your best judgment of this individual's current functioning:

1. Likeable — Hard to Like

   1 2 3 4 5

2. Independent — Dependent

   1 2 3 4 5

3. Mature — Immature

   1 2 3 4 5

4. Cooperative — Non-Cooperative

   1 2 3 4 5

5. Capable — Incapable

   1 2 3 4 5

6. Functioning to Potential — Functioning below Potential

   1 2 3 4 5

7. Which of the following statements most closely approximates your assessment of this individual:

   1. A mildly retarded young man with greater potential.
   2. Essentially normal, needs intensive training to make up for past deprivation.
   3. A mildly retarded young man who probably will never function any higher.

4. A mixed-up young man but not really retarded.

5. A mildly retarded young man who can continue to learn in spite of his handicap.

8. How do you think the "man on the street" would evaluate this individual?

1. A mildly retarded young man with greater potential.

2. Essentially normal, needs intensive training to make up for the past deprivation.

3. A mildly retarded young man who probably will never function any higher.

4. A mixed-up young man but not really retarded.

5. A mildly retarded young man who can continue to learn in spite of his handicap.

9. What would you expect of this individual in the future?

Residence (check one)

_____ Supervised Group Home in Community

_____ Institution for Mentally Retarded

_____ Institution for Mentally Ill

_____ Independent Living (on his own)

_____ Independent Living (with remote supervision)

10. Employment (check one)

_____ No productive employment

_____ Work Activity (simple tasks, close supervision, low productivity rate)

_____ Sheltered Work (moderately complex tasks, moderate supervision, moderate productivity rate)

_____ Competitive Employment with close supervision (regular blue collar employment)

_____ Competitive Employment Independent

11. What are your immediate recommendations for this individual?

Residence

_____ Stay in institution

_____ Stay in institution with gradual increase in freedom

_____ Trial placement in a supervised group home in the community

_____ Placement in supervised group home in the community

_____ Discharge to community, independent living (on his own) with occasional supervision

_____ Discharge to community, independent living

12. Employment

_____ Self-care training at institution

_____ Work Activity Employment (simple tasks, close supervision, low productivity rate)

_____ Sheltered Work (moderately complex tasks, moderate supervision, medium productivity rate)

_____ Competitive Employment with close supervision (regular blue collar employment)

_____ Competitive Employment Independent

13. To what level of independent functioning would you expect this individual to develop?

Independent, Productive, Responsible Citizen		Semi-Independent Needs Supervision		Dependent, Requiring Close Supervision
1	2	3	4	5

Check the following which you think apply to this individual:

14.	_____ Responsive	20.	_____ Ordinary	26.	_____ Anxious
15.	_____ Apprehensive	21.	_____ Melancholy	27.	_____ Reckless
16.	_____ Dependable	22.	_____ Innocent	28.	_____ Manipulative
17.	_____ Hard Working	23.	_____ Loving	29.	_____ Brazen
18.	_____ Pleasant	24.	_____ Courageous	30.	_____ Underrated
19.	_____ Handicapped	25.	_____ Strong Headed	31.	_____ Deserving

APPENDIX F

Derivation of Dependent Variable Scores from
Program Candidate Evaluation Form

1. Positive Qualities Index (PQ)

   Total of all items 14-31 which are weighted +1 or +2, range 0-12. Higher integer indicates more positive qualities. Items 14-31 are weighted as follows:

14 +1	20 0	26 0
15 0	21 0	27 -2
16 +2	22 0	28 -2
17 +2	23 +2	29 -2
18 +2	24 +2	30 0
19 1	25 -1	31 +1

2. Negative Qualities Index (NQ)

   Total of all items 14-31 which are weighted -1 or -2, range 0-(-8) (weighting of items as in (1) above). Higher integer indicates more negative qualities.

3. "A" Quality Index (AQ)

   Total of items 1-5, range 5-25. Higher integer indicates more positive qualities.

   Weighting of items: in parentheses

Item 1	Likeable				Hard to Like
	1 (5)	2 (4)	3 (3)	4 (2)	5 (1)

Item 2	Independent				Dependent
	1 (5)	2 (4)	3 (3)	4 (2)	5 (1)
Item 3	Mature				Immature
	1 (5)	2 (4)	3 (3)	4 (2)	5 (1)
Item 4	Cooperative				Non-Cooperative
	1 (5)	2 (4)	3 (3)	4 (2)	5 (1)
Item 5	Capable				Incapable
	1 (5)	2 (4)	3 (3)	4 (2)	5 (1)

Note: The "A" Quality Index was used in addition to NQ and PQ in order to provide a different format for quality attribution. Whereas the NQ and PQ are based upon "free choice" items, the AQ is derived from forced choice items.

