1997

# Perceptions of control and equality in relationships, and implications for the gender differential in physical and psychological health outcomes / by Sherry L. Grace.

Grace, Sherry L.

# INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

**The quality of this reproduction is dependent upon the quality of the copy submitted.** Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

**UMI**

A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor MI 48106-1346 USA
313/761-4700 800/521-0600

# Perceptions of Control and Equality in Relationships, and Implications for the Gender Differential in Physical and Psychological Health Outcomes

Sherry L. Grace ©

Thesis Supervisor: Dr. K. P. Satinder

Second Reader: Dr. J. Tan

(A Thesis in Partial Fulfilment of the Requirements for the Master of Arts Degree)

Lakehead University

1997

Table of Contents

Acknowledgements

I would like to take this opportunity to thank those who have contributed in some fashion to the completion of my thesis. First of all, I would greatly like to thank Dr. K. P. Satinder, and Dr. J. Tan for their editing time, patience, and invaluable ideas. Without their efforts and energies, this research endeavour would not have succeeded. I would also like to thank my family and friends for their unrelenting support throughout the research process.

## Abstract

With recent interest and awareness pertaining to inequality in our society, many concerns regarding gender and wellness have come to the forefront. Sex differences in distress may be explained by a discrepancy in perceptions of control and of equality between women and men, thereby resulting in the higher reported incidence of depression, psychological distress, and morbidity among women. The purpose of this study was to investigate the factors related to different health outcomes between the sexes. One hundred-eleven female, and 73 male undergraduate students participated in a study examining whether perceptions of control and equality were related to physical and mental health, and levels of non-clinical depression, regardless of the gender of the participants. Generally, among the university student population, social roles do not differ as a function of gender, and therefore the relationship among gender, perceived equality and control with health may not be confounded by social roles. The test battery consisted of the Belief in Personal Control Scale (BPCS), the Global Measure of Participants' Inputs, Outcomes, and Equity / Inequity, a twenty-two item symptom checklist measuring physical and mental health, the Centre for Epidemiological Studies Depression Scale (CES-D), as well as the Sex-Role Egalitarianism Scale. Results indicated that internal control was significantly related to all three health indices, suggesting that a belief in personal control is associated with lower levels of (1) non-clinical depression, and higher levels of (2) physical and (3) mental well-being. No gender differential in health was found in this sample. Furthermore, perceived internal control, and perceptions of equality with an intended life partner were significant predictors of these three health indices.

# Perceptions of Control and Equality in Relationships, and Implications for the Gender Differential in Physical and Psychological Health Outcomes

With recent consideration and awareness in regard to gender equality, many concerns related to gender and wellness have come to the forefront. It is clear from prior research that gender differentials in physical and psychological health come from the very nature of our society's organization, and each individual's lifestyle and history (Lips, 1988). As the incidence of morbidity, psychological distress and non-clinical depression are higher among women (Gove, 1984; Lips, 1988; Nolen-Hoeksema, 1989), the present study examined the prevailing hypothesis of social status and roles as predictors of these health outcomes.

Past research has shown that employment, marital status, and parenthood can influence health. Generally among students, the roles of employment, marital status and parenthood are similar for both sexes (Lips, 1988), and therefore the student population provides an arena to investigate the relationship among gender, equality / control and health, without being confounded by the roles outlined above. Among the university student population, past research has found similar levels of health regardless of gender (Feather, 1985; Hammen & Padesky, 1977). Therefore, students were requested to participate in the present study to test for the relationship between equality / control and health among women and men, and to avoid the confound of social roles. Findings related to the gender differentials in both psychological and physical health, and of the relationship

between perceptions of control / equality and wellness are reviewed, leading to the formulation of the research problem as investigated.

## The Gender Differential in Psychological Health

Studies by Gove (1972, 1984) indicated that cases of mental distress are greater in women than men. This includes anxiety, depression, and other related symptoms. For instance, in a meta-analysis Nolen-Hoeksema (1987) concluded that in North America and Europe, the average female-to-male ratio of depression is 1.95 : 1. Although there are several explanatory factors advanced to account for this effect, as outlined below, the reasons why women are more often mentally ill than men are still unclear and inconclusive (Wilhelm & Parker, 1994). The following section outlines the discussions attempting to account for such a gender differential. Among the explanations offered for such findings are biological, artifactual/sociological, psychological, psychosocial factors, or power and status differentials between the sexes.

### Biological Bases of the Mental Health Differential

Due to the pervasive evidence indicating a high prevalence of mental distress among women, researchers have looked to biological factors to account for this effect. Two specific agents have been forwarded to establish this notion: hormonal levels and genetic bases. Hormonal changes in levels of estrogen and progesterone in women have been implicated in mental distress, during the premenstrual period, postpartum period, and menopause. In terms of genetic factors, a mutant gene on the female X chromosome is thought to increase the likelihood that women inherit mental ill-health (Nolen-Hoeksema, 1987). However, the biological causation of the preponderance of mental distress among

women has not been consistently supported in the literature. Since this is not the focus of this thesis, the reader is referred to Paykel (1991) for further discussion of this issue.

Artifactual/Sociological Explanations

Research conducted under this rubric contends that sex differences in psychological distress and depression are not real; they only represent an inflation of female rates, or underrepresentation of male rates of these symptoms (Nolen-Hoeksema, 1987). According to these hypotheses, the actual prevalence of depression and psychological distress are equal among women and men, but women perceive, acknowledge, report, communicate and seek help for these difficulties more frequently than men (Lips, 1988). Therefore the gender differential in health exists due to artifactual factors unrelated to health.

Other explanations forwarded to account for the higher incidence of health difficulties among women include gender bias in the mental health system (Cook, Warnke & Dupuy, 1993; Ritchie, 1994), more prevalent symptom expression among women (men may express their symptoms in a physical rather than psychological fashion) (Thomas & Williams, 1991), sex differences in patterns of help-seeking (Robertson & Fitzgerald, 1992), lower socioeconomic status among women (Nolen-Hoeksema, 1987), and gender bias among diagnosticians (Wilhelm & Parker, 1994). Other hypotheses include women's greater time and access to health care, the notion that women are more in tune with their bodies, or that they are socialized to acknowledge and report symptoms at a lower threshold than men (Lips, 1988). However, these explanations have not received consistent support in the past (Nolen-Hoeksema, 1987).

Psychological Explanations

It is suggested that learned helplessness, as well as the female gender role propagates depression in women. In terms of Seligman's (1975) learned helplessness theory, psychological distress is engendered in individuals who have low expectations for success, feel hopeless, and do not feel that they can take control to achieve desired outcomes. Perhaps the socialization of women purports a higher risk for such symptoms (Rosenfield, 1980). For instance, women may receive more 'helplessness training' over their lifetime than men. Hence, women expect that their actions will be less successful at generating desired outcomes than men's, and women may also be more prone to the maladaptive explanatory style of attributing negative events to internal, stable, and global causes (Nolen-Hoeksema, 1987). Therefore, if women are socialized to maintain the expectation that they are helpless in controlling the environment, this may be a factor in the higher incidence of mental distress among women.

Based on the findings with the Bem Sex-Role Inventory (Bem, 1974), low levels of masculinity in both men and women has been correlated with depression (Feather, 1985; Grimmell & Stern, 1992; Steenbarger & Greenberg, 1990; Williams & D'Alessandro, 1994). This implies that traditional gender typed women (i.e. high level of feminine traits and a low level of masculine traits) are more prone to psychological distress, whereas traditionally male-typed and androgynous individuals (who are high in levels of masculine traits), are less likely to experience psychological distress. Unfortunately, traditionally masculine qualities are more idealized in our society, to the detriment of women's mental wellness (Lips, 1988). From the original hypothesis that

androgynous individuals experienced the greatest levels of well-being, and through the masculinity model as outlined by Grimmell and Stern (1992), it has been found that the better predictor of psychological adjustment is the degree to which an individual meets a personal gender-role ideal. This would suggest that those individuals who place value on the possession of male qualities, for instance, and do possess these qualities, would experience better health.

Psychosocial Explanations of the Mental Health Differential

More recent work looks to psychosocial roles as possible causative agents of the gender differential in psychological distress (Lips, 1988). The psychosocial role perspective has been found to have the greatest support in the literature (Rosenfield, 1980). Studies show that married women (Gove, 1972; Hughes & Galinsky, 1994; Weissman & Klerman, 1977), women with young children (Gore & Mangione, 1983; Hughes & Galinsky, 1994), women lacking paid employment (Baruch & Barnett, 1986; Hughes & Galinsky, 1994; Weissman & Klerman, 1977), and those with low income or social status (Al-Issa, 1982; Wheaton, 1980) all have a higher incidence of psychological distress. What is it about these factors that affect mental health?

It has been suggested that the more meaningful roles in which one is involved, the greater the level of well-being (Franks & Stephens, 1992; Piechowski, 1989). Although multiple involvements can enhance mental health, it is the quality of these involvements which is the pertinent variable (Lane & Meleis, 1991). "Men and women appear to experience equivalent levels of distress when they hold the same numbers and types of roles," yet "...structural inequalities in role occupancy appear to produce status differences

in distress..." (Thoits, 1986, p. 259). For instance, women in our society often take more responsibility in the home, and less often hold gainful employment outside the home. It is suggested that the gender differences in psychological distress are due to the fact that men and women hold different roles, of different quality and quantity (Franks & Stephens, 1992; Piechowski, 1989). This implies that women's roles may create a higher propensity for distress, because their value is either underestimated or ignored.

Overall, males and females who occupy qualitatively and quantitatively similar roles do not differ significantly in mental health. For example, research findings indicate that after controlling for education, employment status, occupational status, and marital status, the correlation between depression and gender drops by 45% (Amenson & Lewinsohn, 1981). In another study controlling for the effects of employment and marital status, the effect of gender was reduced to nonsignificance (Piechowski, 1989).

Another psychosocial point of view relevant to the link between gender and health is the support gap. Here, a discrepancy between the emotional and social support desired, and the support that is received has been linked to nonclinical depression in married women (Lin, Woelfel & Dumin, 1986). Although this contention has not been tested in a gender comparative fashion, or in terms of unmarried women or men, it should be noted that unequal emotional outcomes in relationships, and a lack of control over amount of support reciprocated by another, may be a factor in the gender differential in psychological health (Andersen, 1993). In the context of the present study, the discrepancy in support may be linked to gender roles, and subsequently health outcomes.

In conclusion, it is more likely that the quality of one's roles determines levels of mental health (Bullers, 1994). Therefore, it is suggested that women's roles which offer less perceived control and / or equality, are likely to result in less well-being. Power and status inequalities may also account for the gender differential in psychological health.

Status / Power

Women are disadvantaged in our society, and their work undervalued. Low social status, legal and economic discrimination coupled with the internalization of role expectations among women are all disadvantages which may lead to helplessness, dependency, chronically low self-esteem, low aspirations, and ultimately clinical depression (Weissman & Klerman, 1977). Rosenfield (1980) provides an explanation for the differential in psychological distress between genders whereby "males and females have different predispositions to depression because of the way they are socialized, the different sex-role expectations to which they are supposed to conform, and/or the power/status differences between males and females" (p. 34). This socialization may also cause differential expression of anger. Due to lower power in inequitable relationships, females tend to exhibit depressive symptoms (which may also be expressed somatically due to anger suppression), whereas males more actively and overtly express their anger (Lips, 1988; Thomas, 1989). Furthermore, it has been argued that as a consequence of gender role socialization, women are less well prepared than men to cope effectively with life stress events, which renders women more susceptible to the negative impact of life stress and, consequently more vulnerable to psychological distress (Thoits, 1987). This notion is based on research showing that women are more highly concerned with

communion and nurturance, whereas men are more instrumental in their coping strategies (Lips, 1988). Therefore, the socialization of gender inequality supports the propagation of power/status inequities, and consequently of gender differentials in health.

Popular thought contends that mind and body are highly interconnected, suggesting that poor mental health will result in poor physical health. Instead of assuming that illness has either a physical or psychological cause, theorists presume that illness results from the transactions and interdependence of biological, psychological, and social systems (Myers, 1989). Accordingly, it is also presupposed that psychological and physical health are closely related. Hence, the relationship between gender and physical wellness is examined next.

## The Gender Differential in Physical Health

Research findings show that mental distress can suppress the immune system (Myers, 1989), "making an individual more susceptible to disease" (Bird & Fremont, 1991, p. 115). The holistic concept assumes that what ails the mind may also be expressed somatically. Men have higher rates of mortality, whereas women display higher rates of morbidity (Gove, 1984). Specifically, "women have higher overall rates of physical illness, disability days, physician visits, and prescription and non-prescription drug use than men" (Verbrugge, 1989, p. 283). Except for impairments, life-threatening chronic diseases, and long-term major disability due to chronic conditions, the rates of poor health are significantly higher for women than men (Verbrugge, 1989). There are several explanations offered in the literature to account for the gender differential in physical health. The following section will discuss how psychosocial factors affect the

immune system, and the effects of psychosocial roles in the gender differential in physical health. Finally, this section will show that from the review of available literature, it is impossible to conclude whether the gender differential in physical health, as was shown with psychological health, is an artifact based on other variables or is in fact a legitimate difference in wellness between women and men.

