

THE MULTIDIMENSIONAL INTERPERSONAL DEPENDENCY INVENTORY:
SCALE DEVELOPMENT

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THE MULTIDIMENSIONAL INTERPERSONAL DEPENDENCY INVENTORY: SCALE DEVELOPMENT

Abstract

Current inventories of interpersonal trait dependency are problematic because they are based on theories that fail to recognize the positive aspects of dependency. The main goal of this thesis was to develop a new inventory that takes into account theoretical advances using Robert Bornstein's definitions and identified components of interpersonal dependency. The study was broken into the following three stages: 1. Item and inventory creation, 2. Expert feedback and interrater reliability and 3. Data collection and analysis. Three-hundred fifteen undergraduates completed a questionnaire packet, consisting of a demographics section, a copy of the new inventory, and seven other inventories that measure dysfunction and well-being. Although the original hypotheses in this work were not supported, exploratory factor analysis yielded four factors. These four factors and their relevance to the measurement of interpersonal dependency are discussed and suggestions are made for future studies.

The Multidimensional Interpersonal Dependency Inventory: Scale Development

Introduction

Interpersonal dependency, as a personality trait, has been of interest since psychology first became a scientific discipline. Interpersonal dependency was described by Freud in the late 1800's as the result of fixation in the oral stage of development, causing an "orally fixated person to be easily influenced and trusting of others to the point of being gullible" (Engler, 1991, p. 51). Later, behaviorists defined interpersonal dependency as a learned behavior or operant response to positive reinforcement, resulting in a "clingy and needy interpersonal style" (Goldin, Perry, Margolin & Stotsky, 1972), while cognitive psychologists defined interpersonal dependency as the propensity to think of oneself as powerless in relation to others (Blatt and Maroudas, 1992). Definitions are numerous and have been written from virtually every psychological orientation (e.g. cognitive, psychodynamic, developmental and behavioral) (Bornstein, 1992; 1993).

In fact, most psychological theories involving human relationships attempt to determine the extent to which humans are influenced by and influence one other, which according to the American Heritage Dictionary (1982), is the essence of dependence. There is little agreement, however, among these theories regarding the exact definition and components of interpersonal dependency. Furthermore, nearly all definitions in the personality and clinical literature define interpersonal dependency using pathological and maladaptive traits or patterns of interaction.

Focusing on maladaptive and pathological traits is problematic for a number of reasons. First, such a focus precludes the examination of interpersonal dependency as an important and valuable component of healthy relationships. Second, this negative perspective impacts the direction of research, the assessment of interpersonal dependency, and its treatment (Clark & Watson, 1995). The focus of treatment then becomes the "eradication" of the negative traits identified through existing assessment

tools, instead of focusing treatment on the alteration and development of a healthy interpersonal relational style. Given the impact a definition has on measurement (Clark & Watson, 1995) and the use of measurement to guide treatment, it seems necessary to redefine the trait concept of interpersonal dependency using a more comprehensive definition. Such a definition would then facilitate the development of a comprehensive inventory that includes healthy (mature) interpersonal dependency.

This manuscript first reviews the recent work of Robert Bornstein and his definition of interpersonal dependency, discusses current measures and their limitations, reports on the development of a new inventory of interpersonal dependency (Multidimensional Interpersonal Dependency Inventory; MIDI), and addresses issues related to scoring and validity.

Toward a More Comprehensive Definition of Interpersonal Dependency

In 1992, Robert Bornstein conducted a review of the literature and examined existing definitions of interpersonal dependency. Following this review, Bornstein noticed that affect, behavior, cognition and motivation were components of virtually every definition and used these to propose an inclusive definition of interpersonal dependency. Bornstein referred to cognition or cognitive processes as the perception of the self as relatively powerless and ineffectual, along with the belief that others are powerful and can control the outcome of situations. Similarly, he defined motivation, or motivational rationale as a marked need for guidance, approval and support from others. Furthermore, affect or affective experiences were defined as a tendency to become anxious and fearful when required to function independently, especially when the products of one's efforts are to be evaluated by others. Finally, he defined interpersonal dependency related behaviors as a tendency to seek help, support, approval, guidance and reassurance from others and to yield to others in interpersonal transactions (Bornstein, 1993; see Table 1).

Bornstein's initial multidimensional definition was based on research literature that focused largely on pathological traits and relational patterns of interpersonal dependency. This is expected since the discipline of psychology has historically been preoccupied with and dominated by a nearly exclusive focus on pathology (Seligman & Csikszentmihalyi, 2000). Recently, however, a series of articles written by Bornstein and others (Baumeister & Leary, 1995; Bornstein, 1993; Markus & Oyserman, 1989; Rude & Burnham, 1995; Stiver, 1994) have begun to discuss at some length the absence of healthy or mature dependency in the definition of interpersonal dependency, and the importance of recognizing its healthy characteristics. These healthy characteristics, called mature dependency, have been defined by Bornstein as "flexible, reciprocal, situation-specific dependent behavior" characterized by connectedness and interdependence (1998, pp. 70).

Limitations of Current Interpersonal Dependency Measures

Review of the literature has found three overall problems with current interpersonal dependency assessment tools. First, current assessment tools are limited to the measurement of unhealthy or immature interpersonal dependency and disregard the healthy, adaptive and necessary type of dependency, mature dependency. Acknowledging and measuring the positive, mature side of dependency is important as it encourages researchers and clinicians alike to think about the importance of these factors in their clients and communities, and how such factors contribute to well-being (Seligman & Csikszentmihalyi, 2000).

Second, it is unclear how to score one of the most frequently used dependency measures (Interpersonal Dependency Inventory, IDI, Hirschfeld, Klerman, Gough, Barrett, Korchin, & Chodoff, 1977). Users of the IDI are encouraged to calculate full-scale scores using all three scales of the IDI, but are not instructed on how this task should be accomplished. Therefore, each researcher has developed his/her own different formula for calculating full-scale scores (Bornstein, 1994).

Still another limitation has been reported regarding validity. Despite the fact that current tools all measure immature dependency, they do not measure the same aspects of this construct (Pincus & Gurtman, 1995). Since definition is the precursor of measurement and assessment (Clark & Watson, 1995; Toth & Cicchetti, 1999), it is not surprising that the construct and discriminant validity of current dependency inventories has been challenged.

Pincus and Gurtman (1995) conducted an analysis of the structural clarity of the concept of immature dependency assessed by a number of widely used, self-report dependency measures, in order to examine the construct validity¹ of current dependency inventories. They hypothesized that if the construct of dependency was similar and comparable across measures, that each measure of dependency should map onto the same personality constructs referred to by two personality models. The first of these two was the Five-Factor model, which has been used most frequently in numerous examinations of personality traits, and identified five personality traits that have been researched and discussed in the literature as essentially universal (Paunonen, S. V., 1998, pp. 538; Pervin, L. A., 1996, pp. 45). These five traits or factors include Extraversion, Conscientiousness, Agreeableness, Neuroticism and Openness to experiences. The Five-factor model was used in conjunction with an interpersonal circumplex model (see Pincus and Gurtman, 1995, for description), which identifies eight personality traits (vectors) across two individual continuums (warmth vs. cold and confident vs. unsure; see Figure 1 for an illustration of this circumplex). Measures examined in this analysis were the IDI, the Sociotropy-Autonomy Scale (SAS) (Beck, Epstein, Harrison & Emery, 1983), Depressive Experiences Questionnaire (DEQ) (Blatt, D’Afflitti & Quinlan, 1976), the Minnesota Multiphasic Personality Inventory Dependency scale (MMPI-Dy) (Navran, 1954), and the Dysfunctional Attitudes Scale (DAS)

¹ Construct validity: the degree to which inventories that purport to measure the same construct are truly measuring the same construct.

(Weissman & Beck, 1978).

Results demonstrated that these self-report measures assessed a diversity of interpersonal tendencies, yet failed to consistently map onto the same personality traits identified by the Five-Factor model and the interpersonal circumplex. These results suggested that the different interpersonal dependency inventories do not appear to be validly measuring the same construct and Pincus and Gurtman concluded that a new measure was needed, which captured all the components of interpersonal dependency (Pincus & Gurtman, 1995).

Discriminant validity² issues have also been identified for the most widely used dependency measures. Pincus and Gurtman (1995) found a lack of discriminant validity between the DEQ and the SAS and measures of neuroticism and self-esteem, and Bornstein (1994) found a lack of discriminant validity between two of the Interpersonal Dependency Inventory (IDI) subscales (emotional reliance on others [ER] and lack of social self-confidence [LS]) and measures of anxiety and depression.

Objectives, Overview and Hypotheses

Given literature recommendations (Rude & Burnham, 1995; Pincus & Gurtman, 1995), a study was conducted to create a new, comprehensive measure of interpersonal dependency which: 1. encompasses Bornsteins broader definition of interpersonal dependency, 2. has clearly defined scoring methods and 3. has improved construct and discriminant validity. The first objective of this study was to create an inventory that measured both mature and immature dependency using Bornstein's four components of interpersonal dependency. The following course of action was planned in three steps to meet this first objective: 1. Item and Inventory Creation, 2. Expert Feedback and Interrater Reliability and 3. Data Collection and Factor Analysis.

During the first step of item and inventory creation, interpersonal dependency

² Discriminant validity: the degree to which scales that measure different constructs are able to clearly discriminate between those different constructs.

was clearly defined for both mature and immature dependency using Bornstein's four components of interpersonal dependency. The main goal for this step of the study was to write items that were mutually exclusive to each defined subcategory of immature and mature dependency. During step two of this study, expert feedback was sought and interrater reliability was calculated. Experts were asked to read each item and determine which type of dependency and which of the four components the item represented. It was expected that experts could distinguish between each of Bornstein's four components of interpersonal dependency across both mature and immature dependency. Finally, data were collected and factor analyzed in the third step of this study. It was expected that two subscales would emerge with four factors each (eight factors total), four factors measuring immature dependency (immature motivational tendencies, immature cognition, immature affect and immature behavior) and four factors measuring mature dependency (mature motivational tendencies, mature cognitions, mature affect and mature behaviors).

The second objective was to develop a clear and concise method by which to score the inventory. Scoring would be based on the results of the factor analysis. It was expected that it would be possible to develop a clear method for calculating scores for the resulting scales and subscales.

The third objective was to examine internal and external validity and test-retest reliability. Based on previous literature, special emphasis would be placed on examinations of construct and discriminant validity. In analyses of construct validity, high correlations were expected between this inventory and other inventories that measure interpersonal dependency. However, given problems other inventories have with measuring the full range of the dependency construct, correlations no higher than .6 or .7 were expected between any dependency inventory and the one created for this study.

