Testing the Relationships among Depression, Communication Competence, Relational Satisfaction, and Social Support

Rebecca Sue DeVries

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TESTING THE RELATIONSHIPS AMONG DEPRESSION, COMMUNICATION COMPETENCE, RELATIONAL SATISFACTION, AND SOCIAL SUPPORT

by

Rebecca Sue DeVries

A Thesis
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the requirements for the
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Rebecca Sue DeVries
The purpose of this thesis was to test the relationship between depression, communication competence (CC), and social support. This relationship is rooted in the premise that central to CC is one’s ability to solicit and receive social support from interpersonal relationships in terms of 3 dimensions: assertiveness, responsiveness, and cognitive flexibility. It was hypothesized that depression is negatively associated to cognitive flexibility, and in turn the assertiveness and responsiveness CC dimensions are positively related to quality interpersonal relationships and the social support received from such relationships. Bivariate correlation results indicate the data are consistent with the predicted relationships between the following variable pairs: depression and cognitive flexibility, cognitive flexibility and assertiveness, cognitive flexibility and responsiveness, assertiveness and quality friendships, responsiveness and quality relationships with family and partners, quality interpersonal relationships and social support for friends, family, and partners. Implications of these findings as well as directions for future research are discussed.
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CHAPTER I
Introduction

The purpose of this thesis was to test the relationship between depression, communication competence, and social support. Communication competence becomes important to those experiencing depression such that it addresses the ability to maintain interpersonal relationships conducive to providing social support. Unfortunately, the interpersonal difficulties often experienced by persons with depressive symptoms adversely affect their ability to create and maintain socially supportive relationships. In essence, communication competence addresses such interpersonal difficulties and becomes an intervening variable between depression and the interpersonal relationships used for social support.

A review of the communication competence (CC) literature clearly shows the emergence of three dimensions essential to communicative competence: assertiveness, responsiveness, and flexibility. What the literature lacks is a single approach that encompasses all three dimensions at once. The following paper provides an argument for an integrated model of CC that encompasses these dimensions and then provides support for an argument that all three dimensions are necessary and impact the extent to which those with depression are able to seek social support. This argument is based on the premise that persons with depressive symptoms need to be adept at maintaining interpersonal relationships in order to actively seek support and receive support. As this concept of social support relates to CC, cognitive flexibility affects the choices one makes with regards to when it is appropriate to be assertive and responsive, assertiveness skills would enable a person with depression to seek quality interpersonal relationships
and directly solicit support where as responsiveness skills would enable an individual with depression to maintain such relationships in order to receive unsolicited support.

While assertiveness and responsiveness are important skills for soliciting social support, cognitive flexibility is particularly important because it can address the negative cognitive biases often characterized with depression (Clark, Beck, & Alford, 1999). Beck’s theory centers on the fact that persons with depression commonly have more negative cognitive biases than those without depression. Such biases could have an impact on cognitive flexibility in that negative biases are at an automatic level and remain relatively rigid (Clark et al., 1999). These biases may make awareness of communicative options an automatic and typically negatively valenced response (e.g., all choices are bad); willingness may be low (e.g., why bother to be flexible); and self-efficacy may be low as well (e.g., I can’t be assertive or responsive anyway).

Based on the function that cognitive flexibility serves with respect to CC, interpersonal difficulties in maintaining interpersonal relationships, and social support, it will be argued that cognitive flexibility is central to the relationship between depression and the assertiveness and responsiveness components of CC. These factors impact the quality of interpersonal relationships and one’s ability to solicit and receive social support.

In order to better understand the relationship between depression and CC, the following review of literature provides the background for the prediction that depression is related to CC and one’s ability to solicit and receive social support. A definition of depression as well as the cognitive features of depression is provided prior to addressing the CC literature, the three dimensions of CC: assertiveness, responsiveness, and
flexibility, and how they may be related to relational satisfaction. Interactional and social support theories of depression are then presented. These theories address the importance of quality interpersonal relationships and the communication within such relationships as it relates to social support. It is then followed with a discussion of the difficulties persons with depressive symptoms face in interpersonal relationships and how such difficulties may inhibit social support. Subsequently, a model for studying the relationship between depression, CC, and social support is presented along with research hypotheses. Methods for data collection and analysis of such data are then discussed. This is followed by the results of the data analysis and a discussion of those results, with implications and suggestions for future research.
CHAPTER II
The Role of Social Support for Persons with Depression

*Definition of Depression and the Cognitive Theory of Depression*

*Dysthymia: Chronic unipolar depression.* Depression has been widely studied, and the definitions that are central to this study are commonly known to those who diagnose it, treat it, and many who suffer from it. There is more than one type of clinical depression. One type is described as the manic-depressive, a person who experiences extreme highs and debilitating lows. This is otherwise known as bipolar disorder. A second type of depression, unipolar depression, as the name suggests, has only one pole. It is absent of the highs associated with bipolar disorder, and is characterized singly by the *debilitating* lows of depression. Chronic unipolar depression, where symptoms are pervasive, but not entirely debilitating, is called dysthymia. Although depression can range in severity, chronicity, and clinical presentation, it is dysthymia that has often been conceptualized as the common cold of mental illness. In order to receive a diagnosis, those with dysthymia should display depressive symptoms more often than not over a two-year period (American Psychiatric Association [APA], 2000). “During periods of depressed mood, at least two of the following additional symptoms are present: poor appetite or overeating, insomnia or hypersomnia, low energy or fatigue, low self-esteem, poor concentration or difficulty making decisions, and feelings of hopelessness” (APA, 2000, p.377). Additionally, those that suffer with dysthymia are often characterized as displaying excessive self-criticism and low interest in everyday activities (APA, 2000).

According to the National Institute of Mental Health ([NIMH] 2002), approximately 19% of the United States (U.S.) population – 12% women and 7% men –
is diagnosed with a depressive illness each year. Thus, nearly 20% of the general U.S. population suffers from various forms of depression, however, medication and psychotherapy work to alleviate depressive symptoms for approximately 80% of sufferers (NIMH, 2002). Clearly, depression is a relatively common disease which deserves attention; contributions to the body of research regarding the psycho-social factors that are related to depression could be beneficial. Throughout the remainder of this paper, the aforementioned definition of depression as dysthymia is what is referred to as depression, unless otherwise specified.

The experience of depression has been studied from a multitude of perspectives including skills deficits (e.g., the inability to assert self; Lewinsohn, Munoz, Youngren, & Zeiss, 1986), explanatory style (e.g., excessive pessimism; Gillham, Reivich, Jaycox, & Seligman, 1995; Peterson, Maier, & Seligman, 1993), and biochemical dysfunction (Bandura, 1997). While these and other perspectives about the causes and outcomes of depression exist in the literature, one perspective concerned with cognitive functioning is particularly relevant for understanding the communication patterns of persons that suffer from depressive symptoms.

*The cognitive theory of depression.* Cognitive theory, as developed by Beck and his colleagues (Beck, Rush, Shaw, & Emery, 1979), posits that at the core of depressive symptoms is cognitive dysfunction (Clark, Beck, & Alford, 1999). Moreover, these cognitive and social/motivational symptoms appear to be more common for those with dysthymia than other types of depression (Clark et al., 1999). Cognitive theory stresses that human information processing, which is at the center of the theory, influences all emotional and behavioral experiences. This approach is based on the assumption that
one's views of self, world, and future determine behavior. As Clark et al. (1999) state, "Subjective consciousness, the centrality of the self, and the proclivity for meaning construction are pivotal to the cognitive perspective" (p. 74). Cognitive organization, or the formation of schema, imposes meaning on our life circumstances, and so shapes our emotional and behavioral response (Clark et al, 1999).

For persons with depression, three dominant cognitive patterns emerge that revolve around self, world, and future (Beck, Rush, Shaw, & Emery, 1979), and such patterns are negatively biased (Beck et al., 1979; Clark et al., 1999). The negative schemas that dominate the processing patterns are more automatic, tightly interrelated, rigid, and impermeable than schema for those without depression (Clark et al., 1999). It is believed that these negative schemas are typically focused on the primal concerns for loss and deprivation. Consequences of such schema are represented by a) the perception of an actual or threatened loss of one's vital resources, b) an affective state of sadness, c) the perceived state of fatigue, d) a lack of motivation in the form of helplessness and no desire for pleasure, and e) a behavioral response of withdrawal or inactivity (Beck et al., 1979; Clark et al., 1999). Having automatic, rigid, and impermeable information processing as the first response to a life stressor may result in a response consisting of fear of loss, sadness, fatigue, lack of motivation, and/or withdrawal. These responses are believed to reinforce the negative cognitive phenomena that are characteristic of depression: negative automatic thoughts, cognitive processing errors resulting in negative evaluations/interpretations, and negative or pessimistic perspectives on life (Clark et al., 1999). To summarize, according to cognitive theory, persons with depressive symptoms hold negative biases about themselves, their world, and their future, which are relatively
automatic and rigid. These biases influence the way in which these individuals perceive and negatively react to events. The rigidity of negative cognitive processes addressed by cognitive theory may be related to an individual's ability to competently communicate with others. In particular, those with depression may lack cognitive flexibility, a central dimension of communication competence.

The Three Dimensions of Communication Competence

A fundamental theme of competent communication is that "competent interaction fulfills personal goals or communicative functions without violating contextual rules of appropriate conduct" (Cupach & Spitzberg, 1983, p.365). A comprehensive look at the communication competence (CC) literature clearly illustrates three dimensions. From most CC theories such as Wiemann's model (1977), Parks' control theory (1985), and Duran's adaptability approach (1992), emerge three general dimensions central to the process of achieving personal goals while being contextually appropriate: assertiveness, responsiveness, and flexibility. The concept of assertiveness deals with why we communicate and translates our motivations and desires into achieving our communicative goals. Responsiveness is conceptualized as being responsive to others' needs through awareness of the impact that our actions have on those around us, being perceptive of others and their needs, and having the skills for relating to others within a social context. Flexibility is conceptualized as how well we assess contexts and select behavior in accordance with our goals and contexts. (See Wiemann, 1977; Parks, 1985; Duran, 1992.) What follows is a review of how models of CC literature have developed and contributed to these three general themes: assertiveness, responsiveness, and
flexibility. Research by Wiemann (1977), in particular, illustrates how these three themes are represented in the CC literature.

Wiemann's model of CC (1977) consists of five dimensions: affiliation/support, social relaxation, empathy, behavioral flexibility, and interaction management. Affiliation/support consists of behaviors that are other-oriented in the sense of providing support for others. Social relaxation entails neither portraying nor provoking anxiety in others. Empathy allows for understanding another's perspective. Behavioral flexibility consists of adaptations that one makes within differing situations. Lastly, interaction management is concerned with the skills involved with establishing, maintaining, and directing the interaction without domination and within social and cultural norms.

