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The Relationship between Supervisors' Power Bases and Supervisory Styles

Hideyuki Tanaka
University of New Orleans

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The Relationship between Supervisors' Power Bases and Supervisory Styles

A Dissertation

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy
in
Counselor Education

by

Hideyuki Tanaka

B.A. Otaru University of Commerce, 1997
M.A. Nicholls State University, 2001

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ABSTRACT

Despite its critical role in counselor training, empirical research on clinical supervision is generally limited (Bernard & Goodyear, 2003; Ellis & Ladany, 2007). This is also applied to an area of power dynamics in supervision. This study tested the relationship between the two aspects of power dynamics; namely, supervisors' power bases (i.e., sources of influencing others) and supervisory styles (i.e., typical ways of shaping supervision), based on the system's approach to supervision model (Holloway, 1995).

This research was a correlational design. Students in masters' and doctoral counseling programs were asked to respond to an online questionnaire packet via Survey MonkeyTM. Of those who responded, 492 students who took supervision with professor or doctoral student supervisors constituted the sample. Varied numbers of participants were used for each analysis after missing or extreme data were deleted. Supervisors' usage of power bases and supervisory styles were measured by the adopted version of Interpersonal Power Inventory (Raven, Schwarzwald, & Koslowsky, 1998) and Supervisory Style Inventory (SSI; Friedlander & Ward, 1984), respectively.

In part 1, results of factor analyses revealed four first-order power factors and two higher-order power factors (Soft & Harsh). Schmeid-Leiman's (1957) solution was also applied. In part 2, result of correlation analysis in revealed that supervisors' usage of Soft or Soft-type power factor (Idealized Expert) was moderately positively correlated to all three supervisory styles but that usage of Harsh or Harsh-type factors (Compensatory Obligation, Relational Power, & Collaborative Alliance) was only weakly correlated to supervisory styles, for majority of supervisors. Similarly, results of regression analyses revealed that supervisory styles did not significantly predict supervisors' usage of Harsh factor, but both supervisory styles and usage of

Harsh factor significantly predicted usage of Soft factor at moderate and strong level, respectively. The interpersonally-sensitive styles predicted Soft factor slightly more strongly than the other styles. It was concluded that supervisors who engaged in supervision with any one of three supervisory styles also tended to use more Soft or Soft-type factor when there are disagreements, but rarely used Harsh or Harsh types.

Key Words: Clinical supervision; supervisory styles; power bases; Soft power; Harsh power.

CHAPTER 1

INTRODUCTION

Clinical supervision refers to long-term intervention involving evaluation, facilitation, and monitoring of less-advanced therapists' counseling performance by advanced therapists (Bernard & Goodyear, 2003). Clinical supervision is considered to be a vital part of the counseling profession, especially for those therapists who are entry-level in their professional development. However, in spite of the critical role of clinical supervision, there is not a clear understanding of the supervision process and there is a lack of data-proven models or methods of supervision (Bernard & Goodyear, 2003). Ellis and Ladany (1997) and Ellis, Ladany, Krenzel, and Schult (1996) pointed out that research studies in the area of clinical supervision are generally regarded as methodologically weak and far from conclusive. More empirical research, therefore, is needed in order for clinical supervision to be more effective and accountable. This study explored power dynamics in supervision as a significant factor towards this end.

Background

Power dynamics in supervision is one of the issues that can have a significant impact on the process and outcomes of clinical supervision. The issue of the power dynamics is particularly important in the ever-rising concern about multicultural perspectives in the current practice of both counseling and clinical supervision (Bernard & Goodyear, 2003; Norton & Coleman, 2003). Further, as some researchers have maintained, power is the central aspect of cross-cultural struggles in counseling and supervision because power is directly related to racism and social oppression toward cultural minorities (Brown & Landrum-Brown, 1995; Fong & Lease, 1997; Ramsey, 1997). In the following sections, the issue of power are discussed in terms of the supervisors' power base(s) and supervisory style(s).

Power Base

One aspect of supervision which some researchers have tried to clarify is the power dynamics within the supervisory dyad. In clinical supervision, power is an integral aspect of the supervisor-supervisee relationship. The supervisors and supervisees' roles are set in a power hierarchy in that supervisors are responsible for overseeing and facilitating their supervisees' professional development and counseling competence (e.g., Bernard & Goodyear, 2003; Fine & Turner, 2003; Holloway, 1995). Even for those who advocate collaborative supervision, the relationship between supervisors and supervisees is never equal because of the power that is inherent in the supervisor's position or evaluative role (Fine & Turner, 2003). However, the authority in the supervisory role is not the only type of power that clinical supervisors possess.

According to social influence theorists (Dixon & Claiborn, 1987; Dorn, 1984, 1985; Strong, 1968; Strong & Matross, 1973), counselors or clinical supervisors possess different types of power sources (i.e., power bases), each of which can be used to uniquely affect the behaviors or attitudes of clients or supervisees, respectively. The types of power sources available for counselors or supervisors are assumed to be certain influencing characteristics (e.g., attractiveness and expertness) and/or change-inducing resources (e.g., authority or information). In these theories, counselors' or supervisors' power sources play a central role in the type and quality of session outcome.

The social influence models of counseling (Strong & Matross, 1973) and supervision (Dixon & Claiborn, 1987; Dorn, 1985) were, in turn, influenced by the typology of French and Raven (1959) and Raven (1965), which was originally formulated and extensively studied in organizational and business disciplines (Podsacoff & Shriemheim, 1985). The original form of French and Raven's typology includes the five power bases of a superior: (a) referent, (b) expert,

(c) legitimate, (d) reward, and (e) coercive power. Subsequently, information power was added to the typology by Raven (1965). However, within the counseling or clinical supervision discipline, researchers did not adopt all power base types.

Although researchers in the counseling or clinical supervision discipline did adopt the concept of power bases in their models, it has been maintained that they have seemingly underestimated the authoritative and controlling aspect of the counselors' or supervisors' power bases. For example, Bernard and Goodyear (2003) asserted that these social influence models of clinical supervision did not consider the clinical supervisors' capacity for forcing supervisee changes by penalty (i.e., French and Raven's coercive power) as a part of their evaluator and gate-keeper roles. In addition, in most studies on social influence in counseling or clinical supervision, researchers have used the Counselor Rating Form (CRF; Barak & LaCrosse, 1975) or its modified form for clinical supervisors, which conceptualize counselors' or clinical supervisors' power bases in terms of only referent, expert, and legitimate power. Furthermore, legitimate power was reframed as "trustworthiness," which referred to genuineness inherent in a supervisor's role, instead of referring to their authority.

There are, however, models of counseling/clinical supervision which suggest supervisors use more balanced combination of power bases including those with an authoritative/controlling nature. Although power bases in these models were not considered a central element of counseling/supervision process, the systemic approach to supervision (SAS) model (Holloway, 1995) and the adaptive counseling and therapy (ACT) model (Howard, Nance, & Myers, 1986) assume counselor/supervisors utilize power bases such as referent, expert, informational, legitimate, reward, and coercive powers. Later, Raven (1992, 1993) developed a comprehensive model of the interpersonal power: the interpersonal power interaction model (IPIM). In this

model, he provided more detailed sub-categories in each of the original power bases. As a result, the IPIM assumed 14 power bases, which were found to be united by two higher-order factors (Soft and Harsh factor; Raven, Schwarzwald, & Koslowsky, 1998). While researchers in other disciplines, including those in higher education (e.g., Elias & Cropanzano, 2006; Elias & Loomis, 2004) and in school psychology (e.g., Erchul, Raven, & Ray, 2001; Erchul, Raven, & Whichard, 2001) successfully adopted this framework, no researchers in counseling or clinical supervision have attempted to extend or differentiate the counselors' or supervisors' power bases.

Considering clinical supervision researchers' limited scope of conceptualizing supervisors' power bases, it is a worthwhile effort to approach supervision research from this new framework. In addition to power bases, power dynamics in clinical supervision can be explored in terms of supervisors' typical way of shaping their interactions with their supervisees, or supervisory styles.

Supervisor Style

Another important factor which is assumed to affect the outcome of supervision is supervisory style. According to Friedlander and Wade (1984), supervisors generally shape their interaction with supervisees in one of three typical ways. These typical styles, which were theoretically and empirically identified by Friedlander and Ward, are: (a) task-oriented style (structured and goal-focused approach), (b) interpersonally-sensitive style (personally-committed approach), and (c) attractive style (friendly approach). Friedlander and Ward also pointed out the logical relevance of supervisory styles and the roles/functions of supervisors, such as those of the teacher, the counselor, and the consultant in Bernard's (1979) discrimination model of supervision.

Supervisory style is also considered to be related to power dynamics in supervisory dyads. Hart and Nance (2003) pointed out that all styles, as well as roles or functions of a supervisor in

supervision literature, share common dimensions of a supervisor's attempt to influence his or her supervisee in terms of structure and support. Accordingly, supervisor power bases are assumed to be directly related to supervisory styles, roles, or functions of supervision in terms of the supervisor inducing power dynamics in the supervisory dyads (Holloway, 1995; Howard, Nance, Myers, 1986). In SAS model (Holloway) and the ACT model (Howard et al.), direct relationships between supervisors' power bases and supervisory styles/functions are specified, but the two models do not entirely agree on the relationships. In this study, power dynamics in clinical supervision were examined in terms of both supervisor power bases and supervisory styles based on the SAS model. The SAS model was used because the ACT model is originally formulated for counselors, not clinical supervisors, and because a limited empirical research is available to support either model (see chapter2).

Statement of Purpose

The purpose of this study was to explore the nature and relationship of supervisor-initiated power dynamics: supervisors' power bases and supervisory styles. Specifically, the first part of this study examined the structure of clinical supervisors' power bases in terms of first-order factors and higher-order factors on the Interpersonal Power Inventory (IPI; Raven, Schwarzwald, & Kolswoosky, 1998). The second part of this study investigated the relationship between supervisors' power bases and supervisory styles.

Significance of the Study

This study is significant because it added additional information to a limited knowledge base on the subject of clinical supervision. As pointed out by Bernard and Goodyear (2003) and Ladany and Elias (1997), previous research in clinical supervision has not done enough to guide the appropriate and effective practice of supervision. In addition, this study added new

knowledge of supervisor-induced power dynamics in supervision, which has been studied in only a limited manner to the knowledge base. Furthermore, the results of this study provided evidence of the relationship between supervisory styles and power bases, which was first suggested by the SAS model (and the ACT model). Finally, in practical terms, the results of this study can help clinical supervisors to understand what kinds of power bases are typically available and how their unique approach to supervision (supervisory style) is associated with certain power bases. With this understanding, supervisors can be intentional in shaping power dynamics in supervision, in ways which can best facilitate the supervisees' professional development.

Conceptual Framework

The systems approach to supervision (SAS; Holloway, 1995) was used as an overall framework which connects the variables of interest in this study, including the power base of supervisors and supervisory style. The SAS is a model of clinical supervision which holds the supervisory working alliance as a uniting and forming force for supervisees' learning experiences and professional development. In this model, the supervision process is influenced by six sub-factors and one central factor of the supervisory working alliance. The six factors include (a) supervisor functions, (b) supervisory tasks, (c) supervisor, (d) supervisee, (e) institution, and (f) client. The first two factors are considered as direct or focal factors, while the other remaining factors are considered as indirect or contextual factors. The supervisory working alliance is considered to be the central factor which bonds these six interrelated factors of the supervision process and impacts the supervisees' development by providing the central learning environment in which supervisees are encouraged to be responsible for their learning through collaboration with their supervisors.

The variables of interest in this study (supervisors' power bases and supervisory styles) are associated with supervisor functions in the SAS model. The literature suggests that direct relationships exist among supervisory styles, roles, and functions (Friedlander & Ward, 1984; Holloway, 1995; Hart & Nance, 2003). Also, the SAS model, as well as the similar ACT model (Howard et al., 1986), suggests that supervisors who play certain supervisory functions or styles utilize certain combinations of power bases to achieve their purpose (Holloway). Furthermore, in the SAS model particularly, the supervisory styles or functions and their associated power bases are supposed to play a significant role of shaping supervisory working alliance, which then creates the critical context of supervisees' learning.

Research Questions

The purpose of this study was summarized in three research questions, which are described below:

Research Question 1. What is the factor structure of the Interpersonal Power Inventory (IPI; Raven et al., 1998) with a population of clinical supervisors in counseling?

R1a. Can unique first-order factors be extracted and identified from the 33 items included in the IPI with a population of clinical supervisors in counseling?

R1b . Can two higher-order factors (second-order factors: Soft and Harsh) be extracted and identified with a population of clinical supervisors in counseling?

Research Question 2. Assuming first-/higher-order factor are extracted from the IPI, are there unique relationships between each supervisory style and first-/higher-order power factors?

The Research Question 3. Do supervisory styles predict Harsh and Soft factors?

Definition of Terms

Clinical Supervision

Clinical supervision refers to advanced therapists' long-term intervention when evaluating, facilitating, and monitoring the counseling performance of less-advanced therapists (Bernard & Goodyear, 2003).

Social Influence

Social influence refers to pressure of inducing certain changes in various aspects of another person such as behavior or attitudes by an influencing person's use of resources (French & Raven, 1960; Raven, 2002, 2003).

Social Power

Social power refers to a person's change-inducing assets toward a target person which, as perceived by the target person, are available from internal or external sources. (French & Raven, 1959; Raven 2002, 2003).

Power Bases

Power bases refer to specific types of a person's social power, such as a person's attractiveness or likableness (referent power) and authority based on his or her social role (legitimate power) (French & Raven, 1959; Raven, 2002, 2003).

Soft Power

Soft power refers to a higher-order power base which unites a set of individual power bases on the IPI (Raven et al., 1998) which induce indirect influences and is grounded in a person's personal characteristics (Koslowsky & Schwarzwald, 2001).

Harsh Power

Harsh power refers to a higher-order power base which unites a set of individual power bases on the IPI which are authoritative in nature and are grounded in person's hierarchal position (Koslowsky & Schwarzwald, 2001).

Supervisory style

Supervisory style refers to supervisors' methods of communicating their supervision interventions to supervisees for supervisees' professional development (Friedlander & Ward, 1984; Holloway & Wolleat, 1984).

CHAPTER 2

LITERATURE REVIEW

Introduction

Counselor supervision can be understood in terms of social power dynamics in supervisory dyads (Dixon & Claiborn, 1987; Dorn, 1994, 1985; Holloway, 1995). Although influence is reciprocal, supervisors clearly are more influential than supervisees because of their position of power and, therefore, are accountable for the consequences of using their powers (Bernard & Goodyear, 2003; Holloway). Therefore, in this study, I examined only supervisor-directed power dynamics in the supervisory process.

The purpose of this study was to examine the relationship between two supervisor-initiated power dynamics in clinical supervision: supervisors' power bases and supervisory styles.

In the following sections of this chapter, the nature of the relationship between these variables is described. In the first part, the overall framework of the systems approach to supervision (SAS) model (Holloway, 1995) is described. This model informs the relationship between supervisors' power bases and supervisory styles, as well as the impact of these variables on supervisees' professional development. In the second part, each variable used in this study is reviewed separately for its general contributions to the supervisory process and outcomes.

Theories and empirical findings on supervisors' power bases in multiple disciplines (management and organizations, higher education, school consultation, and clinical supervision) are reviewed. Power base typologies, including the two factor solutions (Harsh and Soft; French & Raven, 1959; Raven, 2002, 2003) are described. Social influence and power base theories in counseling and clinical supervision are described, and empirical studies are reviewed in terms of (a) the influencing characteristics of counselors/supervisors (attractiveness, trustworthiness, and

expertness) and (b) the power bases of counselors/supervisors. Theories and empirical findings regarding supervisory style are reviewed. Definitions and theories of supervisory styles are described, and the similarities among supervisory styles, roles, and functions are explained. Finally, a brief summary of empirical studies of the relationship between supervisory style and the supervisory processes/outcomes is presented.

In the third part of this chapter, relationships between supervisors' power bases and supervisory styles are discussed. Theoretically, relationships between these variables specified by the SAS model (Holloway, 1995) are described, and these relationships are compared with those specified by the adaptive counseling and therapy (ACT) model (Howard, Nance, & Myers, 1986). Then, empirical studies on relationships between three variables are reviewed. Finally, an overall summary of the review is presented, and research questions are presented.

Overall Framework: The Systems Approach to Supervision model

The systematic approach to supervision (SAS) model assumes the supervisory working alliance is the central core for supervision. A variety of supervisory variables, such as supervisor functions, power, and diversity, are joined together and shape this supervisory relationship into a context for supervisees' significant learning (Holloway, 1995). In this model, supervisors strive to create an empowering and collaborative working relationship with their supervisees within which supervisors are responsible for providing guidance and facilitating supervisees' autonomous engagement in their learning. According to Holloway, this mutual working relationship provides the best learning structure for supervisees. Holloway's conceptualization of working relationship is similar to Bordin's (1983) working alliance which consists of both collaboration and caring. Like Holloway, Bordin assumed that the strength of the supervisory

working alliance, rather than supervisors' specific techniques or styles, is the most critical factor for facilitating supervisees' learning process in clinical supervision.

In the SAS model, six critical factors interact with each other and influence supervisees' development through the core factor of the working relationship. Holloway (1995) symbolized these as a something like a propeller with the six factors attached to the core factor of the working relationship. Two factors directly involve supervisory activity (supervision tasks and supervisory functions) and four factors influence the activity in indirect ways (institution characteristics, supervisor characteristics, supervisee characteristics, and client characteristics). The supervision tasks and supervisory function are especially important because they constitute the essence of the collaboration process in the working relationship. The supervision task refers to the domains or goals of supervisees' learning in supervision, including: (a) facilitative skills, (b) case conceptualization, (c) professional behaviors, (d) self-awareness, and (e) self-evaluation. The supervisory functions refer to a supervisor's activities, including (a) evaluation, (b) teaching, (c) modeling, (d) consultation, and (e) support. The other four factors are characteristics of persons or institutions involved in supervision and are called *contextual factors*. The contextual factors also influence the nature of the working relationship.

The variables of interest in this study, which are supervisory styles and power bases, are related to supervisory functions, which directly determine the collaboration process in supervision (Hart & Nance, 2003; Holloway, 1995). Therefore, both supervisory styles and power bases play a critical role in shaping the context for supervisees' significant learning. Accordingly, supervisors can intentionally adjust the impacts of their supervisory styles and power bases to produce positive supervisee development. Holloway emphasized supervisors' responsibility in shaping the productive working relationship because of their legitimate position,

though she also stressed supervisees' autonomous and active involvement in their learning within the mutual working relationship for empowerment.

Supervisors' Power Bases

The power dynamic exists in clinical supervision partly because supervisors are entitled to formal authority in their supervisor role (Bernard & Goodyear, 2003). Some social influence researchers have further conceptualized supervisees' learning outcomes in clinical supervision as being exclusively a result of supervisors' use of social power over their supervisees (Claiborn, Etringer, Hillerbrand, 1995; Dixon & Claiborn, 1987; Dorn, 1984, 1985). Supervisors can use several different types of power sources in this process, including their formal authority (Dixon & Claiborn; Dorn). These power sources are called *power bases* (French & Raven, 1959; Raven, 1992, 1993). Many studies of supervisors' power bases have been conducted in management and organizations. Researchers in school consultation, higher education, counseling, and clinical supervision also have adopted the concepts. In the first part of this section, power base theories and empirical studies in business and organizations, higher education, and school psychology are reviewed. In the second part of this section, power base theories and empirical findings in counseling and clinical supervision are discussed.

Power Base Theory in Business and Organizations

French and Raven's (1959) power base typology is considered to be a well-studied construct (Podsakoff & Schriemheim, 1985). According to French and Raven, a person (an influencing agent) can possess certain types of social powers over another person (a target person). They consider these powers as an agent's possible influencing resources, upon which a target person depends in order to function in the organization. They differentiated *social power* from *social influence*, which is an actual psychological pressure originating from these social

powers for provoking certain changes in a target person. Achieving social influence over the target person is not a one-way process because exercising power triggers resistance from the target person. Therefore, the exact strength of power is found after subtracting the extent of the target person's resistance to the influence attempts from the extent of intended power influence.

There are some disagreements among theories, regarding the distinctions among social influence, social power, and closely related influence tactics. French and Raven (1959) and Raven (1992, 1993) emphasized social power as only an assets of creating social influence that an target person believes an influencing agent holds, not social influence (or change-producing process) itself. They assumed that social power leads to social influence but did not specify how these assets are communicated and transformed into social influence. On the other hand, Koslowsky and Schwarzwald (2001) considered these power bases as generic types of behavioral influence approach (i.e., influence tactics), which they called social influence. Instead, they proposed new categories of power bases which consist of Raven and his colleague's power base as influence tactics. Other researchers proposed and studied specific behavioral approaches of influencing others as influence tactics (e.g., Kipnis, Schmidt, & Wilkinson, 1980; Kipnis, Schumidt, Swafin-Smith, & Wilkinson, 1984; Yukl, Kim, & Fable, 1996). Despite their relevance, power bases and influence tactics as specific influence approaches seem to be different constructs (Hinkins & Schriesheim, 1990; Imai, 1991; Kipnis, Schmidt, & Wilkinson; Stahelski & Paynton, 1995; Lines, 2007). The result of confirmatory analysis in a study by Hinkins and Schriesheim supported the independence of these constructs.

In power base theories, a relationship is assumed to exist between the influencing nature of each power base and the resulting changes by a target person. Certain power bases can be effective only under a target person's dependence and an influencing agent's active monitoring

(French & Raven, 1959; Raven, 1992, 1993). For most types of power bases, a target person must be dependent on an influencing agent's power resources to achieve and sustain changes. An influencing agent's use of other power bases discourages the target person's dependence because the target person quickly becomes active in implementing his or her changes. Accordingly, depending on the types of power bases, an influencing agent needs to provide different levels of active maintenance on the target person's change. Because each power base induces a different nature of social influence, the resulting behavioral or attitudinal changes in a target person also can differ. Some power bases can lead to a target person's superficial compliance, while other power bases can lead to more voluntary and deeper commitment. According to Kelman (1958), an agent's influencing attempts can result in a target person's changes at three levels. At the lowest level, a target person's change is superficial and characterized by compliance for the purpose of external gain (reward), not internal satisfaction. At the next level, a target person's change is more extensive due to his or her identification with an influencing agent. Finally, at the last level, a target person's change is the most extensive when internalization occurs in such a way that the target accepts the consequence of an agent's influencing attempts as innately valuable or satisfying.

In their original article, French and Raven (1959) classified power bases into five types, which differ in terms of dependence and surveillance. These five power bases are: (a) reward, (b) coercive, (c) legitimate, (d) expert, and (e) referent. Reward and coercive power refer to an influencing agent's available options of rewards and punishments for influencing a target person. Both of these power bases lead to change in the target person that becomes highly dependent on the rewards or punishments and does not last without constant maintenance by an influencing agent. Legitimate power is an influencing agent's potential for authority created by social or

cultural norms, influencing a target person in terms of obligation. When legitimate power leads to a target person's change, the target becomes less dependent and requires little maintenance from the agent. Referent power is an agent's potential for inducing a target person's change through personal attraction, which takes advantage of a target person's desire to strengthen self-concept by identifying with an agent. French and Raven assumed that this power leads to change in which the target person either becomes less dependent or remains dependent on the agent, contingent upon the situation. Expert power is technical expertise that a target person attributes to the influencing agent. Expert power leads to a target person becoming less dependent and requiring less maintenance by an agent once the target person learns technical knowledge. Information power was originally considered as part of expert power, but was later separated from it by Raven (1965) because information power is an influencing person's technical knowledge itself, which is assimilated to the target person as the target person changes, with no further need for reliance on the influencing person's expertise.

Raven (1992, 1993) further differentiated the nature of these basic power bases and identified their sub-categories. Raven divided reward and coercive power bases into impersonal reward/coercive power (a person's capability to arrange materialistic types of reward or punishment) and personal reward/coercive power (a person's capability to provide interpersonal acceptance or rejection). Raven conceptualized legitimate power as having four subcategories which reflect different types of social norms. These include (a) legitimate power of position (based on the social norm that a person will comply due to an agent's hierarchical positions or roles), (b) legitimate power of equity (based on the social norm that a person will comply due to an agent's past efforts or sacrifices), (c) legitimate power of reciprocity (based on the social norm of give-and-take practice), and (d) legitimate power of dependence (based on the social

norm that a person will comply to help a helpless person). Also, positive and negative sides of expert and referent powers were distinguished. While positive expert and referent power lead to a target person's compliance in an agent's intended manner, negative expert and referent power lead to the target person's compliance in a direction reverse from the agent's original intent. Information power also was divided into direct (obvious means of logical persuasion) and indirect (subtle means of logical persuasion) types.

In the initial theory of social power base, power was considered to be exercised from one person/group to another, while the effect of the power was also mediated by the recipient's level of resistance and dependence (French & Raven, 1959). In Raven's later (1992, 1993) interpersonal model of power, a target person and an agent exercise the power bases in a more interactional manner; influence attempts are made in the form of negotiation. While an agent is trying to change a target person by consciously maximizing the effect of his or her power resources, the target person also attempts to buffer the agent's influence by consciously negotiating or resisting it. As a result, they reach some type of agreement or compromise. Both parties will take further actions once they evaluate the outcomes of their influence attempts, which in turn lead to another agreement or compromise.

First-order and higher-order solutions. Some experts and Raven as well have combined the power bases constructs into two higher-order powers: Soft (or Personal) power and Harsh (or Position) power (Bass, 1960; Peiro & Melia, 2003; Rahim, 1988 ; Raven et al., 1998; Yukl & Fable, 1991). Bass (1960) assumed that power bases can be organized into those which relate to a person's personal attributes (Personal power) or those which relate to his or her status in social/organizational hierarchy (Position power). In studies by Rahim and by Peiro and Melia, the results of factor analyses revealed that Personal power consisted of French and Raven's

(1959) referent and expert power and that Position power consisted of legitimate, reward, and coercive power. Yukl and Fable also used factor analysis and found similar results based on their own typology, which was similar to that of French and Raven.