In analyses of discriminant validity, significant positive correlations were

expected between immature dependency scores and scores of depression, anxiety and interpersonal sensitivity. Additionally, it was hypothesized that significant negative correlations would be found between immature dependency, self-esteem and social desirability (Bornstein, 1993; Fichman, Koestner & Zuroff, 1997; Mongrain & Zuroff, 1994; Zuroff & Mongrain, 1987.) Furthermore, it was hypothesized that significant positive correlations would be found between problems with sociability and immature dependency, while significant negative correlations were expected between problems with sociability and mature dependency. Finally, significant negative correlations were expected between mature dependency and scores of depression, anxiety and interpersonal sensitivity, while significant positive correlations were expected between self-esteem and social desirability.

Item and Inventory Construction

The purpose of this first step in the study was to construct an inventory of interpersonal dependency using explicit definitions of mature and immature dependency (type of dependency) defined across the four components of affect, behavior, cognition and motivation (components of dependency). The main objective for item development was to write items that were mutually exclusive for mature and immature dependency by the four components defined above.

Method

Scale development methodology was extrapolated from relevant literature regarding scale construction (Abidin, 1986; Brock, Sarason, Sanghvi, & Gurung, 1998; Carmines & Zeller, 1979; Clark & Watson, 1995; Converse & Presser, 1986; Friedman, 1996; Kim, Atkinson & Yang, 1999; Mathes, Zevon, Roter & Joerger, 1982; McKinley & Shibley-Hyde, 1996; Overholser, 1991; Pedhazur & Pedhazur-Schmelkin, 1991; Peterson, 1993; Pincus & Wilson, in press; Rathus & O'Leary, 1997; Sakamoto, 1998; Wang & Mowen, 1997).

Procedure

Items for this inventory were developed by the author by first carefully defining the two types of dependency across Bornstein's four identified components of interpersonal dependency including cognitive, affective, motivational and behavioral dimensions (1992, 1993, 1998, 1999). Although Bornstein had previously described immature dependency using these four dimensions, it was necessary to originate the four-component description for mature dependency, as this had not been previously done.

The immature dependency construct included the following characteristics: strong interpersonal patterns showing motivations towards forming and maintaining unilaterally nurturant and supportive relationships (motivation), perceptions of self as powerless and incompetent in relation to others (cognition), emotional preoccupations with fears of abandonment and negative evaluation (affect), and behavioral tendencies to act in needy and clingy ways (behavior). Conversely, the mature dependency construct included the following characteristics: strong interpersonal patterns showing motivations towards forming and maintaining mutual, reciprocal and satisfying relationships (motivation), perceptions of self as competent and connected to others (cognition), experiencing feelings of self-worth and self-respect in relation to others (affect), and behavioral tendencies to act in ways that demonstrate cooperation, support and responsibility for self and others (behavior). These definitions resulted in the eight separate categories seen in Table 2.

After deriving these eight categories, statements were written to fit each of the 8 categories. A major objective here consisted of writing an equal number of items (12) for each mutually exclusive category with reduced social desirability bias. Twelve items were desired to allow the first version of the scale to be over-inclusive, so that after factor analysis was used for item reduction, a sufficient number of items would remain on each subscale (Clark & Watson, 1995).

Results

A total of 103³ items were created using the definitions and guidelines stated above. A number of challenges had to be overcome. The first challenge involved the process of item construction in a manner so that each item fit only one of the eight categories. Generated items that appeared at first to be mutually exclusive seemed upon further review, to overlap with other categories. For example, the statement "I enjoy making decisions without the help of others" contains an affective component, "I enjoy," and a cognitive component, "making decisions." Lack of mutual exclusivity of items for the eight categories made it very unlikely that items would form the same eight distinct components during analysis. A second problem that arose during the process of item generation involved the guideline of minimizing social desirability, especially for the motivational component of the scale. Although attempts were made to write items free of social desirability effects, the task of writing items that measured the constructs of mature and immature dependency as defined using this guideline, became all but impossible. Third, since mature and immature dependency share the motivation of forming and maintaining relationships, writing mutually exclusive items for this category was even more difficult. Therefore a smaller, disproportionate number of motivational items were constructed for the two types of dependency. Although the initial objective was to create 12 items for each category, the following number of items were developed for each category: Immature-Affect, 12 items; Immature-Behavior, 12; Immature-Cognition, 21; Immature-Motivation, 12; Mature-Affect, 12; Mature-Behavior, 12; Mature-Cognition, 20; Mature-Motivation, 2.

Expert Feedback and Interrater Reliability

The purpose of step two was to obtain expert feedback regarding the developed inventory and to examine interrater reliability. This part of scale development was

³ Although an additional eleven items were created to assess independence (resulting in 114 items), these items were later used as examples for expert raters but were otherwise excluded from analyses.

based on examples from Rathus and O'Leary (1997), Abidin (1986) and Kim, Atkinson and Yang (1999).

Method

Participants. Five experts who were Ph.D.-level professionals with at least 10 years of experience conducting research in the area of personality and dependency, were contacted and agreed to examine and rate the generated inventory items. These experts included: Dr. Robert F. Bornstein, Department of Psychology, Gettysburg College, PA; Dr. Aaron Pincus, Department of Psychology, Penn State University, PA; Dr. David Zuroff, Department of Psychology, McGill University, Canada; Dr. Sidney Blatt, Department of Psychiatry, Yale University, Connecticut; and Dr. Myriam Mongrain, Department of Psychology, York University, Canada.

Procedure

Experts were sent a packet of information via email. Each packet included a set of instructions, a copy of the inventory, and a checklist that required each expert to indicate with a checkmark whether an item fit one of the eight categories (referred to as item-category fit). Experts were then asked to rate each individual item according to whether it fit the definition of mature dependency or immature dependency and whether it fit one of the eight categories. Independent items were used as example items and were check-marked as independent in order to demonstrate the rating task. Experts were asked to provide additional written feedback for any concerning items, at their own discretion.

Results

A number of challenges of varying degrees arose during this step of the study. To expedite the study, the experts received information by email. However, not all email attachments were easily accessed by the experts, and resulted in unnecessary delays. In addition, only three of the five experts returned responses. One of these experts failed to complete the rating task as requested. Consequently, only two of the five

original experts ratings were used for feedback and examination of inter-rater reliability.

Prior to examination of interrater reliability, nine items were eliminated⁴ on the basis of experts' written comments, regarding the inappropriateness of these items for the construct and expert subsequent lack of ratings for these nine items. The remaining 93 items were analyzed using Cohen's Kappa for interrater reliability, the appropriate analysis for nominal data. Although experts achieved a Kappa of .98 for agreement between mature and immature dependency, their agreement decreased to .63 across the eight categories.

An examination of the expert ratings of each item and original item-category intent demonstrated that some items fit certain categories better than others. Overall, all items intending to measure affect were more easily discernable from all other categories, as both experts agreed with the original item intent on 9 out of 11 items for immature-affect and 6 out of 9 times for mature affect categories. Although both experts agreed with original item-intent approximately one-half of the time for the behavioral items (immature-behavior: 6 out of 11 items; mature-behavior: 6 out of 12 items) and motivational items (immature-motivation: 5 out of 11 items; mature-motivation: 1 out of 2 items), the lack of items written for the mature-motivation category made this number inconclusive. While affect, behavior and motivation appeared to reach similar agreement between immature and mature items, this was not true of the cognitive category. While experts agreed with original item intent two-thirds of the time for items intending to measure mature-cognition (12 out of 18 items), experts only agreed with original item intent for immature-cognition one-third of the time (7 out of 19 items). A comprehensive summary of expert ratings is provided in Table 3.

⁴ Items excluded based on expert comment and lack of rating include: 11, 20, 24, 42, 45, 74, 85, 88, 101. (See [Appendix F.](#))

Data Collection, Factor Analysis and Examination of Validity and Reliability

The purpose of this third step in scale development was to gather sufficient data to allow a proper factor analysis to be conducted, and to assess the construct validity and test-retest reliability of the MIDI. Two major data collection objectives were identified: 1. collect data from 300 participants (150 males and 150 females) to ensure sufficient sample size for factor analysis (Clark & Watson, 1995) and 2. collect retest data from 150 participants (75 female and 75 male).

Method

Participants. Participants were three-hundred fifteen (315) undergraduates at a large southeastern university (145 males and 170 females). Participants were obtained from the psychology department subject pool and consisted of students enrolled in any undergraduate psychology class during the spring semester of 2000. Students received extra credit for research participation. A large majority of participants were Caucasian (84%), and ninety-two percent (92%) were between 18-21 years of age (range 18-38). Additional demographic data are provided in [Appendix B](#).

Procedures

Sign-up sheets and a brief description of the study were posted on the department research-recruitment bulletin board. Students were informed in this description that the research project they were signing up for was being conducted in order to develop a new scale intended to measure the degree to which interpersonal relationships are important to them. Furthermore, participants were informed that they would be asked to fill out a number of questionnaires, that it was anticipated that the entire study would take between 1 hour to 1.5 hours to complete, earning them 2 points of extra credit. Furthermore, students were informed of their rights as participants in this project (freedom to withdraw, confidentiality) as research participants and were given the names, numbers and email addresses of the researcher and her primary chair in the event they had questions or comments.

After students signed up for participation and twenty-four hours before the start of each testing period, participants were emailed reminders about this study. Reminders included the time and location they were to report, and a reminder to bring a writing utensil and something to read after they had completed the questionnaire. An estimated ninety percent (90%) of those who signed up for the study showed up and participated.

After waiting five minutes past start time for all participants to arrive, the researcher in charge read a scripted introduction to the study and gave an informed consent form to each participant to sign (see [Appendix E](#) for scripted introduction and closing remarks). During the scripted introduction, participants were informed that the researchers for this study were in the process of developing a new scale that examined attitudes towards interpersonal interactions. They were then informed that in exchange for 2 points of extra credit they would be asked to complete a number of questionnaires. Participants were then alerted that the questions they were about to answer addressed similar topics and might appear to be redundant, but that this was purposefully done in order to allow the researchers to determine the best wording for questions.

Following this brief introduction, participants were given two copies of an informed consent form explaining again, the purpose of the study and indicating that they were free to refuse to participate any time they chose. Participants were asked to sign one copy of the informed consent form and pass it forward, and then were instructed to retain the other copy for their records. After informed consent was obtained from all participants, they were told they were about to be given a numbered questionnaire packet containing a demographics section, the MIDI and seven other measures. They were asked to read the directions to each section carefully and to make sure they understand the directions before they started each new section. Participants were also informed at this time that the completion of the questionnaire was NOT a timed exercise; they were asked to read each question carefully, answer with the first thought that comes to their minds, and move on to the next question. Finally, it was

requested that when participants completed the questionnaire, they would review their answers and check to assure that they had not double scored answers or left any answers blank. They were then asked to sit quietly until everyone completed the questionnaire. At this time, questionnaires were passed out and participants were told to begin. Questionnaire packets were comprised of a demographics section and eight self-report inventories administered in the following order: The MIDI, the Beck Depression Inventory-II, the Brief Symptom Inventory, an Inventory of Interpersonal Problems, the Depressive Experiences Questionnaire, the Rosenberg Self-Esteem questionnaire, the Marlowe-Crowne Social Desirability Scale and the Interpersonal Dependency Inventory.