The responsiveness theme of CC and being aware of other interactant(s) is represented through the affiliation/support, social relaxation, and empathy dimensions of Wiemann's (1977) model (see Table 1). Wiemann's (1977) behavioral flexibility dimension obviously relates to the ability to be flexible within a variety of social contexts—assessing the context and choosing the appropriate behavior accordingly. Interaction management is best described by one's assertiveness that is tempered by appropriate behavior (Wiemann). Wiemann's study concludes with, "the competent communicator is other-oriented, while at the same time maintaining the ability to accomplish his own interpersonal goals" (1977, p.211). In other words, a competent communicator is effective in achieving what he desires through his ability to be appropriately flexible in his assertiveness and in his responsiveness to others' needs.
Table 1

*Theories of Communication Competence and the Three Emergent Themes*

<table>
<thead>
<tr>
<th>Theory</th>
<th>Assertiveness</th>
<th>Responsiveness</th>
<th>Flexibility</th>
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<tr>
<td>Wiemann’s conversational competence model (1977)</td>
<td>interaction, management</td>
<td>affiliation/support, empath</td>
<td>behavioral flexibility, social relaxation</td>
</tr>
<tr>
<td>Parks’ control theory (1985)</td>
<td>control, foresight</td>
<td>social composure, social confirmation,</td>
<td>foresight</td>
</tr>
<tr>
<td>Duran’s theory of communicative adaptability (1992)</td>
<td>goals</td>
<td>disclosure, articulation, wit</td>
<td>diverse behavioral repertoire</td>
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</table>

Parks (1985), on the other hand, stresses three interdependent dimensions of communication competence: control, responsibility, and foresight. Control implies effectiveness in achieving desirable consequences (goals) of communication whereas, the concept of responsibility stresses that for one to be competent, one must be responsible for obtaining the more desirable consequences (Parks, 1985). Foresight is conceptualized as the ability to recognize that one’s goals are dependent upon each other (one goal may affect the ability to pursue other goals), and that the ability to pursue one’s goals depends upon others’ abilities to pursue their goals (Parks, 1985). Illustrated here, Parks’ themes of responsibility and control correspond to the assertiveness component of CC – one must be assertive in obtaining one’s desired consequences (see Table 1). Foresight is
analogous to both the responsiveness and flexibility dimensions of CC in that one’s goals are dependent upon others’ goals, and one needs to make accommodations in accordance with others’ goals while still working to achieve one’s own goals.

Recent developments in CC research involve an increased focus in the flexibility or adaptability theme of competence (Duran, 1992; Martin, & Rubin, 1994). Duran’s (1992) theory of communicative adaptability focuses on the ability to perceive interpersonal relationships and adapt one’s behaviors and goals accordingly. This theory delves deeper into perceptions of what constitutes appropriate behavior such as social composure, social confirmation, disclosure, articulation, and wit (Duran, 1992). Thus, adaptability not only involves modifying one’s behavior to fit the relationship, but it also involves being able to assess which goals and behaviors are appropriate and when they are appropriate in a relationship (see Table 1). As Duran’s theory explains, communicative adaptability or competence encompasses the need for one to be flexible in assessing when and where to be assertive enough to obtain one’s goals and responsive enough to others and their needs in order to maintain interpersonal relationships.

This dual focus on one’s goals and others’ needs as essential for CC is evidenced in recent research and theoretical extensions of Duran’s theory. Such research indicates a number of outcomes associated with CC, for example, having an issue-oriented conflict style, which requires a concern for the individual’s outcome and the other’s outcome, has a stronger association with competent communication than a singularly focused style in which the concern is for either the individual’s outcome or the other’s outcome (McKinney, Kelly, & Duran, 1997). This research demonstrates that the competent communicator not only has a dual focus on self and others, but also implies that such a
dual focus includes the ability to adapt to the context – be assertive to obtain one’s goals and/or responsive to others’ needs when it is appropriate to the situation. Thus, the literature implies that two of the skills specific to CC, assertiveness and responsiveness, are tempered by one’s ability to know when and how to use such skills or one’s flexibility with those skills based on the context of the communication event. In order to address the need to be flexible between assertiveness and responsiveness, a model of cognitive flexibility was developed that is centered on the notion that individuals must first be cognitively flexible to behave or communicate flexibly (Martin & Rubin, 1995).

The concept of cognitive flexibility is defined in three-fold: (a) awareness of alternative communication options for any given situation, (b) willingness to be flexible and to adapt communication behavior, and (c) self-efficacy or believing that one has the ability to adapt communication behavior (Martin & Rubin, 1995). All three must be present to be cognitively flexible—without awareness, willingness, or self-efficacy, cognitive flexibility is not possible. If a communicator possesses cognitive flexibility, then communication (behavioral) flexibility is possible. Thus, cognitive flexibility allows one to flex between assertiveness and responsiveness.

An integrated model of communication competence. Based on the literature discussed above and, in particular, the work of Martin and Rubin (1995), it is proposed that a complete conceptualization of CC integrates the three dimensions that emerge as central across approaches: assertiveness, responsiveness, and cognitive flexibility. It has been argued that for one to achieve personal communicative goals, you would need to be able to assert such goals. Similarly, for one to be responsive, one would need to recognize and respond to others’ needs. Lastly, the ability and motivation to adapt assertive and/or
responsive behavior to a context should be tempered by cognitive flexibility. Thus, in the integrated model of CC, a competent communicator is one who is highly assertive, responsive, and cognitively flexible.

These three dimensions of communication competence are linked to positive outcomes: assertiveness and responsiveness are positively related to trust (Wooten & McCroskey, 1996) and procedural leadership in small groups (Bacon & Severson, 1986); cognitive flexibility is positively related to willingness to deal with conflict (Martin, Anderson, & Thweat, 1998). Moreover, competent communicators tend to have more satisfying social interactions and relationships than those who are not competent (Spitzberg, 1991). For example, effective communication can be the means for resolving issues of difference where consensus is not met, thus increasing relationship satisfaction and improving the quality of the relationship (Feeney, Noller, & Ward, 1997).

Interactions leading to improved quality of interpersonal relationships, although undoubtedly important for many groups, may be particularly important for persons with depression.

Social Support Theories and the Importance of Interpersonal Relationships for Persons with Depressive Symptoms

Just as competent communication is related to quality interpersonal relationships (Spitzberg, 1991), quality interpersonal relationships, specifically close relationships, lay the groundwork for social support (Albrecht & Adelman, 1987). Over the past two decades, research on social support has been coupled with research on interpersonal relationships. This literature emphasizes the role that social support, especially the support found in common, every-day interpersonal relationships, plays in the well being
of individuals. As Leatham and Duck explain, "While relationships are originally created and maintained socially, the supportive transactions within personal relationships exert their effects psychologically" (1990, p. 10).

Social support is found in the reciprocal nature of interpersonal relationships, and it can act directly on psychological distress and act as a buffer for it (Reifman & Michael, 1995). The types of effective social support often sought and provided are emotional (e.g., comfort), instrumental (e.g., financial aid), informational (e.g., advice), networking (e.g., support group), and companionship (e.g., being present), all of which can be received from interpersonal relationships (Barbour, 2003). Within interpersonal relationships, an individual must be able to effectively seek support as well as maintain interpersonal relationships conducive to providing social support in order to feel the effects of that support on their well being (Eckenrode & Wethington, 1990). Direct solicitation of support is often done through help seeking behaviors, which may take the form of overt requests for support as well as indirect requests made through self-disclosure of problems (Eckenrode & Wethington, 1990). Unsolicited support, however, is typically provided when the supporter assesses the need to provide it based on non-verbal cues of the individual in need or information gained from outside sources (Eckenrode & Wethington, 1990). Relationships that provide social support need to be maintained in a manner such that the providers of support are able and willing to provide it; but not all individuals in interpersonal relationships may be optimal support providers (Fry & Barker, 2002).

It appears that who is considered the most effective support provider may vary across groups (Fry & Barker, 2002). Family members, friends, or others in the social
network may provide support that is considered more or less satisfying, dependent on the characteristics of the supported person. For example, persons with depression seeking inpatient treatment, often thought to have a general negative bias towards all social support providers, were found to differ from those without depression in who they perceived as supportive as opposed to having a stronger negative bias towards all support providers than persons without depression (Lakey, Drew, & Sirl, 1999). This research indicates that persons should seek and maintain interpersonal relationships that can meet their specific social support needs, and such relationships may differ depending on the circumstances of the individual.

People do not, however, spontaneously find themselves in interpersonal relationships with others that provide social support they need. As Berg and Piner (1990) indicate in their review of the literature on the importance of social relationships, well-being is dependent upon having social relationships. More exposure to others leads to increases in social networks and more opportunity to cultivate interpersonal relationships, which are related to a greater variety of social support (Berg & Piner, 1990). For example, depressed individuals that have larger and more satisfying social support systems also have lower rates of depression than depressed individuals that have smaller and less satisfying social support systems (Query, Perry, & Flint, 1992). Likewise, social contact with others is positively related to social support, and the social support as perceived by the participants from those contacts is, in turn, negatively related to depression (Peirce, Frone, Russell, Cooper, & Mudar, 2000). Shaw and Gant (2002) found that, over time, chat room users’ showed an increase in satisfaction with the support provided during Internet chats and showed a decrease in depression. From these
studies, it is evident that a wider exposure to relationships as well as longer exposure is positively related to social support and negatively related to depression. Not only may an increase in the amount of opportunity for interpersonal relationships be related to social support, but these studies also show it to be related to an increase in the quality of relationships that provide satisfying social support.

Unfortunately, the challenge for one who suffers from depression is the difficulty that it causes in seeking, creating, and cultivating close relationships that typically provide social support. In fact, depression is significantly associated with a reduction in social support provided by spouses when measured over time (Wade & Kendler, 2000). It is possible that persons with depression sabotage their interpersonal relationships through withdrawal, maladaptive communication skills such as neediness and inability to ask for help, and poor choice in relationship counterparts, thus putting social support out of reach and further aggravating the depression (Barbour, 2003). Social support within interpersonal relationships can be elusive to those with depression because of the interpersonal difficulties involved with experiencing depression.