Effects of Psychosocial Factors on the Immune System

Disease susceptibility is linked, to a certain extent, to psychosocial factors such as stress, perceived control, dysphoria, adverse life experiences, vulnerability, anxiety, hostility, loneliness, and clinical depression (Kaplan, 1991; Myers, 1989). These factors can exert an immunosuppressive effect on the body's defence mechanisms to unwanted foreign agents. Anxiety, maladjustment, and dependency have all been shown to relate to low natural killer cell activity (Kaplan, 1991).

There are several hypotheses related to the mechanisms by which psychosocial factors physically affect the body. These include a central nervous system change via hypothalamic-pituitary hormonal stimulation, or the sensitivity of the autonomic nervous system to emotional states which may affect the immune system. The T and the B cells are affected by the above distressing factors, leading to a decrease in the effectiveness of the immune system (Goldstein, 1994; Jemmott & Locke, 1984).

Many studies have reported a strong correlation between psychosocial factors and immune system functioning, with diverse populations and different operationalizations of effects on the immune system (Kaplan, 1991). For example, familial and marital relations which were of poor quality have "been associated with greater distress and a poorer

response on antibody to Epstein-Barr virus, and lower helper-suppressor ratios" (Kaplan, 1991, p. 911). Unemployment in both women and men, as well as academic stress have further been shown to depress the immune system (Kaplan, 1991). In terms of interpersonal status and power, Jemmott and Locke (1984) reported that subjects who were experiencing events which challenged their power status had higher scores of mental distress, scored higher on a need for power, and lower on natural killer cell activity. It was also found that "the combination of a great need for power and a high degree of restraint in expressing the power motive characterized individuals whose rates of salivary secretory immunoglobulin A continued to decline following high-stress periods (examinations) rather than recovering as in all other subjects" (Kaplan, 1991, p. 916). Finally, elderly individuals who are placed in nursing homes and perceive a loss of control over their lives, tend to die sooner than do those elderly individuals who take more active control in decision-making (Myers, 1989). It can be concluded that immunocompetence is strongly associated with an individual's ability to have control in one's psychosocial environment (Kaplan, 1991).

Psychosocial Roles and Physical Health

Women in general appear to be at a greater risk than men for many factors which affect health, such as inactivity, nonemployment, job hazards, and stress. This is likely due to the lack of value placed on women's roles in the private and public spheres (Verbrugge, 1989). For example, women run differential risks in morbidity due to factors stemming from labor force participation, life style, psychological and emotional states (Anson, Paran, Neumann, & Chernichovsky, 1993). Furthermore, certain qualities of women's

marital and work roles are associated with subsequent morbidity, such as a lack of equality in decision making and companionship (Hibbard & Pope, 1993). When these psychosocial risks are controlled for, the female excesses in morbidity disappear (Verbrugge, 1989). Therefore, gender differentials in minor physical illness are more likely due to societal constraints on gender roles.

Gender Differentials in Physical Wellness - Artifactual or Legitimate?

Physical health differentials among men and women appear to be functions of gender. However, the notion has also been put forth that the gender differential in physical health is due to artifacts such as differential access to health care, symptom reporting differences due to the greater sensitivity to bodily cues as stereotyped in women, or to gender bias in the health care system (Macintyre, 1993). There has been great debate in the literature as to whether these gender differentials in self-reported symptomatology are due to greater sensitivity to ailments in women, or to actual differences between the sexes, as outlined in the earlier section concerning artifact explanations for the gender differential in psychological health.

Anson et al. (1993) hypothesize that role-related aspects of the female gender-role renders time and travel accessibility to report health symptoms, and procures greater negative perception of these symptoms. For example, it is more acceptable for women than men to communicate their symptoms and feelings to others. Or perhaps the 'sick role' is more compatible with women's roles, and women have greater time flexibility to seek medical attention (Corney, 1990). However, once such role-related risks are controlled for, gender differences in health evaluation and symptom reporting are no

longer significant (Anson et al., 1993). Therefore, research supports the notion that gender differences in physical health are partially due to women's roles and lack of power, due to the fact that once factors are accounted for, gender differences in health and health reporting largely disappear (Anson et al., 1993).

Summary

The literature is inconclusive in explaining gender differences in both physical and mental health. There has been a move in current literature to examine the effects of role quality on health. Perhaps it is the differences in equality and control in men and women's social roles and status which lead to the gender differential in health.

## Perceptions of Equality, and Perceived Control

The constructs of perceived equality, attitudes toward equality, and perceived control are being evaluated in the present study to determine why a gender differential in both physical and mental health exists. Based on hypotheses forwarded in previous research (Bullers, 1994; Walster et al., 1978), these variables are likely to explain what it is about the quality of one's status and roles which contribute to the gender differential in health, as discussed below.

Perceived control refers to one's perception of being able to affect the outcome of life circumstances and relationships (Bullers, 1994). A perception of equality is operationalized as one's sense of receiving the same outcomes, be these psychological, social, or economic, from one's relationships with friends, family, and an intended life partner, as what one perceives their friends, family or intended life partner receive from the same relationship (Walster, Walster & Berscheid, 1978). The Sex-Role Egalitarianism

Scale (King & King, 1993) assesses the participants' attitudes regarding women and men assuming nontraditional roles. These concepts are being utilized in the present study because perceived control deals with the process of experience in relationship to others and outlooks on life circumstances in general, while equality deals with one's perceptions of the outcomes of relationships with others, and what these outcomes should ideally be. The following sections will elaborate more precisely on equality and perceived control.

Perceptions of Equality

The achievement of a society based on equality between the sexes requires an examination into the current state of affairs, that is inequality. Inequality is one of the most familiar facts of social life, and a pervasive element in social relationships that is well known, even to the most casual observer (Grabb, 1990). In general, inequality deals with the gap between the advantaged and disadvantaged. Of greatest importance here, are those consequential differences that become structured; that are built into the ways that people interact with one another on a recurring basis. Inequality is primarily based on the differential treatment people are accorded because of socially defined characteristics, such as gender (Grabb, 1990). The eradication of gender inequality can be defined as the equal representation of women and men in all spheres of life; public power, control and production of resources, acquisition of knowledge and skills, individual value and role in family relationships, and physical and mental health (Young, Fort & Danner, 1994).

It is not difficult to discern why women in our culture experience, and to a great extent perceive, inequality to a larger degree than do men. Surveys of interpersonal transactions between males and females indicate that the male is more powerful (Lips,

1988). Male dominance is due to the almost uniform and universal ascription of higher status to the masculine, over and above the feminine (Lips, 1988). Unfortunately, the effect of status inequality and nonegalitarian attitudes on the power relations of males and females extend throughout the entire behavioural domain, thereby affecting mind and body.

Reward level is a great determinant of the well-being of a relationship (Walster et al., 1978). There are two theories which explicate such a phenomena : equity and equality theory (Walster et al., 1978). Equity theory contends that partners receive proportionate outcomes relative to their inputs. For instance, the differential between inputs and outputs as compared to those of a partner, can result in an overbenefitted, underbenefitted, or equitable status for each party. However, the strong focus on inputs to relationships has received little support in relation to relationship quality and health (Reynolds, Remer, & Johnson, 1995). Equality theory, on the other hand, suggests that "distribution of rewards in relationships is most satisfying when allocation is made equally" (Cate, Lloyd, & Henton, 1985, p. 716). Therefore, equality theorists presume that equal outcomes from one's relationships, in terms of love, status, services, goods, information and money, are the most pertinent predictors of well-being in relationships with others.

Throughout the literature, inputs to relationships have meagre predictive value in determining outcomes of relationships, or well-being. Equality theory has received greater support throughout the literature, as it focuses solely on outcomes (Reynolds, Remer, & Johnson, 1995). Equality theory has been utilized in the present study as it also is more strongly related to gender differences throughout the literature. For example, it has been

shown that female socialization supports egalitarian outcomes in terms of interpersonal processes, affiliation, and balance (Reynolds, Remer, & Johnson, 1995), and that equally positive outcomes in these realms promote well-being.

Inequality, or lack of equally positive relationship outcomes has been linked with ill-health (Reynolds, Remer, & Johnson, 1995). Unequal relationships where there is a discrepancy between what individuals receive as an outcome in a relationship relative to a partner, causes distress in individuals, both physiologically, and psychologically (Walster et al., 1978). For example, women's and men's work and family roles generally result in unequal economic and social rewards, which are, in turn, associated with different health outcomes (Bullers, 1994). For the remainder of this thesis, the term equality will be used to describe relationships with equally positive outcomes. The term inequality will be used to refer to relations where the subject overbenefits, underbenefits, or an equally negative outcome status is perceived.

Attitudes toward gender-role egalitarianism are hypothesized to be related to physical and psychological health as well. A study by Grimmell and Stern (1992) shows that psychological adjustment is related to equal value placed on the possession of both masculine and feminine traits. Furthermore, a study by Duffy (1994) found that the practice of health-promoting behaviours among single parents was predicted by attitudes toward egalitarianism. Studies have not specifically examined the relationship between the attitudes toward gender-role egalitarianism and health outcomes in a university sample, yet as equality has been found to relate to well-being, the study of these attitudes is likely to enhance the understanding of this relationship.

Perceived Control

Perceived control is also being increasingly recognized as a central concept in the understanding of relationships between experiences and health. Life occurrences are especially stressful when one appraises them as both negative and uncontrollable, thus stimulating the release of stress hormones (Myers, 1989). The relationships between perceived control and health outcomes are outlined in the following statement:

> "Experimental investigations indicate that control over aversive stimulation has profound effects on automatic, endocrine and immunological responses, and may influence the pathological processes implicated in the development of cardiovascular disease, tumour rejection and proliferation, and the acquisition of gastrointestinal lesions. Clinically, control and lack of control have been identified as relevant to the experience of pain, anxiety and depression. In the field of psychosocial epidemiology, interesting observations are emerging that relate health to control over job parameters and other aspects of people's lives. The enhancement of personal control is also a common thread running through many intervention techniques, from behaviour therapy and preparation for stressful medical procedures to providing opportunities for self-determination among the institutionalized elderly, and increasing employee participation in decision making" (Steptoe & Appels, 1989, p. ix).

As indicated above, the utility of the construct of 'perceived control' has been pervasive across several different areas of inquiry.

In general, the literature concurs that positive role quality is associated with better health (Gecas, 1989; Steptoe & Appels, 1989). Yet the psychological appraisal of roles and their outcomes, and how they affect health has been largely unspecified. There is a move in the current literature to investigate 'perceived control' as a variable underlying an individual's experience within their roles, and their subsequent health outcomes (Conway, Vickers & French, 1992; Rodin & Ickovics, 1990). Perceived control is defined as "a psychosocial construct that describes beliefs about one's ability to affect desired outcomes and avoid undesired outcomes" (Bullers, 1994, p. 14). The link between control and psychological and physiological health factors have been well supported in the literature (Kaplan, 1991; Mirowsky & Ross, 1989; Steptoe & Appels, 1989). In particular, Larson (1989) contends that "...a generalized sense of control is important to well being in daily life" (p. 775).

Within the present thesis, the perceived control construct has been broken into two constructs of internal control and extreme control. These will be explained in further detail in the measurement of perceived control methods section. As perceived control and equality in relationships are intimately tied to well-being, gender differentials in both physical and psychological health are reviewed, in order to link these constructs together.

## Effects of Perceived Control and Equality on Physical and Mental Health

The central theory behind the notion of perceived equality and control, has appeared in the literature for the past several decades under the different labels of power, personal control, locus of control, mastery, learned helplessness, or self-efficacy (Bullers,

1994; Steptoe & Appels, 1989). In this context, it is appropriate to review the literature linking the constructs of equality and control with health, while taking into account its interaction with gender. Feminist theory regarding equality and health is outlined, followed by a review of the literature linking equality and control with psychological and physical health outcomes.

The Feminist View

In general, power and control have emerged as key concepts in many major theories of social inequality (Grabb, 1990). "Most writers in feminist theory trace gender inequality not to innate biological differences, for example, but to socially defined and structured differences between men and women, especially those that arise because of differential access to the means or sources of power" (Grabb, 1990, p. 199). Women tend to be relegated to subordinate roles within the home, providing care and support to male wage earners, and living in a situation of dependence on their male partners for survival or economic well-being. Furthermore, along with economic and political power, most theories that address the problem of gender inequality place considerable weight on what can be called 'ideological domination': the power that ideas, beliefs, and cultural values can have in establishing and institutionalizing the control of one gender over the other (Grabb, 1990). It appears that internalized perceived lack of control, along with gender inequality, among women at a societal level, could be a major variable at play in gender differences in health (Branch, 1992).