Once every participant had completed the questionnaire packet, the packet was collected and participants were given the opportunity to return in a week for additional extra credit. They were informed that they would earn the additional credit by filling out 3 of the 8 questionnaires they had already filled out, and that this would take no more than 30 minutes of their time. Participants who expressed an interest were given a "retest admission slip", were asked to write down the number from their questionnaire packet on this admission slip and were instructed to write their names and email addresses on a retest sign-up sheet so they could be emailed reminders of the retest date. Participants were then told they would need to present the "retest admission slip" to the researchers the following week, in order to participate in the retest section. The retest admission slip was used in order to ensure participant confidentiality, while making it possible to match his or her original questionnaire packet with the retest packet. All participants were then thanked for their participation and were informed the study was over.

Retest procedures were less involved than initial administration procedures. Email reminders were again sent and participants were reminded of time and location of testing. Once participants arrived, participants were asked for a copy of their "retest

admission slip.” Two participants who did not bring these to the retest session were asked to retrieve them and return to the retest setting. Both participants returned with their retest admission slips and completed the questionnaire. After the retest admission slip was presented, the number on this slip was recorded on the retest packet and participants were allowed to sit and complete the three questionnaires in this packet. Retest questionnaire packets were comprised of the demographics section used earlier and only three of the eight inventories administered during the first administration. The three questionnaires were administered in the following order: The MIDI, the Beck Depression Inventory-II, and the Interpersonal Dependency Inventory. These three inventories were the only ones included during the retest section as they made it possible to reexamine the construct and discriminant validity issues of concern with interpersonal dependency scales, but significantly reduced the time it took for participants to complete the packets.

Upon completion, retest packets were collected and participants were thanked for their participation. Retest offers were removed from the original script once the goal of 150 participants had been reached.

Measures. Participants completed the scale developed for this study (the MIDI), the Beck Depression Inventory II (BDI-II), the Brief Symptom Inventory (BSI), the Inventory of Interpersonal Problems (IIP), the Depressive Experiences Questionnaire (DEQ), a measure of self-esteem (Rosenberg Self-Esteem Inventory, RSE), items from a social desirability scale (Ballard, Crino & Rubenfeld, 1988), and the Interpersonal Dependency Inventory (IDI). See [Appendix D](#) for an abbreviation reference list for all measures and subscales used in this inventory.

MIDI (Shlien, 2000) is the new scale being developed in this study. It consisted of 93-items that purport to measure mature and immature dependency using Bornstein’s four components of dependency: Affect, Behavior, Cognition and Motivation. Each item

is rated on a 4-point Likert scale (from 1=not characteristic of me, to 4=very characteristic of me). (See [Appendix F](#) for a copy of the inventory).

BDI-II. (Beck, Steer & Brown, 1996) is a 21-item scale that measures depression on a 4-point, item-specific scale of severity and is widely used for both research and clinical purposes. Total scores range from 0-63 and reflect mild depression (scores of 10-16), moderate depression (scores of 17-29) and severe depression levels (scores of 30-63). Internal consistency is high, with a reported alpha coefficient of .92 (Steer, Kumar, Ranieri, & Beck, 1998) and the measure has been found to have good construct validity (Steer, Ball, Ranieri & Beck, 1997). This scale was included as it is currently the most widely used depression inventory and provides a means by which to conduct analyses of discriminant validity (Bornstein, 1992; Luthar & Blatt, 1993; Mongrain, 1993; Rude & Burnham, 1995).

BSI. (Derogatis & Melisaratos, 1983), is a 53-item self-report scale rated on a 5-point scale (ranging from 0=not at all, to 4=extremely). The BSI was designed to measure current psychological symptom status (not more stable aspects of personality), and was created as a shorter version of the Symptom Checklist-90. Administration time averages 8-10 minutes, about half the time required to complete the SCL-90. Similar to the SCL-90, the BSI contains nine separate subscales (anxiety, depression, hostility, interpersonal sensitivity, phobic anxiety, obsessive-compulsive symptoms, psychoticism, paranoid ideation, somatization) and three global indices of psychopathology. Substantial evidence has been reported for the BSI's concurrent, criterion, discriminant and construct validity, and its correlations with the SCL-90 are high (Aroian, Patsdaughter, Levin & Gianan, 1995; Boulet & Boss, 1991; Canetti, Shalev & De-Nour, 1994; Derogatis & Melisaratos, 1983; Morlan & Tan, 1998; Royse & Drude, 1984). This scale was included as it measures a wide range of psychological symptoms reported in the literature to have significant positive relationships with immature dependency (e.g. anxiety and interpersonal sensitivity), and provides an additional measure of depression

with which to run comparative discriminant validity analyses (Bornstein, 1992; Luthar & Blatt, 1993; Mongrain, 1993; Rude & Burnham, 1995).

IIP. (Horowitz, Rosenberg, Baer, Ureno & Villasenor, 1988) is a 127-item self-report inventory. The IIP's items are rated on a 5-point scale (ranging from 0=not at all, to 4=extremely) and were developed to measure types of interpersonal problems and levels of interpersonal distress. The IIP contains six subscales that identify spheres of interpersonal difficulty (assertiveness, sociability, submissiveness, intimacy, responsibility and controlling). High internal consistency ($\alpha = .82 - .94$) and high superior test-retest reliability ($p = .98$) has been found for each of the subscales (Horowitz, et. al., 1988). This scale was included in order to provide additional methods by which to examine expected relationships between current interpersonal dependency scales, the MIDI and interpersonal problems.

DEQ. (Blatt, et. al., 1976) is a frequently used 66-item measure of depression that uses a 7-point Likert type scale (ranging from 1-strongly disagree to 7-strongly agree) to measure two types of depression: anaclitic (dependent) and introjective (self-criticism). Both test-retest reliability and split-half reliability coefficients of $r = .81$ were reported for the DEQ anaclitic (dependency) subscale (Welkowitz, Lish, & Bond, 1985; Zuroff, Moskowitz, Wielgus, Powers & Franko, 1983). The DEQ was included in order to determine whether the MIDI has acceptable construct validity.

The Rosenberg Self-Esteem scale (RSE) is a 10-item self-report scale that measures self-esteem. Each item is rated on a 4-point scale, ranging from 1=strongly agree, to 4=strongly disagree. An internal consistency coefficient of .92 has been found and test-retest reliability coefficients range from .85 to .88. Considerable evidence exists for the concurrent, predictive and construct validity of the RSE as it has been found to correlate significantly with other self-esteem inventories (Rosenberg, 1979). Studies examining the relationship between immature dependency and self-esteem have found a significant negative relationship between the two constructs (Fichman, Koestner

& Zuroff, 1997). This scale was included in order to determine whether the expected relationship between self-esteem and dependency can be found in the MIDI (Bornstein, 1993).

Marlowe-Crowne's Social Desirability Scale-Short Version (SDS-S) is a 33-item scale that is rated in true/false format. Although this scale has been widely used in research, Ballard and Crino (1988) identified a short version of the Marlowe-Crowne (items 5-8, 12, 15-16, 19, 21, 24, 26, 30-31 and 33) that is able to discriminate between high and low social desirability scorers. These fourteen items were used to assess the tendency of respondents to answer in socially desirable ways. This inventory was included in order to examine the degree to which items and responses on the MIDI are affected by social desirability.

IDI. (Hirschfeld, et. al., 1977), is a 48-item self-report scale designed to measure excessive dependency. Items are rated on a 4-point scale (from 1=not characteristic of me, to 4=very characteristic of me) and contribute to three subscales: Emotional Reliance on Others (ER), Lack of Self-Confidence (LS) and Assertion of Autonomy (AA). Although researchers have found retest reliability coefficients ranging from $r=.71$ to $r=.91$, and the IDI is reported to have decent concurrent validity, the first two subscales (ER and LS) are reported to lack discriminant validity between depression and anxiety (Bornstein, 1997). The IDI was included in order to determine whether the MIDI has acceptable construct validity.

Results

Three separate exploratory factor analyses were conducted using principle component analysis and Varimax rotation. The first factor analysis was conducted to examine whether the intended eight dimensions were evident (type of dependency x Bornstein's four components of dependency--CAMB⁵). Eight (8) factors were selected for extraction which yielded 8 components with eigenvalues greater than 2.45,

accounting for over 50% of the variance. A close examination of the 8 factors and their associated items (items loading on any factor at $\geq .40$) indicated that the items did not load using Bornstein's four identified components. Specifically, each of the 8 resulting factors contained items from each of the 8 original definitional categories. Even items with full expert interrater agreement did not load on the same factors as intended (see [Appendix A](#)).

Because no evidence was found for intended item-category fit, a second factor analysis was run, to empirically determine the number of factors using standard extraction guidelines of Eigenvalue > 1.0 . This analysis yielded nineteen (19) factors, which accounted for over 66% of the variance. However, examination of the resulting scree plot (see [figure 2](#)) indicated the presence of no more than four (4) distinguishable factors, which accounted for 30.4% of the variance.

A third factor analysis was then run using 4 factors as extraction criteria and the resulting four factors accounted for 41.48% of the variance. Of the 93 items, 37 items loaded on one factor at $> .4$ but $< .3$ on all other factors, 43 items loaded on one factor at $> .4$ but $> .3$ on other factors, and 11 items loaded on all factors $< .4$. Although the high number of items loading on more than one factor limited the ability to create meaningful subscales, the factors were labeled and interpreted in an effort to learn more about the possible subdimensions. Items loading on any factor at $\geq .40$ (Factor 1 = 48 items; Factor 2 = 18; Factor 3 = 17; Factor 4 = 20) were examined for logical similarities in order to facilitate interpretation and items with the highest loading values (items loading at $\geq .50$) guided the direction of interpretation (Factor 1 = 28 items; Factor 2 = 5; Factor 3 = 9; Factor 4 = 7). Examples of items loading on factor 1 included: "I wish I had more support from others," and "I wish my friends were more supportive of me." Using these items and the guidelines stated above, factor 1 was interpreted as Perceived Lack of Social Support (PLS). Examples of items loading of

⁵ CAMB= cognition, affect, motivation and behavior

factor 2 included: "I feel confident around people I don't know," and "I am comfortable with strangers." These items suggested that factor 2 seemed to be assessing some aspect of Social Self-Efficacy (SSE). Examples of items loading on factor 3 included: "When I have a problem, I feel powerless without others help," and "When I have problems, I need others to help me resolve them." These items and other items loading on factor 3 seemed oriented on other-focused, help-seeking behaviors (see [Appendix C](#)).