Interactional perspectives on depression (e.g., Coyne, Burchill, & Stiles, 1990) focus on the role that interpersonal interactions have in depression. These perspectives posit that for those who suffer from depression, it not only influences the types of interactions in which they participate, but their experience of depression is influenced by the interactions as well (Coyne et al, 1990). Like all persons, persons with depression affect and are affected by their interpersonal interactions with others. Persons' depression may increase or decrease based on the responses they experience that are directly due to their behavior, and their levels of depression can even change based on the responses
they experience that are not directly precipitated by their behavior (Coyne et al., 1990). The interactional perspective stresses that there is an interpersonal component to the phenomenon of depression and this interpersonal component is reciprocal in nature. Not only can persons with depression be affected by existing interpersonal relationships, but they can also affect those relationships and any potential relationships. Specifically, people who experience depression may face particular challenges in establishing and maintaining quality interpersonal relationships.

*Interpersonal Difficulties for Persons with Depression*

It is clear from the existing literature of depression that individuals with depression may have interpersonal difficulties that may be related to both social skills deficits (Segrin, 1992) and negative cognitive biases (Beck et al., 1979; Clark et al., 1999). For example, interpersonal difficulties can be illustrated in small groups, where persons with depression were perceived by others as less socially skillful than others without depressive symptoms (Youngren & Lewinsohn, 1980). In addition to observations by others, support was found through self-report measures that there is a link between depression and social skills within dyads (Youngren & Lewinsohn, 1980). In terms of interpersonal difficulties, depression reliably elicits rejection from others (Segrin & Dillard, 1992). However, in their meta-analysis Segrin & Dillard (1992) caution that alone, the (negative) mood associated with depression is not sufficient to elicit such rejection but that other interpersonal difficulties may contribute to rejection. Other interpersonal difficulties may include nonverbal processing difficulties, in which youth suffering from depression could not correctly identify nonverbal cues (Nowicki & Carton, 1997). Not only are children with nonverbal processing difficulties rated by peers
and teachers as being socially incompetent, but the children themselves agree with that assessment and, yet, don’t understand why (Nowicki & Carton, 1997). Depressed adults also made errors in decoding facial expressions and vocal tones which were related to less relationship well-being, even after controlling for depression (Carton, Kessler, and Pape, & 1999). Likewise, Segrin (1992) found a partial social skills deficit in depressed individuals in the form of excessive social anxiety, low social expressivity and behavioral involvement, and communication apprehension. Such behaviors or interpersonal difficulties would undoubtedly have a negative effect on interpersonal relationships and may decrease any social support that such relationships could possibly provide for the person with depression.

Importantly, some research on depression and communication skills has found that depressed persons may not be entirely lacking in social skills. In a study assessing interpersonal skills (Shean & Heefner, 1995), eye contact and freely offering information about self, two of the six interpersonal skills addressed, are significantly and negatively related to rates of depression; however, these relationships only accounted for approximately 10% of the variance on these skills between depressed and non-depressed persons. Thus, individuals with depression may not be entirely lacking in social skills, rather, depressed persons rely on certain patterns of interpersonal relatedness – such as maintaining emotional distance – that result in less rewarding interactions (Shean & Heefner, 1995). Research on depression and verbal behavior showed no observable difference between non-depressed individuals and depressed individuals in speech productivity (amount of speaking time in interactions) (Segrin & Flora, 1998). When conversing with a friend, depressed persons used more negative statements and, counter
to expected, more partner-focused statements than non-depressed persons (Segrin & Flora, 1998). For persons with depression, this may be due to a lack of self-esteem (negative statements) as well as the need to avoid talking about the self (partner-focused statements). Such findings imply that, whatever the reason, depressed individuals may sabotage their intimate relationships (Segrin & Flora, 1998)—the most important relationships for a person with depression, especially with regards to social support. In a more recent study of dyadic interaction, depressed participants rated themselves and others as having significantly lower social skills than non-depressed participants’ ratings, regardless of whether the other was depressed or not (Gable & Shean, 2000).

Interpersonal difficulties in terms of skills deficits, however, are not the only perspective to consider when looking at the relationship between social support and depression. A meta-analytical review of social support literature reveals that negative self-evaluation and other moderating variables (e.g., method of assessment, level of depression) influence the relationship between social skills deficits and depression (Segrin, 1990). The analysis also revealed that self-reports related to social skills deficits were more strongly related to depression than other-reports of social skills deficits (Segrin, 1990). These results indicate a negative bias influencing the relationship between social skills deficits and depression. In addition, the influence of cognitive processes is evident in higher self-reported skills deficits without an interaction preceding the measurement, as opposed to self-reported skills deficits with a preceding interaction (Segrin, 1990). Without a recent interaction from which to gauge one’s own social skills, persons with depression assess such skills harsher than when judging those skills based on a recent interaction. As this meta-analysis indicates, cognitive processes of those with
depression play a role in how they see themselves and others. Such negative cognitive biases must also contribute to the interpersonal difficulties experienced by these individuals. Perhaps negative cognitions can shed light on why persons with depression sabotage their interpersonal relationships; why they withdraw, why they can’t ask for help, and why they make poor choices in relationship counterparts – all putting social support out of reach and further aggravating the depression (Barbour, 2003).

Rationale and Hypotheses

The literature on social support and its relationship to depression, as well as the cognitive theory of depression indicate that persons with depression display some social skills deficits, but they also have negative cognitive biases. Skills deficits and negative cognitive biases both appear related to interpersonal difficulties. Such interpersonal difficulties present a barrier to maintaining quality interpersonal relationships – the very source of social support (Barbour, 2003). In other words, individuals with depression that have these interpersonal difficulties may indicate that they perceive less satisfaction in their social lives and interpersonal relationships, thus making it more difficult to directly solicit support and receive unsolicited support. As previous research indicates, interpersonal difficulties caused by skills deficits are positively related to depression, and such difficulties, when coupled with depression, are undoubtedly negatively related to social support.

As Leatham and Duck stress, interpersonal relationships and social support are manifested through communication (1990), effective or competent communication has the possibility to increase quality interpersonal relationships and social support for individuals that suffer from depression. The assertiveness and responsiveness dimensions
of CC, as tempered by cognitive flexibility, would enable one to make assertions for directly soliciting social support while being responsive enough to maintain interpersonal relationships in an appropriate manner. Unfortunately, this is not an easy task – for many that suffer from depression, interpersonal relationships are problematic due to interpersonal difficulties. The following section provides a conceptualization of CC, which encompasses the skills necessary for social support, as well as the cognitions essential for managing such skills. This conceptualization allows for a more comprehensive examination of the relationship between CC and depression by accounting for the factors that influence interpersonal difficulties of depressed individuals: negative cognitive biases and skills deficits.

The proposed model of CC (See Figure 1.) addresses such skills deficits and negative cognitions in that it consists of the assertiveness and responsiveness skills necessary for maintaining interpersonal relationships crucial for social support, as well as the cognitive flexibility that is essential for managing such skills. These three dimensions of CC provide this study with the framework necessary to assess a more comprehensive relationship between depression, CC, and social support than currently exists.

*Communication competence and the concept of self-monitoring.* Although this integrated model of communication competence may seem as though it is a parallel concept to self-monitoring, conceptually, it is somewhat different. To illustrate similarities, self-monitoring is commonly thought of in terms of high self-monitors and low self-monitors. High self-monitors adapt their image of self to appropriately fit the context they are in; low self-monitors find it more important to present a consistent true image of self (Snyder, 1987).
In addition, high self-monitors strategically create interactions or communicate in a manner that are appropriate to the context, and low self-monitors are equally strategic in their communication in order to create a context that is conducive to one's own beliefs (Snyder, 1987). Similarities could be drawn between assertiveness, responsiveness and self-monitoring. For example, low-self monitors seem to behave similar to those that have highly assertive, where both are concerned with the needs of the self. Likewise, high self-monitors seem to behave similar to those that have high responsiveness, where both are highly aware of and adapt appropriately social contexts. In addition, high self-monitoring may be similar to cognitively flexibility in that both require the ability to adapt or be flexible. However, here is where the similarities between CC and self-monitoring end.

Self-monitoring is conceptualized as one dimension that is concerned with the presentation of self on a continuum; either adaptation of the self-image to the situation (high self-monitor) on one end or presentation of the true self (low self-monitor) on the other end. Assertiveness and responsiveness, on the other hand, have been found to be
unrelated (Richmond & Martin, 1998) and therefore, tapping into two different dimensions of CC. In terms of the cognitive flexibility component of communication competence as it relates to self-monitoring, if someone has low cognitive flexibility, his/her awareness, willingness, and self-efficacy is low (Martin & Rubin, 1995). This is not the case for low self-monitors whose choice to reveal “true selves” is motivationally driven, not from a lack of awareness or ability to be flexible (Snyder, 1987). Thus, the model of CC represented by the three dimensions of assertiveness, responsiveness and cognitive flexibility is conceptually distinct from self-monitoring. It is this conceptualization of CC that will be used to test the relationship between depression and social support.

To summarize, one of the critical ways in which CC can affect the support seeking and receiving process for depressed individuals is through their interpersonal relationships. Within interpersonal relationships, an individual must have the ability to effectively seek support. Assertiveness skills provide one with the means to seek out interpersonal relationships and to solicit social support. On the other hand, an individual must also have the ability to maintain interpersonal relationships conducive to providing social support. Responsiveness skills provide one with the means to adequately respond to others and their needs in order to develop and maintain the quality interpersonal relationships that provide social support. Additionally, an individual must know when to, must want to, and must believe that one can communicate assertively and responsively to gain and maintain such interpersonal relationships. Cognitive flexibility provides the cognitive processes that allow one to do just this: to recognize, and choose when it is appropriate to be assertive or responsive within interpersonal relationships. Thus, the use
of such cognitions and behaviors establish the foundation for quality relationships conducive to providing social support.

The cognitive theory of depression (Clark et al., 1999) serves as additional support for the cognitive dimension of CC, cognitive flexibility. Recalling that cognitive flexibility consists of awareness, willingness, and belief (self-efficacy) in communicating flexibly (Martin & Rubin, 1995), negative cognitive biases specified by the cognitive theory of depression have the potential to adversely affect cognitive flexibility. For example, the automatic nature of such negative cognitive biases could curb awareness of viable communicative options. Depressed persons may not be aware of options because they are not open to perceiving them, and if they are aware of options, all options may look bad. In addition, lack of motivation and helplessness could reduce cognitive flexibility in that a person with depression isn’t willing to communicate flexibly, nor would this person believe that it is even possible to communicating flexibly. (See Figure 1.) Therefore, it is first predicted that there will be a negative relationship between depression and cognitive flexibility.

H1: Depression will be negatively related to cognitive flexibility.