Many studies have shown the effect of a patriarchal social structure on women's health. For instance, Horwitz (1982) found that occupying roles of varying degrees of

control affects rates of mental distress. Regardless of gender or marital status, "people who occupy powerful roles have fewer symptoms of distress than those who are powerless... regardless of whether they conform to or deviate from role expectations" (Horwitz, 1982, p. 607). Turner and Noh (1983) contend that occupying a lower social class likely results in a lower sense of personal control, and therefore in a higher mental health risk in women. This is due to a world-view of the self as causally ineffectual in relating to others (Lips, 1988). In contrast, the experience of greater personal control acts to buffer psychological distress in middle-class women (Turner & Noh, 1983). "Conditions of high demands and low power appear to raise women's rates of anxiety and depression by affording them lower actual control, and thus a lower sense of control" (Rosenfield, 1989, p. 87).

Psychological consequences

There are many negative psychological consequences on women's health arising from a lack of perceived control and perception of inequality (Gecas, 1989). Negative psychological consequences are due to the low degree of control people have over undesirable occurrences in their lives (Rosenfield, 1989). More specifically, a lack of control can result in "constraints on coping ability, diminished authority over decisions, threats to status and self-esteem, lessened opportunity to learn new skills and inappropriateness of coping" (Syme, 1989, p. 8). Theories on perceived control suggest that gender differentials in psychological distress may be due to differing levels of power in relationships (Bullers, 1994). The learned helplessness paradigm from Seligman (1975) can be translated to suggest that women have higher rates of depression due to the

knowledge that their actions cannot produce predictable and rewarding responses from their environment. Perceived control is relevant to susceptibility to psychological distress based on the learned helplessness model (Abramson, Seligman, & Teasdale, 1978), and to research showing psychological distress to be associated with a lack of perceived life control (Johnson & Sarason, 1978; Myers, 1989).

Physical consequences

Perceptions of inequality and lack of control also contribute to physical ill-health. Response to unequal conditions "involves increased sympathetic activity, increased activation of the pituitary - adrenal axis, release of endogenous opiates, enhanced turnover of brain monoamines and suppression of the immune system" (Dantzer, 1989, p. 277). For instance, it has been shown that following the induction of a fear response, production of adrenaline and noradrenaline is increased, unless the subject is provided with a sense of control over the feared situation (Frankenhaeuser, in Levy, 1976). The inequalities in terms of personal costs and benefits in traditional relationships in particular, are likely to result in negative physical health outcomes (Levy, 1976). This suggests that the limitations and inequalities for women in traditional family roles create a discrepancy of power and prestige, whereby psychosomatic symptoms are a likely result (Levy, 1976).

The inability to control undesirable circumstances is significantly associated with decreased immune competence (Kaplan, 1991). "The considerable research demonstrating the effects of perceived control on health and well-being strengthens the assertion that research should examine this variable in relation to human immunocompetence" (Jemmott & Locke, 1984, p. 103). Therefore, the knowledge that one has negligible control over

one's environment, is closely interconnected with lower levels of physical health. Research findings support the notion that the loss of control, and perceptions of inequality in social situations can induce long-lasting physiological changes (Koolhaas, & Bohus, 1989).

Summary

Bullers (1994) concludes that the mediating effects of perceived control / equality in the role / health relationship is generally supported in the current literature, although research in this realm is still relatively new. She states that "these and previous findings suggest that perceived control may be an important construct in the social role / health process" (p. 27). Mirowsky and Ross (1989) point out that one's sense of control over one's own life, and perceptions of (in)equality in relationships might be the most important variable in increasing or reducing distress, affecting psychological well-being, and accounting for at least half of all minor health symptoms. Hence, it can be concluded that past literature links the control / equality concept with both physical and mental health outcomes.

## Rationale of the Present Study

It is currently hypothesized that differences in health outcomes are due to factors related to gender (Lips, 1988). However, it is not clear what characteristics associated with gender are responsible for the differences. Following the propositions of past researchers (Bullers, 1994; Horwitz, 1982), the view that the gender differences in physical and mental health may be largely determined by perceived equality and/or control

differentials is a promising direction for future research. The basis of this research then, is to determine whether the differences in somatic symptoms, nonclinical depression and general psychological distress are related to the constructs of perceived control / equality, regardless of gender.

The present study examined the relationship of perceptions of control and equality to psychological and physical health in male and female university students. As studies utilizing this population have found no significant differences in health between females and males (Feather, 1985; Hammen & Padesky, 1977; Parker, 1979), it is posited that the existence of gender differentials in health in older, more heterogeneous non-university populations may be due to the disparity in roles and expectations, causing women and men to perceive highly contrary levels of equality and/or control. In light of the disparity in older populations, university students are being recruited because psychosocial factors are fairly equal between both sexes, presumably due to the fact that amid this homogenous sample "roles, values, and expectations for men and women are relatively more similar than in other populations" (Hammen & Padesky, 1977, p. 610). Prior to questionnaire completion, subjects were asked not to proceed if they are married, employed full-time, or have children, although this was not independently verified. As roles have been found to confound results relating to gender and health, the effects of these social roles were controlled for in order to investigate whether the differential in health is due to a lack of equality / control, rather than differences in social roles associated with gender per se.

In addition, this study is also unique in that the symptomatology in the health questionnaire is expected to measure internalizing as well as externalizing expression of

depressive and anxious symptoms. As mentioned earlier, it has been suggested that artifactual explanations, such as the expression of more externalizing symptomatology by men and more internalizing symptoms by women, may account for the gender differential in health. Women have been found to demonstrate higher prevalence rates of internalizing disorders such as depression, and anxiety; whereas males display higher rates of externalizing personality, or antisocial disorders such as substance abuse (Rosenfield, 1980; Veroff, Douvan, Kulka, 1981). The 22-item symptom checklist utilized in the present study is expected to tap into male patterns of distress, in addition to the introspective questions included in the questionnaire directed at the female participants, to control for possible gender confounds in measurement of distress symptoms (Veroff, Douvan & Kulka, 1981).

In summary, the following hypotheses were postulated: greater self-reported non-clinical depression, greater general psychological ill-health, along with greater negative physical health are posited to be significantly positively associated with a greater lack of perceived control, a greater perception of inequality in relationships with family, friends and an intimate partner, and less egalitarian attitudes toward women. Furthermore, it was expected that positive health outcomes would be positively related to perceptions of equality and greater perceived internal and extreme control.

## Methods

### Participants

The sample for the present study included 184 undergraduate students (111 females, and 73 males) between the ages of 19 and 20 from an introductory psychology class and university residence. As 78.3% of the students at Lakehead University in first year are between the ages of 19-20 (Clarke, 1995), age criterion was stringent to control for possible age confounds. Students who were not between the ages of 19 and 20, who were married, employed full-time, or had children were excluded from the sample to control for the confounds of these role effects. Participants received one bonus point towards their course mark.

### Measurement

#### Measure of Well-Being

Physical and mental health were measured by the 22-item symptom checklist created by Veroff et al. (1981) (see Appendix A, section B). Of the twenty-two symptom items, half correspond to an assessment of subjective physical health status, and the other half correspond to subjective mental health status. Participants were requested to rate the perceived frequency of each specific symptomatology. Questions 1, 2, 4, 6, 9, 12, 14, 15, 16, 20, and 21 corresponded to the mental health variable, while the remaining questions corresponded to the physical health variable. A summary score was generated for mental and physical health status; each health score ranged from 11-44, with lower scores representing lower levels of health. Questions 1 through 18 requested participants to rate the frequency of how often they experience physical and mental health symptoms on a 4-

point scale. Questions 19-22 assessed physical and mental health on a dichotomous basis, requiring respondents to circle 'yes' or 'no'. For the purpose of scoring, less healthy responses are assigned a score of 2, and more healthy responses are assigned a score of 4, as outlined in Veroff et al. (1981).

In terms of psychometrics, three factors emerged from factor analysis of this assessment scale: ill health, psychological anxiety, and immobilization (Veroff et al., 1981). The ill-health factor has an internal consistency reliability estimate at .77, psychological anxiety has an interitem reliability value of .69, and the immobilization aspect has rather low internal consistency reliability, ranging from .46 to .50. This measure was employed in the present battery as it includes items to determine the presence of internalized (e.g. nightmares, nervousness) and externalized (e.g. problems with drinking or medications) psychological distress symptoms, as well as physical health status (e.g. shortness of breath, trouble sleeping, health problems). This test is a useful tool to assess the connection between subjective mental and physical health for men and women, and does distinguish between greater and smaller frequencies of these symptoms (Veroff, et al., 1981).

Measure of Nonclinical Depression

The Centre for Epidemiologic Studies Depression Scale (CES-D) was included in the questionnaire battery (see Appendix A, section C) to assess the presence of nonclinical depression specifically, and its relationship to equality and control (Radloff, 1977). It requests that participants rate how often in the past week they have experienced 20 different depressive symptoms. The components include: "depressed mood, feelings of

guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance" (Radloff, 1977, p. 386). Scores were rated on a scale from 0 to 3, for a possible range of scores from 0 to 60, with higher scores indicating more symptoms. A total score was used as an estimate of non-clinical depressive symptomatology (Radloff, 1977). The internal consistency of this scale was found to be .85, and test-retest correlations were in the moderate range (between .45 and .70). There is also evidence of reasonable discriminant, concurrent, and construct validity (Radloff, 1977). Although this test is not designed for clinical use specifically, it does discriminate between depressive patients and the general population (Radloff, 1977).

Perceived Control Measure

The Belief In Personal Control Scale (BPCS) was utilized in the present battery (see Appendix A, section D) to assess two dimensions of perceived control: the extent to which individuals believe their outcomes are produced from internal or external factors, and to assess the presence of a sense of extreme and unrealistic control (Berrenberg, 1987). The extreme control factor assesses the presence of perceived control to such a degree that individuals believe that they can control factors outside of the realm of personal control (i.e. the behaviour of others, chance events). The third factor, measuring the belief that God can be enlisted in the achievement of outcomes, was not included in the present battery because spirituality is not linked to the research question at hand. The measure as used in the present study consists of 36 questions, in which the participants rate the best way to describe their feelings on a 5-point Likert-scale. The scale is scored by summing the items, to provide a range of scores from 18 to 90 for each of the two

control factors, namely a perceived sense of internal control, and an extreme sense of control. The BPCS has excellent psychometric integrity, with internal consistency of .85 and .88 and test-retest correlations of .81 and .85 for each dimension respectively, and also has excellent construct validity (Berrenberg, 1987).

Perceptions of Equality

Equality was measured (see Appendix A, section F) by means of the Global Measure of Participants' Inputs, Outcomes, and Equity/Inequity (Walster, Walster, & Traupmann, 1978). The two questions in this measure which assess equality evaluate outputs in relationships, whereby participants are requested to rate their outcomes as well as their perception of the other party's outcomes. In other words, participants were requested to rate their sense of getting identical outcomes (be these psychological, social, or economic) from their relationships with others. On a scale ranging from +4 (extremely positive) to -4 (extremely negative), perceived outcome scores were collated in the realm of relationships relating to family, peers, and an intended life partner.

Scores were coded in four groups. Relationships whereby the participant perceived an equally positive outcome for themselves and either their family, friends, or intended partner were given a score of 0. In terms of unequal relationships, relationships whereby the participant perceived that she/he received more benefits from the relationship than the other (e.g. family, friends, or life partner) were assigned a score of 1, and relationships whereby the individual perceived she/he received less out of the particular relationship was assigned a score of 2. The final group, assigned a value of 3, consisted of relationships whereby an equally negative outcome was perceived. In previous research,

reliability indexes (Cronbach's alpha) showed a value of .87 for outcome scores (Reynolds, Remer, & Johnson, 1995).

Measure for Attitudes Toward Sex-Role Egalitarianism

The Sex-Role Egalitarianism Scale (SRES) "was developed to measure attitudes toward the equality of men and women, and contains items that require judgments about both women assuming nontraditional roles and men assuming nontraditional roles" (King & King, 1993, p. 3). The short-form KK contains 25 items covering judgments of gender-role equality in the domains of marital roles, parental roles, employment roles, social-interpersonal-heterosexual roles, and educational roles (see Appendix A, section E). Items 2 and 3 were altered slightly to reduce cultural bias. Item 2 originally referred to nursing, and question 3 to industrial training, but these items refer to engineering in the present questionnaire. A 5-point Likert-type scale was employed, from "strongly agree" to "strongly disagree", to assess the degree of egalitarian attitudes among participants, with higher scores denoting more egalitarian attitudes. "An accumulation of empirical findings supports the psychometric integrity of all forms of the SRES... and various estimates of reliability (internal consistency, test-retest, and alternate forms) have been uniformly high" (King & King, 1993, p. 4). Convergent, discriminant, and nomological validity are supported as well. A total of scores from each of the twenty-five items provided a range from 25-125, with higher scores representing more egalitarian attitudes (King & King, 1993).

This measure was included in the present test battery to go beyond measurement of equality via analysis of outcomes in specific relationships, by examining attitudes

regarding egalitarianism. It was intended to provide a wider look into the relationship between equality and health, over and above the perceptions of equality test (Walster, Walster, and Traupmann, 1978) as described earlier.