Although the presence of a fourth factor was questionable (see [Figure 2](#) for scree plot results) attempts were made to interpret it as well. The four highest items loading on this fourth factor appeared to be different from the remaining items that loaded on factor 4. First, although they referred to thoughts or behaviors where the respondent appeared to be acting in prosocial, generous and/or reciprocal ways ("I am a very considerate person"; "People have told me frequently that I am a good listener"; "I often do things for other people without expecting things in return"; and "I try to give as much as I receive,") the remaining items referred to the earned respect of others (i.e. "My coworkers/classmates treat me with respect"; "I feel respected by my coworkers/classmates; My friends respect me; Other people hold me in very high regard; etc.). Second, while the first four highest loading items only loaded on factor 4, over half the remaining items (items referring to earned respect) overlapped significantly with factor 1 (perceived lack of social support) and factor 2 (social self-efficacy), with items loading at $\geq .30$ (see [Appendix C](#) for detailed factor analysis results). Given these noteworthy differences, this fourth factor was difficult to interpret and a direct interpretation was not done. However, the presence of this fourth factor suggested that consideration may need to be given to the impact social reciprocity and other prosocial behaviors have on the two types of dependency (this will be further elaborated on in the discussion section; factor 4 will be abbreviated as RCP for the remainder of this manuscript.)

Although it was the intention of this study to examine validity and reliability, construct validity, discriminant validity and reliability analyses could not be conducted as expected, since discriminable subscales could not be created for computation.

Discussion

The major objectives of this study included: 1. developing an inventory that measures both mature and immature dependency, 2. providing a clear method by which to compute scales and subscales and 3. conducting validity and reliability analyses. However, because of the significant overlap of items across the four factors derived from principle component analysis, these objectives were not attainable. Although it seemed feasible to hypothesize about the relationships between the four derived factors and the two types of dependency, the significant overlap between items made subscale computations unattainable, and validity and reliability analyses impossible.

While it seemed at first that developing the MIDI using Bornstein's four components (cognition, behavior, affect and motivation) and associated definitions of interpersonal dependency would yield a more comprehensive, eight-category inventory, the very interwoven nature of human cognition, behavior, affect and motivation was not recognized at the onset of this study, and in retrospect, it is not surprising that focusing mainly on these four components yielded categorical overlap. Therefore, it appears that it was incorrect to use the four components identified by Bornstein to develop an inventory of mature and immature dependency. Although this explanation clarifies the significant item-category overlap across the eight factors shown in appendix A, it fails to account for why the four derived factors emerged and why so much overlap existed on each of these factors.

There are a number of feasible explanations why these four specific factors emerged. First, these four factors may have emerged because they all seem to be related in some way, directly or indirectly, to immature and mature dependency. While immature dependency appears to be related to and characterized by a perceived

absence of social support, a lack of reciprocity, and a lack of social self-efficacy, mature dependency appears to be characterized by the presence of social support, social self-efficacy and reciprocity/prosocial behavior. However, social support, social self-efficacy and reciprocity appear to be antecedents or consequences of immature or mature dependent behavior instead of direct measures of interpersonal dependency. For example, although social support (or the perceived lack of social support) is not a direct measure of interpersonal dependency, it is still related to interpersonal dependency and could be viewed as an antecedent of immature dependency when the perceived lack of social support causes feelings of insecurity and creates an increase of clingy, needy, dependent behavior; similarly, social support could be viewed as a consequence when a person who feels insecure, overly-needy, clingy and dependent on others causes others to avoid him or her.

While social support, social self-efficacy and reciprocity seem to be indirectly related to interpersonal dependency, one of the four factors (other-focused, help-seeking coping) appears to be a more directly related to traditional definitions of interpersonal dependency. Although immature dependency was initially hypothesized as being the polar opposite of mature dependency during the first step of item and inventory development, it would be incorrect to apply such a polarized structure to the derived subscale of other-focused coping. Rather, immature dependency appears to be characterized at one extreme, by a great need for assistance from others in order to cope with even the smallest problem in life (i.e. dependent personality disorder), while the polar opposite of this extreme (an individual who withdraws during stressful times and copes in complete solitude or completely independent of others) does not best describe an individual who relates to others in a maturely dependent interpersonal style; it might be expected that an individual who is best described by mature dependency would fall somewhere in the middle of the scale and rely on both self and others. Therefore, instead of immature and mature dependency being polar opposites, they

appear to fall on a continuum that is reflected by the other-focused, help-seeking coping scale, with complete self-reliance and independent functioning on one extreme, immature dependency on the other extreme, and mature dependency in between the two. Although it does seem that perhaps this factor measures degrees of interpersonal dependency or relatedness, the conceptualization and methodology used in developing this factor does not facilitate the calculations of mature and immature dependency inventories. Specifically, conceptualization and methodology did not lead to the construction of items that sampled from the independent, or self-reliant, end of the continuum.

Another reason these four factors might have emerged can be found by examining the definitions used in this study (table 2). Social support, social self-efficacy and earned respect, other-focused help-seeking coping and reciprocal/prosocial behaviors are repeatedly found, explicitly and implicitly, in the definitions of mature and immature dependency. Specifically, the mature and immature definitions for "motivation" address both reciprocal/prosocial behaviors and social support, the categorical definition of "cognition" addresses social self-efficacy and social support, the two definitions for "affect" address social self-efficacy, and the behavioral definitions address other-focused coping, social support and reciprocal/prosocial behaviors. These four factors might have been anticipated had their repeated presence been noticed in the original definitions of dependency used for this study. It should be pointed out here that factor 1 (perceived lack of social support) is the strongest factor with the most items and that, similarly, the construct of social support is found in three of the four defined categories of mature and immature dependency (table 2). This might explain why the construct of social support is so prominent on an inventory that purports to measure interpersonal dependency. Had social support and the other three factors been recognized a priori as inherent in the definition of interpersonal dependency, these constructs might have been defined clearly and targeted in item construction. Perhaps

this approach might have yielded stronger factors, a stronger measure of reciprocity/prosocial behavior, and a better measure of interpersonal dependency with reduced item overlap on each factor.

These hypotheses help explain why these four factors were found but do not fully explain why there was so much item overlap between the four factors. There are two main reasons this might have occurred. First, interpersonal dependency was the focus of definition, item creation, and inventory development; the four derived factors were not. In the absence of clear, concise definitions, yielding four clear factors does not seem likely. Given that the other-focused, help-seeking coping scale seems to most directly reflect the constructs of mature and immature interpersonal dependency, and has the least amount of item overlap seems to lend supportive evidence to this hypothesis. Furthermore, the complex item loading found throughout the inventory may be due more to the shared variance of interpersonal dependency and the presence of these four factors in the definitions of mature and immature dependency, rather than a true inability to differentiate between the four factors.

Implications for Future Scale Development and Clinical Implications

Given the difficulties encountered during this study, it seems necessary to begin the process of scale development over, using a number of different procedures than those reported here. First, it seems prudent to reconceptualize interpersonal dependency and relatedness on a continuum as shown in Figure 3, with immature dependency on one extreme (complete reliance on others), independence on the other extreme (complete reliance on self) and mature dependency between the two (a balanced, appropriate reliance on self and others). Using this reconceptualization, it might then be possible to create items that measure reliance on others on a continuum and as the basic definition of interpersonal dependency and relatedness.

Another change in procedure might involve the three other factors that emerged in this study. Although it might seem superfluous to consider retaining the constructs of

social support, social self-efficacy and reciprocity (antecedents and/or consequences of interpersonal dependency) in an inventory that purports to measure only mature and immature dependency, defining and developing items that clearly measure social support, social self-efficacy and reciprocity may be clinically relevant.

Clinically, administering a questionnaire that yields a proper measurement of interpersonal dependency and relatedness, social support, social self-efficacy and reciprocity might assist a clinician to determine whether an individual's interpersonal relational style is predominately immature or mature in nature, and allow the clinician to assess areas of difficulty a client might have and areas of interpersonal strengths on which the clinician can build. For example, a client starts treatment and reports feeling depressed. Given the frequent co-occurrence of dependency and depression, a clinician might consider administering a dependency inventory like the one described here. In the event that the client's dependency subscale score is elevated towards immature dependency, the clinician can then examine the additional subscales to try to determine the client's areas of difficulty, which might need to be remedied in treatment.

Another possible important theoretical revision unrelated to the results found in this study might involve the identification of positive and negative relating characteristics that can then be systematically targeted in treatment. An assessment developed on such a theory would be able to identify individual strengths and weaknesses that could then be addressed in therapy. Birtchnell and Borgherini (1999) are already in the process of developing such an inventory, using an interpersonal circumplex not unlike that referred to by Pincus and Gurtzman (1995). Their creation of such an inventory is part of their treatment of dependent personality disorder using a "new interpersonal theory." Although such a treatment sounds promising, it would be important for their inventory to be able to empirically assess the presence of strengths and weaknesses of an individual's interpersonal dependency in order to identify negative and positive relating characteristics. This would then enable treatment to focus on the

minimization of negative relating characteristics and the maximization of positive characteristics.

In conclusion, the major objectives of this study were to develop an inventory that measures mature and immature dependency, provide a clear method by which to compute scales and subscales, and to conduct validity and reliability analyses using the computed scales and subscales of mature and immature dependency. Although an inventory was developed, factor analysis revealed a significant number of items loading on more than one factor, making it impossible to compute subscale scores and analyze validity and reliability. Given the significant problems experienced during this study, alternate procedures for scale development need to be considered in the future. Redefining interpersonal dependency and relatedness on a reliance continuum and defining social support, social self-efficacy and reciprocity for inclusion on a new inventory might be one possible way to proceed; alternatively, a theory (such as that of Birtchnell and Borgherini) could be constructed and tested involving positive and negative relating characteristics that are found in interpersonal relationships. Proceeding in either of these ways would be beneficial, as either type of assessment could guide treatment.

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Appendices

Appendix A: Examining the Item-Category Fit Using Expert Ratings and Factor Analysis.