If a depressed individual has less cognitive flexibility, deficiencies would also occur in the other two CC components, assertiveness and responsiveness, since these two skills are tempered by one’s cognitive flexibility. As previously stated, cognitive flexibility provides the cognitive processes that allow one to do just this: to recognize, and choose when it is appropriate to be assertive or responsive within interpersonal relationships. Thus, it is predicted that there will be positive relationships between rates of cognitive flexibility, assertiveness, and responsiveness.
H2: Cognitive flexibility will be positively related to assertiveness.

H3: Cognitive flexibility will be positively related to responsiveness.

Interpersonal difficulties encompassed by a negative bias, such as low cognitive flexibility, and skills deficits, such as low assertiveness and responsiveness, should prove problematic for the quality of a depressed individual’s interpersonal relationships (Coyne et al, 1990). Thus, specific interpersonal relationships with friends, family, and a partner – relationships that typically provide satisfaction – should provide less satisfaction for those that suffer from depressive symptoms. This would be consistent with the conclusion that positive well-being is related to having quality relationships (Berg & Piner, 1990). Therefore, it is predicted that there will be a positive correlation between rates of assertiveness, responsiveness, and quality interpersonal relationships.

H4: Assertiveness will be positively related to the quality of interpersonal relationships.

H5: Responsiveness will be positively related to the quality of interpersonal relationships.

As previously discussed, quality interpersonal relationships are essential to soliciting and receiving social support. Without quality interpersonal relationships with friends, family, and a partner, social support and the perception of social support from friends and family would remain elusive to individuals with depressive symptoms. Therefore, it is also predicted that there will be a positive correlation between quality interpersonal relationships and social support.

H6: Quality of interpersonal relationships will be positively related with perceived social support.
CHAPTER III

Method

Overview

In the previous section, communication competence theories and models were explored and ultimately refined into one model that addresses the needs of persons with depression seeking social support. The following provides the method used to test the relationship between depression, communication competence, interpersonal relationships, and social support within interpersonal relationships.

Participants

The participant pool consisted of adults waiting to serve jury duty in Allegan and/or Ottawa County. This method for obtaining a sample was used due to the nature of jury selection, specifically that it is a random sample of adults (18 years of age and older) from a specified sampling frame within a community. While the jury selection process is random, it should be noted, that the sampling frame from which jurors are selected is based on a specific set of criteria. The Ottawa County process for jury selection is outlined as follows:

Individuals called for jury duty are randomly selected using driver license and personal identification cardholder lists provided by the Secretary of State. Individuals who are exempt from serving on a jury are: 1) individuals who are not citizens of the United States; 2) individuals who no longer live in the city or county which issued the summons; 3) individuals who do not speak or understand the English language; 4) individuals with a physical or mental disability that would prevent them
from serving; 5) individuals over the age of 70 who do not want to serve on a jury; 6) individuals who have served as a juror during the past 12 months; and 7) individuals who have been convicted of a felony (Michigan Supreme Courts, 2003).

Based on the above selection process and exemptions, the current study automatically did not include non-citizens, non-English speaking individuals, convicted felons, those with physical or mental disabilities that prevent service, and individuals over 70 years of age that chose not to participate.

The use of jury pools for participant selection was chosen based on a previous study (Segrin, 2003) of social support and psycho-social problems that also employed this method of participant selection. Segrin was able to obtain (1) a sample in which age was normally distributed, (2) a response rate estimated at 80-90%, and (3) enough variance in the variables of social support and depression to examine correlation between these variables.

**Power analysis.** In order to determine the number of participants needed, a power analysis was conducted. A power analysis addresses the issue of a type II error – the error made by dismissing the research hypothesis when it holds true (Kraemer & Thiemann, 1987). With a significance level set at .05 for a one-tailed hypothesis, the critical effect size selected of \( r = .34 \), and a recommended acceptable power level for Pearson’s correlation set at .80, the minimum number of participants needed for this study was calculated to be 52. For a higher power level of .90, the minimum number of participants needed is 72.
Of the 90 questionnaires distributed, 73 were returned with all of the questionnaire or portions of the questionnaire completed; resulting in a response rate of 81%. There were a total of 72 participants. Five participants chose not to answer any demographic questions. Of the remaining 67 participants, 55% were females. The age of participants ranged from 20 to 71 years ($M = 46.8; SD = 11.8$). 66 participants identified themselves as Caucasian and one as Hispanic. Three participants identified as being diagnosed with a depressive order. Two of those diagnosed with dysthymia were currently being treated with medication. None of the participants reported using other treatments for depression.

**Procedure**

The study was conducted as participants waited to serve jury duty. Prior to administering the questionnaire, participants were instructed that this was a study looking at communication variables, perceived social support, and mental well-being, and that participation was completely voluntary. Participants were asked to read the consent form and retain the sheet with contact information if they desired to do so. (See Appendix A for the full consent form.) To ensure anonymity, participants were instructed not to provide any identifying information on the questionnaires. In addition, questionnaires were distributed and collected in envelopes.

Instructions on the questionnaire asked participants to focus on close personal relationships with family, intimate significant others (partners), and friends. They were instructed not to consider casual/public relationships. Family was defined as those within an immediate family (parents, siblings, and/or children).
The questionnaire was presented to the participants in two formats.\(^3\) In both formats, basic demographic information (See Appendix B.) was collected at the end of the questionnaire as well as indication of whether the participant had been recently diagnosed with any depressive disorders and whether or not he or she was currently taking any medications or receiving any therapy for depression. Upon completion of the questionnaire, all participants were thanked for their participation, debriefed about the depression component of the study, provided with information about depression (See Appendix C for Debriefing Statement.) and how to seek help via various organizations. As a gesture of gratitude for their participation, a small token of appreciation (candy, chocolate, or chewing gum) was made available for those that completed the survey.

**Measurement**

*Assertiveness and responsiveness.* The Assertiveness-Responsiveness Measure consists of 20 words or phrases (10 assertive and 10 responsive in alphabetical presentation) describing assertive and responsive qualities (Richmond & McCroskey, 1990). Participants were asked to respond to these items, for example “defends one’s beliefs”, on a Likert Scale, a 5-step continuum from 5 (*strongly agree*) to 1 (*strongly disagree*). Previous research indicates internal consistency reliability for the assertiveness portion of the measure ranges from .88 to .90 and responsiveness portion of the measure ranges from .92 to .93 (Richmond & McCroskey, 1990; Martin & Anderson, 1998). In addition, assertiveness and responsiveness were uncorrelated in previous research (Richmond & McCroskey, 1990).

*Cognitive flexibility.* The Cognitive Flexibility Scale consists of 12 statements in which participants respond on a 6-point Likert-type scale where 6 represented *strongly*
agree and 1 represented strongly disagree (Martin & Rubin, 1995). A sample statement is, “I seldom have choices when deciding how to behave” (reverse scored). In previous research the reliability of this scale ranges from .72 to .83 (Martin & Anderson, 1998; Martin & Rubin, 1995) and evidence has been presented for concurrent and construct validity of the scale. (Martin & Anderson, 1998.) This scale was modified to have a 5-point Likert-type response format in order to maintain consistency with other response formats in the questionnaire.

Symptoms of depression. The original version of Beck’s Depression Inventory consists of 21 categories of symptoms and attitudes of depression (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). Within each category, 4-5 self-evaluative statements regarding depressive symptoms are presented (e.g., “I blame myself for everything bad that happens”). These statements are subsequently rated from neutral to maximal severity, being represented by numerical values ranging from 0 (neutral) to 3 (maximal severity). Participants are asked to select the self-evaluative statement that best describes their current state (Beck et al, 1961). The revised version of this inventory (Beck, 1979) removed redundant statements and double negatives (Beck, Steer, & Garbin, 1988) leaving each category of depressive symptom with 4 levels of severity to choose from. The Pearson product-moment correlation between the two versions was found to be .94 which suggests that the revised version can be exchanged for the original version (Beck et al, 1988). In accordance with the DMS-VI (APA, 2000), participants will be asked to reflect on the past two weeks instead of one week, as specified by the revised version of the BDI that was copyrighted in 1987.
An evaluation of 25 years of depression studies provides reliability and validity of both versions of the Beck Depression Inventory (Beck et al, 1988). Reliability, in terms of internal consistency and stability are as follows: internal consistency coefficient alphas range from 0.73 to 0.92 for non-psychiatric samples where the mean alpha was 0.81, and stability correlation coefficients ranged from 0.60 to 0.83. Beck et al. (1988) also provide evidence for concurrent and construct validity of the measure.

*Quality of interpersonal relationships.* The Relationship Assessment Scale (the RAS; Hendrick, 1988) was modified in order to assess satisfaction with friendships and familial relationships, as well as relationships with a spouse, partner, or intimate significant other. The original scale consists of 7 items that assess satisfaction with one intimate partner. Items were reworded to direct participants to answer for close friends, for family members, and a spouse, partner, or intimate significant other. Additionally, items were reworded from questions to statements and a Likert-type response scale was provided to assess agreement with each statement. Thus, the modified scale consisted of a total of 7 items with 3 targets for each item, creating a total of 21 responses [e.g., “My (friendships/relationships with family members/relationship with my spouse, partner, or intimate significant other) have/has met my expectations”]. The original RAS exhibited a reliability coefficient of .87 in previous research (Hendricks, 1988). See Appendix D for the modified items, scale, and instructions.

*Perceived social support.* The Perceived Social Support for Friends (PSS-Fr) and Perceived Social Support for Family (PSS-Fa) scales (Procidano & Heller, 1983) were employed to assess social support from close friends and family members. A modified version of these scales was used to assess social support from a spouse, partner, or
intimate significant other. There are 20 statements for each type of relationship that ask participants to select their response: Yes, No, or Don’t Know. For example, “My friends give me the moral support I need.” The response that indicates social support was scored as a +1. The alternate response received a zero, and the Don’t Know response was not scored. Social support was measured as the total score for each type of relationship with 20 being the highest possible social support for that type of relationship. In a study by Procidano and Heller (1983) the Cronbach’s alpha was .88 for PSS-Fr and .90 for PSS-Fa.

Data Analysis

Measurement analyses. Confirmatory factor analysis was used to test the dimensionality of the scales for the Cognitive Flexibility Scale, the RAS for friends, and the Perceived Social Support for Friends scales because of a lack of evidence for the construct validity of these scales. In addition, it was particularly important to determine whether or not the Cognitive Flexibility Scale was unidimensional. Previous research (Martin & Anderson, 1998; Martin & Rubin, 1995) has treated it as such, but the conceptualization of cognitive flexibility indicates it may be a multi-dimensional construct. Additionally, it was necessary to establish that the parallelism of the RAS and Perceived Social Support scales given that review of the items reveals some conceptual overlap. In addition, basic measurement analysis was conducted for each scale. This included assessment of item contribution to each scale, examination of correlations among scaled items, and calculation of standardized item alpha.