## Procedure

Students were given a very general explanation of the purpose of the study, and were told that they would be asked about their health and attitudes toward some of their relationships, and life situations. Students were informed that participation was voluntary, and that completion of the test battery would require approximately thirty minutes of their time. Confidentiality of their answers was assured. The questionnaire battery was distributed following regularly scheduled introductory psychology classes. Students either completed the surveys in the same classroom, or were permitted to take the questionnaires home for one week. In the latter case, questionnaire pick-up ensued in class one week following distribution. Several participants were also recruited from student residences. The participants name on the consent form (see Appendix B), which was collected separately from the questionnaire, was used to identify participants so that they could obtain bonus marks. Upon receipt of the completed questionnaires, a debriefing discussion ensued, and participants were provided with a debriefing form (see Appendix C), and an opportunity to receive research results.

## Results

The sample consisted in 184 undergraduate students, 111 being female and 73 male. All participants were between the ages of 19 and 20, single, childless, and full-time students without other full-time occupation, although this was not independently verified.

In terms of statistical analysis, a descriptive examination was carried out to present the mean scores, range, and standard deviations for physical health, psychological health, non-clinical depression, perceived internal and extreme control, and attitudes toward sex-role egalitarianism (SRES). Three independent *t*-tests were used to determine whether there were significant gender differences in non-clinical depression, physical and mental health. As the subsequent purpose of this study was to determine whether perceptions of equality, perceptions of control, and attitudes toward sex-role egalitarianism relate to health, Pearson's *r* were calculated to determine the correlation between these variables and the three health indices. Simultaneous multiple regression analyses were then employed to determine if perceptions of equality, control, gender and/or attitudes toward gender role egalitarianism were significant predictors of the three health indices. A minimum critical value of alpha = .05 was used to determine significance for each of the statistical tests.

A summary is presented in Table 1 which lists the range, mean score, and standard deviation for the continuous variables of health, perceived internal and extreme control, and attitudes toward sex-role egalitarianism, including a breakdown of these scores by sex. Levels of physical and mental health were

Table 1

Descriptive Statistics of Variables

| Variable | Range | Means | | |
|---|---|---|---|---|
| | | Overall | Male | Female |
| Non-clinical depression | 7-44 | 20.0(5.98) | 19.9 | 20.1 |
| Mental health | 21-44 | 34.6(4.57) | 35.0 | 34.3 |
| Physical health | 20-44 | 36.8(4.68) | 37.4 | 36.4 |
| Internal control | 43-90 | 67.4(8.70) | 66.97 | 67.7 |
| Extreme control | 40-85 | 62.0(8.90) | 62.8 | 61.4 |
| Sex role egalitarianism | 72-125 | 113.4(10.04) | 108.5* | 116.6* |

Note. N = 184

Values enclosed in parentheses represent overall standard deviation of scores.

*t-test results show significant difference ($p<.05$) in scores based on gender

quite high, indicating good health in the majority of study participants. Tests for homogeneity of variance with gender were performed and results showed Cochrans C (17, 10) = .49, p <.001 for physical health, and Cochrans C (17, 10)=.41, p<.001 for mental health. However, the skewness of these distributions may not be a detriment to the interpretation of results considering the size of the sample (N=184). Mean personal control scores were close to the norms provided by Berrenberg (1987). She reported a mean internal control score of 68.91 (SD = 8.35) and a mean extreme control score of 55.57 (SD = 7.56). When compared to the means shown in Table 1, it is evident that the mean extreme control score in the present sample is slightly higher than the mean reported by Berrenberg (1987), yet the internal control score in the present sample is close to the normative score. The equality measures were extremely skewed, with most participants perceiving an equally positive relationship (see Table 2) in relationships with family, friends and an intended life partner. Finally, the participants in this sample were very egalitarian in attitude (X=113.41), almost nearing the mean score of a sample of feminist women (X=119.4)(King & King, 1993).

The purpose of this study was to firstly determine whether a gender differential in health appeared in this university sample, and secondly to investigate whether perceptions of equality and control were more strongly related to health outcomes than was gender per se. The predictor variables in the present study consisted of gender (female/male), equality (equally positive, subject overbenefits, subject underbenefits, equally negative),

Table 2

Frequency Distribution of Participants Self-Reported Equality with Family, Friends, and an Intended Life Partner, and Mean Non-Clinical Depression Scores

| Variable | n | Mean Non-Clinical Depression Score | Mean Female Score (n=111) | Mean Male Score (n=73) |
|---|---|---|---|---|
| Equality within the Family | | | | |
| equally positive | 111 | 19.29 | 18.87(67) | 19.93(44) |
| subject overbenefits | 53 | 20.75 | 21.35(31) | 19.91(22) |
| subject underbenefits | 17 | 23.06 | 22.83(12) | 23.60(5) |
| equally negative | 3 | 17.00 | 28.00(1) | 11.50(2) |
| Equality with Friends | | | | |
| equally positive | 133 | 19.46 | 19.40(84) | 19.55(49) |
| subject overbenefits | 23 | 20.83 | 22.70(10) | 19.38(13) |
| subject underbenefits | 28 | 22.04 | 21.82(17) | 22.36(11) |
| equally negative | 0 | — | — | — |
| Equality with an Intended Life Partner | | | | |
| equally positive | 159 | 19.56 | 19.47(97) | 19.69(62) |
| subject overbenefits | 13 | 20.92 | 22.63(8) | 18.20(5) |
| subject underbenefits | 11 | 25.18* | 26.33(6) | 23.80(5) |
| equally negative | 1 | 25.00 | .00(0) | 25.00(1) |

Note. All reports are as perceived by the participant only, higher scores denoting greater levels of non-clinical depression.

*$p < .05$, LSD test.

two perceived control factors (internal control and extreme belief in personal control, both of which are continuous variables), and attitudes toward equality (SRES, continuous variable). Three health indices served as criterion variables, namely general physical health, mental health, and a specific nonclinical depression score (continuous variables). An examination into the relative contribution of the predictor variables in relation to health is analysed next.

Gender

To determine whether a gender differential in the three health indices existed in this sample, three independent *t*-tests were conducted. These *t*-tests compared gender within the three health indices of physical health, mental health, and non-clinical depression, which served as dependent variables. The results show that there were no significant differences between males and females in any of the three health indices.This indicates that the reported gender differential in non-clinical depression, psychological distress, or physical health did not exist in this university sample. Therefore, gender is not a differentiating factor in the examination of health.

Health

Pearson's correlations among the three health indices of (1) non-clinical depression, (2) physical health and (3) mental health, and the gender, equality, control, and attitudes toward equality variables were computed (see Table 3). However, as some variables are dichotomous, Spearman's correlations were also calculated. Both Pearson's and Spearman's correlations are reported where a large discrepancy in results exist.

The first perceived control factor, a self-reported sense of internal control, was significantly related to all three health indices. Specifically, the negatively significant correlation ($r = -.23$, $p < .01$) between non-clinical depression and internal control indicates that higher levels of internal control are related to lower levels of non-clinical depression. Higher internal control is also significantly and positively related to higher levels of mental well-being ($r = .33$, $p < .001$), and of physical health ($r = .37$, $p < .001$). This means that a perceived sense of internal control over life circumstances is significantly related to higher physical and psychological well-being. The second perceived control factor, assessing an extreme belief in personal control, was significantly and positively related to mental and physical health ($r = .25$, $p < .01$, and $r = .17$, $p < .05$ respectively), but not to non-clinical depression.

Perceptions of equality, as assessed via perceptions of relationships with family, friends and an intended life partner were also hypothesized to relate to well-being. As coded on a scale from 0 being most egalitarian, to 3 being most nonegalitarian, Pearson's $r$ indicates that perceptions of equality with an intended life partner were significantly related to all three indicators of health (see Table 3). In other words, those participants who perceived a more egalitarian relationship with an intended life partner, reported significantly greater levels of physical and mental health, and lower levels of non-clinical depression (non-clinical depression is reverse scored, i. e. higher scores denote lower levels of non-clinical depression).

Table 3

Pearson's Correlation Matrix

| Variable | Internal Control | Extreme Control | Non-clinical Depression | Equality-Family | Equality-Friend | Equality-Partner | Gender | Mental Health | Physical Health | Attitudes Equality |
|---|---|---|---|---|---|---|---|---|---|---|
| Internal Control | | | | | | | | | | |
| Extreme Control | .39*** | | | | | | | | | |
| Non-clinical dep. | -.23** | -.13 | | | | | | | | |
| Equality-Family | -.12 | -.02 | .14 | | | | | | | |
| Equality-Friend | -.22** | -.09 | .16* | -.002 | | | | | | |
| Equality-Partner | -.25** | -.19* | .23** | .16* | .10 | | | | | |
| Gender | .04 | -.08 | .01 | .001 | -.05 | -.06 | | | | |
| Mental Health | .33*** | .25** | -.51*** | -.23** | -.10 | -.26*** | -.07 | | | |
| Physical Health | .37*** | .17* | -.44*** | -.21** | -.02 | -.23** | -.11 | .63*** | | |
| Attitudes-Equality | .05 | -.01 | -.09 | .05 | -.03 | -.18* | .40*** | -.07 | -.05 | |

Note. N = 184

Female gender was coded higher than male

*p<.05

**p<.01

***p<.001

Perceptions of equality with family were significantly related to mental and physical health, but not to non-clinical depression, suggesting that those participants who perceived that they experienced greater levels of equality in relation to their family also experienced greater levels of physical and mental well-being. However, concerning the relationship between perceptions of equality with friends and health outcomes, this relationship reached statistical significance only in the case of non-clinical depression ($r = .16$, $p < .05$). Therefore, perceptions of equally positive outcomes within friend relationships are also related to low levels of non-clinical depression, yet not to the physical and mental health indices.

Gender and attitudes toward equality (SRES) were not significantly related to any of the health indices (see Table 3). However, upon perusing Spearman correlations, it appears that males rated themselves as significantly physically healthier than female participants ($r_s = -.162$, $p < .05$). In terms of the results surrounding health outcomes, one can conclude that health status is strongly linked to a perception of control, and perceived equality in relationships with family and an intended life partner in this university sample.

Equality

The equality variable assessed the degree to which the subject perceived an equally positive relationship, overbenefitted, underbenefitted, or equally negative relationship with (1) family, (2) friends, and (3) an intended life partner. In all three relationship cases, the overwhelming majority of subjects perceived an equally positive relationship (see Table 2). To examine the relationship between equality and health, three separate one way analyses of variance were performed respectively, with each of the three health indices as a

dependent variable. Results showed a significant difference in non-clinical depression scores based on participants' perceptions of equality with an intended life partner ($F$ (3, 180) = 3.51, $p < .05$). With further post-hoc analyses utilizing the test of least significant difference (LSD), it was found that in the context of relationships with an intended life partner, non-clinical depression was significantly higher where participants perceived that they would underbenefit from the relationship (means shown in Table 2). This shows that when individuals perceive they receive less from a relationship socially, psychologically, or economically, than their intended life partner, this may foster depressive tendencies. Analyses of variance among the other equality and health indicators were not significant.

Perceived Control

Perceived control was operationalized in two factors: (1) a sense of internal control, and (2) a sense of extreme control. In terms of the former (see correlations in Table 3), a sense of internal control was significantly linked with lower levels of non-clinical depression, and greater levels of physical and mental well-being. A sense of internal control was also significantly related to more egalitarian perceptions of outcomes in relationships with friends and an intended life partner. Moreover, as indicated by the multiple regression analyses (see Tables 4-6), perceived internal control has significant predictive value in mental and physical health outcomes. The importance of perceived internal control in relation to health outcomes has been strongly supported in this investigation.

The relationship between an extreme perception of personal control and health, however, is not so clear. A lack of association (see Table 3) exists between an extreme

belief in personal control and non-clinical depression ($r$= -.13, $p$ >.05), and the variable of extreme control furthermore lacks predictive value in determining health outcomes (see Table 4-6). Yet, a significantly positive relationship does exist between a belief in extreme control and physical and mental well-being, and a significantly negative relationship exists between extreme control and perceptions of equality with a life partner (see Table 3).

Attitudes Toward Equality

The measure of attitudes toward gender-role egalitarianism (SRES) did not correlate significantly with any of the three health indicators (see Table 3), suggesting that attitudes toward equality do not relate to health outcomes. Furthermore, as will be outlined, attitudes regarding equality are not significant in predicting health outcomes (see Tables 4-6). These results suggest that attitudes toward equality do not affirm the relationship between perceived equality and health outcomes. Attitudes toward gender-role egalitarianism did relate significantly to the other predictor variables of gender and equality in relations with an intended life partner however. Here, the correlation between gender and attitudes regarding equality show an $r$ = .40, $p$ <.001, supporting that (see Table 1), females (X=116.6) were significantly more egalitarian in attitude than males (X=108.5) in this sample ($t$ (182) = -5.82, $p$<.001). Participants who perceived they would experience an egalitarian relationship with an intended life partner (see Table 3) were significantly associated with higher egalitarian attitudes ($r$ = -.18, $p$ <.05).

