

**A Structural Analysis of Young Women's Interpersonal Empowerment:
An Empirical Validation Of and Elaboration Upon Zimmerman's (1995) Nomological
Network of Psychological Empowerment**

Amy L. Anderson

**A Thesis Submitted to
The Faculty of Graduate Studies
In Partial Fulfillment of the Requirements
for the Degree of
Master of Arts**

**Department of Psychology
University of Manitoba
Winnipeg, Manitoba**

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**A Structural Analysis of Young Women's Interpersonal Empowerment:
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BY

Amy L. Anderson

**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University
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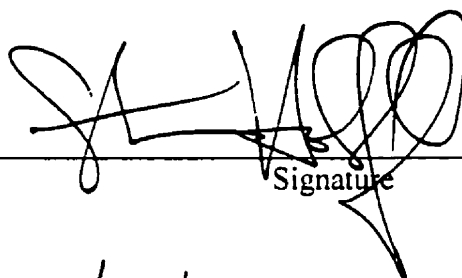
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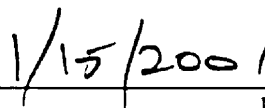
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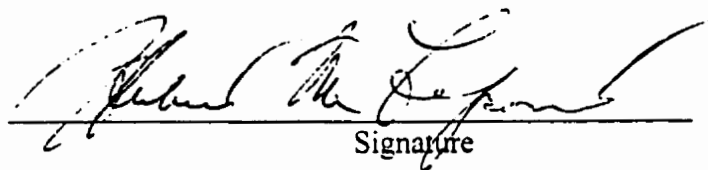
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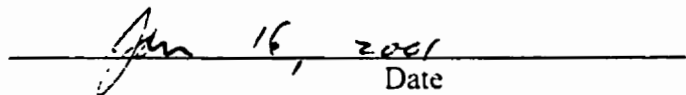
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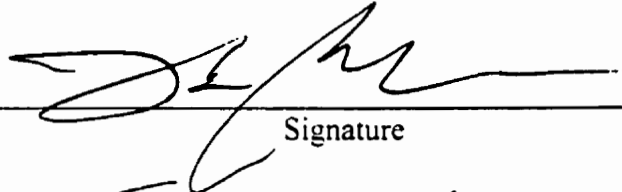
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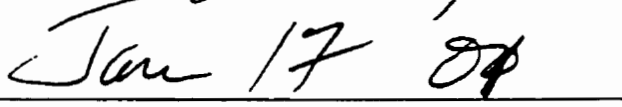

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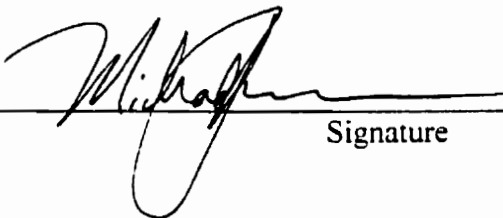
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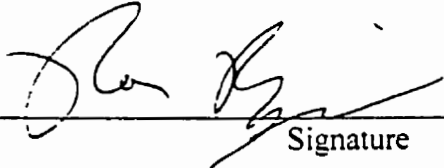
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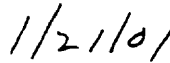
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Abstract

Empowerment is a term used by many disciplines concerned with eradicating human problems. Promoting empowerment throughout the life cycle has distinct benefits in terms of decreased physical and mental health risks and increased resilience when confronted with such risks. Despite the term's widespread use, the definition of empowerment remains elusive. Research indicates that its meaning is quite fluid and contingent upon individual or group characteristics, context, and the timeframe in question. The nomological network of psychological empowerment (Zimmerman, 1995) is a conceptual model that taps into some of empowerment's commonalities.

Psychological empowerment is a composite of three components: the intrapersonal, the interactional, and the behavioral. The present research applied this model to the interpersonal or social domain of young females and validated these components empirically. In addition, it explored some of the relationships and contingencies between the components, including testing a feedback loop. A total of 469 female introductory psychology students were recruited and completed a questionnaire (final sample size = 411). The questionnaire included two scales assessing each of the three components: the intrapersonal (Self Efficacy Scale, Spheres of Control Scale), the interactional (Social Skills Inventory, Social Resources Scale), and the behavioral (Strategic Approach to Coping Scale, Participation Scale). In addition to these measures, interpersonal empowerment was assessed by the Social Support Questionnaire and the Miller Social Intimacy Scale. The relationships between the intrapersonal, interactional, and behavioral components, and their connection to empowerment in the interpersonal domain, were evaluated using exploratory and confirmatory factor analysis, and structural equation

modeling. In almost all cases, the expected relationships were observed between the scales and subscales of each component, and with the interpersonal empowerment measures (social support and intimacy). Exploratory factor analysis of a subset of the scales and subscales resulted in the extraction of five factors, rather than the four predicted (intrapersonal, interactional, behavioral, and IE). the behavioral component was broken into two factors: prosocial coping behavior and participatory behavior. This factor structure was subjected to a confirmatory factor analysis, the results of which proved that the measurement model had an excellent fit to the data. A structural model was tested and was found to have good fit. Several modifications were made to the model, which produced poorer results (increased fit, but uninterpretable path coefficients). The initial model was selected as best fitting these data. There was a significant pathway from interpersonal empowerment to each component. This model, however, did not support any of the pathways between the four components, including the feedback loop. At this exploratory stage, the most conservative conclusion is that the four components (each influenced by interpersonal empowerment) appear to be distinct from each other. However, limitations inherent in the current data, such as a highly restricted sample and a problematic participation scale, preclude adoption of this model to explain interpersonal empowerment. Future research should endeavor to replicate these findings, to apply different measures and combinations of measures, and to extend this investigation to other populations.

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Introduction

Empowerment is a pervasive positive value in American culture ...

Empowerment conveys both a psychological sense of personal control or influence and a concern with actual social influence, political power, and legal rights. It is a multilevel construct applicable to individual citizens as well as to organizations and neighborhoods; it suggests the study of people in context.

(Rappaport, 1987, p. 121)

Empowerment has become a fashionable word. It has the ring of virtue and unquestioned morality. Some proclaim it as a panacea. If the empowerment movement is to avoid the worst excesses of sloganeering and conceptual superficiality, it will have to come to grips with issues that are as complex conceptually as they are at the level of action. (Sarason, 1993, p. 260)

Empowerment is a word on everyone's lips. It is fought for by advocacy and lobbying groups, espoused by public policy and political figures, and endorsed by health service professionals and self-help literature. As a concept, it resonates with most people. In a similar vein, empowerment is the current buzzword in modern social science research. In fact, a literature search returns almost 2000 entries for the term alone. Empowerment has been used as a research variable in a myriad of ways: as an intervention tool, an outcome measure, and so forth. Though its popularity is undeniable, the meaning of empowerment is much less clear.

The following proposal will outline the importance, definition, and theoretical development of empowerment. It will also briefly review current research, with particular attention to empowerment at the individual level of analysis. Following this,

Zimmerman's (1995) nomothetical network of psychological empowerment will be described in detail. This conceptualization of empowerment was selected because it encapsulates some of the main facets of empowerment as described in the literature. Some of these facets are psychological or internal aspects of empowerment, such as self-efficacy; behavioral or external aspects, such as coping; and interactional aspects or aspects that bridge the internal and external, such as possessing the relevant skills to achieve the intended goal. An application of and elaboration upon Zimmerman's model with young adults will be explicated and this hypothetical model will be illustrated. The intention of this research is to explore the interrelationships of the various hypothesized components or contributors of empowerment at the individual level. It also aims to empirically test these interrelationships, and their singular and collective contributions to psychological empowerment.

Multiple Purposes – The Importance of Empowerment

Empowerment is a significant construct for a number of reasons, most notably because of its potential for positive impacts on wellness and, notwithstanding these benefits, because it has been (counter-intuitively) largely neglected in psychology. Empowerment has the potential to be a vital area of theoretical interest, particularly in the field of community psychology.

Empowerment's relationship to well being. According to Kessler et al. (1994), about 50% of the general population will experience at least one mental health disorder in their lifetime. The most common disorders are major depressive disorder (the preponderance of whom were females), alcohol dependence (the majority of whom were males), and anxiety disorders. The rates of most disorders decrease with age and with

higher socioeconomic status. Individuals aged 25-34 are most likely to be diagnosed with a mental disorder. Stressors experienced in navigating one's development into a responsible and productive adult (e.g., obtaining a career) may pose particular problems that may precipitate disorder. Having the financial wherewithal may allow people to do more for themselves in mitigating some of life's stressors. The fact that so many people have the potential to experience a mental disorder, and the fact that there are gender and other socio-demographic differences in rates of various disorders, suggest systemic and/or environmental influences. The magnitude and differential rates of mental disorder in western society certainly point to etiological influences that are not solely located within the individual. That is, it is not likely that biological or genetic forces are sufficient to explain these problems. More likely, these reflect additional societal and macro-level influences and presses.

Only 40% of people who experience a disorder ever receive treatment in their lifetime (Kessler et al., 1994). When considering 12-month prevalence rates, only 20% receive active treatment. These treatment rates (in conjunction with the rates of mental disorder) indicate a number of things: (a) that a large number of people do not receive any form of treatment, (b) that it is impossible to meet the treatment demand, and (c) it is not likely that all risk factors can be predicted, treated, or prevented in all people. These factors suggest that it is prudent to focus on what makes people well. "Allocations of our energies and resources must go increasingly toward building wellness rather than toward struggling, however compassionately, to contain troubles" (Cowen, 1991, p. 404).

In the modern world, children and youth are profoundly stressed. However, when faced with a great number of stressors and risk factors, some children seem to be resilient

(Cowen & Work, 1988). What is crucial is identification of the distinguishing characteristics in resilient children, so that such resilience may be promoted in others. Importantly, studies in resilience have indicated that there are relationships between resilience and individual characteristics like autonomy, independence, empathy, and problem solving in children. Research in resilience has produced a triad of protective factors that relate to resiliency in children: (a) personal predispositions (e.g., social responsivity and autonomy), (b) warm and supportive family environment, and (c) peer and adult support. Clearly, this research points to factors contributing to resilience that are both internal and external to the individual. For Cowen (1991), the notions of competence, resilience, social system modification, and empowerment all figure prominently in the pursuit of wellness. Developing life competencies early in a child's development may be a strong predictor of the degree to which the child develops a sense of empowerment and control over his or her destiny.

Cowen (1991) argues that empowerment is integral to the concept of wellness. "The roots of maladaptation or problems in living reside less in failings of individuals, as suggested by a 'blaming the victim' view . . . and far more in de facto aspects of a macro-system that deprives them of power, justice, and opportunity" (p. 407). Empowerment is often cited as a vehicle for social change, for creating healthy and active communities (Zimmerman, 1995). Cowen (1994) suggests that there are five pathways to wellness: the formation of wholesome early attachments, the acquisition of age and ability appropriate competencies, the construction of settings that promote adaptive outcomes, the promotion of empowerment, and the acquisition of skills needed to effectively cope with life stressors. There is a remarkably consistent association between disempowered groups

(e.g., ethnic minorities, those with mental disorders) and problems in living (Cowen, 1991). Promoting social policy and control-enhancing living situations may reduce problems, and enhance wellness and empowerment in adults.

Empowerment's utility as a theoretical domain of interest for community psychology. Empowerment is also important from a disciplinary point of view. Prilleltensky (1994) indicates that, with the exception of community psychology and those working in the area of primary prevention, psychologists have overlooked empowerment research and practice. Rappaport (1987) argues that empowerment represents a unique body of literature that is consistent with community psychology. It captures the essence of community psychology's "world view" and its "phenomena of interest" (the plural form of phenomenon is appropriate, as empowerment has multiple referents: Rappaport, p. 122). Moreover, Rappaport suggests that empowerment be adopted by the field as its theoretical orientation – empowerment as community psychology's paradigm and prevention as its exemplar. A paradigm is composed of a number of elements such as generalizations, analogies, and heuristics. Exemplars refer to concrete solutions or examples accepted as being part of that paradigm. In essence, a paradigm frames a world view that is learned by the study of exemplars. Rappaport asserts that empowerment should be the focus of theory development, rather than prevention (which has been, historically, the emphasis). He argues, instead, that prevention should be the focus of solutions and strategies – prevention is not sufficient in and of itself to be the paradigm of interest. To illustrate, it is possible to design prevention initiatives that contravene the basic principles embedded in empowerment theory (e.g., the preventive intervention is hierarchical, rather than collaborative, and

ignores cultural and contextual influences). Thus, empowerment has the potential for being the theoretical impetus for research in community psychology.

Multiple Meanings – Empowerment Defined

In a general sense, “empowerment is a process, a mechanism by which people, organizations, and communities gain mastery over their affairs” (Rappaport, 1987, p. 122). The construct assumes “a proactive approach to life, a psychological sense of efficacy and control, socio-political activity, and organizational development” (Rappaport, 1985, p. 18). Empowerment is rooted in social action and change.

At the individual level of analysis, “[psychological empowerment] includes personal control, a sense of competence, a critical awareness of the sociopolitical environment, and participation in community organizations and activities” (Zimmerman, Israel, Schulz, & Checkoway, 1992, p. 709). At the organizational level, empowerment is characterized by the enhancement of skills, the provision of mutual support, successful competition for resources, and increased networking and influence (Schultz, Israel, Zimmerman, & Checkoway, 1995). At an even broader level, community-level empowerment may be described as groups of people operating as an organized collective to better their lives and expand the connections between community agencies that are important to them (Schultz et al., 1995).

As can be seen, depending on the nature of the actor or stakeholder in question, empowerment will have factors that are broad and socially bound. Psychological (or individual-level) empowerment can be differentiated from these other levels of analysis; however, it is important to remember that all of these levels influence and are influenced by each other (Zimmerman, 1995). This study will examine empowerment at the psychological level in young adults attending university. For the purposes of this research, psychological empowerment “includes beliefs that goals can be achieved, awareness about resources and factors that hinder or enhance one’s efforts to achieve those goals, and efforts to fulfill the goals” (Zimmerman, 1995, p. 582). These aspects of empowerment describe the intrapersonal, interactional, and behavioral components of psychological empowerment as postulated by Zimmerman (these components will be explained in greater detail in later sections).

Measuring psychological empowerment is fraught with difficulty. According to Zimmerman (1995), this is because “(a) [psychological empowerment] manifests itself in different perceptions, skills, and behaviors across people; (b) different beliefs, competencies, and actions may be required to master various settings; and (c) [psychological empowerment] may fluctuate over time” (p. 583). For this reason, it is inappropriate to expect that one measure of empowerment will fit every situation. In fact, empowerment must be measured with reference to a specific population, problem, and environmental context. Zimmerman indicates that a global measure of empowerment is not desirable because it is inconsistent with the construct and that it may lead to the inaccurate conceptualization of empowerment as a “static personality trait instead of a more dynamic contextually driven construct” (p. 596).

It is also important to understand what empowerment is not. Frequently, it is misunderstood as being interchangeable with a number of other psychological constructs. Zimmerman (1995) summarizes this succinctly. Self-esteem may appear to be comparable to psychological empowerment. A “person’s self esteem is a judgment of worthiness that is expressed by the attitudes he or she holds toward the self” (Coopersmith, 1989, p. 6). However, self-esteem is generally understood to be a personality trait and does not include perceptions of perceived control, skills, and behaviors required to approach a given challenge. Zimmerman (1995) notes that is entirely possible for some individuals to have low self-esteem and report active involvement in their community (an indicator of psychological empowerment); thus, self-esteem is insufficient and cannot be interchangeable with empowerment.

Zimmerman (1995) also distinguishes psychological empowerment from competence, as the latter does not usually involve awareness of sociopolitical factors and collective action. Competence is certainly one feature of the intrapersonal component of psychological empowerment, yet it is not sufficient to fully explain the phenomenon. Competence is frequently linked to a reactive stance to external events, such as coping with a situation. Psychological empowerment, on the other hand, denotes a more proactive stance and set of behaviors.

Psychological empowerment is also not reflected in mental health. It is indeed possible for those with mental disorders to be empowered. Actions such as involvement in support groups, and enhancing one’s awareness of mental health issues and services, are all illustrative of psychological empowerment (Zimmerman, 1995).

Psychological empowerment is not power. “Power suggests authority, whereas psychological empowerment is a feeling of control, a critical awareness of one’s environment, and an active engagement in it” (Zimmerman, 1995, p. 592). There have been circumstances in which people with relatively little authority and social status have been able to successfully influence social policy. They may not have ultimately gained high levels of power (in a formal sense), yet they were empowered to the extent that these individuals were able to increase their skills, feelings of competency, and ability to operate as a collective to effect change.

Actual power or control is not necessary for empowerment because in some contexts and for some populations real control or power may not be the desired goal. Rather, goals such as being more informed, more skilled, healthier, or more involved in decision-making may be the desired outcome. (Zimmerman, 1995, p. 593)

Theoretical Development of Empowerment

Partly because institutions have a tendency to become one-sided, many social problems are ironically and inadvertently created by the so-called helping systems – the institutions and organizations developed by well-meaning scientists and professionals – and often “solutions” create more problems than they solve...

There can never be a now and for all time single scientific “breakthrough” which settles and solves the puzzles of our discipline... To seek *the* answer may be more than wrong, it may be dangerous. (Rappaport, 1981, p. 8-9)

Rappaport (1984) argues, “empowerment is uniquely powerful as a model for policy in the field of social and community intervention” (p. 2). In the social arena, there

are many complex problems to which one must discover many complex solutions. In fact, for some social problems, pursuing many different solutions may be an appropriate strategy. Further, Rappaport indicates that empowerment is an active ingredient in many human interactions and that the final outcome can take a number of forms – that is, empowerment can lead to a sense of control or it may lead to actual control. Empowerment can be an attitude that is internalized or a behavior that is observed. Rappaport indicates that “empowerment is easy to define in its absence: powerlessness, real or imagined; learned helplessness; alienation; loss of a sense of control over one’s life. It is more difficult to define positively only because it takes on a different form in different people and contexts” (p. 3).

It is of vital importance to understand the relationships between individuals, their communities, and other types of environments in order to completely understand the meaning of empowerment (Rappaport, 1987). One may discover the ways in which empowerment is facilitated or inhibited: (a) by studying individuals in settings where one would expect empowerment to occur, or (b) by studying environments where empowerment is not expected to occur. Rappaport suggests that empowerment is not just an individual construct, it also is comprised of organizational, political, sociological, economic, and spiritual aspects. Further, empowerment is reflected in racial and economic justice, in human rights, competency and sense of community. This is not to say that one should be only concerned with broad, macro-level change; interventions can be person-centered or situation-centered, micro- and macrosocial. What is most important is “the radiating impact, the unintended consequences, and the metacommunications” of an empowering intervention (p. 132). One must be continually aware of the outcomes of

interventions – it is all too easy to apply a helping strategy that may unintentionally perpetuate victim blaming and powerlessness.

Rappaport (1987) outlines “[eleven] assumptions, presuppositions, and hypotheses built into a theory of empowerment” (p. 139):

1. Empowerment is a multilevel construct.
2. The radiating impact of one level of analysis on the others is assumed to be important. . . [That is.] understanding persons, settings, or policies requires multiple measures from differing points of view and different levels of analysis.
3. The historical context in which a person, a program, or a policy operates has an important influence on the outcomes of the program.
4. The cultural context matters. . . [I]ndividuals as well as settings will bring with them a variety of cultural assumptions, and that the match or mismatch between person and setting is of consequence.
5. Longitudinal research, or the study of people, organizations, and policies over time, is seen to be at least desirable, and perhaps necessary.
6. Empowerment theory is self-consciously a world-view theory: (a) the people of concern are to be treated as collaborators... the researcher may be thought of as a participant...; (b) the choice of our language is seen to be very important as to what it communicates...not only to other researchers and policy makers but also to the people who we are studying.
7. It is assumed that the conditions of participation in a setting will have an impact on the empowerment of the members.

8. Other things being equal, an organization that holds an empowerment ideology will be better at finding and developing resources than one with a helper-helpee ideology.
9. Locally developed solutions are more empowering than single solutions applied in a general way. . . prepackaged interventions, [designed to be applied in all situations, will not be as relevant as a solution that is created specifically for the community, by the community.]
10. The size of the setting matters. Settings that are small enough to provide meaningful roles for all members, yet large enough to obtain resources, are hypothesized as more likely to create the conditions that lead to empowerment.
11. Empowerment is not a scarce resource which gets used-up, but rather, once adopted as an ideology, empowerment tends to expand resources. (Rappaport, 1987, p. 139-142)

According to Prilleltensky (1994), empowerment has three main components: values, agents/stakeholders, and processes. In terms of values, empowerment reflects the values of self-determination, distributive justice, and collaborative and democratic participation. Self-determination is the value of people being able to choose their own course of action and their own destiny. Distributive justice is the promotion of fair distribution of resources and responsibilities (history has largely shown a continual struggle for power and resources, and the inequitable distribution of same). Collaborative and democratic participation refers to the notion that individuals affected by social interventions should be involved in the decision-making process.

Agents/stakeholders comprise the second hypothesized component of empowerment (Prilleltensky, 1994). Agents refer to individuals that are able to undertake actions and behaviors that empower themselves and others. Stakeholders are individuals or groups that are involved in the process, with the end-goal of becoming agents themselves. For example, a facilitator of a self-help group would have an initial role that guides the group towards its goals. The facilitator is an agent of empowerment – a person who is knowledgeable about the recovery process and is able to take action. The self-help group members would be stakeholders at the outset; people involved in the recovery process with the end goal of becoming facilitators (or agents) themselves.

The third component of empowerment is processes (Prilleltensky, 1994). These generally refer to research and action – the study and promotion of empowerment. “These may be best understood by posing the following questions: how, when, and where does empowerment occur, and what are the necessary and sufficient conditions for it to develop” (Prilleltensky, p. 361). Action may be instigated by a variety of stakeholders and agents, by powerless individuals and professionals alike. An empowering intervention is not reflected in its content, rather in whether it conforms to the values of empowerment. For example, intervention may require assisting individuals directly or initiating political action at a broader level (Prilleltensky). The content of these two interventions differ widely, however the basic values of empowerment remain.

Zimmerman (1995) distinguishes between empowering processes and empowered outcomes. Empowering processes “are those where people create or are given opportunities to control their own destiny and influence the decisions that affect their lives” (p. 583). In effect, these are events or experiences in which people learn to

associate personal goals with the mechanisms with which to achieve them, obtain needed resources, and gain control or mastery over their lives. These processes can occur at the individual, organizational, and community level, and such processes can lead to empowered outcomes and other salutary effects. In short, facilitating events that lead to the attainment of goals, resources, and mastery, are processes that can produce beneficial results. For Zimmerman, empowering outcomes “refer to specific measurement operations . . . that may be used to study the effects of interventions designed to empower participants, investigate empowering processes and mechanisms, and generate a body of empirical literature that will help develop empowerment theory” (p. 585). In essence, empowered outcomes are “locally relevant measures” that allow the measurement of empowerment in a specific context (p. 585). For example, a situation may call for the measurement of self-efficacy and perceived control, which in turn, will assist in identifying what are the empowering outcomes (e.g., increased feelings of control). Being specific in the ways in which empowerment is measured helps to delineate empowerment’s boundaries in a particular context (Zimmerman). In general, however, outcomes are seen as end-products or states, not operations. The operations alluded to above actually facilitate the verification and identification of empowered outcomes. However, such outcomes may be difficult to identify with precision.

Three assumptions underlie psychological empowerment (Zimmerman, 1995): that psychological empowerment takes different forms for (a) different groups of people and (b) different contexts, and (c) that psychological empowerment is a dynamic variable that fluctuates over time. These assumptions have been supported empirically in the assessment of empowerment experiences of 49 employees of a large human service

organization (Foster-Fishman, Salem, Chibnall, Legler, & Yapchai, 1998). Unstructured interviews, observations, and archival data revealed that people had different ideas of what constituted empowerment. People with previous empowering experiences tended to desire more real influence in decision making, whereas those who had relatively little empowerment experience found a more directive leader to be empowering. A variety of pathways, having multiple expressions and unique combinations, were found. Feelings of empowerment also varied according to context: people reported feeling constrained in one location (e.g., the work site), yet felt empowered in another (e.g., being a member of an agency-wide work group, or at home). Empowerment's dynamic nature was also illustrated: its variance over time, changing funding patterns, leadership, and political agendas all influenced the external demands placed on employees. At one moment, task demands were controllable, at another they spiraled out of control (Foster-Fishman et al.).