4. Diagnostic Index (DX)

Total integer scores of items 5, 7, 11, 12. Range 4-20. Higher scores indicate more favorable diagnosis.

Weighting of items:

Item 5	Capable				Incapable
	1 (5)	2 (4)	3 (3)	4 (2)	5 (1)

Item 7
1. (3.66)
2. (5)
3. (1)
4. (5)
5. (2.33)

Item 11
1. (1)
2. (1.8)
3. (2.6)
4. (3.4)
5. (4.2)
6. (5)

Item 12
1. (1)
2. (2)
3. (3)
4. (4)
5. (5)

5. Diagnostic Statement (DS)

Item 7 - range 1-5. Higher score indicates more favorable diagnosis.

Weighting of item:

1. (3.66)
2. (5)
3. (1)
4. (5)
5. (2.33)

6. Projective Diagnostic Statement (PRS)

Item 8 - range 1-5. Higher score indicates more favorable projective diagnosis.

Weighting of items same as (5) above.

7. Prognostic Index (PX)

Total integer scores of items 6, 9, 10, 13. Range 4-20. Higher score indicates more favorable prognosis.

Weighting of items:

6.

Functioning to Potential			Functioning below Potential	
1 (1)	2 (2)	3 (3)	4 (5)	5 (5)

9.
1. (3)
2. (1)
3. (2)
4. (5)
5. (4)

10.
1. (1)
2. (2)
3. (3)
4. (4)
5. (5)

13.

Independent, Productive Responsible Citizen		Semi-Independent Needs Supervision		Dependent Requiring Close Supervision
1 (5)	2 (4)	3 (3)	4 (42)	5 (1)

8. Residence Recommendation (RES)

Item 11 - range 1-5. Higher score indicates higher level residence recommendation.

1. (1)
2. (1.8)
3. (2.6)

4. (3.4)
5. (4.2)
6. (5)

9. Vocational Recommendation (VOC)

Item 12 - range 1-5. Higher score indicates higher level vocational recommendation.

1. (1)
2. (2)
3. (3)
4. (4)
5. (5)

APPENDIX G

Post-Evaluation Questionnaire

What source was most important to you in making your decisions regarding this individual?

A. Current Functioning Level

B. Appropriate Residential Placement

C. Employment Placement

D. Future Possibilities, Potentialities

E. Personality Traits

Comments on Information, Questions, etc.:

APPENDIX H

Results Summary for Research Participants

Dear Research Participant:

In the recent past, you participated in a research effort involving the evaluation of mentally retarded program candidates. In the interest of creating a naturalistic evaluation situation, you were led to believe that the information summary forms, which you surveyed, referred to actual clients. It was also suggested to you that the purpose of the study was to assess the efficiency of the information forms for evaluating retarded clients. In appreciation of your professionalism and with respect for ethical research principles, I am now disclosing to you the true nature of the research efforts.

Purpose: To assess the effect of the physical attractiveness of mental retardates upon quality attribution, diagnosis, prognosis and program placement.

Method: Three professional groups, Work Study Coordinators, Speech Therapists and Counseling Trainees were used as evaluators. Each evaluator received the same information summary but the attached photographs varied between evaluators. The photographs were portraits of mentally retarded program candidates which had been rated previously as low, medium or high in physical attractiveness. The rated attractiveness of the attached photos was the only variation

in materials from one evaluator to the next.

Results: Data analysis showed that physically attractive photographs received significantly higher ratings on 3 of the 9 measures used. It was also noted that less experienced and less trained evaluators gave higher evaluation scores on 2 of the 9 measures.

For further information regarding this study, please contact me personally. Thank you again for your participation.

BIBLIOGRAPHY

BIBLIOGRAPHY

Aronson, E. Collected writings. In W.J. Arnold and D. Levine (Eds.), Nebraska Symposium on Motivation. Lincoln: University of Nebraska, 1969, pp. 143-177.

Barber, T.X., and Silver, M.J. Fact, fiction and the experimenter bias. Psychological Bulletin, 1968, 70, 1-29.

Bar-Tal, D., and Saxe, L. Effect of physical attractiveness on the perception of couples. Paper presented at the American Psychological Association Convention, New Orleans, August, 1974.

Barocas, R., and Vance, F.L. Physical appearance and personal adjustment counseling. Journal of Counseling Psychology, 1974, 21(2), 96-100.

Berscheid, E., Dion, D., Walster, E., and Walster, G. Physical attractiveness and dating choice: a test of the matching hypothesis. Journal of Experimental Social Psychology, 1971, 7, 173-189.

Berscheid, E., and Walster, E. Beauty and the best. Psychology Today, 1972, 5(10), 42-46.