More recently, researchers have started to test the factor structure of power bases in various settings using the Interpersonal Power Inventory (IPI; Raven et al., 1998) which is based on 14 power bases of Raven's (1992, 1993) interpersonal power interaction model (Elias & Loomis, 2004; Erchul, Raven, & Ray, 2001; Koslowsky, Schwarzwald, & Ashuli, 2001; Raven et al.; Schwarzwald, Koslowsky, & Agassi, 2001; Schwarzwald, Koslowsky, & Ochana-Lavin, 2004; Wilson, Erchul, & Raven, 2008). These studies consistently supported a two-factor solution at higher-order level across different settings. These factors are called Soft and Harsh factor, which basically correspond to Personal and Position power in French and Raven's (1959) five power bases (Koslowsky & Schwarzwald, 2001). Although the factor structures of Soft and Harsh power in IPI were basically similar across different studies, there were also slight differences in these factor structures. For example, in Raven et al. (1998), legitimate position power and personal reward power were included into different higher-order factors (Soft and Harsh) for the U.S. and the Israel samples. In addition, the structures of Soft and Harsh factors seem to differ slightly from those of Personal and Position power based on the five power bases, respectively. For example, while legitimate power was assumed to be a part of Position power (Rahim, 1988; Yukl & Fable, 1991), two of four sub-types of legitimate power in the IPI contributed to Soft power in Raven et al.'s (1998) study.

Some studies of factor analysis of the IPI at individual item levels found unique first-order factors. Although these first-order factors shared some commonality among the studies, they also seem to reflect unique characteristics of each setting and sample. Raven et al. (1998)

found a seven-factor solution in which 11 individual power bases were uniquely combined, in a business/organization setting. Erchul, Raven, and Ray (2001) found a four-factor solution in a school consultation setting. Finally, Elias and Mace (2005) found a six-factor solution in a higher education setting.

Relationships among power bases. As seen above, although individual power bases are seen as conceptually distinct constructs, they are expected to share similar aspects under each higher-factor (Soft and Harsh). Individual power bases also can be related to each other in predictable patterns across higher-order factors. Several researchers have discussed specific interrelationships between French and Raven's (1959) power bases. According to French and Raven, a person's level of referent power can be increased or decreased as he or she is seen to have more resources of reward or punishment (reward and coercive power), respectively. Other researchers have provided empirical evidence that Position powers (reward, coercive and legitimate power) influence Personal powers (referent and expert power) through meta-analysis (Carson, Carson, & Roe, 1993) and structural equation modeling (Gaski, 1986; Howell, 1987; Munduate & Dorado, 1998; Rahim, Antonioni, & Psenicka, 2001; Rahim & Psenicka, 1996). In addition, Pierro, Cicero, and Raven (2008) and Schwarzwald, Koslowsky, and Aggasi (2001) found that Soft and Harsh factors on the IPI correlate to each other.

Empirical studies on five power bases. French and Raven's (1959) original power base typology has been studied extensively in organizations and businesses (Podsakoff & Schriesheim, 1985). Many researchers have explored the differential impact of the five power bases (Podsakoff & Schriesheim). According to reviews by Carson, Carson, and Roe (1993) and Podsakoff and Schriesheim, earlier studies of French and Raven's power bases revealed that Personal power bases (expert and referent power) generally were more effective than Position

power bases (legitimate, coercive, and reward power) for inducing different aspects of change in a target person. In these studies, Personal power bases were found to be generally effective in influencing subordinates' performance, satisfaction with supervision, withdrawal behavior/attitudes, conformity, goal/role clarity, compliance, job satisfaction, support of supervisors, and work commitment. Position power bases (especially legitimate power) had generally positive impact on compliance but usually did not lead to deeper change on the part of subordinates. Position powers had little impact on the subordinates' withdrawal or work commitment, and they (especially coercive power) had negative impacts on satisfaction with supervision. Carson et al. noted, however, that reward and legitimate power had weaker but positive impacts on performance in general.

Most of the early field studies in power bases were subject to serious methodological flaws (Podsakoff & Schriesheim, 1985). These flaws included: (a) psychometrically inadequate instruments (e.g., 1-item format), (b) lack of consistent definition of each power base across studies, (c) possible confounding by social desirability, and (d) ignorance of the possible inter-correlation among power bases in data analysis. More recently, in an effort to overcome these flaws, researchers have developed more psychometrically sound instruments, including that of Hinkins and Schriesheim (1989) and the Rahim Leader Power Inventory (RLIP; Rahim, 1988). Researchers have used these newer instruments in their studies of the impact of power bases on (a) subordinates' compliance (Rahim, 1988, 1989; Rahim & Bantzman, 1989; Rahim, Kim, & Kim, 1994), (b) subordinates' satisfaction (Mossholder, Bennett, Kemery, & Wesolowsky, 1998; Rahim, 1989; Rahim & Buntzman, 1989; Rahim et al., 1994; Teven 2007), (c) subordinates' performance/effectiveness (Rahim, Antonioni, Psenicka, Kim, & Khan, 1999; Rahim, Anitnioni, Krumov, & Ilieva, 2000, Rahim et al., 2001), and (d) subordinates' committeemen (Mossholder,

Bennett, Kemery, & Wesolowski, 1998; Munduate & Dorado, 1998; Rehim et al., 1999; Rahim & Buntzman, 1989; Yuki & Fable, 1991; Yukl et al., 1996). The general results of these studies are similar to those reviewed by Podsakoff and Schriesheim (1985) and Carson et al. (1993).

Overall, Personal powers (most notably, referent power measured by RLPI) resulted in a strong positive impact on these outcome variables. Position powers had generally negative or mixed impacts on the outcome variables, while legitimate power seemed to have positive impact on compliance and commitment. In addition, Rodrigues (1995) and Rodrigues and Lloyd (1998) examined the motivational aspect of power bases in terms of an attribution theory. As results of their analogue experimental studies, they concluded that subordinates tended to perceive their behaviors to be of their own making (i.e., due to their internal resources and free will) when their supervisors used more reward, information, or referent power than expert, legitimate or coercive power.

Social Influence and Power Base Theories in Counseling.

Counseling researchers have attempted to incorporate social influence theories into counseling and clinical supervision. Strong (1968) established one of the earliest major theories of social influence in counseling based on Festinger's (1957) cognitive dissonance theory. In Strong's social influence model of counseling, change in clients can be achieved when clients who are in a state of cognitive dissonance cannot reject counselors' messages because of the counselors' attractiveness, trustworthiness, and expertness. The counselors' intervention based on this model is a two-phase process. In the first phase, counselors set the stage for their clients to change by interacting with clients so that the clients see them as more attractive, trustworthy, and expert. In the second phase, counselors begin to persuade their clients by gradually helping them to face dissonance-provoking messages. If counselors appear to be attractive, trustworthy,

and expert to clients, these clients are more likely to resolve their cognitive dissonance in such a way that they change their opinions to align with those of counselors.

Later, Strong and Matross (1973) departed from the original conceptualization of Strong's (1968) model and adopted power base theories such as French and Raven's (1959). In their model, Strong and Matross considered counseling to be a process wherein counselors use their available power sources to help clients to achieve necessary changes. Counselors' influencing attempts, however, also provoke clients' resistance (refusal to accept the influence) and opposition (clinging to their dysfunctional but satisfying behaviors). Therefore, clients achieve actual behavioral changes only when counselors' influencing power is stronger than clients' resistance and opposition. Strong and Matross identified five types of counselors' power bases. Referent power refers to perceived attractiveness of counselors which facilitates clients' identification with them. Expert power refers to perceived expertise of counselors to help clients. Legitimate power refers to perceived authority of counselors as helping agents, based on the social norm of counselor role. Informational power is perceived expert information of counselors for clients' necessary change. Finally, ecological power is the perceived ability of counselors to manipulate the environment for clients to achieve functional change.

Although Strong (1968) and Strong and Matross (1973) offered two different models, counseling researchers consider counselors' influencing characteristics (attractiveness, expertness, and trustworthiness) and counselor's power bases (referent, expert, legitimate, informational, and ecological power) as similar concepts. Goodyear and Robyak (1981) pointed out that counselors' influencing characteristics of attractiveness, trustworthiness, and expertness are generally treated in the literature as the same as referent, legitimate, and expert power bases, respectively. Generally, researchers have emphasized only counselors' Personal powers,

discounting Position powers. Furthermore, legitimate power, which could be classified as position power, has been treated as the same as trustworthiness, which reflects counselors' openness, benevolent attitudes, and role as helping professionals (Strong). This definition of legitimate power did not include the authoritative aspect of counselors' power bases as Strong and Matross described. Moreover, neither Strong nor Strong and Matross considered certain position power bases, such as personal reward and coercive power and legitimate position power in Raven's (1992, 1993) typology, to be counselors' power bases.

Empirical findings. Since early studies by Strong (1968) and Strong and Matross (1973) were published, researchers have conducted many empirical studies to examine the nature and impact of counselors' influencing characteristics or power bases. Many of these researchers focused on (a) the factors that are related to counselors' attractiveness, trustworthiness, and expertness, reflecting the first phase of Strong's (1968) model, and (b) the impact of counselors' influencing characteristics on therapeutic outcomes of clients, which reflects the second phase of Strong's model (Heppner & Claiborn, 1989). According to Heppner and Claiborn's review, some research findings supported the positive impact of counselors' influencing characteristics on client outcomes, including client satisfaction, self-concept, and premature termination. However, they also pointed out methodological weaknesses of social influence research in counseling, such as extensive use of analogue research designs, which led to findings with limited generalizability. Another weakness noted involved the Counselor Rating Form (CRF; Barak & LaCrosse, 1975), which researchers commonly use for measuring counselors' influencing characteristics (attractiveness, expertness, and trustworthiness). Heppner and Claiborn reported that this instrument often has high inter-correlations among subscales, indicating these subscales might not be different constructs. Also, they pointed out the possible

ceiling effect of the CRF, with most clients rating counselors' influencing characteristics highly. The influencing characteristics' impacts may have been underestimated due to these psychometric weaknesses of the CRF.

Social Influence and Power Base Theories for Clinical Supervision

Social influence or power base theories developed in counseling have been adapted to clinical supervision (Dixon & Claiborn, 1987; Dorn, 1984,1985), based on the assumption that the similarities between counseling and clinical supervision make such adaptation possible. Supervisors are assumed to possess certain power bases or influencing characteristics similar to those of counselors, which they can use to facilitate their supervisees' development. Dorn (1984) considered clinical supervisors to have influencing characteristics (attractiveness, expertness, and trustworthiness). Dorn (1985) further suggested that supervisors also have power bases (referent, expert, legitimate, information, and ecological power) identical to those of counselors. Dixon and Claiborn suggested that supervisors have referent, expert, legitimate, and information power. Both Dixon and Claiborn and Dorn (1984, 1985) deemed it important to consider other factors, such as supervisees' individual differences, in attempting to understand supervisors' social influence in clinical supervision. It appears that social models of clinical supervision have been adopted from counseling models, without emphasizing the possible differences between these two disciplines. Like the social influence models of counseling, researchers tended to emphasize the Personal powers of clinical supervisors and to ignore their Position powers. Those social influence models defined legitimate power as clinical supervisors' *reliability* (not *authority*) and consider coercive power unavailable for clinical supervisors. This tendency was also seen in researchers' choice of a measurement of power bases. Most studies of social influence in clinical supervision utilized the version of CRF that measures mainly Personal

power bases (expertness, trustworthiness, and attractiveness). However, supervisors can have more Position powers than counselors because their supervisor role includes the functions of educator, evaluator, and gate-keeper (Goodyear & Bernard, 2003).

Some researchers, however, have acknowledged Position powers of clinical supervisors and conceptualized the nature of their power bases as being similar to that of their business or organizational counterparts. The SAS model (Holloway, 1995), although not entirely based on social influence theory, assumed social influence process as a part of supervision, specifically related to supervisor functions. Contrary to social influence models of supervision (Dixon & Claiborne, 1987; Dorn, 1984, 1985), the SAS model adopted the exact form of French and Raven's (1959) power bases (referent, expert, coercive, reward, and legitimate power). It acknowledged clinical supervisors' coercive power and an authoritative aspect of legitimate power. Legitimate power, as well as expert power, in this model was linked to clinical supervisors' role of directing and teaching their supervisees. Similarly, the adaptive counseling and therapy (ACT) model (Howard, Nance, & Myers, 1986) assumed social influence of counselors as a part of their counseling process. When applied to supervision as suggested by Howard et al., this model assumes that supervisors could utilize power bases very similar to French and Raven's typology, including coercive and authoritative aspect of legitimate power. In this model, supervisors have personal (referent), expert, coercive, reward, connective, and position powers (legitimate). Connective power was defined as available personal links with external power holders or institutions. By acknowledging these links, supervisors can boost their intended power bases (e.g., link with professional associations for expert power). However, this power does not seem to be a power base in itself; rather, it is a preparation strategy (Raven, 2002, 2003) to build up the power base. Some researchers have adapted the ACT model to supervision

(Hart & Hance, 2003; Rando, 2001; Sumerall, Barke, Timmons, Oehlart, Lopez, & Trent, 1998), but they ignored an aspect of social influence process in this model. Finally, one can assume that certain types of Harsh powers, such as personal reward/coercive powers in Raven's (1992, 1993) typology, are available for clinical supervisors.

Empirical studies on supervisors' influencing characteristics. Researchers have studied clinical supervisors' power bases over the past three decades. These studies, conducted mostly during the 1980s, focused on supervisors' attractiveness, trustworthiness, and expertness as measured by a modified version of the CRF (Carey, Williams, & Wells, 1988; Dondenhoff, 1981; Friedlander & Snyder, 1983; Heppner & Handley, 1981, 1982; Heppner & Roehlke, 1984; Johnson, 1998; Rickards, 1984; Welsh, 1998). The studies were limited in scope because they examined mainly supervisors' Personal powers and utilized the psychometrically weak CRF (Dixon & Claiborne, 1987).

Some researchers have examined the relationships between supervisee factors and their perceived levels or impacts of supervisors' influencing characteristics. Researchers examined supervisees' developmental level with respect to its relationship to supervisors' influencing characteristics in three studies (Friedlander & Synder, 1983; Heppner & Roehlke, 1984; Welsh, 1998). According to the results of these studies, it seems that supervisees' developmental levels, measured by practicum or intern status, generally did not have a meaningful impact on their perception or expectation of supervisors' influencing characteristics. However, Heppner and Roehlke suggested that the developmental level moderated the impact of supervisors' influencing characteristics on supervisee outcomes (motivation and skill development), as this impact was observed for master's supervisees rather than doctoral supervisees.

Researchers also studied supervisees' motivational characteristics (self-efficacy and outcome expectation of supervision process, and locus of control) with respect to their relationship to supervisors' influencing characteristics (Friedlander & Synder, 1983; Heppner & Roehlke, 1984). Friedlander and Synder found that supervisees' self-efficacy and outcome expectation of supervision were positively related to the expected importance of supervisors' influencing characteristics. Specifically, supervisees with high counseling self-efficacy expected their supervisors' expertness to be more important for their supervision, while supervisees with high outcome expectation expected their supervisors' attractiveness and trustworthiness to be more important. Additionally, Heppner and Roehlke found that supervisees' locus of control, as well as their expectation of supervisors' influencing characteristics, seemed unaccommodated by their supervisors because these variables were generally not related to their perceived supervisors' influencing characteristics.

Researchers have examined the relationship between supervisors' influencing characteristics and outcome variables of supervision. These studies examined the relationship between supervisors' influencing characteristics and supervisees' performance (Carey et al., 1988; Dodencoff, 1981), self-efficacy (Welsh, 1998), perceived supervision impact on their satisfaction, professional or skill development, and motivation (Friedlander & Synder, 1983; Heppner & Handley, 1981; Heppner & Roehlke, 1984), and relationship qualities in supervision dyads (Heppner & Handley, 1981; Welsh, 1998). A positive impact of supervisors' influencing characteristics on supervisees' performance in counseling and supervision was found by Dodenhoff and by Carey et al. Dodenhoff found that supervisors' influencing characteristics (total score of attractiveness, expertness, and trustworthiness) had a positive impact on supervisees' performance when evaluated by their supervisors. Supervisors' influencing

characteristics and influencing method types (direct vs. indirect) offset each other to some extent in their impact on supervisees' performance, which was measured in terms of clients' improvement. This offset was indicated by the suppressor effect of these two predictors in multiple regression analysis. Similarly, Carey et al. found that supervisors' influencing characteristics were related to supervisees' performance in six different areas. Specifically, supervisors' trustworthiness was more extensively related to different areas of supervisees' performance than expertness and attractiveness.

The relationship between supervisors' influencing characteristics and supervisees' perceived impact of supervision on different areas of supervision outcomes has been studied. Heppner and Handley (1981) and Welsh (1998) found that supervisors' influencing characteristics were positively related to supervisees' perceived impact of supervision on the affective quality of the supervisory relationship. Heppner and Handley also found that supervisors' influencing characteristics were positively related to supervisees' satisfaction with their supervision. Results of studies of the relationship between supervisors' influencing characteristics and supervisees' perceived impact of supervision on their skill or professional development were mixed. Neither Heppner and Handley nor Welsh found positive relationships between supervisors' influencing characteristics and supervision impact on professional/personal behavior and attitudes (Heppner & Handley) or counseling self-efficacy (Welsh). However, Welsh noted the serious limitation of his analysis because of the high multicollinearity of supervisors' influencing characteristics and small sample size. A different result was reported by Heppner and Roehlke (1984), who found that supervisors' influencing characteristics were positively related to supervisees' perceived impact of supervision on both their motivation to learn and skill development. This relationship applied only for master's level practicum and

internship students and did not apply for doctoral interns. Also, in Friedlander and Snyder's (1983) study, supervisees with high outcome expectation of supervision on personal development also considered supervisors' attractiveness and expertness more important for their supervision.

Several studies have examined behavioral cues for supervisors' influencing characteristics (Friedlander & Snyder, 1983; Heppner & Handley, 1982; Richards, 1984). Heppner and Handley found that supervisors' influencing characteristics, especially trustworthiness, were positively related to supervisors' evaluative and, to a lesser extent, supportive behaviors. However, there is indirect evidence that supervisors' motivational characteristics (outcome expectation and self-efficacy) might impact the relationship between supervisors' influencing characteristics and their supervision behaviors. Friedlander and Snyder found that supervisees with higher outcome expectations from supervision also considered both supervisors' influencing characteristics (attractiveness and expertness) and supervisors' evaluative and supportive behaviors as important for their supervision. Supervisees with high self-efficacy considered only supervisors' expertness and evaluative behaviors important for their supervision. Richards found that supervisors' verbal behaviors of criticism-giving and opinion-giving, as well as supervisees' verbal behaviors, were related to supervisors' influencing characteristics.

To summarize, results of many studies suggest that supervisees' perception of their supervisors' influencing characteristics is related to several supervision outcomes, at least for master's level supervisees. Supervisees' status as practicum or internship student seems unrelated to their perception of supervisors' influencing characteristics, indicating that supervisors might communicate their influencing characteristics in similar ways across

supervisees' developmental levels. In addition, supervisors' trustworthiness seems to be the most influential characteristic for supervisees' development. Supervisors' expertness seems not to be influential for all supervisees, but can be influential for those who have higher levels of self-efficacy. Finally, it is possible that impacts of supervisors' characteristics and their influencing method types might offset each other on outcome variables.

It should be noted that studies in clinical supervision in general have serious methodological weaknesses, and the conclusions were very tentative (Ellis & Ladany, 1997). Ellis and Ladany pointed out that some studies used instruments with no validity data or used instruments adopted from other fields. Subscales of the modified CRF for clinical supervisors, the most popular instrument for assessing supervisors' attractiveness, trustworthiness, and expertness, were correlated highly with each other, making interpretation of results difficult. The focus of these studies was limited to Personal or Soft powers of supervisors. Clinical supervisors can also possess additional power sources, such as information, legitimate, or ecological power bases (Dorn, 1985; Strong & Matross, 1973), and position, connective, and personal/impersonal reward and coercive power (Hart & Hance, 2003; Holloway, 1995; Howard et al., 1986; Rando, 2001; Raven, 1992, 1993; Sumerall et al., 1998).

Empirical studies on supervisors' power bases. Although most social influence studies in clinical supervision examined supervisors' three influence characteristics (trustworthiness, attractiveness, and expertness) measured by the modified CRF, some attempts were made to examine broader types of clinical supervisors' power bases. Robyak, Goodyear, and Prange (1987) used an experimental design with a vignette, and found significant relationships between supervisors' characteristics (sex and level of supervising experience, and focus) and supervisors' expert, referent, and legitimate power bases. Referent power was more likely to be preferred by

male supervisors than by female supervisors, and by supervisors with less supervising experience. Also, expert power was more likely to be preferred by supervisors who approached supervision with a focus on supervisees' self-awareness than supervisors with a focus on case conceptualization. Finally, there was no indication that supervisors differed in their preference for legitimate power depending on their sex, experience, and focus.

Power base instruments from business and organizational disciplines have been adopted in clinical supervision. Hess and Wagner (1999) adapted the Rahim Leader Power Inventory (RLPI; Rahim, 1988) for exploring the factor structure of clinical supervisors' power bases. The result of factor analysis with a sample of speech-language pathologists-in-training revealed a five-factor solution similar to that in Rahim's original study. The five-factor structure in this study accounted for 49.4% of total variability in this instrument. Other researchers tested the relationship between clinical supervisors' five power bases and the supervisory working alliance (Schultz, Ososkie, Fried, Nelson, & Bardos, 2002). Based on the SAS model, Schultz et al. examined the relationship between rehabilitation supervisors' power bases measured by RLPI and the supervisory working alliance. Results revealed that the strength of the supervisory working alliance was significantly predicted only by Personal power bases (both referent and expert power), while legitimate, coercive, and reward powers, as well as the supervisory contract, had no significant impact. The effect size of the impact on supervisors' power bases was quite high ($R^2=.63$). However, this was likely to be an overestimation because of the lack of control over the time spent in supervision, which was found to be significantly related to both power bases and the supervisory working alliance.

Four studies examined the tendencies of relative use of supervisors' power base in terms of French and Raven's (1959) original five power base taxonomy. Wanger (1994), Wanger and

Hess (1999), and Betha (1996) used the RLPI, and Preslar (2001) used Hinkin and Schriesheim's (1989) instrument, and they found that differences in the frequency of each of the individual power bases used by supervisors were relatively small. Supervisees' ratings on the frequency of supervisors' use of each individual power base ranged from 3.78 to 4.28 on a 5.00 subscale in Wagner (1994), from 3.39 to 3.98 in Betha (1996). In Preslar's (2001) study, supervisees' ratings on each power base ranged from 3.30 to 4.23 on 5.00 subscale, except that their ratings on the coercive scale was only 1.65. This markedly low frequency of coercive power may have resulted from the fact that a majority of supervisors in Preslar's study were academic faculty members, who might have more limited resources of coercive power than on-site supervisors. In addition, based on descriptive statistics, another noticeable difference among these studies was supervisors' more frequent usage of expert power for less-advanced level supervisees (Preslar; Wagner) than advanced-level supervisees (doctoral students) (Betha).

Wagner (1994) and Preslar (2001) compared actual and ideal supervisors' use of individual power bases. Supervisees in both Preslar's and Wagner's studies reported that they prefer more Personal powers (referent and expert) and reward power than their actual supervisors utilized. Supervisees in speech language pathology reported that their ideal supervisors would use less legitimate power (Wagner), while supervisees in counseling reported that their ideal supervisors would use more legitimate power than their actual supervisors did (Preslar).

Also, Wagner (1994) and Preslar (2001) examined the relationship between supervisors' power bases and supervisory outcome variables. Both found that supervisors' use of Personal powers (expert and referent power) was positively related to supervisees' satisfaction. Wagner found that both reward and legitimate were also positively but more weakly related to supervisees' satisfaction than Soft powers. Preslar also found that Personal powers were

positively related to the psychological function component of the mentoring relationship in supervisory dyads.

Relationships between supervisees' characteristics (White racial identity status and developmental levels) were examined in two studies. Betha (1996) found that supervisees' White racial identity status was not significantly related to supervisors' use of power bases. Wagner (1994) and Wagner and Hess (1999) (the latter seems to consist of the selected findings from the former) reported that supervisees' developmental levels were generally not related to supervisees' perceived frequency of their supervisors' power bases, except that Wagner reported supervisees at low-intermediate level (50 to 125 clinical hours of training) to perceive their supervisors to use more legitimate power than advanced supervisees did. Supervisors reported that they used power bases differently, depending on the developmental level of supervisees. Supervisors believed that they resorted to stronger expert and legitimate powers but to weaker reward power when influencing beginning supervisees than when influencing advanced supervisees. This discrepancy might be the result of supervisors' failure to adjust their use of power bases to accommodate supervisees' developmental needs, despite their claim to have done so.

Studies of Power Bases Using the Interpersonal Power Inventory.

Business and organizations. Recently, researchers in business and organizations have started to use the Interpersonal Power Inventory, which is a relatively new instrument that utilizes 11 of 14 power bases based on Raven's (1992, 1993) IPIM (Koslowsky, Schwarzwald, & Ashuli, 2001; Pierro et al., 2008; Raven et al., 1998; Schwarzwald, Koslowsky, & Agassi, 2001; Schwarzwald, Koslowsky, & Ochana-Levin, 2004). In the IPI, superiors' power bases are rated in terms of their impact on subordinates' compliance with their superiors' unpleasant requests

(Rave et al., 1998). In all of the above-cited studies, researchers confirmed a two-factor solution (Soft and Harsh factor). In general, individual power bases that were associated with Soft factor were stronger reasons for subordinates' compliance than those associated with Harsh factor.

Most studies which used the IPI analyzed the relationships between the two higher-order factors (Soft and Harsh), instead of 11 individual power bases and other variables. Koslowsky and Schwarzwald (2001) suggested that this practice of using Soft and Harsh factors for analysis is more effective for comparing their impact in different settings. Although superiors can possess different sets of individual power bases in different settings, the Soft and Harsh factors are likely found across different settings.