In sum, groups of people may be stratified in many ways (e.g., employed versus unemployed, minority group membership). Empowerment can and likely will mean something different for each person (Foster-Fishman et al., 1998). Context also plays an important role: the organizational makeup of one agency may be quite different from another; one's role at the office may be quite different from that at home. Empowerment will probably differ from one life domain to the next. The fluidity of this concept also speaks to the possibility that feelings of empowerment will ebb and flow over time.

Zimmerman (1990a) argues for the need to distinguish between an individually-oriented conceptualization of empowerment and psychological empowerment. Empowerment restricted to the individual is often limited to a single perspective and conceives empowerment as a personality variable. These limitations do not take into

account the multi-faceted and multi-leveled influences that may impinge upon the individual. Empowerment or a lack thereof is attributed solely to the efforts (or lack of effort) on the part of the individual alone. However, there may be pervasive and systemic forces that facilitate or inhibit an individual's ability to become empowered.

Psychological empowerment, in contrast, acknowledges ecological and cultural influences. The fit between the person and the environment/context is of vital importance. This is not to say that individual-level variables are unnecessary. In fact, these are quite crucial. Examples of these are cognitive, personality, and motivational aspects of control. Psychological empowerment is a "contextual construct that requires an ecological analysis of individual knowledge, decision-making processes, and person-environment fit" (p. 175; see also Rappaport, 1987).

Multiple Applications – Research Investigating Empowerment

Though organizational and community-level analyses of empowerment have been conducted (Florin & Wandersman, 1990; Chavis & Wandersman, 1990; Prestby, Wandersman, Florin, Rich, & Chavis, 1990; McMillan, Florin, Stevenson, Kerman, & Mitchell, 1995; Rich, Edelstein, Hallman, & Wandersman, 1995 and others), and ecological approaches are prevalent, the following summarizes empowerment research that utilizes individual-level variables. This study will be focusing on empowerment at the individual level in order to better understand its meaning and impact upon persons, rather than groups. The group level of analysis is important in order to understand the processes in which a group's empowerment can be facilitated or inhibited. However, groups are very heterogeneous in nature, thus potentially influencing the data in certain

ways. In order to understand more concretely the basic correlates of empowerment, the individual is the most easily controlled unit of analysis.

The empowerment of persons with serious mental health problems can enhance their quality of life (Wilson, 1996). Mental health and well-being “are determined by the interactions between the individual, the community of which he or she is a part, and the environment in which he or she lives” (p. 71). A critical component of empowerment in the mental health arena includes consumer involvement (consumers are, in this case, people with mental disorders who receive services or treatment). Examples of consumer involvement include participation in influencing outcomes (e.g., actions or decisions made about their disorder, its treatment, and other aspects of living), gaining a sense of control over their illness and lives, and becoming more able to cope with the illness.

It is also important to examine the experiences of other people who are likewise marginalized, yet are not mentally ill. Fifteen individuals, active in grassroots, citizen-initiated organizations, were interviewed at length by Kieffer (1984).

Typical of the individuals involved were a working-class mother who had become the prime force in constructing a community health clinic, a migrant laborer who had become an organizer and boycott coordinator, a former junkie and gang leader who had become a leader in an urban homesteading program, and a retired laborer leading efforts against brown lung disease (Kieffer, 1984, p. 14)

At the outset, these individuals had experienced powerlessness, alienation, sustained conflict (e.g., lack of time to think, just focusing on getting by), and oppressive social and economic circumstances. The interviews were open-ended and reflective, designed to enable the individuals to describe their transition from powerlessness to

sociopolitical empowerment. This was a collaborative process in that initial and subsequent transcripts and interpretations were shared with the participants for correction and further elaboration. At the outset, all subjects reported powerlessness, self-blame, distrust, and alienation – survival was a full-time occupation. Kieffer asserts that a developmental or growth process emerged as a result of these interviews. He notes four distinct phases of development, each of which lasted approximately one year. The first phase was “the era of entry” (Kieffer, p. 18), which can be conceived as the birth of empowerment. Although all participants reported self-reliance and rootedness in their community, direct threats to self-interests were required to provoke action (these threats tended to be immediate and physical in nature). For example, a company’s construction of a power facility included plans to flood the land of one of the participants. This direct and immediate threat to the individual and his or her family propelled the participant into choosing to do something about the situation. This reactive engagement was marked by trial-and-error efforts in which participants became aware of themselves as political beings.

The second phase was “the era of advancement” (Keiffer, 1984, p. 20), which corresponds roughly to later childhood. Primary aspects of this phase are “the centrality of a mentoring relationship, the enabling impact of supportive peer relationships within a collective organizational structure, and the cultivation of a more critical understanding of social and political relations” (p. 20). The existence of an enabler was critical, as this person supported and enabled action in these participants. For example, one of the participants commented on the local organizers, “[They] all saw beyond me. . . They saw what I was *capable* of, what I *could* be . . . It was so important that somebody cared

enough to be there encouraging me, pushing me . . .” (p. 20). This phase was marked by increasingly successful strategies for action, “more effective mechanisms for collective expression and support, and more sophisticated capacities for social analysis and resource development” (p. 20). That is, the actions and mistakes made by the participants allowed them to learn and build upon their experiences. Mutually supportive problem-solving with peers was also important. The development of understanding was related to involvement and action, and the more involved they were the more they came to understand. This involvement allowed for the appreciation of the relationships between social, political, and economic variables, and for the examination of the processes that maintain the exploitation and alienation of the powerless (Kieffer).

The third phase is the “era of incorporation” (Kieffer, 1984), which corresponds roughly to adolescence. In this phase, “self-concept, strategic ability, and critical comprehension substantially mature” (p. 22). Many participants indicated an identity crisis of sorts – which resulted from the understanding that they had to contend with permanent and painful barriers to self-growth. Some of these barriers included the awareness that the agencies or corporations they were fighting had many more resources than they did, and that the government and the media were not interested in advancing their cause. On the positive side, organization skills were honed in terms of leadership and in enhancing self-acceptance. Many participants commented on having more skills and control in dealing with issues.

The final phase is the “era of commitment” (Kieffer, 1984, p. 24), which corresponds roughly to adulthood. Individuals who successfully attain this phase are generally able to reconstruct their sense of mastery and awareness of self. That is, they

were able to renegotiate who they were and redefine themselves when faced with pitfalls and challenges along the way. During this phase, the participants struggled with assimilating new knowledge and skills into the structure of everyday life. Some participants noted that even their values had changed, requiring a re-evaluation of many of the roles they occupied previously. Kieffer notes that this struggle and evolutionary process will continue in adulthood. For many of the participants, this phase includes ongoing community involvement and collaboration, and the awareness that one must nurture others through this same process.

For Kieffer (1984), there are two critical themes underlying this work. The first theme is the notion of constructive dialogue or awareness of internal conflict when confronted with a difficult issue (in this study most of the individuals had to experience sustained conflict, and took action when a conflict touched them at the gut-level). The second theme is the notion of praxis, which corresponds to a circular relationship between reflection and action. This latter theme is consistent with Zimmerman (1995), in that reflection and action are a building process: "the 'building up' of skills progresses only through repetitions of cycles of action and reflection" (Kieffer, p. 26). Participatory competence is achieved in the progression through the four stages and is marked by "(a) development of more positive self-concept or sense of self-competence, (b) construction of more critical or analytical understanding of the surrounding social and political environment, and (c) cultivation of individual and collective resources for self-control and political action" (p. 31). Competence is the intersection of these three components. Participants did not believe that they had attained more power in the absolute sense (in

terms of changing the social environment). However, they believed that they were better able to interact within and engage the dynamics of the social environment in question.

Rissel (1994) indicates that personal development at the individual level may be necessary predecessor to empowerment. Examples of this development are the enhancement of self-efficacy (a person's judgments about how well he or she can execute an action) or self-esteem. Rissel notes that personal development is the first step beyond having an empowerment deficit. This development then progresses through a number of phases: (a) mutual support groups, (b) issue identification and campaigns, (c) participation in community organizations and advocacy coalitions, and (d) collective political and social action. This last stage culminates in a healthier status and success in controlling resources.

Lord and Hutchison (1993) interviewed a number of people making the transition from powerlessness to empowerment. Empowerment may result from the mobilization of internal resources (such as self-efficacy and a sense of personal responsibility) and external resources (such as social support networks). Participation in community activities was related to increased levels of competence and personal control. These positive outcomes lead to more involvement and further enhancement of intrapersonal or internal characteristics. Participation contributed to empowerment in a number of ways: (a) it increased social interaction and the ability to develop social roles; (b) it increased feelings of competency in the ability to participate; and (c) all of the individuals indicated that participation in group or community activities was important to their own sense of empowerment. The act of participating was key. The involvement and the action of being

empowered lead to increased social interaction, a sense of control, and a sense of collective identity and belonging.

In examining the empowerment of individuals in client-run self-help agencies, Segal, Silverman, and Temkin (1995) created and validated three measures: the personal, organizational, and extra-organizational empowerment scales. The personal measure was developed to assess the amount of control over common life domains. Items were constructed after 12 months of observation at the self-help agencies. These items were then reviewed by and tested on the clients. To develop the organizational measure, the authors drew upon existing definitions of power and organizational task structure (which includes control and coordination). The same client review process was done on this measure. The extra-organizational measure simply assessed the extent that clients were involved in political and other community activities.

These scales were used to investigate several beliefs: (a) that participating in a client-run self-help agency would facilitate self-esteem and self-competence; and (b) that change can come about through one's own initiative. The authors felt that multiple levels of analysis were needed and viewed individual empowerment as being linked to organizational and social participation. In essence, they investigated empowerment in self-help agency members in three ways: (a) the degree to which these individuals believed that they had gained control over their own lives; (b) the degree to which they were involved in influencing organizational structures; and (c) the degree to which they became participants in the political processes and civic duties in the broader community.

Not only did Segal et al. (1995) construct and administer direct measures of empowerment, they administered measures of related concepts such as self-esteem, hope,

internal locus of control, and self-efficacy. Quality of life and independent social functioning were also examined. All of the measures showed high levels of internal consistency at two sampling periods and showed high levels of stability. A convergent discriminant validity analysis found two distinct constructs; the first included personal empowerment, locus of control, hope, and self-esteem; and the second was comprised of organizational and extra-organizational empowerment. Segal et al. indicate that this clustering is consistent with Zimmerman and Rappaport's (1988) work on psychological empowerment, which found a similar clustering of locus of control and self-efficacy. Of interest, self-efficacy appears to be a factor in both constructs and may be the bridging construct between the two dimensions of personal and organizational/extra-organizational empowerment (Segal et al., 1995). Additionally, Segal et al.'s research indicates that organizational and extra-organizational empowerment is highly correlated with work experiences, whereas the personal empowerment cluster appears to be more strongly related to quality of life and independent social functioning.

Weaving It Together – Empowerment's Common Linkages and Components

Rappaport (1984) asserts that the only way to see empowerment (as a process or outcome) is by a process of triangulation. In this way, a variety of concepts and measures are used to converge on the construct in question. As can be seen from the preceding overview, there are number of common or overlapping elements found in empowerment research. All of them emphasize one or more of the following areas: (a) psychological or internal characteristics and mechanisms, most commonly self-efficacy and perceived control; (b) awareness and learning, such as skill development, resource acquisition, and the understanding of community and societal-level influences and barriers; and (c)

purposeful action. These commonalities triangulate on Zimmerman's (1995) nomothetical network of psychological empowerment that is described in detail in the following section. This triangulation also speaks to the validity of Zimmerman's model in capturing some of the basic correlates of empowerment.

Zimmerman's Nomological Network of Psychological Empowerment

Zimmerman (1995) endeavored to advance a conceptual model of empowerment that was broad enough to accommodate a multiplicity of actors and concerns, while maintaining enough specificity to guide the measurement of empowerment in discrete settings and populations. Zimmerman uses the notion of the nomological network to describe psychological empowerment.

As proposed by Cronbach and Meehl (1955), a nomological network is a framework or "interlocking system of laws which constitute a theory" (p. 290). These laws may connect (a) observable properties to each other, (b) theoretical constructs to each other, or (c) theoretical constructs to observable properties. At least some of the laws in the network must be observable in order for the framework to be scientifically admissible. Constructs are inherently open-ended and necessitate the precise specification of the interrelationships between observed phenomena and how they relate to intangible concepts (e.g., empowerment). Early elaborations of a construct will necessarily have fewer components and there may be other ways of organizing this network. Further, these relationships may be contingent upon context and may fluctuate over time.

Based on associations reported in the empowerment research literature between perceived control, skill development, and community participation, Zimmerman (1995) concludes that "[psychological empowerment] is expected to include a sense of and

motivation to control; decision-making and problem-solving skills and a critical awareness of one's sociopolitical environment; and participatory behaviors" (p. 588).

Figure 1 illustrates Zimmerman's nomological network of psychological empowerment at the individual level. As can be seen, three components are hypothesized to contribute to psychological empowerment: the intrapersonal, interactional, and behavioral components.

Intrapersonal component. At the heart of this component are the ways in which people perceive or think about themselves. This component "includes domain-specific perceived control and self-efficacy, motivation to control, perceived competence, and mastery" (Zimmerman, 1995, p. 588). Beliefs and perceptions are critical because they may propel individuals to act in ways to secure desired outcomes. Without these perceptions of competency, people would probably not take the time to develop the necessary skills nor the needed behaviors to accomplish the desired goal. The work of Zimmerman et al. (1992), and Zimmerman and Rappaport (1988) illustrates the multifaceted nature of the intrapersonal component – it cannot be described as being just self-efficacy or perceived control. Both studies found that self-efficacy was but one contributor to the intrapersonal or internal component of empowerment. Zimmerman and Rappaport discovered that 11 separate measures of control (including self-efficacy, locus of control, motivation, etc.) formed a single unitary dimension. Likewise, Zimmerman et al. (1992) found that self-efficacy was one of several variables that formed the intrapersonal component.

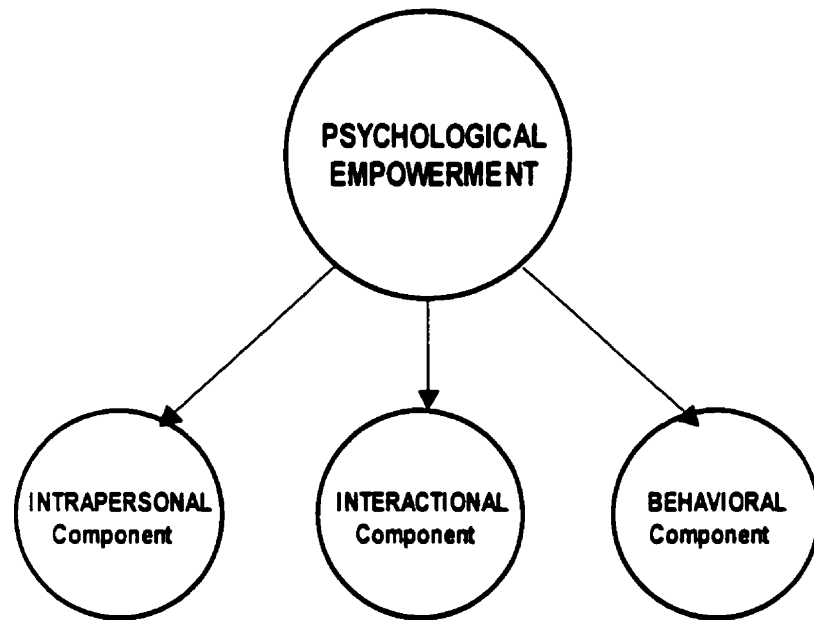


Figure 1
Nomological Network of Psychological Empowerment (Zimmerman, 1995)

Interactional component. The interactional component is the bridge between the intrapersonal (internal) and behavioral (external) components – between the perception of control and the measures taken to enact it (Zimmerman, 1995). Many elements can bridge this gap, such as critical awareness, acquisition of resources, decision-making, problem solving, and skill development. These elements allow the person to move from an internal desire to approach a goal to the external behavior needed to approach the goal. In order to take action, people must be informed of opportunities, as well as understand their community and the sociopolitical forces that act within it. Thus, critical awareness, learning, and possessing the needed skills and resources prepare the individual for action. The interactional component allows the internal and external elements of empowerment to interact.

Behavioral component. This aspect of psychological empowerment is comprised of “actions taken directly to influence outcomes” (Zimmerman, 1995, p. 590). These actions may range from behaviors intended, for example, to improve (a) one’s living situation, such as finding a job; (b) one’s interpersonal situation, such as joining a book club, church, or support group; and (c) one’s societal contribution, such as being active in community groups or volunteer associations. Another set of behaviors relevant to this component are “behaviors to manage stress or adapt to change,” such as coping strategies (Zimmerman, p. 590).

Zimmerman (1995) indicates that all three of these components must be evaluated to completely assess psychological empowerment. It is not sufficient to measure, for example, only the intrapersonal component, omitting the other aspects. The intrapersonal, interactional, and behavioral components work in concert and, ostensibly, are equally

important for an accurate assessment of empowerment. Zimmerman also reiterates the need to adopt relevant measures that are appropriate to the particular population and context under investigation.

The elegance of Zimmerman's (1995) model of psychological empowerment is in the interaction of beliefs, perceptions, resources, and action. Without belief in the ability to influence or master an outcome, there would be no movement to either acquire the necessary skills or enact the necessary behaviors to attain that outcome. Likewise, even if one felt personally capable, yet lacked resources, critical awareness, or decision-making skills, one could not act. Finally, if one possessed the perception of competency, and the required skills and resources, yet still did not act to achieve a goal, one would still not be empowered. In essence, one's positive self-perceptions are a necessary prerequisite to the acquisition of skills and resources; the acquisition of these resources is a necessary prerequisite to action. The behavior or movement to influence or attain a goal represents empowered action and, in fact, provides for a concrete means of tracing these empowering events (as these are certainly observable and measurable).

Zimmerman (1995) emphasizes that empowerment behavior is action intended to influence or attain the desired goal or outcome. This is important because empowerment is not only found in mastering or achieving a goal; it is also found in being engaged in the process. One certainly does not go from powerlessness to mastery in one step. Rather, the process can be seen as an incremental one – empowerment is a developmental process (see also Keiffer, 1984). As such, engaging in empowering processes may lead to increased learning, resource acquisition, and/or progress toward the desired goal. A step in the right direction is empowerment operationalized. This is not to say that higher-level

goals or outcomes are unimportant. If engaging in the process does not eventually lead an individual to achieve an even greater goal, the process may cease to be empowering.

Zimmerman (1995) describes a number of issues related to the nomological network of psychological empowerment that warrant further investigation. These include (a) investigating the ways these components relate to each other and (b) whether one or more components is/are contingent upon another. The intention of the present research is to explore some of these issues.

The Present Study: Applying Zimmerman's Framework of Psychological Empowerment to Young Women in the Interpersonal Domain

As a species, humans are inherently social. For many, lack of social support and friendship dramatically reduces their quality of life, regardless if they are successful in other areas of functioning. A paucity of social interaction, or negative social experiences, can lead to poor functioning, depression, and apathy in individuals. There are consistent reports of a link between the lack of social support and psychological distress (see Finch, Okun, Pool, & Ruehlman, 1999, for a quantitative review of 48 studies). The present research, therefore, will specifically evaluate young adults' empowerment within the social or interpersonal domain. Adequate competency, skill, and behavior in the interpersonal domain are important for life success and overall well-being. These adequacies are likely to be very important to young adults, particularly since early adulthood is the period in which people form long-lasting patterns of adult social relationships. As the focus of this investigation is on the interpersonal domain, psychological empowerment will be referred to hereafter as interpersonal empowerment (IE).

As indicated in previous sections, determining how to measure each component must be done according to a specific population and their ecological context. University students will have particular concerns and contextual considerations unique to their group. The measurements must also be in reference to a specific life domain, as it is very likely that students may be differentially empowered across various life domains. For example, a student may feel very empowered when it comes to the academic domain (e.g., he or she may perform extremely well in school), yet may feel powerless in a social setting (e.g., he or she may feel isolated from his or her peers at school). The transition from adolescence into young adulthood is a difficult one. Having adequate social support and positive interpersonal relationships will sustain many individuals through this risky period. Understanding what makes some university students more empowered in the interpersonal domain is important. The university student population was selected for this reason.

Additionally, there are likely some significant differences between males and females, in terms of interpersonal relationships. How men and women approach interpersonal problems, their feelings about their abilities to cope with these problems, and the kinds of interpersonal skills they possess tend to diverge (Hobfoll, Dunahoo, Ben-Porath, & Monnier, 1994; Riggio, 1986). As a result, it seemed reasonable to limit this investigation to one gender (women).

This work will be conducted at the individual-level of analysis. Though some broader elements beyond the individual will be considered (e.g., organizational involvement), understanding the person-specific elements that create differential IE will facilitate a better understanding of the basic correlates of IE. Broader levels of analysis

may distort this understanding, as groups are made up of many different types of people with many different sets of experiences. For this reason, variables appropriate to individual will be examined.

IE, as well as its intrapersonal, interactional, and behavioral components, is a latent construct – that is, it is not directly observable. Therefore, it is necessary to use observable measures to triangulate these constructs. Importantly, each component must be given equal emphasis regarding measurement, particularly when evaluating each component's relative contribution to IE. In this study, only two elements or aspects of each of the three components will be measured, recognizing that this will not exhaustively measure these constructs. Likewise, two measures will be utilized for IE.

Measuring interpersonal empowerment. Applying Zimmerman's (1995) model to the interpersonal domain in young women will be done in the following way: (a) the intrapersonal component will be examined using measures of self-efficacy and perceived control; (b) the interactional component will be explored using measures of social skills and resources; (c) the behavioral component will be measured using assessments of coping skills and levels of social participation; and (d) IE will be measured using reported levels of social support (satisfaction and frequency ratings) and social intimacy.

Perceived self-efficacy and control are situation-specific and tap into the intrapersonal component of IE. Perceived self-efficacy "is concerned with judgments of how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982, p. 122). Bandura (1977) asserts that changes in behavior are mediated through an individual's feelings of self-efficacy. If the activity is beyond one's capabilities, it will be avoided. Self-efficacy is multidimensional and can vary in terms of

magnitude (i.e., estimate of the best possible performance), strength (i.e., confidence to perform at a given level), and generality (i.e., whether or not the experience results in situation-specific feelings of efficacy).

Perceived control can be defined as “the belief that one has at one’s disposal a response that can influence the aversiveness of an event” (Litt, 1988, p. 243). Like self-efficacy, perceived control is multidimensional, with little agreement on the number of influencing factors. Paulhus (1983) divides the concept into primary behavioral spheres, the spheres in which one confronts the world. These spheres radiate out from the individual and are describe as personal control (control in personal achievement), interpersonal control (control in dyadic and group situations), and sociopolitical control (control in the political and social system; p. 1254). This conceptualization of perceived control is certainly relevant to IE. Litt (1988) asserts that “perceptions of control in a situation and estimates of self-efficacy to use that control to advantage interact to determine how a person will appraise the situation and how much distress will be elicited” (p. 253). Self-efficacy may be as important as dispositional traits in mediating the effects of control in various situations. Self-efficacy and perceived control are influential and related aspects of the intrapersonal component. Most certainly, these will impact an individual’s perceptions of the social milieu in which he or she is engaged.