Item	Intended	Experts			ID/MD ^a	Factor									
		1	2			1	2	3	4	5	6	7	8		
10	Sometimes I feel like people just want me to leave them alone.	ia ^b	ia	ia	ID	0.60									
13	I feel lonely and isolated from others.	ia	ia	ia	ID	0.74									
18	I feel I have to compete for my friends' attention.	ia	ia	ia	ID	0.49									
21	I feel that others don't like me.	ia	ia	ia	ID	0.71									
28	When I am criticized, I feel very hurt and angry.	ia	ia	ia	ID	0.34									0.51
46	Even when I am with my friends, sometimes I still feel alone.	ia	ia	ia	ID	0.64									
62	I feel powerless.	ia	ia	ic ^b	ID	0.59				0.31					
67	I frequently feel upset about my professional or personal relationships.	ia	ia	ia	ID	0.52									
91	When I have a problem, I feel powerless without others help.	ia	ia	ia	ID					0.63					
97	Sometimes I feel like people are avoiding me.	ia	ia	ic	ID	0.68									

^a ID=Immature Dependency, MD=Mature Dependency

^b ia=Immature Affect; ib=Immature Behavior; ic=Immature Cognition; im=Immature Motivation; ma=Mature Affect; mb=Mature Behavior; mc=Mature Cognition; mm=Mature Motivation.

Item	Intended	Experts			ID/MD ^a	Factor									
		1	2			1	2	3	4	5	6	7	8		
109	My feelings get hurt easily.	ia	ia	ia	ID	0.40									0.37
5	I can't seem to do anything right.	Ib ^b	ib	ic	ID	0.54									
26	I frequently find myself doing things for other people I don't want to do.	ib	ib	ib	ID	0.34								0.43	
54	I have a hard time saying no to people.	ib	ib	ib	ID									0.56	
65	I frequently ask my family for advice (several times a week).	ib	ib	ib	ID										0.44
70	I am quick to agree with the opinions of others.	ib	mb	ib	ID				0.46	0.36					
80	When I have a problem, I immediately look to others for help.	ib	ib	ib	ID			0.73							
94	I frequently depend on others to get my needs met.	ib	ic	im	ID			0.46							
98	I go out of my way to make sure that other people like me.	ib	ib	ib	ID					0.42					
100	I put up with a lot of abuse from others.	ib	ib	ic	ID	0.53								0.33	
105	I doubt myself frequently.	ib	ic	ic	ID	0.47	-0.33	0.32	0.31						

^a ID=Immature Dependency, MD=Mature Dependency

^b ia=Immature Affect; ib=Immature Behavior; ic=Immature Cognition; im=Immature Motivation; ma=Mature Affect; mb=Mature Behavior; mc=Mature Cognition; mm=Mature Motivation.

Item	Intended	Experts			ID/MD ^a	Factor								
		1	2			1	2	3	4	5	6	7	8	
111	I almost always seek the advice of others when trying to make a decision.	ib ^b	ib	ib	ID			0.79						
6	I am frequently taken advantage of.	ic ^b	ic	ic	ID	0.42					0.52			
14	Often, my friends seem too busy to pay attention to me.	ic	ic	ic	ID	0.68								
16	I can't stand being without a romantic partner for a long period of time.	ic	im ^b	ia ^b	ID					0.36		0.62		
29	People just don't seem to like me.	ic	ic	ic	ID	0.63								
33	My friends frequently let me down when I need them.	ic	ic	ic	ID	0.58								
34	I often get embarrassed around others.	ic	ia	ia	ID	0.45			0.39					
35	People just don't seem to understand me.	ic	ic	ic	ID	0.67								
40	I can't seem to make a decision without first getting feedback on my choices.	ic	ib	ib	ID			0.67						
45	I hate to be alone.	ic	im	ia	ID					0.53				

^a ID=Immature Dependency, MD=Mature Dependency

^b ia=Immature Affect; ib=Immature Behavior; ic=Immature Cognition; im=Immature Motivation; ma=Mature Affect; mb=Mature Behavior; mc=Mature Cognition; mm=Mature Motivation.

Item		Intended	Experts			Factor								
			1	2	ID/MD ^a	1	2	3	4	5	6	7	8	
50	I am at the mercy of other people in my life.	ic	ic	ic	ID	0.35								
57	I worry about how others treat me.	ic	ia	ic	ID	0.51								0.36
60	When speaking to my supervisor, I worry about saying the right thing.	ic	ia	ic	ID	0.34			0.34					
66	I sometimes obsess about what other people think about me.	ic	ic	ic	ID	0.35			0.31					0.38
68	I worry a lot about being evaluated negatively by my supervisor or professor.	ic	ia	ic	ID	0.40			0.31			0.33		
87	I worry that my friends don't really care about me as much as I wish they did.	ic	ia	ic	ID	0.72								
90	I suffer more crises than other people do.	ic	ic	ia	ID	0.37								-0.35
95	It is hard for me to take criticism well.	ic	ic	ia	ID	0.33								0.48
96	People don't help me as much as I would like.	ic	im	im	ID	0.64								
108	I have let myself down.	ic	ic	ia	ID	0.45	-0.31							
3	I wish my family was more supportive.	im ^b	ic	im	ID	0.31								

^a ID=Immature Dependency, MD=Mature Dependency

^b ia=Immature Affect; ib=Immature Behavior; ic=Immature Cognition; im=Immature Motivation; ma=Mature Affect; mb=Mature Behavior; mc=Mature Cognition; mm=Mature Motivation.

Item	Intended	Experts				Factor								
		1	2	ID/MD ^a	1	2	3	4	5	6	7	8		
7	I like being the center of attention.	im	ia	im	ID					0.58				
25	I have to have a significant other in my life.	im	im	im	ID								0.65	
30	When I have problems, I need others to help me resolve them.	im	im	ic	ID			0.65						
44	I wish I had more support from others.	im	im	im	ID	0.72								
51	I wish my friends were more supportive of me.	im	im	im	ID	0.70								
56	I wish I was as capable as my peers.	im	im	ic	ID	0.41			0.35					
61	I always seek out the company of others.	im	mb	ib	ID			0.34		0.49				
64	I need to be surrounded by other people.	im	im	im	ID			0.35		0.60				
84	When I help others, it is very important to me that my good deeds are appreciated.	im	im	im	ID									
52	I want to have deeper, more supportive friendships.	im	mm	mm	MD	0.61								
4	I feel close to my friends.	ma ^b	ma	ma	MD	-0.52	0.30							

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Item	Intended	Experts			ID/MD ^a	Factor									
		1	2			1	2	3	4	5	6	7	8		
32	I feel like I can be myself around my classmates or coworkers.	ma	mc	ma	MD	-0.39	0.60								
47	I feel respected by my parents.	ma	ma	mc	MD	-0.35	0.42								
49	I feel respected by my coworkers/classmates.	ma	ma	mc	MD	-0.30	0.72								
58	I feel secure around my friends.	ma	ma	ma	MD	-0.58	0.50								
63	I feel close and connected to others.	ma	ma	ma	MD	-0.55	0.42								
76	I feel very respected by others.	ma	ma	ma	MD	-0.31	0.74								
81	I feel confident around people I don't know.	ma	ma	ma	MD		0.52		-0.34	0.32					
113	I feel very supported by others.	ma	ma	ma	MD	-0.50	0.55								
1	I address conflict with my friends as it occurs.	mb ^b	mb	mb	MD				-0.64						
15	I always take responsibility for my mistakes.	mb	mb	mb	MD								0.30		
22	I make friends easily.	mb	mc	mb	MD	-0.46	0.41		-0.31	0.31					
23	I experience life to it's fullest.	mb	mc	ma	MD	-0.50	0.36								
31	People have told me frequently that I am a good listener.	mb	mb	mb	MD		0.40						0.39		

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Item	Intended	Experts			ID/MD ^a	Factor								
		1	2			1	2	3	4	5	6	7	8	
36	I always act in accordance with my beliefs.	mb	mb	mb	MD					-0.36				
37	I often do things for other people without expecting things in return.	mb	mb	mb	MD								0.61	
53	I address conflict with others as it occurs.	mb	mb	mb	MD					-0.68				
82	I handle problem situations with ease.	mb	mc	mb	MD			0.47	-0.34					
89	I tolerate misfortune better than many people I know.	mb	mc	ma	MD									-0.43
106	I work well with others.	mb	mc	mb	MD			0.50						
77	I make valuable contributions when I work in a group.	mb	mc	mc	MD			0.58		-0.33				
8	My friends accept me.	mc ^b	mc	mc	MD	-0.40	0.52							
12	Relationships are very important to me.	mc	mc	mm	MD								0.52	
17	I have satisfying relationships with others.	mc	mm	mc	MD	-0.53	0.34							
27	It is easy for others to understand me.	mc	mc	mc	MD	-0.38	0.42							

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Item	Intended	Experts			ID/MD ^a	Factor								
		1	2			1	2	3	4	5	6	7	8	
39	My coworkers/classmates treat me with respect.	mc	mc	mc	MD		0.72							
48	I am comfortable among strangers.	mc	ma	ma	MD		0.54							
72	I am satisfied with my relationships (friends, family, coworkers, etc.).	mc	ma	mc	MD	-0.57	0.42							
73	I am a very considerate person.	mc	mc	mc	MD		0.49				0.45			
78	Other people hold me in very high regard.	mc	mc	mc	MD		0.70							
83	My friends respect me.	mc	mc	mc	MD	-0.41	0.73							
86	I trust my ability to do a good job.	mc	mc	mc	MD		0.58	-0.32						
92	I am accepted by others.	mc	mc	mc	MD	-0.49	0.62							
93	I am very picky about who I consider a friend.	mc	mm	mb	MD	0.32							0.32	
99	My friends treat me with the respect and courtesy that I deserve.	mc	mc	mc	MD	-0.43	0.67							
102	I like who I am.	mc	mc	ma	MD	-0.41	0.52							
103	My boss/supervisor/teacher treats me like her/his equal.	mc	mc	mc	MD		0.51							

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Item	Intended	Experts			ID/MD ^a	Factor								
		1	2			1	2	3	4	5	6	7	8	
104	My friends like me for who I am.	mc	mc	mc	MD	-0.41	0.66							
107	My supervisor respects me.	mc	mc	mc	MD		0.71							
19	I try to give as much as I receive.	mm ^b	mb	mm	MD						0.63			
41	I am always striving to improve my interpersonal relationships.	mm	mm	mm	MD						0.32	0.35		

*Items excluded from original inventory based on expert feedback: 11, 20, 24, 42, 43, 74, 85, 88, 101

** Example items from expert feedback checklist not intended to be part of inventory: 2, 9, 38, 55, 59, 69, 71, 75, 79, 110, 112, 114

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Appendix B: Frequency Data for Sample Demographics

GENDER					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	145	46.00	46.00	46.00
	female	170	54.00	54.00	100.00
	Total	315	100.00	100.00	

RACE					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Caucasian	265	84.1	84.10	84.10
	African American	13	4.1	4.10	88.30
	Hispanic	2	.6	.60	88.90
	American-Indian	2	.6	.60	89.50
	Asian-American	22	7.0	7.00	96.50
	other	11	3.5	3.50	100.00
	Total	315	100.0	100.00	

AGE					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18	87	27.60	27.60	27.60
	19	104	33.00	33.00	60.60
	20	56	17.80	17.80	78.40
	21	44	14.00	14.00	92.40
	22	11	3.50	3.50	95.90
	23	6	1.9	1.9	97.8
	24	1	.3	.3	98.1
	25	2	.6	.6	98.7
	26	1	.3	.3	99.0
	30	1	.3	.3	99.4
	37	1	.3	.3	99.7
	38	1	.3	.3	100.0
	Total	315	100.0	100.0	

Appendix C: Items, Expert Ratings and Final Factor Analysis.