Results of analyses of two higher-order factors revealed that both Soft and, to a lesser extent, Harsh factor had positive impacts on some outcome variables (Kolsowsky, Schwarzwald, & Ashuri, 2001; Raven et al., 1998). Raven et al. (1998) found that only Soft power was positively related to satisfaction. Koslowsky, Schwarzwald, and Ashuri (2001) found that Soft and Harsh factors had similar levels of positive correlation with subordinates' organizational commitment and with supervisor-subordinate difference of training levels. Soft power had a stronger relationship than Harsh power to job satisfaction and to professional dependence on superiors.

Additional variables were found to be related to the usage or impact of power bases. Schwarzwald, Koslowsky, and Ochana-Levin (2004) found that superiors used more Harsh power in work settings with higher level of task-complexity than in settings with lower levels of task-complexity. Also, they found that supervisors over-emphasize the use of Soft power and under-emphasize the use of Harsh power, compared to subordinates' perceptions. Schwarzwald, Koslowsky, and Allouf (2005) found that Harsh power was used more for out-group members

than for in-group members. Schwarzwald, Kolsowsky, and Aggasi (2001) found that leadership styles (transformational vs. transactional) moderated the impact of police captains' power bases for police officers' compliance. Finally, Pierro, et al. (2008) found that motivational variables (intrinsic and extrinsic motivation, desire to control, self-presentation styles, and self-esteem) were related to Soft or Harsh factor.

Higher education and school consultation. In higher education and school consultation, researchers have studied power bases in the faculty-student and school psychologist-teacher relationships. The more recent studies in these disciplines adopted the IPI instrument. Many of these researchers were concerned about the relationship between power bases and individual differences, such as gender or race, as well as characteristics of the settings. Moreover, the impact of power bases in higher education and school consultation settings might be similar to each other, rather than to that in business and organizational settings. For example, Erchul, Raven, and Ray (2001) noted that school consultants and college instructors considered certain power bases more important than others in a similar manner, compared to business or organizational superiors.

In higher education, several researchers recently studied the power bases of university instructors using the IPI (Elias, 2007; Elias & Cropanzano, 2006; Elias & Loomis, 2004; Elias & Mace, 2005). The results of principal component analyses in two studies (Elias; Elias & Mace) showed a very similar structure of higher-order factors (Soft and Harsh), except that legitimate dependence was subordinated to Soft factor in Elias's study. The structures of these higher-order factors were similar to those found in Raven et al.'s (1998) original studies. Elias and Looms provided evidence of high reliability of the higher-order factors (Cronbach's alpha = .85 for both Soft and Harsh) found in the studies by Elias and Mace. Elias and Mace also found six first-

order factor solutions with some subscales of the IPI combined. These factors are (a) Informational, (b) Knowledgeable Authoritative (legitimate position, expert, and referent power), (c) Legitimate Dependence, (d) Impersonal Power (impersonal reward and coercive power), (e) Personal Power (personal reward and coercive power), and (f) Reciprocal Power (legitimate reciprocal and legitimate equity power). Generally, as found in studies in business and organizations, these researchers found that the individual power bases in Soft factor were considered more influential (Elias & Cropanzano; Elias & Loomis; Elias & Mace) and more appropriate (Elias) than those in Harsh factor. Moreover, all of these studies examined the impact of students' and/or instructors' gender on instructors' power bases. In terms of instructors' gender, Elias and Loomis found a significant main effect of gender, as well as an interaction effect of gender and race, on effectiveness of instructors' power bases. In their study, male instructors in general might have advantages over female instructors in seeking students' compliance from some individual power bases, and Soft power bases might be more effectively used by male African American than female African American instructors. In terms of student gender, there is some disagreement regarding the impact of gender on instructors' power bases. Although Elias found that male students perceived instructors' Harsh power bases (except personal coercive) as more acceptable than did female students, studies by Elias and Mace and by Elias and Loomis revealed that male and female students did not differ in their perception of the relative impact of instructors' individual power bases on their compliance (though univariate tests in Elias and Loomis's study suggested a possible gender impact).

Rather than examining the impact of supervisors and students' gender separately, Elias and Cropanzano (2006) examined the possible interactional impact of supervisors' and supervisees' gender on instructors' power bases based on the data of Elias and Loomis (2004).

Using the Orthogonal Contrast approach, they found that male students perceived a female instructor's use of Harsh power (especially its subordinate powers of impersonal and personal coercive and impersonal reward) as less effective than female students did. They concluded that female instructors encounter more resistance from male students when they try to use Harsh power to influence students.

Recently, Erchul and her colleagues (Erchul, Raven, & Ray, 2001; Erchul, Raven, & Whichard, 2001; Erchul, Raven, & Wilson, 2004) conducted several studies on school psychologists' power bases in school consultation using the IPIs. Erchul, Raven, and Ray found both four-factor and two higher-order factor (Soft and Harsh) solutions. Their four-factor solution is different from Raven et al.'s (1998) seven-factor solution in the management setting and Elias and Mace's (2005) six-factor solution in the higher education setting. They also noted that the relative effectiveness of individual power bases in the school consultant-consultee dyads was more like that in the university instructor-student dyads than that in business superior-subordinate dyads. Their two higher-order factors (Harsh and Soft) were similar to other studies. In all these studies by Erchul and his colleagues, Soft power bases were generally perceived to be more effective in inducing teacher consultees' compliance than Harsh power bases. Furthermore, Erchul, Raven, and Wilson (2004) found that female psychologists considered Soft factor as being more efficient than did male psychologists and that there was no meaningful gender difference in the perceived efficiency of Harsh factor.

In addition to studies by Erchul and his colleagues which examined the utility of school psychologists' power bases in soliciting teachers' compliance, researchers in two studies examined school psychologists' differential tendency of using power bases measured by a modified IPI. As Schwarzwald, Koslowsky, and Ochana-Levin (2004) modified IPI to measure

business and organizational supervisors' usage of power bases, Wilson, Erchul, and Raven (2008) and Getty and Erchul(2009) modified it to measure school psychologists' *likelihood of use* of power bases. Similarly to studies by Erchul and his colleagues which found that Soft power bases led to teachers' compliance better than Harsh power bases, Wilson et al. found that school psychologists reportedly used Soft power bases much more often than Harsh power bases. Contrary to Erchul et al. in which female psychologists expected more impact on teachers from Soft power compared to male psychologists, Wilson et al. found no gender impact on the school psychologists' actual usage of power bases. By contrast, Getty and Erchul found that within Soft factor, gender did have an impact on the frequency of school psychologists' use of power bases. Their results showed that female psychologists tried to influence female teachers with less use of referent power than other Soft power bases, while male psychologists tried to influence female teachers with more use of expert power than other Soft powers.

First-order and higher-order factors in the IPI. First-order factors were found to be different depending on settings (Elias & Mace, 2005; Erchul, Raven, & Ray, 2001; Raven et al., 1998). Raven et al. used the U.S. sample and found that business/organization superiors' power bases were summarized into seven first-order factors. In this study, each pairs of impersonal reward and coercive, personal reward and coercion, expert and information, and legitimate equity and reciprocity formed Impersonal Sanction, Personal Sanction, Credibility, and Legitimate Equity , respectively, with referent, legitimate dependence, and legitimate position forming independent factors. Elias and Mace found that college instructors' power bases were summarized into six factors. Similar to Raven et al., both impersonal and personal types of reward and coercive powers formed independent factors (Impersonal and Personal Power), respectively, and legitimate dependence comprised its own factor (Legitimate Dependence).

However, unlike Raven et al., legitimate position, referent, and expert powers formed a factor (Knowledgeable Authority), and information power formed its own factor (Information). Erchul, Raven, and Ray found that school psychologists' power bases were summarized into four first-order factors. Similar to both Raven et al. and Elias and Mace, impersonal reward and coercive formed a common factor (Impersonal Sanction); similar to Raven et al., expert and information powers formed a factor (Credibility). However, unlike these studies, personal coercion, legitimate equity, legitimate and position formed a factor (Position Power), and personal reward, referent, legitimate dependence, and legitimate reciprocity formed another factor (Personal Power). Although there are some similarities, these three studies reported different nature of first-order power factors among college instructors, school psychologists, and business/organization supervisors.

The structure of higher-order factors is similar between school psychologist (Wilson et al., 2008; Erchul, Raven, & Ray, 2001), academic instructors (Elias & Mace, 2005; Elias, 2007), and business/organization supervisors (Raven et al., 1998; Koslowsky, Schwarzwald, & Ashuri, 2001; Schwarzwald, Koslowsky, & Aggasi, 2001). Across the studies, personal and impersonal coercive, impersonal reward, legitimate reciprocity, legitimate equity formed part of Harsh factor; informational, expert, and referent form soft formed part of Soft factor. Personal reward was generally included into Harsh factor (Wilson et al.; Elias & Mace; Elias; Koslowsky, Schwarzwald, & Ashuri; Schwarzwald, Koslowsky, & Aggasi), except in studies by Erchul, Raven and Ray and Raven et al. with the U.S. sample. Legitimate dependence is generally a part of Soft factor, except in a study by Elias. Surprisingly, legitimate position tends to form a part of Soft factor, despite the fact that the definition of legitimate position seems to correspond closely to Position power (vs. Personal power) in higher-order categories of traditional French and

Raven's (1959) power base typology (Bass, 1960; Peiro & Melia, 2003; Rahim, 1988; Raven et al., 1998; Yukl & Fable, 1991). According to Koslowsky and Schwarzwald (2001), this might be because a person's ability to use positional authority becomes a part of his/her personal attribute in a target person's perspective. It is also worth mentioning that legitimate position shared similar property of college instructor's power as expert and referent power, which was indicated by their underlying first-order factor (Knowledgeable Authority) (Elias & Mace). However, results of factor analysis in study by Eurchel, Raven, and Ray revealed that school psychologists' legitimate position power loaded at comparable strength on Soft and Harsh factors.

Studies of Relationship among Power Bases.

Several researchers have attempted to clarify the nature of relationships among French and Raven's (1959) five power bases. Carson et al. (1993) tested the path models of interrelationship among five power bases with a meta-analytic method. The first model reflects French and Raven's assumptions, and the second model reflects the modified version, both of which generally reflect the causal influence from Position powers (legitimate, reward, and coercive) to Personal power (referent and expert). With structural equation modeling, they found that the second model fit adequately and better than the first model to the aggregated correlation data from 16 studies. Similarly, other researchers used structural equation modeling and tested the casual influence of Position powers on Personal powers as a part of the model (Gaski, 1986; Howell, 1987; Munduate & Dorado, 1998; Rahim, Antoniani, & Psenicka, 2001; Rahim and Psenicka, 1996). Howell retested the analysis done by Gaski with improved methodology and tested the relationships among a company's power bases according to dealer owners' perceptions. He found that reward and coercive power had impacts on expert, reference, and legitimate power, respectively, as a part of the first model and on the second-order "qualitative power" of these

three power bases as a part of the second model. Although Howell's findings were very similar to those of Gaski, Howell emphasized the tentative nature of the findings due to weak methodology. Three researchers (Munduate & Dorado; Rahim, Antonioni, & Psenicka; Rahim & Psenicka) used more solid methodology and tested the causal impact from Position powers to Personal powers as a part of their path models, except Munduate and Dorado did not include legitimate power in their analysis. Both studies by Rahim and his colleagues reached similar results: that coercive power had weak and negative impact on expert power, that reward power had weak and positive impact on expert power, and that legitimate power had weak and positive impact on both expert and referent power. In Mundane and Dorado's study, only reward power had weak impact on referent power. Finally, although no researcher directly tested the causal impact from Harsh to Soft factors, some researchers reported a positive correlation between these two factors. In Schwarzwald, Koslowsky, and Agassi's (2001) study, police captains' Soft and Harsh factors were correlated at $r = .36$. Also, in four studies by Pierro, Cicero, and Raven (2008), the correlations between Soft and Harsh factors of supervisors in some organizations in Europe ranged from $r = .55$ to $.76$.

Section Summary.

Supervisors' power bases, such as those described by Raven and French (1959), have been widely studied by researchers in business and organizations. Some researchers have assumed that power bases can be organized into Personal or Position types and that causal relationships exist from Position type powers to Personal type powers. Researchers in counseling and clinical supervision have adapted the power base concepts into their theories, in which power bases play a critical role in facilitating clients' and supervisees' growth. Many of these theories and empirical studies place more emphasis on Personal power bases and less on

Position powers. However, the SAS model and the ACT model of clinical supervision provided models which closely adapted French and Raven's typology with balanced emphasis on Personal and Position powers. There are a limited number of empirical studies in clinical supervision which adapted French and Raven's typology.

More recently, Raven (1992, 1993) expanded French and Raven's (1959) original typology, and Raven et al. (1998) created an instrument to measure the new typology (Interpersonal Power Inventory; IPI). Studies based on the IPI in business and organizations, higher education, and school psychology suggested that Soft/Personal powers are generally more efficient in obtaining supervisees' compliance/commitment and producing positive supervision outcomes than Harsh/Position powers. Also, these studies provided evidence of two higher-order factors (Harsh and Soft) and first-order factors, which are somewhat different from sample to sample.

In this proposed study, Raven's (1992, 1993) new typology was utilized in the clinical supervision setting because it is believed to be a more detailed and balanced framework for studying power base concepts. Also, the IPI was used to find if first-order and higher-order power factors unique to clinical supervision are extracted, as researchers in other disciplines have found. These first-order and higher-order factors was used to examine the relationship between clinical supervisors' power bases and supervisory styles as suggested by the SAS and the ACT models.

Supervisory Style

Definition of Supervisory Style

Scholars define supervisory styles or roles as supervisors' typical ways of shaping communication patterns with their supervisees in their supervision (Friedlander & Ward, 1984;

Hart & Nance, 2003; Holloway & Wolleat, 1981). Holloway and Wolleat, along with Friedlander and Ward, emphasized supervisory styles as reflecting a two-way exchange between supervisors and supervisees in supervisory dyads, rather than one-sided behavior of the supervisor. Holloway (1984) assumed that supervisors' choice of a certain style or role needs to be complemented by their supervisees' appropriate style or role for their functional interactions.

According to Friedlander and Ward (1984), supervisors in clinical settings typically use three supervisory styles: (a) task-oriented style, (b) interpersonally-sensitive style, and (c) attractive style. These are logically and empirically determined as reflected in the Supervisory Style Inventory (SSI). The attractive style refers to the amiable approach of supervisors in communicating with supervisees, described as *warm, supportive, friendly, open, and flexible*. The interpersonally-sensitive style refers to the supervisors' style of communicating with supervisees in a caring and committed way, which is described as *invested, committed, therapeutic, and perceptive*. Finally, the task-oriented style refers to the supervisors' instructive approach of communicating with supervisees, described as *goal-oriented, thorough, focused, practical, and structured*.

Other researchers have described clinical supervisors' interactional approach with their supervisees in terms of (a) structure and (b) affection (Hart & Nance, 2003; Holloway, 1989, 1995; Holloway & Poulin, 1995; Nelson & Holloway, 1990; Howard et al., 1986; Leary, 1957; Rando, 2001; Sumerall et al., 1998). Penman's (1980) classification system has been used to describe clinical supervisors' behaviors in terms of these dimensions (Holloway & Paulin; Holloway; Nelson & Holloway). In the Adaptive Counseling and Therapy (ACT) model of supervision (Howard et al.; Rando; Sumerall et al.), supervisors' typical ways of approaching supervision are classified into four styles based on a combination of high or low levels of these

two dimensions. These styles are (a) telling style (high direction and low affection), (2) teaching style (high direction and low affection), (3) supporting style (low direction and high affection), and (4) delegating style (low direction and low affection).

Some researchers have pointed out the similarity of supervisory style to other concepts, including supervisor roles and supervisor functions (Friedlander & Ward, 1984; Hart & Nance, 2003; Holloway, 1995). Friedlander and Ward suggested supervisory styles are directly related to supervisor roles, such as those defined by Bernard (1979). The task-oriented, interpersonally-sensitive, and attractive style correspond to the teacher, counselor, and consultant role, respectively. Hart and Nance suggested a direct association of the telling, supporting, and delegating styles in the ACT model to the teacher, counselor, and consultant roles. Holloway proposed that the consulting, the instructing/advising and the monitoring/evaluating, and the supporting/sharing functions in the SAS model have their equivalent supervisor roles. Although Holloway did not state as directly, it can be assumed that the monitoring/evaluating, the supporting/sharing, and the consulting functions in the SAS models are similar to Bernard's teacher, counselor, and consultant roles, respectively, based on descriptions of these constructs. In summary, direct connections can be assumed between each of supervisors' roles, styles, and functions. However, these constructs are not exactly the same. For example, although the ACT model's consulting style and Friedlander and Ward's attractive style are considered to be related to each other because of their relevance to consultant role, the descriptors of the attractive style such as *warm*, *friendly*, and *trusting*, do not match the description of the consultant style as less supportive.

Researchers seem to disagree regarding supervisors' flexibility in adopting these supervisory styles, functions, or roles in order to accommodate their supervisees' individual

differences. Friedlander and Ward (1984) assumed that supervisors tend to use a certain supervisory style which fits their theoretical orientation. Some researchers have asserted that supervisors should be flexible and change their supervisory styles/roles/functions to accommodate supervisees' needs (Bernard, 1979; Holloway, 1995; Howard, Nance, & Myers, 1986; Ladany, Friedlander, & Nelson, 2005). The developmental models of supervision imply that supervisors need to change their styles/roles/functions according to supervisees' professional developmental stages (see Bernard & Goodyear, 2003).

Empirical Studies

Researchers have conceptualized supervisory styles, roles, or functions as critical elements of supervision (Bernard, 1979; Holloway, 1995; Howard et al., 1986; Ladany et al., 2005). Empirical studies have revealed a generic picture of supervisors' use of styles and the impact of each supervisory style on different aspects of supervisory process and outcomes. Clinical supervisors, collectively, tend to adopt all three supervisory styles in their supervision, though they use both the attractive and interpersonally-sensitive style more frequently than the task-oriented style (Fernando & Hulse-Killacky, 2005; Friedlander & Ward, 1984; Ladany, Hill, Corbett, & Nutt, 1996; Ladany, Marotta, & Muse-Burke, 2001; Ladany, Walker, & Melinkoff, 2001; Lochner & Melchert, 1997; Prieto, 1998; Steward, Breland, & Neil, 2001; Usher & Borders, 1993). In Friedlander and Ward's validation studies of the SSI, ANOVAs showed significant differences in styles of supervisors for both supervisor and supervisee samples. According to the descriptive statistics, participants in these studies generally rated their supervisors lower in the task-oriented style than in attractive and interpersonally-sensitive styles, regardless of samples (supervisors vs. supervisees), developmental levels of supervisees (trainee vs. intern), and theoretical orientations of supervisors. In terms of the ACT model, Sumerall et al.

(1998) found that supervisors utilized supporting styles most often and telling styles least often, regardless of developmental level of supervisees. On the other hand, Hart and Nance (2003) found that supervisors utilized the supporting style and the teaching style more often and the telling style and the consulting style less often.

While supervisors, collectively, tend to use all three supervisory styles, there is some evidence that supervisors prefer and adopt certain supervisory styles more than other styles, and that their use of these supervisory styles tends to be somewhat inflexible and can fail to accommodate supervisees' needs (Friedlander & Ward, 1984; Goodyear, Abadie, & Efros, 1984; Hart & Nance, 2003; Holloway, Freund, Gardner, Nelson, & Walker, 1989; Itzhaky & Eliahu, 1999; Putney, Worthington, & MacCullough, 1992). Friedlander and Ward tested their assumption that supervisors' theoretical orientations or worldviews influence their supervisory style. They found that supervisors who had a psychodynamic orientation had a higher level of interpersonally-sensitive style than those with other theoretical orientations, while supervisors who had cognitive-behavioral orientation had a higher level of task-oriented style than those with other theoretical orientations. Putney, Worthington, and MacCullough also found supervisors' theoretical orientations were related to their supervisory roles. Using a rank-order instrument with single-item format, they found that supervisees perceived their supervisors with humanistic-psychodynamic orientation to take a counselor role in supervision more than supervisors with other theoretical orientations. Unlike Friedlander and Ward's results, however, supervisees perceived that their supervisors with cognitive-behavioral orientation approached supervision in consultant roles more than supervisors with other theoretical orientations. Putney, Worthington, and MacCullough did not find supervisees' theoretical orientations to be significantly related to supervisors' supervisory styles.

Supervisory styles of well-known supervisors from various counseling theoretical orientations have been compared (Friedlander & Ward, 1984; Goodyear, Abadie, & Efros, 1984; Holloway, Freund, Gardner, Nelson, & Walker, 1989). These supervisors included Polster (gestalt), Ellis (rational-emotive), Erikson (psychodynamic), and Rogers (person-centered). In general, the four supervisors used combinations of supervisory styles or roles corresponding to their theoretical orientations, except that Holloway et al. found Rogers to use teacher-like approaches. Friedlander and Ward found that these supervisors used significantly different combinations of three supervisory styles.

Results of other studies have indicated some disagreement between supervisors and supervisees in terms of supervisor styles (Hart & Nance, 2003; Itzhaky & Eliahu, 1999). In study by Hart and Nance, supervisory styles based on the ACT model reported by supervisors were not strongly related to those reported by supervisees. Also, they found that supervisors' and supervisees' preference of supervisory styles did not agree systematically at an individual level, although at the aggregate level both supervisors and supervisees tend to prefer more the telling and/or teaching styles and less supporting and/or delegating styles or vice versa. In addition, Itzhaky and Eliahu found that social work supervisees' learning roles were significantly but generally not strongly related to supervisors' supervisory styles. However, Friedlander and Ward found that supervisors adjusted their supervisory styles depending on supervisees' developmental level. In supervisors' perspective, they tended to interact with their practicum students with more task-oriented style and less attractive and interpersonally-sensitive styles than with more advanced students (internship students). However, in students' perspective, similar but much weaker relationship between supervisors' supervisory styles and students' training level was found.

Supervisory styles have been related to supervisors' self-disclosure (Ladany & Lehrman-Waterman, 1999; Ladany, Walker, & Merincoff, 2001). In Ladany, Walker, and Merincoff's study, supervisors who self-reported as using more attractive or interpersonally-sensitive style described themselves as self-disclosing more often, while supervisors' task-oriented style was not significantly related to their self-disclosure. Ladany and Lehrman-Waterman reported that supervisees perceived that supervisors who used more attractive style tended to self-disclose more. Also, supervisees perceived that self-disclosures made by supervisors with the attractive style were more neutral in content; those made by supervisors with the interpersonally-sensitive style were less neutral; and those made by supervisors with the task-oriented style were less about private matters or counseling success. Ladany and Lehman-Waterman speculated that attractive supervisors who use attractive style can diminish hierarchal power differences in the supervisory relationship by their frequent use of self-disclosure.

The relationship between supervisory styles and supervisory working alliance has been explored (Efstation, Patton, & Kardash, 1990; Ladany, Walker, & Melincoff, 2001). Significant positive relationships were found between supervisory styles and the supervisor working alliance from both supervisors' and supervisees' perspectives. Specifically, the attractive style and the interpersonally-sensitive style seem to have higher impacts across different aspects of the supervisory working alliance, while the task-oriented style relates more to a collaborative aspect of working alliance rather than emotional connection. Also, in terms of unique contributions, the attractive style seems to have highest impact across different aspects of the supervisory working alliance.

Researchers have found supervisory styles to be related to supervisory outcomes variables (satisfaction of supervision, perceived impact of supervision, and self-efficacy). The

interpersonally-sensitive style was found to be positively related to supervisees' perceived impact of supervision (Friedlander & Ward, 2004) and to their satisfaction with supervision (Fernando & Hulse-Killacky, 2005). Supervisors' task-oriented style was found to be the most strongly related to supervisees' self-efficacy (Fernando & Hulse-Killacky; Efstation, Patton, & Kardash, 1990). Although these studies suggest that the task-oriented style might be more efficient in promoting supervisees' self-efficacy, this finding might be partly due to the possibility that supervisors' task-oriented style prevented supervisees' tendency to underestimate their own competency (Steward, Breland & Neil, 2001). In addition, Wilkinson and Wagner (1993) used an organizational leadership style model, which the ACT model was adapted from, and found that supervisors' supporting leadership style (low direction and high support) and coaching leadership style (high direction and high support) predict rehabilitation counselors' satisfactions, especially satisfaction with supervision. However, supervisors' directing leadership style (high direction and high support) and delegating leadership style tend to be negatively related to rehabilitation counselors' satisfactions.

Section Summary.

As suggested by the SAS model (Holloway, 1995), supervisory style plays a critical role in supervision. Empirical findings have supported the relationship between supervisory styles and supervision outcomes. Also, researchers have suggested that supervisor styles, roles, and functions are similar concepts and that specific correspondences exist among these concepts, although they are not exactly the same constructs. In this proposed study, the supervisory styles based on the SSI (Friedlander & Ward, 1984) are examined with respect to their relationship to supervisor power bases, as both variables reflect different aspects of power dynamics in clinical

supervision. In the next section, relationships between Friedlander and Ward's supervisory styles and supervisors' power bases are reviewed theoretically and empirically.

Relationships among Supervisor Power Bases and Supervisory Styles

Theoretical Assumptions.

Supervisory styles are the types of communication patterns in supervisory dyads (Friedlander & Ward, 1984; Holloway & Wolleat, 1981). In their interactions, supervisors communicate influences to their supervisees in particular ways which are commonly described in terms of structure (power) and affection (support) (Hart & Nance, 2003; Holloway et al., 1989; Holloway, 1995; Howard et al., 1986; Leary, 1957). Supervisory styles and supervisors' power bases can be considered as two different aspects of the power dynamics in supervision. The SAS model and the ACT model inform specific relationships between these two variables.

