Job applicants' age, gender, and exercise lifestyle as determinants of evaluations of hiring application forms

Sally Allene Kaiser

Follow this and additional works at: https://scholarworks.lib.csusb.edu/etd-project

Part of the Psychology Commons

Recommended Citation
https://scholarworks.lib.csusb.edu/etd-project/696

This Thesis is brought to you for free and open access by the John M. Pfau Library at CSUSB ScholarWorks. It has been accepted for inclusion in Theses Digitization Project by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.
JOB APPLICANTS' AGE, GENDER, AND EXERCISE LIFESTYLE
AS DETERMINANTS OF EVALUATIONS
OF HIRING APPLICATION FORMS

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Psychology

by
Sally Allene Kaiser
June, 1993
JOB APPLICANTS' AGE, GENDER, AND EXERCISE LIFESTYLE AS DETERMINANTS OF EVALUATIONS OF HIRING APPLICATION FORMS

A Thesis
Presented to the Faculty of California State University, San Bernardino

by
Sally Allene Kaiser

June, 1993

Approved by:

[Signatures and dates]
ABSTRACT

This study examined the effect of age, gender, and exercise lifestyle in the evaluation of hiring application forms. Two hundred and seventy undergraduate and graduate students rated two job applicants, one applying for the position of a vocational rehabilitation counselor and the other for a bank loan officer on a Likert-like scale consisting of nine job dimensions. A Principal Component Analysis (PCA) reduced the nine job dimensions to two factors, and one unrelated variable. A repeated measures analysis was performed on the three dependent variables partitioned from the PCA (aspects of good performance; aspects of poor performance and the likelihood of quitting). Results showed no significant effect for age or gender of applicant. There was a significant effect for exercise, with active applicants being rated less likely to be ill or have an accident than sedentary applicants. Subject effects for gender and exercise were also identified. Implications and suggestions for further research are discussed.
ACKNOWLEDGEMENTS

All three of my committee members made this paper possible. Thank you Dr. Jan Kottke, Dr. Diane Halpern, and Dr. Liz Klonoff for the hours of support, patient guidance, and expert advice. I am also grateful to my friends and family for all the encouragement they gave me during the past two years. Lastly, I would like to especially thank Robert Dyer who wouldn't let me give up when I was overwhelmed and discouraged.
TABLE OF CONTENTS

Abstract...........................................................................iii
Acknowledgements............................................................iv
Table of Contents..............................................................v
List of Tables......................................................................vii
Introduction.........................................................................1
  Age-Related Stereotyping Older Workers..............................2
  Situational Factors Affecting Age Stereotyping...............5
  Age and Job Performance.....................................................8
  Age and Gender Stereotyping..........................................10
  Ambiguity Explanation for Gender-Stereotyping...............12
  Exercise Lifestyle Factor.....................................................14
  Cognitive Ability and Exercise...........................................15
  Selection of Measurement Instrument...............................19
  Selection of Subjects.......................................................20
  Gender of Subjects........................................................20
  Hypotheses......................................................................21
Method.............................................................................23
  Subjects........................................................................23
  Instrument/Material.........................................................23
  Experimental Design.......................................................24
  Procedure.......................................................................25
Results............................................................................27
  Analysis of Items on Rating Scale......................................27
Tests of Hypotheses.................................................30
Supplemental Findings..............................................36
Discussion...............................................................39
Hypotheses...............................................................39
Additional Findings: Subject Sex.................................41
Recommendations and Implications for Future Research....43
Appendices.................................................................45
Appendix A. Consent Form............................................46
Appendix B. Instruction to Subjects...............................47
Appendix C. Retrain Job Description.............................48
Appendix D. Retraining Job Application Form..................49
Appendix E. Retrain Rating Scale Sheet..........................50
Appendix F. Prairie Job Description..............................51
Appendix G. Prairie Job Application Form.......................52
Appendix H. Prairie Rating Sheet..................................53
Appendix I. Evaluation of Job Characteristics................54
Appendix J. Subject Information Survey.........................55
Appendix K. Debriefing Form.......................................56
References.................................................................57
LIST OF TABLES

Table 1. Varimax Rotated Factor Matrix for Vocational Rehabilitation Counselor........28
Table 2. Varimax Rotated Factor Matrix for Loan Officer.................................29
Table 3. Reliability Analysis Scale for Factors 1 and 2 for Vocational Counselor..........31
Table 4. Reliability Analysis Scale for Factors 1 and 2 for Loan Officer.........................32
Table 5. Mean Scores and Standard Deviations for Applicant Age, Gender, and Exercise........34
Table 6. Mean Scores for Subject Sex Effects..............37
INTRODUCTION

The American Workforce is shifting to a larger proportion of older workers presenting legal, ethical, and economic issues to consider. In 1980 there were 106.9 million Americans in the workforce. By the year 2005 it is projected there will be 150.7 million (Statistical Abstract of U.S., 1992). Part of this 41% increase is due to people living longer. Estimates show by the year 2000, 60 year old men can expect to live 19.2 more years, and 60 year old women an additional 24.7 more years (Kieffer, 1984). According to the 1983 Amendment to the Social Security Act, by the year 2000 this older group will be expected to remain in the workforce beyond age 65 to 67. Further, inflation in the U.S. has made it increasingly difficult to live solely on Social Security benefits. Older adults without supplemental incomes from retirement or pension funds may have to continue working to meet basic expenses.

The anticipated larger proportion of older workers after the year 2000 presents American organizations with the need to adopt procedures requiring fair age-related employment decisions pertaining to hiring, retention, promotion, and training (Gatewood & Feild, 1990). The Age Discrimination in Employment Act prohibits denying an employee selection, promotion, and training opportunities based on age (Rosen & Jerdee, 1976b). Unfortunately, this does not prevent employment decisions from being influenced
by the chronological age of a job applicant. The U.S. House Select Committee on Aging in 1982 surveyed the American workforce and found 80% of American workers believed that employers still discriminated against older workers (Waldman & Avolio, 1986). The number of age discrimination complaints filed in the U.S. has doubled since 1980 to over 27,000 per year in 1990 (Remondet & Hansson, 1991).

**Age-Related Stereotyping of Older Workers**

Research suggests that age-related stereotyping in personnel selectors has greatly influenced the decision making process. Stereotypes represent factually incorrect perceptions that have been shown not to be valid predictors of performance for a specific individual in a particular job (Cleveland & Landy, 1983). In one example, Rosen and Jerdee (1976a) examined age stereotyping using 56 realtors and 50 undergraduate business students to assess the degree to which ratings based on personal characteristics (i.e. creativity, motivation, productivity) for a 60 year old person would differ from those of a 30 year old person. Their results showed the older person was perceived as being less creative, motivated, and productive, as well as having less potential for development. Rosen and Jerdee (1976b) also used an in-basket exercise task (i.e. paper and pencil test that is designed to duplicate tasks of the job under consideration) with undergraduate business students to see if managerial decisions would be different for employees
described as "younger" vs "older." The found subjects had negative age-related attitudes about the older workers in on-the-job performance, potential for development, certain interpersonal skills, vitality, and propensity for risk taking.

Perry and Varney (1978) were interested in the attitudes of college students in relation to competence and age of workers. They compared older workers (60 year olds) to younger workers (25 year olds) on two levels of competence (average vs high competence). They found that the level of competence had a greater effect on attitudes than did age; nevertheless, subjects believed older workers would catch on to new ideas less quickly than younger workers and would make less valuable future contributions.

Negative age stereotypes towards older workers have also been shown to exist in adults within the work environment. In a study on age and performance, Waldman and Avolio (1986) found performance increased with age when objective productivity indices were used; however, when supervisory rating were used there was a decline in performance with increase in age. The researchers explained that this could be due to rater bias against older workers. These studies show human judgment is not always objective, nor a valid predictor of potential job performance by an older worker.