In the interactional component of IE, social skill is generally an individual’s ability to achieve interpersonal goals in a manner that is reasonably efficient and appropriate. “The socially skilled actor can be expected to draw regularly on his or her repertoire, enact the relevant strategy and, in turn, exhibit ‘skilled’ performances” (Segrin & Dillard, 1993, p. 76). A lack of social skills is related to myriad problems in living,

according to these researchers. Social skills are critical to psychological adjustment in children, and to developing and maintaining quality interpersonal relationships throughout life (Riggio, Waring, & Throckmorton, 1993). Undoubtedly, assessing social skills and competencies is relevant to IE, and comprise part of the interactional component.

Resources are an important companion to social skills. "Resources are material, social, or personal characteristics that a person possesses that he or she can use to make progress toward her or his personal goals" (Diener & Fujita, 1995). Individuals who have more assets such as material possessions (e.g., money), good social roles (e.g., respected career), and desired personal characteristics (e.g., intelligence, attractiveness) are far more likely to be able to fulfill their social needs. Diener and Fujita evaluated the relationship between resources and subjective well-being and found that social and personal resources were more related to well-being than were material resources. It is likely that resources other than social skills would contribute to the IE process. Some of the resources that will be measured are social or interpersonal in nature, such as self-confidence, intelligence, assertiveness; others include friends' approval, health, good manners, having enough free time, and physical attractiveness (these were taken, in part, from Diener and Fujita).

Turning to the behavioral component of empowerment, participation in a variety of organizations and activities is expected to play a large role in achieving IE. Zimmerman and Rappaport (1988) found that "individuals reporting a greater amount of participation scored higher on indices of empowerment" (p. 725). Recalling Kieffer's (1984) idea of praxis (the circular relationship between reflection and action) and

Zimmerman's (1995) discussion of empowerment as an action process, a key to being interpersonally empowered is participating in environments that can increase access to positive social supports and relationships. This participation allows for the process of empowerment to occur: action will prompt reflection upon competencies and skills, which would lead to the continual refinement of such aspects of functioning. The refinement of these competencies and skills is likely to prompt further action in the interpersonal domain. Thus, participation in a variety of social and other types of organizations and activities will do two things: it will (a) expose the individual to greater social opportunities and (b) provide learning experiences that may prompt further development of social skills and competencies. Empowering participation in the interpersonal domain can come in many forms: volunteer and leisure activities, work, community league participation, sports, campus social groups, scholastic groups, and student government are a few examples.

Coping behavior is likewise critical to the behavioral component of IE. A person's activities and interpersonal interactions are rarely free of conflict. The ways in which an individual approaches conflict and problem-resolution will certainly have an impact on the quality of his or her social relationships. Hobfoll et al. (1994) investigated a dual-axis model of coping, which had two dimensions of interest: active versus passive and prosocial versus antisocial coping. They found that women were as active as men in coping strategies and used more prosocial strategies. These strategies were marked by an active approach to the problem and utilization of social resources, which work in concert to increase resistance to stress. Men were more likely to use antisocial and aggressive, or less assertive, coping strategies than women. Prosocial and active strategies were related

to increased feelings of mastery. Of interest, both prosocial and antisocial coping resulted in greater distress for men. This may reflect a restriction in the boundaries around what constitutes acceptable coping strategies. Later evaluations of the SACS employed a tri-axial model, which included prosocial-antisocial, active-passive, and direct-indirect axes (Dunahoo, Hobfoll, Monnier, Hulsizer, & Johnson, 1998). In the current study, active and prosocial coping are expected to be associated with greater IE. In sum, the three components of IE will be assessed using a variety of measures relevant to the interpersonal domain, these are perceived self-efficacy, perceived control, social skills, resources, participation in a variety of activities, and coping strategies.

As with the individual components, there are likely quite a number of relevant dimensions that contribute to overall IE. Dimensions that may be particularly meaningful are the size of and satisfaction with one's social support network, and feelings of social intimacy. Social support is generally defined as "the existence or availability of people on whom we can rely, people who let us know that they care about, value, and love us" (Sarason, Levine, Basham, & Sarason, 1983: p. 127). Further, Sarason et al. (1983) contend that "social support (a) contributes to positive adjustment and personal development and (b) provides a buffer against the effects of stress" (p. 127). Having supportive relationships is a critical aspect to living. Not only is it important to have a number of social relationships on which to draw (this number, of course, may vary from individual to individual), satisfaction with these supports is critical as well. Because of individual differences in needs, the perception of the available supports is paramount and is reflected in subjective satisfaction ratings (irrespective of the actual number of available supports). Number of and satisfaction with interpersonal relationships are

reasonable measures of the goal or end-state of IE. Each person will have certain numeric threshold at or past which he or she perceives that there are enough supports in his or her life. Individuals not satisfied with their interpersonal relationships will likely desire a greater number or better quality of those relationships. Further, closeness or social intimacy may also be significant in terms of measuring IE. Intimacy differs from satisfaction only in that it is a more precise measurement of or elaboration upon the quality of interpersonal relationships. Intimacy is likely a subset or factor of support satisfaction. In a pilot study conducted by this author, participants used words like "close, loving, deeper, more meaningful, having good communication, comforting, and belonging" as central aspects of what constitutes good and desirable interpersonal connections. Thus, measuring intimacy may tap a vital aspect of the quality of relationships relevant to IE. It is likely that, for young females to feel empowered in the interpersonal domain, they must have a certain number of social relationships, they must be satisfied with these relationships, and they must feel that these relationships fulfill their needs for social intimacy.

The reasoning behind the selection of the aforementioned measures is as follows. Feelings of efficacy and competency would necessarily be related to having or developing suitable social skills and resources. Having these perceptions and skills would likely facilitate appropriate behavior in the interpersonal domain, such as participation in a variety of social, community, and volunteer settings, as well as utilization of positive, proactive coping behaviors when confronted with interpersonal disputes. Empowerment is a process that is circular and builds upon itself. The process of IE is in the flow from the intrapersonal component, to the interactional component, to the behavioral component

which, in turn, feeds back into the intrapersonal component. In this way, successful action and participation should lead to positive self-appraisals and feelings of competency, which in turn, will lead to improved skill and further participatory behavior. Thus, the process element of empowerment is manifest in action. Action alone is not enough, however. Eventually, the individual must move towards a goal; in the case of IE, this is logically reflected in having high-quality interpersonal relationships. It is important to note that IE necessarily includes aspects of social influence and personal control/efficacy that are requisite in order to acquire the kinds of support needed.

A distinction should be made here between processes and outcomes. The process of empowerment in the interpersonal domain would lead the individual to greater levels of participation and competency in social settings, thus maximizing the individual's chances of actually gaining more supportive relationships. However, the proof is in the pudding: the outcome of empowerment should be a network of relationships (that is perceived to be sufficient in size) and higher levels of satisfaction with these relationships. For this reason, IE, in the opinion of this author, is not just the manifestation of the behavioral component, although the presence of it signifies that the process of empowerment is operating. IE is found in the presence of the intrapersonal, interactional, and behavioral components to be sure. Nevertheless, in the final analysis, one must move towards goal attainment. In sum, the process of IE is reflected in an individual successfully engaging in behaviors and activities that would lead him or her to develop satisfactory interpersonal relationships. The outcome of IE is reflected in actually attaining the desired interpersonal relationships.

Investigating the interrelationships and contingencies between the components of interpersonal empowerment. As Zimmerman (1995) indicates, interrelationships between these components are very likely. In this case, Figure 2 illustrates the proposed relationships between the components in this study (Figure 2 differs from Figure 1 in that connections between the components are suggested). It is probable that these relationships will be positive in nature. For example, possessing sufficient skills and resources in the interpersonal domain likely indicates the presence of similar levels of self-efficacy and behavioral action. High amounts of efficacy should predict high amounts of skills, and high amounts of participatory behavior.

Contingencies are expected with these components as well. People will not seek or enact their social skills if they do not feel competent to approach a given social goal. Consequently, feelings of efficacy are critical to instigate the empowerment process – skill development and relevant approach behaviors will not occur if people do not feel capable at the outset. Therefore, the empowerment process flows in a distinct direction, and is contingent upon the engagement of certain preceding elements or components (the process element is illustrated in the connections and feedback loop that link the components in Figure 2).

In most circumstances, the intrapersonal component must be engaged before the empowerment process can begin. Beliefs in being able to do something must be present in order for the next steps to occur (although this does not preclude the possibility that behavior may influence cognition and instigate the process). Enhancing perceptions of self-efficacy and control will not necessarily lead to empowered action. If faced with a lack of skills, lack of resources, or other types of social barriers, individuals certainly

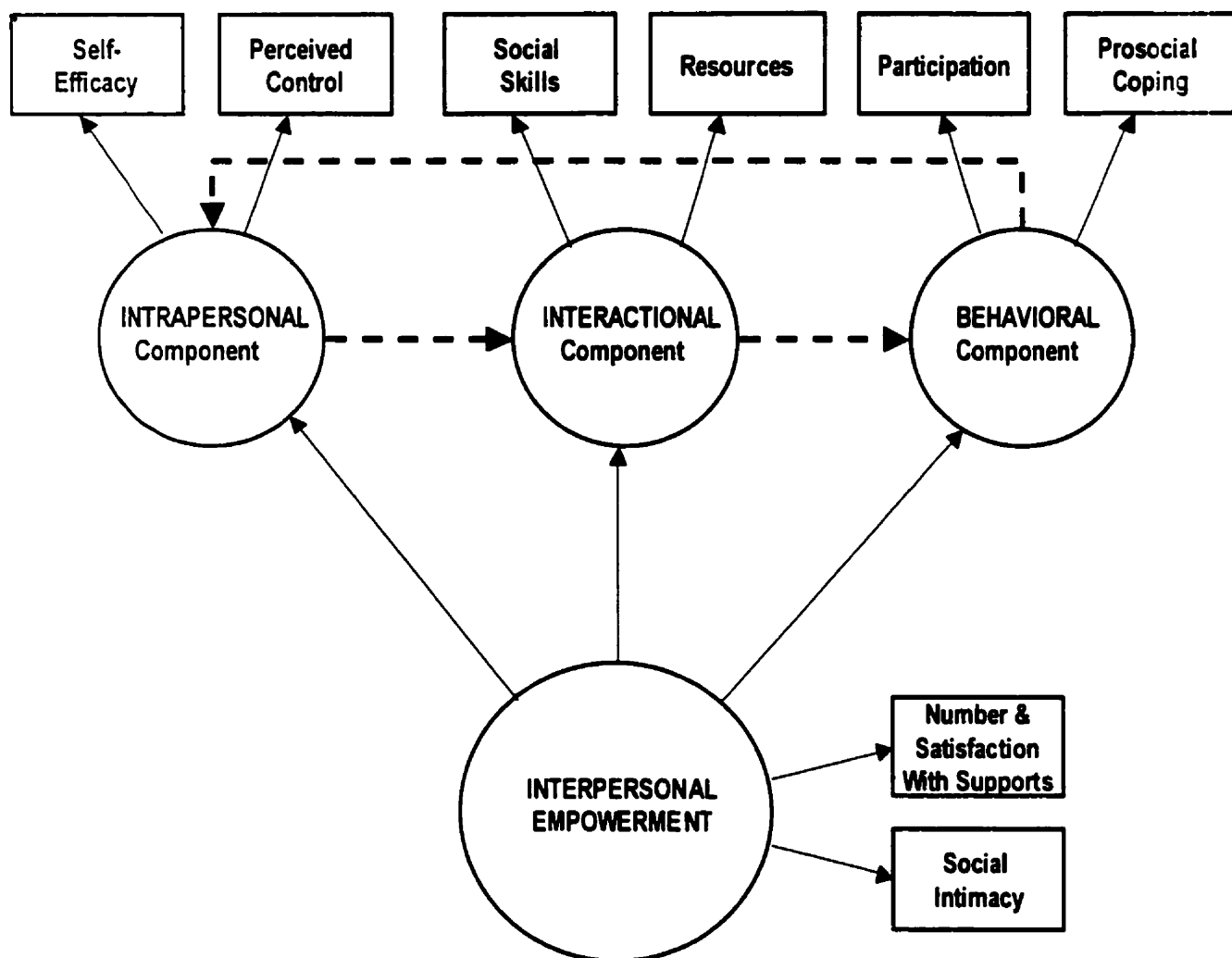


Figure 2
Nomological Network of Interpersonal Empowerment and Hypothetical Relationships
Between Components (Based on Zimmerman, 1995)

cannot act. Therefore, the interactional component must be engaged before empowered action is possible. Action will tentatively lead to further refinement of perceptions and skills (behavior feeds back to the start of the process). Therefore, empowered action is contingent upon the engagement of the intrapersonal component, and then the interactional component. Again, Figure 2 illustrates this idea: the IE process flows from the intrapersonal, to the interactional, and finally to the behavioral component, with the outcome of the actions taken influencing or feeding back into the intrapersonal component. In other words, the outcome of an individual's behaviors will either facilitate or inhibit feelings of self-efficacy and personal control. The litmus test of empowerment is in action. Thus, in a sense, the behavioral component is most important, as it leads to more opportunities and the refinement of people's intrapersonal and interactional skills. Ultimately, the success of these behaviors will either enhance or restrain the empowerment process.

The present study endeavors to do two things. First, it will apply Zimmerman's framework of psychological empowerment to young women, specifically in the domain of interpersonal relationships. Second, it will explore the interrelationships and contingencies between empowerment's components – an aspect of the model that has not been developed.

Hypotheses To Be Tested

The relationships to be tested are illustrated in Figure 2.

1. The measures in each component are hypothesized to be positively related to each other, and positively related to social support and social intimacy.

2. It is hypothesized that the set of observed measures for each component of empowerment will load most heavily on its corresponding factor (component).
3. The measurement model will be subjected to confirmatory factor analysis. It is hypothesized that the measurement model will be confirmed and have good fit.
4. It is hypothesized that a significant proportion of the variance in each scale/subscale will be explained by its related construct/component.
5. The structural model will be subjected to exploratory structural equation modeling (SEM) to test the fit of the hypothesized model and to suggest changes. It is hypothesized that the direction of the paths (or contingencies) between the components will be supported, and that these paths will be statistically significant.
6. It is hypothesized that the model will also have a significant pathway from the behavioral to the intrapersonal component (thus making the contingency path a circular one).
7. It is hypothesized that the final model derived from the exploratory phase will have good fit.

Method

Participants

In this research, participants were selected according to certain characteristics. Participant selection was restricted to university students who were between the ages of 18 and 24, whose marital status was single (not married), and were female. These restrictions were necessary due to the fact that varying age groups may have vastly different life experiences and challenges, all of which may influence IE. Marital status can also greatly impact the interpersonal domain. Having a marital partner can provide a stable source of social support or can provide a source of constant conflict. In terms of gender, it seemed reasonable to limit the investigation to one gender for two reasons. First, when developing a model, it is easier to interpret the results of a highly restricted sample (the results are less likely to be contaminated by differences within the sample). Second, gender differences have been observed previously on many of the scales and subscales that were used in this research. Therefore, it was probable that gender differences would be observed and would confuse interpretation. As women have been found to engage in more social joining, and more support seeking, developing a model of interpersonal empowerment would be more tenable with this population. As a result, women, instead of men, were selected to test the model.

Participants were also restricted according to culture (Canadian born) and language (English as first language). Canadians who have recently immigrated from other countries may have markedly different life experiences. Restricting the sample to Canadian-born participants ensured nominal control of the cultural context. English as a first language was also important. There may be subtle differences in meaning accorded

to certain terms and phrases used in the measures. In sum, the sample was restricted on five characteristics: (a) gender (female), (b) age (18 to 24), (c) marital status (single, not married), (d) culture (Canadian-born), and (e) language (English).

A total of 469 females completed a questionnaire packet. A minimum of 400 were needed for the factor analysis and structural equation modeling phases (200 participants per group; Ullman, 1996). The College Undergraduate Stress Scale (CUSS) was also administered to identify participants that had recently experienced extremely stressful events. Individuals experiencing certain events would be removed from the final group of participants (please refer to the description of the CUSS in the section that follows for a listing of the exclusion criteria). A total of 58 participants were excluded immediately from the final sample because of (a) restriction violations ($n=16$), (b) recent experience with significant life events (total $n=41$; 10 experienced death of a close friend, 23 death of a close family member, 1 contracted a sexually transmitted disease, and 7 had a combination of these events), or (c) substantial amounts of missing data ($n=1$).

Mean age for the final sample ($n=411$) was 18.78 years ($SD=1.25$); 99% of these individuals reported English as their first language ($n=407$), with 1% ($n=4$) reporting having learned both French and English. All of these participants were born in Canada and were not married (i.e., single; though 6.8% or 28 participants indicated that they were cohabitating with a partner). In terms of educational status, 80.4% ($n=329$) were first year students, 13.2% ($n=54$) were in their second year, 4.6% ($n=19$) were in third year, and 1.7% ($n=7$) were in their fourth year of studies ($n=2$ did not specify their university year).

Participants received course credit for their participation. All individuals received an informed consent form (see Appendix A) to read and sign, indicating that their

participation was entirely voluntary and that this participation could be terminated at any time, without penalty. At the end of their participation, each individual received a debriefing form explaining their role in the experiment and who to contact for further information (see Appendix B). All participants were told to keep the details of this experiment to themselves so as to not jeopardize the data obtained from others.

Materials

Questionnaire cover sheet. It is critical to assess IE in ways that are relevant to young adults. Therefore, the questionnaire should be filled out in reference to the social or interpersonal goal that is most important to the participant.

A small pilot study was conducted by this author to investigate what goals are most important to young adults and to collect some general information about the resource and participation scale items. A total of 29 psychology students (22 females, 7 males) filled out a brief questionnaire and then participated in a group activity (students were asked to discuss and respond to questions related to the questionnaire content and to empowerment in general). The mean age of the sample was 26 years, with 46% of the group falling between the ages of 19 and 22. Eighty-three percent were born in Canada, with 80% listing their first language as English. Individuals were asked to list interpersonal goals that were important to them and then rate these goals (the most important goal received a rating of “1”, the next most important a “2”, etc.). Next, they rated a list of resources (as suggested in Diener & Fujita, 1995) in terms of their relevance and indicated whether they participated in activities related to the categories in the participation scale (these details follow in later sections). To evaluate the goal portion of the questionnaire, the most important interpersonal goals were grouped into general

themes. The most frequent interpersonal goal categories were: (a) finding or developing an intimate relationship, (b) maintaining or improving existing close friendships, and (c) finding or developing a close friendship. This completed the pilot study.

For the main study, the above interpersonal categories were listed on the questionnaire cover sheet and the participant was asked to circle the one that is most important to her (see Appendix C). Space was available for the participant to indicate an alternative social goal, if her most important goal is not captured by the categories listed. Finally, the participant was instructed to keep her goal in mind, as she would be filling out the questionnaire in reference to that goal. The participant would then fill out the remainder of the questionnaire, which consisted of measures that were intended to tap into IE, to measure life events, and to collect demographic information. Please refer to Table 1 for a summary of the measures used to tap into each component, their subscales, and the number of items in each.

Perceived self-efficacy was measured using the Self-Efficacy Scale (SES; Sherer et al., 1982). The SES is a 23-item scale that assesses participants' self-efficacy expectations. Individuals rate their agreement with each scale item, using a 5-point scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). There are two subscales, general and social self-efficacy. A sample item that reflects the general subscale is "I feel insecure about my ability to do things." An example from the social subscale is "I do not handle myself well in social gatherings." In general, the higher the score, the greater the self-efficacy expectation. The two subscales are not balanced in terms of the number of items: the general subscale has 17 items, whereas the social subscale has six. Fourteen of the 23 items are reverse-scored. Cronbach alphas are .86

Table 1

Summary of Measures Used to Assess Interpersonal Empowerment

Measure	Number of		
	Subscales	Subscale Items	Items as a Whole
<u>Intrapersonal Component</u>			
Self-Efficacy Scale	2		23
1. General Self-Efficacy		17	
2. Social Self-Efficacy		6	
Spheres of Control Scale	3		30
3. Personal Control		10	
4. Interpersonal Control		10	
5. Socio-Political Control		10	
<u>Interactional Component</u>			
Social Skills Inventory	6		90
6. Emotional Expressivity		15	
7. Emotional Sensitivity		15	
8. Emotional Control		15	
9. Social Expressivity		15	
10. Social Sensitivity		15	
11. Social Control		15	
Social Resources Scale	1		14
12. Social Resources		14	

Measure	Number of		
	Subscales	Subscale Items	Items as a Whole
<u>Behavioral Component</u>			
Strategic Approach to Coping	9		52
13. Assertive Action		9	
14. Social Joining		5	
15. Seeking Social Support		7	
16. Cautious Action		5	
17. Instinctive Action		6	
18. Avoidance		6	
19. Indirect Action		4	
20. Antisocial Action		5	
21. Aggressive Action		5	
Participation Scale	3		n/a
22. Total Number of Activities		n/a	
23. Mean Satisfaction with Activities		n/a	
24. Mean Frequency of Activities		n/a	
<u>Interpersonal Empowerment</u>			
Social Support Questionnaire	2		12
25. SS – Mean Number		6	
26. SS – Mean Satisfaction		6	
Miller Social Intimacy Scale	1		17
27. Social Intimacy		17	

Note. The Participation Scale is an open-ended scale, with seven activity categories (and an “other” category). Each category has three blanks in which participants may fill in specific activities. Thus, the absolute maximum number of items is 24, however the participant is free to respond to a range of items.

and .71 for the general and social self-efficacy subscales, respectively (Sherer et al.). The construct validity of the SES was assessed by correlating the SES with other measures of control, social desirability, competency, and self-esteem (e.g., internal-external locus of control; Sherer et al.). All were moderately correlated in the proper direction, but not so strongly to suggest that the SES is simply measuring the same thing as the other scales. These findings were substantiated by Woodruff and Cashman (1993), who found the SES “captured aspects of strength, magnitude, and generality of efficacy” (p. 423).

Perceived control. The Spheres of Control Scale (SOC; Paulhus, 1983: Appendix D) was used to assess three areas of control: personal, interpersonal, and socio-political. According to Paulhus, an individual’s life space is “partitioned” into these three discrete domains or primary behavioral spheres. An individual may desire control in the non-social environment (personal), in interactions with others (interpersonal), and/or in the political and social system (socio-political). It is possible that individuals will have divergent expectancies of control across the three domains. The items related to the interpersonal domain were of most interest in this study. Updated in 1989, the SOC is comprised of 30 items. It has three subscales (10 items each), reflecting each area of control. Participants rate each item on a scale ranging from 1 (“disagree”) to 7 (“agree”). Half of the items are negatively-keyed. Each of the three subscale scores is obtained by summing its 10 responses. A sample personal control item is “I can usually achieve what I want if I work hard for it”; an example of an interpersonal item is “If there’s someone I want to meet, I can usually arrange it”; an item from the sociopolitical domain is “The average citizen can have an influence on government decisions.” Cronbach alphas for internal consistency for an undergraduate sample are 0.65 for personal control, 0.85 for

interpersonal control, and 0.67 for sociopolitical control (Paulhus & Van Selst, 1990).

The relationships between the SOC scales and external correlates provide evidence that each scale is measuring a separate domain.

The [personal control] scale correlates highly with Lefcourt's (1981)

Achievement internality scale, but not with his Affiliation internality scale. The

[interpersonal control] scale taps neuroticism/social self-efficacy as well as social

competence, and the [sociopolitical control] scale correlates highly with Rotter's

Politically Responsive World factor (Paulhus, 1990, p. 1031).