As indicated by the SAS model and the ACT model, different supervisory styles/roles/functions are inherent in unique power structures in supervisory interactions (Holloway, 1989, 1995; Howard et al., 1986). In the SAS model, each of the supervisory functions corresponds to certain supervisors' power bases (Holloway, 1995). Supervisors' instructing/advising and evaluating functions are effective when supervisors possess expert, legitimate, reward, and coercive power. Supervisors' supporting function is effective when supervisors possess referent power base. Supervisors' consulting function is effective when supervisors possess expert and referent power.

In the original ACT model, Howard et al. (1986) assumed that counselors need to possess certain power bases similar to those of French and Raven (1959) for their counseling styles to be effective in influencing their clients. For counselors to be effective in using the telling style, they need to have a certain level of coercive, reward, expert, connective, and position powers. For the

teaching style, counselors need personal, expert, reward, and position powers. For the supporting style, counselors must have personal, expert, and reward powers. For the delegating style, they must have information, connective, and position powers. Position power in the ACT model is very similar to legitimate position power as defined by Raven et al. (1998).

Researchers have assumed that the ACT model is applicable to clinical supervision (Hart & Nance, 2003; Howard et al.; Rando, 2001; Sumerall et al., 1998). However, they did not clarify if supervisors use the identical power bases associated with each style as assumed originally for counselors.

Based on descriptions of supervisor styles, roles, and functions and suggested correspondence among them (Bernard, 1979; Friedlander & Ward, 1984; Hart & Nance, 2003; Howard et al., 1986; Holloway, 1995) as described in Supervisory Style section, specific correspondence between supervisory styles and power bases roles could be hypothesized based on the SAS and the ACT models. Although both models inform similar pairing between supervisory styles and power bases, they also disagree somewhat. The attractive style corresponds to consultant role, which in turn corresponds to the ACT model's consulting style and the SAS model's consulting function. These models do not agree on power bases associated with this style. The ACT model's consulting style requires information, connective, and legitimate power (Howard et al.); the SAS model's consulting function requires referent and expert powers (Holloway). In my opinion, descriptors in the SSI (Friedlander & Ward, 1984) for this style, such as *friendly, flexible, trusting, supportive, warm, and open* are directly associated with referent power as the SAS model assumes. However, if supervisors with this seemingly easy-going and less involving approach play a consultant-like function/role, this style can be associated with information and some expert and legitimate powers. The interpersonally-

sensitive style corresponds to the counselor role, which in turn corresponds to the ACT model's supporting style and the SAS model's supporting/sharing functions. Again, these models do not agree on power bases associated with this style. Both the SAS model and the ACT model assumes referent power to be related with this style (Holloway); the ACT model also suggested expert and (personal) reward powers to be related with it (Howard et al.). In my opinion, descriptors of this style in the SSI, such as *intuitive, invested, perceptive, reflective, resourceful, creative, and therapeutic*, describe an emotionally-involving and highly facilitative approach. This type of style can be assumed to require supervisors' not just referent power but also some indirect guidance (expert) and explicit encouragement and validation (personal reward) as suggested by the ACT model. The task-oriented style corresponds to the teacher role, which in turn corresponds to the ACT model's telling style and the SAS model's instructing/advising and monitoring/evaluating functions. The ACT model and the SAS model closely agree on power bases for this style. Both models assume expert, legitimate, reward and coercive powers are required for this style (Howard et al.; Holloway), though the ACT model also assumes connective power. In my opinion, the descriptors for this style on the SSI, such as *structured, goal-oriented, prescriptive, didactic, practical, and evaluative* describe a more an instructive than emotionally-involving approach. This type of style can be assumed to require expert, legitimate, personal reward and coercive powers commonly assumed by these models.

Empirical Studies

The relationship between supervisory styles and supervisors' power bases in clinical supervision has not been directly examined; however, three studies from the leadership literature examined the relationship between similar concepts (Han, Kwon, Stoeberl, & Kim, 1996; Schwarzwald, Koslowsky, & Agassi, 2001; Stoeberl, Kwon, Han, & Bae, 1998). Two other

studies examined supervisors' approaches in supervision and supervisors' influencing characteristics (attractiveness, trustworthiness, and expertness) (Dondenhoff, 1981; Heppner & Handly, 1982).

In the leadership research, Han et al. (1996) and Stoeberl et al.(1998) examined the relationship between university instructors' power bases (referent, expert, reward, coercive, and legitimate) and leadership dimensions (structure and support). Soeberl et al. added Korean female subjects into Han et al.'s original sample to add analysis of sex to the study. In Han et al., the canonical correlation analysis revealed a dimension where a set of power bases and a set of leadership dimensions are related. Each power base and leadership dimension was found to be highly and positively related to a canonical variate of its own set. For leadership dimensions, canonical correlations of structure and support dimension with leadership dimension variate were $r = .98$ and $.91$, respectively. For power base variables, their canonical correlations with power base variate ranged from $r = .68$ to $.92$, except that coercive power was not related to this variate at a meaningful level. Canonical correlations of Personal powers ($r = .92$ for expert and $.84$ for reference) to a power base variate were stronger than those of Position powers ($r = .78$ for legitimate and $.68$ for reward). According to standardized canonical coefficients, Personal powers (expert and, to lesser degree, referent) mostly predicted power base variate uniquely; structure dimension of leadership mostly predicted a leadership dimension variate. No information was provided for the canonical correlation between power base and leadership dimension variates. In addition, regression analyses by Han et al. and by Stoeberl et al. revealed that both leadership dimensions (structure and, to lesser extent, support) were positively predicted by Personal powers (expert and, to lesser extent, referent) and negatively predicted by coercive power. In the study by Han et al., after the impact of culture was controlled, expert and

referent power predicted structure with $B = 1.41$ and $.62$, respectively, and predicted support with $B = .60$ and $.42$, respectively; coercive power predicted structure with $B = -.56$ and predicted support with $B = -.25$. In the study by Stoeberl et al., after impacts of culture and gender were controlled, expert and referent power predicted structure with $\beta = .40$ and $.16$, respectively, and predicted support with $\beta = .29$ and $.22$, respectively; coercive power predicted structure with $\beta = -.15$ and predicted support with $\beta = -.12$. In Han et al., the overall relationships between power bases and leadership dimension were very strong with effect size of $R^2 = .51$ for predicting structure and $R^2 = .44$ for predicting support. Including a cultural variable into regression equations increased R^2 by only $.03$ each for predicting structure and support.

In a study of police captain-officer supervisory dyads, Schwardwald, Koslowsky, and Agassi (2001) examined the relationship between police captains' leadership styles (combinations of high vs. low levels of the transactional and transformational styles) and the effectiveness of their power bases for officers' compliance. They described the transactional leadership style as being more controlling and using external reward/punishment to gain compliance of their members. They defined the transformational leadership style as an approach using more facilitative and inspirational means for gaining compliance. The results revealed that, in general, police captains who used a higher level of transformative leadership utilized Harsh power more successfully in inducing their officers' compliance. Police captains gained no benefit from using higher transformational style in inducing police officers' compliance when these captains also used a high level of the transactional style.

Barbuto, Fritz, and Matkin (2001) also examined the relationship between the transactional/transformational leadership styles of organizational superiors and their power bases as measured by Hinkin and Schrieheim's (1989) instrument. The result of correlation analyses

showed a weak relationship between subscales of superiors' leadership style reported by subordinates and subscales of superiors' power bases reported by superiors. Superiors' reward power and the individual consideration subscale of the transformational style were negatively correlated to each other ($r = -.14$). Superiors' referent power and the management-by-exception subscale of the transactional leader style were also negatively correlated to each other ($r = -.24$). No other pairs of subscales between these variables were significantly correlated to each other. These results suggest that those superiors who are concerned about each subordinate's personal growth are likely to use less reward power; those superiors who are concerned only about remediating subordinates' failures are likely to use less referent power. The weak relationships between these variables might be the result of correlating the superiors' self-reported data and subordinates' self-reported data. In addition, participants were volunteers among those who attended the authors' leadership workshop. Although data were collected before the workshop started, they might be exposed to the cues of the research purposes by the content of the workshop disseminated previously. No psychometric data for the instruments with this study's sample were reported.

In the clinical supervision arena, researchers have examined the relationship of supervisors' influencing characteristics (attractiveness, expertness, and trustworthiness) to supervisors' evaluative (structure) or supportive behaviors. Heppner and Handley (1982) examined the relationship between supervisors' behaviors and supervisors' influencing characteristics (attractiveness, expertness, and trustworthiness) measured by the modified version of CRF. They measured supervisors' behaviors in terms of two types of behaviors. Evaluative-type behaviors include 10 behaviors, and supportive-type behaviors include 7 behaviors. From the supervisees' perspective, bivariate correlation analysis revealed that many of these

supervisors' behaviors were significantly correlated with supervisors' attractiveness, expertness and trustworthiness. More evaluative-type behaviors were related to supervisors' influencing characteristics than supportive-type ones. Also, evaluative-type behaviors tended to be related most strongly to supervisors' trustworthiness and least strongly to expertness. No specific pattern was found in the relationship between supervisors' supportive-type behaviors and supervisors' influencing characteristics. From supervisors' perspectives, the pattern of correlations between supervisors' behaviors and influencing characteristics was similar but much weaker than from supervisees' perspectives. Assuming that trustworthiness is a type of Personal power, the results of this study suggest that both task-oriented style (evaluative-type behaviors) and interpersonally-sensitive style (supportive-type behaviors) might be related to supervisors' Personal powers (influencing characteristics). These results also suggest that supervisors' task-oriented style (high in structure and evaluative) might be more strongly related to supervisors' referent power than expert power for master's level counselor-trainees; a finding contrary to Han et al. (1996) and Stoeberl et al.'s (1998) who found expert power had more impact than referent power.

Dodenhoff (1981) examined the relationship between supervisors' influencing characteristics (total score of attractiveness, expertness, and trustworthiness), intervention methods (direct and indirect), and supervisees' performance measured by both supervisor and clients. Dodenhoff categorized supervisors' influencing methods as: (a) direct type (more structured and less supportive), including providing information and opinions, providing negative feedback and criticism, giving directions and demands, answering supervisees' questions, and providing rewards and punishment, and (b) indirect type (less structured and more supportive), including clarifying or accepting emotional reactions, helping to clarify and

accepting conceptualizations, and asking questions. In terms of supervisors' evaluation of supervisee performance, moderated multiple regression analysis revealed that only supervisors' influencing characteristics had a positive impact on the supervisee performance, after the impact of covariates and supervisors' influencing methods were controlled. In terms of supervisee performance measured by clients' improvement, supervisors' influencing characteristics and influencing method worked as suppressor variables for each other on supervisees' performance. This implied that supervisors' influencing characteristics and influencing method were somehow offsetting each other's impact on supervisees' performance when the performance was measured in terms of client improvement. It is possible that these supervisors did not utilize power bases which were compatible with their supervisory method, resulting in a less than optimal impact on their supervisees' learning. Also, there was no interaction effect of supervisors' influencing characteristics and method- types on supervisees' performance in either supervisees' or supervisors' evaluations.

Stenack and Dye (1982) explore specific behaviors which describe and discriminate supervisor roles (teacher, counselor, and consultant). They found that participants described and discriminated teacher and consultant roles in terms of two mostly independent sets of supervisor behaviors. However, several supervisor behaviors which were attributed to consultant were also attributed to the other roles, and only a few behaviors significantly distinguished consultant role from the others. Similarly, the result of principal component analysis showed the relatively independent nature of teacher and consultant roles, but consultant role was not well distinguished because many supervisor behaviors in the consultant role also loaded on the other roles. From the content analysis of common behaviors over three supervisor roles, Stenack and Dye suggested that supervisors' manner of taking initiative or control while engaging in certain

supervisor behaviors is related to how supervisees perceive their roles, as well as supervisors' choices of focus and goals of intervention.

Section Summary.

The SAS and the ACT models of supervision suggest specific relationships between supervisors' power bases and supervisory styles, which are similar but somewhat different from each other. Results of studies by Han et al. (1996) and Stoeberl et al.(1998) also showed some contradictions with the theoretical assumptions. The findings suggest that supervisors' use of Personal powers are more likely to be positively related to structure and, to lesser extent, support dimensions of supervisors' styles, while Positional powers are weakly and negatively related to structure and, to a lesser extent, support dimensions of supervisory style (only coercive power had a negative impact on supervisory style). When translated into the relationship between supervisory styles on the ACT model and power bases, telling style (high in structure and low in support) is associated with high level of Personal powers and low level of Position powers, compared with other styles. Supporting style (low in structure and high in support) is associated with moderate level of Position powers and Personal power, compared with other styles. Delegating style (low in structure and support) is associated with both high level of Position power and low level of Personal power, compared with other styles. However, these relationships between power bases and supervisory style were not matched with the predictions from the ACT model. Especially, the ACT model suggests that telling model is positively associated with Position powers (legitimate, coercive, and reward), but these studies indicated that this style is associated with lower level of coercive power than the other styles and with no legitimate and reward powers. It might be that structure and support dimensions of supervisory styles fail to tap full range of supervisors' power bases adequately, especially their Harsh aspect.

Barbuto et al. (2001) indicated the transactional/transformational leadership styles have only weak relationship to power bases. The results might indicate that the task-oriented supervisory style and the ACT model's telling style, which seems to be similar to the transactional leadership style, are negatively correlated to supervisors' referent power; the interpersonally-sensitive supervisory style and the ACT model's supporting style, which seems similar to the transformational leadership style, are negatively correlated to supervisors' reward power. The latter relationship between the telling style and reward (negative correlation) was not assumed in the ACT model. Also, these results fail to indicate many positive correlations between these supervisory styles and power bases assumed in the SAS or the ACT models. While there seem to be some similarities, the transactional and transformational leadership styles might be of limited utility in inferring the nature of supervisory styles. In addition, the results of Schwarzwald et al. (2001) implied that certain combinations of supervisory styles and supervisor powers might have differential impacts on supervisors' compliance. Finally, Dondenhoff (1981) implied that supervisors might not utilize supervisory styles and power bases in the optimal combinations for achieving supervisees' development. In this study, because of the theoretical and empirical disagreements in the literature, I utilized the SAS model as a guiding framework for specifying hypothesis, instead of relying on the ACT model, which was originally formulated for counseling.

Chapter Summary

The Purpose and Research Questions of the Proposed Study

The purpose of this proposed study was to examine relationships between clinical supervisors' power bases and supervisory styles. To achieve this purpose, three research questions were proposed. The first research question is: Do clinical supervisors have a unique

set of power bases? Specifically, can unique first-order and higher-order factors be extracted from the Interpersonal Power Inventory (IPI; Raven et al., 1998)? The second research question is: How is each supervisory style related to first-order and higher-order power factors? Specifically, this question asks: (a) if the task-oriented style is positively related to Soft factor and Harsh factors as well as to those first-order factors which include expert, legitimate, personal/impersonal reward and coercive powers, (b) if the interpersonally-sensitive style is positively related to Soft factor and the first-order factor which includes referent power, and (c) if the attractive style is positively related to Soft factor and those first-order factors which include referent and expert powers. The third research question is: Do supervisory styles predict Harsh and Soft factors? Specifically, this question asks: (a) if the task-oriented style significantly predicts Harsh factor, and (b) if the task-oriented, attractive, and interpersonally-sensitive styles significantly predict Soft factor after the impact of Harsh power is controlled.

The Historical Context of the Proposed Study

According to the literature review, clinical supervisors' power bases and supervisory styles are both critical elements of the supervision process. Both theoretical and empirical studies indicated a relationship between these variables and supervisory outcomes. The literature also revealed that both power bases and supervisory styles are composed of correlated sub-constructs within each variable. In terms of power bases, both theory and empirical studies indicated one-way impact of Harsh power factor and Harsh-type power bases on Soft power factor and Soft-type power bases. Pierro et al. (2008) reported positive correlations between Harsh and Soft factors. However, what is known so far about the relationship between supervisors' power bases and supervisory styles is limited. Theoretically, both the ACT model and the SAS models assume a direct relationship between supervisory styles and power bases.

However, these models do not agree on which power bases are associated with each supervisory style. It appears that no researcher has directly tested the relationship between power bases and supervisory styles. Some existing studies which indirectly tested this in terms of structure and support dimensions of supervisory styles provided results which did not entirely agree to the models' prediction. These studies seemed to fail to examine a full range of associations between power bases and supervisory styles. The results of literature review in this chapter are summarized in Figure1.

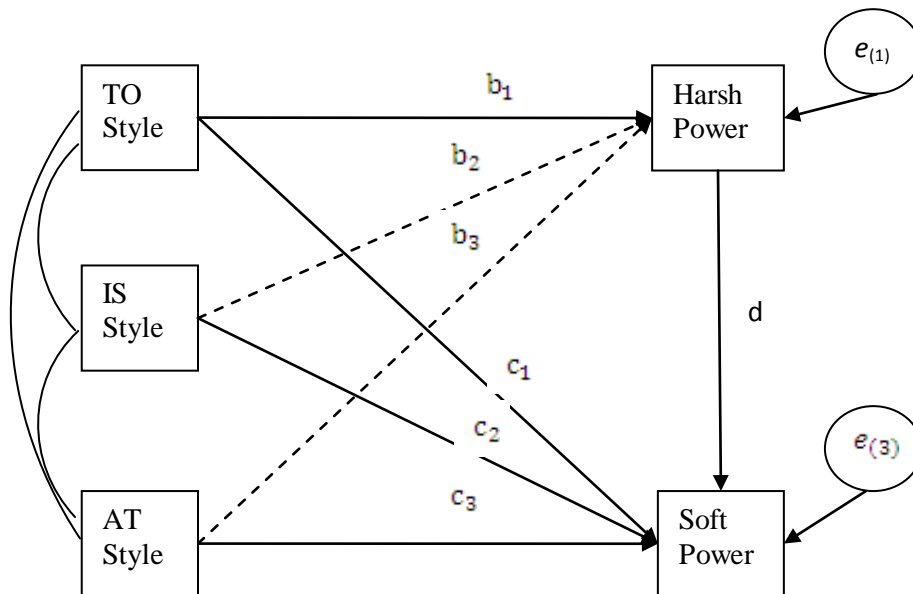


Figure 1. *TO*, *IS*, and *AT Style* refer to the task-oriented, interpersonally-sensitive, attractive style, respectively. Also, b , c , and d , refer to standardized regression coefficients; e refers to errors.

CHAPTER 3

METHODOLOGY

Purpose of the Study

The purpose of this study was to explore the power dynamics of clinical supervision. Specifically, nature of power bases in clinical supervision and the relationship between supervisors' power bases and supervisory styles were explored. Nature of power bases was examined by factor analyses in terms of first-and higher-order power base factors on the Interpersonal Power Inventory (IPI; Raven et al., 1998) unique to clinical supervision. Then, relationship between these first- and higher-order power factors and supervisory styles (Supervisory Style Inventory; Friedlander & Ward, 1994) was explored by correlation analyses and regression analyses. In correlation analyses, simple Pearson's correlation coefficients were analyzed between each of three supervisory styles and the first-/higher-order power base factors. In regression analyses, each higher-order power base factor was regressed on the three supervisory styles.

Research Questions

Three main research questions with their related sub-questions or hypotheses were:

Research Question 1. What is the factor structure of the Interpersonal Power Inventory (IPI; Raven et al., 1998)?

Research Question 1a. Can unique first-order factors for clinical supervisors be extracted and identified from the 33 items included in the IPI-CV-U, based on exploratory factor analysis? Because previous studies of school psychologists (Erchul, Raven & Ray, 2001), college instructors (Elias & Mace, 2005), and business/organization (Raven et al., 1998) showed

different sets of first-order factors for these sample populations, no a priori hypothesis was established for this research question.

Research Question 1b. Can two higher-order factors (second-order factors: Soft and Harsh) be extracted and identified from the first-order factors, based on exploratory higher-order factor analysis? Many studies which used the IPI reported the existence of Soft and Harsh factors, although the structure of each higher-order factor was slightly different from study to study (see chapter 2). However, these studies did not agree as to which individual power bases were included into each higher-order factor. Also, it is not known what first-order factors emerge for clinical supervisors. Therefore, no a priori hypothesis was established for this research question.

Research Question 2. Are there relationships between supervisory styles and power factors as predicted by the SAS model (Holloway, 1995)?

Hypothesis 2a. There are significant correlations between each supervisory style and each first-order power factor. Specifically, the task-oriented style is positively correlated to those first-order power factors which include expert, legitimate, personal/impersonal reward and coercive powers. The interpersonally-sensitive style is positively correlated to those first-order power factors which includes referent power. The attractive style is positively correlated to those first-order factors which include referent and expert powers.

Hypothesis 2b. There are significant correlations between each supervisory style and each higher-order power factor. Specifically, the task-oriented style is positively correlated to Soft factor and Harsh factors. The interpersonally-sensitive style is positively correlated to Soft factor. The attractive style is positively correlated to Soft factor.

Research Question 3. Do supervisory styles predict Harsh and Soft factors?

Hypothesis 3a. The task-oriented style significantly predicts Harsh factor.

Hypothesis 3b. The task-oriented, attractive, and interpersonally-sensitive styles significantly predict Soft factor after the impact of Harsh power is controlled. Hypotheses 3a and 3b are based on the assumption that supervisors who use each supervisory style forms supervisees' perception of unique combination of supervisors' Harsh and Soft factors. These hypotheses are also formulated based on the specific relationships between supervisory styles and Harsh and Soft factors based on conceptual map derived from literature (see Figure 1).

Participants

The population of this study was comprised of doctoral, specialist, and master's level counseling students who were supervisees. The target population was delimited to counseling students enrolled in counseling programs which were CACREP-accredited or non-CACREP-accredited. Among these students, the accessible population was further limited to those supervisees listed in the CACREP program directory (CACREP, 2008) or Counselor Preparation (12th ed.; Schweiger, Henderson, & Clawson, 2008). This lists were updated based on each program's internet site. Although exact numbers of programs were unknown due to some discrepancies among these sources, about 1027 programs (850 master's, 90 specialist, and 87 doctoral programs) were asked to participate in this study via e-mail invitation. Student participants were required to have taken counseling practicum or internship and to have developed a working alliance with their supervisors through at least five consecutive weeks of individual or triadic supervision sessions at the time of data collection, or to have met these criteria through their counseling practicum or internship within the last three years. The accessible population was reached by invitation e-mails through an online survey service (Survey MonkeyTM) (see Data collection procedure section for detail). Those who met the conditions and

returned the online questionnaire packet were considered for inclusion in this study. Initially, 1049 students responded to the online-questionnaire packets. To avoid potential biases, supervisor type (academic or onsite) was limited to academic supervisors who were either professors or Ph.D students ($n = 510$). Also, program type was limited to CACREP-accredited and non-CACREP-accredited counseling programs ($n = 953$). As a result, 509 participants were retained. After eliminating 17 participants who stopped taking the questionnaire with demographic questions, 492 participants were considered for further analyses. Because e-mail invitations were distributed to potential participants by program directors/coordinators, it was not known how many students received these invitations. Therefore, the return rate of the online-questionnaire packets was unknown.

Instruments

Instruments in this study included a demographic questionnaire, the modified version of the Interpersonal Power Inventory (IPI; Raven, Schwarzwald, & Koslowsky, 1998) and the Supervisory Style Inventory (SSI; Friedlander & Ward, 1984). These measures are described below with the related validity and reliability information provided for each.

Demographic Questionnaire. A demographic questionnaire was created for this study. Participants were asked to specify their sex, age, race, program concentration (community, counselor education and supervision, gerontological, marital, couple, and family, mental health, student affairs practice in higher education with a college counseling emphasis, student affairs in higher education with a professional practice emphasis, and school; CACREP, 2001), level of training (practicum, first internship, second internship, post master internship which includes doctoral practicum and internships), cumulative hours of past individual supervision experience, and amount of time in weekly supervision (minimum of one hour weekly). In addition,

participants were required to select one supervisor, about whom they answered the IPI-CV-U and the SSI, and were also asked the sex, race, and status (Ph.D student, academic instructor, full time professor, or on-site supervisor) of the supervisor selected.

The Interpersonal Power Inventory-Counselor Version-Usage (IPI-CV-U). The Interpersonal Power Inventory (IPI) is a 33-item instrument with a 7-point Likert scale ranging from 1 (*definitely not a reason*) to 7 (*definitely a reason*). It was originally developed by Raven et al. (1998) to measure 11 types of superiors' potential power resources with which their subordinates are likely to comply. The IPI is based on Raven's (1992, 1993) Interpersonal Power Interaction Model (IPIM). Raven broadened French and Raven's (1959) taxonomy of the five power bases of superiors into 14 bases by dividing some of the original five bases, and formulated a model, the IPIM. The IPI includes 11 of the 14 power bases, which are (a) impersonal reward, (b) impersonal coercion, (c) personal reward, (d) personal coercion, (e) legitimate equality, (f) legitimate reciprocity, (g) legitimate position, (h) legitimate dependence, (i) referent, (j) expert, and (k) information.

In a study by Raven et al. (1998), psychometric properties of the IPI were examined in two phases with two different samples. The first phase used a sample of 317 college students in the U.S., and the merged data from both subordinate and supervisor versions of the IPI were used for analyses. Coefficient alphas were reported to be in an acceptable range, falling between .72 and .86 for both superior and subordinate versions of the IPI, except for .67 for legitimate reciprocity. The second phase used a sample of 101 hospital staff in Israel for cross-validating the first study with the subordinate version of the IPI. Coefficient alphas of the subordinate version of the IPI in the second phase were between .71 and .83, except .62 for personal coercion, .62 for legitimate dependence, and .68 for legitimate position. Similar levels of

internal consistencies were found in studies of higher education (Ellias & Loomis, 2004) and school consultation (Erchul, Raven, & Ray, 2001). In addition, the validity of the IPI was demonstrated by the significant relationships between the IPI and outcome variables, such as subordinates' commitment and satisfaction (Koslowsky, Schwarzwald, & Ashuli, 2001; Raven, Schwarzwald, & Koslowsky, 1998).