In addition to individuals who negatively stereotype
older workers, American industry has adopted a retirement policy based on the decremental theory of aging. This theory proposes that employees' ability and speed of performance on the job deteriorate as chronological age increases (Giniger, Dispenzieri, & Eisenberg, 1983). Cleveland and Landy (1983) reviewed the literature on age changes and age-job performance differences among older workers. They found research on older workers (over 65 years) shows slight decreases in performance (i.e. measures of memory and cognition, problem-solving ability, and performance on speed or paced tasks) with increasing age, although several factors make the interpretation of these studies very limited. They concluded that there are many individual differences in job performance among older workers, and the type of performance measures used in research studies could make a difference in the results. Overall, they found a lack of support for the belief that performance declines as age increases. Further evidence that job performance does not necessarily decline with age was found by Waldman and Avolio (1986) in a meta-analysis of age differences in job performance. Their results showed job performance did not decrease with age (up to retirement age of 65). They suggested the possibility that older employees who take on new and challenging roles (i.e. renewed stimulation) may improve performances over a career span. Waldman and Avolio concluded that chronological age
does not explain the variance between individual differences in job performances for employees at various ages and should not be used as a bona fide occupational qualification for employment decision making.

Situational Factors Affecting Age Stereotyping

The literature suggests age-group membership is not the only factor influencing perceptions about older workers. Lee and Clemons (1985) evaluated whether more favorable decisions were made about older workers when the situation did not require a choice between an older worker and a younger worker (older worker's age was 61 and younger worker was 32), and if presence of information (information vs no information) provided about the job applicant influenced the selection process. Lee and Clemon's results showed that more favorable evaluations of older workers were given when no comparisons were made with younger workers and when behaviorally stated information was provided about the older worker. Clearly, detailed information about an older applicant can influence the hiring process with factors other than age.

In addition to detailed information about the job applicant, it is important to consider the research process used in obtaining empirical data on attitudes towards older workers. Brubaker and Power's (1976) literature review on the stereotypes of "older," point out that although there is prejudice towards older people in general, how the research
data are collected affects the results. For example, of the 47 reports they reviewed, 21 studies had used older individuals as subjects, and of these subjects half were from an institutionalized or indigent populations. Brubaker and Powers state the results from these studies are therefore greatly affected in a negative way by the subject pool utilized.

In a meta-analysis on attitudes towards older and younger adults, Kite and Johnson (1988) were interested in why the results of some studies indicate that older adults are negatively evaluated in some situations and not others. Their focus was on testing a multidimensional model instead of attitudes of individual subjects. Their overall results showed attitudes towards older adults are more negative than those toward younger adults; however, these findings were influenced by several factors. First, when the research design was within-subjects there was an increased possibility that subjects could guess the hypothesis (increasing the likelihood of demand characteristics). In addition, when subjects directly compared older to younger individuals, the subjects tended to be more negative in their ratings towards the older individual. When a between-subject design was used negativity toward older targets was decreased. Second, the results of the studies reviewed were influenced by the focus on the target group (i.e. personality traits, role behaviors, physical
characteristics, and occupations). For example, subjects were more negative in their ratings of older workers when compared to younger workers on the bases on physical attraction and competence, but not on personality traits. Finally, the experimental setting in which the studies took place influenced the results. Laboratory settings tended to show little difference in subject's ratings between older and younger individual. Field studies showed more negative attitudes by the subjects toward older workers than younger workers. Kite and Johnson's meta-analysis supports how negative stereotypes of "old" can be construed by situational factors in the research process.

In addition to the research method used, another situational factor accounting for the age-bias effect is that some jobs have stereotypical attitudes associated with them (Singer & Sewell, 1989). Cleveland and Landy (1983b) looked at perceptions of age characteristics of employees in relation to age-job characteristics. Their study was designed to assess if the effects of age on decision making are different in a stereotypically older job than in a stereotypically younger job. They varied hypothetical employees on job performance patterns to behave either stereotypically old (i.e. viewed as slower, less up to date, or less technically competent as younger employees) or stereotypically young. This was done in relation to age stereotype of the job (i.e. older job was plant manager vs
younger job was intermediate programmer). Their results showed as age-bias effect only when an older behaving employee was in a stereotypically young person's job. They suggested the source of bias could be the perception of a job as appropriate for either an older worker or younger worker. To test this idea, Cleveland and Landy (1987) later studied subject's classifications of jobs as older, younger, or age-neutral. One hundred and twenty managers used two different questionnaires to categorize 40 managerial jobs into age distributions of between 20 years to over 70 overs. Cleveland and Landy wanted to identify specific areas within an organization where discrimination was likely to take place. Their results showed 62% of jobs were classified as appropriate for an older, younger, or age-neutral group using convergence criteria. These data support their earlier work that jobs have age-related stereotypical attitudes associated with them.

Age and Job Performance

It is important to distinguish between negative attitudes (perceptions) of older workers and future job performance, and actual empirical data on job performance. Ginger, Dispenzieri, and Eisenberg (1983) conducted a study looking at age, experience, and performance in relation to speed and skill jobs in a work environment. The researchers examined age and experience in the garment industry in relation to work productivity, absenteeism, accidents, and
turnover. They distinguished between two types of job tasks, a) tasks that demanded speed and agility, and b) tasks that demanded skill and experience. Their results showed older workers surpassed younger workers (i.e. cutoff age was 45 between younger and older workers) in both job task categories. Experience, not age, was the primary factor influencing job performance. Other studies have found that older worker's skill, competence, and experience influence job performance rather than the worker's age (Birren, 1964; Muriel & Griew, 1965; Sheppard, 1976). Older workers have been shown to have better attendance records (Bartley, 1977), decreased accident rates (Tiffin & McCormick, 1968), and less turnover rates (Porter & Steers, 1973).

The literature on actual job performance of older workers presents a different picture of the older workforce than the literature on perceptions of older worker's job performance by personnel selectors. Consequently, the perceptions of personnel selectors regarding age-related differences in job performance ability are important to assess. What factors affect people's judgements of older people? Green (1981) researched studies that had been done on the attitudes and perceptions about the older persons. Green suggests that when little or general information is given about an older individual, subjects are forced to rely on stereotypes and this increases the likelihood of a
negative perception about the older individual. It appears that specific positive information given about an older individual directly reduces negative stereotyping.

**Age and Gender Stereotyping**

Human resource literature suggests the importance of addressing gender bias along with age bias in personnel selection for two reasons. First, the proportion of older women (i.e. over age 45) in the workforce is expected to increase during the next 10 years. In 1980 there were seven million women in the workforce between the ages of 45 and 54 years. By the year 2005, the projected number of working women in the 45-54 age group is expected to increase to 17.2 million (Statistical Abstract on the U.S., 1992). Second, there is a underrepresentation of women in professional and managerial positions (Cohen & Bunker, 1975). Government legislation has tried to eliminate discrimination against women by employers. Title VII created the Equal Employment Opportunity Commission (EEOC); and Executive Older 11375 mandated "affirmative action" to recruit, train, employ, promote, and pay without regard to race, sex, or national origin (Hess, 1986). Despite this legislation, it is well documented that gender discrimination does take place in the selection process (Arvey & Campion, 1982); Cohen & Bunker, 1975); Dipboye, Fromkin, & Wiback, 1975). This underrating of women in comparison to men for job positions (gender discrimination) has been demonstrated regardless of the
research method used (i.e. rating resumes, observing videotapes, or doing in-basket exercises), and regardless of the type of subjects used (i.e. college students, professional interviewers, or personnel directors) (Heilman, Martell, & Simon, 1988).

Previous research has proposed that gender-role stereotyping may be partially responsible for gender discrimination. For example, a personnel selector may have a stereotypical view of women as not being aggressive, persistent, or tenacious and may believe successful performance of the job calls for these attributes. According to Heilman, Martell and Simon (1988), perceptions about job requirements in combination with negative stereotypical perceptions about women by a personnel selector can be very powerful, leading to the derogation of women's competence and a pessimistic assessment of women's success as jobholders.