ITEM	Intended	Experts			ID/MD ^a	Factor			
		1	2			PLS ^c	SSE ^d	OFC ^e	RCP ^f
44 I wish I had more support from others.	im ^b	im	im		ID	0.755			
51 I wish my friends were more supportive of me.	im	im	im		ID	0.716			
35 People just don't seem to understand me.	ic ^b	ic	ic		ID	0.702			
13 I feel lonely and isolated from others.	ia ^b	ia	ia		ID	0.688	-0.315		
87 I worry that my friends don't really care about me as much as I wish they did.	ic	ia	ic		ID	0.681			
21 I feel that others don't like me.	ia	ia	ia		ID	0.670	-0.321		
46 Even when I am with my friends, sometimes I still feel alone.	ia	ia	ia		ID	0.651			
72 I am satisfied with my relationships (friends, family, coworkers, etc.)	mc ^b	ma	mc		MD	-0.633			0.315
97 Sometimes I feel like people are avoiding me.	ia	ia	ic		ID	0.632			
100 I put up with a lot of abuse from others.	ib ^b	ib	ic		ID	0.627			
14 Often, my friends seem too busy to pay attention to me.	ic	ic	ic		ID	0.612			
96 People don't help me as much as I would like.	ic	im	im		ID	0.610			
33 My friends frequently let me down when I need them.	ic	ic	ic		ID	0.609			
52 I want to have deeper, more supportive friendships.	im	mmmm			MD	0.601			
58 I feel secure around my friends.	ma ^b	ma	ma		MD	-0.589			0.416

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^c PLS=Perceived lack of social support; ^d SSE=Social self-efficacy; ^e OFC=Other-Focused, Help-Seeking Coping; ^f RCP=Reciprocity.

ITEM	Intended	Experts			ID/MD ^a	Factor			
		1	2			PLS ^c	SSE ^d	OFC ^e	RCP ^f
29 People just don't seem to like me.	ic	ic	ic		ID	0.579	-0.319		
62 I feel powerless.	ia	ia	ic		ID	0.577	-0.373		
113 I feel very supported by others.	ma	ma	ma		MD	-0.574			0.447
10 Sometimes I feel like people just want me to leave them alone.	ia	ia	ia		ID	0.553			
5 I can't seem to do anything right.	ib	ib	ic		ID	0.546	-0.305		
63 I feel close and connected to others.	ma	ma	ma		MD	-0.541			0.438
17 I have satisfying relationships with others.	mc	mm	mc		MD	-0.536			0.406
4 I feel close to my friends.	ma	ma	ma		MD	-0.532			
99 My friends treat me with the respect and courtesy that I deserve.	mc	mc	mc		MD	-0.529			0.449
57 I worry about how others treat me.	ic	ia	ic		ID	0.525		0.332	
67 I frequently feel upset about my professional or personal relationships.	ia	ia	ia		ID	0.521		0.357	
6 I am frequently taken advantage of.	ic	ic	ic		ID	0.517			
92 I am accepted by others.	mc	mc	mc		MD	-0.514	0.409		0.448
104 My friends like me for who I am.	mc	mc	mc		MD	-0.495	0.363		0.422
8 My friends accept me.	mc	mc	mc		MD	-0.487			0.310
47 I feel respected by my parents.	ma	ma	mc		MD	-0.482			0.321

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^c PLS=Perceived lack of social support; ^d SSE=Social self-efficacy; ^e OFC=Other-Focused, Help-Seeking Coping; ^f RCP=Reciprocity.

ITEM	Experts				Factor			
	Intended	1	2	ID/MD ^a	PLS ^c	SSE ^d	OFC ^e	RCP ^f
105 I doubt myself frequently.	ib	ic	ic	ID	0.477	-0.475		
18 I feel I have to compete for my friends' attention.	ia	ia	ia	ID	0.467		0.329	
108 I have let myself down.	ic	ic	ia	ID	0.466	-0.328		
90 I suffer more crises than other people do.	ic	ic	ia	ID	0.451			
50 I am at the mercy of other people in my life.	ic	ic	ic	ID	0.417		0.326	
26 I frequently find myself doing things for other people I don't want to do.	ib	ib	ib	ID	0.412		0.329	
27 It is easy for others to understand me.	mc	mc	mc	MD	-0.410			0.358
3 I wish my family was more supportive.	im	ic	im	ID	0.405			
*56 I wish I was as capable as my peers.	im	im	ic	ID	0.391	-0.367		
*89 I tolerate misfortune better than many people I know.	mb	mc	ma	MD	0.330			
*93 I am very picky about who I consider a friend.	mc	mm	mb	MD				
81 I feel confident around people I don't know.	ma	ma	ma	MD		0.674		
82 I handle problem situations with ease.	mb ^b	mc	mb	MD		0.582		
48 I am comfortable among strangers.	mc	ma	ma	MD		0.567		0.320
34 I often get embarrassed around others.	ic	ia	ia	ID	0.419	-0.540		
7 I like being the center of attention.	im	ia	im	ID		0.500	0.349	

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ITEM	Intended	Experts			ID/MD ^a	Factor			
		1	2			PLS ^c	SSE ^d	OFC ^e	RCP ^f
22 I make friends easily.	mb	mc	mb		MD	-0.425	0.494		
102 I like who I am.	mc	mc	ma		MD	-0.438	0.486		
53 I address conflict with others as it occurs.	mb	mb	mb		MD		0.474		
23 I experience life to it's fullest.	mb	mc	ma		MD	-0.446	0.471		
32 I feel like I can be myself around my classmates or coworkers.	ma	mc	ma		MD	-0.423	0.465		0.415
1 I address conflict with my friends as it occurs.	mb	mb	mb		MD		0.460		
86 I trust my ability to do a good job.	mc	mc	mc		MD		0.447		0.374
106 I work well with others.	mb	mc	mb		MD		0.418		0.348
80 When I have a problem, I immediately look to others for help.	ib	ib	ib		ID			0.671	
30 When I have problems, I need others to help me resolve them.	im	im	ic		ID			0.658	
64 I need to be surrounded by other people.	im	im	im		ID		0.305	0.655	
91 When I have a problem, I feel powerless without others help.	ia	ia	ia		ID			0.642	
111 I almost always seek the advice of others when trying to make a decision.	ib	ib	ib		ID			0.603	
61 I always seek out the company of others.	im	mb	ib		ID			0.593	
94 I frequently depend on others to get my needs met.	ib	ic	im		ID			0.569	
45 I hate to be alone.	ic	im	ia		ID			0.538	

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^c PLS=Perceived lack of social support; ^d SSE=Social self-efficacy; ^e OFC=Other-Focused, Help-Seeking Coping; ^f RCP=Reciprocity.

ITEM	Intended	Experts			ID/MD ^a	Factor			
		1	2			PLS ^c	SSE ^d	OFC ^e	RCP ^f
66 I sometimes obsess about what other people think about me.	ic	ic	ic		ID	0.317		0.522	
40 I can't seem to make a decision without first getting feedback on my choices.	ic	ib	ib		ID			0.477	
16 I can't stand being without a romantic partner for a long period of time.	ic	im	ia		ID			0.476	
98 I go out of my way to make sure that other people like me.	ib	ib	ib		ID			0.467	
25 I have to have a significant other in my life.	im	im	im		ID			0.436	
28 When I am criticized, I feel very hurt and angry.	ia	ia	ia		ID		-0.310	0.433	
95 It is hard for me to take criticism well.	ic	ic	ia		ID		-0.325	0.419	
68 I worry a lot about being evaluated negatively by my supervisor or professor.	ic	ia	ic		ID	0.351		0.419	
60 When speaking to my supervisor, I worry about saying the right thing.	ic	ia	ic		ID			0.405	
*109 My feelings get hurt easily.	ia	ia	ia		ID	0.388	-0.387	0.397	
*70 I am quick to agree with the opinions of others.	ib	mb	ib		ID			0.395	
*65 I frequently ask my family for advice (several times a week).	ib	ib	ib		ID			0.367	
*12 Relationships are very important to me.	mc	mc	mm		MD			0.357	0.341
*54 I have a hard time saying no to people.	ib	ib	ib		ID	0.319		0.323	
*84 When I help others, it is very important to me that my good deeds are appreciated.	im	im	im		ID				

^a ID=Immature Dependency, MD=Mature Dependency

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^c PLS=Perceived lack of social support; ^d SSE=Social self-efficacy; ^e OFC=Other-Focused, Help-Seeking Coping; ^f RCP=Reciprocity.

ITEM	Intended	Experts			Factor			
		1	2	ID/MD ^a	PLS ^c	SSE ^d	OFC ^e	RCP ^f
73 I am a very considerate person.	mc	mc	mc	MD				0.668
31 People have told me frequently that I am a good listener.	mb	mb	mb	MD				0.589
37 I often do things for other people without expecting things in return.	mb	mb	mb	MD				0.571
19 I try to give as much as I receive.	mm ^b	mb	mm	MD				0.520
39 My coworkers/classmates treat me with respect.	mc	mc	mc	MD	-0.400	0.325		0.514
49 I feel respected by my coworkers/classmates.	ma	ma	mc	MD	-0.405	0.369		0.509
83 My friends respect me.	mc	mc	mc	MD	-0.496	0.376		0.506
78 Other people hold me in very high regard.	mc	mc	mc	MD		0.433		0.493
76 I feel very respected by others.	ma	ma	ma	MD	-0.410	0.411		0.486
107 My supervisor respects me.	mc	mc	mc	MD		0.371		0.466
77 I make valuable contributions when I work in a group.	mb	mc	mc	MD		0.411		0.452
41 I am always striving to improve my interpersonal relationships.	mm	mmmm		MD				0.434
*15 I always take responsibility for my mistakes.	mb	mb	mb	MD				0.394
*36 I always act in accordance with my beliefs.	mb	mb	mb	MD				0.350
*103 My boss/supervisor/teacher treats me like her/his equal.	mc	mc	mc	MD				0.333

* Items marked for exclusion using the following exclusion criteria: $r < 4.0$ with no complex loadings where $r > 4.0$.