Social skills. The Social Skills Inventory (SSI; Riggio, 1986; Appendix E) was used to assess basic social skills. Revised in 1989, the SSI is a 90-item measure of basic social and communication skills, and consists of six subscales (15 items each). The six subscales "represent three basic communication skills dimensions: expressivity,

(communication sending ability); sensitivity, (communication receiving/decoding ability); and control, (ability to regulate communication). Each of these three skills occurs

in two separate domains, [namely] the nonverbal, or emotional domain and the verbal, or social domain." (Riggio, 1993, p. 275). These three dimensions and two domains give

rise to the six subscales: emotional expressivity (EE), emotional sensitivity (ES),

emotional control (EC), social expressivity (SE), social sensitivity (SS) and social control

(SC). A 9-point scale, ranging from - 4 ("not at all true of me") to +4 ("very true of me"),

is used to rate each item; items within each subscale are summed to make up the subscale

score (Riggio, 1986). The summed, total score of all six subscales form a global measure

of social skill. Alpha coefficients for internal consistency range from 0.62 to 0.87 for the

six subscales (Riggio, 1993). Sample items include "Quite often I tend to be the life of

the party” (EE), “People often tell me that I am a sensitive and understanding person” (ES), “I am very good at maintaining a calm exterior, even when upset” (EC), “I usually take the initiative and introduce myself to strangers” (SE), “I often worry that people will misinterpret something that I have said to them” (SS), and “I can fit in with all types of people, young and old, rich and poor” (SC).

Resources were measured using some of the items cited in Diener and Fujita (1995; see Appendix F). Additional items included by this author for testing were family’s approval, friends’ approval, enough free time, and transportation/proximity (to the social goal in question). All of the 14 items in the Social Resources Scale (including several others) were tested previously by this author in a pilot study (as described earlier), to ensure that these resources were relevant to the participants’ important social goals. Participants were asked to rate each resource’s relevance on a scale from 1 (“irrelevant”) to 5 (“extremely relevant”); this scale and its labels were taken from Deiner & Fujita). Twelve of the 21 resources were found to have modal and median scores of 4 or greater, indicating that they were perceived as being very relevant by most of the sample (these resources were: self-confidence, self-discipline, intelligence, energetic, assertive, friends’ approval, emotional self-control, healthy, articulate, good manners, enough free time, and transportation/proximity). Two of the resources, public speaking skills and money, had a median and mode of 3 (neutral in terms of relevance). Seven resources were perceived as less relevant (median and mode of 1 or 2); they were family’s approval, expert knowledge, position of authority, physical attractiveness, influential connections, material possessions, and athletic ability. As a result, these seven items were dropped from the scale. Scoring the Social Resources Scale (SRS) entailed computing a summed score of

all resource ratings resulting in a global resources rating. This approach makes sense, as having quite a bit of one resource may outweigh a relative lack of another in the real world. For example, being very self-disciplined, assertive, and intelligent may counterbalance having little financial security, in terms of achieving an interpersonal goal.

Coping was measured using the Strategic Approach to Coping Scale (SACS; Hobfoll, Dunahoo, Ben-Porath, & Monnier, 1994; Appendix G). This scale is based on a dual-axis model of coping, which includes both action (active vs. passive) and social (prosocial vs. antisocial) dimensions. The SACS' 52 items were derived from the strategy literature (e.g., military and chess strategy) and other coping measures. Hobfoll et al. conducted a secondary factor analysis with the eight subscales of the SACS and forced a two-factor solution in an effort to test the dual-axis model (active-passive & antisocial-prosocial). The dual-axis model of coping was supported. The prosocial factor loaded exclusively on assertive action, social joining, seeking social support, and cautious action; the antisocial factor loaded exclusively on aggressive action, avoidance, antisocial action, and instinctive action. There was an active-passive continuum present in both factors. Later evaluations of the SACS employed a tri-axial model, which included prosocial-antisocial, active-passive, and direct-indirect axes (Dunahoo, Hobfoll, Monnier, Hulsizer, & Johnson, 1998). Of interest, men and women did not differ in terms of activity-passivity, whereas they did differ in terms of prosocial and antisocial strategies. Women used more social support seeking and social joining; men used more antisocial and aggressive action. Three factors emerged out of these data: (a) an active-antisocial factor (which included aggressive action, antisocial action, instinctive action, and indirect

action), (b) a prosocial-judicious factor (which included social joining, seeking social support, and cautious action), and (c) an active-passive factor (which included assertive action and avoidance). Of interest, indirectness was more associated with antisocial than the activity dimension, and was used more often by men. Assertiveness was also not strongly associated with social joining or support seeking, in this later analysis. Dunahoo et al. contend that prosocial strategies may be less active than antisocial ones, possibly due to the fact that, to engage in communal behavior and to consider other people's needs, a person must be somewhat cautious. Nine subscales are derived from the SACS: assertive action, social joining, seeking social support, cautious action, instinctive action, avoidance, indirect action, antisocial action, and aggressive action. The subscales of interest for this research were assertive action, social joining, seeking social support, and cautious action, because these characterize the coping strategies of women. Cronbach alphas range from .54 to .88 for the subscales (Dunahoo, Hobfoll, Monnier, Hulsizer, & Johnson, 1998). Participants respond to SACS items on a 5-point scale ranging from 1 ("not at all what I'd do") to 5 ("very much what I'd do"). Six of the items are negatively-keyed. Some sample items include "Think carefully about how others feel before deciding what to do" (social joining), "Talk to others to get out your frustrations" (seeking social support), "Just work harder; apply yourself" (assertive action), and "Take the bull by the horns; adopt a take-charge attitude" (aggressive action).

Many different types of activities would enable people to access multiple social settings and interact with other people. Participation was measured using the items found in Appendix H, developed by this author. Broad categories of activities were listed in the participation form, with blanks available for the participant to specify the exact type of

activity in which he or she engages (for that particular category). Some examples of activity categories are volunteering, physical fitness and leisure, community organizations, and on/off-campus social groups. Three response blanks are provided for each category, as people may participate in a number of them. After having listed the activity, the participant then rates his or her satisfaction with the activity, and the frequency with which he or she engages in the activity. Again, these activity categories were tested previously in the pilot study described earlier, in which participants indicated whether they engaged in a related activity and listed any activities that were relevant. Work (86%), volunteering (70%), and physical fitness and leisure classes (55%) were the most prevalent, followed by leadership/coordinator roles (41%), community organization involvement (35%), and creative arts (31%). Other activities that were not as prevalent were collapsed into groups. "Recreational sports league" was collapsed into the fitness and leisure category, and "scholastic organizations" was collapsed into on/off-campus social groups. These items were designed to assess the frequency of and satisfaction with a wide range of activities. Satisfaction with these activities was important to measure, as an individual may engage in an activity that did not fulfill his or her expectations. If an activity fails to provide the person with tangible benefits (e.g., meeting other like-minded people and enjoying their company in the context of a chosen activity), the activity is less beneficial. The Participation Scale (PS) consists of seven broad activity categories, with an additional "other" category, which allows the participant to list any activities that he or she feels is not captured by the categories. The total number of activities, the mean satisfaction rating, and the mean activity frequency (weekly, monthly, etc.) was calculated as participation indices.

Social support. The brief version of the Social Support Questionnaire was used to assess the number of and satisfaction with people's social supports (SSQ: Sarason, Sarason, Shearin, & Pierce, 1987; Appendix I). This six-item version was adapted from the original 27-item instrument (Sarason et al., 1983). It has good psychometric properties, with α coefficients ranging from 0.90 to 0.93 for both Number and Satisfaction. Sample items of the SSQ include "Whom can you really count on to be dependable when you need help?" and "Who accepts you totally, including both your worst and your best points?" In response to each item, participants are asked to list all the people he or she knows that can be counted upon for help or support, and provide their relationship to the person. Next, the participants rate how satisfied they are with the overall support that they have on a scale ranging from 6 ("very satisfied") to 1 ("very dissatisfied"). To summarize the SSQ, mean scores were calculated for the total number of supports (SSQN) and the satisfaction with these supports (SSQS).

Social intimacy was measured using the Miller Social Intimacy Scale (MSIS: Miller & Lefcourt, 1982; Appendix J). The MSIS assesses intimacy in various interpersonal relationships. Participants respond to items such as "How often are you able to understand his/her feelings?", "How much do you feel like being encouraging and supportive to him/her when he/she is unhappy?", and "How often do you feel close to him/her?" (Miller & Lefcourt, p. 516). It is evident that these questions can be answered in reference to any number of interpersonal relationships. The MSIS has 17 items and uses 10-point scales. Six of the items require a frequency response (1 "very rarely" to 10 "almost always") and 11 items require an intensity rating (1 "not much" to 10 "a great deal"). Each score was simply summed to produce a maximum intimacy score.

Stressful life events were assessed using the College Undergraduate Stress Scale (CUSS; Renner & Mackin, 1998; Appendix K), which is based on the Social Readjustment Rating Scale (SRRS; Holmes & Rahe, 1967). The SRRS is a frequently used instrument that generates stress scores based on life change units (each life event listed is associated with some sort of adaptive behavioral response by the respondent). Recently, the events noted in the SSRS were newly standardized on a large sample of people, and revised to reflect more current viewpoints and issues (Hobson et al., 1998). However, Renner and Mackin (1998) assert that the “SSRS does not include many common events that act as stressors affecting traditional-age college student (e.g., final examinations). It also includes many items that are not meaningful to the typical college student or that have lost their meaning” because of the passage of time since it was originally developed (e.g., mortgage over \$10,000). The CUSS was developed to specifically target meaningful stressful events that a typical college student would encounter. The scale includes 51 items, with stress values attached to each. Using an anchoring method and the ratings of university students, the most stressful event was given a stress value of 100; the next most stressful event was given a value of 98, and so on. Participants are to indicate which events happened to them in the past year. The values of all items that are endorsed are summed to produce an overall stress rating. For the purpose of the present experiment, students were asked to indicate those events that have happened in the past three weeks. Those who endorsed one or more of the first six events were excluded. Such unusually stressful events may substantially affect an individual’s perspective on his or her levels of social support, perceived self-efficacy/control, and coping abilities.

Social-demographics were also collected on all participants (Appendix L).

Participants' gender, age, place of birth (to identify those who are Canadian born), first language, current level of education, ethnicity/cultural characteristics, and marital status were collected. Certain characteristics about the participants' families were gathered, such as parent's marital status, highest level of education achieved by both the mother and father, economic status, and number and gender of siblings. These data were collected to allow for future evaluations of empowerment using family characteristics.

The questionnaire had the above scales in the following sequence: (a) IE (SSQ, MSIS); (b) intrapersonal component (SES, SOC); (c) interactional component (SSI, SRS); (d) behavioral component (SACS, PS); (e) life events (CUSS); and (f) social-demographics. The questionnaires began with the IE measures (SSQ and MSIS). Because participants' assessments of IE may be tainted by further reflection on their social standing (e.g., reflection on their efficacy, skills). The life events scale (CUSS) appeared at the end of the questionnaire, again so that it would not taint the remainder of the data. The social-demographics section also appeared at the end because the items were easy to complete and were less affected by fatigue and other demands.

Design and Procedures of Data Collection

Participants were tested in groups, with an experimenter present at all times. As each individual arrived for testing, she was requested to find a seat with a questionnaire packet (which had the consent form attached on top) and she was told that further instructions were on the overhead projector. Testing information and procedures were placed on an overhead, to assist participants in following protocol and to ensure a quiet and orderly testing environment (see Appendix M for a copy of the overhead). After

having signed the consent form, the participant then completed the questionnaire. Once complete, the participant returned the materials to the experimenter, who ensured that her information on the course credit form was correct, detached her consent form from the questionnaire (in front of the participant), gave her a debriefing form, and thanked her for her participation in the study.

Results

As previously mentioned, of the 469 participants, 57 were excluded due to restriction violations and significant life events. The data were scrutinized for errors in data entry and for missing data points, on an item-by-item basis. One person had a significant amount of a scale or scales missing, and was subsequently excluded leaving 411 in the final sample. There were no missing values for the majority of the 260 items that comprised the data set. Of the items that had a few values missing, the number of missing values ranged from 1 to 3 out of 411. The occasional missing value was replaced with the series mean for that item (which is the mean value obtained using all of the 411 scores for that item).

Scale and subscale scores were computed for all participants. Most of the scales and subscales were simply summations of a number of items. The following equation was used to compute the scales and subscales having reverse-scored items: $(\sum \text{Positive Items}) + \frac{\text{Constant}}{[\# \text{ Neg. Items}] * [\# \text{ Response Options} + 1]}$ (DeVellis, 1991). This equation allows for the calculation of the score using numbers with decimal values (e.g., the series mean that was input for any missing values), rather than first calculating new items with the scores reversed and then summing these values. The latter approach can lead to missing values in the reverse-

scored item, because of non-whole values for the missing values that were replaced. The standard approach to reverse-scoring, however, was used to generate the items needed to compute the reliability coefficients for each measure. For the computation of the reliability coefficients, all items that were slated to be reverse-scored were scrutinized for any instances in which the series mean appeared. The series mean was then rounded up or down to the nearest whole number in order to reverse-score that item using the statistical software package (as noted previously, non-whole numbers would lead to blank values when computing the reverse-scored item).

The distributions of the scales and subscales were examined for normality. Of the 27 scales and subscales, only a few exhibited slight departures from symmetry: antisocial action (positive skewness), total number of activities (positive), mean satisfaction with activities (negative), mean frequency of activities (negative), and social support satisfaction (negative). Though only one had a marked amount of skewness (mean frequency of activities), transforming these data would likely render it far less interpretable. Therefore, these subscales were retained in their original form.

Sample Descriptive Statistics

Prior to calculating descriptive statistics for this sample, it was necessary to test for any substantial differences between several subgroups. Out of the 411 individuals in the final sample, 23 were of Métis and/or Aboriginal descent and 64 participants reported having experienced life event #7 (concerns about being pregnant). Though these are not large numbers (in comparison to the whole group), there may have been important differences between these two subgroups and the rest of the sample. Independent sample t-tests were conducted between each of the two subgroups and the rest of the sample on

all of the scale and subscale scores. Only a few significant differences were noted with these groups (4 differences out of 27 for the Métis/aboriginal subgroup, and 3 out of 27 for the life event #7 subgroup [see Appendices N and O for significant differences]): as such, it seemed reasonable to keep these individuals in the final sample. People with Métis/Aboriginal heritage had lower scores on emotional and social expressivity and were less satisfied with the activities in which they engage. Additionally, these individuals used more indirect approaches to coping. In terms of the life event #7 subgroup, these individuals reported less personal control, and more social expressivity and social intimacy.

For 50.5% (n=204) of the participants, maintaining and improving an existing friendship or multiple friendships was their most important goal, followed by finding or developing an intimate relationship (27.5%; n=111), and finding/developing a close friendship or multiple friendships (11.4%; n=46). Ten percent of the sample indicated alternative goals in the space provided (n=43). The majority of these individuals desired a combination of some or all of the goals listed (n=23). The remainder desired to improve or maintain an existing intimate relationship, to improve relations with family members, and to succeed in certain personal and job-related areas. In sum, over 60% of these young women cited goals related to their friendships as most important to them.

Descriptive statistics, including the range of scores and alpha reliability coefficients for each scale and subscale (where applicable), are presented in Table 2. Whenever possible, these data have been compared to published norms for females. Independent sample t-tests were conducted to ascertain whether the sample in this study differed from normative samples (results noted in Table 2).

Table 2

Means, Standard Deviations, and Reliability Coefficients for Participants, Including Comparisons with Normative Samples

Scale/ <u>Subscale</u>	<u>Current Sample (N=411)</u>					<u>Normative Sample</u>				
	<u>M</u>	<u>SD</u>	<u>Range</u>		α	<u>M</u>	<u>SD</u>	<u>N</u>	<u>p-value</u>	α
			Min	Max						
<u>Self Efficacy Scale</u> (Sherer et al., 1982; no female norms available)										
Social Self Efficacy	20.4	4.09	8	30	.73	--	--	--	--	.71
General Self Efficacy	60.8	9.00	34	83	.85	--	--	--	--	.86
<u>Spheres of Control Scale</u> (Paulhus & Van Selst, 1990; Norms: female <u>M</u> & <u>SDs</u> ; alphas include an additional group of males)										
Personal Control	53.9	6.86	32	70	.72	49.1	7.20	62	.001	.65
Interpersonal Control	48.8	8.74	19	70	.76	47.3	8.80	62	.203	.85
Socio-Political Control	40.3	7.13	10	62	.68	37.2	6.80	62	.001	.67

<u>Scale/Subscale</u>	<u>Current Sample (N=411)</u>					<u>Normative Sample</u>				
	<u>M</u>	<u>SD</u>	<u>Min</u>	<u>Max</u>	<u>α</u>	<u>M</u>	<u>SD</u>	<u>N</u>	<u>p-value</u>	<u>α</u>
<u>Social Skills Inventory (Riggio, 1989; Norms: all descriptives based on a female sample)</u>										
Emotional Expressivity	49.2	8.23	26	70	.73	52.6	9.50	271	.001	.71
Emotional Sensitivity	50.7	8.69	30	73	.80	61.6	7.10	271	.001	.69
Emotional Control	42.4	7.92	19	69	.69	41.5	9.40	271	.189	.70
Social Expressivity	48.0	12.23	21	75	.91	53.3	12.10	271	.001	.87
Social Sensitivity	51.3	9.58	26	72	.82	57.3	8.90	271	.001	.74
Social Control	51.9	9.66	26	73	.82	52.2	11.00	271	.670	.82
<u>Social Resources Scale (no norms available; instrument developed for this study)</u>										
Social Resources	48.1	7.85	23	67	.81	--	--	--	--	--

Scale/Subscale	Current Sample (N=411)					Normative Sample				
	<u>M</u>	<u>SD</u>	<u>Range</u>		α	<u>M</u>	<u>SD</u>	<u>N</u>	p-value	α
			Min	Max						
<u>Strategic Approach to Coping (Hobfoll, Dunahoo, & Monnier, no date; Norms: all descriptives based on a combined gender sample)</u>										
Assertive Action	32.3	5.08	12	45	.77	33.0	4.84	116	.250	.66
Social Joining	18.2	2.76	9	25	.65	17.0	3.31	116	.001	.67
Seeking Social Support	27.4	4.44	12	35	.78	24.9	6.15	116	.001	.86
Cautious Action	18.0	2.78	9	25	.58	17.5	3.16	116	.150	.62
Instinctive Action	20.7	3.89	9	30	.77	11.6	2.94	116	.001	.61
Avoidance	15.3	4.34	6	30	.80	16.8	4.85	116	.002	.80
Indirect Action	12.0	2.93	4	20	.65	19.4	4.08	116	.001	.76
Antisocial Action	11.9	3.83	5	24	.79	15.2	4.70	116	.001	.82
Aggressive Action	14.1	3.61	5	25	.73	14.9	3.80	116	.038	.74

Scale/Subscale	Current Sample (N=411)					Normative Sample				
	<u>M</u>	<u>SD</u>	Min	Max	α	<u>M</u>	<u>SD</u>	N	p-value	α

Participation Scale (no norms available; developed for this study)

Total Number of Activities	3.2	2.16	0	12	n/a	--	--	--	--	--
Mean Satisfaction	5.1	1.47	0	7	n/a	--	--	--	--	--
Mean Frequency	4.1	1.09	0	5	n/a	--	--	--	--	--

Social Support Questionnaire (Total Number and Satisfaction was calculated for the purpose of normative comparisons; Female

Norms: Hobfoll, Dunahoo, Ben-Porath, & Monnier, 1994))

SS – Mean Number	4.6	1.78	.67	9	.89	--	--	--	--	--
(SS – Total Number)	(27.9)	(10.68)	(4)	(54)	(.89)	(20.3)	(4.82)	(260)	(.001)	.86
SS – Mean Satisfaction	5.3	.63	1.5	6	.86	--	--	--	--	--
(SS – Total Satisfaction)	(31.8)	(3.76)	(9)	(36)	(.86)	(28.8)	(7.21)	(260)	(.001)	.86

<u>Scale/Subscale</u>	<u>Current Sample (N=411)</u>					<u>Normative Sample</u>				
	<u>Range</u>					<u>M</u>	<u>SD</u>	<u>N</u>	<u>p-value</u>	<u>α</u>
	<u>M</u>	<u>SD</u>	<u>Min</u>	<u>Max</u>						
<u>Miller Social Intimacy Scale (Miller & Lefcourt, 1982; Norms: female M & SDs; alphas computed on a subgroup of males & females)</u>										
Social Intimacy	143.3	16.62	71	170	.90	139.3	16.8	130	.017	

Note. Citations contained within parentheses indicate the source from which the norms were obtained. The alpha reliability coefficients reported for the current sample are standardized item alphas (Spearman-Brown). p-values reported indicate the statistical significance of a simple independent sample t-test between the two means of a given scale/subscale.

In terms of the Self Efficacy Scale, the alpha reliability coefficients (for internal consistency) are quite close to those reported in the literature. These coefficients diverge somewhat for the Spheres of Control Scale, in which the personal control subscale for the IE sample is somewhat more reliable than that of the normative sample, and the alpha for interpersonal control somewhat lower for the IE group. Of interest, the IE group reported significantly higher levels of personal and socio-political control than the norm.

The IE group's reliability coefficients for the Social Skills Inventory are fairly similar, with markedly higher internal consistencies measured for emotional sensitivity and social sensitivity than the normative sample. The IE group reported significantly lower levels of emotional expressivity, emotional sensitivity, social expressivity, and social sensitivity than the female normative group. The Social Resources Scale, which was developed for this study, proved to be quite reliable, with an alpha of .81. On average, the IE group felt satisfied with the levels of social resources they possessed (total $\bar{M} = 48.09/14 = 3.44$; scale ranged from 1 to 5).

The IE group differed to some extent on internal consistencies for the subscales of the Strategic Approach to Coping Scale. Alpha coefficients for the IE group are stronger for Assertive Action and Instinctive Action; however, these coefficients are lower for Seeking Social Support, Cautious Action, and Indirect Action. The IE group was similar to a combined male/female normative group in terms of assertive and cautious action. In comparison to the norms, the IE group engaged in more social joining, seeking social supports, and instinctive action. The IE group had lower levels of avoidance, indirect action, antisocial action, and aggressive action (which is to be expected from this study's all-female group).

In terms of the Participation Scale, the IE group reported a mean of 3.23 activities in which they were involved. These activities spanned a range of categories, from leadership roles (e.g., community league coach), to volunteering, work, and fitness activities. The IE group reported that they were satisfied overall with their participation, and engaged in these activities, on average, about once a week. Alpha coefficients were not available for this scale, as it was open-ended and required individual computation (it was not required to fill in all sections).

The Social Support Questionnaire subscales had strong internal consistencies, with alphas comparable to those reported in the literature. Though Sarason, Sarason, Shearin, & Pierce (1987) indicate that means for both number of, and satisfaction with, supports is the appropriate method of calculation, the items for each of the two subscales were also summed to allow for normative comparisons. The IE group reported a higher total number of social supports and higher satisfaction with these supports than the normative sample.

The alpha for the Miller Social Intimacy Scale was .90 for the IE group, which compares favorably with the norms. The IE group also reported higher levels of social intimacy. After having scrutinized the descriptive statistics for these participants, the seven hypotheses outlined previously were evaluated.

Hypothesis #1 – The measures in each component are hypothesized to be positively related to each other, and positively related to social support and social intimacy.