The literature supports other situational factors that could influence gender discrimination in the decision making process. Terborg (1977) noted in his research review on gender discrimination that personnel selectors tended to base selection decisions on stereotypical attitudes when pertinent information about the job applicant was not provided. According to research done by Quereshi and Kay (1986) age and sex biases can operate in subtle and complex fashion in relation to the social and personal attributes of
both the raters and the ratees. Their study looked at three applicant variables (age, physical attractiveness, and gender) and three rater variables (age, gender, and experience of raters) as determinants of reactions to resumes. The results showed that physical appears of the applicant was significant for both men and women raters, especially if the job is perceived as requiring interaction with the general public, and there was indication of age and gender bias operating in a subtle fashion by raters.

In a related study by Dipboye, Arvey, and Terpstra (1977), bias against unattractive applicants and female applicants was examined. Their results showed gender and physical appearance variables may account for only a trivial portion of the rating variance, and when this occurs both women and men raters are equally biased against women. Placing women in hiring positions will not necessarily eliminate bias in the employment process.

Ambiguity Explanation for Gender-Stereotyping

When descriptions of the job applicant do not address explicit or implicit job requirements, there is the likelihood of discrimination according to the ambiguity explanation (Kiesler, 1975; Rosen & Jerdee, 1974c). In studies where the female applicant is portrayed as highly competent in the demands of the job, unbiased evaluation has taken place (Gerdes & Garber, 1983). This finding suggests that when there is a "fit" between the specific job
requirements and the pertinent qualifications of an applicant, negative stereotyping can be reduced. Otherwise, when pertinent applicant information is not provided about the job requirements, there is a tendency by the rater to use stereotypical attitudes in making a selection decision. Gerdes and Garber (1983) tested the ambiguity explanation by looking at whether female applicants would fare worse when job demands included responsibilities not addressed in their application material. The results of their study supported the ambiguity explanation for stereotypical evaluations of women.

The studies cited support the relevance of gender bias in the selection process. Further, the studies point to the need for job applicants to provide individual information that is specific to the job requirements to reduce negative gender stereotyping by decision makers. The data showed the significance of perceptions by personnel managers on non-job related variables (i.e. gender, age). If we accept the idea that these perceptions do in fact exist, it is important to continue adding empirical evidence to the literature concerning any factor that would have a positive influence in the perception of older workers, either male or female. The empirical data needs to focus on objective job performance measures (i.e. reaction time as a measure of speed and accuracy of cognitive ability in order workers) to bring the perceptions of decision makers more in line with
the reality of age-related and gender-related differences in job performance.

The following discussion on exercise briefly attempts to contribute positive evidence about male and female older workers and their future job performance. It has been suggested by research studies that exercise has beneficial influences on the brain, and these influences result in improved cognitive functioning. In addition, exercise may postpone negative symptoms (i.e., sensory awareness becoming dull, muscle strength declining) in the aging motor system (Spirduso, 1983). It was believed that with the age and gender composition of the American workforce changing, there was an increased need to study any factors that might influence the job performance of older male and female workers.

Exercise Lifestyle Factor

The relevance of exercise to job performance of workers has already been identified by American industry in the number of wellness programs that have originated during the past ten years (Rhodes & Dunwoody, 1980). Organizations that provide wellness programs report workers who are good adherers to a physical fitness program may reduce absenteeism, hospital utilization, and incidence of heart attacks (Cohen, 1985). In addition, regular exercisers in these programs report improved muscular strength and flexibility, enhanced self-esteem, greater self-reliance,
and relief from mild depression (Cohen, 1985). It is evident that these benefits could affect job performance. Due to the subjective nature of the above cited benefits from exercise, a literature review was undertaken to see if there was empirical evidence supporting exercise as a positive influence on job performance. The following studies looked at the effect exercise has on the aging process and cognitive ability.

**Cognitive Ability and Exercise**

The research reviewed suggested that there are cognitive ability differences in older adults who exercise on a regular basis compared to those who are sedentary (Powell & Pohndorf, 1971; Spirduso, 1975; Clarkson-Smith & Hartley, 1989). These differences are hypothesized to be due to one of two factors: a) there is a diffuse slowing throughout the central nervous system (CNS) that occurs with the aging process causing age-related cognitive deficits; and b) limitations in our capacity for attention that occur with the aging process (Clarkson-Smith & Hartley, 1989). The variation in reaction times (RT) among older adults therefore, could be due to any variable that would effect the physiological change of either the CNS or attention capacity in the aging process (Clarkson-Smith & Hartley, 1989).

A study of Powell and Pohndorf (1971) found there appears to be an exception to the concept of intelligence
declining during the normal aging process. Power and Pohndorf compared adult exercisers (i.e. older men, $\bar{x}=50$ years, who had been doing aerobic exercise three times a week for at least three years) to nonexercisers (i.e. older men, $\bar{x}=50$, who had been sedentary for the past three years) on fluid intelligence (i.e. biological factors). They were interested in the concept of whether a subject's maintenance of general fitness would contribute to higher levels of cortical functioning as age increased. Their conclusions showed fluid intelligence test scores did decrease with age and were indicative of some loss of cognitive functioning, except when subjects exercised regularly.

A key issue is long term, regular exercise by the older individual. In a study by Spirduso (1975) age and activity level were examined with reaction time measures. Four groups of 15 subjects each were formed: a) old active group, $\bar{x}=57.2$ years, b) old non-active group, $\bar{x}=56.3$ years, c) young active group, $\bar{x}=23.6$ years, and d) young non-active group, $\bar{x}=25.4$ years. An important feature of the study was that the older active subjects in the study had been physically active (played racquetball three times a week) for the past 30 years. The results showed the reaction times of the older active group were similar to both younger groups (active and non-active); in contrast the older non-active group responded much more slowly than the three other groups.
Clarkson-Smith and Hartley (1989) looked at cognitive performance of older adults to assess differences between those who were vigorous exercisers and those who were sedentary. They used measures of reasoning, working memory, and RT as their dependent variables. The importance of this study was that they statistically controlled for the extraneous variables age, education, and health. It was therefore possible to support the hypothesis that strenuous exercise was the variable affecting the dependent variables. Specifically, cognition was a function of activity (exercise) not health.

Spiduso (1980) in his review of physical fitness, aging, and psychomotor speed pointed out that a major difficulty in studying physical fitness and aging in relation to psychomotor speed is the between-subject variability that exists in samples of older adults. Yet he states that as the evidence from research accumulates, exercise is a strong candidate as a contributor to the general regulator mechanism of high quality psychomotor function. He emphasized that with each decade of aging, the effects of exercise become more important.

The literature on exercise demonstrates a possible positive correlation between the physical activity level of an older worker (i.e. over the age of 45) and cognitive ability. The present paper wanted to assess if exercise was perceived to make a difference in the selection process. It
was found that American organizations in general have recognized the benefits of exercise for their employees, but no research had been done on the perception of exercise by personnel selectors in differentiating the job performance ability of older job applicants. Organizations like the National Aeronautics and Space Administration (NASA-USA) have conducted physical fitness programs. NASA's 1972 physical fitness program found that 90% of the good adherers to the program stated they felt better in health and stamina, and had a more positive work-attitude (Rhodes & Dunwoody, 1980). These were perceived effects by the participants and are subjective in nature. Yet organizations that provide preventive programs (i.e. exercise, weight control, smoking cessation) recognize that how a person thinks and feels can influence job performance (Wilbur, 1983). For example, Johnson & Johnson Company started a program called "Live for Life" for the purpose of providing their employees with an opportunity for a healthier lifestyle. There is enough positive information correlating exercise to enhanced job performance to continue investigating the relationship.

If we accept the evidence showing the positive influence exercise can have on the aging process and its relationship to job performance, it becomes evident that the perceptions about exercise and job performance by personnel selectors is an important area to explore. Is there a
perceived difference between an older male or female physically active job applicant and an older non-physically active male or female job applicant? Is there a perceived difference between an older physically active female and a younger non-active female. Before discussing this study's method, the choice of an effective measurement instrument, the selection of subjects, and the hypotheses will be presented.