Table 4

Summary of Simultaneous Regression Analysis for Variables Predicting Non-Clinical Depression

| Variable | B | SE B | B |
|---|---|---|---|
| Equality - Partner | 1.55 | 0.81 | 0.15* |
| Internal Control | -0.10 | 0.05 | -0.15 |
| Equality - Friend | 0.91 | 0.59 | 0.11 |
| Equality - Family | 0.87 | 0.59 | 0.59 |
| Attitudes-Equality | -0.05 | 0.05 | -0.08 |
| Gender | 0.75 | 0.95 | 0.06 |
| Extreme Control | -0.01 | 0.05 | -0.03 |
| (Constant) | 31.60 | 6.53 | |

Note. $R^2 = .11$

N = 184

*p<.05

Table 5

Summary of Simultaneous Regression Analysis for Variables Predicting Mental Health

| Variable | B | SE B | B |
|---|---|---|---|
| Internal Control | 0.12 | 0.04 | 0.22** |
| Equality - Family | -1.05 | 0.43 | -0.17* |
| Equality - Partner | -1.42 | 0.58 | -0.17* |
| Extreme Control | 0.06 | 0.04 | 0.12 |
| Attitudes-Equality | -0.04 | 0.03 | -0.09 |
| Gender | -0.45 | -0.69 | -0.05 |
| Equality - Friend | -0.16 | 0.43 | -0.03 |
| (Constant) | 28.90 | 4.74 | |

Note. $R^2 = .20$

N = 184

*p<.05

**p<.01

Table 6

Summary of Simultaneous Regression Analysis for Variables Predicting Physical Health

| Variable | B | SE B | B |
|---|---|---|---|
| Internal Control | 0.18 | 0.04 | 0.34*** |
| Equality - Family | -0.93 | 0.44 | -0.15* |
| Equality - Partner | -1.19 | 0.60 | -0.14* |
| Gender | -1.14 | 0.70 | -0.12 |
| Equality - Friend | 0.41 | 0.44 | 0.06 |
| Attitudes-Equality | -0.02 | 0.03 | -0.04 |
| Extreme Control | .00 | 0.04 | 0.00 |
| (Constant) | 27.64 | 4.83 | |

Note. $R^2 = .21$

N = 184

*p<.05

***p<.001

The Predictive Value of Gender, Equality, and Control in Determining Health Outcomes

Three simultaneous multiple regression analyses were run to assess the degree to which the two perceived control factors, the three equality relationships, and gender predicted a positive health outcome within each of the three health variables (see Tables 4-6). It was hypothesized that control and equality, but not gender, would be greater predictors of health. This was supported by the results reported in Tables 4-6.

Firstly, in predicting non-clinical depression (see Table 4), the seven predictor variables account for 11% of the variance ($R^2 = .11$, $F(7, 176) = 3.19$, $p<.01$) in this health indicator. The results also show that a perception of positively equal outcomes with an intended life partner is significantly predictive of lower levels of non-clinical depression. Secondly, in terms of mental health (see Table 5), 20% of the variance is accounted for by the seven predictor variables. A perception of internal control, and a perception of positive equality within the family, and an intended life partner are significant predictors of mental well-being, where the results showed an $F(7, 176) = 6.24$, $p < .0001$. Therefore, perception of an equally positive relationship with family and an intended life partner, and a sense of perceived internal control are significant predictors of general mental health. Finally, with the third health variable, physical health (see Table 6), a perception of internal control, and perception of equally positive outcomes with the family and with an intended life partner were again significant predictors, where the overall regression showed an $F(7, 176) = 6.49$, $p <.0001$. Here, 21% of the variance in physical health is accounted by the seven predictor variables.

It can be concluded that good health is significantly determined by a sense of perceived internal control, and a perception of positively equal outcomes in relationships with either family or an intended life partner. The fact that gender was not significant in predicting any of the three health variables (see Tables 4-6) alerts us to the possibility that the gender differential in health among more heterogeneous populations may be due to disparate levels of equality and control. This lends strong support to the hypotheses stated earlier in the rationale section. On a cautionary note, these results cannot be generalized to more heterogeneous populations until further replication is undertaken.

## Discussion

In general, from this study one can conclude that health outcomes are more strongly related to internal control and equality, than to gender. Gender was not significantly related to health, yet a perception of equality, and a high degree of internal control were significant predictors of health in the university population studied. A sense of internal control, and perception of equality in relation to an intended life partner were significantly related to all three health indicators of general mental and physical well-being, and low levels of non-clinical depression. Furthermore, a perception that one underbenefits from one's relationship with an intended life partner (i.e. inequality) leads to significantly higher rates of non-clinical depression. This section now turns to probe the findings related to each variable.

### Gender

More specifically, the findings of Feather (1985), and Hammen and Padesky (1977) as discussed in the literature review were replicated in the current study; male and

female students were not significantly different in mental, or physical health, or non-clinical depression. The higher incidence of depressive and anxious symptomatology and minor health ailments as found among women (Nolen-Hoeksema, 1987) is theoretically ascribed to psychosocial factors. These results suggest that it is specifically perceptions of equality and internal control which significantly accounts for health outcomes in minor ailments and psychological difficulties. Through the use of a population in which males and females are involved in heterogeneous roles, these hypotheses could be replicated to test the notion that mainstream society propagates this gender differential in health by disallowing women a sense of control within their life situation, and concerning the outcomes in their relationships.

Control

Bullers' (1994) contention that perceived control affects health was strongly supported. According to the results of multiple regression analyses, the most significant predictor of mental and physical health was the perception that one's outcomes are self-produced (i.e. high internal control). Significant correlations among perceived internal control, and all three health indices signify that a perception of internal control is significantly related to lower levels of non-clinical depression, and better physical and mental health. Furthermore, an extreme sense of personal control was also significantly correlated with mental and physical well-being.

Equality

Perceptions of equally positive outcomes in relation to an intended life partner were significantly predictive of, and significantly related to, all three health indices of

physical health, psychological distress, and non-clinical depression. Perceptions of equally positive outcomes in relationships with family were also significantly predictive of mental and physical well-being. Therefore equality is commensurate with health outcomes. More specifically, it was found that where participants perceived they underbenefitted psychologically, socially, or economically in their relations with an intended life partner, they reported significantly higher levels of non-clinical depression. This provides compelling support of the contention of Walster, Walster, and Berscheid (1978) that equality promotes mental health, but furthermore promotes general physical well-being as well.

There was a trend (see Table 2) that participants experienced greater levels of non-clinical depression as relationships were perceived as increasingly unequal. For instance, relationships whereby participants perceived an equally positive relationship were associated with the lowest levels of non-clinical depression, but as participants perceptions move to an overbenefitted, underbenefitted, to an equally negative relationship, levels of non-clinical depression rose. Here, even overbenefitting in a relationship may have negative health consequences. This trend may not have reached statistical significance due to the clustering in perceptions of equally positive relationships, leaving small cell sizes for the underbenefitted, overbenefitted and equally negative groups. The centrality of equally positive relationships in health status needs to be examined in future studies.

Responses concerning perceptions of equality in relationships with friends were not strongly related to health outcomes. Here, none of the participants reported an equally negative relationship. Perhaps due to the fact that there is much more choice

involved in these types of relationships, furthered by the fact that less commitment and emotional investment occurs in this capacity, the relationship between perceptions of equality with friends and health is not as poignant.

Overall, perceptions of relationships with an intended life partner were most indicative of health outcomes. The fact that participants were evaluating prospective relationships may have implications for advancing theoretical hypotheses. Considering the fact that the majority of relationships in today's society result in an underbenefitted status for women (Lips, 1988), it is ironic that the female and male participants in this study nevertheless believe that their relationship with an intended life partner will be equally positive in outcome. This statistically improbable conviction is nonetheless related to lower levels of non-clinical depression. Perhaps the equality measure is assessing self-esteem; these participants feel they can attain an equal state in future marital relationships. Or perhaps this links in with the concept of control; they feel they can control the nature of this future relationship. It can be said that one rarely intends an unequal relationship, yet a need to breakdown, or pinpoint social effects which contribute to perceptions of immunity to inequality in marital relations, will further the understanding of the nature of the association between perceptions of equality and health outcomes.

Attitudes Regarding Equality

Attitudes toward gender equality appeared to have no relationship with health. However, this variable did significantly relate to the other predictor variables of gender and equality with an intended life partner. Female participants did have significantly stronger attitudes toward gender-role egalitarianism, and those participants with

egalitarian attitudes also had significantly higher perceptions of equal outcomes in a future life relationship. Although perceptions of equality were indicative of health outcomes, perhaps attitudes regarding equality are not related to health in this sample due to near-universal idealist notions in the attainment of equality (regardless of its non-existence). Upon replication with equal number of female and male participants, it could be hypothesized that those individuals who perceive equality to be imperative, yet exist in non-egalitarian relationships, may experience health deficits. This may hold particularly true in the experience of women who underbenefit in the majority of North American society. On this note, this paper now turns to the limitations incurred through this research.

Limitations of This Study

Caution should be exercised when interpreting these results. Factors such as unequal cell sizes, generalizability, the lack of examination into the effects of ethnicity, culture, class and race, a typographical error in Section C of the questionnaire, and the lack of infallible establishment of sample role qualities obscure the positive impact of the present findings.

The most prominent limitation of this study lies in the presence of unequal cell sizes. Unfortunately, the unequal cell sizes for both gender and the equality variables may have implications for the results, in terms of less power and/or statistical results may have been drawn towards greater cell sizes. Moreover, a great majority of participants reported equally positive outcomes, especially in terms of relationships with an intended life partner. As mentioned above, considering the fact that a state of equality is quite

statistically improbable, the idea that participants are perceiving a 'different yet equal' relationship may need to be investigated. It is unclear at this juncture whether this represents a true state of affairs, or if social desirability may have played a large role in assessing the reward level and outcomes in subjects' recounting of relationships with family, friends, and an intended life partner. In future studies, more consideration should be given to assess perceptions of equality in a manner which will provide equal cell sizes for equally positive, overbenefitted, underbenefitted, and equally negative relationship outcomes.

It is not recommended that these results be generalized to a wider population. The sample is restricted in terms of its reliance on a non-random psychology subject pool, and the effects of ethnicity, social class, age, and culture were not studied. It is furthermore limited in that the test battery assessed non-clinical depression and morbidity only, so that findings may not be generalized in terms of other types of health variables, such as major or chronic illness, and psychopathology. This study also failed to look at equality in other types of relationships, such as relationships with authority figures, the extended family, and present intimate relationships. Perhaps these relationships would be more strongly related to health, as the perceptions of equality in affinities with friends had limited value.

An error exists within the questionnaire in the test for non-clinical depression (see Appendix B, section C). The instructions prompted participants to rate how often they had experienced any of 20 depressive traits during the previous week. The first response option was less than one day per week, yet, the actual response scale to be circled by the participant read more than one day per week (>1). There is a possibility here for data

contamination with the typographical error. The fact that the response scale has a continuum from less than one day per week, to 5-7 days per week may have aided participants to respond appropriately however.

Finally, at the point of questionnaire distribution, it was requested of students not to complete the questionnaire if they were outside the 19-20 age range, if they were married, had children, or were employed full-time. However, independent verification was not sought to determine whether participants who returned completed questionnaires were involved in any of these roles. The experimenter attempted to confirm involvement in these particular roles with many of the participants, yet data contamination may have occurred. Upon replication of research in this field, additional questions and confirmation concerning involvement in roles should be included in the questionnaire battery.

Strengths of This Study

Despite the aforementioned limitations, the psychometric integrity, large sample size, and contribution to feminist research endeavours attest to the cogency of this study. The finding that perceptions of equality and control are more strongly linked to health outcomes than gender boldly questions current thought on the gender differential in health. To lend further support, this relationship holds true across three different operationalizations of health. The resultant theoretical ramifications in reducing myths regarding gender and health certainly open new avenues for empirical investigation.

Directions for Future Research

Future research should examine the effects of equality and control in more heterogeneous populations, to determine whether these factors promulgate the gender

differential in health in mainstream society. These results should be examined from a longitudinal perspective; how do equality and control affect gender roles and health in older populations? Is it the case that roles diverge between the sexes after university, so that a greater power/status differential exists in the public sphere after university, delimiting control/inequality as the variables which mediate the gender differential in physical and mental health?

Future research may further wish to address the question of direction, causality, and social selection. Do people who are depressed perceive themselves to have less control in relationships? Perhaps poor physical condition affects perceptions of equality / inequality (Gore & Mangione, 1983). Conceivably it is the case that women who are mentally healthy get involved in equal relationships. Future research should take into account the interpretation of the present results in light of these factors.

These findings, along with those referenced in this study, should be integrated into a larger theoretical model. For instance, this study did not examine gender differences in coping strategies, personality variables, or social support which may mediate the effects of control / equality, and its relationship to health (Lin, Woelfel & Dumin, 1986; Rodin, 1987; Rosenfield, 1980). One's cognitive appraisals and coping strategies should be built into a model based on past, and future research endeavours. The process through which perceptions of a lack of control and inequality channel themselves into poorer health outcomes, perhaps through the mediation of factors such as stress, maladaptive coping responses, or denial, must be elucidated to further research endeavours in this realm.

Moreover, the specification of how inequality and a lack of control affects immune system biologically (Kaplan, 1991) should be integrated into this model.