Tables 3, 4, and 5 illustrate the inter-correlations between all scales and subscales that are relevant to each component of the interpersonal empowerment model. As can be seen, Hypothesis #1 is reasonably supported because, in virtually all cases, the

Table 3

Subscale Intercorrelations – Intrapersonal Component

Subscale	<u>Subscale Abbreviations</u>				
	GSE	SSE	PC	IPC	SPC
<u>Self Efficacy</u>					
General Self-Efficacy					
Social Self-Efficacy	.41**				
<u>Perceived Control</u>					
Personal Control	.32**	.74**			
Interpersonal Control	.68**	.55**	.44**		
Socio-Political Control	.25**	.21**	.26**	.31**	
<u>Interpersonal Empowerment</u>					
Social Support Number	.35**	.26**	.24**	.32**	.14**
Social Support Satisfaction	.35**	.41**	.35**	.41**	.21**
Social Intimacy	.18**	.25**	.26**	.27**	.07

Table 4

Subscale Intercorrelations – Interactional Component

Subscale	Subscale Abbreviations						
	EE	ES	EC	SE	SS	SC	SR
<u>Social Skills</u>							
Emotional Expressivity							
Emotional Sensitivity	.39**						
Emotional Control	-.28**	-.00					
Social Expressivity	.64**	.46**	.01				
Social Sensitivity	-.11**	.20**	.26**	-.14**			
Social Control	.52**	.31**	.10*	.71**	-.40**		
<u>Resources</u>							
Social Resources	.31**	.22**	.03	.44**	-.35**	.57**	
<u>Interpersonal Empowerment</u>							
Social Support Number	.22**	.18**	-.04	.27**	-.10	.27**	.31**
Social Support Satisfaction	.19**	.14**	-.01	.26**	-.22**	.30**	.41**
Social Intimacy	.24**	.30**	-.07	.19**	-.01	.22**	.26**

Table 5

Subscale Intercorrelations – Behavioral Component

Subscale	Subscale Abbreviations						
	AA	SJ	SSS	CA	Num	Sat	Freq
<u>Prosocial Coping</u>							
Assertive Action							
Social Joining	.15**						
Seeking Social Support	.05	.47**					
Cautious Action	.24**	.31**	.32**				
<u>Participation</u>							
Total Number of Activities	.23**	.13**	.04	.02			
Satisfaction with Activities	.24**	.20**	.11*	.09	.37**		
Frequency of Activities	.01	.10	-.01	.04	.08	.59**	
<u>Interpersonal Empowerment</u>							
Social Support Number	.22**	.14**	.24**	.03	.15**	.20**	.07
Social Support Satisfaction	.34**	.14**	.18**	.14**	.10*	.14**	-.03
Social Intimacy	.26**	.17**	.23**	.15**	.00	.06	-.06

scales/subscales that are intended to measure each component are significantly correlated with each other and, likewise, with all three measures of interpersonal empowerment (social support satisfaction and number, and social intimacy). Please refer to Appendix P for a correlation matrix of all subscales.

There were a few notable exceptions to the expected relationships. Social sensitivity appeared to have no relationship or a negative relationship to social support and social intimacy (and to other efficacy, control, skills, and resources measures). It may be that, when highly attuned and sensitive to the social world, such individuals are more critical of social interactions and their own skills and resources, and may need different kinds of social support and social intimacy. Another clear exception was frequency of activities, which appeared to have no relationship to any other subscale, aside from emotional sensitivity and satisfaction with activities. The same was true for emotional control; it had few relationships with any of the subscales.

Based on an examination of the content of the subscales (and their theoretical relevance), the alpha reliability coefficients, and preliminary correlations, some subscales were excluded from later analyses. Table 6 summarizes the subscales that were excluded in later analyses, and provides a rationale for that exclusion.

Testing the IE Model: Rationale and Procedure

Given the fact that Zimmerman's (1995) model has never been tested in its entirety and that it has never been applied to the interpersonal domain in this fashion, it seemed appropriate to proceed cautiously and tentatively with model identification, specification, and testing. The first step in model testing is to subject the chosen scales and subscales to an exploratory factor analysis (EFA), which allows the researcher to

Table 6

Summary of Excluded Subscales and Rationale for Their Exclusion

Scale/Subscale	Rationale for Inclusion/Exclusion
Social Self Efficacy	Its six items overlap substantially with those of interpersonal control; interpersonal control was selected because it contained more items, had slightly better internal consistency, and was more strongly related to general self-efficacy (than was social self-efficacy)
Socio-Political Control	Weaker alpha; more distal in terms of interpersonal functioning (items are focused on political activity, which may have little relevance to this population); had weak relationships throughout (none exceeded .30)
Emotional Control	Weaker alpha; has little to no relationship with any other subscales; may be an "outlier variable" (Tabachnick & Fidell, 1996)
Social Control	Though having a good α , it was strongly related to the efficacy and control subscales and may be tapping into this component more so than social skills
Cautious Action	Although related to prosocial coping, was excluded because of a weak α and weak correlations with other subscales (no relationship to participation)
Instinctive Action	Associated with antisocial coping strategies
Avoidance	Polar opposite to assertive action (used equally by males & females)
Indirect Action	Associated with antisocial coping; used more frequently by males
Antisocial Action	Associated with antisocial coping; used more frequently by males
Aggressive Action	Associated with antisocial coping; used more frequently by males
Frequency of Activities	Has little to no relationship with any other subscales (with the exception of satisfaction with activities); may be an "outlier variable" (Tabachnick & Fidell)

eliminate scales and subscales that have weak loadings, or cross-loadings on several other factors.

Anderson and Gerbing (1988) suggest a two-step approach to structural equation modeling, in which the measurement model is tested (and respecified, if needed) prior to testing the structural model. The authors suggest that a one-step approach (simply testing the structural model) risks suffering from interpretational confounding. In this situation, empirical meaning is assigned to an unobserved variable, which is different from the meaning assigned to it prior to estimating the unknown parameters. This empirical meaning may also change depending on the specification of free or constrained parameters for the structural model. To minimize the risk of interpretational confounding, Anderson and Gerbing advise estimating the measurement model first, prior to testing the structural model, because there are no constraints placed on the structural parameters with the former. This two-step approach has been used by other researchers examining issues related to coping and social support (see Dunkley & Blankstein, in press; Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000).

In sum, a cautious approach to model specification would include testing the measurement model first, using confirmatory factor analysis (CFA), and then proceeding with testing the structural model, using structural equation modeling (SEM). In CFA, the observed variables (selected previously by the EFA) are forced or constrained to load on certain factors or unobserved constructs, with the factors being allowed to correlate freely (no constraints in terms of structural parameters or pathways). In SEM, the relationships or pathways between the factors are tested. In this study, the sample was split in half. On one half, EFA was used to examine the scales and subscales of interest (those identified

in Table 6), and to refine the set of subscales for the CFA. On the other half of the sample, the scales and subscales selected in the EFA stage will be subjected to a CFA (where the subscales will be constrained to load on certain factors, in contrast to the EFA which allows all of the subscales to load freely on all factors). Following this, the pathways between the factors will be tested using SEM (with the CFA group data).

Hypothesis #2 – It is hypothesized that the set of observed measures for each component of empowerment will load most heavily on its corresponding factor (component).

All retained subscales derived from the measures (i.e., 16) were entered into an EFA, using the data from one-half (n=205) of the total sample. The principal components method of factor extraction was used, with a Varimax orthogonal rotation (Tabachnick & Fidell, 1996).

A number of solutions were tried, and a five-factor solution was most interpretable. Table 7 describes the results of the five-factor EFA, with a cutoff for size of adequate loading to be .55 or greater (.55 denotes a “good” loading value [30% overlapping variance]; Tabachnick & Fidell, 1996). Tabachnick and Fidell note that only loadings of .32 or greater are interpreted (i.e., 10% overlapping variance). If a variable (which loaded on one factor >.55) also loaded on another factor at .32 or greater (at a level that is interpretable), this variable was identified as crossloading and to be tentatively rejected for the CFA.

Hypothesis #2 was partially supported by the EFA. Though four factors (the intrapersonal, interactional, behavioral, and IE components) were predicted to emerge, the five-factor solution does make theoretical sense. Personal control and general self-efficacy clustered together in one factor (feelings of efficacy and control); as did

Table 7

Exploratory Factor Analysis (Principal Components Method of Factor Extraction with a Varimax Rotation): A Five-Factor Solution

Subscale	Factor Loadings				
	1	2	3	4	5
General Self-Efficacy	.853	--	--	--	--
Personal Control	.847	--	--	--	--
Assertive Action	.780	--	--	--	--
Social Resources Scale	.682	.352	--	--	--
Social Intimacy	.503	--	--	--	--
Social Expressivity	--	.863	--	--	--
Emotional Expressivity	--	.820	--	--	--
Emotional Sensitivity	--	.595	--	.463	--
Interpersonal Control	.505	.580	--	--	--
Social Joining	--	--	.698	--	--
Seeking Social Support	--	--	.684	--	.421
Social Sensitivity	-.361	--	.637	--	-.316
Total Number of Activities	--	--	--	.800	--
Mean Satisfaction with Activities--	--	--	--	.771	--
Social Support Number	--	--	--	--	.696
Social Support Satisfaction	.424	--	--	--	.512

Note: Loadings in excess of .55 are in boldface type. Small to very small loadings (less than .32) are denoted by "--".

emotional expressivity and social expressivity (social skills); social joining and seeking social support (prosocial coping behavior); number of and satisfaction with activities (participatory behavior); and social support number and satisfaction (IE). Essentially, the behavioral component was broken into two distinct factors that differentiated between coping and participatory behaviors. This makes good sense, as these behaviors may be reasonably distinct.

Of interest, assertive action clustered strongly with the control and self-efficacy factor. This also stands to reason because assertive action was not found previously to be associated with prosocial coping (which tends to be more cautious and judicious: Dunahoo et al., 1998). Rather, in previous research, assertive action was found to be a part of an active-passive continuum that included avoidance as its polar opposite. It seems plausible to associate these assertive strategies with the control and efficacy component; being assertive is likely to be highly associated with feelings of personal control and self-efficacy.

Social support satisfaction loaded fairly strongly with both social support number and with the control/efficacy factor. It may be that there is a covarying relationship between feelings of control/efficacy and IE. In essence, satisfaction with supports may be related to having an adequate number of supports and possessing feelings of personal control and efficacy in general. Not surprisingly, seeking social support also crossloaded onto both the coping and the IE (social support) factors. Again, there may be a covarying relationship between coping and IE that may be of interest. Furthermore, social support satisfaction and seeking social support were both needed in their respective factors because two or more manifest variables were required for each latent factor in CFA and

SEM. It seems reasonable to include assertive action, social support satisfaction, and seeking social support in the CFA and SEM phases.

Based on the EFA results and the preceding discussion, the following subscales were entered into the CFA and SEM analyses: general self-efficacy, personal control, assertive action, emotional expressivity, social expressivity, seeking social support, social joining, total number of activities, mean satisfaction with activities, social support number, and social support satisfaction.

Review of Fit Indices for CFA and SEM Evaluation

Based on the recommendations of Anderson and Gerbing (1984, 1988); Bentler (1990, 1992); Marsh, Balla, and McDonald (1988); and Ullman (1996); the following list summarizes the fit indices (and their critical values) used to evaluate the fit of models tested in CFA and SEM:

1. **AGFI** – Adjusted Goodness of Fit Index (> .90)
2. **CFI** – Bentler’s Comparative Fit Index (> .95)
3. **χ^2/df** – Chi-Square/degrees of freedom (< 2)
4. **GFI** – Goodness of Fit Index (> .95)
5. **NNFI** – Bentler & Bonett’s Non-Normed Fit Index (> .90)
6. **RMSEA** – Root-Mean Square Error of Approximation (< .05).

When examining structural models in SEM, the following degree of parsimony fit indices were used to determine whether a later model has better fit than an earlier one:

7. **AIC** – Akaike Information Criterion (there is no standard critical value, only that these values should be smaller in a modified model)
8. **CAIC** – Consistent Akaike Information Criterion (as indicated in AIC).

Model testing for CFA and SEM was conducted using SAS CALIS (a statistical program), which uses the maximum likelihood estimation method to determine the fit of a given model to its observed variance-covariance matrices.

Hypothesis #3 – The measurement model will be subjected to confirmatory factor analysis. It is hypothesized that the measurement model will be confirmed and have good fit.

The following 11 subscales, that were identified in the EFA, were entered into a CFA: general self-efficacy, personal control, assertive action, emotional expressivity, social expressivity, seeking social support, social joining, total number of activities, mean satisfaction with activities, social support number, and social support satisfaction. Five latent factors, each of which had at least two of the 11 indicators above, comprised the measurement model (see Figure 3).

The measurement model converged after 12 iterations and produced the following fit indices: AGFI = 0.94, CFI = 0.99, $\chi^2/df = 1.06$, GFI = 0.97, NNFI = 0.99, and RMSEA = 0.02. All of these fit indices exceeded the minimum criteria for good fit. Essentially, this indicates that the factor structure from the EFA fits the data very well, as the subscales were forced to load together as predicted. Replicating this factor structure with a separate sample of participants, using more conservative criteria (forced loadings), increases confidence that these factors represent the data. These strong fit indices confirm the measurement model of IE and confirm Hypothesis #3.

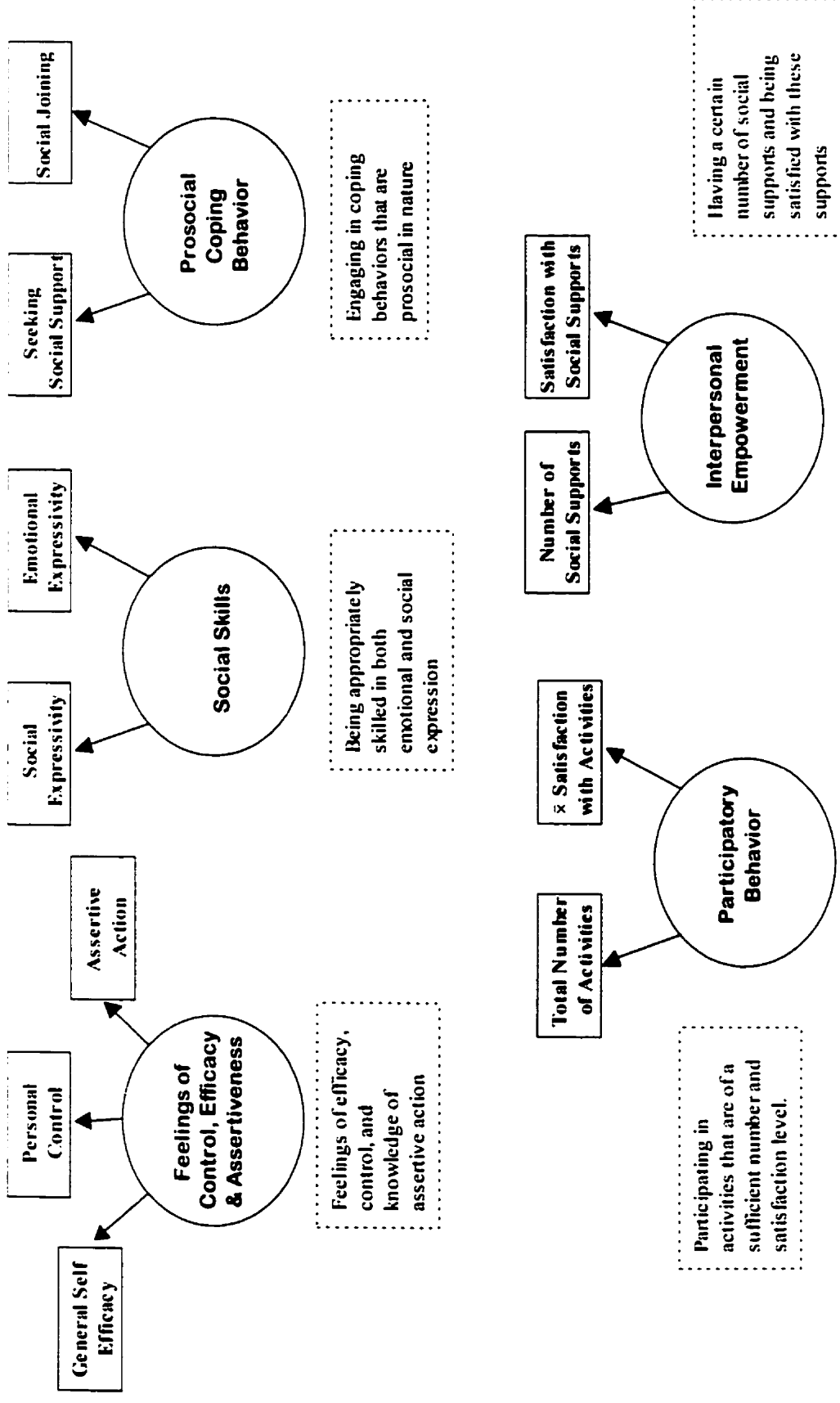


Figure 3
Measurement Model of Interpersonal Empowerment

Hv #4 – It is hypothesized that a significant proportion of the variance in each scale/subscale will be explained by its related construct/component.

Table 8 describes additional results of the CFA: the factor loadings of each subscale, their significance, and the amount of variance explained in each variable by its latent factor. The factor loadings were taken from the equations with standardized coefficients; their significance was assessed by examining the manifest variable equations, where each t-value is compared with non-directional critical values of 1.96 ($p < .05$), 2.58 ($p < .01$), and 3.29 ($p < .001$). All factor loadings for this model are highly significant ($p < .001$).

Hypothesis #4 is partially supported when examining the R^2 values (which denote the amount of variance in a variable explained by its latent factor). For six of the eleven subscales, a reasonably large proportion of the variance (greater than .50) is explained by their related factors. These include: general self-efficacy, personal control, assertive action, social expressivity, seeking social support, and mean satisfaction with activities. A proportion of less than .50 indicates that more than half of the variability in the subscale is left unexplained (i.e., error and other influences account for most of the variance, overshadowing the influence of the construct). In this case, between 51 and 98% of the variance in just over half of the subscales is explained by their factors.

Table 8

CFA Factor Loadings, Their Significance, Proportion of Variance in Each Variable
Explained by Its Latent Factor, and EFA Loading Comparisons

Subscale	Factor Loadings					R ²
	1	2	3	4	5	
General Self-Efficacy	.929 (.853)	--	--	--	--	.86
Personal Control	.779 (.847)	--	--	--	--	.61
Assertive Action	.715 (.780)	--	--	--	--	.51
Social Expressivity	--	.990 (.863)	--	--	--	.98
Emotional Expressivity	--	.660 (.820)	--	--	--	.44
Social Joining	--	--	.560 (.698)	--	--	.31
Seeking Social Support	--	--	.851 (.684)	--	--	.72
Total Number of Activities	--	--	--	.443 (.800)	--	.20
Mean Satisfaction with Activities--	--	--	--	.776 (.771)	--	.60
Social Support Number	--	--	--	--	.530 (.696)	.28
Social Support Satisfaction	--	--	--	--	.569 (.595)	.32

Note. CFA loadings are in boldface type; EFA loadings are placed below, in parentheses, for comparison purposes. All CFA loadings are highly significant ($p < .001$). R² denotes the squared multiple correlations for each subscale. This value approximates the proportion of variance in the subscale that is explained by its latent factor.

Examining the correlations, provided by the CFA between exogenous or latent variables, allows for general impressions regarding the relationships between the constructs to be tested in SEM. As seen in Table 9, there were reasonably strong relationships between IE and the other four components, which likely would support those pathways. However, with exception of the path from Feelings to Skills, there appeared to be weak relationships between the four components themselves. Weak relationships may indicate that because the components were reasonably separate from one another, the pathways between the four components were less likely to be confirmed. In essence, after conducting the CFA, IE appears to influence all of the components; the components, in turn, appear to be distinct. The latent variable correlations seem to be consistent with the theoretical underpinnings of the model (please refer to Figure 2).

Hypothesis #5 -- The structural model will be subjected to exploratory structural equation modeling (SEM) to test the fit of the hypothesized model and to suggest changes. It is hypothesized that the direction of the paths (or contingencies) between the components will be supported, and that these paths will be statistically significant.

The hypothesized structural model of interpersonal empowerment was tested, in which the pathways between the latent variables were specified. Figure 4 illustrates the initial structural model, in which feelings of efficacy, control, and assertiveness (in the intrapersonal domain) would lead sequentially to enhancement of social skills, prosocial coping, and participation in a variety of activities. Participation would then feed back into the intrapersonal component, thus completing the IE process element. The outcome element of IE (social support) would impact all of the components. To facilitate the discussion of the five factors, they were abbreviated as follows: feelings of control,

Table 9

Confirmatory Factor Analysis: Correlations Among Latent Factors

Factor (Abbreviation)	Factors				
	Feelings	Skills	Coping	Participation	IE
Feelings of Efficacy. Control, & Assertiveness (Feelings)	1.00	--	--	--	--
Social Skills (Skills)	.41	1.00	--	--	--
Prosocial Coping Behavior (Coping)	.02	.13	1.00	--	--
Participatory Behavior (Participation)	.30	.25	.14	1.00	--
Interpersonal Empowerment (IE)	.68	.49	.48	.50	1.00

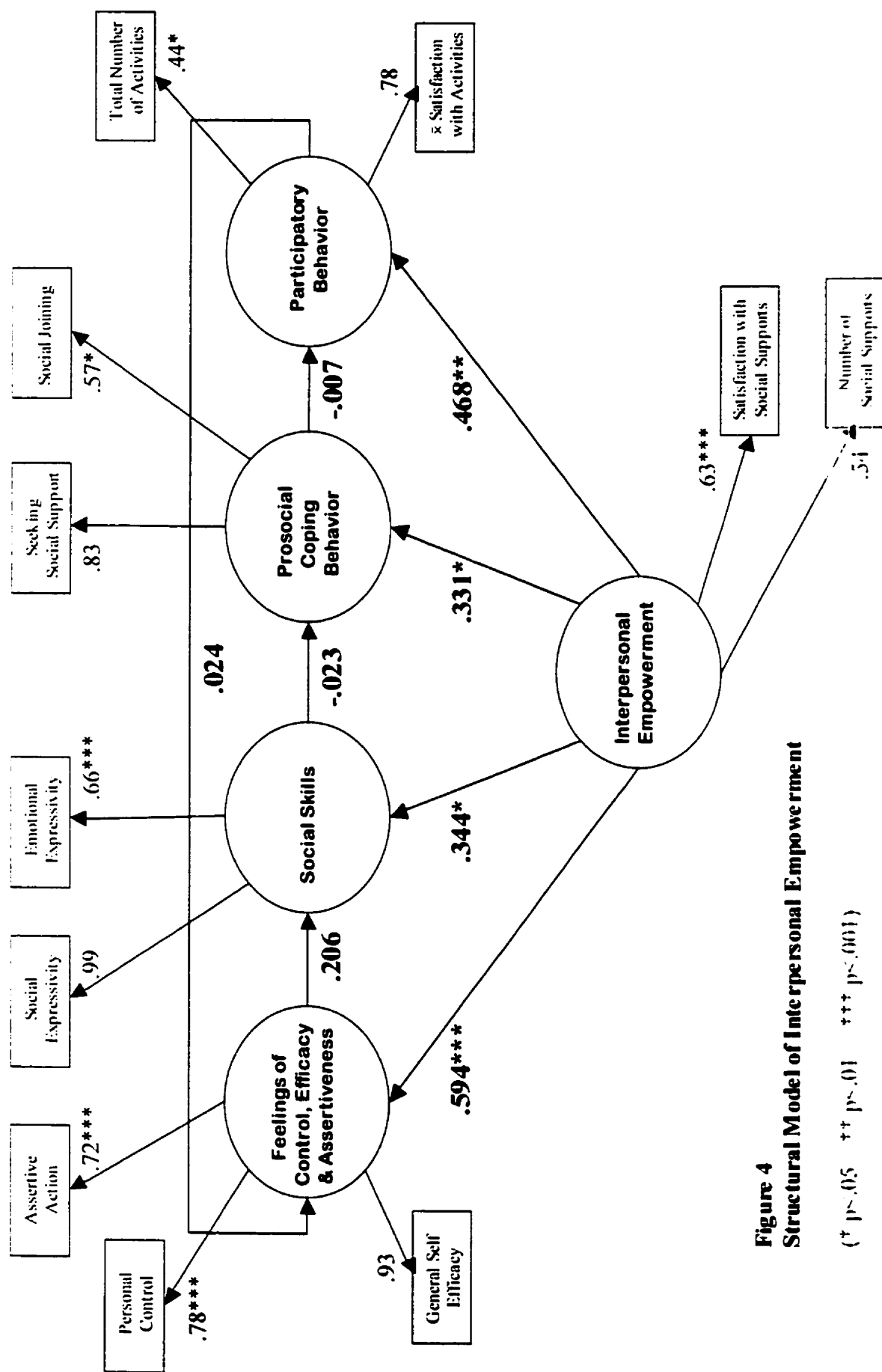


Figure 4
Structural Model of Interpersonal Empowerment

(* $p < .05$ ** $p < .01$ *** $p < .001$)

efficacy, and assertiveness = “Feelings”; social skills = “Skills”; prosocial coping behavior = “Coping”; participatory behavior = “Participation”; and interpersonal empowerment = “IE”.