Studies which utilized the IPI consistently reported two higher-order factor solutions (i.e., Harsh and Soft factors) (e.g., Koslowsky, Schwarzwald, Ashuli, 2001; Raven et al., 1998; Schwarzwald, Koslowsky, & Agassi, 2001; Schwarzwald, Koslowsky, & Ochana-Levin, 2004). The structures of the two higher-order factors in these studies were basically similar but somewhat different. For example, in two phases of Raven et al. (1998), the IPI was found to have almost identical two higher-order factors of Soft and Harsh. In the first phase, Soft and Harsh factors were found to explain 34.7 % and 24.7% of all the variance in the IPI, respectively and in the second phase, 20.3% and 39.8% of the variance, respectively.

In order to fit the IPI to this study, the IPI-Consultant-Usage version (the IPI-CT-U; Wilson, 2005) was adapted. The IPI-CT-U was adapted from the IPI-Consultant (the IPI-CT; Erchul, Raven, & Ray, 2001; Erchul, Raven, & Whichard, 2001), which was in turn adapted from the original IPI (Raven et al., 1998) to be used for school psychologist-teacher consultation dyads. The IPI-CT-U has 33 items. The descriptors of the 7-point Likert-scale were changed to 1 (*extremely unlikely to use*), 2 (*very likely to use*), 3 (*somewhat unlikely to use*), 4 (*neither likely nor unlikely to use*), 5 (*somewhat likely to use*), 6 (*very likely to use*), and 7 (*extremely likely to use*). The reliability of each of 11 power bases measured by coefficient alpha ranged from .90 to .91; reliability of higher-order factors (Soft and Harsh) were both .89. The IPI-CT-U is different from the original IPI and the IPI-CT in that it was designed to measure consultants'

likelihood of using power bases to achieve consultees' compliance, not effectiveness of consultants' power bases to achieve their consultees' compliance. In this study, two major modifications were applied to the IPI-CT-U. *School psychologists* and *consultant* were exchanged to *clinical supervisors*, *teachers* to *counselor-trainees*, and *consultees* to *supervisees*. Also, examples in the introduction were changed to reflect clinical supervisors' power base usage. The modified version of the IPI is called the IPI-Counselor Version-Usage (IPI-CV-U).

The Supervisory Style Inventory-Trainee. Friedlander and Ward (1984) developed the Supervisory Style Inventory (SSI) to measure supervisors' typical styles of communicating and providing supervision for their supervisees (see Appendix C). The SSI was constructed both with a theoretical and an empirical base, but it was not constrained to specific psychotherapy or counseling orientations. Both the supervisee version (SSI-T) and supervisor-version (SSI-S) contain 25 Likert-scale items. Each item is composed of a one-word adjective, such as *friendly* or *intuitive*, and has a 7-point scale from 1 (*not very*) to 7 (*very*), with only two descriptors of *not very* and *very* at the lowest and highest extremity, respectively.

The SSI has three subscales, which were identified by a factor analysis (Friedlander & Ward, 1984). The first subscale is the task-oriented style, which is the supervisors' instructive and systematic approach in supervision. The second subscale is the interpersonally-sensitive style, which is the supervisor's perceptive and relationship-focused approach in supervision. The third subscale is the attractive style, which is the supervisor's pleasant and accommodating approach to supervision. In the process of developing the SSI, Friedlander and Ward conducted a series of studies which tested the reliability and validity of data generated from the use of the SSI. For reliability, the SSI-T was reported to have high internal consistency with Cronbach's alpha ranging from .84 to .93 for the three subscales. In addition, the test-retest reliability of

SSI-T was generally stable over two weeks. Whole scale test-retest reliability was .92 and test-retest reliability of each subscale ranged from .81 to .94.

The convergent validity of SSI-T was demonstrated with a sample of 90 doctoral level supervisees with significant correlations between SSI-T and the subscales of Stenak and Dye's (1982) instrument, which measures supervisors' roles as consultant, counselor, and teacher (Fredlander & Ward, 1984). Though subscales of the two instruments did not correlate as Friedlander and Ward predicted, there were moderate correlations between the subscales of these instruments, with most of the correlation coefficients ranging from .40s to .60s.

The largest weakness of the SSI is its potentially high correlations among the subscales, especially between the interpersonally-sensitive style and the attractive style. In two phases of Friedlander and Ward's (1984) study, the interpersonally-sensitive style and the attractive styles moderately correlated with each other ($r = .61$ and $.52$), but the task-oriented style was only weakly correlated with the attractive and interpersonally-sensitive styles (r ranging from $.09$ to $.27$). Similarly, in Ladany and Lehrman-Waterman (1999), the correlation between the interpersonally-sensitive style and attractive style was moderately high ($r = .65$); the correlations between task-oriented style and the attractive style and between the task-oriented style and the interpersonally sensitive style were weaker with $r = .15$ and $.39$, respectively. However, some studies found higher correlations between the subscales (Herbert & Ward, 1995; Ladany & Lehrman-Waterman, 1999; Steward, Breland, & Neil, 2001). In Herbert and Ward, the correlations among the subscales ranged from $r = .64$ to $.85$. Also, in Steward, Breland, and Neil, the correlation between the interpersonally-sensitive style and attractive style was $r = .80$. Interestingly, in Ladany, Marotta, and Muse-Burke (2001), the interpersonally-sensitive style and attractive style were negatively correlated at $r = -.65$. In summary, the existing research

supports that the SSI possesses appropriate psychometric properties for research purpose.

However, interpretation of research findings should be done carefully because of potential high correlations between its subscales.

Data Collection Procedures

Approximately 1027 counseling or counseling psychology programs (850 master's, 90 specialist, and 87 doctoral programs) were invited to participate in this study. These programs were selected based on the CACREP program directory (CACREP, 2008) or Counselor Preparation (12th ed.; Schweiger, Henderson, & Clawson, 2008). Lists also were updated through each program's internet site. Exact numbers of programs were unknown due to some discrepancies these sources. Participants were eligible to participate in this study if they met the following conditions: (a) had completed more than five consecutive supervision sessions in their counseling practicum or internship at the time of data collection or (b) had completed more than five consecutive supervision sessions in their counseling practicum or internship within the last three years before the data collection. As a first step, coordinators of all counseling programs in the aforementioned list were contacted for possible participation in this study via e-mail. They were notified about the purpose and nature of this study and were asked to participate. Once they agreed to participate, the program directors were asked to distribute the e-mail message to request participation of their student body. The content of the email message included the following: (a) the purpose of the study, format of study (i.e., online-survey), possible risks and benefits, voluntary nature of participation, confidentiality, contact information of researchers, and an incentive for agreeing to participate and (b) a link to web-based packet of materials through an on-line survey service company (i.e., Survey Monkey™) (see Appendix E). The incentives were five music players (iPods) for a cost of approximately \$150.00 each. A lottery

was used so that all participants had a chance at winning. Five participants who had volunteered to provide their names and addresses for the lottery were randomly selected from the pool of all respondents, and the prizes were sent to them.

The confidentiality of participants was guaranteed by the use of an online questionnaire packet which was secured by an SSL encryption. The questionnaire packet did not include identifiable information. After participants completed the on-line question packet, another on-line survey unit was designed to show up automatically. Those who wished to participate in winning the incentive were asked to present name and address on this separate on-line survey unit. Anonymity was ensured by storing the participants' responses to the questionnaire packet and their personal information independently on these separate online survey units. Participants were notified that the personal information (name and address) were deleted after this study was completed.

The questionnaire packet was administered via Survey MonkeyTM. The online packet included the following: (a) an informed consent (see Appendix F), (b) the demographic questionnaire (see Appendix F), (c) the Interpersonal Power Inventory-Counselor Version-Usage, and (d) the Supervisory Style Inventory (Friedlander & Ward, 1984). To control for the order effect of the instruments, two versions of the online-packet were used. The first and second part of the two versions contained an informed consent and the demographic questionnaire, while the remaining parts contained IPI-CV-U, followed by SSI, in the first version and vice versa in the second version. The two versions of the survey packets were randomly assigned to a list of the institutions which are CACREP-accredited programs, instead of a list of counseling programs themselves because some universities have more than one program.

When responding to a survey packet, a participant were asked to complete the three instruments in terms of their perceptions as a supervisee of one supervisor with whom they completed at least five consecutive supervision sessions at the time of data collection or with whom they had completed supervision at least five consecutive supervision sessions within the past three years. The requirement of at least five consecutive supervision sessions was chosen to ensure the development of a working alliance, strong enough to induce a positive impact on outcomes of supervision. According to counseling literature, the therapeutic working alliance between a counselor and a client is developed during early stage of therapy (i.e., the first 2-5 sessions) at a level that relatively stable prediction of its impact on outcome can be made (Castonguay, Constantino, & Holtforth, 2006; Horvath & Greenberg, 1986, 1989). The e-mail invitation was sent to each program director around the middle of the semester when at least five academic weeks have pasted in the most counseling programs. Reminder e-mail notices were sent to each program director a week after the due date.

Survey MonkeyTM automatically downloaded the data into an Excel file, separately for each of the six versions of the online-survey packages. These individual Excel files were merged into one Excel file. This merged data were used for analyses.

Preliminary Analysis

Preliminary analysis was conducted separately for Research Questions 1, 2, 3 and 4. This analysis was conducted based on the data cleaning procedure by Tabachnick and Fidell (2007). For Research Question 1, the assumptions of the factor analysis (principal axis analysis) were examined on the 33 items and means of 11 subscales of the IPI-CV-U. The assumptions for data analysis were checked in terms of : (a) sample size, (b) normality of distributions of individual variables (i.e., each of 33 items and first-order factors of the IPI-CV-U), (c) univariate and

multivariate outlier, (d) pair-wise linearity of score of items or first-order factors, (e) singularity (i.e., extreme level of multicollinearity), and (f) outliers among variables (i.e. variables with very low correlations with a set of the other variables).

Similarly, for research questions 2, 3, and 4, general screening procedures for ungrouping data (Tabachnik & Fidell, 2007) were used for examining the assumptions of each analysis based on both subscale scores of the SSI and first-order and higher-order factor scores of the IPI-CV-U. The assumptions for each analysis (simple/multiple correlation, multiple regression, and canonical correlation analysis) were checked in terms of : (a) missing data, (b) sample size, (b) normality, linearity, and homoscedasticity of variables or residuals, (c) univariate and multivariate outlier, (e) multicollinearity and singularity (i.e. extreme level of multicollinearity), and (g) ratio of cases to independent variables. Also, significant tests were conducted to detect systematic relationships between demographic variables of participants and of their supervisors and the main variables of this study (first-order and higher-order power factors and supervisory styles). For categorical demographic variables (participants' sex, race, level of training, and program concentration; supervisors' sex, race, and status), ANOVAs were used. For continuous demographic variables (participants' age, cumulative hours of past individual supervision experience), Pearson's correlation coefficients were used.

Any issue which was identified in the preliminary analysis were treated appropriately, including eliminating inappropriate data, controlling for demographic variables which were found to be related to main variables, and reporting unfixable issues as limitations. Finally, all the significant tests in preliminarily analysis for research question 1 to 4 were conducted at the alpha level of .001 in order to control for family-wise Type I errors.

Main Analyses

Research Question 1 was examined by conducting higher-order factor analysis in two steps (Gorsuch, 1983; 1997). In the first step, the first-order factors were extracted based on individual items on the IPI-CV-U as variables by a factor analysis with oblique rotation. The first-order power factors were expected to correlate with each other because literature has suggested the existence of higher-order factors (Harsh & Soft; see chapter 2). In the second step, the higher-order power factors were extracted based on the first-order factors as variables by factor analysis with oblique rotation. The higher-order factors (Harsh & Soft) were also expected to correlate with each other, according to past literature (see chapter 2).

Research Question 1a. Can unique first-order factors for clinical supervisors be extracted and identified from the 33 items included in the IPI-CV-U, based on exploratory factor analysis?

Analysis. Principal axis factor analysis with a promax rotation was conducted for the scores of individual 33 items on the IPI-CV-U. The factors were identified based on (a) the size of eigenvalues higher than one, (b) a scree test, and (c) interpretability of emerging factors. The factor analysis was exploratory in nature because this study is the first attempt to apply the IPI to counseling supervision. Past research revealed that different first-order factor structures of power bases on the IPI exist for different settings, such as an eight-factor solution in a business setting (Raven, et al., 1998), a six-factor solution in higher education (Elias & Mace, 2005), and a four-factor solution in school consultation (Erchul, Raven, & Ray, 2001). The interpretation of first-order factors was based on pattern matrix from the factor analysis.

Research Question 1b. Can two higher-order factors (second-order factors: Soft and Harsh factors) be extracted and identified based from the first-order factors as variables, based on exploratory higher-order factor analysis?

Analysis. Principal axis factor analysis with a promax rotation was conducted on correlation matrix of the first-order factor on the IPI-CV-U. A two-factor solution was expected based on the literature (see chapter 2). However, two-factor solution or other possible solutions were evaluated based on the size of eigenvalues higher than one, (b) a scree test, and interpretability of higher-order factors. In addition, Schmid-Leiman solution (SL solution; Schmid & Leiman, 1957) was applied to investigate the relationship between individual items and factors at different levels by using the SPSS syntax provided by Wolff and Preising (2005). With SL solution, information about both the contribution of higher-order factors on individual items and the additional contribution of first-order factors on individual items after the former is controlled can be obtained (Wolff & Preising). The interpretation of higher-order factors was based on both pattern matrixes from the factor analyses and a modified pattern matrix derived by SL solution.

In research question 2, relationships between supervisory styles and power factors were examined by correlation analysis. These relationships were tested on two sub-hypotheses based on first-order and higher-order power factors obtained by Research Question 1.

Hypothesis 2a. There are correlations between each supervisory style and each first-order power factors. Specifically, the task-oriented style is positively correlated to those first-order power factors which include expert, legitimate, personal/impersonal reward and coercive powers. The interpersonally-sensitive style is positively correlated to those first-order power factors which includes referent power. The attractive style is positively correlated to those first-order factors which include referent and expert powers.

Hypothesis 2b. There are correlations between each supervisory style and each higher-order power factors. Specifically, the task-oriented style is positively correlated to Soft factor

and Harsh factors. The interpersonally-sensitive style is positively correlated to Soft factor. The attractive style is positively correlated to Soft factor.

Analysis. Correlation analysis was conducted with Spearman's correlation coefficients between subscale of the SSI and the first-order/higher-order factors separately. Because two demographic variables (supervisor type and supervisee sex) were found to be related to the main variables in the preliminary analysis, correlation analyses were conducted separately for four subgroups (professor vs. ph.d. student supervisors; supervisors of male supervisees vs. supervisors of female supervisees) to control the impact of these demographic variables. In order to control for family-wise type I error, Bonferroni procedure (Dunn, 1961) was utilized for all the analyses of hypotheses 2a-2b.

Research Question 3 asks if supervisory styles predict higher-order power factors (Harsh and Soft). In this study, it is assumed that supervisors' use of each supervisory style leads to supervisees' perception of specific power bases used by supervisors. Therefore, supervisors' use of power bases at the higher-order factor level was regressed to supervisory styles. Two hypotheses were made based on the expected relationship between supervisory styles and higher-order power bases in the conceptual map (see Figure1).

Hypothesis 3a. The task-oriented style significantly predicts Harsh factor.

Analysis. Hierarchical multiple regression analysis was conducted for predicting Harsh factor from three supervisory styles. Based on the conceptual map (see Figure 1), a supervisory style (the task-oriented style) was expected to predict Harsh factor. Because two demographic variables (supervisor type and supervisee sex) were found to be correlated with the main variables in the preliminary analysis, these demographic variables were included in the

regression in the first step to control their impact on the dependent variable. Supervisory styles were added as predictors in the second step. The regression equations were following.

$$Y_{\text{Harsh}(1)} = b_{0(1)} + b_{1(1)}X_{\text{SRType}} + b_{2(1)}X_{\text{SESex}} + e_{(1)} \quad (1)$$

$$Y_{\text{Harsh}(2)} = b_{0(2)} + b_{1(2)}X_{\text{SRType}} + b_{2(2)}X_{\text{SESex}} + b_{3(2)}X_{\text{TO}} + b_{4(2)}X_{\text{IS}} + b_{5(2)}X_{\text{AT}} + e_{(2)} \quad (2)$$

Where SRType, SESex, TO, IS, and AT refer to supervisor type, supervisee sex, task-oriented style, interpersonally-sensitive style, and attractive style.

Hypothesis 3b. The task-oriented, attractive, and interpersonally-sensitive styles significantly predict Soft factor after the impact of Harsh factor is controlled.

Analysis. Hierarchal multiple regression analysis was conducted for predicting Soft factor from three supervisory styles and Harsh factor. Based on the conceptual map (see Figure 1), both supervisory styles predict Soft factor partly mediated by power factors. Because two demographic variables (supervisor type and supervisee sex) were found to be correlated with the main variables in the preliminary analysis, these demographic variables were included in the regression in the first step to control their impact on the dependent variable (Soft factor).

Supervisory styles were added as predictors in the second step. Finally, Harsh factor was added as an predictor in the third step. The equations were following.

$$Y_{\text{Soft}(3)} = c_{0(3)} + c_{1(3)}X_{\text{SRStyle}} + c_{2(3)}X_{\text{SESex}} + e_{(3)} \quad (3)$$

$$Y_{\text{Soft}(4)} = c_{0(4)} + c_{1(4)}X_{\text{SRStyle}} + c_{2(4)}X_{\text{SESex}} + c_{3(4)}X_{\text{TO}} + c_{4(4)}X_{\text{IS}} + c_{5(4)}X_{\text{AT}} + e_{(4)} \quad (4)$$

$$Y_{\text{Soft (5)}} = c_{0(5)} + c_{1(5)}X_{\text{SRStyle}} + c_{2(5)}X_{\text{SESex}} + c_{3(5)}X_{\text{TO}} + c_{4(5)}X_{\text{IS}} + c_{5(5)}X_{\text{AT}} + d_{(5)}X_{\text{Harsh}} + e_{(5)} \quad (5)$$

For analyses for Hypotheses 3a and 3b, the significant tests were conducted first at the level of regression models. Increment of multiple regression coefficients (ΔR^2 s) were tested for these models at each step. Regression models at first step (Equation 1 for Hypothesis 3a and Equation 3 for Hypothesis 3b) were tested if predictors (demographic variables) improve prediction of corresponding dependent variable over no-predictor model (i.e., null model). The models at subsequent steps were tested if the predictors added to these models improve prediction of the dependent variable over the corresponding models at the immediately preceding step. Significance of individual main predictors (supervisory styles and Harsh factor) was tested only within the significant model at the highest step for each dependent variable. In order to control for type I error inflation, Bonferroni procedure was used; each of the five model comparisons was tested at alpha level of $.01 = (.05/5)$. Each significant test for individual coefficients was also conducted at alpha level of $.01$.

CHAPTER 4

RESULTS

The results of this study are reported in two parts. In part 1, the results of factor analyses on the IPI-CV-U, as related to hypothesis 1, are described. In part 2, the results are described of correlation analyses for hypothesis 2 and regression analyses for hypothesis 3 on the relationship between clinical supervisors' supervisory styles and their usage of power base factors. The overall summary of the results follows last.

General Participants.

Initially, 1049 participants responded to the online questionnaire packet for this study. Because clinical supervisors in an academic setting and those in a practicum/internship site may have different types of power bases available, 510 participants who selected on-site supervisors were eliminated from further analyses. For the same reason, 96 participants who identified themselves being from a *counseling psychology* program or *other* program were eliminated. Also, 17 participants who stopped taking the online questionnaire at the section of demographic questions were eliminated. As a result, responses from 492 participants who selected academic supervisor (professors and Ph.D. students) and identified themselves as being from CACREP- or non-CACREP-accredited counseling programs were retained for further analysis.

Part 1: Result of Factor Analysis

Preliminary Analysis

Preliminary analyses were conducted to examine the nature of univariate and bivariate distributions of 33 IPI-CV-U items and the assumptions of factor analysis. Of 492 responses, 95 (19.3%) were incomplete on the IPI-CV-U part of the questionnaire packet. Because participants were forced to answer each item, any missing data were the result of participants' stop taking the

online questionnaire, leaving missing values on all the subsequent items. This resulted in cumulatively larger numbers of missing data in the variables in order of presentation, making it difficult to find if missing data were randomly distributed in each variable or not. For example, participants who did not answer to Item 10 also did not answer Item 15. This made it impossible to find if those participants with a missing value on Item 10 and those without a missing value on Item 10 rated Item 15 differentially or not (to test randomness of missing data of Item 10 with regard to Item 15) because no data on Item 15 were available for those with a missing value on Item 10. Because I lacked sophisticated software for analyzing and substituting appropriate data for missing values, I decided to eliminate those incomplete responses although a relatively large portion of responses were missing in some variables (about 20%). The result of logistic regression analysis with demographic variables as independent variables and membership of missing data (missing vs. no-missing) as dependent variable revealed no significant difference between missing data and non-missing data in terms of demographic variables. Therefore, eliminating subjects with missing values did not confound the result of the main analyses at least in terms of demographic variables.

Distributions of the IPI-CV-U items were examined by histogram, bivariate scatter plots, and descriptive statistics. Univariate distributions were not normally distributed for many items on the IPI-CV-U, as expected from the Likert scale items as variables. Item-level variables are less suited for factor analysis partly because of their tendency of skewed distribution (Gorsuch, 1997). As Gorsuch pointed out, skewed distribution often result because item-level variables are less accurate with a limited numbers of ordered-categories (an ordinal variable) and because some items were often designed to be answered by either large or low percentage of respondents to differentiate individuals better as a scale (a set of items). In this study, some items had

negatively skewed (skewness index < -1.0), J-shaped, or partially Platykurtic distributions. Selected numbers of bivariate scatter plots among those items with non-normal distributions showed a moderate level of non-linearity in some pairs of variables. Although transformations of these variables were attempted as recommended by Tabachnick and Fidell (2007), not all transformation successfully normalized the shape of distributions. Because the results of the factor analyses with and without transformed items were similar, it was decided to continue analyses with original (untransformed) items, although the analyses might suffer from weakened relationships among variables.

Outliers were screened in terms of both univariate and multivariate forms. Univariate outliers were identified by the criteria of (a) z -scores larger than 3.0 SD in absolute value or (b) scores in original unit less than 3.0 inter-quartile range (IQR) from the 25th PR or more than 3.0 IQR from the 75th PR on the boxplots produced by SPSS (described as *extreme* outlier) (Cohen, Cohen, West, & Aiken, 2003; Lunneborg, 1994; Steven, 2002). A total of 33 participants were identified to have at least one univariate outlier in their responses on the IPI-CV-U items. These participants were deleted from further analyses, because outliers could cause serious biases in the results of correlation-type parametric analyses including factor analysis (Tabachnick & Fidell, 2007). After the deletion, only one variable (item 28) still showed skewness index less than -1.0. Next, multivariate outliers were screened on the IPI-CV-U items on the criteria of $h_{ii} \geq 2*(k/N)$, where h_{ii} is leverage, k is numbers of items, and N is numbers of subjects. After three waves of screening, 13 participants were identified to have at least one multivariate outlier. Consequently, a total of 46 participants were deleted from the further analyses due to either univariate or multivariate outliers. The results of a stepwise discriminant analysis showed a composite of eight IPI-CV-U items significantly differentiated the outliers from non-outliers at $\alpha = .001$.

Outliers had lower means on these items than non-outliers: three items in the Expert scale, and one item each in Legitimate Reciprocity, Legitimate Equity, Personal Reward, Personal Coercive, and Impersonal Reward scales.

Multicollinearity and outliers among variables were tested by examining the value of tolerance. Each of the variables has acceptable multiple correlations (neither too low nor too high) with the rest of variables as a set, as evidenced by tolerance index ranging from .283 to .697 (or squared multiple correlation ranging from .717 to .303). Therefore, no multicollinearity or outliers among variables were indicated in this data.

In general, preliminary analyses showed mild to moderate level of violation of linearity and homoscedasticity assumption among some variables for factor analyses. Incomplete responses and outliers were detected and eliminated. Finally, the responses of 351 participants were selected for factor analyses.

Participants.

The descriptive statistics for demographic information of participants in this study are displayed in Table 1. The majority of participants were Caucasian female in CACREP-accredited counseling programs. The most common specialty areas for this sample are counselor education (29.3%), community (19.1%), school (20.8%), and mental health (15.7%). About half the participants were enrolled in master's practicum (45.9%); the other half were enrolled in master's internship (1st and 2nd) and post-master's practicum/internship (54.1%).

Table1

Participants' (Supervisees) Demographic Information (N = 351)

Demographic Variable			
Age	<i>Mdn</i> = 28.0 (<i>IQR</i> = 14.0); <i>M</i> =32.2 (<i>SD</i> =10.2)		
Sex			
Male	<i>n</i> = 56	(16.0%)	
Female	<i>n</i> = 295	(84.0%)	
Race			
Caucasian	<i>n</i> = 277	(78.9%)	
African American	<i>n</i> = 39	(11.1%)	
Hispanic	<i>n</i> = 15	(4.3%)	
Asian	<i>n</i> = 14	(4.0%)	
Native American	<i>n</i> = 1	(0.3%)	
Others	<i>n</i> = 5	(1.4 %)	
Status			
Doctoral	<i>n</i> = 50	(14.2%)	
Specialist /Post-Master's	<i>n</i> = 19	(5.4%)	
Master's	<i>n</i> = 282	(80.3 %)	
Accreditation			
CACREP	<i>n</i> = 323	(92.0%)	
NON-CACREP	<i>n</i> = 28	(8.0%)	
Program types			
Counselor Education	<i>n</i> = 103	(29.3%)	
Community	<i>n</i> = 67	(19.1 %)	
Career	<i>n</i> = 1	(0.3 %)	
School	<i>n</i> = 73	(20.8%)	
Mental Health	<i>n</i> = 55	(15.7%)	
Marriage & Family	<i>n</i> = 20	(5.7 %)	
SA-College	<i>n</i> = 8	(2.3 %)	
SA-Professional	<i>n</i> = 1	(0.3%)	
Others	<i>n</i> = 23	(6.6%)	
Training Level			
Master's Practicum	<i>n</i> = 161	(45.9 %)	
Master's 1 st Internship	<i>n</i> = 60	(17.1 %)	
Master's 2 nd Internship	<i>n</i> = 74	(21.1%)	
Post-Master's	<i>n</i> = 56	(16.0%)	
Practicum/Internship			

Note. SA refers to student affairs.