In sum, these findings seem to indicate that it is a lack of perceived control, and inequality within our society which propagate the differences in health between women and men. With the attainment of gender equality, social and cultural forces may cease to limit women's possibilities, and access to the realization of their potential. Implications of these findings in the feminist context are discussed next, as the importance of gender equality is saliently exemplified by the present findings.

Recommendations From a Feminist Perspective

The ramifications of these findings are many. The role-related risks associated with gender are greatly affected by perceptions of equality and control, thereby affecting health. It can be predicted that if sex-role expectations change and women come to occupy more meaningful/powerful roles, sex differences in distress will decline (Horwitz, 1982). The stereotype of the anxious and neurotic woman must be exterminated to negate prejudice among health professionals, gender-differentiated diagnoses, and health-reporting biases.

If there is a direct link between equality / control and well-being, perhaps education and skill-building can mediate this effect, in order to improve the status of women. It was found in the present study that a perception that one receives less economically, socially, or psychologically from one's relationship with family and an intended life partner, they may experience greater levels of non-clinical depression. If women can be provided with opportunities to find their strength through the support of other women, if options and education could be offered to enable women to attain greater

economic heights, and if relationship skills training could be provided, perhaps the health impairment due to inequality can be minimized. On a final note, preventative measures aiming at the sex-role socialization of young children could perhaps deter the gender differential in health. The crux of the problem may be unravelled by working from the source of the problem; prior to the point where roles diverge between males and females.

## Conclusions

The results of this study clearly demonstrate that perceptions of equally positive outcomes in close interpersonal relationships, and a sense of internal control over these outcomes are highly related to general physical and emotional health. More specifically, it has been shown that where males or females perceive that they are receiving less from said relationships, they experience greater levels of non-clinical depression. The notion of the 'anxious and neurotic woman' can be reframed to the 'anxious and neurotic powerless individual'. Regardless of gender, general health has been revealed to be related to equality and internal control in this study.

Feminists ask us to question the constructed attachment of weakness and femininity, and the ways in which the division of the world by gender creates an alliance of males by means of biology (Unger, 1979). Through an examination of inequality, it appears that women's presumed differences from men are used to justify unequal treatment, overriding the possibility that it is the unequal treatment that might lead to the apparent health differences between men and women. By construing men in a more dominant position, society has concealed that differences in health outcomes result from social inequities and power differences (Hare-Mustin & Marecek, 1990). Therefore,

health outcomes can be seen not as gender-linked traits, but rather as stances evoked by one's position in a social hierarchy.

Stemming from imbalances in social roles, and subsequently in power, equality and control are found to affect women's health adversely. It is only through the understanding of one's daily life experiences, societal surroundings, as well as physical, psychological, and social stresses, that professionals can come to meet health needs. Remnants of a patriarchal social structure in our society hampers the well-being of both women and men.

## References

Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.

Al-Issa, I. (1982). Gender and Psychopathology. New York: Academic Press.

Amenson, C. S., & Lewinsohn, P. M. (1981). An investigation into the observed sex differences in prevalence of unipolar depression. Journal of Abnormal Psychology, 90 (1), 1-13.

Andersen, M. L. (1993). Thinking about women: Sociological perspectives on sex and gender (3rd. ed). New York: Macmillan Publishing Company.

Aneshensel, C. S., Frerichs, R. R., & Clark, V. A. (1981). Family roles and sex differences in depression. Journal of Health and Social Behavior, 22, 379-393.

Aneshenel, C. S., Frerichs, R. R., & Huba, G. J. (1984). Depression and physical illness: A multiwave, nonrecursive causal model. Journal of Health and Social Behaviour, 25, 350-371.

Anson, O., Paran, E., Neumann, L, & Chernichovsky, D. (1993). Gender differences in health perceptions and their predictors. Social Science and Medicine, 36(4), 419-427.

Baird, R. M., & Rosenbaum, S. E. (1992). Bigotry, prejudice and hatred: Definitions, causes and solutions. New York: Prometheus Books.

Bartone, P. T., Ursano, R. J., Wright, K. M., & Ingraham, L. H. (1989). The impact of a military air disaster on the health of assistance workers. Journal of Nervous and Mental Disease, 177, 317-328.

Baruch, G. K., & Barnett, R. (1986). Role quality, multiple role involvement, and psychological well-being in mid-life women. Journal of Personality and Social Psychology, 51(3), 578-585.

Bem, S. (1974). The measurement of psychological androgyny. Journal of Consulting and Clinical Psychology, 42, 155-162.

Berrenberg, J. L. (1987). The belief in personal control scale: A measure of god-mediated and exaggerated control. Journal of Personality Assessment, 51, 194-206.

Bird, C. E., & Fremont, A. M. (1991). Gender, time use, and health. Journal of Health and Social Behaviour, 32, 114-129.

Bullers, S. (1994). Women's roles and health: The mediating effect of perceived control. Women and Health, 22 (2), 11-29.

Branch, J. (1992). Depression and feminine personality development. Pratt Institute of Creative Arts Therapy Review, 13, 9-15.

Brubander, B. D., & Boone, C. (1989). Sex differences in perceived locus of control. The Journal of Social Psychology, 130 (2), 271-272.

Cate, R. M., Lloyd, S. A., & Henton, J. M. (1985). The effect of equity, equality, and reward level on the stability of students' premarital relationships. Journal of Social Psychology, 125(6), 715-721.

Celentano, D. D., Linet, M. S., & Stewart, W. F. (1990). Gender differences in the experience of headache. Social Science and Medicine, 30, 1289-1295.

Clarke, K. L. (1995). Incoming students: A statistical profile. Thunder Bay: Lakehead University.

Conway, T. L., Vickers, R. R., & French, J. R. (1992). An application of person-environment fit theory: Perceived versus desired control. Journal of Social Issues, 48 (2), 95-107.

Cook, E. P., Warnke, M., & Dupuy, P. (1993). Gender bias and the DSM-III-R. Special section: The DSM-III-R in counselor education. Counselor Education and Supervision, 32 (4), 311-322.

Corney, R. H. (1990). Sex differences in general practice attendance and help seeking for minor illness. Journal of Psychosomatic Research, 34 (5), 525-534.

Dantzer, R. (1989). Neuroendocrine correlates of control and coping. In A. Steptoe, & A. Appels (Eds.), Stress, personal control, and health. (pp. 277-294). New York: John Wiley and Sons.

Davis, M. A. (1981). Sex differences in reporting osteoarthritic symptoms: A sociomedical approach. Journal of Health and Behavior, 22, 298-310.

Davis, N. J., & Robinson, R. V. (1990). Men's and womens' consciousness of gender inequality: Austria, West Germany, Great Britain, and the United States. American Sociological Review., 72-84.

Della Fave, L. R. (1991). Ritual and the legitimation of inequality. Sociological Perspectives, 34 (1), 21-38.

Dohrenwend, B. P. & Dohrenwend, B. S. (1969). Social status and psychological disorder: A causal inquiry. New York: Wiley-Interscience.

Dohrenwend, B. P., Shrout, P. E., Egri, G., & Mendelsohn, F. S. (1980). Nonspecific psychological distress and other dimensions of psychopathology. Archives of General Psychiatry, 37, 1229-1236.

Duffy, M. E. (1994). Testing the theory of transcending options: Health behviours of single parents. Scholarly Inquiry for Nursing Practice: An International Journal, 8 (2), 191-202.

Ewart, C. K. (1991). Social action theory for a public health psychology. American Psychologist, 46(9), 931-946.

Feather, N. T. (1985). Masculinity, femininity, self-esteem, and nonclinical depression. Sex Roles, 12, 491-500.

Fisher, C. S. (1982). To dwell among friends: Personal networks in town and city. Chicago: University of Chicago Press.

Franks, M. M., & Stephens, M. P. (1992). Multiple roles of middle-generation caregivers: Contextual effects and psychological mechanisms. Journals of Gerontology, 47 (3), S123-S129.

Fried, M. (1975). Social differences in mental health. In J. Kosa & I. K. Zola (Eds.), Poverty and Health: A Sociological Analysis (pp. 135-192). Cambridge: Harvard University Press.

Gecas, V. (1989). The social psychology of self-efficacy. Annual Review of Sociology, 15, 291-316.

Goldstein, E. B. (1994). Stress and health. In Psychology (pp. 514-549). Pacific Grove, CA: Brooks Cole Publishing Company.

Gore, S., & Mangione, T. W. (1983). Social roles, sex roles and psychological distress: Additive and interactive models of sex differences. Journal of Health and Social Behavior, 24, 300-312.

Gove, W. (1972). Relationship between sex roles, marital status and mental illness. Social Forces, 51, 34-44.

Gove, W. R. (1984). Gender differences in mental and physical illness: The effects of fixed roles and nurturant roles. Social Science and Medicine, 19, 77-91.

Grabb, E. G. (1990). Social inequality: Classical and contemporary perspectives (2nd ed.). Toronto: Harcourt Brace and Company.

Grimmell, D., & Stern, G. S. (1992). The relationship between gender roles ideals and psychological well-being. Sex Roles, 27 (9/10), 487-497.

Gurin, P., Gurin, G., Lao, R. C., & Beattie, M. (1969). Internal-external control in the motivational dynamics of Negro youth. Journal of Social Issues, 15(3), 29-53.

Hammen, C. L., & Padesky, C. A. (1977). Sex differences in the expression of depressive responses on the Beck depression inventory. Journal of Abnormal Psychology, 86 (6), 609-614.

Hare-Mustin, R. T., & Marecek, J. (1990). Making a difference: Psychology and the construction of gender. New Haven: Yale University Press.

Haynes, S. G., & Feinleib, M. (1980). Women, work, and coronary heart disease: Prospective findings fromtlhe Framingham heart study. American Journal of Public Health, 70, 133-141.

Hibbard, J., & Pope, C., R. (1993). The quality of social roles as precictors of morbidity and mortality. Social Science and Medicine, 36 (3), 217-225.

Hochschild, A. (1989). The second shift: Working parents and the revolution at home. New York: Viking.

Horwitz, A. V. (1982). Sex-role expectations, power, and psychological distress. Sex Roles, 8 (6), 607-623.

Hughes, D., Galinsky, E., & Morris, A. (1992). The effects of job characteristics on marital quality: Specifying linking mechanisms. Journal of Marriage and the Family, 54, 31-42.

Hughes, D. L. & Galinsky, E. (1994). Gender, job and family conditions, and psychological symptoms. Psychology of Women Quarterly, 18, 251-270.

Jemmott, J. B., & Locke, S. E. (1984). Psychosocial factors, immunologic mediation, and human susceptibility to infectious diseases: How much do we know? Psychological Bulletin, 95 (1), 78-108.

Johnson, J. H., & Sarason, I. G. (1978). Life stress, depression, and anxiety: Internal-external control as a moderator variable. Journal of Psychosomatic Research, 22, 205-208.

Kaplan, H. B. (1991). Social psychology of the immune system: A conceptual framework and review of the literature. Social Science and Medicine, 33 (8), 909-923.

Kenney, J. W. (1991). Perceptions of health among lay consumers. Perceptual and Motor Skills, 73, 427-432.

Kessler, R. C., & Essex, M. (1982). Marital status and depression: The importance of coping resources. Social Forces, 61(2), 484-507.

King, L. A., & King, D. W. (1993). Sex-Role Egalitarianism Scale. London, ON: Research Psychologist Press.

Koolhaas, J., & Bohus, B. (1989). Social control in relation to neuroendocrine and immunological responses. In A. Steptoe, & A. Appels (Eds.), Stress, personal control, and health. (pp. 295-306). New York: John Wiley and Sons.

Lane, S. D., & Meleis, A. I. (1991). Roles, work, health perceptions and health resources of women: A study in an Egyptian delta hamlet. Social Science and Medicine, 33(10), 1197-1208.

Larson, R. (1989). Is feeling 'in control' related to happiness in daily life? Psychological Reports, 64, 775-784.

Lerner, M. (1975). Social differences in physical health. In J. Kosa & I. K. Zola (Eds.), Poverty and Health: A Sociological Analysis (pp. 80-134). Cambridge: Harvard University Press.

Levy, R. (1976). Psychosomatic symptoms and women's protest: Two types of reaction to structural strain in the family. Journal of Health and Social Behavior, 17, 122-134.

Lin, N., Woelfel, M., & Dumin, M. Y. (1986). Gender of the confidant and depression. In N. Lin, A. Dean, & W. M. Ensel (Eds.), Social support, life events, and depression (pp. 283-306). London: Academic Press.

Lips, H. M. (1988). Sex and gender: An introduction. California: Mayfield Publishing Company.

Macintyre, S. (1993). Gender differences in the perceptions of common cold symptoms. Social Science and Medicine, 36(1), 15-20.

Martin, M. W. (1985). Satisfaction with intimate exchange: Gender-role differences and the impact of equity, equality, and rewards. Sex Roles, (13), 597-605.

Mirowsky, J., & Ross. C. E. (1989). Social causes of psychological distress. New York: Aldine de Gruyter.