** Items excluded from original inventory based on expert feedback: 11, 20, 24, 42, 43, 74, 85, 88, 101. Example items from study 2 not intended to be part of inventory: 2, 9, 38, 55, 59, 69, 71, 75, 79, 110, 112, 114.

^a ID=Immature Dependency, MD=Mature Dependency

^b ia=Immature Affect; ib=Immature Behavior; ic=Immature Cognition; im=Immature Motivation; ma=Mature Affect; mb=Mature Behavior; mc=Mature Cognition; mm=Mature Motivation.

^c PLS=Perceived lack of social support; ^d SSE=Social self-efficacy; ^e OFC=Other-Focused, Help-Seeking Coping; ^f RCP=Reciprocity.

Appendix D: Abbreviation Reference List for Measures Used in this Study

Subscale Abbreviation	Inventory Subscales	Inventory Abbreviation	Inventory Name	Inventory Type
PLS	Perceived Lack of Social Support	MIDI	Multidimensional Interpersonal Dependency Inventory	Dependency
SSE	Social Self-Efficacy			
OFC	Other-Focused Coping			
RCP	Reciprocity			
ID	Immature Dependency			
MD	Mature Dependency			
ER	Emotional Reliance on Others	IDI	Interpersonal Dependency Inventory	
LS	Lack of Social Self-Confidence			
DEQ-Dy	Anaclitic (dependent) Depression	DEQ	Depressive Experiences Questionnaire	
BDI-II	Depression Inventory – no subscales	BDI-II	Beck Depression Inventory-II	Psychological Distress
BSI-Dpr	BSI Depression Subscale	BSI	Brief Symptom Inventory	
BSI-Anx	BSI Anxiety Subscale			
BSI-IpSn	BSI Interpersonal Sensitivity Subscale			
IIP-Pso	IIP-Problems with Sociability Subscale	IIP	Inventory of Interpersonal Problems	Interpersonal Distress

Subscale Abbreviation	Inventory Subscales	Inventory Abbreviation	Inventory Name	Inventory Type
RSE	Self-Esteem inventory – no subscales	RSE	Rosenbergs Self Esteem Scale	Self-Esteem
SDS-S	Social Desirability scale – no subscales	SDS-S	Marlowe-Crowne Social Desirability Scale-Short version	Social Desirability

Appendix E: Scripted Introduction and Concluding Remarks

SCRIPT

TRY TO MAKE EYE CONTACT AS OFTEN AS POSSIBLE WITH PEOPLE AS YOU READ
(You can start by saying something like: OK, WHY DON'T WE GET STARTED)

I am going to be reading from a script in order to retain consistency from one group to the next and to make sure I don't leave out any directions.

It is really important that you listen carefully to the following instructions, which explain what you are going to be doing.

READ SLOWLY:

As you probably know from the sign-up sheet, we are in the process of developing a new scale that examines your attitudes towards interpersonal interactions. You will earn 2 points of extra credit today by filling out a number of questionnaires and will be given the opportunity today to qualify to earn an easy 3rd point of extra credit at the end of the study.

In order to develop this scale, we are going to ask you to complete a number of scales that test many different questions and address similar topics.

(READ SLOWLY AND EMPHASIZE:) *Therefore, you may feel some of the questions are redundant; please understand this is done intentionally to allow us to determine the best wording for questions.*

(BEFORE HANDING OUT SAY:)

The first form you are going to be getting is two copies of the informed consent form; please take one copy of the loose sheet and one of the stapled sheets. The loose sheet is going to be signed and handed up; the stapled sheet is a copy for your records. When you receive the form, please read it carefully, then sign and date the back of the loose sheet.

PASS OUT INFORMED CONSENT FORMS

(PAUSE WHILE THEY FILL THEM OUT...)

If everyone is done, please pass forward the unstapled copy.

WAIT UNTIL ALL COPIES ARE HANDED FORWARD AND THEN READ SLOWLY AGAIN

*Please read the directions carefully at the beginning of every section and make sure you understand the directions before you start a new section. If anyone has questions about a particular item, please feel free to ask at any time. Please answer each question as honestly as possible; remember *there is no way for us to associate your responses with your personal information.**

This is NOT a timed exercise; therefore please work at your own pace. However, don't worry too much about individual items – mark the first answer that comes to mind and move on. When you have finished, please check your answers to make sure you haven't missed any questions, then **HOLD ON TO YOUR COPY UNTIL EVERYONE IS DONE**. Just relax after you are finished and feel free to read something quietly until everyone is finished.

Remember: in order to earn 2 points of extra credit, the research we are doing today has to take longer than one hour to complete.

ANY QUESTIONS?

Ok, I am going to hand out the questionnaires now. When you get them, please note the following items on the board, answer the questions as they apply and feel free to get started as soon as you get your copy.

HAND OUT QUESTIONNAIRES

WRITE THE OPSCAN INFORMATION ON THE BOARD (BOTTOM OF THIS PAGE) WHILE THEY FILL OUT THE QUESTIONNAIRES.

(AFTERWARDS....)

Ok, it looks like everyone has finished. Before you hand your questionnaires forward, we will be asking any of you who are interested in earning an ADDITIONAL EXTRA CREDIT POINT to come back after next week, and fill out the demographics section again and 2 scales (the first scale that follows it and the last one you filled out). THIS SHOULD TAKE NO MORE THAN 10-20 MINUTES OF YOUR TIME and will not require that you wait for others to finish.

If you are interested in doing this for a 3rd extra credit point, please raise your hand at this time so that I can hand out a slip of paper titled: "proof of previous participation form". *(Hand out the proof of previous participation forms.)*

(When everyone has received their slip, pick up a questionnaire packet and say)

At the bottom of this form, you will find a subject number. Please write this number on the top of your questionnaire in the box that says "for office use only: SUBJECT NUMBER". *(Show them where this is on the questionnaire)* When you return during the week following spring break, you will need to bring this slip of paper with you so you can write your subject number on the top of your abbreviated questionnaire.

In order to email you a reminder of this appointment, please write your name and email address on the sign up sheets that I am sending around now.

ANY QUESTIONS? If not, please pass your questionnaires forward.

Collect questionnaires, pause, wait for people to quiet down again, and then say:

As standard research policy for human subjects requires, we have attached a list of mental health resources to the back of your stapled sheet in the event that completing any of these scales has caused you distress. If you have any additional questions about the research you participated in today, you are welcome to call the researchers listed at the bottom of the informed consent form.

I am going to hand out extra credit opscans now. Please take and fill out 2 of them with the information that is on the board (SEE BELOW). Also, at this time, if anyone has extra credit sheets for another class, please let me know so you can be sure to get credit for your participation. When you are done with your extra credit opscans, please place your opscan on the table and feel free to leave. **THANKS FOR YOUR PARTICIPATION AND TIME TODAY. HAVE A GREAT AFTERNOON.**

INFORMATION ON THE BOARD:

Your name (legibly)

Today's Date

Your social security number

In seat space please write/bubble 286.

Appendix F: Copy of the MIDI as presented to participants.

IMPORTANCE OF INTERPERSONAL RELATIONSHIPS

Instructions: 114 statements are presented below. Please read each one and decide whether or not it is characteristic of your attitudes, feelings, or behavior. Then assign a rating to every statement, using the values given below:

4 = very characteristic of me
3 = quite characteristic of me
2 = somewhat characteristic of me
1 = not characteristic of me

- | | |
|---|---|
| <p><u>1.</u> I address conflict with my friends as it occurs.</p> <p><u>2.</u> My work/schoolwork always comes before my social life.</p> <p><u>3.</u> I wish my family was more supportive.</p> <p><u>4.</u> I feel close to my friends.</p> <p><u>5.</u> I can't seem to do anything right.</p> <p><u>6.</u> I am frequently taken advantage of.</p> <p><u>7.</u> I like being the center of attention.</p> <p><u>8.</u> My friends accept me.</p> <p><u>9.</u> I much prefer to be alone than to spend time with friends.</p> <p><u>10.</u> Sometimes I feel like people just want me to leave them alone.</p> <p><u>11.</u> I seldom seek advice from others when trying to make decisions.</p> <p><u>12.</u> Relationships are very important to me.</p> <p><u>13.</u> I feel lonely and isolated from others.</p> <p><u>14.</u> Often, my friends seem too busy to pay attention to me.</p> <p><u>15.</u> I always take responsibility for my mistakes.</p> <p><u>16.</u> I can't stand being without a romantic partner for a long period of time.</p> <p><u>17.</u> I have satisfying relationships with others.</p> <p><u>18.</u> I feel I have to compete for my friends' attention.</p> <p><u>19.</u> I try to give as much as I receive.</p> <p><u>20.</u> I enjoy making decisions without the help of others.</p> <p><u>21.</u> I feel that others don't like me.</p> <p><u>22.</u> I make friends easily.</p> <p><u>23.</u> I experience life to it's fullest.</p> | <p><u>24.</u> I have been told I talk too much.</p> <p><u>25.</u> I have to have a significant other in my life.</p> <p><u>26.</u> I frequently find myself doing things for other people I don't want to do.</p> <p><u>27.</u> It is easy for others to understand me.</p> <p><u>28.</u> When I am criticized, I feel very hurt and angry.</p> <p><u>29.</u> People just don't seem to like me.</p> <p><u>30.</u> When I have problems, I need others to help me resolve them.</p> <p><u>31.</u> People have told me frequently that I am a good listener.</p> <p><u>32.</u> I feel like I can be myself around my classmates or coworkers.</p> <p><u>33.</u> My friends frequently let me down when I need them.</p> <p><u>34.</u> I often get embarrassed around others</p> <p><u>35.</u> People just don't seem to understand me.</p> <p><u>36.</u> I always act in accordance with my beliefs.</p> <p><u>37.</u> I often do things for other people without expecting things in return.</p> <p><u>38.</u> I am always striving to do be the best in my class or on the job.</p> <p><u>39.</u> My coworkers/classmates treat me with respect.</p> <p><u>40.</u> I can't seem to make a decision without first getting feedback on my choices.</p> <p><u>41.</u> I am always striving to improve my interpersonal relationships.</p> <p><u>42.</u> I often resent the things I do for other people.</p> <p><u>43.</u> I know my supervisor is concerned with my recent performance, even though she/he has not said anything to me.</p> <p><u>44.</u> I wish I had more support from others.</p> |
|---|---|