Preliminary analysis. Univariate descriptive statistics were examined for each variable, including means and standard deviations. Each variable was assessed by
aggregate scores across all participants. The variables for each participant were assessed
in the following manner: depression via a total BDI-II score, cognitive flexibility via a
total Cognitive Flexibility Scale score, assertiveness via a total assertiveness score of the
Assertiveness-Responsiveness Measure, responsiveness via a total responsiveness score
of the Assertiveness-Responsiveness Measure, quality of interpersonal relationships
(relational satisfaction) via a total score from the revised Relationship Assessment Scale,
perceived social support via a total score from the Perceived Social Support scales.
Boxplots were assessed to look for and possibly remove any outlier scores for all
variables.

Tests of Hypotheses

Bivariate correlations were performed to test each hypothesis for the predicted
linear relationship between variables. Prior to conducting these tests, a bivariate scatter
plot for each hypothesis was assessed to determine whether a linear relationship exists
between two variables. In addition, a curve fit analysis was performed if a linear
relationship was not evident. Hypothesis one predicts a negative relationship between
depression and cognitive flexibility. Therefore it is predicted that there will be a negative
correlation coefficient for this hypothesis. All other hypotheses predict positive
relationships between variables, therefore it is predicted that there will be positive
correlation coefficients for these hypotheses.

Regression analysis. After each relationship is addressed according to the
hypotheses, multiple regression analysis was performed with social support as the
dependent variable and all other variables as independent variables. Since this is a cross-
sectional assessment as opposed to longitudinal, time is not a variable included in this
study. Further, the independent variables were measured rather than controlled. Therefore, it is not possible to determine causality.
CHAPTER IV

Results

Measurement Analyses

Confirmatory factor analysis. Prior to testing the hypotheses, an evaluation of the dimensionality of three scales used in this study was performed through a confirmatory factor analysis. According to Hunter and Gerbing (1982), confirmatory factor analysis employs tests of internal consistency and parallelism to evaluate an a priori specified measurement model. Tests of internal consistency were conducted by assessing the pattern and size of errors between the obtained and predicted correlations between items in a factor. A priori criterion for and the magnitude of the errors was set at $|e| < .20$ (Hunter & Gerbing, 1982). Items that were deemed problematic per this criterion were dropped prior to conducting tests for parallelism.

Testing for parallelism allows one to assess the external consistency of a factor (or unidimensional scale) based on how it relates to other factors (or unidimensional scales in this case) using the same a priori criteria for errors as internal consistency (Hunter & Gerbing, 1982). Again, if an item was problematic, it was removed from the analyses. The three scales evaluated were the Cognitive Flexibility Scale, the modified Relational Assessment Scale, and the Perceived Social Support scale.

Based on the results of tests for internal consistency, of the 12 original items, one reverse scored item was removed from the Cognitive Flexibility Scale, “I feel like I never get to make decisions.” Next, tests of parallelism were conducted that indicated that all items for this scale were parallel to items on other scales. Internal consistency tests were also conducted for the Relational Assessment Scale. Large errors between predicted and
obtained inter-item correlations resulted in two items being removed from the scale. For each version of the Relational Assessment Scale, the item “I often wish I didn’t have most of my (friendships/family relationships)” and “I often wish I didn’t have my relationship with my partner” was dropped, resulting in a six-item unidimensional RAS for each target. The RAS was also tested for parallelism in which results indicated one item was problematic “I care for (all my friends/all my family/my partner).” This item was subsequently removed from each version of the scale.

Internal consistency for the Perceived Social Support for Friends scale indicated that for each version of the perceived social support scale, the item “I think that my (friends/family/partner) feel I’m good at helping them solve their problems” was dropped, resulting in a 19-item unidimensional scale. Tests for parallelism showed that these scales were parallel to the other scales.

Scale reliability. Once the confirmatory factor analyses were completed, alpha reliabilities were calculated for each scale. All scales exhibited acceptable levels of reliability with Cronbach’s alphas greater than .70. See Table 2 for reliability statistics, means, and standard deviations for all scales.

Univariate Descriptive Statistics

Univariate descriptive statistics for each variable were assessed for outliers and normality. Based on the descriptive statistics and histograms, normality was assessed for all continuous variables. Assertiveness and age were distributed normally, while other continuous variables deviated from normality.
Table 2

*Cronbach's Alpha, Mean, and Standard Deviation for All Scales*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Scale M (SD)</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beck Depression Inventory</td>
<td>5.87 (5.15)</td>
<td>.85</td>
</tr>
<tr>
<td>Cognitive Flexibility</td>
<td>42.58 (4.81)</td>
<td>.79</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>34.36 (6.79)</td>
<td>.89</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>41.54 (5.27)</td>
<td>.91</td>
</tr>
<tr>
<td>Relational Satisfaction for Friends</td>
<td>18.54 (2.90)</td>
<td>.79</td>
</tr>
<tr>
<td>Relational Satisfaction for Family</td>
<td>18.75 (3.93)</td>
<td>.91</td>
</tr>
<tr>
<td>Relational Satisfaction for Partner</td>
<td>19.84 (4.26)</td>
<td>.92</td>
</tr>
<tr>
<td>Perceived Social Support with Friends</td>
<td>13.75 (4.65)</td>
<td>.88</td>
</tr>
<tr>
<td>Perceived Social Support with Family</td>
<td>14.80 (4.84)</td>
<td>.91</td>
</tr>
<tr>
<td>Perceived Social Support with Partner</td>
<td>15.16 (4.97)</td>
<td>.93</td>
</tr>
</tbody>
</table>

*Assessment for Linear Relationships*

Prior to conducting test of the hypotheses, bivariate scatter plots were assessed to determine linear relationships. Review of the scatter plots indicated that the relationships between each of the variables in the hypothesis appear to be linear, with one exception which will be discussed below.

*Bivariate Correlations for Hypotheses*

One-tailed correlations were computed to test the hypothesized relationships.

Hypothesis one predicted a negative relationship between depression scores and cognitive flexibility scores. The data were consistent with this hypothesis with a Pearson's $r$ (69) = -.222; $p = .046; r^2 = .049$. Hypothesis two predicted a positive relationship between
cognitive flexibility scores and assertiveness scores. The data were consistent with the predicted relationship with a Pearson's $r (68) = .399; p = .001; r^2 = .159$. Hypothesis three predicted a positive relationship between cognitive flexibility scores and responsiveness scores. The results of the correlation indicate the data were consistent with this hypothesis with a Pearson's $r (68) = .220; p = .033; r^2 = .048$.

Hypothesis four predicted a positive relationship between assertiveness scores and relational satisfaction scores. The correlations indicate that the data were only consistent with the hypothesis for the relationship between assertiveness and relational satisfaction for friends with a Pearson’s $r (67) = .347; p = .002; r^2 = .120$. The correlations for family $[r(65) = .017; p = .445]$ and partners $[r (62) = .030; p = .406]$ were not significant.

Hypothesis five predicted a positive relationship between responsiveness scores and relational satisfaction scores. The correlations indicate that the data were consistent with this hypothesis for the relationship between responsiveness and relational satisfaction for family with a Pearson’s $r (65) = .282; p = .010; r^2 = .079$. The results of the correlations for friends $[r (67) = .104; p = .197]$ and partners $[r (62) = .100; p = .217]$ were not significant. Additional analyses indicated that that scores for responsiveness and satisfaction with partners was not linear. Curve-fit analysis was conducted between responsiveness scores and relational satisfaction with partners. The original linear relationship was not significant $[r (62) = .100; p=.217; r^2 = .010]$, whereas a quadratic relationship was significant ($df = 60, p = .017, r^2 = .127$). An incremental F-test was also used to determine if the quadratic relationship was significantly different than the linear relationship. The calculated $F (8.856)$ was larger than the critical value of $F (7.17)$, therefore the null of linearity was rejected in favor of the quadratic relationship. See
Figure 2. Curvilinear Relationship between Responsiveness and Relational Satisfaction for Partners.

Figure 2 for a graphical representation of this curvilinear relationship. See Appendix E for hand calculations of the incremental F-test.

Lastly, hypothesis six predicted a positive relationship between relational satisfaction scores and perceived social support scores. The correlations indicate the data were consistent with the hypothesis for each type of relationship, friends, family, and partner. For friends, the Pearson’s $r (68) = .632; p = .001; r^2 = .399$. For family, the Pearson’s $r (66) = .692; p = .001, r^2 = .478$. For partners, the Pearson’s $r (63) = .780; p =$
.001; \( r^2 = .608 \). Results showing Pearson's \( r, r^2 \), and significance for each hypothesis can be found in Table 3. In addition to the above tested hypotheses, a total correlation matrix was created testing each continuous variable on all other continuous variables. These results are located in Table 4.

Regression Model Results

In order to examine the effects of each of the variables presented in Figure 1 on the dependent variable of perceived social support, separate multiple regression analyses were conducted for each type of social support (friends, family, partners). Prior to these analyses, the assumptions of regression were tested including normality, linearity, and homoskedasticity of residuals and the linearity of the relationships between each independent and dependent variable.

Perceived social support from friends. In order to test for the relative effects of each independent variables, scores on perceived social support from friends were regressed onto scores for depression, cognitive flexibility, assertiveness, responsiveness, and relational satisfaction (with friends, family, and partner). Positively and significantly related to perceived social support from friends are relational satisfaction with friends \( (\beta = .606, p=.001) \), responsiveness \( (\beta = .266, p=.008) \). Also of note, a negative relationship between perceived social support from friends and relational satisfaction with family \( (\beta = -.193, p=.060) \) approached significance. The model accounted for approximately 62% \( (r = .786, r^2 = .618) \) of the variance in perceived social support from friends. See Table 5 for a table of regression results.
Table 3

**Correlations for each Hypothesis**

<table>
<thead>
<tr>
<th>Hypothesis tested</th>
<th>$r$</th>
<th>$r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression and cognitive flexibility (H1)</td>
<td>-0.222*</td>
<td>0.049</td>
</tr>
<tr>
<td>Cognitive flexibility and assertiveness (H2)</td>
<td>0.399**</td>
<td>0.159</td>
</tr>
<tr>
<td>Cognitive flexibility and responsiveness (H3)</td>
<td>0.220*</td>
<td>0.048</td>
</tr>
<tr>
<td>Assertiveness and relational satisfaction for friends (H4)</td>
<td>0.347**</td>
<td>0.120</td>
</tr>
<tr>
<td>Assertiveness and relational satisfaction for family (H4)</td>
<td>0.017</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Assertiveness and relational satisfaction for partners (H4)</td>
<td>0.030</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Responsiveness and relational satisfaction for friends (H5)</td>
<td>0.104</td>
<td>0.011</td>
</tr>
<tr>
<td>Responsiveness and relational satisfaction for family (H5)</td>
<td>0.282*</td>
<td>0.079</td>
</tr>
<tr>
<td>Responsiveness and relational satisfaction for partners (H5)</td>
<td>0.100</td>
<td>0.010</td>
</tr>
<tr>
<td>Relational satisfaction and perceived social support for friends (H6)</td>
<td>0.632**</td>
<td>0.399</td>
</tr>
<tr>
<td>Relational satisfaction and perceived social support for family (H6)</td>
<td>0.692**</td>
<td>0.478</td>
</tr>
<tr>
<td>Relational satisfaction and perceived social support for partners (H6)</td>
<td>0.780**</td>
<td>0.608</td>
</tr>
</tbody>
</table>

* $p<.05$. ** $p<.01$.