Myers, D. (1989). Psychology, (2nd. ed). Holland, MI: Worth Publishers, Inc.

Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and Theory. Psychological Bulletin, 101(2), 259-282.

Parker, G. (1979). Sex differences in non-clinical depression. Australian and New Zealand Journal of Psychiatry, 13, 127-132.

Parkes, K. R. (1990). Coping, negative affectivity, and the work environment: Additive and interactive predictors of mental health. Journal of Applied Psychology, 75(4), 399-409.

Paykel, E. S. (1991). Depression in women. British Journal of Psychiatry, 158, 22-29.

Pearlin, L. I., & Lieberman, M. A., Menaghan, E. G., & Mullan, J. T. (1981). The stress process. Journal of Health and Social Behavior, 22, 337-356.

Pearlin, L., & Schooler, C. (1978). The structure of coping. Journal of Health and Social Behaviour, 19, 2-21.

Pleck, J. H. (1977). The work-family role system. Social Problems, 24, 417-427.

Piechowski, L. D. (1989). Mental health and women's multiple roles. Families in Society, 733 (3), 131-139.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. Applied Psychological Measurement, 1, 385-401.

Rantala, C. S. (1995). A review of racial and sexual equality: Psychobiological issues. Unpublished HBA thesis: Lakehead University.

Reynolds, W. A., Remer, R., & Johnson, M. (1995). Marital satisfaction in later life: An examination of equity, equality and reward theories. International Journal of Aging and Human Development, 40 (2), 155-173.

Ritchie, M. H. (1994). Cultural and gender biases in definitions of mental and emotional health and illness. Special section: Critical issues in research in counselor education and supervision. Counselor Education and Supervision, 33 (4), 344-348.

Robertson, F. M., & Fitzgerald, L. F. (1992). Overcoming the masculine mystique: Preferences for alternative forms of assistance among men who avoid counseling. Journal of Counseling Psychology, 39 (2), 240-246.

Rodin, J. (1987). Personal control throughout the life course. In R. P. Abeles (Ed.)., Life-span perspectives and social psychology (pp. 103-120). New Jersey: Lawrence Erlbaum Associates.

Rodin, J., & Ickovics, J. R. (1990). Women's health: Review and research agenda as we approach the 21st century. American Psychologist, 45 (9), 1018-1034.

Rosenfield, S. (1980). Sex differences in depression: Do women always have higher rates? Journal of Health and Social Behavior, 21, 33-42.

Rosenfield, S. (1989). The effects of women's employment: Personal control and sex differences in mental health. Journal of Health and Social Behaviour, 30, 77-91.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80 (1).

Seligman, M. (1975). Helplessness: On depression, development, and death. San Francisco: Freeman.

Stangler, R. S., & Printz, A. M. (1980). DSM-III: Psychiatric diagnosis in a university population. American Journal of Psychiatry, 137 (8), 937-940.

Steenbarger, B. N., & Greenberg, R. P. (1990). Sex roles, stress, and distress: A study of person by situation contingency. Sex Roles, 22 (1-2), 59-68.

Steptoe, A., & Appels, A. (1989). Preface. In A. Steptoe, & A. Appels (Eds.), Stress, personal control, and health. (p ix). New York: John Wiley and Sons.

Syme, S. L. (1989). Control and health: A personal perspective. In A. Steptoe, & A. Appels (Eds.), Stress, personal control, and health. (pp. 3-18). New York: John Wiley and Sons.

Tan J. (1989). A review and synthesis of artifact, psychological and psychosocial explanations for sex differences in depression. Unpublished paper.

Thoits, P. A. (1986). Multiple identities: Examining gender and marital status differences in distress. American Sociological Review, 51, 259-272.

Thoits, P. A. (1987). Gender and marital status differences in control and distress: Common stress versus unique stress explanations. Journal of Health and Social Behaviour, 28, 7-22.

Thomas, S. (1989). Gender differences in anger expression: Health implications. Research in Nursing and Health, 12 (6), 389-398.

Thomas, S., & Williams, R. (1991). Perceived stress, trait anger, modes of anger expression, and health status of college men and women. Nursing Research, 40 (5), 303-307.

Thompson, S. C., & Spacapan, S. (1991). Perceptions of control in vulnerable populations. Journal of Social Issues, 47 (4), 1-21.

Tuites, A. H., & Tuites, D. E. (1986). Equality in male/female relationships. Journal of Adlerian Theory: Individual Psychology, 42 (2), 191-200.

Turner, R. J., & Noh, S. (1983). Class and psychological vulnerability among women: The significance of social support and personal control. Journal of Health and Social Behavior, 24, 2-15.

Unger, R. (1976). Male is greater than female: The socialization of status inequality. Counseling Psychologist, 6, 2-9.

Van Wijk, C. M., & Van Vliet, K. P. (1989). "The sicker sex": Sex differences in morbidity, medical consumption and the reporting of physical symptoms. Gedrag and Gezondheid Tijdschrift voor Psychologie and Gezondheid, 17 (2), 59-68.

Verbrugge, L. M.(1976). Females and illness: Recent trends in sex differences in the United States. Journal of Health and Social Behavior, 17, 387-403.

Verbrugge, L. M. (1985). Gender and health: An update on hypotheses and evidence. Journal of Health and Social Behavior, 26, 156-182.

Verbrugge, L. M. (1989). The twain meet: Empirical explanations of sex differences in health and mortality. Journal of Health and Social Behavior, 30, 282-304.

Veroff, J., Douvan, E., & Kulka, R. A. (1981). The inner American: A self-portrait from 1957-1976. New York: Basic Books.

Walster, E., Walster, G. W., & Berscheid, E. (1978). Equity. Massachusetts: Allyn and Bacon.

Walster, E., Walster, G. W., & Traupmann, J. (1978). Equity and premarital sex. Journal of Personality and Social Psychology, 36, 82-92.

Weissman, W. M. & Klerman, G. L. (1977). Sex differences and the epidemiology of depression. Archives of General Psychiatry, 34, 98-111.

Wheaton, B. (1980). The sociogenesis of psychological disorder: An attributional theory. Journal of Health and Social Behavior, 21, 100-124.

Wilhelm, K., & Parker, G. (1994). Sex differences in lifetime depression rates: Fact or artefact? Psychological Medicine, 24 (1), 97-111.

Williams, D. E., & D'alessandro, J. D. (1994). A comparison of three measures of androgyny and their relationship to psychological adjustment. Journal of Social Behaviour and Personality, 9 (3), 469-480.

Young, G., Fort, F., & Danner, M. (1994). Moving from 'the status of women' to 'gender inequality': Conceptualization, social indicators and an empirical application. International Sociology, 9 (1), 55-85.

Appendix A

QUESTIONNAIRE

**SECTION A:**

**Please circle your answer:**

1. Gender: MALE FEMALE

**SECTION B:**

**Please write the appropriate number to correspond to how often in the past six months you have experienced these symptoms:**

***1 - nearly all the time 2 - pretty often 3 - not very much 4 - never***

1. ____ Do you ever have trouble getting to sleep or staying asleep?
2. ____ Have you ever been bothered by nervousness, feeling fidgety or tense?
3. ____ Are you ever troubled by headaches or pains in the head?
4. ____ Do you have loss of appetite?
5. ____ How often are you bothered by having an upset stomach?
6. ____ Do you find it difficult to get up in the morning?

**Please write the appropriate number to correspond to how often in the past six months you have experienced the following symptoms:**

1 - many times 2 - sometimes 3 - hardly ever 4 - never

7. ____ Has any ill health affected the amount of work you do?

8. ____ Have you ever been bothered by shortness of breath when you were not exercising or working hard?

9. ____ Have you ever been bothered by your heart beating fast?

10. ____ When you feel worried, tense or nervous, do you ever drink alcoholic beverages to help you handle things?

11. ____ Have you ever had spells of dizziness?

12. ____ Are you bothered by nightmares?

13. ____ Do you tend to lose or gain weight when something important is bothering you?

14. ____ Do your hands ever tremble enough to bother you?

15. ____ Are you troubled by your hands sweating so that you feel damp and clammy?

16. ____ Have there ever been times when you couldn't take care of things because you just couldn't get going?

17. ____ Have there ever been problems between you and your family or friends because you drank alcoholic beverages?

18. ____ When you feel worried, tense or nervous, do you ever take medicines or drugs to help you handle things?

**Please circle the appropriate response for you:**

19. Do you feel you are bothered by all sorts of pains and ailments in different parts of your body? YES NO

20. For the most part, do you feel healthy enough to carry out the things you would like to do? YES NO

21. Have you ever felt that you were going to have a nervous breakdown?

YES NO

22 a. Do you have any particular physical or health problem?

YES NO

b) if yes, please specify _____

_____

_____

_____

**SECTION C:**

**Below is a list of the ways you might have felt or behaved. Please circle the number of times you have felt this way during the past week.**

***Rarely or None of the Time (Less Than 1 Day)***

***Some of a Little of the Time (1-2 Days)***

***Occasionally or a Moderate Amount of Time (3-4 Days)***

***Most of all of the Time (5-7 Days)***

1. I was bothered by things that usually don't bother me.
   >1 1-2 3-4 5-7

2. I did not feel like eating; my appetite was poor.
   >1 1-2 3-4 5-7

3. I felt that I could not shake off the blues even with help from my family or friends.
   >1 1-2 3-4 5-7

4. I felt that I was just as good as other people.
   >1 1-2 3-4 5-7

5. I had trouble keeping my mind on what I was doing.
   >1 1-2 3-4 5-7

6. I felt depressed.
   >1 1-2 3-4 5-7

7. I felt that everything I did was an effort.
   >1 1-2 3-4 5-7

8. I felt hopeful about the future.
   >1 1-2 3-4 5-7

9. I thought my life had been a failure.
   >1 1-2 3-4 5-7

10. I felt fearful.
    >1 1-2 3-4 5-7

***Rarely or None of the Time (Less Than 1 Day)***

***Some of a Little of the Time (1-2 Days)***

***Occasionally or a Moderate Amount of Time (3-4 Days)***

***Most of all of the Time (5-7 Days)***

11. My sleep was restless.
>1 1-2 3-4 5-7

12. I was happy.
>1 1-2 3-4 5-7

13. I talked less than usual.
>1 1-2 3-4 5-7

14. I felt lonely.
>1 1-2 3-4 5-7

15. People were unfriendly.
>1 1-2 3-4 5-7

16. I enjoyed life.
>1 1-2 3-4 5-7

17. I had crying spells.
>1 1-2 3-4 5-7

18. I felt sad.
>1 1-2 3-4 5-7

19. I felt that people dislike me.
>1 1-2 3-4 5-7

20. I could not get 'going'.
>1 1-2 3-4 5-7

**SECTION D:**

**This questionnaire consists of items describing possible perceptions you may have of yourself, others, and life in general. Please respond to each of the statements below by indicating the extent to which that statement describes your beliefs. For each statement circle the number that best describes your feelings.**

| *1 = always true* | *2 = often true* | *3 = sometimes true* | *4 = rarely* | *5 = never true* |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 1. I can make things happen easily | 1 | 2 | 3 | 4 | 5 |
| 2. Getting what you want is a matter of knowing the right people. | 1 | 2 | 3 | 4 | 5 |
| 3. My behaviour is dictated by the demands of society | 1 | 2 | 3 | 4 | 5 |
| 4. If I just keep trying, I can overcome any obstacles. | 1 | 2 | 3 | 4 | 5 |
| 5. I find that luck plays a bigger role in my life than my ability | 1 | 2 | 3 | 4 | 5 |
| 6. If nothing is happening, I go out and make it happen. | 1 | 2 | 3 | 4 | 5 |
| 7. I am solely responsible for the outcomes in my life. | 1 | 2 | 3 | 4 | 5 |
| 8. Regardless of the obstacles, I refuse to quit trying. | 1 | 2 | 3 | 4 | 5 |
| 9. My success is a matter of luck. | 1 | 2 | 3 | 4 | 5 |
| 10. Getting what you want is a matter of being in the right place at the right time. | 1 | 2 | 3 | 4 | 5 |
| 11. I am able to control effectively the behaviour of others. | 1 | 2 | 3 | 4 | 5 |

**(PLEASE TURN OVER)**

| *1 = always true* *2 = often true* *3 = sometimes true* *4 = rarely* *5 = nevertrue* | | | | | |
|---|---|---|---|---|---|
| 12. I feel that other people have more control over my life than I do. | 1 | 2 | 3 | 4 | 5 |
| 13. There is little that I can do to change my destiny. | 1 | 2 | 3 | 4 | 5 |
| 14. I feel that I control my life as much as is humanly possible. | 1 | 2 | 3 | 4 | 5 |
| 15. I am not the master of my own fate. | 1 | 2 | 3 | 4 | 5 |
| 16. I continue to strive for a goal long after others would have given up. | 1 | 2 | 3 | 4 | 5 |
| 17. Most things in my life I just can't control. | 1 | 2 | 3 | 4 | 5 |
| 18. I have more control over my life than other people have over theirs. | 1 | 2 | 3 | 4 | 5 |
| 19. I actively strive to make things happen for myself. | 1 | 2 | 3 | 4 | 5 |
| 20. Other people hinder my ability to direct my life. | 1 | 2 | 3 | 4 | 5 |
| 21. What happens to me is a matter of good or bad fortune. | 1 | 2 | 3 | 4 | 5 |
| 22. When something stands in my way, I go around it. | 1 | 2 | 3 | 4 | 5 |
| 23. I can be whatever I want to be. | 1 | 2 | 3 | 4 | 5 |
| 24. I know how to get what I want from others. | 1 | 2 | 3 | 4 | 5 |
| 25. Fate can be blamed for my failures. | 1 | 2 | 3 | 4 | 5 |
| 26. I am the victim of circumstances beyond my control. | 1 | 2 | 3 | 4 | 5 |