Running the initial model produced excellent fit indices, as noted in Table 9 (which compares the results of several nested models). These indices suggest that the data fit the hypothesized structural model. The standardized coefficients of the estimated parameters (estimated pathways) are indicated in Figure 4. The significance of each of the pathways estimated between the latent variables was evaluated using the t-tests provided with the manifest variable equations and using non-directional critical t-values of 1.96 ($p < .05$), 2.58 ($p < .01$), and 3.29 ($p < .001$). As suggested in the evaluation of the latent factor correlations in the CFA (where the factors were allowed to correlate freely), once having constrained the relationships between the variables (by specifying and testing their pathways), none of the pathways between the components was significant. Only the pathways from IE to each component were significant. Hypothesis #5 is therefore partially confirmed.

Hypothesis #6 -- It is hypothesized that the model will also have a significant pathway from the behavioral to the intrapersonal component (thus making the contingency path a circular one).

Again, none of the pathways between the four components were significant, including the feedback loop. As a result, Hypothesis #6 is not confirmed.

Table 10

Lagrange Multiplier and Wald Tests for the Addition and Subtraction of Pathways and Evaluation of Fit Indices

Model	Model Fit Indices (Fit Criteria for Each Index)							Degree of Parsimony Fit Indices	
	AGFI (> .90)	CFI (> .95)	χ^2	df	χ^2/df (< 2)	GFI (> .95)	NNFI (> .90)	RMSIA (< .05)	CAIC
1. Initial Model	.93	.98	47.79	36	1.33	.96	.97	.04	-24.214 -180.018
2. Modification #1	.94	.99	35.90	35	1.03	.97	.99	.01	-34.103 -185.578
3. Modification #2	.94	.99	36.38	36	1.01	.97	.99	.01	-35.617 -191.420

Note. The parsimony fit indices, AIC and CAIC, are not normed to a 0 to 1 scale. The values (which are functions of χ^2 and df) should become smaller as the model is improved (Ullman, 1996). Modification #1 results represent model fit after the addition of a path from Coping to Skills (the highest-ranked Lagrange Multiplier involving two latent variables). Modification #2 illustrate the fit of the model after the deletion of the feedback loop from Participation to Feelings (the highest-ranked Wald Test involving a pathway between two latent variables).

Hypothesis #7 -- It is hypothesized that the final model derived from the exploratory phase will have good fit.

The initial run of the structural model produced suggestions for modification. Implementing these suggestions may result in a better fitting model. In general, adding paths should be done before deleting other paths; all changes to a model are to be done incrementally, one at a time, with re-examination of the suggestions for modification (Ullman, 1996). The highest-ranked Lagrange Multiplier test (for adding paths) suggested adding a path from Coping to Skills, making the relationship between the two components bi-directional. It seems reasonable that the two would influence each other: a person's ability to express feelings (either verbally or non-verbally) is likely related to social joining and seeking social support as coping strategies. It is also likely that engaging in such strategies would encourage an individual's abilities to express feelings. The model of modification #1 is illustrated in Figure 5, along with its path coefficients. Modification #1 resulted in a marked change in the fit indices (see Table 9). These changes were indeed significant at $p < .001$ as indicated by the χ^2 difference (goodness-of-fit) test ($\chi^2_D = \chi^2_{\text{Model 1}} - \chi^2_{\text{Model 2}} = 11.889$; $df_D = df_{\text{Model 1}} - df_{\text{Model 2}} = 1$; $\chi^2_{(\text{crit}, \alpha=.05, df=1)} = 3.84$). However, the model produced uninterpretable path coefficients (which, when standardized, should fall between 0 and 1), making these results suspect.

The modification suggestions of the modified model were again examined. There were no pathways to be added between any two latent variables (no Lagrange Multipliers), however the highest-ranked Wald test (for deleting paths) suggested removing the feedback loop from Participation to Feelings. The objective of the Wald test is to proceed backwards and delete pathways in such a way that non-significant changes

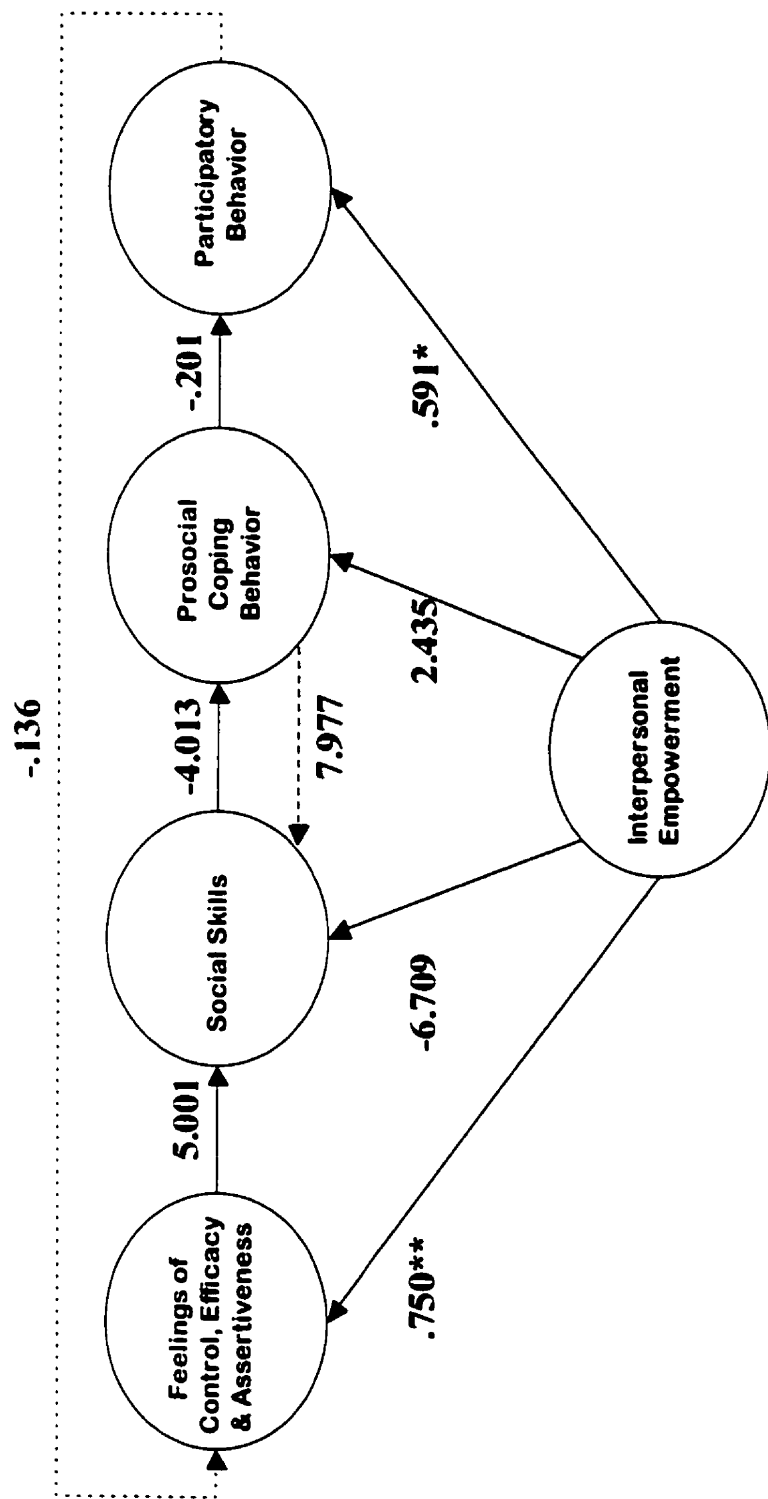


Figure 5
Modification #1 of the Structural Model

(* $p < .05$ ** $p < .01$ *** $p < .001$)

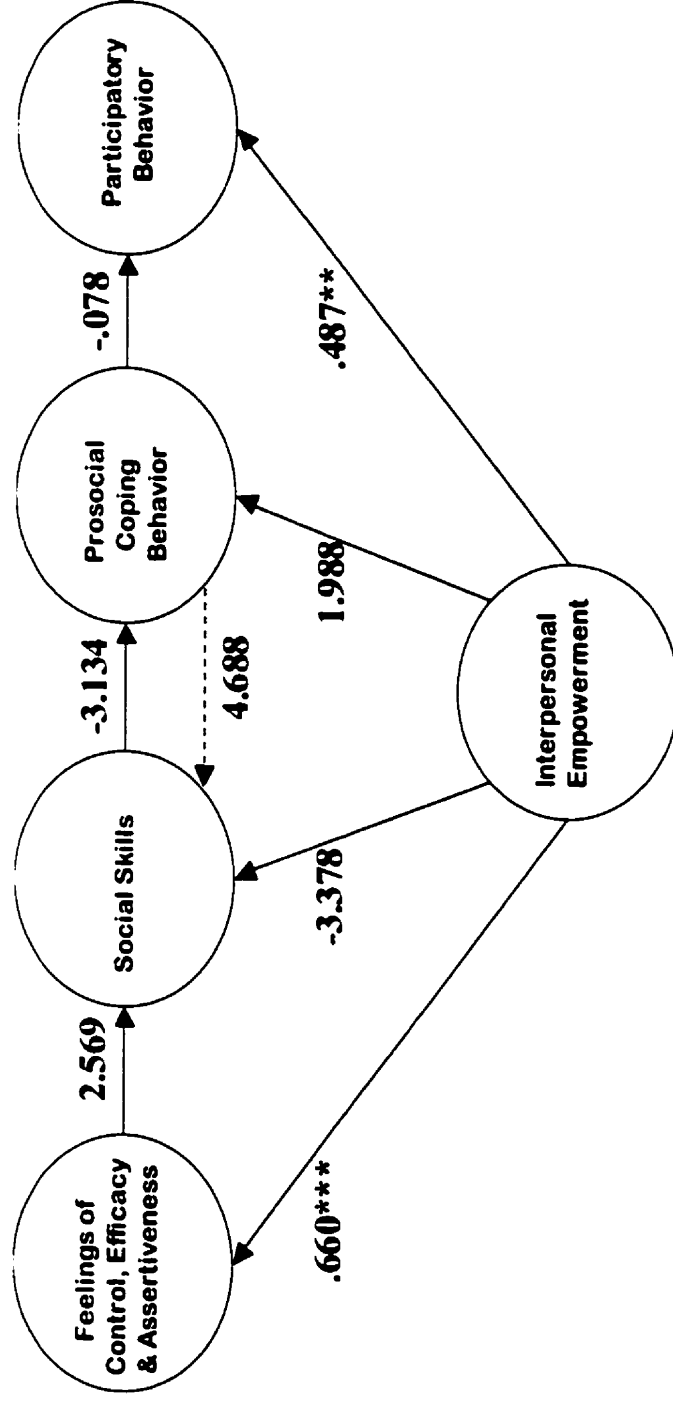


Figure 6
Modification #2 of the Structural Model

(* $p < .05$ ** $p < .01$ *** $p < .001$)

in χ^2 are observed (analogous to step-wise regression). The model of modification #2 did not provoke any significant change in χ^2 , yet did increase the degrees of freedom of the model (see Table 9). The model of modification #2 is illustrated in Figure 6. Yet again, the path coefficients from the second modification were not interpretable as well.

It is clear that, based on the results of modification attempts, the best solution for the data is the initial structural model. Its paths between the components were interpretable (though very weak), and significant pathways from IE to all four components were observed. In sum, several approaches indicate that the components are not highly interrelated, and appear to be distinct. The significant pathways from IE to the four distinct components support Zimmerman's original depiction of his conceptual model.

Discussion

Validation of a Nomological Network of Interpersonal Empowerment

The most compelling finding of this research was the extraction of a five-factor solution, in which the behavioral component was split into coping behavior and participatory behavior. Although four components were anticipated (as illustrated in Zimmerman's model of psychological empowerment), this solution made good sense. Coping strategies and participation in activities appear to be conceptually dissimilar behaviors.

Why is engaging in a number of satisfying activities behaviorally distinct from social joining and seeking social support? Some reasons for this disparity may be found in (a) the nature and outcomes or benefits of the behavior, and (b) the social supports related to the behavior. First, the nature of coping and participatory behaviors may be different. Prosocial coping is reactive behavior; that is, people engage in coping behavior in response to a negative or stressful interpersonal event. As a result, prosocial coping is a fairly straightforward concept—coping occurs in reaction to an event. On the other hand, participatory behavior may be more complex. Participation in satisfying activities may indeed be a reactive behavior (like prosocial coping), in that enjoyable activities (particularly social activities) may reduce the stress associated with a negative interpersonal event. Participation may also serve several other functions, however. Engaging in enjoyable activities can be a simple diversion as well; these activities are enjoyed for their own sake and for their intrinsic benefits (they make life more pleasant, they increase skill levels, etc.). Participation may serve an even more important function as proactive behavior. Engaging in a number of satisfying activities may be proactive and

protective in that these activities encourage the individual to be out in the social world, and open to developing new interpersonal relationships and the support they would provide. In sum, prosocial coping may represent a more reactive behavioral set, with the reduction of distress as its outcome. Participatory behavior may represent a more complex behavioral set that may be reactive, proactive, or of some neutral, intrinsic value. The outcomes of participatory behavior may also be more varied, such as reduction of distress, development of new interpersonal relationships, and personal enjoyment derived from the activity itself. These potential differences may help to explain why these two types of behavior formed separate behavioral constructs.

A second reason why prosocial coping and participatory behavior are distinct from one another may be related to social support. When confronted with a stressful or negative interpersonal event, a woman may rely on social joining or seeking out social supports. When a woman is distressed, it seems likely that she would seek out friends and family members that are reasonably close to her. Prosocial coping behavior probably occurs in connection with loved ones in whom the distressed individual trusts and to whom she feels close. Participatory behavior, in reaction to a negative event, may also involve similar social supports. However, the types of interpersonal relationships involved in proactive participation may be different: they may be more casual acquaintances or, in fact, complete strangers. Potential differences in the types of interpersonal relationships that arise from each behavioral set may also explain why prosocial coping and participation in activities are discrete.

There are some practical implications that result from these distinctions. For the women in this study, both prosocial coping behavior and participatory behavior had

strong positive pathways from IE. To be interpersonally empowered, women engaged in both reactive and proactive behavior. Therefore, women need to know how to react to stressful interpersonal situations (such as engaging in social joining and seeking social supports) and they need to know how to initiate satisfying activities that encourage further development of interpersonal relationships. Good coping strategies are not enough, women need to know how to be proactive and engaged in their social milieu in order to be interpersonally empowered.

Interpersonal Empowerment in Young Women

For over 60% of the young women who participated in this study, the most important interpersonal goal related to their friendships. Another 28% of the IE group felt that finding or developing an intimate relationship was most central. It is clear that peer relationships are a critical aspect to the interpersonal functioning of young women. In examining the path coefficients of the structural model (Figure 4), it is also clear that there are strong and positive relationships between being interpersonally empowered (having an adequate number of and satisfaction with social supports) and (a) possessing feelings of control, efficacy, and being assertive; (b) being socially skilled in terms of verbal and non-verbal expression; (c) engaging in prosocial coping strategies, such as social joining and seeking out social supports; and (d) participating in a number of satisfying activities. This appears consistent with the IE group's most important interpersonal goal: the ongoing development of close friendships. For many young women, having a strong peer group on which to rely may facilitate their interpersonal empowerment.

The finding that the components are relatively distinct (that they are not significantly related to each other) approximates the structure of Zimmerman's model, which illustrates the components of psychological empowerment as unconnected elements (see Figure 1). IE appears to have the most influence on each component, rather than any potential connection between them. In essence, the number of and satisfaction with social supports had the most impact on feelings of control, verbal and non-verbal expression, prosocial coping, and participation in activities. This is not to suggest that there is no possibility of meaningful connections between the components themselves. The fact that there are weak (non-significant) relationships between them suggests that the connections between these components warrant further investigation.

Methodological Issues and Limitations

Most of the scales had reliability coefficients that were good (greater than .70), and most appeared to perform well. Regardless, other measures for each component should be explored. One of the clear limitations of this research is the participation scale, which was tenuous in its performance. This is not surprising given the fact that it was the only open-ended scale, and one that was previously untested. It produced somewhat skewed responses, at the high end of the scale. Several attempts were made at exploring and confirming factor structures that included the mean frequency of activities subscale. In EFA, mean frequency would always load strongly with mean satisfaction with activities (because of the strong correlation between the two). The first attempt at CFA with mean frequency and satisfaction with activities resulted in a model that would not converge (a solution was not found after 50 iterations). This model also reported a very unusual standardized coefficient for mean satisfaction with activities of 4.7184

(standardized coefficients, analogous to factor loadings, are intended to be <1) and a negative variance of 46.112. Since the distribution for mean satisfaction with activities was somewhat asymmetrical (negatively skewed) and had a number of individuals with no activities at the other end of the scale, transformations were attempted. However, when the transformed satisfaction with activities scores were entered into the CFA, the model did not converge again, and reported yet another unusual standardized coefficient of -4.6107 and a negative variance of 0.774. Omitting the mean satisfaction with activities scale was the next step, yet entering mean frequency and total number of activities was equally problematic. Finally, mean frequency of activities was excluded, leaving mean satisfaction with and total number of activities. No apparent problems remained with the mean satisfaction subscale – it became obvious that it was influenced by the mean frequency subscale. Initially, it was felt that the mean frequency of activities subscale may be mediated by mean satisfaction, however it appears that the mean frequency subscale, due to its unusual characteristics was an outlier variable (it was distinctively different from and was largely unrelated to the others).

Though it was heartening that the model was validated easily and strongly once having discovered the influential variable, the analysis remains highly exploratory in that there were multiple attempts at analyzing the data. For example, early attempts at EFA using all of the subscales produced uninterpretable results; subsequently, the number of subscales entered into the EFA and CFA phases was refined. The scales and subscales to be included or excluded should have been specified a priori. As such, these preliminary findings must be interpreted cautiously. The interpersonal empowerment model certainly requires replication and further refinement (such as using other scales and subscales).

An additional limitation to this research was the highly restricted participant sample. The ability to generalize the findings beyond the sample characteristics is severely limited (e.g., to describe the empowerment experiences of young men); on the other hand, it is easier to interpret the results with such a homogenous group. Also relevant is the investigation of whether there are differential influences or effects of IE depending on age, gender, and social, physical, and mental health status.

A final limitation is the cross-sectional approach used to assess interpersonal empowerment. The data were collected at one point in time only, at the beginning of the university school year. Therefore, the temporal stability of the factor structure of the interpersonal empowerment model is unknown at this time. Consistent with empowerment theory, IE may wax and wane over time depending on people's interpersonal experiences.

Implications for Further Research

Even though this research partially validates a theoretical model of empowerment, clearly this is a first step in elucidating an empirical model of interpersonal empowerment. Replication is needed with a new sample of participants, especially to confirm the structural model. CFA was used in this study to confirm the measurement model developed with EFA. Confirming the structural model is essential as well and this must be done with a separate sample of participants.

More work is required on the measurement of IE, most importantly with respect to participatory behavior. The development of a participation scale that is not open-ended would be a good first step. Perhaps it could be similar to the CUSS, in that people could check off all activities in which they have engaged. Parsing out the dissimilarities

between coping and participation as behaviors, and investigating whether each is associated with different kinds of social support, should be part of future research into interpersonal empowerment.

Once having clarified the basic correlates of interpersonal empowerment, other steps should be taken. The stability of IE should be assessed over multiple points in time. It seems likely that there should be some amount of stability to IE, particularly since many individuals tend to adopt entrenched patterns of social behavior. However, levels of IE may suddenly be destabilized due to a highly stressful event or series of events pertaining to an individual's salient interpersonal relationships. Assessment over multiple time periods, with long between-test intervals and measurement of life events and distress, would be a method of ascertaining the volatility of IE.

In sum, this research provides a tentative conceptualization of interpersonal empowerment in young women. This model was empirically validated, for the most part, using multiple measures. These measures tapped into key aspects of interpersonal empowerment: (a) feelings of control, efficacy, and assertiveness (intrapersonal); (b) social and emotional expression (interactional); (c) social joining and seeking social support (prosocial coping behavior); and (d) involvement in activities (participatory behavior). All four components were positively related to the participants' current number of and satisfaction with social supports. These preliminary findings underscore the complexity of interpersonal relationships and provide some insight into how young women are empowered to obtain the social supports that they need.

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Appendix A

Consent Form – Edmonton 24

This study will investigate the nature of young adults' interpersonal interactions: your interest in this study is very much appreciated. The following questionnaire will ask you questions about you and your feelings about your interpersonal relationships. The questionnaire will take about an hour to complete and you will receive two credits for your participation. Please consider your responses carefully as you complete the packet.

It is important to know that your participation in this study is entirely voluntary and you are free to discontinue your participation at any time, without penalty. Please remember that, at all times, your responses will be kept confidential. Your questionnaire will receive a number only, for identification and data entry purposes. Your name will not be associated in any way with these data.

If you have any questions while you are completing the questionnaire, please raise your hand and the researcher will assist you.

Signing this document indicates that you understand the above information and that you are giving your informed consent to participate in this study.

Name (please print) _____

Signature _____

Date _____

NOTE: This consent form will be separated from the questionnaire once you have completed it. No identifying information will be stored with these data.

Appendix B

Debriefing Form – Edmonton 24

Thank you very much for your participation and interest in this study. The overall purpose of this study is to examine empowerment as it relates to the social or interpersonal domain in young adults. Some of the questions we want to answer are: What are some of the things that make people feel empowered in interpersonal relationships? How do these things build on each other – that is, when we increase our feelings of self-efficacy, or increase our social skills, or actively seek out social relationships, do these actions strengthen other aspects of this empowerment process?

Some researchers believe that empowerment is composed of a number of elements. The measures you filled out today are meant to tap into these different aspects of empowerment. The general idea is that, in order to be empowered, you need to have all of these elements in place. The research literature suggests that empowerment is composed of (a) an internal or psychological component (e.g., self-efficacy), (b) a behavioral component (e.g., actual participation in activities), and (c) an interactional component (e.g., skills) which bridges the gap between internal processes and behavior. To feel socially empowered, you probably have to have all of these elements present. Your responses today have helped us to better understand the complex nature of empowerment and will assist us in developing a structural model of interpersonal empowerment.

The results of this study will likely be available sometime in December. A feedback folder will be available in the Psychology general office once the results have been finalized. Please contact Amy L. Anderson in the Department of Psychology (474-9338) if you have any questions or would like additional feedback on the results of this study.

Appendix C

Questionnaire Cover Sheet – Edmonton 24

This questionnaire will investigate your feelings and perceptions about yourself and your interpersonal relationships. As you read the items, mark the response that first occurs to you. Make sure to complete both sides of each page (double-sided copies). If you change your mind about an answer, erase or strike through the old one, and clearly indicate your new response.

Research suggests that young adults have some common interpersonal goals – these are areas of your social life that you feel need to be changed or need improvement. Some of these areas are listed below. ***Please circle the social or interpersonal goal that you feel is most important to you:***

- goal 1. Finding or developing an intimate relationship.
- goal 2. Maintaining or improving your existing close friendship (or multiple friendships).
- goal 3. Finding or developing a close friendship (or multiple friendships).

If your most important interpersonal goal is not listed above, please write it in the blank below:

goal 9. My own interpersonal goal: _____

Please keep in mind the goal you just identified as most important. You will be asked to recall it from time to time in the sections of the questionnaire that follow.

Please continue onto the next section

Appendix D

Spheres of Control Scale: Version 3

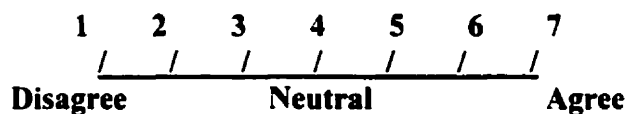
(Paulhus & Van Selst, 1990)

INSTRUCTIONS:

Write a number from 1 to 7 to indicate how much you agree with each statement.