*Perceived social support from family.* In order to test for the relative effects of each independent variable, scores on perceived social support from family were regressed onto scores for depression, cognitive flexibility, assertiveness, responsiveness, and relational satisfaction (with friends, family, and partner). Positively and significantly related to perceived social support from family is relational satisfaction with family ($\beta = .666$, $p=.001$). Also, depression is negatively and significantly related to perceived social support ($\beta = -.237$, $p=.045$). The model was responsible for approximately 59%
Table 4

*Correlation Matrix for the Relationships among Variables*

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BDI</td>
<td>-</td>
<td>-222*</td>
<td>-239**</td>
<td>-.064</td>
<td>-.436**</td>
<td>-.321**</td>
<td>-.309*</td>
<td>-.457**</td>
<td>-.482**</td>
<td>-.227*</td>
</tr>
<tr>
<td>2. CF</td>
<td>-</td>
<td>.399**</td>
<td>.220*</td>
<td>.117</td>
<td>.148</td>
<td>.244*</td>
<td>.243*</td>
<td>.108</td>
<td>.312**</td>
<td></td>
</tr>
<tr>
<td>3. A</td>
<td>-</td>
<td>.091</td>
<td>.341**</td>
<td>.017</td>
<td>.030</td>
<td>.311**</td>
<td>.040</td>
<td>.034</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. R</td>
<td>-</td>
<td>.104</td>
<td>.282*</td>
<td>.100</td>
<td>.302*</td>
<td>.153</td>
<td>.070</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. RSFR</td>
<td>-</td>
<td>.262</td>
<td>.222*</td>
<td>.632**</td>
<td>.217*</td>
<td>.210*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. RSFA</td>
<td>-</td>
<td>.269*</td>
<td>.201</td>
<td>.692**</td>
<td>.278*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. RSPA</td>
<td>-</td>
<td>.258</td>
<td>.216*</td>
<td>.780*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. PSSFR</td>
<td>-</td>
<td>.333**</td>
<td>.388**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. PSSFA</td>
<td>-</td>
<td>.373**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. PSSPA</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05. **p<.01.

*Note: BDI = Beck Depression Inventory measure of depression; CF = cognitive flexibility; A = assertiveness; R = responsiveness; RSFR = relational satisfaction for friends; RSFA = relational satisfaction for family; RSPA = relational satisfaction for partner; PSSFR = perceived social support from friends; PSSFA = perceived social support from family; PSSPA = perceived social support from partner.*

\( r = .770, r^2 = .592 \) of the variance in perceived social support from family. See Table 6 for a table of regression results.
Table 5

Regression Results for Perceived Social Support from Friends

<table>
<thead>
<tr>
<th>Variables entered</th>
<th>Unstandardized β</th>
<th>Standardized β</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>-.150</td>
<td>-.170</td>
<td>-1.534</td>
</tr>
<tr>
<td>Cognitive flexibility</td>
<td>7.481E-02</td>
<td>.079</td>
<td>.742</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>4.329E-02</td>
<td>.071</td>
<td>.608</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.230*</td>
<td>.266*</td>
<td>2.779**</td>
</tr>
<tr>
<td>Relational satisfaction for friends</td>
<td>.859**</td>
<td>.606**</td>
<td>5.795**</td>
</tr>
<tr>
<td>Relational satisfaction for family</td>
<td>-.227</td>
<td>-.201</td>
<td>-1.929*</td>
</tr>
<tr>
<td>Relational satisfaction for partners</td>
<td>.130</td>
<td>.126</td>
<td>1.266</td>
</tr>
</tbody>
</table>

*p<.05. **p<.01.

Perceived social support from partner. In order to test for the relative effects of each independent variables, scores on perceived social support from partners were regressed onto scores for depression, cognitive flexibility, assertiveness, responsiveness, and relational satisfaction (with friends, family, and partner). Positively and significantly related to perceived social support from partner is relational satisfaction with partner (β = .830, p=.001). The model was responsible for approximately 68% (r = .823, r² = .678) of the variance in perceived social support from partner. See Table 7 for a table of regression results.
Table 6

*Regression Results for Perceived Social Support from Family*

<table>
<thead>
<tr>
<th>Variables entered</th>
<th>Unstandardized $\beta$</th>
<th>Standardized $\beta$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>-.240*</td>
<td>-.237*</td>
<td>-2.064*</td>
</tr>
<tr>
<td>Cognitive flexibility</td>
<td>-.170</td>
<td>-.154</td>
<td>-1.415</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>1.017E-02</td>
<td>.014</td>
<td>.120</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>-8.800E-02</td>
<td>-.088</td>
<td>-.894</td>
</tr>
<tr>
<td>Relational satisfaction for friends</td>
<td>-.198</td>
<td>-.121</td>
<td>-1.123</td>
</tr>
<tr>
<td>Relational satisfaction for family</td>
<td>.864**</td>
<td>.666**</td>
<td>6.189**</td>
</tr>
<tr>
<td>Relational satisfaction for partners</td>
<td>.151</td>
<td>.126</td>
<td>1.235</td>
</tr>
</tbody>
</table>

*p<.05. **p<.01.

Table 7

*Regression Results for Perceived Social Support from Partner*

<table>
<thead>
<tr>
<th>Variables entered</th>
<th>Unstandardized $\beta$</th>
<th>Standardized $\beta$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>9.378E-02</td>
<td>.102</td>
<td>.997</td>
</tr>
<tr>
<td>Cognitive Flexibility</td>
<td>-2.944E-02</td>
<td>-.030</td>
<td>.304</td>
</tr>
<tr>
<td>Assertiveness</td>
<td>-1.592E-02</td>
<td>-.025</td>
<td>-.233</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>-8.507E-02</td>
<td>-.094</td>
<td>-1.070</td>
</tr>
<tr>
<td>Relational satisfaction for friends</td>
<td>6.562E-02</td>
<td>.044</td>
<td>.461</td>
</tr>
<tr>
<td>Relational satisfaction for family</td>
<td>7.764E-02</td>
<td>.066</td>
<td>.495</td>
</tr>
<tr>
<td>Relational satisfaction for partners</td>
<td>.899**</td>
<td>.830**</td>
<td>9.121**</td>
</tr>
</tbody>
</table>

**p<.01.
CHAPTER V
Discussion

Within interpersonal relationships, an individual should be able to effectively communicate support needs as well as to communicate in a manner that maintains satisfying quality relationships that provide such support. As predicted in the current study, depressed individuals may lack the communication competence necessary to maintain quality relationships and solicit needed social support. The assertiveness dimension of CC provides one with the means to seek out satisfying interpersonal relationships as well as the means to solicit social support. On the other hand, an individual must also have the ability to maintain interpersonal relationships conducive to providing social support. The responsiveness dimension of CC should provide one with the means to do just this. Lastly, cognitive flexibility provides the cognitive processes that allow one to recognize, and choose when it is appropriate to be assertive or responsive within interpersonal relationships. Analysis of the data indicates that the data were largely consistent with the relationships hypothesized in this study. What follows is a discussion of the results, limitations of the study, and directions for future research.

Results of the Measurement Analyses

According to the confirmatory factor analysis of the measures of cognitive flexibility, relational satisfaction, and social support, internal consistency results indicate that these scales are unidimensional in nature. Of particular interest is that the Cognitive Flexibility Scale has only one factor. This is consistent with how this scale has been treated in the past, but none the less seems incomplete given that cognitive flexibility has been conceptually defined as consisting of three important qualities: awareness of
communication options, willingness to be flexible, and self efficacy in one’s flexibility (Martin & Anderson, 1998; Martin & Rubin, 1995). Our understanding of cognitive flexibility might profit from re-examination of the measures of the construct in future research. Tests of parallelism indicate that the three scales are parallel to one another, providing some evidence that these scales are indeed measuring distinct constructs. Of particular interest here is the evidence that the RAS and the Perceived Social Support scale are measuring distinct constructs; enhancing confidence in the interpretation of the correlations between the scales found in this study.

Depression and Communication Competence

Hypothesis one predicted that depression would be negatively related to cognitive flexibility. Results indicate that the data were consistent with this predicted relationship, which means that as depression increases, cognitive flexibility decreases. This is of particular interest in the current study since cognitive flexibility is conceptualized as a necessary component of communication competence, furthering a potential model that captures how negative cognitive biases are related to communication difficulties of persons with depression.

The relationship between these variables might be attributable to several factors. Since cognitive flexibility was assessed via self-report, the relationship with depression could be representative of a depressed person’s lack of cognitive flexibility or representative of a negative bias when evaluating the self. Segrin (1990), for example found self-reports related to social skills deficits were more strongly related to depression than other-reports of social skills deficits. In addition, those with depressive symptoms report higher skills-deficits for themselves without an interaction preceding the
measurement. This finding is consistent with the literature that suggests that depressed persons hold negative cognitive biases that revolve around self, world, and future (Beck et al, 1979; Clark et al, 1999), negative self-evaluations (Segrin, 1990), and lower self-reports of social skills (Gable & Shean, 2000).