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|--|---|
| <u>45.</u> I hate to be alone. | <u>46.</u> Even when I am with my friends, sometimes I still feel alone. |
| <u>47.</u> I feel respected by my parents. | <u>72.</u> I am satisfied with my relationships (friends, family, coworkers, etc.) |
| <u>48.</u> I am comfortable among strangers. | <u>73.</u> I am a very considerate person. |
| <u>49.</u> I feel respected by my coworkers/classmates. | <u>74.</u> I believe I can do a good job. |
| <u>50.</u> I am at the mercy of other people in my life. | <u>75.</u> I enjoy spending time alone. |
| <u>51.</u> I wish my friends were more supportive of me. | <u>76.</u> I feel very respected by others. |
| <u>52.</u> I want to have deeper, more supportive friendships. | <u>77.</u> I make valuable contributions when I work in a group. |
| <u>53.</u> I address conflict with others as it occurs. | <u>78.</u> Other people hold me in very high regard. |
| <u>54.</u> I have a hard time saying no to people. | <u>79.</u> I don't enjoy group projects. |
| <u>55.</u> My main ambitions are career-oriented rather than socially-oriented. | <u>80.</u> When I have a problem, I immediately look to others for help. |
| <u>56.</u> I wish I was as capable as my peers. | <u>81.</u> I feel confident around people I don't know. |
| <u>57.</u> I worry about how others treat me. | <u>82.</u> I handle problem situations with ease. |
| <u>58.</u> I feel secure around my friends. | <u>83.</u> My friends respect me. |
| <u>59.</u> Having a career is more important to me than having a family of my own. | <u>84.</u> When I help others, it is very important to me that my good deeds are appreciated. |
| <u>60.</u> When speaking to my supervisor, I worry about saying the right thing. | <u>85.</u> I have let my friends down. |
| <u>61.</u> I always seek out the company of others. | <u>86.</u> I trust my ability to do a good job. |
| <u>62.</u> I feel powerless. | <u>87.</u> I worry that my friends don't really care about me as much as I wish they did. |
| <u>63.</u> I feel close and connected to others. | <u>88.</u> I wish people didn't demand so much of me. |
| <u>64.</u> I need to be surrounded by other people. | <u>89.</u> I tolerate misfortune better than many people I know. |
| <u>65.</u> I frequently ask my family for advice (several times a week). | <u>90.</u> I suffer more crises than other people do. |
| <u>66.</u> I sometimes obsess about what other people think about me. | <u>91.</u> When I have a problem, I feel powerless without others help. |
| <u>67.</u> I frequently feel upset about my professional or personal relationships. | <u>92.</u> I am accepted by others. |
| <u>68.</u> I worry a lot about being evaluated negatively by my supervisor or professor. | <u>93.</u> I am very picky about who I consider a friend. |
| <u>69.</u> I would rather lead than follow. | <u>94.</u> I frequently depend on others to get my needs met. |
| <u>70.</u> I am quick to agree with the opinions of others. | <u>95.</u> It is hard for me to take criticism well. |
| <u>71.</u> I do my best work alone. | <u>96.</u> People don't help me as much as I would like. |
| | <u>97.</u> Sometimes I feel like people are avoiding me. |

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|-------------|---|-------------|--|
| <u>98.</u> | I go out of my way to make sure that other people like me. | <u>106.</u> | I work well with others. |
| <u>99.</u> | My friends treat me with the respect and courtesy that I deserve. | <u>107.</u> | My supervisor respects me. |
| <u>100.</u> | I put up with a lot of abuse from others. | <u>108.</u> | I have let myself down. |
| <u>101.</u> | I never feel jealous of my friends' successes. | <u>109.</u> | My feelings get hurt easily. |
| <u>102.</u> | I like who I am. | <u>110.</u> | I am a workaholic. |
| <u>103.</u> | My boss/supervisor/teacher treats me like her/his equal. | <u>111.</u> | I almost always seek the advice of others when trying to make a decision. |
| <u>104.</u> | My friends like me for who I am. | <u>112.</u> | I am a very competitive person. |
| <u>105.</u> | I doubt myself frequently. | <u>113.</u> | I feel very supported by others. |
| | | <u>114.</u> | I am frequently distracted by thoughts of my work when I am with other people. |

Table 1

Bornstein's Initial, Literature-Based Four Component Definition of Interpersonal Dependency

Four Components	Interpersonal Dependency
Motivational:	A marked need for guidance, approval and support from others
Cognitive:	Perception of self as powerless and incompetent in relation to others.
Affective:	Fears of negative evaluation, rejection and abandonment.
Behavioral:	Needy and clingy behaviors, including help-, support-, approval-, and reassurance-seeking.

Table 2

Two types of Dependency: Mature dependency and Immature dependency.

Four Components	Mature dependency	Immature dependency
Motivational	Goal of forming and maintaining mutually supportive, mature and satisfying relationships.	Goal of forming and maintaining nurturant and unilaterally supportive relationships.
Cognitive	Perception of self as competent with, and connected to others.	Perception of self as powerless and incompetent in relation to others.
Affective	Characterized by feelings of self-worth and self-respect.	Fears of abandonment and negative evaluation.
Behavioral	Cooperative, supportive of others, assumes responsibility for self and others.	Needy and clingy behavior.

Table 3

Degree Of Agreement Between Experts And Original Item Intent.

Category	# of items intended for category after initial item deletion	Degree of agreement			
		Full agreement btwn experts and initial item intent.	1 of 2 experts disagreed with item intent	Both experts agreed, but not with initial item intent	No agreement between experts or item intent
IA	11	9	2	0	0
IB	11	6	4	1	0
IC	19	7	7	3	2
IM	11	5	4	1*	1
MA	9	6	3	0	0
MB	12	6	3	1	2
MC	18	12	4	1	1
MM	2	1	1	0	0

* Intent was for immature dependency but one expert identified item as mature dependency.

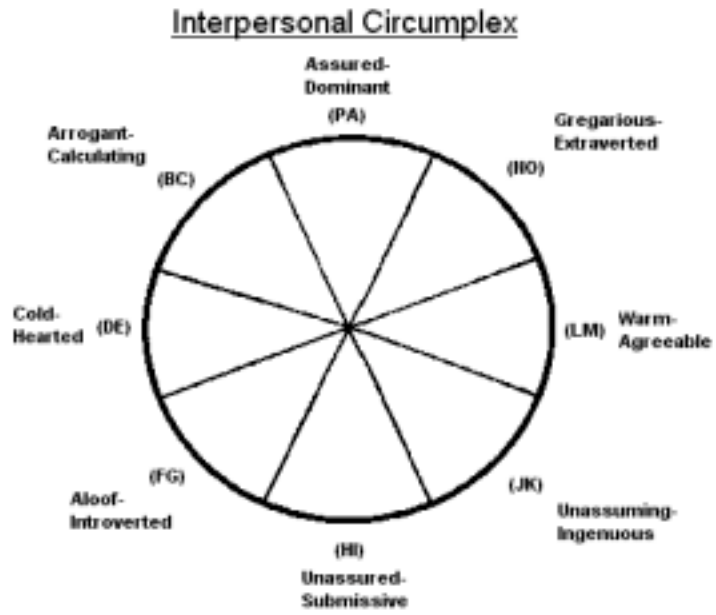


Figure 1. The Interpersonal Circumplex (Pincus & Gurtman, 1995, pp. 746).

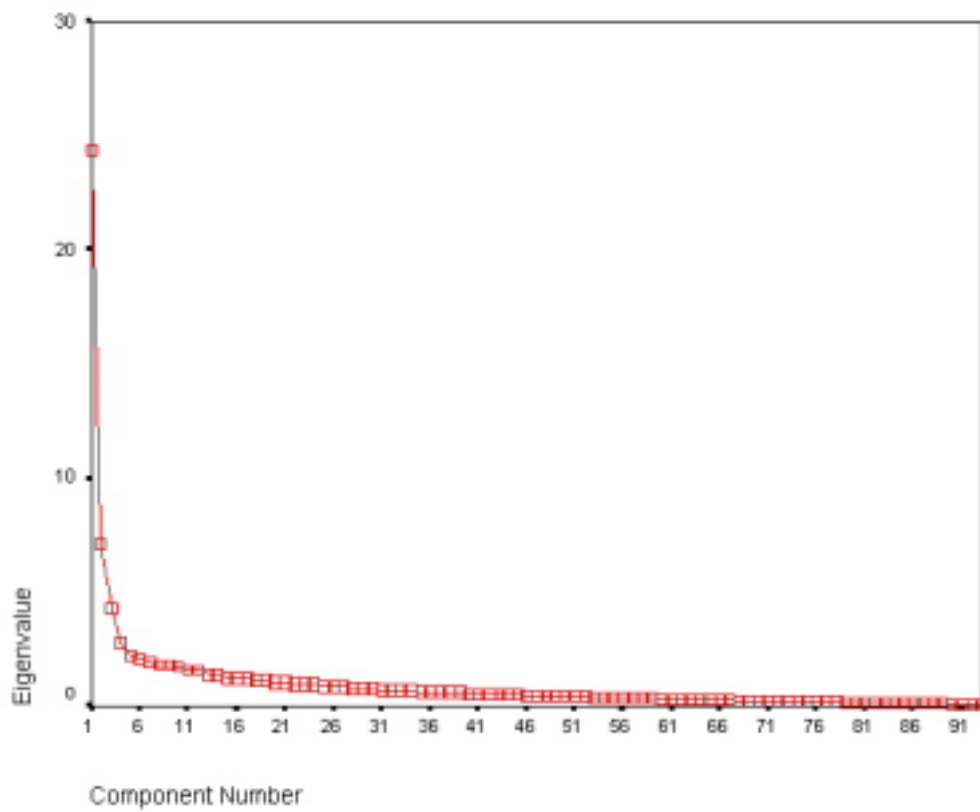


Figure 2. Scree Plot: Factor Analysis Using Eigenvalues > 1 for Extraction.

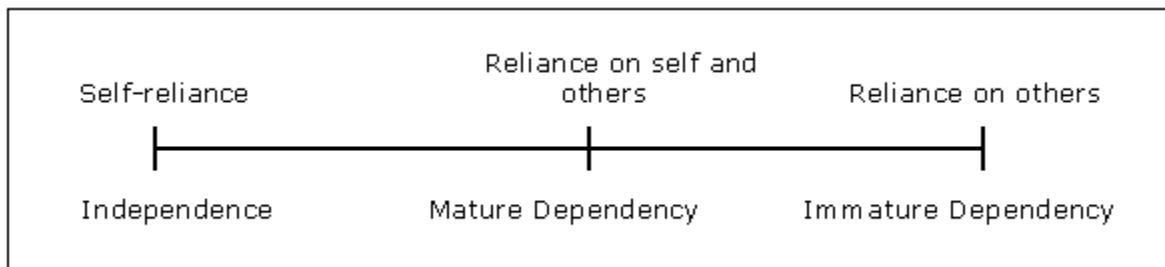


Figure 3: Reconceptualization of an Interpersonal Dependency and Relatedness Continuum.