1	2	3	4	5	6	7
/	/	/	/	/	/	/
Disagree			Neutral		Agree	

- ___ soc 1. I can usually achieve what I want if I work hard for it.
- ___ soc 2. In my personal relationships, the other person usually has more control than I do.
- ___ soc 3. By taking an active part in political and social affairs, we the people can influence world events.
- ___ soc 4. Once I make plans, I am almost certain to make them work.
- ___ soc 5. I have no trouble making and keeping friends.
- ___ soc 6. The average citizen can have an influence on government decisions.
- ___ soc 7. I prefer games involving some luck over games requiring pure skill.
- ___ soc 8. I'm not good at guiding the course of a conversation with several others.
- ___ soc 9. It is difficult for us to have much control over the things politicians do in office.
- ___ soc 10. I can learn almost anything if I set my mind to it.
- ___ soc 11. I can usually develop a personal relationship with someone I find appealing.
- ___ soc 12. Bad economic conditions are caused by world events that are beyond our control.
- ___ soc 13. My major accomplishments are entirely due to my hard work and ability.
- ___ soc 14. I can usually steer a conversation toward the topics I want to talk about.
- ___ soc 15. With enough effort we can wipe out political corruption.



- ____ soc 16. I usually do not set goals because I have a hard time following through on them.
- ____ soc 17. When I need assistance with something, I often find it difficult to get others to help.
- ____ soc 18. One of the major reasons we have wars is because people don't take enough interest in politics.
- ____ soc 19. Bad luck has sometimes prevented me from achieving things.
- ____ soc 20. If there's someone I want to meet, I can usually arrange it.
- ____ soc 21. There is nothing we, as consumers, can do to keep the cost of living from going higher.
- ____ soc 22. Almost anything is possible for me if I really want it.
- ____ soc 23. I often find it hard to get my point of view across to others.
- ____ soc 24. It is impossible to have any real influence over what big businesses do.
- ____ soc 25. Most of what happens in my career is beyond my control.
- ____ soc 26. In attempting to smooth over a disagreement, I sometimes make it worse.
- ____ soc 27. I prefer to concentrate my energy on other things rather than on solving the world's problems.
- ____ soc 28. I find it pointless to keep working on something that's too difficult for me.
- ____ soc 29. I find it easy to play an important part in most group situations.
- ____ soc 30. In the long run, we the voters are responsible for bad government on a national as well as a local level.

Please continue onto the next section

Appendix E

The Social Skills Inventory (Riggio, 1986)

INSTRUCTIONS:

On the following pages are 90 statements that indicate an attitude or behavior that may or may not be characteristic or descriptive of you. Read each statement carefully. Then decide which response will most accurately reflect your answer and circle the appropriate number on the scale that follows each question.

Keep in mind that there are no right or wrong answers. Mark only one response for each statement. It is important to try to respond to every statement.

- ssi 1. **It is difficult for others to know when I am sad or depressed.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 2. **When people are speaking, I spend as much time watching their movements as I do listening to them.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 3. **People can always tell when I dislike them no matter how hard I try to hide my feelings.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 4. **I enjoy giving parties.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 5. **Criticism or scolding rarely makes me uncomfortable.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 6. **I can be comfortable with all types of people—young and old, rich and poor.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 7. **I talk faster than most people.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 8. **Few people are as sensitive and understanding as I am.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 9. **It is often hard for me to keep a “straight face” when telling a joke or humorous story.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **10. It takes people quite a while to get to know me well.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **11. My greatest source of pleasure and pain is other people.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **12. When I'm with a group of friends, I am often the spokesperson for the group.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **13. When depressed, I tend to make those around me depressed also.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **14. At parties, I can immediately tell when someone is interested in me.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **15. People can always tell when I am embarrassed by the expression on my face.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **16. I love to socialize.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **17. I would much rather take part in a political discussion than to observe and analyze what the participants are saying.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **18. Sometimes I find it difficult to look at others when I am talking about something personal.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **19. I have been told that I have expressive eyes.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **20. I am interested in knowing what makes people tick.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **21. I am not very skilled in controlling my emotions.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **22. I prefer jobs that require working with a large number of people.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **23. I am greatly influenced by the moods of those around me.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **24. I am not good at making prepared speeches.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **25. I usually feel uncomfortable touching other people.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **26. I can easily tell what a person's character is by watching his or her interactions with others.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **27. I am able to conceal my true feelings from just about anyone.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **28. I always mingle at parties.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **29. There are certain situations in which I find myself worrying about whether I am doing or saying the right things.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **30. I find it very difficult to speak in front of a large group of people.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **31. I often laugh out loud.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **32. I always seem to know what peoples' true feelings are no matter how hard they try to conceal them.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **33. I can keep a straight face even when friends try to make me laugh or smile.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **34. I usually take the initiative to introduce myself to strangers.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **35. Sometimes I think that I take things other people say to me too personally.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi **36. When in a group of people, I have trouble thinking of the right things to talk about.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

- ssi 37. **Sometimes I have trouble making my friends and family realize just how angry or upset I am with them.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 38. **I can accurately tell what a person's character is upon first meeting him or her.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 39. **It is very hard for me to control my emotions.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 40. **I am usually the one to initiate conversations.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 41. **What others think about my actions is of little or no consequence to me.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 42. **I am usually very good at leading group discussions.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 43. **My facial expression is generally neutral.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 44. **One of my greatest pleasures in life is being with other people**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 45. **I am very good at maintaining a calm exterior even if I am upset.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 46. **When telling a story, I usually use a lot of gestures to help get the point across.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 47. **I often worry that people will misinterpret something I have said to them.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 48. **I am often uncomfortable around people whose social class is different from mine.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 49. **I rarely show my anger.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 50. **I can instantly spot a "phony" the minute I meet him or her.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

- ssi 51. **I usually adapt my ideas and behavior to the group I happen to be with at the time.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 52. **When in discussions, I find myself doing a large share of the talking.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 53. **While growing up, my parents were always stressing the importance of good manners.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 54. **I am not very good at mixing at parties.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 55. **I often touch my friends when talking to them.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 56. **I dislike it when other people tell me their problems.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 57. **While I may be nervous on the inside, I can disguise it very well from others.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 58. **At parties I enjoy talking to a lot of different people.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 59. **I can be strongly affected by someone smiling or frowning at me.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 60. **I would feel out of place at a party attended by a lot of very important people.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 61. **I am able to liven up a dull party.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 62. **I sometimes cry at sad movies.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 63. **I can make myself look as if I'm having a good time at a social function even if I'm not really enjoying myself at all.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me
- ssi 64. **I consider myself a loner.**
 1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 65. **I am very sensitive of criticism.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 66. **Occasionally I've noticed that people from different backgrounds seem to feel uncomfortable around me.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 67. **I dislike being the center of attention.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 68. **I am easily able to give a comforting hug or touch to someone who is distressed.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 69. **I am rarely able to hide a strong emotion.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 70. **I enjoy going to large parties and meeting new people.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 71. **It is very important that other people like me.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 72. **I sometimes say the wrong thing when starting a conversation with a stranger.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 73. **I rarely show my feelings or emotions.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 74. **I can spend hours just watching other people.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 75. **I can easily pretend to be mad even when I am really feeling happy.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 76. **I am unlikely to speak to strangers until they speak to me.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 77. **I get nervous if I think that someone is watching me.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 78. **I am often chosen to be the leader of a group.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 79. **Friends have sometimes told me that I talk too much.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 80. **I am often told that I am a sensitive, understanding person.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 81. **People can always “read” my feelings even when I’m trying to hide them.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 82. **I tend to be the “life of the party.”**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 83. **I’m generally concerned about the impression I’m making on others.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 84. **I often find myself in awkward social situations.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 85. **I never shout or scream when angry.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 86. **When my friends are angry or upset, they seek me out to help calm them down.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 87. **I am easily able to make myself look happy one minute and sad the next.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 88. **I could talk for hours on just about any subject.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 89. **I am often concerned with what others are thinking of me.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

ssi 90. **I can easily adjust to being in just about any social situation.**

1 Not at all like me 2 A little like me 3 Like me 4 Very much like me 5 Exactly like me

Please continue onto the next section

Appendix F

Social Resources Scale
(adapted from Diener & Fujita, 1995)

INSTRUCTIONS:

What follows is a list of resources that are important to achieving interpersonal goals. Are you satisfied with how much of these items you possess? Rate how satisfied you are with these items as they relate to your most important interpersonal goal that you are striving for.

1 = unsatisfied, I do not possess enough of this
5 = very satisfied, I do possess enough of this

		<i>Unsatisfied</i>				<i>Very satisfied</i>
res 1.	Self-confident	1	2	3	4	5
		<i>Unsatisfied</i>				<i>Very satisfied</i>
res 2.	Self-discipline	1	2	3	4	5
		<i>Unsatisfied</i>				<i>Very satisfied</i>
res 3.	Intelligence	1	2	3	4	5
		<i>Unsatisfied</i>				<i>Very satisfied</i>
res 4.	Energetic	1	2	3	4	5
		<i>Unsatisfied</i>				<i>Very satisfied</i>
res 5.	Assertive	1	2	3	4	5
		<i>Unsatisfied</i>				<i>Very satisfied</i>
res 6.	*Friends' approval	1	2	3	4	5
		<i>Unsatisfied</i>				<i>Very satisfied</i>
res 7.	Emotional self-control	1	2	3	4	5
		<i>Unsatisfied</i>				<i>Very satisfied</i>
res 8.	Healthy	1	2	3	4	5
		<i>Unsatisfied</i>				<i>Very satisfied</i>
res 9.	Articulate (well-spoken)	1	2	3	4	5
		<i>Unsatisfied</i>				<i>Very satisfied</i>
res 10.	Good manners	1	2	3	4	5
		<i>Unsatisfied</i>				<i>Very satisfied</i>
res 11.	Public speaking skills	1	2	3	4	5

res 12.	Money	<i>Unsatisfied</i> 1	2	3	4	<i>Very satisfied</i> 5
res 13.	*Enough free time	<i>Unsatisfied</i> 1	2	3	4	<i>Very satisfied</i> 5
res 14.	*Transportation/Proximity (or being physically close) to your goal	<i>Unsatisfied</i> 1	2	3	4	<i>Very satisfied</i> 5

* = Resource suggested by this author, not part of Diener & Fujita's list.

Please continue onto the next section

Appendix G

The Strategic Approach to Coping Scale

(Hobfoll, Dunahoo, Ben-Porath, & Monnier, 1994)

INSTRUCTIONS:

Describe how much you generally react this way when faced with a stressful interpersonal problem. Indicate your answer by responding from "1," "Not at all what I would do" to "5," "Very much what I would do."

sacs 1. Don't give up, even when things look their worst; because you can often turn things around.

Not at all what I'd do

1

2

3

4

5

Very much what I'd do

sacs 2. Check with friends about what they would do.

Not at all what I'd do

1

2

3

4

5

Very much what I'd do

sacs 3. Act fast; it is better to throw yourself right into the problem.

Not at all what I'd do

1

2

3

4

5

Very much what I'd do

sacs 4. Try to be in control, but let others think they are still in charge.

Not at all what I'd do

1

2

3

4

5

Very much what I'd do

sacs 5. Depend on yourself and your personal strengths; it's not a good idea to depend on others.

Not at all what I'd do

1

2

3

4

5

Very much what I'd do

sacs 6. Trust your instincts, not your thoughts.

Not at all what I'd do

1

2

3

4

5

Very much what I'd do

sacs 7. Avoid dealing with the problem; things like this often go away on their own.

Not at all what I'd do

1

2

3

4

5

Very much what I'd do

sacs 8. Mount an all-out attack; be aggressive.

Not at all what I'd do

1

2

3

4

5

Very much what I'd do

sas 9. Check with family about what they would do.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>	
1	2	3	4	5	

sacs 10. Move on to other things: there's little hope for such situations getting better.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>	
1	2	3	4	5	

sacs 11. Depend on your own gut-level reaction.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>	
1	2	3	4	5	

sacs 12. Be very cautious and look very hard at your options (better safe than sorry).

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>	
1	2	3	4	5	

sacs 13. Turn to others for help.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>	
1	2	3	4	5	

sacs 14. Go forward, but don't use all your resources until you know full well what you're up against.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>	
1	2	3	4	5	

sacs 15. Retreat: avoid contact until the problem blows over.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>	
1	2	3	4	5	

sacs 16. Counterattack and catch others off-guard.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>	
1	2	3	4	5	

sacs 17. Join together with others to deal with the situation together.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>	
1	2	3	4	5	

sacs 18. Depend on yourself but at the same time rely on others who are close to you.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>	
1	2	3	4	5	

sacs **29.** Move very cautiously; there may be a hidden agenda.

Not at all what I'd do *Very much what I'd do*
1 2 3 4 5

sacs **30.** Try hard to meet others' wishes, as this will really help the situation.

Not at all what I'd do *Very much what I'd do*
1 2 3 4 5

sacs **31.** Move aggressively; often if you get another off-guard, things will work to your advantage.

Not at all what I'd do *Very much what I'd do*
1 2 3 4 5

sacs **32.** If it doesn't get worse, just avoid the whole thing.

Not at all what I'd do *Very much what I'd do*
1 2 3 4 5

sacs **33.** Get out of the situation; when problems arise, it's usually a sign of worse to come.

Not at all what I'd do *Very much what I'd do*
1 2 3 4 5

sacs **34.** Let others think they are in control, but keep your own hands firmly on the wheel.

Not at all what I'd do *Very much what I'd do*
1 2 3 4 5

sacs **35.** Go with your intuition.

Not at all what I'd do *Very much what I'd do*
1 2 3 4 5

sacs **36.** Assert your dominance quickly.

Not at all what I'd do *Very much what I'd do*
1 2 3 4 5

sacs **37.** Sometimes your only choice is to be a little manipulative and work around people.

Not at all what I'd do *Very much what I'd do*
1 2 3 4 5

sacs **38.** Talk to others to get out your frustrations.

Not at all what I'd do *Very much what I'd do*
1 2 3 4 5

sacs **39.** Act quickly to put others at a disadvantage.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>
1	2	3	4	5

sacs **40.** Break up the problem into smaller parts and deal with them one at a time.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>
1	2	3	4	5

sacs **41.** Try to meet the needs of others who are involved.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>
1	2	3	4	5

sacs **42.** Follow your first impulse; things usually work out best that way.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>
1	2	3	4	5

sacs **43.** Do something to help you calm down and, only then, start problem-solving.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>
1	2	3	4	5

sacs **44.** Look for others' weaknesses and use them to your advantage.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>
1	2	3	4	5

sacs **45.** Take the bull by the horns; adopt a take-charge attitude.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>
1	2	3	4	5

sacs **46.** Ask friends and family for their opinions about your plan of action.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>
1	2	3	4	5

sacs **47.** Focus on something else and let the situation resolve itself.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>
1	2	3	4	5

sacs **48.** Rely on your own judgment because only you have your best interests at heart.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>
1	2	3	4	5

sacs **49.** Be firm; hold your ground.

<i>Not at all what I'd do</i>				<i>Very much what I'd do</i>
1	2	3	4	5

sacs **50.** Be assertive and get needs met.

Not at all what I'd do

1

2

3

4

5

Very much what I'd do

sacs **51.** Be strong and forceful, but avoid harming others.

Not at all what I'd do

1

2

3

4

5

Very much what I'd do

sacs **52.** Directly address the situation; don't back away from problems.

Not at all what I'd do

1

2

3

4

5

Very much what I'd do

Please continue onto the next section

Appendix H

Participation Scale**INSTRUCTIONS:**

Below you will find categories of activities and organizations in which you can become involved. Please indicate whether or not you are involved in an activity that is related to the category, list the specific activity or organization in the blanks below the category, rate your satisfaction with this involvement, and indicate how frequently you are involved. For example, I might be involved in a recreational sports league, so I would fill out the section like this:

Involved?

Physical Fitness and Leisure Classes, Recreational Sports League Yes ☒ No ☐

Activity	Not at all satisfied						Very satisfied
Play hockey in community league	1	2	3	4	5	⑥	7
2+ times/week <input type="checkbox"/>	once/week <input checked="" type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>			

Involved?

Community Organizations (e.g., 4-H, church groups) Yes ☐ No ☐

Activity	Not at all satisfied						Very satisfied
	1	2	3	4	5	6	7
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>			

Activity	Not at all satisfied						Very satisfied
	1	2	3	4	5	6	7
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>			

Activity	Not at all satisfied						Very satisfied
	1	2	3	4	5	6	7
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>			

						Involved?	
On/Off-Campus Social and Scholastic Organizations						Yes <input type="checkbox"/> No <input type="checkbox"/>	
(e.g., fraternities, chess club, book or gaming clubs, women's groups, debate club)							
Activity	Not at all satisfied				Very satisfied		
_____	1	2	3	4	5	6	7
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>			
Activity	Not at all satisfied				Very satisfied		
_____	1	2	3	4	5	6	7
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>			
Activity	Not at all satisfied				Very satisfied		
_____	1	2	3	4	5	6	7
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>			

						Involved?	
Volunteering						Yes <input type="checkbox"/> No <input type="checkbox"/>	
Activity	Not at all satisfied				Very satisfied		
_____	1	2	3	4	5	6	7
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>			
Activity	Not at all satisfied				Very satisfied		
_____	1	2	3	4	5	6	7
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>			
Activity	Not at all satisfied				Very satisfied		
_____	1	2	3	4	5	6	7
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>			

Involved?

Creative Arts (e.g., dance, drawing, music classes/training) Yes ☐ No ☐

Activity	Not at all satisfied	Very satisfied
_____	1 2 3 4 5 6 7	
2+ times/week <input type="checkbox"/> once/week <input type="checkbox"/> 2+ times/month <input type="checkbox"/> once/month <input type="checkbox"/> 2+ times/year <input type="checkbox"/>		

Activity	Not at all satisfied	Very satisfied
_____	1 2 3 4 5 6 7	
2+ times/week <input type="checkbox"/> once/week <input type="checkbox"/> 2+ times/month <input type="checkbox"/> once/month <input type="checkbox"/> 2+ times/year <input type="checkbox"/>		

Activity	Not at all satisfied	Very satisfied
_____	1 2 3 4 5 6 7	
2+ times/week <input type="checkbox"/> once/week <input type="checkbox"/> 2+ times/month <input type="checkbox"/> once/month <input type="checkbox"/> 2+ times/year <input type="checkbox"/>		

Involved?

Work (part-time/full-time) Yes ☐ No ☐

Activity	Not at all satisfied	Very satisfied
_____	1 2 3 4 5 6 7	
2+ times/week <input type="checkbox"/> once/week <input type="checkbox"/> 2+ times/month <input type="checkbox"/> once/month <input type="checkbox"/> 2+ times/year <input type="checkbox"/>		

Activity	Not at all satisfied	Very satisfied
_____	1 2 3 4 5 6 7	
2+ times/week <input type="checkbox"/> once/week <input type="checkbox"/> 2+ times/month <input type="checkbox"/> once/month <input type="checkbox"/> 2+ times/year <input type="checkbox"/>		

Activity	Not at all satisfied	Very satisfied
_____	1 2 3 4 5 6 7	
2+ times/week <input type="checkbox"/> once/week <input type="checkbox"/> 2+ times/month <input type="checkbox"/> once/month <input type="checkbox"/> 2+ times/year <input type="checkbox"/>		

										Involved?
Physical Fitness & Leisure Classes, Recreational Sports League										Yes <input type="checkbox"/> No <input type="checkbox"/>
(e.g., aerobics, martial arts, yoga)										
Activity	Not at all satisfied					Very satisfied				
_____	1	2	3	4	5	6	7			
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>						
Activity	Not at all satisfied					Very satisfied				
_____	1	2	3	4	5	6	7			
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>						
Activity	Not at all satisfied					Very satisfied				
_____	1	2	3	4	5	6	7			
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>						

										Involved?
Administrative/Organizational (e.g., student gov't, work improvement team)										
Leadership/Coordinator Roles (any capacity)										Yes <input type="checkbox"/> No <input type="checkbox"/>
Activity	Not at all satisfied					Very satisfied				
_____	1	2	3	4	5	6	7			
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>						
Activity	Not at all satisfied					Very satisfied				
_____	1	2	3	4	5	6	7			
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>						
Activity	Not at all satisfied					Very satisfied				
_____	1	2	3	4	5	6	7			
2+ times/week <input type="checkbox"/>	once/week <input type="checkbox"/>	2+ times/month <input type="checkbox"/>	once/month <input type="checkbox"/>	2+ times/year <input type="checkbox"/>						

Other – please list any activities or organizations in which you participate that you feel is not listed above

Involved?

Yes ☐ No ☐

Activity	Not at all satisfied	Very satisfied
_____	1 2 3 4 5 6 7	
2+ times/week <input type="checkbox"/> once/week <input type="checkbox"/> 2+ times/month <input type="checkbox"/> once/month <input type="checkbox"/> 2+ times/year <input type="checkbox"/>		

Activity	Not at all satisfied	Very satisfied
_____	1 2 3 4 5 6 7	
2+ times/week <input type="checkbox"/> once/week <input type="checkbox"/> 2+ times/month <input type="checkbox"/> once/month <input type="checkbox"/> 2+ times/year <input type="checkbox"/>		

Activity	Not at all satisfied	Very satisfied
_____	1 2 3 4 5 6 7	
2+ times/week <input type="checkbox"/> once/week <input type="checkbox"/> 2+ times/month <input type="checkbox"/> once/month <input type="checkbox"/> 2+ times/year <input type="checkbox"/>		

Please continue onto the next section

For office use only

	#	s1	s2	s3	f1	f2	f3
CO							
OOC							
VO							
CA							
WO							
PF							
AO							
O							

Appendix I

Social Support Questionnaire
(Sarason, Sarason, Shearin, & Pierce, 1987)

INSTRUCTIONS:

The following questions ask about people in your environment who provide you with help or support. Each question has two parts. For the *first part*, **list all the people** you know, excluding yourself, **on whom you can count for help** or support in the manner described. **Give the persons' initials and their relationship to you** (see example). Do not list more than one person next to each of the numbers beneath the question.

For the second part, circle how satisfied you are with the overall support you have.

If you have had no support for a question, check the words "No one," but still rate your level of satisfaction. Do not list more than nine persons per question.

Please answer all the questions as best you can.

EXAMPLE:

Who do you know whom you can trust with information that could get you in trouble?

No one 1) T. N. (brother) 4) T. N. (father) 7) _____
 2) L. M. (friend) 5) L. M. (employer) 8) _____
 3) R. S. (friend) 6) _____ 9) _____

How satisfied?

6 - Very ⑤ - Fairly 4 - A little 3 - A little 2 - Fairly 1 - Very
 satisfied satisfied satisfied dissatisfied dissatisfied dissatisfied

ssq 1. Whom can you really count on to be dependable when you need help?

No one 1) _____ 4) _____ 7) _____
 2) _____ 5) _____ 8) _____
 3) _____ 6) _____ 9) _____

ssq 2. How satisfied?

6 - Very 5 - Fairly 4 - A little 3 - A little 2 - Fairly 1 - Very
 satisfied satisfied satisfied dissatisfied dissatisfied dissatisfied

ssq 3. Whom can you really count on to help you feel more relaxed when you are under pressure or tense?

No one 1) _____ 4) _____ 7) _____
 2) _____ 5) _____ 8) _____
 3) _____ 6) _____ 9) _____

ssq 4. How satisfied?

6 - Very satisfied 5 - Fairly satisfied 4 - A little satisfied 3 - A little dissatisfied 2 - Fairly dissatisfied 1 - Very dissatisfied

ssq 5. Who accepts you totally, including both your worst and your best points?

No one 1) _____ 4) _____ 7) _____
 2) _____ 5) _____ 8) _____
 3) _____ 6) _____ 9) _____

ssq 6. How satisfied?

6 - Very satisfied 5 - Fairly satisfied 4 - A little satisfied 3 - A little dissatisfied 2 - Fairly dissatisfied 1 - Very dissatisfied

ssq 7. Whom can you really count on to care about you, regardless of what is happening to you?