Hypotheses two and three predicted that cognitive flexibility would be positively related to assertiveness (H2) and responsiveness (H3). Results indicate that the data were consistent with these predicted relationships. That is, cognitive flexibility and assertiveness, as well as cognitive flexibility and responsiveness were positively related. These results illustrate that those with lower cognitive flexibility also exhibit less ability to be assertive and responsive. This finding is consistent with the CC literature that a competent communicator not only has a dual focus on self and others – reaching one’s communicative goals while being appropriate to others’ needs (Duran, 1992) – but also implies that such a dual focus includes the ability to adapt to the context and assess what communicative behavior is appropriate to the situation. This implies that two of the skills specific to CC, assertiveness and responsiveness, are tempered by one’s ability to know when and how to use such skills or one’s flexibility with those skills based on the context of the communication event. These findings provide evidence for the conceptualization that CC includes cognitive flexibility, assertiveness, and responsiveness discussed in this paper.

*Assertiveness and Satisfaction with Interpersonal Relationships*

Hypothesis four predicted a positive relationship between assertiveness and satisfaction with interpersonal relationships. The data were not consistent with the predicted relationship for relational satisfaction for family or partners. The data, however,
were consistent with the predicted relationship for relational satisfaction with friends, which means that as assertiveness decreases for an individual, relational satisfaction with friends also decreases. This finding is consistent with the literature that illustrates well-being is dependent upon having social relationships, and the opportunity to cultivate interpersonal relationships (Berg & Piner, 1990). With decreased capacity to assert oneself in order to seek out a variety of satisfying relationships depressed individuals experience less satisfaction with those types of relationships. Moreover, this finding illustrates how a decreased capacity in CC, specifically, a lack of assertiveness, may be related to the depressive symptoms experienced by individuals. Other research indicates that non-assertiveness behaviors such as low social expressivity, communication apprehension, and social anxiety (Segrin, 1992) are associated with higher rates of depression.

Upon further consideration, the lack of support for a relationship between assertiveness and satisfying relationships with family and partners may be due in part to the fact that these types of relationships are already well established and friendship relationships may tend to be more fluid. Assertiveness skills are not needed to seek out partner and family relationships as one would expect such skills are needed in seeking out relationships that typically exhibit less commitment and permanence, such as relationships with friends. In other words, friendships tend to dissolve more often than relationships with family and partners, which would leave one with more opportunity to seek new friendships; making assertiveness skills an important part of satisfaction with these relationships.
Responsiveness and Satisfaction with Interpersonal Relationships

Hypothesis five predicted a positive relationship between responsiveness and satisfaction with interpersonal relationships. The data were not consistent with the predicted relationship for relational satisfaction for friends or partners. In fact, a curvilinear relationship was found between responsiveness and relational satisfaction for partners. (These findings are discussed after the discussion of the linear relationship between responsiveness and relational satisfaction with family.) The data, however, were consistent with the predicted relationship for relational satisfaction with family, which means that as responsiveness decreases, relational satisfaction with family also decreases. This finding is consistent with the literature that illustrates interpersonal difficulties that are specific to being responsive to others within interpersonal relationships. Such interpersonal difficulties for persons with depression include mistakes in processing nonverbal cues (Nowicki & Carton, 1997), errors in decoding facial expressions and vocal tones (Carton, Kessler, and Pape, & 1999) which were related to lower reported relationship satisfaction, and may contribute to rejection. This finding demonstrates that – similar to assertiveness – decreased capacity in responsiveness, a component of CC, is related to less satisfaction with relationships for depressed individuals.

The results of the present study also indicate that there is a curvilinear relationship between responsiveness and satisfying relationships with partners. Relationship satisfaction with partners increases as responsiveness increases; however, as responsiveness continues to increase, relationship satisfaction begins to decrease. Therefore, it appears that in relationships with partners there comes a point when responsiveness no longer contributes to the satisfaction of the relationship. Any
responsiveness beyond that point is then observed with a decline in relational satisfaction. Why, exactly, this is the case is unclear. Perhaps this curvilinear relationship between responsiveness and relational satisfaction with partners may be a result of the measure of relational satisfaction with partners. By providing participants the opportunity to focus on a single, specific relationship (as opposed to an aggregate of relationships such as family or friends), participants may have been able to better specify the nature of relational satisfaction within a single relationship.

Lastly, the data that were not consistent with the prediction of a relationship between responsiveness and satisfying relationships with friends could be explained by the transient nature of friendships. It may be much easier to end a friendship and seek a new, more satisfying friendship because there tends to be less commitment to and less need to be responsive in such relationships. As the cliché implies, we can’t choose our family, but we can certainly choose our friends. This may also explain the support for the relationship between responsiveness and satisfying family relationships. There is typically a lifelong commitment to familial relationships and to keep these relationships satisfying, family members would have to respond to each others’ needs.

Satisfaction with Interpersonal Relationships and Perceived Social Support

Hypothesis six predicted a positive relationship between relational satisfaction and perceived social support. The data were consistent with the predicted relationship between relational satisfaction and perceived social support for all three types of relationships: friends, family, and partner. This means that as relational satisfaction decreases, perceived social support also decreases for an individual; these effects were all substantial. These finding are consistent with the social support literature that illustrate
the importance of satisfying interpersonal relationships to social support (Albrecht & Adelman, 1987; Barbour, 2003) and one’s well-being (Leatham & Duck, 1990; Reifman & Michael, 1995). Additionally, within interpersonal relationships, an individual must be able to effectively seek support as well as maintain satisfying interpersonal relationships conducive to providing social support in order to feel the effects of that support on their well-being (Eckenrode & Wethington, 1990). To put this into the terms of the current study, the lack of satisfying interpersonal relationships leaves a depressed individual with less social support.

How Does Depression, CC, and Quality Interpersonal Relationships Contribute to Perceived Social Support?

Regression results varied across the different types of perceived social support. Depression, CC, and satisfaction with all three types of relationships accounted for more than half of the variance in perceived social support from friends, with relational satisfaction with friends being the largest significant contributor and responsiveness being the second largest significant contributor. Thus, both relational satisfaction with friends and the extent that one is responsive to those friends explain the changes in perceived social support from those friendships. As satisfaction of friendships increases and responsiveness increases, perceptions of social support from those friendships increases. Interestingly, satisfaction with family relationships contributed negatively to perceived social support from friends, although this relationship only approached significance. Perhaps when perceived social support from family is low, individuals seek social support from other relationships such as friends.
Similar to friendships, over half of the variance in perceived social support from family is due to depression, CC, and satisfaction with relationships with friends, family, and partners. Most of the variance explained can be attributed to satisfaction with family relationship; the largest and most significant contributor to this variance, whereas depression was the second largest significant contributor, albeit in a negative way. In other words, increases in satisfaction with family relationships explain increases in perceived social support from those relationships, whereas, increases in depression are associated with decreases from familial social support. This finding is consistent with other literature. A study conducted by Serovich, Kimberly, Mosack, and Lewis (2001) found that when controlling for actual available social support and perceived social support from family and friends, depression was most significantly negatively related to perceived social support from family.

Lastly, the amount of variance in perceived social support from partners due to depression, CC, and satisfaction with relationships with friends, family, and partners was also substantial, accounting for two-thirds of it. The largest and most significant contributor was relational satisfaction for partners. Similar to both friends and family, as satisfaction with one’s relationship with a partner increases, one’s social support from that relationship also increases.

Upon reviewing all of the results, it would appear that the components of CC, especially responsiveness, are indeed an important feature of satisfying interpersonal relationships with friends, family, and partners and the social support elicited from them. The responsiveness dimension of CC seems to be most vital in nurturing satisfying relationships with family and the buffer created by the perceived social support from
them. This is especially important since depression plays a more important role in perceived social support from family than in perceived social support from friends or partners. At the very least, if family cannot provide perceived social support, responsiveness in other relationships, such as friendships, would likely contribute to the overall social support needed for depressed persons. Further, in order to seek out supportive friendships, one would also need to be assertive.

**Limitations and Implications for Future Research**

There are several limitations of this study that should be addressed. One limitation of this study is the fact that causality cannot be established. Depression, as used in this particular study, is an independent variable that cannot be manipulated. In addition to this, the debate over whether depression is a cause of social skills deficits or if social skills deficits cause depression is ongoing. Time-ordering of these variables is difficult and was not attempted with the present study since it was cross-sectional in nature. Thus, the findings of this study are limited to associations between variables. Perhaps a longitudinal study concerning CC, depression, and social support could prove fruitful in establishing causality and determine if CC is an intervening variable between depression and social support. Longitudinal studies of depression are possible as evidenced in the method of Bandura, Pastorelli, Barbaranelli, and Caprara, (1999) for establishing self-efficacy pathways to depression in children.

Another limitation of this study is the use of the Cognitive Flexibility Scale as the measure of the cognitive component of communication competence. Although the results indicate the measure is unidimensional and reliable, it seems that the current scale may be too simplistic and does not address the 3 aspects of the conceptual definition of cognitive
flexibility: awareness, willingness, and self-efficacy of communicating flexibly. Importantly, this measure is the only one that is currently available that attempts to address the cognitive ability to be communicatively flexible. Perhaps a more comprehensive measurement of cognitive flexibility can better capture the essence of awareness, willingness, and self-efficacy to communicate flexibly and better represent the negative biases that persons with depression seem to demonstrate than what was established in this current study. Future research on communication competence should involve the development of a more comprehensive measure of competence.

Due to logistical constraints of the data collection time frame, data could only be collected from 72 participants over a course of two months of the jury selection process. While a sample size of 72 appears to be small, the power analysis conducted for this study required a minimum of 72 participants for a statistical power level of .90. Therefore, results are presented with confidence that the analyses performed were powerful enough to detect significant effects.

One implication of this study is with regards to social skills deficits for those that suffer from depression. If we consider cognitive flexibility, assertiveness and responsiveness as social skills, it would seem that the focus in skills training for depressed persons should not only include instruction in assertiveness techniques, but to also include instruction for how to be appropriately responsive in close, personal relationships with family members, friends, and partners. Additionally, a person with depression that improves in communication competence could also use such skills to seek out positively reinforcing situations as a whole; thus, creating for one's self a positive and nurturing environment within which to counterbalance the symptoms and/or onset of
depression. As a part of this instruction, depressed persons should also increase their ability to assess the appropriateness of each type of skill and perhaps even to be more flexible in the use of these skills. Such instruction would undoubtedly need to focus on perspective taking skills, interpreting non-verbal cues from others, expressing empathy, and a whole host of interpersonal skills that nurture quality relationships and environments. As with many interventions for depression, such training could also be coupled with cognitive therapy that would help to correct negative biases in thinking about one's social skills. Importantly, future research could address the efficacy of such training.