Selection of Measurement Instrument

After reviewing the literature on age, gender, and exercise variables, an effective measurement instrument was researched. The challenge is to find a reliable, valid measuring instrument of differentiate among potentially successful and unsuccessful employees (Saal & Knight, 1988). Personnel managers are concerned that measurement instruments match the knowledge, skills, and abilities (KSAs) of the job requirements to individual men and women applying for the job. These KSAs are believed to be predictive of future job performance.

Research by Hough, Keys, and Dunnette (1983) and Pannone (1984) has supported biographical information as a valid and reliable selection instrument. Their work is based on the concept that past behavior is the best predictor of future behavior (Saal & Knight, 1988). In addition, research done by Heilman (1984) has shown biographical data can weaken negative stereotypes given to
female applicants, thus helping to decrease sex discrimination in the selection process. Biographical data can be obtained by requesting job applicants to complete a standard application form.

Selection of Subjects

Due to the availability and interests of large numbers of college students, many researchers turn to universities to obtain their subjects. College students as subjects rather than personnel managers for the current paper raises the question of external validity. Can you generalize what personnel managers will decide from results of research using students as subjects? Locke-Connor and Walsh's (1980) study on attitudes toward older workers, found attitudinal and attributional factors did not differ between college students raters and middle-aged male raters in the hiring selection of older applicants. Cleveland and Landy (1987) evaluated this same question in their study. They looked at whether student subjects would provide ratings similar to managers in age perceptions of jobs. Results suggested students can classify jobs similar to managers according to age stereotypes. Further, managers as subjects may be a nonessential feature in field studies on job-age stereotypes. Hence, the use of college students as subjects was believed justified for the present paper.

Gender of Subjects

Previous research investigating the stimulus of age and
sex on person perception by male and female subjects has shown differential perceptions (O'Connell & Rotter, 1979; Levin, 1988). O'Connell and Rotter (1979) researched college males and females perception of ages 25, 50, and 75 year-old male and females using a semantic differential task. Their results found male subjects rated female stimuli less favorably than male stimuli, and female subjects rated both sexes more favorably and more equitably than the male subjects. Although no hypothesis is proposed regarding subject sex, analyses will be done to see if differential perceptions exist by sex.

Hypotheses

Hypothesis 1: It was hypothesized that subjects would have more negative perceptions of older workers (age 51) when compared to younger workers (age 31). Job applicants who are young would be rated higher on job dimensions considered important in selection.

Hypothesis 2: It was hypothesized that subjects would have greater negative perceptions toward female job applicants when compared to male job applicants. Job applicants who are male would be rated higher on job dimensions considered important in selection.

Hypothesis 3: It was hypothesized that exercise would influence a subject's perception of an applicant's future job performance regardless of the applicant's age or gender. Exercise would influence a subject's perception of an
applicant's future job performance regardless of the applicant's age or gender resulting in a higher rating on job dimensions considered important in selection.

**Hypothesis 4:** It was hypothesized that older exercising job applicants would be evaluated more favorably than older non-exercising job applicants. Older job applicants who are actively exercising would be rated higher on job dimensions considered important in selection than older non-exercising job applicants.
METHOD

Subjects

Volunteers were recruited from students of a southern California University, after being given a brief description of the tasks involved. Subjects were asked to provide information regarding their age, sex, education level, work experience, and if they had ever been responsible for hiring employees. Two hundred and seventy subjects (Males = 139 and females = 131) ranging in age from 18 to 62, with the average age of 27, participated in the study. The majority of subjects were either third (17%) or fourth (25.6%) year undergraduate students. Sixty seven percent of participants had worked full time eight years and sixty one percent reported they had worked part time four years. Seventy one percent had never hired a job applicant. Each subject rated two job applicants applying for two different occupations (vocational rehabilitation counselor and loan officer). A filler-task was included that asked subjects to evaluate characteristics of a person actually performing each occupation that the job applicants were applying for.

Instrument/Material

Hiring Application Forms. The subjects rated two job applicants, one applying for the position of a vocational rehabilitation counselor and the other for the position of a bank loan officer. Each hiring application form fit one of the eight (2 age, 2 sex, 2 exercise) categories for the two
different occupations making a total of 16 hypothetical job applicants that were randomly distributed to the subjects. The hiring application form consisted of: applicant name, age, address, telephone number, sex, relevant work experience, education, and hobbies/interests (See Appendix for stimulus forms).

Rating Scales. The rating scale sheet asked subjects to rate the job applicant on the following nine job characteristics (dependent variables): 1) how qualified is the job applicant to perform the job, 2) how motivated would this job applicant be to perform the job, 3) how likely would this job applicant be absent due to illness, 4) how likely would this job applicant be absence due to a job-related accident, 5) based on the job applicant's qualifications, what level of job performance would you expect to see, 6) how dependable do you think this job applicant will be, 7) how likely is this job applicant to quit during the next five years, 8) would you interview this applicant for the job, and 9) if the hiring decision was up to you, would you hire this applicant?

Experimental Design

The study was a 2 within x 2 x 2 x 2 between factorial design. Exercise was the within factor, with each subject rating an active job applicant and a sedentary job applicant. The exercise variable was randomly ordered between the two occupations. The between factors were
subject sex, applicant sex, and applicant age. The occupations (vocational rehabilitation counselor and loan officer) were considered random variables. The hiring application form evaluation task manipulated three independent variables, a) applicant age (young 31/old 51), b) applicant sex (male/female), and c) applicant exercise (active/sedentary).

Procedure

Each subject was given a packet of papers consisting of a) consent form, b) instruction sheet, c) two job descriptions, d) two of eight hiring application forms, e) two rating sheets consisting of a 9-point rating scale for nine questions regarding job applicant characteristics, f) an evaluation of job characteristics form, and g) information regarding subject's age, sex, education level, work experience, and if they had ever been responsible for hiring employees. The subject was then asked to think of himself or herself as a personnel manager who must rate the two job applicants for two different occupations as to his/her hireability. The subjects read the job descriptions and hiring application forms and then rated their perceptions of the applicant on a Likert-like 9-point scale for nine job characteristics.

A filler-task was included that evaluated characteristics of a person actually performing each of the occupations that the job applicants were applying for. The
filler-task was not analyzed.
RESULTS

Analysis of Items on Rating Scale

Principal Component Analysis. An assessment of the relationships among the dependent variables was done. A Kaiser-Meyer-Olkin measure of sampling adequacy was performed to test for sufficient common variance before a principal component analysis (PCA) was performed. Results showed a sampling adequacy of .833, which was sufficient to justify a PCA.

A PCA was then used to reduce the nine rating questions on each occupation to a smaller number by identifying any underlying relationships among the nine questions. Two factors were identified from the observed variables and one variable appeared unrelated directly to either of the two factors (See Tables 1 & 2). Among the 270 subjects, the perceived differences between the vocational rehabilitation counselor job applicant was composed of two factors accounting for 60.4% of the variance and labeled aspects of good performance (good performance) and aspects of poor performance (poor performance). Perceived differences between the loan officer job applicants among the 270 subjects was composed of two factors accounting for 62.3% of the variance and were also labeled aspects of good performance and aspects of poor performance. A varimax orthogonal rotation was used to maximize the variance of the loadings within factors, across the variables.
Table 1
Varimax Rotated Factor Matrix for Vocational Rehabilitation Counselor