No one 1) _____ 4) _____ 7) _____
 2) _____ 5) _____ 8) _____
 3) _____ 6) _____ 9) _____

ssq 8. How satisfied?

6 - Very satisfied 5 - Fairly satisfied 4 - A little satisfied 3 - A little dissatisfied 2 - Fairly dissatisfied 1 - Very dissatisfied

ssq 9. Whom can you really count on to help you feel better when you are feeling generally down-in-the-dumps?

No one 1) _____ 4) _____ 7) _____
 2) _____ 5) _____ 8) _____
 3) _____ 6) _____ 9) _____

ssq **10.** How satisfied?

6 - Very satisfied	5 - Fairly satisfied	4 - A little satisfied	3 - A little dissatisfied	2 - Fairly dissatisfied	1 - Very dissatisfied
-----------------------	-------------------------	---------------------------	------------------------------	----------------------------	--------------------------

ssq **11.** Whom can you count on to console you when you are very upset?

No one	1) _____	4) _____	7) _____
	2) _____	5) _____	8) _____
	3) _____	6) _____	9) _____

ssq **12.** How satisfied?

6 - Very satisfied	5 - Fairly satisfied	4 - A little satisfied	3 - A little dissatisfied	2 - Fairly dissatisfied	1 - Very dissatisfied
-----------------------	-------------------------	---------------------------	------------------------------	----------------------------	--------------------------

Please continue onto the next section

Appendix J

Miller Social Intimacy Scale

(Miller & Lefcourt, 1982)

INSTRUCTIONS:

Take a moment to think about the person or persons who currently provide(s) the most support for you. Please indicate if this person or persons are part of your most important interpersonal goal: Yes No Now, fill out these questions in reference to that person or persons who give you the most support.

msis 1. When you have leisure time, how often do you choose to spend it with him/her/them alone?

Very rarely *Some of the time* *Almost always*
1 2 3 4 5 6 7 8 9 10

msis 2. How often do you keep very personal information to yourself and do not share it with him/her/them?

Very rarely *Some of the time* *Almost always*
1 2 3 4 5 6 7 8 9 10

msis 3. How often do you show him/her/them affection?

Very rarely *Some of the time* *Almost always*
1 2 3 4 5 6 7 8 9 10

msis 4. How often do you confide very personal information to him/her/them?

Very rarely *Some of the time* *Almost always*
1 2 3 4 5 6 7 8 9 10

msis 5. How often are you able to understand his/her/their feelings?

Very rarely *Some of the time* *Almost always*
1 2 3 4 5 6 7 8 9 10

msis 6. How often do you feel close to him/her/them?

Very rarely *Some of the time* *Almost always*
1 2 3 4 5 6 7 8 9 10

msis 7. How much do you like to spend time alone with him/her/them?

Not much *A little* *A great deal*
1 2 3 4 5 6 7 8 9 10

msis 8. How much do you feel like being encouraging and supportive to him/her/them when he/she/they is/are unhappy?

Not much *A little* *A great deal*
1 2 3 4 5 6 7 8 9 10

msis 9. How close do you feel to him/her/them most of the time?

<i>Not much</i>					<i>A little</i>					<i>A great deal</i>
1	2	3	4	5	6	7	8	9	10	

msis 10. How important is it to you to listen to his/her/their very personal disclosures?

<i>Not much</i>					<i>A little</i>					<i>A great deal</i>
1	2	3	4	5	6	7	8	9	10	

msis 11. How satisfying is your relationship with him/her/them?

<i>Not much</i>					<i>A little</i>					<i>A great deal</i>
1	2	3	4	5	6	7	8	9	10	

msis 12. How affectionate do you feel towards him/her/them?

<i>Not much</i>					<i>A little</i>					<i>A great deal</i>
1	2	3	4	5	6	7	8	9	10	

msis 13. How important is it to you that he/she/they understands your feelings?

<i>Not much</i>					<i>A little</i>					<i>A great deal</i>
1	2	3	4	5	6	7	8	9	10	

msis 14. How much damage is caused by a typical disagreement in your relationship with him/her/them?

<i>Not much</i>					<i>A little</i>					<i>A great deal</i>
1	2	3	4	5	6	7	8	9	10	

msis 15. How important is it to you that he/she/they is/are encouraging and supportive to you when you are unhappy?

<i>Not much</i>					<i>A little</i>					<i>A great deal</i>
1	2	3	4	5	6	7	8	9	10	

msis 16. How important is it to you that he/she/they show you affection?

<i>Not much</i>					<i>A little</i>					<i>A great deal</i>
1	2	3	4	5	6	7	8	9	10	

msis 17. How important is your relationship with him/her/them in your life?

<i>Not much</i>					<i>A little</i>					<i>A great deal</i>
1	2	3	4	5	6	7	8	9	10	

Please continue onto the next section

Appendix K

College Undergraduate Stress Scale
(Renner & Mackin, 1998)**INSTRUCTIONS:**

Please indicate whether any of these items have happened to you in the past three weeks. A checkmark in the box indicates a "Yes" response; that this event happened to you in the past three weeks.

- | | | |
|--------|--------------------------|--|
| cus 1 | <input type="checkbox"/> | Being raped |
| cus 2 | <input type="checkbox"/> | Finding out that you are HIV positive |
| cus 3 | <input type="checkbox"/> | Being accused of rape |
| cus 4 | <input type="checkbox"/> | Death of a close friend |
| cus 5 | <input type="checkbox"/> | Death of a close family member |
| cus 6 | <input type="checkbox"/> | Contracting a sexually transmitted disease (other than AIDS) |
| cus 7 | <input type="checkbox"/> | Concerns about being pregnant |
| cus 8 | <input type="checkbox"/> | Finals week |
| cus 9 | <input type="checkbox"/> | Concerns about your partner being pregnant |
| cus 10 | <input type="checkbox"/> | Oversleeping for an exam |
| cus 11 | <input type="checkbox"/> | Flunking a class |
| cus 12 | <input type="checkbox"/> | Having a boyfriend or girlfriend cheat on you |
| cus 13 | <input type="checkbox"/> | Ending a steady dating relationship |
| cus 14 | <input type="checkbox"/> | Serious illness in a close friend or family member |
| cus 15 | <input type="checkbox"/> | Financial difficulties |
| cus 16 | <input type="checkbox"/> | Writing a major term paper |
| cus 17 | <input type="checkbox"/> | Being caught cheating on a test |
| cus 18 | <input type="checkbox"/> | Drunk driving |

- cus 19** ☐ Sense of overload in school or work
- cus 20** ☐ Two exams in one day
- cus 21** ☐ Cheating on your boyfriend or girlfriend
- cus 22** ☐ Getting married
- cus 23** ☐ Negative consequences of drinking or drug use
- cus 24** ☐ Depression or crisis in your best friend
- cus 25** ☐ Difficulties with parents
- cus 26** ☐ Talking in front of a class
- cus 27** ☐ Lack of sleep
- cus 28** ☐ Change in housing situation (hassles, moves)
- cus 29** ☐ Competing or performing in public
- cus 30** ☐ Getting in a physical fight
- cus 31** ☐ Difficulties with roommate
- cus 32** ☐ Job changes (applying, new job, work hassles)
- cus 33** ☐ Declaring a major or concerns about future plans
- cus 34** ☐ A class you hate
- cus 35** ☐ Drinking or use of drugs
- cus 36** ☐ Confrontations with professors
- cus 37** ☐ Starting a new semester
- cus 38** ☐ Going on a first date
- cus 39** ☐ Registration
- cus 40** ☐ Maintaining a steady dating relationship

- cus 41** ☐ Commuting to campus or work, or both
- cus 42** ☐ Peer pressures
- cus 43** ☐ Being away from home for the first time
- cus 44** ☐ Getting sick
- cus 45** ☐ Concerns about your appearance
- cus 46** ☐ Getting straight A's
- cus 47** ☐ A difficult class that you love
- cus 48** ☐ Making new friends; getting along with friends
- cus 49** ☐ Fraternity or Sorority rush
- cus 50** ☐ Falling asleep in class
- cus 51** ☐ Attending an athletic event (e.g.. football game)

Please continue onto the next section

Appendix L

Demographics

INSTRUCTIONS:

Please provide some information about your personal characteristics.

- dem 1. **Gender: M F** (*circle one*)

- dem 2. Date of birth: ____ / ____ / ____ Age: ____
day month year

- dem 3. **Place of birth** (*circle one*): Canada Other

(please indicate the **city & province** here [**& country** if you selected "other"]):

- dem 4. **First language learned/spoken:** English

(circle one language)

French

Other (please list) _____

- dem 5. **Educational level:** (13) First-Year University
(circle the year (14) Second-Year University
you are in) (15) Third-Year University
(16) Fourth-Year University
(17) Post-Degree

- dem 6. **Ethnic and Cultural Background:** *(circle all that are meaningful to you)*

1. Canadian
2. Francophone
3. North American Indian
4. Aboriginal
5. Inuit
6. Métis
7. North American (other than Canada; e.g., United States, Mexico)
8. Central American (e.g., Costa Rica, Belize, El Salvador, Guatemala)
9. South American (e.g., Bolivia, Brazil, Columbia, Venezuela, Chile)
10. Caribbean (e.g., Antigua, Bahamas, Cuba, Haiti, Jamaica, Trinidad)

11. Eastern European (e.g., Poland, Romania, Hungary, Russia, Bulgaria)
12. Western European (e.g., UK, France, Spain, Italy, Switzerland)
13. Northern European (e.g., Iceland, Norway, Sweden, Finland, Denmark)
14. North African (e.g., Morocco, Algeria, Egypt, Tunisia, Libya)
15. Central African (e.g., Nigeria, Chad, Sudan, Ethiopia, Somalia, Mali)
16. South African (e.g., South Africa, Namibia, Botswana, Madagascar)
17. Middle Eastern (e.g., Turkey, Iraq, Israel, Saudi Arabia, Jordan, Iran)
18. East Asian (e.g., India, Pakistan, Nepal, Sri Lanka, Bangladesh)
19. North Asian (e.g., China, North & South Korea, Japan, Hong Kong)
20. Central Asian (e.g., Thailand, Malaysia, Philippines, Vietnam, Indonesia, Papua-New Guinea)
21. South Asian (e.g., Australia, New Zealand)
22. Other ethnicity/culture: _____

- dem 7. **Marital Status:**
- (circle one number)
1. Single
 2. Common-law/Cohabiting with partner
 3. Married
 4. Divorced/Separated from partner

Your Parents:

- dem 8. The information that I will be providing below relates to my _____ parents:
(circle one) (1) biological (2) adoptive (3) foster (9) other _____

dem 9. **Your Parents' Marital Status:**

- (circle one number)
1. Married
 2. Common-law marriage
 3. Divorced/Separated from spouse

- dem 10. 3a. How old were you when they separated? _____

- dem 11. 3b. One or both are now remarried Yes No

- 3c. If yes, how old were you when they remarried?

- dem 12 & 13. Mother _____ Father _____

dem **14. Your *mother's* highest educational level achieved (circle your response):**

Elementary: grade 1 2 3 4 5 6

Junior High: grade 7 8 9

Senior High: grade 10 11 12

Post-secondary diploma/certificate

Technical college

Undergraduate university education: 1 2 3 4 holds a degree

Professional degree (e.g., LL.B., MD, DDS)

Graduate education: (circle one) complete *or* incomplete

Master's degree

Ph.D.

dem **15. Your *father's* highest educational level achieved (circle your response):**

Elementary: grade 1 2 3 4 5 6

Junior High: grade 7 8 9

Senior High: grade 10 11 12

Post-secondary diploma/certificate

Technical college

Undergraduate university education: 1 2 3 4 holds a degree

Professional degree (e.g., LL.B., MD, DDS)

Graduate education: (circle one) complete *or* incomplete

Master's degree

Ph.D.

dem **16. Siblings:** (*indicate the number of each*)

1. Sister(s): _____ older _____ younger
2. Brother(s): _____ older _____ younger
3. Half-Sister(s): _____ older _____ younger
4. Half-Brother(s): _____ older _____ younger
5. Step-Sister(s): _____ older _____ younger
6. Step-Brother(s): _____ older _____ younger
7. Adopted Sister(s): _____ older _____ younger
8. Adopted Brother(s): _____ older _____ younger

Thank you very much for participating!

Please hand in this questionnaire to the researcher and pick up a debriefing form.

Appendix M

Testing Protocol Overhead – **Instructions for Edmonton 24**

Your silence during this experiment is appreciated.
If at any time you have a question, please raise your hand
and an experimenter will come and assist you.

Informed Consent Form:

1. Please read the form carefully.
2. Sign and date it at the bottom.

Questionnaire Packet:

1. Please consider your responses carefully.
2. Complete the questionnaire in the order it is presented, **do not skip ahead.**
3. If you change your mind about an answer, erase it or strike through it, so that your final answer is clear.
4. When you have completed your questionnaire packet, bring it up to the front (along with any borrowed pencils) so that you can get your credit and debriefing form. Please be as quiet as possible, so as to not disturb others who are still completing the study.
5. PLEASE KEEP THE DETAILS OF THIS EXPERIMENT TO YOURSELF. It is important to keep the details confidential because it might make future participants respond in ways that may jeopardize the study.

Thank you for participating!

Your assistance is very much appreciated.

Appendix N

Comparisons Between the General Sample and the Métis/Aboriginal Subgroup(Significant Differences Only)

Subscale	<u>N</u>	<u>M</u>	<u>SD</u>	<u>p-value</u>
<u>Emotional Expressivity</u>				
General Sample	388	49.5	8.23	.026
Métis/Aboriginal	23	45.5	7.61	
<u>Social Expressivity</u>				
General Sample	388	48.3	12.26	.043
Métis/Aboriginal	23	43.0	10.90	
<u>Indirect Action</u>				
General Sample	388	11.9	2.91	.018
Métis/Aboriginal	23	13.3	2.98	
<u>Overall Satisfaction with Activities</u>				
General Sample	388	5.1	1.42	.012
Métis/Aboriginal	23	4.0	1.91	

Appendix O

Comparisons Between the General Sample and the Life Event #7 Subgroup (Significant Differences Only)

Subscale	<u>N</u>	<u>M</u>	<u>SD</u>	p-value
<u>Personal Control</u>				
General Sample	347	54.3	6.91	.028
Life Event #7	64	52.2	6.37	
<u>Social Expressivity</u>				
General Sample	347	47.5	12.17	.042
Life Event #7	64	50.9	12.28	
<u>Social Intimacy</u>				
General Sample	347	142.3	17.05	.003
Life Event #7	64	148.9	12.72	

Note. Life event #7 refers to concerns in the past three weeks about being pregnant.

Appendix P

Intercorrelations Between All Scales and Subscales

Scale/Subscale	GSE	SSE	PC	IPC	SPC	EE	ES	EC	SE	SS	SC	SR	AA	SJ
General Self Efficacy	<i>GSE</i>													
Social Self Efficacy	.41**	<i>SSE</i>												
Personal Control	.32**	.74**	<i>PC</i>											
Interpersonal Control	.68**	.55**	.44**	<i>IPC</i>										
Socio-Political Control	.25**	.21**	.26**	.31**	<i>SPC</i>									
Emotional Expressivity	.46**	.17**	.12*	.48**	.21**	<i>EE</i>								
Emotional Sensitivity	.30**	.11*	.14**	.36**	.14**	.39**	<i>ES</i>							
Emotional Control	.01	.04	.02	.12*	.00	-.28**	-.00	<i>EC</i>						
Social Expressivity	.76**	.28**	.20**	.66**	.25**	.64**	.46**	.01	<i>SE</i>					
Social Sensitivity	-.23**	-.39**	-.26**	-.35**	-.16**	-.11*	.20**	-.19**	-.14**	<i>SS</i>				
Social Control	.66**	.50**	.38**	.75**	.30**	.52**	.31**	.10*	.71**	-.40**	<i>SC</i>			
Social Resources	.48**	.59**	.50**	.59**	.19**	.31**	.22**	.03	.44**	-.35**	.57**			

Scale/Subscale	GSE	SSE	PC	IPC	SPC	EE	ES	EC	SE	SS	SC	SR	AA	SJ
Assertive Action	.33**	.65**	.55**	.48**	.24**	.26**	.18**	-.01	.29**	-.27**	.46**	.54**	.44	
Social Joining	.12*	.11*	.07	.08	.06	-.00	.23**	-.03	.10	.23**	.05	.10*	.15**	<i>SJ</i>
Seeking Social Support	.11*	.03	.05	.09	.03	.14**	.19**	-.26**	.11*	.23**	.02	.07	.05	.47**
Cautious Action	-.01	.12*	.14**	.07	.07	-.05	.22**	-.02	-.03	.09	-.03	.11*	.24**	.31**
Instinctive Action	.05	.09	.11*	.14**	-.01	.08	.19**	.06	.11*	-.05	.09	.16**	.17**	.02
Avoidance	-.19	-.51	-.42**	-.30**	-.20**	-.23**	-.06	.07	-.15**	.21**	-.33**	-.29**	-.69**	.00
Indirect Action	-.07	-.07	-.09	.02	-.09	-.06	.10*	.17**	-.01	.13**	-.07	-.07	-.13**	.04
Antisocial Action	.03	-.06	-.07	.16**	.12*	.17**	.05	.12*	.11*	-.10*	.07	.11*	.05	-.23**
Aggressive Action	.23**	.23**	.18**	.39**	.12*	.33**	.09	.09	.31**	-.26**	.31**	.32**	.42**	-.14**
Total Number of Activities	.22**	.17**	.10*	.15**	.15**	.04	.08	.04	.17**	.00	.18**	.22**	.23**	.13**
Satisfaction with Activities	.21**	.21**	.14**	.17**	.00	.07	.12*	-.05	.16**	-.03	.16**	.23**	.24**	.20**
Frequency of Activities	.05	-.02	-.05	.03	-.07	.03	.11*	-.04	.04	.04	.01	-.00	.01	.10
Social Support Number	.35**	.26**	.24**	.32**	.14**	.22**	.18**	-.04	.27**	-.10	.27**	.31**	.22**	.14**
Social Support Satisfaction	.35**	.41**	.35**	.41**	.21**	.19**	.14**	-.01	.26**	-.22**	.30**	.41**	.34**	.14**
Social Intimacy	.18**	.25**	.26**	.27**	.07	.24**	.30**	-.07	.19**	-.01	.22**	.26**	.26**	.17**

Appendix Q Continued

Intercorrelations Between All Scales and Subscales

Scale/Subscale	SSS	CA	IA	AV	IND	ANT	AGG	NUM	SAT	FRQ	SS_N	SS_S	SI
Seeking Social Support	SSS												
Cautious Action	.32**	CA											
Instinctive Action	.02	.22**	IA										
Avoidance	.03	-.00	.05	AV									
Indirect Action	-.04	.21**	.23**	.28**	IND								
Antisocial Action	-.24**	.09	.25**	.15**	.46	ANT							
Aggressive Action	-.16	.11*	.31**	-.15**	.30**	.64**	AGG						
Total Number of Activities	.04	.02	-.04	-.11*	-.03	-.07	.09	NUM					
Satisfaction with Activities	.11*	.09	.05	-.11*	-.05	-.10*	.01	.37**	SAT				
Frequency of Activities	-.01	.04	.01	.02	-.00	.06	-.04	.08	.59**	FRQ			
Social Support Number	.24**	.03	-.04	-.14**	-.13*	-.17**	.02	.15**	.20**	.07	SS_N		
Social Support Satisfaction	.18**	.14**	.05	-.19**	-.10*	.02	.17**	.10*	.14**	-.03	.31**	SS_S	
Social Intimacy	.23**	.15**	.05	-.20**	-.03	-.10*	.05	.00	.06	-.06	.26**	.39**	

Appendix Q

CFA Syntax

```

PROC IMPORT OUT= WORK.CFA
      DATAFILE= "A:\CFA_NEW.dbf"
      DBMS=DBF REPLACE;
      GETDELETED=NO;
RUN;

proc callS cov data=cfa maxiter=1000 se all modification;
  lineqs
    gse = x1 f1 + e1,
    p_con = x2 f1 + e2,
    aa = x3 f1 + e3,
    se = x4 f2 + e4,
    ee = x5 f2 + e5,
    sss = x6 f3 + e6,
    sj = x7 f3 + e7,
    tot_num = x8 f4 + e8,
    tot_sat = x9 f4 + e9,
    ssq_n = x10 f5 + e10,
    ssq_s = x11 f5 + e11;

  std
    f1 = 1,
    f2 = 1,
    f3 = 1,
    f4 = 1,
    f5 = 1,
    e1-e11 = x12-x22;

  cov
    f1-f5 = rho1-rho10;

run;

```

Appendix R

Initial SEM Syntax

```

PROC IMPORT OUT= WORK.CFA
      DATAFILE= "A:\CFA_NEW.dbf"
      DBMS=DBF REPLACE;
      GETDELETED=NO;
RUN;

proc callis cov data=cfa maxiter=1000 se all modification;
  lineqs
    gse = f1 + e1,
    p_con = x1 f1 + e2,
    aa = x2 f1 + e3,
    se = f2 + e4,
    ee = x3 f2 + e5,
    sss = f3 + e6,
    sj = x4 f3 + e7,
    tot_num = x5 f4 + e8,
    tot_sat = f4 + e9,
    ssq_n = f5 + e10,
    ssq_s = x6 f5 + e11,

    f1 = x7 f5 + x8 f4 + d1,
    f2 = x9 f5 + x10 f1 + d2,
    f3 = x11 f5 + x12 f2 + d3,
    f4 = x13 f5 + x14 f3 + d4;

  std
    e1-e11 = x15-x25,
    d1 = x26,
    d2 = x27,
    d3 = x28,
    d4 = x29,
    f5 = x30;

run;

```

Appendix S

SEM Syntax – Modification #1

```

PROC IMPORT OUT= WORK.CFA
      DATAFILE= "A:\CFA_NEW.dbf"
      DBMS=DBF REPLACE;
  GETDELETED=NO;
RUN;

proc callis cov data=cfa maxiter=1000 se all modification;
  lineqs
    gse = f1 + e1,
    p_con = x1 f1 + e2,
    aa = x2 f1 + e3,
    se = f2 + e4,
    ee = x3 f2 + e5,
    sss = f3 + e6,
    sj = x4 f3 + e7,
    tot_num = x5 f4 + e8,
    tot_sat = f4 + e9,
    ssq_n = f5 + e10,
    ssq_s = x6 f5 + e11,

    f1 = x7 f5 + x8 f4 + d1,
    f2 = x9 f5 + x10 f1 + x15 f3 + d2,
    f3 = x11 f5 + x12 f2 + d3,
    f4 = x13 f5 + x14 f3 + d4;

  std
    e1-e11 = x16-x26,
    d1 = x27,
    d2 = x28,
    d3 = x29,
    d4 = x30,
    f5 = x31;

run;

```

Appendix T

SEM Syntax – Modification #2

```

PROC IMPORT OUT= WORK.CFA
      DATAFILE= "A:\CFA_NEW.dbf"
      DBMS=DBF REPLACE;
      GETDELETED=NO;
RUN;

proc calis cov data=cfa maxiter=1000 se all modification;
  lineqs
    gse = f1 - e1,
    p_con = x1 f1 + e2,
    aa = x2 f1 + e3,
    se = f2 - e4,
    ee = x3 f2 + e5,
    sss = f3 - e6,
    sj = x4 f3 + e7,
    tot_num = x5 f4 + e8,
    tot_sat = f4 + e9,
    ssq_n = f5 + e10,
    ssq_s = x6 f5 + e11,

    f1 = x7 f5 + d1,
    f2 = x8 f5 + x9 f1 + x10 f3 + d2,
    f3 = x11 f5 + x12 f2 + d3,
    f4 = x13 f5 + x14 f3 + d4;

  std
    e1-e11 = x15-x25,
    d1 = x26,
    d2 = x27,
    d3 = x28,
    d4 = x29,
    f5 = x30;

run;

```