Future research should also include focusing further investigation of relational satisfaction and CC on specific, dyadic relationships to detect the complexity of how CC or lack of it can affect relational satisfaction for individuals with depressive symptoms. Additionally, such an investigation should include not only self-reports, but paired data from both individuals in a dyadic relationship. Evidence that this approach would be fruitful in detecting the complexity of relational satisfaction within a single relationship can be found in a study of emotional awareness and couple relationship satisfaction. Croyl and Waltz (2002) found that when discrepancies between a couple's levels of emotional awareness, experiencing, and expression increase, relational satisfaction decreases. In their study, high emotional awareness was defined as the ability to 1) recognize emotions in one's self and others, 2) experience, distinguish, and label a wider variety of specific and differentiated emotions, and 3) express such emotions (Croyle & Waltz, 2002). Specifically, this study found that women tend to have higher relationship-specific emotional awareness, experiencing, and expression than men, and when
discrepancies between those levels of emotional awareness, experiencing, and expression increase, relational satisfaction decreases (Croyle & Waltz, 2002). Therefore, as women’s level of emotional awareness, experiencing, and expression increases beyond their partner’s level, a discrepancy occurs, resulting in a decline in relational satisfaction.

With regards to the present study, the conceptualization of responsiveness is being responsive to others’ needs through awareness of the impact that our actions have on those around us, being perceptive of others and their needs, and having the skills for relating to others within a social context. In order to be responsive to others’ needs, one most certainly would need to be emotionally aware since a part of emotional awareness is to recognize emotions in others. Perhaps as one partner’s level of responsiveness exceeds the other partner’s level of responsiveness, a discrepancy occurs, thus resulting in a decline in relational satisfaction. This may help explain the curvilinear relationship between responsiveness and relational satisfaction with partners found in this study.

Summary

The purpose of this study was to test the relationships among depression, communication competence, relational satisfaction, and social support. Communication competence becomes important to those experiencing depression in that it addresses the one’s ability to seek and maintain interpersonal relationships conducive to providing social support as well as soliciting such support. Unfortunately, interpersonal difficulties experienced by depressed individuals adversely affect their ability to seek and keep these socially supportive relationships. Hypotheses were developed to represent this argument and a study was designed to test these hypotheses. Data obtained in this study were
consistent with many of the hypothesized relationships. The results and implications of this study were addressed as well as directions for additional research.
ENDNOTES

1 A power analysis is dependent upon several assumptions, the robustness of the significance test, the size of the critical effect, the level of power desired, and the number of participants needed to find the critical effect. For the present study, the critical effect sizes used for the variables of communication competence (CC) were selected from a meta-analysis of social skills deficits in depression (Segrin, 1990). The behavioral skills assessments in the meta-analysis address the assertiveness-responsiveness component of CC and were found to have an effect size of $r = .34$ (Segrin, 1990). The cognitive assessments in the meta-analysis address the cognitive flexibility component of CC and were found to have an effect size of $r = .47$ (Segrin, 1990). Since the effect size for the behavioral skills was smaller, this was selected as the minimum effect size needed.

2 Analysis of boxplots indicated that one case (case #73) was problematic and an outlier for both the Assertiveness assessment and the Responsiveness assessment. Upon inspection, this case was dropped because only four items in the Assertiveness – Responsiveness Scale were completed out of the entire questionnaire. (This case was not included in the participant results reported in the Method section.)

3 There was one variable, perceived social support from partner, for which order of the questionnaire appears to have made a difference; therefore, correlations for this variable should be interpreted with caution. Participants who were administered the BDI at the beginning of the questionnaire ($M = 16.65; SD = 3.21$) scored higher than those who were administered the BDI at the end of the questionnaire ($M = 14.00; SD = 5.70$) on the partner social support scale [$t (63) = 2.24; p = .03; r = .27$] the first format being: Assertiveness-Responsiveness Measure, Cognitive Flexibility Scale, Relational
Assessment scales, Perceived Social Support scales, and Beck Depression Inventory. The second format placed the Beck Depression Inventory at the beginning with the remainder of the scales in the same order as the first format. Two formats were used to determine whether or not placement of the Beck Depression Inventory impacted participants' responses on the other scales.
APPENDIX A

Survey Consent Form
You are invited to participate in a research project entitled "Understanding Relationships and Well-Being." This study is designed to understand your perceptions of how you communicate with friends and family and how it is related to your well-being. This study is being conducted by Dr. Maria Lapinski and Rebecca DeVries from Western Michigan University, Department of Communication.

IMPORTANT! The county jury pool was chosen as the method of selecting participants because of the random nature in which people are chosen to serve. This provides us with the ability to better apply our results to the county population as a whole. This study is NOT affiliated with the county judicial/legal system. Your participation in this study is in no way related to your tasks as a potential juror. The jury selection team will have no knowledge of your decision to participate or not participate in this project.

If you decide to take part in this study, it involves answering survey questions regarding how you think about communication, and how you think you actually communicate with family, friends, and significant others. It also involves assessing your perceptions about these relationships as well as assessing your mental well-being. Lastly, some basic demographic information will be collected. The entire questionnaire will take less than 30 minutes to complete. Your replies will be completely anonymous. Please do not put your name or any marks that might identify you anywhere on the actual questionnaire. The results of this study will be reported ONLY in aggregate form. That is, the information provided by a single person will not be reported – we will only look at the answers to the questions across all the participants in the study. In no way, will you be associated with the responses you provide.

You may choose to not answer any question and simply leave it blank. If you choose not to participate in this survey, you may either return the blank survey or you may discard it. If at any time you feel uncomfortable about the content of this survey, please feel free to discontinue your participation. You will not be penalized in any way for terminating your participation. If you choose to complete the survey, you will be offered a small token of our appreciation for participating.

Please note that returning the survey indicates your consent for use of the answers you supply. Please keep this consent form for your reference.

If you have any questions regarding the content of this study or the results of this research project, you may contact Dr. Maria Lapinski (269-387-0362). You may also contact the Chair, WMU Human Subjects Institutional Review Board (269-387-8293) or the Vice President for Research (269-387-8298) if questions or problems arise during the course of the study.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

We appreciate your participation in this study!
APPENDIX B

Demographic Questions
The following were the demographic questions included at the end of the questionnaire.

What is your sex? (female or male)

What is your age in years? (fill in blank)

What is your ethnicity? (fill in blank)

Indicate if you have been diagnosed with any of the following depressive disorders. (Check all that apply.)

- Major Depression
- Chronic Mild Depression (Dysthymia)
- Bipolar Disorder (Manic-Depression)
- Other __________________

If you have been diagnosed with a depressive order, are you currently receiving treatment for it?

(Check one: Yes / No)

If receiving treatment, what kind or kinds of treatment are you receiving? (Circle all that apply)

- Medication
- Cognitive or Behavioral Therapy
- Support Group
- Other __________________
APPENDIX C

Debriefing Statement
The specific issue of well-being that was addressed in this study was depression. If, as a result of participating in this survey, you are concerned about your well-being, especially if it involves depressive symptoms, please use the provided information to your benefit and seek assistance.

To learn more about depression, you can contact the National Institute for Mental Health at http://www.nimh.nih.gov.

If unsure where to go for help, check the Yellow Pages under "mental health," "health," "social services," "suicide prevention," "crisis intervention services," "hotlines," "hospitals," or "physicians" for phone numbers and addresses. In times of crisis, the emergency room doctor at a hospital may be able to provide temporary help for an emotional problem, and will be able to tell you where and how to get further help.

Listed below are the types of people and places that will make a referral to, or provide, diagnostic and treatment services.

- Family doctors
- Mental health specialists, such as psychiatrists, psychologists, social workers, or mental health counselors
- Health maintenance organizations
- Community mental health centers
- Hospital psychiatry departments and outpatient clinics
- University- or medical school-affiliated programs
- State hospital outpatient clinics
- Family service, social agencies, or clergy
- Private clinics and facilities
- Employee assistance programs
- Local medical and/or psychiatric societies
APPENDIX D

Modified Relationship Assessment Scale
The following is the modified Relationship Assessment Scale. Two versions will appear on the questionnaire, one for close friends and another for family members. For this study, a Likert-type scale was developed for this scale. The original scale was developed by Hendrick (1988).

Instructions and scoring. The following statements deal with your beliefs and feelings about your own behavior in close personal relationships with (friends/family members/spouse, partner, or intimate significant other). Read each statement and respond by circling the number that best represents your satisfaction for each statement. (R) indicates a reverse score. (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree)

1. My (friends/family members/spouse, partner, or intimate significant other) meet my needs.

2. In general, I’m satisfied with my (friendships/relationships with family members/relationship with spouse, partner, intimate significant other).

3. My (friendships/relationships with family members/relationship with spouse, partner, intimate significant other) are better than other people’s (friendships/relationships with family members/relationship with spouse, partner, intimate significant other).

4. I often wish I didn’t have most of my (friendships/relationships with family members/relationship with spouse, partner, intimate significant other). (R) *

5. My (friendships/relationships with family members/relationship with spouse, partner, intimate significant other) have met my expectations.

6. I care for all my (friends/family members/spouse, partner, or intimate significant other). **
7. There are many problems with my (friendships/relationships with family members/relationship with spouse, partner, intimate significant other). (R)

* Note: Item dropped due to internal consistency results.

** Note: Item dropped due to parallelism results.
APPENDIX E

Non-Linearity Incremental F-Test
Below are hand calculations to determine if the quadratic relationship between responsiveness and relational satisfaction for partners is significantly different than the linear relationship predicted. $R^2$ is the coefficient of determination for each type of relationship. $p$ represents the number of predictors (slope coefficients) for a specific type of relationship. Linear relationships have one slope coefficient and quadratic relationships have two slope coefficients. $N$ is the sample size for the relationship.

According to a table of percentiles of the F distribution ($p=.01$), the below calculated value of $F$ must exceed the critical value of $F=7.17$ in order to reject the null of linearity (MacClendon, 2002).

$$F = \frac{(R_2^2 - R_1^2)}{(1-R_2^2)} \left( \frac{p_2 - p_1}{(N - p_2 - 1)} \right) = \frac{(127 - .003)}{(1-.127)} \left( \frac{2 - 1}{64 - 2 - 1} \right) = \frac{.124}{.014} = 8.857$$
APPENDIX F

HSIRB Approval Letter
Date: March 5, 2004

To: Maria Lapinski, Principal Investigator  
Rebecca DeVries, Student Investigator for thesis

From: Mary Lagerwey, Ph.D., Chair

Re: HSIRB Project Number: 04-02-14

This letter will serve as confirmation that your research project entitled “Understanding the Relationships of Communication, Social Support, and Well-Being” has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: March 5, 2005
REFERENCES


*Human Communication Research, 3*, 195-213.