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>&quot;Good&quot;</th>
<th>&quot;Poor&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIRE</td>
<td>0.83</td>
<td>-0.09</td>
</tr>
<tr>
<td>PERFORMANCE</td>
<td>0.82</td>
<td>-0.15</td>
</tr>
<tr>
<td>QUALIFICATION</td>
<td>0.79</td>
<td>0.03</td>
</tr>
<tr>
<td>MOTIVATION</td>
<td>0.75</td>
<td>-0.23</td>
</tr>
<tr>
<td>INTERVIEW</td>
<td>0.74</td>
<td>-0.28</td>
</tr>
<tr>
<td>DEPENDABLE</td>
<td>0.60</td>
<td>-0.36</td>
</tr>
<tr>
<td>ILLNESS</td>
<td>-0.15</td>
<td>0.84</td>
</tr>
<tr>
<td>ACCIDENT</td>
<td>-0.10</td>
<td>0.84</td>
</tr>
<tr>
<td>QUIT</td>
<td>-0.12</td>
<td>0.48</td>
</tr>
<tr>
<td>Alpha</td>
<td>0.87</td>
<td>0.58*</td>
</tr>
</tbody>
</table>

Note. Factors 1 and 2 account for 60.4% of variance
*Alpha does not include 'quit' variance
<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>&quot;Good&quot;</th>
<th>&quot;Poor&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERFORMANCE</td>
<td>.80</td>
<td>-.22</td>
</tr>
<tr>
<td>HIRE</td>
<td>.78</td>
<td>-.06</td>
</tr>
<tr>
<td>INTERVIEW</td>
<td>.77</td>
<td>-.19</td>
</tr>
<tr>
<td>MOTIVATION</td>
<td>.77</td>
<td>-.23</td>
</tr>
<tr>
<td>DEPENDABLE</td>
<td>.76</td>
<td>-.32</td>
</tr>
<tr>
<td>QUALIFICATION</td>
<td>.67</td>
<td>-.12</td>
</tr>
<tr>
<td>ILLNESS</td>
<td>-.15</td>
<td>.85</td>
</tr>
<tr>
<td>ACCIDENT</td>
<td>-.15</td>
<td>.85</td>
</tr>
<tr>
<td>QUIT</td>
<td>-.22</td>
<td>.58</td>
</tr>
<tr>
<td><strong>Alpha</strong></td>
<td>.87</td>
<td>.68*</td>
</tr>
</tbody>
</table>

Note. Factors 1 and 2 account for 62.3% of variance

*Alpha does not include 'quit' variance
Reliability Analysis. A reliability analysis (See Table 3) of the derived factor for the vocational rehabilitation counselor showed factor 1 (good performance) at alpha = .87 and factor 2 (poor performance) at alpha = .58. The reliability analysis of the derived factor for the loan officer (See Table 4) showed factor 1 (good performance) at alpha = .87 and factor 2 (poor performance) at alpha = .68. The characteristic of "quitting" appeared to be a separate entity from factor 1 and factor 2 for both occupations (counselor = .24 and loan officer = .37) due to relatively low factor loading. Deleting it from the poor performance scale improved that scale's reliability. "Quitting" was therefore analyzed separately.

Summing and Transforming Scale Scores. Based on these analyses, three dependent variables were used (aspects of good performance, aspects of poor performance, and likelihood of quitting). Good performance was the sum of the six job dimension ratings; poor performance had two job dimension ratings; likelihood to quit was based on one job dimension rating. Because these three dependent variables (scales) had different numbers of items, each summed scale score was transformed to a standard score with a mean of 50 and a standard deviation of 10.

Tests of Hypotheses

A 2 within $x$ 2 x 2 x 2 between-subjects repeated analysis of variance using the SPSS MANOVA procedure was
Table 3
Reliability Analysis Scale for Factors 1 and 2 for Vocational Counselor

<table>
<thead>
<tr>
<th>Factor 1 Good Performance</th>
<th>Item Total</th>
<th>Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
</tr>
<tr>
<td>PERFORMANCE</td>
<td>.74</td>
<td>.83</td>
</tr>
<tr>
<td>QUALIFICATION</td>
<td>.62</td>
<td>.85</td>
</tr>
<tr>
<td>HIRE</td>
<td>.72</td>
<td>.83</td>
</tr>
<tr>
<td>MOTIVATION</td>
<td>.68</td>
<td>.84</td>
</tr>
<tr>
<td>INTERVIEW</td>
<td>.68</td>
<td>.84</td>
</tr>
<tr>
<td>DEPENDABLE</td>
<td>.56</td>
<td>.86</td>
</tr>
</tbody>
</table>

Alpha = .87

<table>
<thead>
<tr>
<th>Factor 2 Poor Performance</th>
<th>Item Total</th>
<th>Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACCIDENT</td>
<td>.49</td>
<td>.35</td>
</tr>
<tr>
<td>ILLNESS</td>
<td>.50</td>
<td>.34</td>
</tr>
<tr>
<td>QUIT</td>
<td>.24</td>
<td>.76</td>
</tr>
</tbody>
</table>

Alpha = .58
Table 4  
Reliability Analysis Scale for Factors 1 and 2 for Loan Officer

<table>
<thead>
<tr>
<th>Factor 1 Good Performance</th>
<th>Item Total</th>
<th>Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Correlation</td>
<td></td>
</tr>
<tr>
<td>PERFORMANCE</td>
<td>.73</td>
<td>.84</td>
</tr>
<tr>
<td>QUALIFICATION</td>
<td>.55</td>
<td>.87</td>
</tr>
<tr>
<td>HIRE</td>
<td>.66</td>
<td>.85</td>
</tr>
<tr>
<td>MOTIVATION</td>
<td>.70</td>
<td>.84</td>
</tr>
<tr>
<td>INTERVIEW</td>
<td>.69</td>
<td>.85</td>
</tr>
<tr>
<td>DEPENDABLE</td>
<td>.73</td>
<td>.84</td>
</tr>
</tbody>
</table>

Alpha = .87

<table>
<thead>
<tr>
<th>Factor 2 Poor Performance</th>
<th>Item</th>
<th>Correlation</th>
<th>Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCIDENT</td>
<td>.58</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>ILLNESS</td>
<td>.57</td>
<td>.49</td>
<td></td>
</tr>
<tr>
<td>QUIT</td>
<td>.37</td>
<td>.77</td>
<td></td>
</tr>
</tbody>
</table>

Alpha = .88
performed on three dependent variables partitioned from the PCA (factor 1 = good performance, factor 2 = poor performance, and the unrelated variable quitting) that were associated with the subject ratings of the nine job characteristics. The independent variables good and poor performance were included in the same repeated measure ANOVA to determine if subjects rated differentially on those two factors. For hypotheses one and two the good and poor performance dimensions were used as repeated measures because systematic differences by performance level were not expected. Hypotheses three and four treated exercise as the repeated dimension. The independent variables were applicant age (young = 31/old = 51), applicant sex (male/female), applicant exercise (active/sedentary), and subject sex (male/female). Results of an evaluation of assumptions of normality and homogeneity of variance were satisfactory.

**Hypothesis 1.** It was predicted that job applicants who were young would be rated higher on job dimensions considered important in selection. An ANOVA of between-subject effect of applicant's age showed no significant effect ($F[1,240]=.90, p=.345$) when subjects rated applicants on the good and poor performance factors. An ANOVA of between-subject effect on age for the quit factor showed no significant effect ($F[1,248]=2.07, p=.151$). Means and standard deviations are presented in Table 5 (high score
Table 5