The descriptive statistics for demographic information of supervisors selected by participants were summarized in Table 2. The majority of participants included in part 1 selected their current supervisors, who were primarily Caucasian female professors.

Table 2
Supervisors' Demographic information

Demographic Variable			
Time	Current Supervisor	<i>n</i> = 284	(80.9%)
	Past Supervisor	<i>n</i> = 67	(19.1%)
Sex	Male	<i>n</i> = 130	(37.0%)
	Female	<i>n</i> = 221	(63.0%)
Race	Caucasian	<i>n</i> = 293	(83.5%)
	African American	<i>n</i> = 31	(8.8%)
	Hispanic	<i>n</i> = 10	(2.8%)
	Asian	<i>n</i> = 7	(2.0 %)
	Native American	<i>n</i> = 2	(0.6%)
	Others	<i>n</i> = 8	(2.3%)
Status	Professor	<i>n</i> = 278	(79.2 %)
	Ph.D. Student	<i>n</i> = 73	(20.8%)

Main Analysis

Hypothesis 1a. The first factor analysis was conducted at the item-level on the IPI-CV-U regarding the hypothesis 1a in which the zero-order factors were expected to be found. SPSS FACTOR (SPSS 15.11) was used for this analysis. Specifically, principal axis factor method with promax rotation was applied to the 33 items on the IPI-CV-U. The numbers of factors were decided first by using the eigenvalue 1 rule and the scree plot as rough guidelines and then by interpretability of obtained factors. Eigenvalue 1 rule and, to lesser extent, scree plot are often criticized for their positional inaccuracy (e.g., Velicer, Eaton, & Fava, 2000). However, there was no clear evidence that other supposedly more accurate procedures such as the minimum average partial correlation (MAP) test or parallel analysis for finding numbers of uncorrelated (orthogonal) factors are reliable for correlated (oblique) factors, which were expected in this study (Bandalos & Boehm-Kaufman, 2008). Additionally, Cho, Li, and Bandalos (2009) found the result against parallel test which led to underestimation of the number of correlated factors.

According to eigenvalue 1 rule, the initial eigenvalue of each variable before extraction showed seven factors to be extracted. The scree test was less obvious about the exact numbers of factors because of the multiple changes in linear trends connecting eigenvalues. The obviously identifiable gaps in slopes of lines suggested either two or three factors to be retained. However, less pronounced gaps suggested four or nine factors to be retained. When one to three factors were forced to be extracted, the emerged factors were complex and less cleanly defined. However, a simpler factor structure emerged when four factors were forced to be extracted. This initial four factor structure was commonly observed when five to seven factors were forced to be extracted. In the six-factor solution, two factors in addition to the four stable factors were weakly defined but make theoretical sense, while an extra factor at seven-factor solution did not make sense. At eight-factor solution, one of four stable factors split into two factors. Therefore, the six-factor solution with four main factors and two tentative ones was selected for application to this analysis.

The result of the six-factor solution is displayed in Tables 3 and 4. In the unrotated orthogonal solution after extraction, the six factors accounted for 53.76 % of overall variability of the IPI-CV-U items. The main four factors explained 49.32% of overall variance of the IPI-CV-U items. The first, second, third, and fourth factors explained 32.50%, 10.63%, 3.60%, and 2.59% of the overall variance, respectively. The fifth and sixth factors explained 2.42% and 2.02% of the overall variance. After oblique rotation, relatively comparable levels of eigenvalues were obtained for each of the six factors, ranging from 4.12 to 7.46. This indicates that all factors, including the two weak ones, contributed well to the overall variability extracted from the IPI-CV-U items. In addition, the adequacy of the six-factor solution was confirmed by inspection of the residual correlation matrix after the six factors were extracted. The only 10.0 % of residual

correlations among the IPI-CV-U items (i.e., the remaining correlations after six factors were extracted) exceeded .05 in absolute value. In addition, these six factors were inter-correlated with correlation coefficients (r) ranging from .12 to .59. The percentage of accounted variability in the IPI-CV-U items by the six factors in this study was relatively comparable to 58.38% found by Elias and Mace (2005) and lower than 70.7% found by Erchul, Raven, and Ray (2001), although the percentages in these studies might be higher partly due to their use of principal component analysis with orthogonal rotation.

Table 3

Pattern Coefficients for Factor Analysis of the IPI-CV-U items

Factor	Scale	Item	Pattern Coefficient					
			1	2	3	4	5	6
1. Compensatory Obligation	Legit. Reciprocal	Item 24					.50	
		Item 6	.87					
	Legit. Equity	Item 32	.53					
		Item 5	.70					
		Item 14	.65					
2. Idealized Expert	Expert	Item 21	.61					
		Item 2		.49				
		Item 12		.78				
		Item 28		.71				
	Referent	Item 8		.49				-.34
		Item 18				.49		
	Informational	Item 27		.67				
		Item 10		.52			-.39	
3. Relational Power	Personal Reward	Item 16		.83	-.33			
		Item 31		.71				
		Item 7			.72			
	Personal Coercive	Item 20			.35			.30
		Item 25			.48			
		Item 4			.71			
4. Collaborative Alliance	Legit. Position	Item 11			.67			
		Item 33			.63			.31
		Item 13		.44				
		Item 19				.43		
	Legit. Dependence	Item 26				.49		
		Item 9				.67		
		Item 17				.88		
5. Personal Favor	Impersonal Reward	Item 30				.86		
		Item 1					.30	
		Item 15	.55				.31	
6. Personal Disfavor	Impersonal Coercive	Item 23					.58	
		Item 3						
		Item 22						.67
		Item 29						.52

Note. Bold and Italicized Coefficients are salient and no cross-loadings ($\geq .40$). Legit refers to Legitimate. Coefficients less than .30 in absolute value were omitted.

Table 4

Structure Coefficient for Factor Analysis of the IPI-CV-U items

Factor	Scale	Item	Structure Coefficient					
			1	2	3	4	5	6
1. Compensatory Obligation	Legit. Reciprocal	Item 24	.55			.57	.69	
		Item 6	.78					
		Item 32	.72			.52		.57
	Legit. Equity	Item 5	.75		.52			
		Item 14	.75			.53		
		Item 21	.74			.54		.59
2. Idealized Expert	Expert	Item 2		.58				
		Item 12		.68				
		Item 28		.77				
	Referent	Item 8		.53				
		Item 18				.57		
		Item 27		.71				
	Informational	Item 10		.50				
		Item 16		.70				
		Item 31		.66				
3. G	Personal	Item 7			.78			
4. Relational Power	Reward	Item 20	.50		.64	.62		.60
		Item 25			.73	.61	.52	.57
	Personal Coercive	Item 4			.74			
		Item 11			.74			
		Item 33	.51		.78	.56		.61
5. Collaborative Alliance	Legit. Position	Item 13		.60		.54		
		Item 19		.55		.68		.50
		Item 26			.55	.70		.54
	Legit. Dependence	Item 9			.57	.68		
		Item 17				.83		
		Item 30				.76		
6. Personal Favor	Impersonal Reward	Item 1						
		Item 15	.67			.50	.54	
		Item 23					.68	
Personal Disfavor	Impersonal Coercive	Item 3						
		Item 22	.51					.72
		Item 29	.54			.53		.70

Note. Bold and italicized coefficients are salient and no cross-loading ($\geq .60$). Coefficients less than .50 in absolute value were omitted.

The adequacy of the six-factor solution was also examined in terms of how items were defined by factors and vice versa. In general, the variability of each item was found to be moderately explained by the six factors, indicated by the average communality of .54. The

communality ranged from .37 to .71, with the exception of two relatively low communality scores (.26 and .23 for Items 1 and 2, respectively). The main four factors were relatively well defined by the items with few cross-loadings above .30. The three factors were each defined by at least four items with pattern coefficients above .60; the other factor was defined by two items with pattern coefficients above .80, one item above .60, and three items above .40. The two tentative factors were less well defined; each had only two items with pattern coefficients above .50 and three items with those in .30s.

To interpret the factors, only those items which had a loading larger than .30 in absolute value were used. Before rotation, the first factor accounted for 32.50 % of overall variability and sums of squared loadings (SSL) of 10.73. After oblique rotation, the SSL was 6.81. It was named Compensatory Obligation because 5 of 6 items (Items 6, 32, 5, 14, and 21) in the Legitimate Reciprocity and Legitimate Equity scales loaded on this factor with pattern coefficients above .50. The Items in these scales originally were considered to measure power bases which address a person's feeling of duty to pay back their past dues (Raven, 1992, 1993; Raven et al., 1998). Unexpectedly, Item 24 of the Legitimate Reciprocity scale loaded on the fifth factor which retained the original meaning of Impersonal Reward scale; instead, Item 15 of Impersonal Reward scale weakly cross-loaded on this factor.

The second factor accounted for 10.63% of overall variability and SSL of 3.51 before rotation. After oblique rotation, the SSL was 6.15 after oblique rotation. This factor was named Idealized Expert because 8 of 9 items in a combination of items on the Referent, Expert, and Informational scales loaded on it with pattern coefficients above .49 in absolute value. These scales originally were considered to reflect supervisors' perceived attractiveness/expertness and their expertise (Rave et al., 1998). Unexpectedly, Item 18 of the Referent scale loaded on the

fourth factor (pattern coefficient of .49); instead, the item 13 of Legitimate Position scale which basically belonged to the forth factor loaded on Idealized Expert (pattern coefficient of .44).

The third factor explained 3.60% of overall variability and had SSL of 1.19 before rotation. After oblique rotation, the SSL was 7.46 after oblique rotation. This factor was named Relational Power because all 6 items in a combination of items on the Personal Reward and Coercive scales loaded on it with pattern coefficients above .40 in absolute value. Item 20 of Personal Reward scale cross-loaded weakly both on this factor and on the sixth factor. Unexpectedly, Item 16 of Idealized Expert cross-loaded on this factor, although more weakly (pattern coefficient of -.39) than on Idealized Expert (pattern coefficient of .83).

The fourth factor explained only 2.59% of overall variability and had SSL of .85 before rotation. After oblique rotation, the SSL increased to 8.27. This factor was named Collaborative Alliance because 5 of 6 items in a combination of items from the Legitimate Position and Legitimate Dependence scales loaded on this factor with pattern coefficients above .40. While these scales appear to measure different concepts, they seem to capture clinical supervisors' positional authority which also depends on their supervisees' cooperation. As previously stated, Item 13 in Legitimate Position scale unexpectedly loaded on Idealized Expert. Instead, Item 18 in Referent scale, which basically belonged to Idealized Expert, loaded on this factor. Item 18 ("We are both part of the same work group and should see eye-to-eye on things.") seemed to capture the mutual/collaborative aspect of supervisors' positional authority.

As stated previously, the remaining two factors (the fifth and the sixth) were tentative ones, although after-rotated SSL are comparable to the main four factors (4.12 and 5.53 for the fifth and sixth factors, respectively). The fifth factor was primarily composed of only two items with pattern coefficients above .50: Item 23 ("My supervisor can help me get a job after I

graduate.”) in Impersonal Reward scale and Item 24 (“My supervisor has done something nice things I requested in the past.”) from Legitimate Reciprocity scale. This factor was named Personal Favor, because these items shared the common meaning of supervisors’ private/informal offering, which retains the original meaning of Impersonal Reward scale. As stated previously, Item 15 which loaded weakly on this factor unexpectedly cross-loaded more strongly on Compensatory Obligation; instead Item 24, which was expected to load on Compensatory Obligation loaded on this factor. In addition, although three more items related to this factor weakly with their loading at .30s, two items (Items 1 and 10) were spuriously related to this factor because their bivariate correlations with the Items 23, 24 and 15 were all very low.

The sixth factor was named Personal Disfavor and was also mainly loaded by only two items in Impersonal Coercive scale with pattern coefficients of .67 and .52 for item 22 and item 29, respectively. Another two items (item 20 and item 33), which loaded on Relational Power, also cross-loaded weakly on this factor at .30s level. Item 8 was also loaded weakly to this factor, but its relationship to the factor is spurious because its bivariate correlations with item 23, 24, 20 and 33 were all low.

In summary, as a result of factor analysis (principal axis factor extraction) with promax rotation, four main factors and two tentative factors were extracted. The four main factors were named Compensatory Obligation, Ideal Expert, Relational Power, and Collaborative Alliance. The two tentative factors were named Personal Favor and Personal Disfavor. These factors were generally correlated with each other at a moderate level, indicating the existence of second-order factors (Gorsuch, 1983).

Hypothesis 1b. The second factor analysis was conducted to extract the second-order factors from the six first-order factors obtained in the first analysis. As in the first analysis,

principal axis factor extraction method with promax rotation through SPSS FACTOR (SPSS 15.11) was used to extract the higher-order factors. Unlike the first analysis, however, factor analysis was directly applied to the correlations matrix of the first-order factors obtained from the SPSS output in the first analysis, by using the SPSS syntax written by Zhang (2005). Upon the analysis, the two-factor solution (Soft and Harsh) was forced to be applied, as assumed by previous researchers (e.g., Raven et al., 1998).

The result of the second-order factor analysis is displayed in the Table 5. The results of the analysis using the two-factor solution seemed to be adequate. In the unrotated solution after extraction, the two higher-order factors accounted for 56.66% of overall variability of the six first-order factors. Harsh factor accounted for 45.53%, and Soft factor accounted 11.13% of overall variability. After oblique rotation, however, these two factors were more comparable in their importance measured by eigenvalues, 2.57 and 1.80 for the first and the second second-order factor, respectively. The structure of the second-order factors basically agreed with the previous research. Each second-order factor was generally defined by the first-order factors in terms of its underlying IPI scales, similar to the previous research. Although no direct comparison was possible because of different factor analysis procedures, these percentages were relatively comparable to those found in many previous studies (Elias, 2007; Elias & Mace, 2005; Erchul, Raven, & Ray, 2001; Koslowsky, Schwarzwald, & Ashuli, 2001; Schwarzwald, Koslowsky, & Agassi, 20010; Raven et al., 1998; Wilson et al., 2008). These researchers all used principle component analysis (mostly with orthogonal rotation) and found that two second-order factors accounted for 46.4% to 70.49% of the overall variability of 11 IPI scales as variables.

Table 5

Pattern and Structure Coefficients of the Second-order Factor Analysis on the IPI-CV-U

1 st order factors	<u>Pattern Coefficients</u>		<u>Structure Coefficients</u>	
	Harsh	Soft	Harsh	Soft
1. Compensatory Obligation	.89		.77	
2. Idealized Expert		.94	.38	.89
3. Relational Power	.58		.69	.51
4. Collaborative Alliance	.62	.36	.81	.68
5. Personal Favor	.42		.50	.37
6. Personal Disfavor	.70		.68	.33

Note. Coefficients less than .30 in absolute value were omitted.

Harsh factor was defined most strongly by Compensatory Obligation (pattern coefficient of .89) and less strongly by Relational Power, Collaborative Alliance, Personal Favor, and Personal Disfavor (pattern coefficients of .58, .62, .42, and .70, respectively). In turn, these first-order factors were composed primarily of items in Legitimate Equity, Legitimate Reciprocity, Impersonal Reward and Coercive, Personal Reward and Coercive, and Legitimate Position, and Legitimate Dependence subscales. On the other hand, Soft factor was almost exclusively loaded by Idealized Expert (pattern coefficient of .94), though also weakly cross-loaded by Collaborative Alliance (pattern coefficient of .37). The former first-order factor was in turn mainly composed of items in Expert, Referent, and Informational subscales. In terms of structure coefficients, however, both Relational Power and Collaborative Alliance loaded more comparably on both Harsh factor and Soft factor (.69 and .80 for Harsh factor and .51 and .68 for Soft factor, respectively).

Each variable (the first-order factors) was generally well defined by the two higher-order factors. The communality of first-order factors were generally at adequate levels with an average of .57, (ranging from .27 to .80). This indicates that the variability of each first-order factor was adequately explained by the two second-order factors. On the other hand, the second-order

factors were less fit to the common factor analysis framework where factor are assumed to be defined by at least two variables (Gorsuch, 1983). Harsh factor was relatively stable with five factors (Compensatory Obligation, Relational Power, Collaborative Alliance, Personal Favor and Personal Disfavor) loading on it (pattern coefficient above .40). However, in terms of pattern coefficient, Soft factor was almost exclusively loaded by Idealized Expert (.94), although, in terms of structure coefficients, it was more comparatively loaded by Idealized Expert (.89), Relational Power (.51), and Collaborative Alliance (.68).

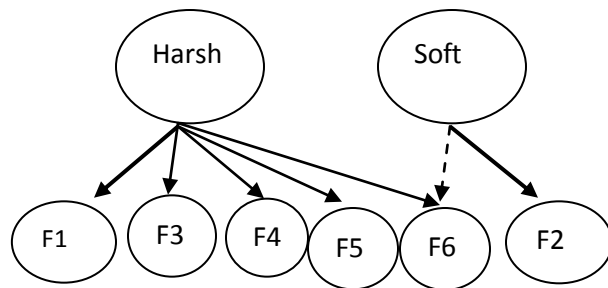


Figure 2. Two-level power factor structure in terms of pattern coefficients: F1, F2, F3, F4, F5, F6, and F7 refer to the first-order power factors, which are Compensatory Obligation, Idealized Expert, Relational Power, Collaborative Alliance, Personal Favor, and Personal Disfavor, respectively.
Note. Dashed line refers to weaker relationship. Bold lines refer to stronger relationships.

The Schmid-Leiman solution. The Schmid-Leiman solution (SL Solution; Schmid & Leiman, 1957) was applied to all the IPI-CV-U items to clarify the nature of the power factor structure in terms of (a) how the IPI-CV-U items directly load on the generic (higher-order) power factors, (b) how the IPI-CV-U items load on the unique (lower-order) power factors beyond their loadings on the generic factors, and (c) how the power factors at different levels contributed to the IPI-CV-U items (Gorsuch, 1983; Thompson, 2004; Wolff & Preising, 2005a). In the present study, a three-level SL solution was obtained with a third-order *General* factor added, although a third-order factor was not an initial interest of this study. This was necessary because the two second-order factors (Harsh and Soft) obtained in this study were correlated

at .52, implying the existence of a third-order factor (Gorsuch). To obtain the SL solution, the factor at highest-order should be uncorrelated (i.e., no more higher-order factor could be extracted from them) (Gorsuch; H.-G.Wolff, personal communication, September 25, 2009). Prior to obtain the SL solution, a third-order factor was extracted from the two second-order factors by the principle axis method. After extraction, the third-order factor accounted for 52.00% of overall variability of the two second-order factors. The loading of both second-order factors was .72. Then, factor loadings at all three levels were used to obtain SL solution with SPSS syntax written by Wolff and Preising (2005b).

Table 6
The Three-level Schmid-Leiman Solution

<u>The IPI Items</u>		<u>3rd Order</u>	<u>2nd-Order</u>		<u>1st-Order Factors</u>					
<u>Subscales</u>	<u>Item</u>	<u>Factor</u>	<u>Factors</u>							
		<u>General</u>	<u>Harsh</u>	<u>Soft</u>	<u>F1</u>	<u>F2</u>	<u>F3</u>	<u>F4</u>	<u>F5</u>	<u>F6</u>
Expert	Item 2	.39		.37						
	Item 12	.35		.47						
	Item 28	.48		.50						
Referent	Item8			.37						
	Item18	.43						.34		
	Item27	.45		.46						
Informational	Item10	.30		.33					-.35	
	Item16	.34		.48						
	Item31	.38		.43						
Legitimate Reciprocity	Item24	.48	.40						.45	
	Item6		.48		.33					
	Item32	.43	.50							
Legitimate Equity	Item5	.37	.48							
	Item14	.48	.46							
	Item21	.44	.50							
Legitimate Position	Item13	.48		.36						
	Item19	.54						.30*		
	Item26	.54	.31					.34		
Legitimate Dependence	Item9	.48	.37					.46		
	Item17	.58	.34					.62		
	Item30	.51	.33					.60		
Personal Reward	Item 7	.50					.57			
	Item20	.52	.41							
	Item25	.57	.38				.38			
Personal Coercive	Item4	.43	.31				.56			
	Item11	.44	.38				.53			
	Item33	.51	.44				.50			
Impersonal Reward	Item1									
	Item5	.45	.42							
	Item23	.37	.33						.52	
Impersonal Coercive	Item3		.31							
	Item22	.33	.43							.48
	Item29	.42	.45							.38
SSL		6.25	3.54	2.10	.43	.39	1.82	1.44	1.00	.79
%		.35	.20	.12	.02	.02	.10	.08	.06	.05

Note. F1, F2, F3, F4, F5, and F6, refer to Compensatory Obligation, Idealized Expert, Relational Power, Collaborative Alliance, Personal Favor, and Personal Disfavor, respectively. SSL refers to sum of squared loadings. *= .298. Coefficients less than .30 in absolute value were omitted.

The result of the SL solution is described in Table 6. It should be noted that the first-order and second-order factors in this SL solution were not the same ones found in previous analysis. In the SL solution, the originally correlated second-order factors were reduced to be uncorrelated or *orthogonalized* factors after their shared variability was removed to form the third-order factor. Similarly, originally correlated first-order factors were reduced to uncorrelated or *orthogonalized* factors as their shared variability was removed to form the higher-order factors (second-order and third-order) (Gorsuch, 1983; Thompson, 2004; Wolff & Preising, 2005a). Overall, the result showed that factors at the first, second, and third levels have comparable levels of unique information (each accounted for about 1/3 of variability of the IPI-CV-U items in solution). A generic factor (the third-order factor) accounted for 35.2% of variability of the IPI-CV-U items in solution (sum of square loading of 6.25). The second-order factors explained overall systematic variability of the IPI-CV-U items in the solution (31.8%) over the third-order factor. Sum of squared loadings (SSL) of Harsh and Soft Power was 3.54 and 2.10, respectively; the percentages of explained variance in the solution by Harsh and Soft Power were 19.9% and 11.9%, respectively. On the other hand, the remaining 33.0 % of explained variability of the IPI-CV-U items in the solution was accounted by the first-order factors as a set. Among the four main first-order factors, Relational Power and Collaborative Alliance contributed to 10.3% (SSL of 1.82) and 8.1% (SSL of 1.44) of the explained variability of the items in the solution, respectively, beyond the contribution of the second-order factors. Compensatory Obligation and Idealized Expert contributed at only a negligible level, 2.4% (SSL of .42) and 2.2% (SSL of .39), respectively. Two tentative factors, Personal Favor and Personal Disfavor, contributed to 5.6% (SSL of 1.00) and 4.5% (SSL of .79) of the explained variability of the IPI-CV-U items in the solution.

The direct relationships between the IPI-CV-U items and orthogonalized power factors were as expected. The more generic factors (third and second-order) were loaded by most of the IPI-CV-U items; the more focused factors (first-order) were loaded by limited numbers of the IPI-CV-U items. As expected for the most generic factor, inspection of the loadings of each item on the third-order factor revealed that most of the items loaded on it above salient level (29 of 33 items with loadings ranging from .30 to .58). One item which uniquely loaded on the third-order factor above salient level was Item 19 (loading .54) from Legitimate Position subscale, (“My supervisor has the right to request that I handle the situation in particular way”). Therefore, the nature of the generic power factor reflects mainly the positional authority, which seems to be more neutral in terms of the second-order factors (Harsh or Soft). In addition, items from Legitimate Position scale (including item 19) as a set seemed to be more neutral in terms of Harsh-Soft type. The three items which constitute Legitimate Position subscale all loaded on the third-order factor at salient level (.48–.54); each of them loaded differently on the second-order factor. One item loaded on Soft factor; another loaded on Harsh factor; and the other (Item 19) did not load on either.

Also, due to their generic nature (though less so than the third-order factor), the second-order factors (Harsh and Soft) were defined by most of the IPI-CV-U items. The loading strength of items on both the second-and the third-order factor was almost equal, except that those items loaded on Relational Power and Collaborative Alliance loaded on the third-order factor slightly more strongly than on the Harsh factor. The Items which loaded on orthogonalized Harsh and Soft factors were basically the same items which loaded on the corresponding original first-order factors. The Soft factor was defined by the same items which originally loaded on Idealized Expert (loadings ranging from .33 to .50). The Harsh factor was

defined by many of those items which originally loaded on Compensatory Obligation (loadings ranging from .42 to .50), to a lesser extent, those originally loaded on Relational Power (loadings ranging from .31 to .44) and those originally loaded on Collaborative Alliance (loadings ranging from .31 to .37). Although items from Impersonal Reward and Coercive scales only weakly formed two tentative first-order factors (Personal Favor and Personal Disfavor, respectively) in the original solution, five of six items of these scales loaded on orthogonalized Harsh factor above salient level (loadings ranged from .31 to .45). Beyond the contribution of the higher-order factors (third-order and second-order), two of orthogonalized main first-order factors contributed little to explain overall variability of the IPI-CV-U items in the SL solution. They were no longer factors. Orthogonalized Idealized Expert and Compensatory Obligation explained only 2.4% and 2.2% of variability of the IPI-CV-U items in the SL solution, respectively. The items which originally defined Idealized Expert and Compensatory Obligation no longer loaded on orthogonalized form of these factors at salient level (.30 in absolute value), except item 6 (loading of .33). In the original correlated solution, these first-order factors are redundant because they contain the same information but in a limited focus as higher-order factors (second-order and third-order). It also means that these first-order factors constituted the core of higher-order factors (second-order and third-order). In the original correlated solution, the nature of Soft factor directly reflected Idealized Expert (or the items of Idealized Expert), and that of Harsh factor directly reflected Compensatory Obligation (or the items of Compensatory Obligation). This was also evidenced by the high loadings of Idealized Expert and Compensatory on Soft and Harsh factor in the original higher-order solution (pattern coefficients of .94 and .89, respectively). In addition, Item 3 ("My supervisor can give me

undesirable work assignment”) of the Personal Coercive scale loaded only on Harsh factor although weakly (loading of .31), indicating this item also reflects the core nature of Harsh factor.