Berscheid E., and Walster, E. Physical attractiveness. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology. New York: Academic Press, 1974, pp. 157-215.

Blatt, B. The physical, personality and academic status of children who are mentally retarded attending special classes as compared with children who are mentally retarded. American Journal of Mental Deficiency, 1958, 62(5), 810-818.

Brislin, R., and Lewis, S. Dating and physical attractiveness; replication. Psychological Reports, 1968, 22, 976.

Bruner, J.S., Shapiro, D., and Tagiuri, R. Collected writings. In R. Tagiuri and L. Petrullo (Eds.), Person Perception and Interpersonal Behavior. Stanford: Stanford University Press, 1958, pp. 276-288.

Butler, E.W., Lei, T., and McAllister, R. Childhood impairments and subsequent social adjustment. Paper presented at the American Association of Mental Deficiency Convention, 1974.

Butler, E.W., Tzuen, L., and McAllister, R.J. Childhood impairments and subsequent social adjustment. Paper presented at American Association of Mental Deficiency Convention, Toronto, June, 1974.

Byrne, D., Ervin, C., and Lamberth, J. Continuity between the experimental study of attraction and real life computer dating. Journal of Personality and Social Psychology, 1970, 16, 157-165.

Cavior, N., and Dockecki, P.R. Physical attractiveness, perceived attitude similarity and academic achievement as contributors to interpersonal attraction among adolescents. Developmental Psychology, 1973, 9, 44-54.

Cavior, N., and Glogower, F. Effects of physical attractiveness of therapist and client on number of psychotherapy sessions. Proceedings of the 81st Annual Convention of the American Psychological Association, 1973, 8.

Choban, M.C., Cavior, N., and Bennet, P. Effects of physical attractiveness of patients on outcome in a token economy. Paper presented at the 82nd Annual Convention of the American Psychological Association, New Orleans, August, 1974.

Clifford, M.M., and Walster, E. The effect of physical attractiveness on teacher expectations. Sociology of Education, 1973, 46, 248-258.

Dion, K. Children's physical attractiveness and sex as determinants of adult punitiveness. Developmental Psychology, 1974, 10, 772.

Dion, K. Physical attractiveness and evaluation of children's transgressions. Journal of Personality and Social Psychology, 1972, 24, 207-213.

Dion, K., and Berscheid, E. Physical attractiveness and peer perception among children. Sociometry, 1974, 37(1), 1-12.

Dion, K., Berscheid, E., and Walster, E. What is beautiful is good. Journal of Personality and Social Psychology, 1972, 24(3), 285-290.

Dunn, O.J. Multiple comparisons among means. Journal of the American Statistical Association, 1961, 56, 52-64.

Efran, M.G. The effect of physical appearance on the judgment of guilt, interpersonal attraction and severity of recommended punishment in a simulated jury task. Journal of Personality, 1974, 8, 45-54.

Ehrlich, H.J., and Bauer, M.L. Therapists feelings toward patients and patient treatment and outcome. Social Science and Medicine, 1967, 1, 283-292.

Friend, R.M., and Vinson, M. Leaning over backwards: jurors responses to defendants' attractiveness. Journal of Communication, 1974, 24, 124-129.

Finn, Jeremy D. A General Model for Multivariate Analysis. New York: Holt, Rinehart and Winston, 1974.

Gephart, W.J., and Antonopolos, P.P. The effects of expectancy and other research biasing factors. Phi Delta Kappan, 1969, 50, 579-583.

Glass, G.V., and Stanley, J.C. Statistical Methods in Education and Psychology. Englewood Cliffs: Prentice Hall, 1970.

Goffman, E. Stigma. Englewood Cliffs: Prentice Hall, 1963.

Gold, M. Research on the vocational habilitation of the retarded: the present, the future. In N.R. Ellis (Ed.), International Review of Research in Mental Retardation (Vol. 6). New York: Academic Press, 1973, pp. 97-147.

Howard, C.R., Cohen, S.H., and Cavior, N. More results on increasing the persuasiveness of the low prestige communicator. Paper presented at the American Psychological Association Convention, New Orleans, August, 1974.

Kolstoe, O.P. Collected writings. In A. Baumeister (Ed.), Mental Retardation. Chicago: Aldine, 1967, pp. 47-53.

Kretschmer, E. Physique and Character. New York: Brace and World, 1925.

Kurtzberg, R.L., Safor, H., and Cavior, N. Surgical and social rehabilitation of adult offenders. Proceedings of the 76th Annual Convention of the American Psychiatric Association, 1968, 3, 649-650.

Lindzey, G. Morphology and behavior. In G. Lindzey and C.S. Hall (Eds.), Theories of Personality. New York: Wiley, 1965.