Mean Scores and Standard Deviations for Applicant Age, Gender, and Exercise

<table>
<thead>
<tr>
<th></th>
<th>Good Perf</th>
<th>Poor Perf</th>
<th>Quit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
<td>Mean</td>
</tr>
<tr>
<td><strong>AGE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Young Job Applicant</td>
<td>50.27</td>
<td>50.8</td>
<td>49.30</td>
</tr>
<tr>
<td></td>
<td>(sd.=8.36)</td>
<td>(sd.=8.03)</td>
<td></td>
</tr>
<tr>
<td>Old Job Applicant</td>
<td>49.80</td>
<td>49.26</td>
<td>50.55</td>
</tr>
<tr>
<td></td>
<td>(sd.=8.03)</td>
<td>(sd.=9.23)</td>
<td></td>
</tr>
<tr>
<td><strong>GENDER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male Job Applicant</td>
<td>50.04</td>
<td>50.00</td>
<td>50.35</td>
</tr>
<tr>
<td></td>
<td>(sd.=8.64)</td>
<td>(sd.=8.54)</td>
<td></td>
</tr>
<tr>
<td>Female Job Applicant</td>
<td>50.02</td>
<td>50.04</td>
<td>49.49</td>
</tr>
<tr>
<td></td>
<td>(sd.=7.71)</td>
<td>(sd.=8.86)</td>
<td></td>
</tr>
<tr>
<td><strong>EXERCISE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active Job Applicant</td>
<td>50.48</td>
<td>50.69</td>
<td>49.64</td>
</tr>
<tr>
<td></td>
<td>(sd.=8.63)</td>
<td>(sd.=8.47)</td>
<td></td>
</tr>
<tr>
<td>Sedentary Job Applicant</td>
<td>49.57</td>
<td>49.32</td>
<td>50.23</td>
</tr>
<tr>
<td></td>
<td>(sd.=7.70)</td>
<td>(sd.=8.87)</td>
<td></td>
</tr>
<tr>
<td>Older Active Job Applicant</td>
<td>49.84</td>
<td>49.37</td>
<td>50.49</td>
</tr>
<tr>
<td></td>
<td>(sd.=9.91)</td>
<td>(sd.=10.34)</td>
<td></td>
</tr>
<tr>
<td>Older Sedentary Job Applicant</td>
<td>49.86</td>
<td>49.29</td>
<td>50.64</td>
</tr>
<tr>
<td></td>
<td>(sd.=8.58)</td>
<td>(sd.=10.14)</td>
<td></td>
</tr>
</tbody>
</table>

*Poor performance dimension has been reversed, high scores indicate less likely to be ill or have an accident.*

Note. Means are T-scores
indicates more favorable decision).

**Hypothesis 2.** It was predicted that male job applicants would be rated higher on job dimensions considered important in selection. An ANOVA of between-subject effects for gender showed no significant finding ($F_{[1,240]} = .00, p = .969$) for the good or poor performance factors. An ANOVA of between-subject effects for gender examining the quit factor also revealed no significant effect ($F_{[1,248]} = .64, p = .424$). Means and standard deviations are presented in Table 5.

**Hypothesis 3.** It was predicted that exercise would influence a subject's perception of an applicant's future job performance regardless of the applicant's age or gender resulting in a higher rating on job dimensions considered important in selection for active job applicants. An ANOVA of within-subject effects for exercise yielded no significant difference ($F_{[1,260]} = .26, p = .608$) for the good performance factor, but was significant for the poor performance factor ($F_{[1,255]} = 14.94, p < .005$), with active applicants being rated less likely to be ill or have an accident than sedentary applicants. An ANOVA of within-subjects effects for exercise examining the quit factor showed no significant effect ($F_{[1,265]} = .28, p = .597$). Mean scores and standard deviations are presented in Table 5.

**Hypothesis 4.** It was expected that older job applicants who were actively exercising would be rated
higher on job dimensions considered important in selection than older non-exercising job applicants. An ANOVA of within-subject effects for exercise among older applicants of both gender showed no significant effect for the good performance factor ($F[1,128]=0.01, p=.914$) or for the poor performance factor ($F[1,126]=0.01, p=.923$). There was no significant effect for the quit dimension ($F[1,132]=0.01, p=.920$).

**Supplemental Findings**

While testing for hypotheses, several subject sex effects were discovered. An ANOVA of between-subject effects for gender, regardless of applicant's age, showed a main effect for subject sex ($F[1,248]=4.57, p=.034$) in the quit dimension. Male subjects rated male and female job applicants less likely to quit in both occupations than did female subjects. Mean scores and standard deviations are presented in Table 6.

An ANOVA of between-subject effects for exercise regardless of job applicant's age or gender showed a main effect for subject sex ($F[1,265]=5.88, p=.016$) for the quit dimension. Male subjects rated active and sedentary job applicants less likely to quit than did female subjects. Mean scores and standard deviations are presented in Table 6.

An ANOVA of within-subject effects for exercise looking at just older job applicants showed an interaction effect of
Table 6
Mean Scores for Subject Sex Effects

<table>
<thead>
<tr>
<th>Subject Sex Effect for Gender</th>
<th>Male Subjects</th>
<th>Female Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
</tr>
<tr>
<td>Likely to quit</td>
<td>51.12 (sd.=8.24)</td>
<td>48.76 (sd.=7.99)</td>
</tr>
<tr>
<td>Likely to quit - Active</td>
<td>51.49 (sd.=8.43)</td>
<td>48.17 (sd.=7.74)</td>
</tr>
<tr>
<td>Likely to quit - Sedentary</td>
<td>50.82 (sd.=8.13)</td>
<td>49.58 (sd.=8.33)</td>
</tr>
<tr>
<td>Good Perf - Older Male Appl</td>
<td>47.86 (sd.=8.51)</td>
<td>51.51 (sd.=8.24)</td>
</tr>
<tr>
<td>Good Perf - Older Female Appl</td>
<td>51.04 (sd.=7.01)</td>
<td>49.07 (sd.=7.68)</td>
</tr>
<tr>
<td>Likely to quit - Active Older</td>
<td>52.45 (sd.=8.23)</td>
<td>47.24 (sd.=7.20)</td>
</tr>
<tr>
<td>Likely to quit - Sedentary Old</td>
<td>51.22 (sd.=8.89)</td>
<td>52.62 (sd.=8.47)</td>
</tr>
</tbody>
</table>

Note. Means are T-Scores
subject sex by applicant sex ($F[1,128]=3.94, p=.049$) for the good performance factor. Male subjects rated older male applicants lower than older female applicants on good performance. In contrast, female subjects rated older male applicants higher than older female applicants on good performance. Mean scores and standard deviations are presented in Table 6.

An interaction was also found for subject sex by exercise ($F[1,132]=5.27, p=.023$) for likelihood to quit. Male subjects rated older active applicants less likely to quit than sedentary older applicants. Female subjects rated older active applicants more likely to quit than older sedentary applicants.
DISCUSSION

Hypotheses. The results of the current study failed to find a significant difference on any of the job dimensions as a function of age. These results are in direct conflict with Perry and Varney's (1978) research which had shown college students' ratings toward older workers to be lower than for younger workers in areas of catching onto new ideas and making valuable future contributions.

Several reasons may account for the current study's finding. First, older applicants were not directly compared to younger applicants, which according to Lee & Clemon's (1985) finding decreases the possibility of negative ratings toward older individuals. Second, a between-subject design was used and Kite and Johnson's (1988) meta-analysis findings demonstrate that between-subject designs decrease negativity toward older workers. Third, it is possible that the two jobs used in the study (vocational rehabilitation counselor and loan officer) were not perceived as stereotypically age-related occupations by the subjects. Specifically, the subjects perceived an older worker performing just as well as a younger worker. A fourth possible reason for a lack of significant finding may have been due to the subtle nature of age stereotyping. Levin's (1988) work on age stereotyping of college student's evaluations suggests age discrimination can present itself in a subtle form that is hard to document.
The current study also failed to find differences between men and women on ratings of job dimensions for selection also in contrast to previous research. This may have been due to the design of the job application hiring forms. Forms were constructed such that pertinent qualifications of the applicant matched the job requirements, thereby reducing any ambiguity in the subject's perception. This would support Gerdes & Garber's (1983) finding that negative stereotyping can be reduced if specific job requirements match qualifications of the applicant. Terborg's (1977) research review also supports a decrease in gender discrimination when pertinent information about the job applicant is available to the decision maker.

The third hypothesis centered around whether a subject's perception of exercise for both young and old applicants of both genders would result in a higher rating on job dimensions in selection. While there were no significant effects for the good performance factor or likelihood to quit, there was a significant finding for the poor performance factor (likelihood to be ill and likelihood to have an accident). Subjects rated applicants who had an active lifestyle less likely to be ill and less likely to have an accident than applicants who were sedentary (See Table 5).