On the other hand, beyond the contribution of the universal (third order and orthogonalized second-order) factors, the two other main and two tentative first-order factors uniquely contributed to the explained variability of the IPI-CV-U items in the SL solution (28.50%). Relational Power, Collaborative Alliance, Personal Favor, and Personal Disfavor contributed 10.3%, 8.1%, 5.6%, and 4.5% of the explained variability, respectively. Loadings of items loaded on Relational Power, Collaborative Alliance, Personal Favor, and Personal Disfavor ranged from .27 to .57, from .30 to .62, from .27 to .52, from .22 to .48, respectively.

Summary of Part 1.

In summary, two second-order (Soft and Harsh) and four main first-order power factors (Idealized Expert, Compensatory Obligation, Relational Power, and Collaborative Alliance) were extracted in factor analysis on the IPI-CV-U. Soft factor was almost exclusively defined by Idealized Expert; Harsh factor was defined by the other first-order factors. Second-order power factors inform more universal aspects of power construct; first-order factors inform more focused aspects (Gorsuch, 1983). According to the SL solution, the original second-order factors, which contain the universal information (in the third-order factor; 35.2% in the SL solution) and the more specific information unique at the second level (in orthogonalized second-order factor; 31.8 % in the SL solution), can inform a fair amount of the power base construct (total 66.7% in the solution). Soft Power is based on supervisors’ use of their professional knowledge and attribute as counselor educators (Ideal Expert); Harsh Power is mainly based on supervisors’ use of their supervisee’s obligatory feelings related to their past debt. Finally, the original first-order factors can inform the universal information (in the third-order and the orthogonalized second-

order factors) and also add more focused information at the first-order level about the power base construct (in the orthogonalized first-order factors; 33.0% of variability of the IPI-CV-U items in SL solution). However, this focused information is related only to supervisors' use of emotional relationship with supervisees (Relational Power) and their use of working coalition (Collaborative Alliance) among the main factors.

Part 2: Correlation and Regression Analysis

In part 2 of this study, Hypothesis 2 and Hypothesis 3 were tested to examine the relationship between clinical supervisors' power bases and supervisory styles. In Hypotheses 2a and 2b, the correlations between supervisory styles and power bases were examined; in Hypotheses 3a and 3b, regression models were examined to determine if supervisory style (the task-oriented style) predicts Harsh factor and if supervisory styles and Harsh factor predict Soft factor. For these analyses, three supervisory styles were measured by the average scores of each SSI subscale. The first-order and the second-order factors were obtained by the regression method (Gorsuch, 1983) in which the uniquely weighted z-scores of 33 IPI-CV-U items were summed to form the scores for each factor. The regression method is one of the common procedures to produce factor scores (Gorsuch, 1983). Factor scores of correlated (i.e., oblique) factors based on this method were found to be a more valid estimate of true factor scores than those based on various unit-weighting methods (Grice, 2001).

The regression-based factor scores for the first-order factors were obtained from the IPI-CV-U items by using the option of SPSS FACTOR (SPSS 15.11). The factor scores for the second-order factors (F_{vh}) were obtained from the items by applying the following equations (Gorsuch, 1983).

$$\mathbf{F}_{vh} = \mathbf{Z}_v * \mathbf{W}_{vh} \text{ (Equation 4.1)}$$

$$\mathbf{W}_{vh} = \mathbf{R}_{vv}^{-1} * \mathbf{S}_{vh} = \mathbf{R}_{vv}^{-1} * (\mathbf{P}_{vh} * \mathbf{R}_{hh}) = \mathbf{R}_{vv}^{-1} * [(\mathbf{P}_{vf} * \mathbf{P}_{fh}) * \mathbf{R}_{hh}] \text{(Equation 4.2)}$$

\mathbf{F}_{vh} is the second-order factor score matrix, \mathbf{Z}_v is the z-score matrix of 33 items, \mathbf{W}_{vh} is the weighting matrix (or the factor score coefficient matrix) of the IPI-CV-U items to obtain the second-order factors, \mathbf{R}_{vv}^{-1} is the inverse of the correlation matrix of the IPI-CV-U items, \mathbf{S}_{vh} is the structure coefficient matrix of the IPI-CV-U items for the second-order factors, \mathbf{P}_{vh} is the pattern coefficient matrix of the IPI-CV-U items for the second-order factors, \mathbf{R}_{hh} is the correlation matrix of the second-order factors, \mathbf{P}_{vf} is the Pattern coefficient matrix of factors for the second-order factors. The pattern coefficient matrix of variables for the second-order factors (\mathbf{P}_{vh}) were the multiple of the pattern coefficient matrix of the items for the first-order factor and that of the first-order factors ($\mathbf{P}_{vf} * \mathbf{P}_{fh}$). The coefficients of $\mathbf{P}_{vf} * \mathbf{P}_{fh}$ are identical to the pattern coefficient of the IPI-CV-U items for the second-order factors in the SL solution.

Preliminary Analysis for Correlation and Regression Analyses

Preliminary analyses were conducted for correlation model in Hypothesis 2 and the regression model in Hypothesis 3 to the examine distributional nature of the SSI scales and power factors as well as the assumptions for these analyses. The sample used in the factor analysis in part 1 (N = 351) was originally considered for the main analyses in Part2. Four subjects with missing values in the SSI scales were eliminated because of the trivial size of the missing data. As a result, data from 347 participants were retained for further preliminary analyses, using SPSS 15.11 and ARC 1.06 (Cook & Weisberg, 1999-2004).

As indicated by the histograms, each power factor (the first-/the second-order factors) was roughly normally distributed. However, the SSI scales seemed to suffer from ceiling effect. Both Attractive and Interpersonally-sensitive scales had highly negative skewness (J-shape), appearing as if possible distribution in the upper-end was pushed back and condensed in their last few highest values. To a lesser extent, Task-oriented scale also suffered ceiling effect. Although transforming the SSI scales was attempted, this did not improve the distributional assumptions of these analyses; therefore, the original variables were used for further analyses. The non-normal univariate distributions of the SSI scales seemed to be reflected in the shapes of bivariate distributions among these variables. According to bivariate scatter plots between the SSI scales and power factors, possible bivariate distribution at upper-end of the SSI scales appeared to be pushed back and condensed within their last few highest scores. As a result, when lowess curves with ± 1 *SD* values were fitted to these bivariate distributions with power factors in *x* and the SSI scales in *y*, these distributions showed some non-linearity and heteroscedasticity. On the other hand, when lowess curves with ± 1 *SD* values were fitted to these bivariate distributions with power factors in *y* and the SSI scales in *x*, these bivariate distributions showed rough linearity and homoscedasticity, except in the short range at the upper extremity of the SSI scales where they departed from the linear trend. Therefore, data in this study did not fit well to the assumption of bivariate normal distributions in parametric correlation models. However, data seemed to fit more adequately to the assumption of conditional normal distribution, although non-linearity at upper extremity of the SSI scales might cause some bias in the results of analysis.

Outliers were also detected for each analysis. Univariate outliers were detected by using the criteria of (a) *z*-scores larger than 3 in absolute values and (b) extreme outliers in boxplot in

SPSS. Multivariate outliers were detected separately for each analysis. For correlation analysis, multivariate outliers among the SSI styles and power factors (the first- and second-order) in terms of their deviation from the centroid were detected based on the criteria of hat index (h) $\geq 2*(K/N)$, where K is number of variables and N is sample size (Cohen et al., 2003; Lunneborg, 1994). Multivariate outliers among all variables were detected, instead of bivariate outliers, to make all bivariate correlations comparable based on the same sample. For regression analysis, multivariate outliers among the SSI scales and the second-order power factors were screened in terms of (a) leverage (h) $\geq 2*(K/N)$, (b) Cook's distance >1 , and (c) externally studentized residuals $> \pm 3.0$ SDs (Cohen et al.; Lunneborg). Because three regression models in this study were directly and indirectly nested to the full model under hypotheses in this analysis, multivariate outliers were sought by a preliminary run of this full regression model, which includes Soft factor as DV and three SSI subscales and Harsh factor as IVs. For both correlation and regression analysis, additional multivariate outliers appeared repeatedly after each attempt at detection, but only those found in the first attempts were considered as outliers to conserve sample size. As a result, 42 (12.1%) responses for correlation analysis and 55 (15.9%) were detected as outliers and eliminated. The results of stepwise discriminant analyses showed that these outliers as a group had lower scores in all three SSI scales than non-outliers for correlation and regression analyses. Additionally, outliers had lower scores in Harsh factor for regression analysis.

Finally, potential extraneous relationships between the demographic variables and the main variables for correlation and regression analyses were tested, separately for samples of correlation and regression analyses. The results of sets of ANOVAs and Spearman's rhos identified supervisor type (*professor* vs. *Ph.D. student*) and supervisee sex (*male* vs. *female*) as

positional extraneous variables, as the test statistics for the relationship between these variables and some of power factors became significant or approached significance at α level of .001. Therefore, it was decided to control these variables for main analyses. For correlation analyses, correlations between the SSI scales and power factors were examined, separately for four subgroups, (a) participants with professor supervisors, (b) participants with Ph.D. student supervisors, (c) male participants, and (d) female participants. Because of insufficient sample size in some cells, 2 (supervisor type) by 2 (supervisee sex) categorization was not conducted; instead, subgroups were mutually exclusive only within each variable. For regression analysis, these variables were incorporated as independent variables. Because correlation analysis was conducted by separating the sample into four groups, outliers were re-screened within each subgroup, which resulted in 30 (10.9%) outliers for *professor* group, 7 (9.9%) for *Ph.D. student* group, 7 (12.7%) for *male* group, and 28 (9.6%) for *female* group. In general, these outliers tended to have lower scores in some SSI scales than non-outliers. Additionally, the outliers in *Ph.D. student* group also had higher scores in Idealized Expert than non-outliers, and the outliers in *male* group had lower scores in Compensatory Obligation and higher scores in Relational Power.

In summary, because of ceiling effects in the SSI scales, the bivariate distributions between the SSI scales and power factors did not fit to the assumption of bivariate normality for parametric correlation analysis well, but fit more adequately to that of conditional normality for regression analysis. The attempts to screen outliers resulted in relatively large numbers of outliers. Also, supervisor type and supervisee sex were identified as positional extraneous variables. Therefore, it was decided to use non-parametric correlation coefficients (Spearman's rho) for correlation analysis, separately for four subgroups (*professor* vs. *Ph.D. student*; *male* vs.

female). After eliminating the outliers, 246, 64, 48, and 264 participants consisted subgroups of *professor, Ph.D. student, male, and female*. For regression analysis, ordinal least-square regression was used with caution, and supervisor sex and supervisee sex were incorporated as independent variables. After eliminating outliers, 292 participants comprised the sample for regression analysis. In addition, because of ceiling effect of SSI scales, the supplemental analysis was conducted with OLS regression without the data in maximum value of SSI scales (without significant testing). The use of this partial OLS regression was suggested by Austin and Hoch (2004) to avoid possible bias from the censored IVs, which resemble the SSI scales with ceiling effect in this case.

Correlation Analysis

Descriptive statistics. To make parts1 and 2 of this study more comparable, the participants selected for part1 were originally considered for this correlation analyses. Of the total 347 participants in this preselected group, 42 scores were identified as outliers in the preliminary analysis and were eliminated. As a result, 305 participants were included in the current analysis. The demographic information of these participants is summarized in Table 7. As is shown in Table 7, the participants were mainly female, Caucasian, and students from CACREP-accredited master's programs.

Table 7

Descriptive Statistics of Demographic Information of Participants (Supervisees)

Demographic Variable	Supervisor Type		Supervisee Gender	
	Supervisees with Professor Supervisors (n = 246)	Supervisees with Ph.D. Student Supervisors (n = 64)	Female Supervisees (n = 264)	Male Supervisees (n = 48)
Age	Mdn = 28.0 (IQR = 14.0)	Mdn = 26.0 (IQR = 10.75)	Mdn = 27.0 (IQR = 14.0)	Mdn = 27 (IQR = 14.0)
Race				
Caucasian	n = 190 (77.2%)	n = 51 (79.7%)	n = 204 (77.3%)	n = 40 (83.3%)
African American	n = 29 (11.8%)	n = 8 (12.5%)	n = 35 (13.3%)	n = 1 (2.1%)
Hispanic	n = 13 (5.3%)	n = 1 (1.6%)	n = 12 (4.5%)	n = 2 (4.2%)
Asian	n = 10 (4.1%)	n = 2 (3.1%)	n = 9 (3.4%)	n = 3 (6.3%)
Native American	n = 1 (0.4%)	n = 0 (0.0%)	n = 0 (0.0%)	n = 1 (2.1%)
Others	n = 3 (1.2%)	n = 2 (3.1%)	n = 4 (1.5%)	n = 1 (2.1%)
Status				
Doctoral	n = 34 (13.8%)	n = 5 (7.8%)	n = 28 (10.6%)	n = 13 (27.1%)
Specialist /Post-Master's	n = 14 (5.7%)	n = 3 (4.7%)	n = 14 (5.3%)	n = 3 (6.3%)
Master's	n = 198 (80.5%)	n = 56 (87.5%)	n = 222 (84.1%)	n = 32 (66.7%)
Accreditation				
CACREP	n = 222 (90.2%)	n = 61 (95.3%)	n = 241 (91.3%)	n = 43 (89.6%)
NON-CACREP	n = 24 (9.8%)	n = 3 (4.7%)	n = 23 (8.7%)	n = 5 (10.4%)
Program types				
Counselor Education	n = 74 (30.1%)	n = 16 (25.0%)	n = 78 (29.5%)	n = 14 (29.2%)
Community	n = 51 (20.7%)	n = 11 (17.2%)	n = 58 (22.0%)	n = 4 (8.3%)
Career	n = 1 (0.4%)	n = 0 (0.0%)	n = 0 (0.0%)	n = 1 (2.1%)
School	n = 46 (18.7%)	n = 21 (32.8%)	n = 58 (22.0%)	n = 9 (18.8%)
Mental Health	n = 38 (15.4%)	n = 8 (12.5%)	n = 38 (14.4%)	n = 8 (16.7%)
Marriage & Family	n = 14 (5.7%)	n = 2 (3.1%)	n = 11 (4.2%)	n = 5 (10.4%)
SA-College	n = 6 (2.4%)	n = 1 (1.6%)	n = 5 (1.9%)	n = 3 (6.3%)
SA-Professional	n = 1 (0.4%)	n = 0 (0.0%)	n = 0 (0.0%)	n = 0 (0.0%)
Others	n = 15 (6.1%)	n = 5 (7.8%)	n = 16 (6.1%)	n = 4 (8.3%)
Training Level				
Master's Practicum	n = 116 (47.2%)	n = 29 (45.3%)	n = 126 (47.7%)	n = 20 (41.7%)
Master's 1 st Internship	n = 42 (17.1%)	n = 10 (15.6%)	n = 43 (16.3%)	n = 10 (20.8%)
Master's 2 nd Internship	n = 49 (19.9%)	n = 19 (29.7%)	n = 60 (22.7%)	n = 7 (14.6%)
Post-Master's Practicum/Internship	n = 39 (15.9%)	n = 6 (9.4%)	n = 35 (13.3%)	n = 11 (22.9%)

Note. SA refers to student affairs.

In addition to demographic information, descriptive statistics for the variables in this correlation analysis are described in Table 8. Means and standard deviations are presented for the main variables, which are the three SSI subscales, the four main first-order power factors,

and the two second-order power factors. Cronbach's α s for the SSI subscales are also presented in Table 9.

Table 8
Means (Standard Deviations) of the SSI Scales and the 1st-Order /2nd-Order Power Factors

Variables	Supervisor Type		Supervisee Gender	
	Supervisees of Professor supervisors (n=246)	Supervisees of PhD Student supervisors (n = 64)	Female supervisees (n = 264)	Male Supervisees (n = 48)
SSI Scales				
Attractive	6.19 (.95)	6.08 (1.05)	6.22(.90)	5.89 (1.25)
Interpersonally -sensitive	6.13 (.84)	5.82 (1.06)	6.10 (.86)	5.84 (1.02)
Task-oriented	5.54 (.95)	5.40 (.98)	5.55(.96)	5.25 (1.02)
1 st -Order Power Factors				
Compensatory	3.73 (.90)	3.44 (.89)	3.57 (.91)	4.06 (.78)
Obligation	7.58 (.86)	7.14 (.97)	7.51 (.90)	7.29 (.97)
Idealized Expert	5.39 (.88)	4.92 (.89)	5.26 (.95)	5.24 (.78)
Relational Power	6.02 (.89)	5.61 (.91)	5.88 (.96)	6.04 (.77)
Collaborative Alliance				
2 nd -Order Power Factors				
Harsh	5.37 (.85)	4.91 (.85)	5.20 (.90)	5.50 (.74)
Soft	7.25 (.82)	6.80 (.88)	7.16 (.86)	7.03 (.89)

Note. SSI refers to Supervisory Style Inventory (Friedlander & Ward, 1984).

Table 9
Cronbach's α s for the SSI Scales

Variables	Supervisor Type		Gender	
	Supervisees of Professor Supervisors (n=246)	Supervisees of PhD Student Supervisors (n = 64)	Female Supervisors (n = 264)	Male Supervisors (n = 48)
SSI Scales				
Attractive	.94	.96	.94	.96
Interpersonally -sensitive	.91	.94	.91	.94
Task-oriented	.91	.91	.91	.91

Note. SSI refers to Supervisory Style Inventory (Friedlander & Ward, 1984).

Main analysis. Correlation analyses were conducted to test Hypothesis 2. Because of some violations of assumptions in the parametric correlation model, Spearman's rho was calculated to examine the relationships between three supervisory styles (the SSI scales) and power factors (the first-and the second-order), separately for *professor*, *Ph.D. student*, *male*, and *female* subsamples. Power factors included the four first-order factors (Compensatory Obligation, Idealized Expert, Relational Power, and Collaborative Alliance) and two second-order factors (Harsh and Soft). SPSS CORRELATE was used for the analysis.

In preliminary analysis, some violations of bivariate normality and homoscedasticity assumptions were identified. Supervisor type (professor vs. Ph.D. student) and supervisee sex (male vs. female) were found as potential extraneous variables. Therefore, it was decided to use non-parametric correlation coefficient (Spearman's rho), separately for four subgroups. Of 351 participants in part 1 of this study, 30, 7, 7, and 28 outliers were further identified for *professor*, *Ph.D. student*, *male*, and *female* subgroups, respectively. After eliminating these outliers, 246, 64, 48, and 264 participants in *professor*, *Ph.D. student*, *male*, and *female* subgroups, respectively, were included in the main analyses.

In addition, to control for family-wise type I error (FWE), the Bonferroni procedure (Dunn, 1961) was used for subsets of overall correlations. As a result of the factor analyses in part 1, Compensatory Obligation and Idealized Expert at the first-order level contained little unique information about power construct over Harsh and Soft factor at the second-order level, respectively. To conserve statistical power, therefore, these first-order power factors were not subjected to significance testing. Also, only these correlations directly related to hypotheses were tested. As a result, six correlations between Soft factor and all three SSI scales and between the three power factors (Harsh, Relational Power, and Collaborative Alliance) and Task-

oriented scale were tested separately for each subgroup. Because total 24 correlations (= 6 correlations * 4 subgroups) were to be tested, family-wise error was controlled at $\alpha = .20$, instead of .05, as a compromise to balance statistical power and multiple statistical tests. For *Ph.D. student* and *male* subgroups with smaller sample size ($n = 64$ and $n = 48$, respectively), each of 12 correlation coefficients was tested at .01, resulting in FWE of about .12. For *professor* and *female* subgroups with larger sample size ($n = 246$ and $n = 264$, respectively), each of 12 correlations was tested at .0067 ($=.08/12$), resulting in FWE of about .08. In addition, effect size was evaluated by Cohen's (1988) conventional criterion for Pearson's r . According to the criterion, weak, moderate, and strong effects were around $r = .10$, $.30$ and $.50$ in absolute value, respectively.

The results of correlation analyses were described in Tables 10-13.

Table 10

Correlations between Supervisory Styles and Power Factors : Spearman's rho for Professor (n= 246)

	FACT1 Compensatory Obligation	FACT2 Ideal Expert	FACT3 Relational Power	FACT4 Collaborative Alliance	Harsh	Soft
SSI_AT	-.180	.240	-.011	.048	-.086	.206** (.001)
SSI_IS	-.170	.351	.030	.068	-.071	.301** (.000)
SSI_TO	-.020	.325	.123 (.055)	.193* (.002)	.078 (.221)	.307** (.000)

Note. Values in table are Spearman's rho. Values in parentheses are p-values. * is significant at .0067 level. **is significant at .001 level.

Table 11

Correlations between Supervisory Styles and Power Factors : Spearman's rho for Ph.D. Student (n= 64)

	FACT1 Compensatory Obligation	FACT2 Ideal Expert	FACT3 Relational Power	FACT4 Collaborative Alliance	Harsh	Soft
SSI_AT	-.121	.529	.041 (.747)	.075	-.057	.466** (.000)
SSI_IS	-.078	.535	.065	.071	-.033	.466** (.000)
SSI_TO	.047	.321	.060 (.640)	.085 (.504)	.036 (.776)	.284 (.023)

Note. Values in table are Spearman's rho. Values in parentheses are p-values. * is significant at .01 level. **is significant at .001 level.

Table 12

Correlations between Supervisory Styles and Power Factors : Spearman's rho for Female (n = 264)

	FACT1 Compensatory Obligation	FACT2 Ideal Expert	FACT3 Relational Power	FACT4 Collaborative Alliance	Harsh	Soft
SSI_AT	-.163	.281	-.004	.023	-.083	.230** (.000)
SSI_IS	-.090	.392	.068	.086	-.014	.334** (.000)
SSI_TO	.012	.310	.127 (.039)	.153 (.013)	.077 (.210)	.282** (.000)

Note. Values in table are Spearman's rho. Values in parentheses are p-values. * is significant at .0067 level. **is significant at .001 level.

Table 13

Correlations between Supervisory Styles and Power Factors : Spearman's rho for Male (n = 48)

	FACT1 Compensatory Obligation	FACT2 Ideal Expert	FACT3 Relational Power	FACT4 Collaborative Alliance	Harsh	Soft
SSI_AT	-.032	.425	.155	.337	.200	.431* (.004)
SSI_IS	-.215	.527	.144	.227	.087	.494* (.002)
SSI_TO	-.110	.576	.284 (.051)	.438* (.002)	.353 (.014)	.582** (.000)

Note. Values in table are Spearman's rho. Values in parentheses are p-values. * is significant at .01 level. **is significant at .001 level.

Generally, SSI scales tended to correlate moderately with Soft and Soft-type factor (Idealized Expert); they tended to correlate little or weakly with Harsh and Harsh-type factors (Compensatory Obligation, Relational Power, and Collaborative Alliance). As expected from their similarity, the correlations of Soft and Harsh factor with the SSI scales were similar to those of Idealized Expert and Compensatory Obligation, respectively, although the former correlations tended to be a little weaker than the latter ones. This probably reflected the more generic nature of Soft and Harsh factors, compared with the more specific nature of these first-order factors.

Professor and *female* subgroups included the majority of the overall sample ($n = 246$ and 264 , respectively). The patterns of correlation coefficients between these samples were very similar to each other. For both subgroups, all three SSI scales were positively correlated with Soft factor at a significant level. For the *Professor* subgroup, Soft factor was correlated with Attractive, Interpersonally-sensitive, and Task-oriented scale at $r_s = .21$ ($p < .001$), $r_s = .30$ ($p < .001$), and $r_s = .31$ ($p < .001$), respectively. For *Female* subgroup, Soft factor was correlated with Attractive, Interpersonally-sensitive, and Task-oriented scale at $r_s = .23$ ($p < .001$), $r_s = .33$ ($p < .001$), and $r_s = .28$ ($p < .001$) for Task-oriented style, respectively. Generally, the effect sizes of these coefficients were moderate, and about 4.4%-10.9% of bivariate variability was shared among these variables. Although no statistical test was conducted, Idealized Expert was also correlated with three SSI scales in similar patterns to Soft factor, with slightly higher coefficients (r_s ranging from .24 to .39.) for both subgroups. On the other hand, for both subgroups, Harsh factor or Harsh-type factors (Relational Factor and Collaborative Alliance) generally were not significantly correlated with three SSI scales, except for the significant correlation between Collaborative Alliance and Task-Oriented scales, $r_s = .19$ ($p < .01$) in *female* subgroup. Descriptively, some pairs of the SSI scales and Harsh-type factors showed a weak

level of correlation coefficients. The correlation coefficients (r_s) between Attractive and Interpersonally-sensitive scales and Compensatory Obligation for both subgroups were negative, ranging from -.09 to -.18. The correlation coefficients (r_s) between Task-oriented scale and Relational Power/Collaborative Alliance in both subgroups were positive, ranging from .12 to .19. However, all of these coefficients indicated that less than 4% of bivariate variability was shared by each pair of these variables.