MacMillan, E.L., Jones, R.L., and Aloria, G.F. The mentally retarded label: a theoretical analysis and review of research. American Journal of Mental Deficiency, 1974, 79(3), 241-261.

Magnussen, M.G., and Homann, J. Treatment prognosis and duration as related to attractiveness and intelligence. Paper presented at A.A.P.S.C. Convention, Chicago, 1972.

Miller, A.G. Role of physical attractiveness in impression formation. Psychonomic Science, 1970, 19, 241-243.

Miller, R. Simultaneous Statistical Inference. New York: McGraw-Hill, 1966.

Mills, J., and Aronson, E. Opinion change as a function of the communicator's attractiveness and desire to influence. Journal of Personality and Social Psychology, 1965, 1, 173-177.

Mischel, W. Sex typing and socialization. In Mussen (Ed.) Charmichaels Manual (3rd ed.). New York: John Wiley and Sons, 1970, pp. 3-72.

Morgenstern, M. Community attitudes toward the sexuality of the retarded. In F. de la Cruz and G.D. Laveck (Eds.), Human Sexuality and the Mentally Retarded. New York: Burner-Mazel, 1973, pp. 157-166.

Murstein, B. Physical attractiveness and marital choice. Journal of Personality and Social Psychology, 1972, 22, 8-12.

Nash, H.E., Hoehn-Saric, R., Battle, C.C., Stone, A.R., Imber, S.D., and Frank, J.D. Systematic preparation of patients for short-term psychotherapy. The relation to characteristics of patient, therapist and the psycho-therapeutic process. Journal of Nervous and Mental Disease, 1965, 140, 374-383.

Palardy, M.J. What teachers believe, what children achieve. Elementary School Journal, 1969, 69, 370-374.

Perrin, F.A.C. Physical attractiveness and repulsiveness. Journal of Experimental Psychology, 1921, 4, 203-217.

Pope, B. Socio-economic contrasts in childrens' peer culture prestige values. Genetic Psychology Monographs, 1953, 48, 157-220.

Roff, M., and Brody, D.S. Appearance and choice status during adolescence. Journal of Psychology, 1953, 36, 347-356.

Rosenthal, R., and Jacobsen, L. Teachers' expectancies: determinants of the pupil's I.Q. gains. Psychological Reports, 1966, 19, 115-118.

Saenger, G. Collected writings. In A. Baumeister (Ed.), Mental Retardation. Chicago: Aldine Publishing, 1967, p. 248.

Safilios-Rothschild, C. The Sociology and Social Psychology of Disability and Rehabilitation. New York: Random House, 1970.

Sattler, J.M., Hillis, W.A., and Neher, L.A. Halo effect in examiner scoring of intelligence tests responses. Journal of Consulting, Clinical Psychology, 1970, 34, 172-176.

Schofield, W. Psychotherapy, the Purchase of Friendship. Englewood Cliffs: Prentice Hall, 1964.

Seligman, C., Paschall, N., and Takata, G. Effects of physical attractiveness on attribution of responsibility. Canadian Journal of

Behavioral Science, 1974, 6, 290-296.

Sheldon, W.H., and Stevens, S.S. The Varieties of Temperament. New York: Harper, 1942, pp. 472-473.

Sheldon, W.H., Stevens, S.S., and Tucker, W.B. The Varieties of Human Physique. New York: Harper, 1940.

Sigall, H., and Aronson, E. Liking for an evaluator as a function of her physical attractiveness and nature of the evaluation. Journal of Experimental Social Psychology, 1969, 5, 93-100.

Siller, J., and Chipman, A. Perceptions of physical disability by the non-disabled. Paper presented at the meetings of the American Psychological Association, Los Angeles, September, 1970.

Siller, J., Chipman, A., Ferguson, L.T., Vann, D.H. Collected writings. Studies in Reaction to Disability: Vol. II. New York University, School of Education, May, 1967.

Skinner, B.F. Contingencies of Reinforcement. New York: Appleton-Century Crofts, 1969.

Soble, S.L., and Strickland, L.H. Physical stigma, interaction and compliance. Bulletin of Psychonomic Society, 1974, 4(2-B), 130-132.

Soule, D. Teacher bias effects with severely retarded children. American Journal of Mental Deficiency, 1972, 77(2), 208-211.

Stroebe, W., Insko, C., Thompson, T., and Layton, B. Effects of physical attractiveness, attitude similarity and sex on various aspects of interpersonal relations. Journal of Personality and Social Psychology, 1971, 18(1), 79-91.

Walster, E., Aronson, V., and Abrahams, D. Importance of physical attractiveness in dating behavior. Journal of Personality and Social Psychology, 1966, 4, 508-516.

Wright, B.A. Physical Disability - A Psychological Approach. New York: Harper and Row, 1960.