The purpose of the third hypothesis was to see if subjects perceived exercise as being a factor in job
dimension rating for selection of an applicant. It was expected that the relevance of exercise to job performance, already identified by the amount of wellness programs present in American industry, would result in a variance in subject ratings. The findings did show subjects identified exercise as being a factor in the likelihood of an applicant being ill or having an accident (which is promising). With health care issues being critical to American industry, the perception of exercise as a factor in reducing absenteeism is a positive point that could help decrease negative stereotyping in regard to age or gender.

The lack of any significant age effects for hypothesis four demonstrated the subjects had not perceived any differences between older job applicants who actively exercise and those who were sedentary. An objective of the paper had been to see if subjects identified exercise as a potential benefit in their ratings of older job applicants. The importance of exercise as a factor in rating older job applicants of both genders has been covered in the literature review of this paper.

**Additional Findings: Subject Sex.** Although no hypotheses were developed apriori for subject sex, the possibility of different perceptions by male and female raters toward male female applicants was considered important to examine. Subject sex effects were found for the variables gender and exercise in the quit dimension.
Male subjects rated male and female job applicants less likely to quit in both occupations than did female subjects, and male subjects rated active and sedentary job applicants less likely to quit than did female subjects. No information on the application form gave any indication of the likelihood of an applicant quitting. The quit variable may be perceived as behaviorally orientated, requiring subjects to extrapolate from the hiring application form and project onto future performance patterns of the applicants.

In addition to subject main effect, there was an interaction effect of subject sex by applicant sex for good performance. Male subjects rated older male applicants lower on the good performance factor than older female applicants. In contrast, female subjects rated older male applicants higher on good performance factor than older female applicants. There was also an interaction effect of subject sex by exercise in regard to the quit dimension. Male subjects rated older active applicants less likely to quit than sedentary applicants. Female subjects rated older active applicants more likely to quit than older sedentary applicants. These subject sex findings support previously documented studies (O'Connell & Rotter, 1979; Levin, 1988) that have shown differential perceptions by male and female subjects. Future studies are needed to explore male and female differential perceptions of age and sex dimensions since negative stereotyping of these variables appears to
have taken on a more subtle form that appears to more
difficult to document. It seems unlikely that sex
discrimination has disappeared. The focus of this paper did
not deal with subject sex differences in the perception of
age, gender, and exercise stimuli in evaluating hiring
application forms, yet the results show is existence.

**Recommendations and Implications for Future Research.**
A different research design for future studies than the one
used in this paper may enable subjects to perceive
differences in older job applicants of both genders. A
suggestion would be video presentations of applicants
interviewing for jobs. A visual image of an older job
applicant who is discussing his/her exercise lifestyle may
present the potential benefits of exercise to future job
performance in a more effective way. Clearly the EEOC would
likely find the use of exercise as a selection criterion an
illegal discriminator; however, once an employee had been
hired the research evidence would appear to support programs
encouraging exercise among its employees.

Another possible suggestion would be to use actual
personnel managers. Cleveland and Berman's (1987) research
was the source of support for this paper's use of college
students as subjects. They had found no differences in age
perception of jobs between college students and actual
managers. The perception of exercise may be different
though--it may be important to obtain subjects who have had
experience working with older workers who are physically active compared to sedentary.

Although most of the hypotheses did not demonstrate the results predicted, subjects did perceive exercise to be a factor in some of the job dimensions used in this study. There is still a great need to examine any factors that affect personnel selector's perceptions of older male and female job applicants. It is believed that future studies focusing on the perception of exercise by personnel selectors in differentiating job performance abilities of older job applicants would help reduce negative stereotyping of the older workforce.
Appendix A

Consent Form

Dear Participant:

I am a psychology student at Cal State San Bernardino collecting data as a requirement to complete my thesis for a Masters in Psychology. I am investigating the nature of decision-making involved in the hiring of potential job applicants. This project is being conducted under the supervision of Dr. Jan Kottke of the Psychology Department.

I would like you to participate in the study by acting as a personnel selector who is reviewing job applicants' Hiring Application Forms. You will be asked to evaluate 2 job applicants, each for a different occupation. Your evaluation will be placed on a Rating Scale Sheet consisting of 9 short questions. In addition, you will be asked to evaluate job characteristics pertaining to a person presently working in the two different occupations. Finally, you will be asked to complete a short Subject Information Survey. The entire process should take 10 to 15 minutes and your responses will remain confidential, only group results will be reported.

If you decide not to participate in this study, please return the forms blank. You are free to discontinue your participation at any time during the procedure. Simply return your forms incomplete.

If you would like the results of this project, please contact the student listed below. A written report of the findings can be sent to you.

If you have any questions or concerns regarding the research, please contact either the student listed below or Dr. Jan Kottke at (714)880-5585.

Thank you in advance for your assistance in my research.

Sincerely,

Sally A. Kaiser
(714)275-5272

Signature __________________________________________ Date ________________

Tear here if you want to leave an address for results to be sent to you.

Name ______________________________________________

Address ____________________________________________

_________________________________________ Return separately to the researcher
Appendix B

Instruction to Subjects

Your packet contains:
1. 2 Job descriptions
2. 2 Hiring Application Forms
3. 2 Rating Scale Sheets
4. Evaluation of Job Characteristics Form
5. Subject Information Survey

Instructions:

Begin by reading the first job description thinking of yourself as a personnel manager who must rate the applicant as to his/her hireability.

Proceed to the Hiring Application Form and place your evaluation on the Rating Scale Sheet provided. The Rating Scale Sheet requires you to rate the job applicant on 9 areas according to how well you perceive the job applicant will perform on the job. Repeat the process for the second job. After you have completed both your ratings, evaluate what characteristics you feel a person should have to perform each of the jobs on the Evaluation of Job Characteristics Form. Finally, please fill out the Subject Information Survey attached. All information will be confidential and anonymous.
Appendix C

RE-TRAIN, INC.

Job Title: Vocational Rehabilitation Counselor
Accountable to: Supervisor of Vocational Rehabilitation Department

Qualifications:
1. College graduate - BA degree
2. Post-college training in area of vocational counseling services
3. Minimum one year experience providing vocational counseling to handicapped individuals.
4. Medical knowledge (terminology) of different types of disabilities (i.e. mental illness, alcohol abuse, hearing and visual impairments)

Job Description:
Counsels handicapped individuals to provide vocational rehabilitation services: Interviews and evaluates handicapped applicants, and confers with medical and professional personnel to determine type and degree of handicap, eligibility for service, and feasibility of vocational rehabilitation. Determines suitable job or business consistent with applicant's desires, aptitudes, and physical, mental and emotional limitations. Plans and arranges for applicant to study or train for job. Assists applicant with adapting to his/her new lifestyle throughout rehabilitation program. Promotes and develops job openings and places qualified applicant in employment.
Appendix D
Retraining Job Application Form

RE-TRAIN, INC.
A VOCATIONAL REHABILITATION CENTER

Position Applying For: Vocational Rehabilitation Counselor

General Information (Please Type or Print)

Name: Last, First, Middle Initial
Goodman, Debra

Address: Number, Street, Apartment or Space Number
5405 Mt. Helen Ave

City, State, Zip Code
Wichita, Kansas 67215

Phone: Home Telephone (Include Area Code)
(316) 405-1169

Phone: Work Telephone (Include Area Code)
(316) 802-0022

Age:
51

Education (College or University Education)

Name and Address of College Attended
Wichita State University
999 University Ave
Wichita, Kansas 67210

Bachelor of Arts (BA) Degree
Psychology
Yes

Wichita State University
999 University Ave
Wichita, Kansas 67210

Masters Degree
Vocational Rehabilitation

Relevant Experience

Name of Employer or Company
V.A. Medical Center

Address, City, State, Zip Code
5134 Intervale Street Topeka, Kansas 69517

Your Job Title
Caseworker for 8 years

Describe Your Duties
Interviewed applicants applying for job training program; evaluated client skills and developed vocational profile; assisted in job training seminars; made referrals to job training programs established with community agencies.