***1 = always true 2 = often true 3 = sometimes true 4 = rarely 5 = never true***

| | | | | | |
|---|---|---|---|---|---|
| 27. I can control my own thoughts. | 1 | 2 | 3 | 4 | 5 |
| 28. There is nothing that happens to me that I don't control. | 1 | 2 | 3 | 4 | 5 |
| 29. Whenever I run up against some obstacle, I strive even harder to overcome it and reach my goal. | 1 | 2 | 3 | 4 | 5 |
| 30. I am at the mercy of my physical impulses. | 1 | 2 | 3 | 4 | 5 |
| 31. In this life, what happens to me is determined by my fate. | 1 | 2 | 3 | 4 | 5 |
| 32. I am the victim of social forces. | 1 | 2 | 3 | 4 | 5 |
| 33. Controlling my life involves mind over matter. | 1 | 2 | 3 | 4 | 5 |
| 34. When I want something, I assert myself in order to get it. | 1 | 2 | 3 | 4 | 5 |
| 35. The unconscious mind, over which I have no control, directs my life. | 1 | 2 | 3 | 4 | 5 |
| 36. I am not really in control of the outcomes in my life. | 1 | 2 | 3 | 4 | 5 |

**(PLEASE TURN OVER)**

**SECTION E:**

**Below are statements about men and women. Read each statement and decide how much you agree or disagree. I am not interested in what society says, but I am interested *in your personal opinions.* For each statement, circle the letter(s) that describe(s) your opinion. Please do not omit any statements. Remember to circle only one of the five choices for each statement.**

***SA = strongly agree, A = agree, N = neutral or undecided or no opinion, D = disagree, SD = strongly disagree.***

1. Women should have as much right as men to go to clubs alone.

SA A N D SD

2. Clubs for students in engineering should only admit men.

SA A N D SD

3. Engineering programs ought to admit more qualified females.

SA A N D SD

4. Women ought to have the same chances as men to be leaders at work.

SA A N D SD

5. Keeping track of a child's activities should be mostly the mother's task.

SA A N D SD

6. Things work out best in marriage if the husband stays away from housekeeping tasks.

SA A N D SD

**SA = strongly agree, A = agree, N = neutral or undecided or no opinion, D = disagree, SD = strongly disagree.**

7. Both the husband's and wife's earnings should be controlled by the husband.

SA A N D SD

8. A woman should not be Prime Minister of our country.

SA A N D SD

9. Women should feel as free to 'drop in' on a male friend as vice versa.

SA A N D SD

10. Males should be given first choice to take courses that train people as school principals.

SA A N D SD

11. When both husband and wife work outside the home, housework should be equally shared.

SA A N D SD

12. Women can handle job pressures as well as men can.

SA A N D SD

13. Male managers are more valuable to a business than female managers.

SA A N D SD

**(PLEASE TURN OVER)**

**SA = strongly agree, A = agree, N = neutral or undecided or no opinion, D = disagree, SD = strongly disagree.**

14. A woman should have as much right to ask a man for a date as a man has to ask a woman for a date.

SA A N D SD

15. The father, rather than the mother, should give teenage children permission to use the family car.

SA A N D SD

16. Sons and daughters ought to have an equal chance for higher education.

SA A N D SD

17. A marriage will be more successful if the husband's needs are considered first.

SA A N D SD

18. Fathers are better able than mothers to decide the amount of a child's allowance.

SA A N D SD

19. The mother should be in charge of getting children to after-school activities.

SA A N D SD

20. A person should be more polite to a woman than to a man.

SA A N D SD

21. Women should feel as free as men to express their honest opinion.

SA A N D SD

**SA = strongly agree, A = agree, N = neutral or undecided or no opinion, D = disagree, SD = strongly disagree.**

22. Fathers are not as able to care for their sick children as mothers are.

SA A N D SD

23. An applicant's gender should be important in job screening.

SA A N D SD

24. Wives are better able than husbands to send thank you notes for gifts.

SA A N D SD

25. Choice of university / college is not as important for women as for men.

SA A N D SD

**SECTION F: We'd like to know how you feel your relationships 'stack up' - considering what you're putting into them and what you're getting out of them. For the next two questions we would like you to think about your relationship with your family. Circle the appropriate response for you.**

***+4 extremely positive***
***+3 very positive***
***+2 moderately positive***
***+1 slightly positive***
***-1 slightly negative***
***-2 moderately negative***
***-3 very negative***
***-4 extremely negative***

1. All things considered how would you describe what *you* get out of your relationship with your family?

+4 +3 +2 +1 -1 -2 -3 -4

2. All things considered, how would you describe what *your family* gets out of your relationship with them?

+4 +3 +2 +1 -1 -2 -3 -4

**For the next two questions, answer, using the same scale, regarding your relationship with your friends at school.**

3. All things considered how would you describe what *you* get out of your relationship with your friends?

+4 +3 +2 +1 -1 -2 -3 -4

4. All things considered, how would you describe what *your friends* get out of your relationship with them?

+4 +3 +2 +1 -1 -2 -3 -4

**For the last two questions, using the same scale, answer in reference to your expected relationship with an intimate partner in marriage.**

5. All things considered, how would you describe what you think *you* would get from your relationship with your intended life partner?

+4 +3 +2 +1 -1 -2 -3 -4

6. All things considered, how would you describe what *your intended partner* would get out of their relationship with you?

+4 +3 +2 +1 -1 -2 -3 -4

Appendix B

QUESTIONNAIRE STUDY

Lakehead University

Dear Student:

I am a psychology graduate student conducting research under the supervision of Dr. K. P. Satinder concerning your health, and your perceptions of relationships and life in general. As a member of the university community, your input and time would be invaluable in supporting this study. Because little is known about these phenomena, the information gained from this research will be useful in increasing our knowledge concerning our well-being. Please remember there are no right or wrong answers.

I would appreciate if you would complete the attached questionnaire. Completion of the questionnaire is voluntary and is expected to take about 30 minutes of your time. All of your responses will be anonymous. All information you provide will be considered strictly confidential, and will be seen only by myself and my supervisor. This project seeks voluntary participation, and you may withdraw at any time. Furthermore, raw data will be stored for seven years.

This project has been reviewed and approved by the Ethics Advisory Committee To The Senate Research Committee at Lakehead University. When you have completed the questionnaire, please detach this sheet to maintain confidentiality, and once everyone has finished further details concerning the study will be provided. Thank you in advance for your assistance with this project.

Yours respectfully,

Sherry Grace

CONSENT FORM

My signature below indicates that my participation in this study is voluntary, and that I am aware that I am free to withdraw at any time. The purpose of the study was explained to my satisfaction. I understand that the study is concerned with health and perceptions of my relationships. I have been assured that there are no risks to my involvement in this study; that my contributions will remain completely anonymous and confidential; and that I may receive the results of the study once it has been completed.

Name (Please Print):_____

Signature: _____, Student ID: _____

Date: _____

Appendix C

DEBRIEFING

Thank you for your time in completing the questionnaire. Here is some information concerning the purpose of the study in which you have participated.

Previous research findings suggest that the roles of women and men, and the amount of power in those roles, may affect an individual's physical and mental health. I would like to add to this body of research by investigating how the amount of control and equality individuals feel they have in many roles they participate in, affects their physical and mental health. It is often cited in the literature that women are more often physically ill, and psychologically distressed than men, yet results are inconclusive as to why this effect is found. This research is investigating whether your perceptions of equality and control affect your health, regardless of whether you or female or male. I feel this research is invaluable to further our understanding of well-being in general, as well as the roles of women and men in our society.

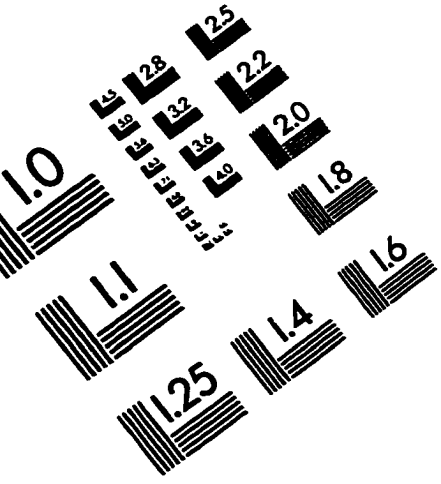
The important aspect here is that there are no right or wrong answers. This study is simply looking at the relationships between these variables, and how they fit together in making the people that we are today. If there are any further questions, or you would like to request a summary of results, feel free to fill out a mailing label, or contact Sherry at 343-8476, and / or Dr. Satinder at 343-8367. Thank you once again for adding to this knowledge base, and I wish you the best of luck for the duration of the term.

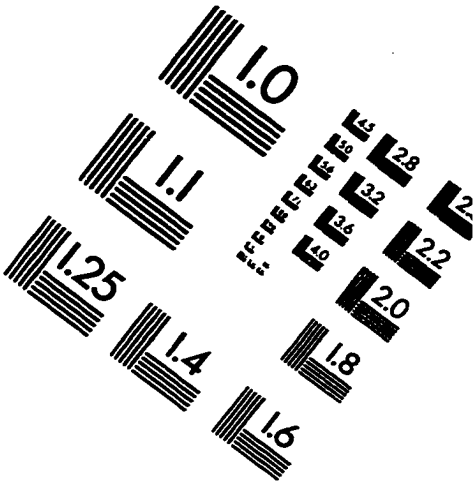
Sincerely,

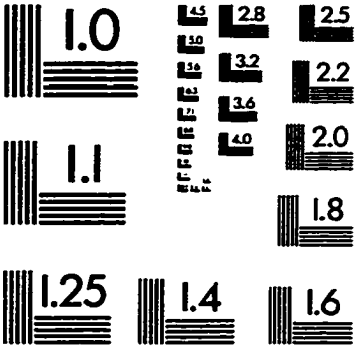
Sherry Grace

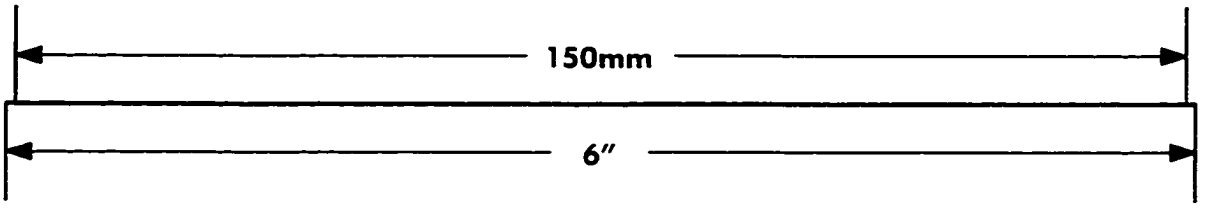
Dr. K. P. Satinder

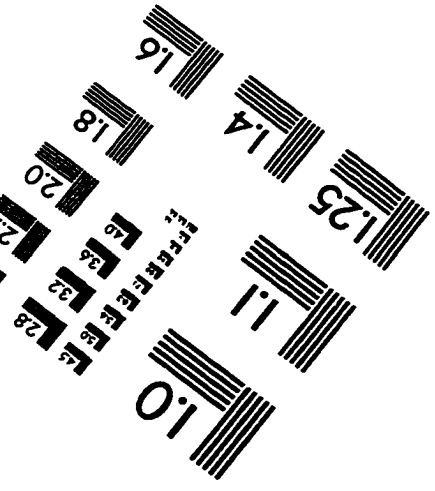
# IMAGE EVALUATION TEST TARGET (QA-3)

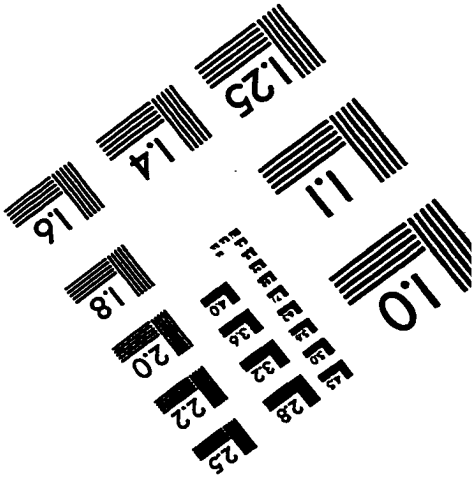



APPLIED IMAGE, Inc
1653 East Main Street
Rochester, NY 14609 USA
Phone: 716/482-0300
Fax: 716/288-5989