Hobbies/Interests
Reading, Gardening
Appendix E

Rating Scale Sheet

**Personnel Selection for Vocational Rehabilitation Counselor**

**Applicant:**

Please rate the applicant on the following characteristics:

1. How qualified is the job applicant to perform the job:
   - Not at all
   - Fully qualified
   1 2 3 4 5 6 7 8 9

2. How motivated would this job applicant be to perform the job:
   - Not at all
   - Highly motivated
   1 2 3 4 5 6 7 8 9

3. How likely would this job applicant be absent due to illness:
   - Not at all
   - Very likely
   1 2 3 4 5 6 7 8 9

4. How likely would this job applicant be absent due to a job-related accident:
   - Not at all
   - Very likely
   1 2 3 4 5 6 7 8 9

5. Based on the job applicant's qualifications, what level of job performance would you expect to see?
   - Low performance
   - High performance
   1 2 3 4 5 6 7 8 9

6. How dependable do you think this job applicant will be?
   - Not very dependable
   - Very dependable
   1 2 3 4 5 6 7 8 9

7. How likely is this job applicant to quit during the next 5 years:
   - Not likely
   - High probability
   1 2 3 4 5 6 7 8 9

8. Would you interview this applicant for the job:
   - Definitely not
   - Not sure
   - Yes, definitely
   1 2 3 4 5 6 7 8 9

9. If the hiring decision was up to you, would you hire this applicant:
   - Definitely not
   - Not sure
   - Yes, definitely
   1 2 3 4 5 6 7 8 9
Appendix F

PRAIRIE MUTUAL BANK

Job Title: Loan Officer
Accountable to: Manager of Prairie Mutual Bank

Qualifications:
1. College graduate - BA degree
2. Post-college training in banking finance
3. Minimum one year experience as a loan officer in a banking facility

Job Description:
Interviews applicants, and examines, evaluates, and authorizes or recommends approval of customer applications for lines or extension of lines of credit, commercial loans, real estate loans, consumer credit loans, or credit card accounts; Interviews applicant and requests specified information for loan application. Analyzes applicant financial status, credit, and property evaluation to determine feasibility of granting loan or submits application to credit analyst.
Appendix G
Prairie Job Application Form

EMPLOYMENT APPLICATION

PRAIRIE MUTUAL BANK

<table>
<thead>
<tr>
<th>POSITION APPLYING FOR:</th>
<th>Loan Officer</th>
</tr>
</thead>
</table>

GENERAL INFORMATION (PLEASE TYPE OR PRINT)

<table>
<thead>
<tr>
<th>Name: Last, First, Middle Initial</th>
<th>Home Telephone (Include Area Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Williams, Fred</td>
<td>(316) 443-3321</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address: Number, Street, Apartment or Space Number</th>
<th>Work Telephone (Include Area Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2205 Montana Ave</td>
<td>(316) 885-9292</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City, State, Zip Code</th>
<th>Age:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wichita, Kansas 67215</td>
<td>31</td>
</tr>
</tbody>
</table>

EDUCATION (College or University Education)

<table>
<thead>
<tr>
<th>Name and Address of College Attended</th>
<th>Major Course of Study</th>
<th>Did You Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wichita State University 999 University Ave</td>
<td>BA Degree Finance</td>
<td>Yes X No No</td>
</tr>
<tr>
<td>Wichita State University 999 University Ave</td>
<td>Masters Degree Finance</td>
<td>Yes X No No</td>
</tr>
</tbody>
</table>

RELEVANT EXPERIENCE

<table>
<thead>
<tr>
<th>Name of Employer or Company</th>
<th>Telephone No. (Include Area Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topeka National Bank</td>
<td>(316) 885-9292</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address, City, State, Zip Code</th>
<th>Year Job Title</th>
<th>Describe Your Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>4102 Wilshire Blvd Topeka, Kansas 69518</td>
<td>Loan Officer for 8 years</td>
<td>Interviewed applicants for line of credit, or extension of present line of credit; personally evaluated customer's application for credit pertaining to consumer credit loans, commercial loans, real estate loans, or credit cards; analyzed feasibility of loan to applicant's financial status, credit, and property evaluation.</td>
</tr>
</tbody>
</table>

HOBBIES/INTERESTS

Long distance running, participated in 2 marathons, aerobics
Appendix H

Rating Scale Sheet

Personnel Selection for Loan Officer

Applicant:

Please rate the applicant on the following characteristics:

1. How qualified is the job applicant to perform the job:
   - Not at all
   - Fully qualified
   1  2  3  4  5  6  7  8  9

2. How motivated would this job applicant be to perform the job:
   - Not at all
   - Highly motivated
   1  2  3  4  5  6  7  8  9

3. How likely would this job applicant be absent due to illness:
   - Not at all
   - Very likely
   1  2  3  4  5  6  7  8  9

4. How likely would this job applicant be absent due to a job-related accident:
   - Not at all
   - Very likely
   1  2  3  4  5  6  7  8  9

5. Based on the job applicant's qualifications, what level of job performance would you expect to see?
   - Low performance
   - High performance
   1  2  3  4  5  6  7  8  9

6. How dependable do you think this job applicant will be?
   - Not very dependable
   - Very dependable
   1  2  3  4  5  6  7  8  9

7. How likely is this job applicant to quit during the next 5 years:
   - Not likely
   - High probability
   1  2  3  4  5  6  7  8  9

8. Would you interview this applicant for the job:
   - Definitely not
   - Not sure
   - Yes, definitely
   1  2  3  4  5  6  7  8  9

9. If the hiring decision was up to you, would you hire this applicant:
   - Definitely not
   - Not sure
   - Yes, definitely
   1  2  3  4  5  6  7  8  9
Appendix I

Evaluation of Job Characteristics

Please rate by circling how true the following characteristics should be of the person performing each of the two jobs used in this study.

Scale:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never or almost never true</td>
<td>Usually not true</td>
<td>Sometimes but infrequently true</td>
<td>Occasionally true</td>
<td>Often true</td>
<td>Usually true</td>
<td>Always or almost always true</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vocational Rehab Counselor</th>
<th>Loan Officer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

Conscientious
Independent
Sympathetic
Assertive
Sensitive to needs of others
Reliable
Strong personality
Understanding
Forceful
Compassionate
Truthful
Have leadership abilities
Willing to take risks
Warm
Adaptable
Dominant
Tender
Conceited
Tactful
Aggressive
Gentle
Conventional
Appendix J

Subject Information Survey

Age: ___________

Sex: Male _____ Female _____

Education Level:

Year in College    Graduate Student
1  2  3  4 _____

Work Experience:

Number of years    Full Time _____ Part Time _____

Have you ever been responsible for the hiring of employees?

yes _____ no _____

if yes, number of hires made in your work experience ____
Appendix K

Debriefing Form

Dear Participant,

Thank you for your participation in this research. The specific purpose of this investigation was to gather information on "perceptions" people have regarding age-related and gender-related issues in the decision making process and to see if exercise compared to a sedentary lifestyle made any difference in the hiring process. Please help us avoid incorrect data by keeping the nature of this study confidential for the next 2 months.

The workforce in our country is shifting to an older population (over 45 years). This older population includes many women who are working outside the home. Human resource literature has pointed out the need to study the perceptions of personnel selectors regarding age-related and gender-related issues to prevent discrimination in the workplace. Due to the recent emphasis by American businesses to promote wellness programs within their organizations, this study wanted to see if a lifestyle that included exercise would make any difference in how a job applicant was perceived.

If you have any questions or concerns regarding this research, please contact either the student listed below or Dr. Jan Kottke who is supervising the research.

Sally A. Kaiser
(714)275-5272

Dr. Jan Kottke
(714)880-5585

Thank you,

Sally A. Kaiser
REFERENCES