The patterns of bivariate correlations for *Ph.D. student* and *male* subgroups, which constituted the minority of the overall sample ($n = 64$ and $n = 48$, respectively), were generally similar to those for *professor* and *female* subgroups. However, the strength of correlations tended to be stronger for these subgroups than for *professor* and *female* counterparts, although fewer correlations were significant most likely due to their smaller sample sizes. For both *Ph.D. student* and *male* sample, Soft factor was positively correlated with all three subscales at a significant level, except for the correlation between Soft factor and Task-oriented scale in *Ph.D. student* subgroup. For *Ph.D. student* subgroup, Soft factor was significantly correlated with Attractive and Interpersonally-sensitive scale at $r_s = .47$ ($p < .001$) and $r_s = .47$ ($p < .001$); it was not significantly correlated with Task-oriented scale (at $r_s = .28$, $p = .02$), although the strength of the correlation was comparable to that of *professor* and *female* counterparts. For *male* subgroup, Soft factor was significantly correlated with Attractive, Interpersonally-sensitive, and Task-oriented scale at $r_s = .43$ ($p < .01$), $r_s = .50$ ($p < .01$), and $r_s = .58$ ($p < .001$), respectively. The effect sizes of these coefficients were from high-moderate to strong, indicating that about 7.8% - 33.6 % of bivariate variability was shared between these variables. Although no statistical test was conducted, Idealized Expert was also correlated with three SSI scales in patterns similar to Soft factor, with slightly higher coefficients in general (r_s ranging from .32

to .58), for both subgroups. On the other hand, Harsh factor or Harsh-type factors (Relational Factor and Collaborative Alliance) were not significantly correlated with three SSI scales, except for the correlation between Task-oriented scale and Collaborative Alliance for *male* subgroup ($r_s = .44, p < .02$), possibly due to its small sample size. For *Ph.D. student* subgroup, there was little correlation between the SSI scales and Harsh or Harsh-type factors. No coefficient coefficients exceeded the value of .10, except between Attractive scale and Compensatory Obligation ($r_s = -.12$), which is still considered weak effect. However, for *male* subgroup, correlation coefficients of weak to moderate effect size were observed. Task-oriented style had moderate levels of correlation coefficients (r_s) of -.35, .28, and .44 in relation to Harsh factor, Relational Power, and Collaborative Alliance, respectively, and a weak level of coefficient (r_s) of -.11 in relation to Compensatory Obligation. Attractive style had a moderate level of correlation coefficient of .34 in relation to Collaborative Obligation, and weak level of correlation coefficient (r_s) of .20 and .16 in relation to Harsh factor and Relational Power, respectively. Interpersonally-sensitive style had weak correlation coefficients (r_s) of -.22, .14, and .23 with Compensatory Obligation, Relational Power, and Collaborative Alliance. Effect sizes of these correlations between the SSI scales and Harsh or Harsh-type power factors were generally very weak for *PhD student* subgroup with most of the bivariate relationships having less than 1% of systematic bivariate variability between these variables. On the other hand, four coefficients for *male* subgroup were weak effect (about 1% - 5% of bivariate variability being systematically shared), and another four coefficients were moderate effect (about 8% to 19% of bivariate variability being systematically shared).

In summary, Hypotheses 2a and 2b were only partially supported by the result of this study. As predicted, in general, all three supervisory styles were positively related with Soft

power at a significant level. Idealized Expert (Soft-type factor) also correlated with supervisory styles in a similar fashion. Despite the prediction, however, task-oriented style generally had little, if any, relationship to Harsh factor or Harsh-type factors for the majority of supervisors. However, task-oriented style was weakly and positively related to Collaborative Alliance (Harsh-type factor) at a significant level for the *professor* and *female* subgroups. Exceptionally, for the *male* subgroup, correlation coefficients between task-oriented style and Harsh or Harsh-type factors (Relational Power and Collaborative Alliance) were positive and moderate in strength, even though only the coefficient between task-oriented style and Collaborative Alliance reached a significant level.

Regression Analysis

Descriptive statistics. Again, to make parts 1 and 2 of this study more comparable, the participants selected for part 1 were originally considered for this correlation analysis. Of the total 351 participants in this preselected group, four participants had missing values in the SSI scales, and 59 were identified as outliers in the preliminary analysis. They were eliminated from the further analyses. As a result, 292 participants were included in the current analysis. The demographic information on these participants is summarized in Table 14, which is comparable to that of *professor* or *female* subgroup in the correlation analyses for Hypothesis 2.

The descriptive statistics of the variables for this regression analysis including the SSI scales and the second-order power factors (Harsh and Soft) were described in Table 15. Means, standard deviations, and Cronbach's α s (for the SSI scales) were also comparable to those of *professor* or *female* subgroup in the correlation analyses for hypothesis 2.

Table 14

Participants' (Supervisees) Demographic Information (N = 292)

Demographic Variable		
Age	<i>Mdn</i> = 27.0 (<i>IQR</i> = 14.0)	<i>M</i> = 31.9 (<i>SD</i> = 9.9)
Race		
Caucasian	<i>n</i> = 225	(77.1%)
African American	<i>n</i> = 35	(12.0%)
Hispanic	<i>n</i> = 13	(4.5%)
Asian	<i>n</i> = 14	(4.8%)
Native American	<i>n</i> = 0	(0.0%)
Others	<i>n</i> = 5	(1.7%)
Status		
Doctoral	<i>n</i> = 35	(12.0%)
Specialist /Post-Master's	<i>n</i> = 17	(5.8%)
Master's	<i>n</i> = 240	(82.2%)
Accreditation		
CACREP	<i>n</i> = 267	(91.4%)
NON-CACREP	<i>n</i> = 25	(8.6%)
Program types		
Counselor Education	<i>n</i> = 83	(28.4%)
Community	<i>n</i> = 57	(19.5%)
Career	<i>n</i> = 1	(0.3%)
School	<i>n</i> = 65	(22.3%)
Mental Health	<i>n</i> = 46	(15.8%)
Marriage & Family	<i>n</i> = 15	(5.1%)
SA-College	<i>n</i> = 7	(2.4%)
SA-Professional	<i>n</i> = 0	(0.0%)
Others	<i>n</i> = 18	(6.2%)
Training Level		
Master's Practicum	<i>n</i> = 131	(46.9%)
Master's 1 st Internship	<i>n</i> = 51	(17.5%)
Master's 2 nd Internship	<i>n</i> = 61	(20.9%)
Post-Master's Practicum/Internship	<i>n</i> = 43	(14.7%)

Note. SA refers to student affairs.

Table 15

Means (Standard Deviations) of the SSI Scale and the 1st-/2nd-Order Power Factors (N = 292)

Variables	Mean	(SD)	Cronbach's α
SSI Scales			
Attractive	6.26	.82	.93
Interpersonally-sensitive	6.16	.74	.89
Task-oriented	5.63	.84	.88
2 nd -Order Power Factors			
Harsh	5.31	.84	
Soft	7.22	.83	

Note. SSI = Supervisory Style Inventory (Friedlander & Ward, 1984).

Main analysis. A series of multiple regression analyses were conducted to examine the relationship between supervisory styles (the SSI scales) and the second-order power factors (Harsh and Soft), which are hypothesized in the conceptual map (see Figure 1). Harsh factor was hypothesized to be predicted by Task-oriented style; Soft factor was to be predicted by three supervisory styles and Harsh factor. SPSS REGRESSION (SPSS 15.11) was used for this analysis.

In the preliminary analysis, the assumptions of conditional normality and homoscedasticity were roughly achieved, except for some non-linearity at the upper extremity of the SSI scales. Of 351 participants in part 1 of this study, four participants with missing values in SSI scales and 55 outliers were further identified for exclusion in this analysis. After eliminating these outliers, 292 participants were included in the main analyses. Also, two potential extraneous variables (supervisor type and supervisee sex) were controlled in this analysis by including them as independent variables. Originally, three multiple regression equations were planned to be tested, but two more equations were added as a part of hierarchical regression analysis to control for demographic variables (supervisor type and supervisee sex) as possible extraneous variables. Harsh factor was predicted from demographic variable (supervisor style and supervisee sex) in the first step; then, the three supervisory styles were added as predictors in the second step. Soft factor was predicted from the demographic variables (supervisor style and supervisee sex) in the first step; then, three supervisory styles as a set and Harsh factor were added to the predictors in the second and third step, respectively. During the preliminary run, a possible interaction effect between the demographic variables and supervisory styles was tested by including these interaction terms at the last step of each

hierarchical regression analysis; however, interaction terms as a set did not add any significant contributions to either Harsh or Soft factors ($p > .05$). Therefore, the interaction terms were dropped for the main analyses. To control for family-wise error (FWE) at alpha level of .05, alpha level of .01 ($=.05/5$) was used to test each regression equation.

The results of these regression analyses as well as bivariate correlations among variables (Pearson's r s) were summarized in Tables 16-18.

Table 16

Correlations among the SSI Subscales (Supervisory Styles) and Harsh/Soft Factors

	1	2	3	4	5	6	7
1. Supervisor Type	-	.09	-.05	-.128	-.10	-.16	-.18
2. Supervisee Sex		-	.05	.04	.04	-.11	.05
3. SSI_AT			-	.80	.42	-.03	.29
4. SSI_IS				-	.68	-.04	.33
5. SSI_TO					-	.06	.28
6. Harsh						-	.65
7. Soft							-

Note. SSI_AT, SSI_IS, SSI_TO refer to attractive subscale, interpersonally-sensitive subscale, and task-oriented subscale, respectively. Harsh and Soft factors refer to the second-order power factors.

Table 17

The Results of Hierarchical Regression Analysis of Regressing Harsh Factor on Predictors (N = 292)

	<i>B</i>	<i>SE B</i>	β	Semi-Partial R^2
Model 1				
SR Type	-.32* (-.37)	.12	-.15* (-.18)	.02 (.03)
SE Sex	-.23 (-.10)	.14	-.10 (-.05)	.01 (.00)
Model 2				
SR Type	-.34 (-.40)	.12	-.16 (-.20)	.02 (.04)
SE Sex	-.23 (-.10)	.14	-.10 (-.05)	.01 (.00)
SSI_AT	.09 (.02)	.10	.083 (.17)	.00 (.01)
SSI_IS	-.27 (-.05)	.14	-.242 (-.35)	.01 (.03)
SSI_TO	.18 (.02)	.08	.182 (.22)	.02 (.03)

Note. $R^2 = .04$ ($p < .01$) for Model 1. $\Delta R^2 = .02$ (ns) for Model 2. SSI_AT, SSI_IS, SSI_TO refer to attractive scale, interpersonally-sensitive scale, and task-oriented scale, respectively. Harsh and Soft factors refer to the second-order power factors. No significant test was conducted on individual predictors in Model 2. * $p < .01$.

Table 18

The Results of Hierarchical Regression Analysis of Regressing Harsh Ractor on Predictors.

Model	<i>B</i>	<i>SE B</i>	β	Semi-partial R^2
Model 3				
SR Type	-.38 (-.492)	.12	-.18 (-.24)	.03
SE Sex	.16* (.255)	.13	.07 (.12)	.01
Model 4				
SR Type	-.30* (-.407)	.12	-.15* (-.20)	.02
SE Sex	.12 (.223)	.13	.05 (.10)	.00
SSI_AT	.13 (.028)	.10	.13 (.19)	.01
SSI_IS	.14 (.012)	.13	.13 (.08)	.00
SSI_TO	.12 (.006)	.08	.12 (.05)	.01
Model 5				
SR Type	-.08 (-.142)	.08	-.04 (-.07)	.00
SE Sex	.27* (.291)	.09	.12* (.13)	.01
SSI_AT	.08 (.012)	.07	.08 (.08)	.00
SSI_IS	.32** (.044)	.10	.29** (.32)	.02
SSI_TO	-.00 (-.010)	.06	-.00 (-.09)	.00
Harsh	.65** (.661)	.04	.66** (.67)	.42

Note. $R^2 = .07$ ($p < .01$) for Model 3. $\Delta R^2 = .08$ ($p < .01$) for Model 4. $\Delta R^2 = .42$ ($p < .001$) for Model 5. SSI_AT, SSI_IS, SSI_TO refer to attractive scale, interpersonally-sensitive scale, and task-oriented scale, respectively. Harsh and Soft factors refer to the second-order power factors. No significant test was conducted on individual predictors in Model 2. * $p < .0165$. ** $p < .001$.

The SSI scales were relatively highly inter-correlated, with moderate to high Pearson's r s. Attractive scale and Interpersonally-sensitive scale were correlated highly ($r = .80$) with each other; Task-oriented scale was correlated less highly with the other styles ($r = .42$ with Attractive scale and $r = .68$ with Interpersonally-sensitive scale). The correlation between Harsh and Soft power factor was relatively high at $r = .65$, which was somewhat higher than that found in Part 1 ($r = .52$). The correlations between the SSI scales and the second-order power factors were generally weak. They were similar to the Spearman's ρ s obtained in the correlation analysis for the majority of supervisors selected in this study (i.e., *professor* supervisors, $n = 246$ or supervisors of *female* supervisees, $n = 264$), indicating that the relationships among these variables could be well approximated by the linear model used in this analysis.

Hypothesis 3a was tested with two nested regression models (Model 1 and 2) in which task-oriented supervisory style was assumed to predict Harsh factor. Although demographic variables as a set significantly predicted Harsh factor in model 1, $F(2, 289) = 5.213, p < .01$, the R^2 increment by adding three SSI scales in model 2 was not significant, $F(2, 289) = 1.91, p = .13$. The three SSI scales as a set did not contribute to the prediction of Harsh factor beyond the demographic variables. The effect size was very small, indicated by the R^2 increment of .019. Less than 2 % of variability in Harsh power was explained by the three supervisory styles as a set over the demographic variables. Against hypothesis 3a, task-oriented style was not significantly related to Harsh factor.

Hypothesis 3b was tested with three nested regression models (model 3, 4, and 5) in which three supervisory styles and Harsh factor were assumed to predict Soft factor. In the first model (model 3), the demographic variables were entered as predictors to control their impact. The result revealed that the demographic variables as a set significantly predicted Soft factor, $F(2, 289) = 5.354, p < .01$, with R^2 of .036, indicating that only 3.6 % of variability in Soft factor was accounted by these demographic variables. In the second model (Model 4), adding three SSI scales led to significant R^2 increment of .105, $F(3, 286) = 11.691, p < .001$. Three supervisory styles as a set significantly improved prediction of Soft factor over the demographic variables by accounting for an additional 10.5 % of variability of Soft factors, which was of medium effect size. However, none of regression coefficients of individual SSI scales were significant ($p > .05$). In the third model (model 5), or the full model, further adding Harsh factor led to significant R^2 increment of .418, $F(1, 285) = 269.736, p < .001$. Harsh factor significantly improved the prediction of Soft factor over the demographic variables and the SSI scales by accounting for an additional 41.8 % of variability of Soft factor, which was of large effect size. In the full model,

among the individual variables, Supervisee Sex, Interpersonally-sensitive scale, and Harsh factor significantly predicted Soft factor, with $B = .27$ ($t = 2.92, p < .01$), $\beta = .29$ ($t = 3.38, p < .001$), $\beta = .664$ ($t = 16.42, p < .001$), respectively. Although it did not predict Soft factor significantly in the first and second model (Model 3 and Model 4), Supervisee Sex significantly predicted Soft factor after the impact of the supervisory styles and Harsh factors were controlled in the full model (Model 5). Supervisors of female supervisees were .27 points ($z = .267 / .825 = .324$) higher on average in Soft factor than supervisors of male counterparts, after the impact of the other predictors was controlled. Effect size of the unique impact of supervisee sex was weak, accounting for only 1.3 % of variability in Soft factor, as indicated by its squared semi-partial correlation ($sr^2 = .013$). Although it did not predict Soft factor significantly in the second model (Model 4), Interpersonally-sensitive scale significantly predicted Soft factor after the impact of the demographic variables and Harsh factor were controlled. One SD unit increase in Interpersonally-sensitive scale led to .289 SD unit increase in Soft factor. Effect size of the unique impact of interpersonally-sensitive scale was weak, accounting for only about 1.8 % of variability of Soft factor, as indicated by its squared semi-partial correlation. Harsh factor significantly predicted Soft factor after the impact of the demographic variables and the SSI scales were controlled. One SD unit increase in Harsh factor led to .664 SD unit increase in Soft factor. The effect size of unique impact of Harsh factor was very strong, accounting for 41.7 % of variability in Soft factor, as indicated by its squared semi-partial correlation ($sr^2 = .417$). Consequently, as predicted by Hypothesis 3, three supervisory styles as a set were positively related to Soft factor at a moderate level, although only interpersonally-sensitive style uniquely predicted the Soft factor. On the other hand, Harsh factor was strongly related to Soft factor, even after the impact of the other predictors was controlled.

In sum, Hypothesis 3 was only partially supported. Against Hypothesis 3a, Task-oriented style did not predict Harsh factor. However, Hypothesis 3b was supported. Supervisory style as a set and Harsh factor significantly predicted Soft factor, with moderate and Strong effect size respectively. Among supervisory styles, only interpersonally-sensitive style uniquely but weakly predicted Soft factor.

Summary of Part 2

In part 2 of this study, Hypotheses 2 and 3 were tested by correlation and regression analysis, respectively, in which clinical supervisors' supervisory styles were assumed to be related to their usage of power factors. Generally, the results only partially supported these hypotheses that supervisory styles are positively related to Soft or Soft-type (i.e., Idealized Expert) factor. These variables were positively related at moderate strength. Each supervisory style had relatively comparable level of relationship with Soft or Soft-type factor, with a relatively high intercorrelation among the SSI scales. Against these hypotheses, the result showed that task-oriented style was generally not significantly only weakly related to Harsh or Harsh-type factors, except for its weak positive relationship to Collaborative Alliance for *professor* supervisors. However, results of correlation analysis revealed somewhat stronger relationship between these variables for the minority of supervisors (i.e., Ph.D. student supervisors or supervisors of male supervisees), although a preliminary run of regression analysis revealed no interaction effect (Supervisor Type \times Supervisory Style or Supervisee Sex \times Supervisory Style) on power factors.

Summary of Findings of Research Questions and Hypotheses

Research Question 1. What is the factor structure of the Interpersonal Power Inventory-Counselor Version (IPI-CV-U)?

Research Question 1a. Can unique zero-order factors for clinical supervisors be extracted and identified from the 33 items included in the IPI-CV-U, based on exploratory factor analysis?

Result. Four main factors and two tentative factors were extracted from the IPI-CV-U items. The main factors included Compensatory Obligation, Idealized Expert, Relational Power, and Collaborative Alliance. The tentative factors included Personal Favor and Personal Disfavor.

Research Question 1b. Can two higher-order factors (Soft and Harsh) be extracted and identified from the zero-order factors, based on exploratory higher-order factor analysis?

Result. Two second-order factors (Harsh and Soft) were extracted from the first-order factors (including four main and two tentative factors). Soft factor was composed primarily of Idealized Expert and partly of Collaborative Alliance. Harsh factor was composed primarily of Compensatory Obligation and partly of Relational Power, Collaborative Alliance, and two tentative factors.

Research Question 2. Are there relationships between supervisory styles and power factors as predicted by the SAS model (Holloway, 1995)?

Hypothesis 2a. There are significant correlations between each supervisory style and each zero-order power factor. Specifically, the task-oriented style is positively correlated to those zero-order power factors which include expert, legitimate, personal/impersonal reward and coercive powers. The interpersonally-sensitive style is positively correlated to those zero-order power factors which includes referent power. The attractive style is positively correlated to those zero-order factors which include referent and expert powers.

Result. Results partially supported Hypothesis 2a. As predicted, all supervisory styles were positively related to Soft-type factor (Idealized Expert, including both expert and referent

powers). Against prediction, except for its weak positive relationship to Collaborative Alliance for professor supervisors, task-oriented style was not generally significantly related to Harsh-type factors: Relational Power (including personal reward and coercive powers), Compensatory Obligation (including subsets of legitimate power), and Collaborative Alliance (including subsets of legitimate power). For supervisors of male supervisees, task-oriented style was positively related at moderate strength to Collaborative Alliance and Relational Power, although only its relationship to the former was significant probably due to small sample size of this subgroup.

Hypothesis 2b. There are significant correlations between each supervisory style and each higher-order power factor. Specifically, the task-oriented style is positively correlated to Soft factor and Harsh factors. The interpersonally-sensitive style is positively correlated to Soft factor. The attractive style is positively correlated to Soft factor.

Result. Results supported only part of Hypothesis 2b. As predicted, all supervisory styles were generally positively related to Soft factor, except no significant correlation between these variables for Ph.D. student supervisors probably due to the small sample size of this subgroup. Against prediction, task-oriented style was generally not related to Harsh factor. Although the positive correlation between these variables was at a moderate strength for male subscales, it was not significant, again, probably due to the small sample size of this subgroup.

Research Question 3. Do supervisory styles predict Harsh and Soft factors?

Hypothesis 3a. The task-oriented style significantly predicts Harsh factor.

Result. Results did not supported Hypothesis 3a. The task-oriented style (as well as the other styles) did not significantly predict Harsh factor, after the impact of demographic variables (supervisor type and supervisee sex) were controlled.

Hypothesis 3b. The task-oriented, attractive, and interpersonally-sensitive styles significantly predict Soft factor after the impact of Harsh power is controlled.

Results. Results partially supported Hypothesis 3b. Three supervisory styles as a set significantly predicted Soft factor, after the impact of demographic variables (supervisor type and supervisee sex) were controlled. However, for individual predictors, only interpersonally-sensitive style significantly predicted Soft factor, after the impact of Harsh factor and demographic variables were controlled. The other styles did not significantly predicted Soft factor probably because of relatively high intercorrelations among three supervisory styles.

CHAPTER 5

DISCUSSION

In this study, the structure of clinical supervisors' power bases and the relationship between their supervisory styles and power base factors were examined. In part 1, Research Question 1 asked whether the first-order and the second-order factors could be extracted from the IPI-CV-U. This question was examined by factor analyses, and the nature of the second-order factor was also examined by the SL solution. The results revealed four main first-order factors and two second-order factors. In part 2, Hypotheses 3 and 4 there are specific patterns of relationships between supervisory styles and power bases were tested by correlation and regression analysis, respectively. In general, supervisors' supervisory styles were moderately related to Soft factor, but only weakly related to Harsh factor.

Part 1: Factor Analyses of the IPI-CV-U

In part 1 of this study, Research Question 1 examined the existence of the first-order and the second-order factors on the IPI-CV-U. Research Question 1a was tested by item-level factor analysis, in which the first-order factors were assumed to be extracted from the IPI-CV-U items. Then, Research Question 1b was tested by higher-order factor analysis, in which the second-order factors (Harsh and Soft) were assumed to be extracted from the first-order factors. The SL solution also was obtained to examine the nature of the second-order factors (as well as the third-order factor) directly from the IPI-CV-U items. The result of factor analyses was that four main first-order factors, two tentative factors, and two second-order factors were extracted. The four main first order-factors included (a) Idealized Expert, (b) Compensatory Obligation, (c) Relational Power, and (d) Collaborative Alliance. The two tentative factors were (a) Personal Favor and (b) Personal Disfavor. The second-order factors were Harsh and Soft factor. These

factors of clinical supervisor are generally similar to those of supervisors/superiors in different fields found by previous researchers, but also differ in some ways.

First-order Factors

Research Question 1 examined if the first-order power factors of clinical supervisors could be extracted from the IPI-CV-U items. The factor analysis on the IPI-CV-U items resulted in six correlated factors. Four of them were stable, and the other two were tentative. Among the four main factors, clinical supervisors' Idealized Expert was composed primarily of items in the Referent, Expert, and Information scales of the IPI-CV-U; thus, Idealized Expert is a power base that results from supervisees' perceptions of their supervisor as exemplary expert. It should be noted that one item of Referent scale excluded from this factor (item 18) loaded on another factor (Collaborative Alliance). Instead, an item of Legitimate Position scale excluded from Collaborative Alliance (item 13, "I understand it is my supervisor's job to tell me how to handle this situation.") loaded on this factor.

Both Idealized Expert and Collaborative Alliance loaded on Soft second-order factor, although the latter cross-loaded on Harsh factor more strongly. These findings indicate that clinical supervisors' role as ideal expert has an authoritative aspect and that supervisors' positional authority might be partly strengthened by their exemplary expert role. Elias and Mace (2005) found that Legitimate Position scale was combined with Expert and Referent scales to form a power factor (Knowledgeable authority). In their study, however, the items of informational subscale formed their own factor. Similar but somewhat different factors have been found in other studies. In Raven et al.'s (1998) original study of the IPI, organization supervisors' Expert and Informational scales formed a power factor, while Referent scale formed another. Erchul, Raven, and Ray (2001) found that Informational and Expert scales formed a

power factor (Credibility) of school psychologists; Referent subscale was a part of another (Personal Power) factor. As explained later, Idealized Expert constitutes a core of one of the second-order factors (Soft factor).

Compensatory Obligation is composed of items of both Legitimate Equity and Legitimate Reciprocity scales. These scales reflect supervisors' power bases based on supervisees' sense of obligation to repay what these supervisees perceived that they owe their supervisors, personally or formally (Raven, 2002, 2003). This factor has been found to be relatively stable across previous studies. The same factor also has been found for instructors in higher education (Elias & Mace, 2005) and organization supervisors (Raven et al., 1998). However, Erchul, Raven, and Ray (2001) found that legitimate equity and legitimate reciprocity were included in different factors (Position and Personal Power, respectively) of school psychologists. As explained later, this factor composes the core of one of the second-order factor (Harsh).

Another factor is Collaborative Alliance, which consists primarily of items from the Legitimate Position and Legitimate Dependence scales. These two Legitimate scales seem somewhat incompatible at first, because the former is based on the authority inherent in the supervisor's role and the latter is based on supervisors' helplessness in terms of supervisees' perception (Raven, 2002, 2003). However, it makes sense when one considers that clinical supervisors in academic settings generally do not have the same level of authority over their supervisees' practice as do administrative supervisors in on-site settings. Clinical supervisors' authority requires that their supervisees' cooperatively play their supervisee roles. When supervisees are aware of this limited aspect of supervisors' authority, these supervisees could be pressured to cooperate with them or accept their authority. In a way, supervisors' positional authority is shared with their supervisees. As mentioned earlier, one item excluded from

Idealized Expert (Item13) and another item excluded from Collaborative Alliance (item18) loaded reversely to these factors. The former item (“We are both part of the same work group and should see eye-to-eye on things”) could be interpreted to reflect the mutual aspect of supervisors’ authority in their supervisory working alliance. In previous studies, these scales (Legitimate Position and Legitimate Dependence) were found to be included in different first-order power factors for academic instructors (Elias & Mace, 2005), for organization supervisors (Raven et al., 1998), and for school psychologists (Erchul, Raven, & Ray, 2001). These scales also have been found to be subordinate to different higher-order factors (Soft and Harsh). However, one study found the similar factor with Collaborative Alliance in this study (Wilson, 2005). As a result of principal component analysis on the instrument which measures acceptability of several IPI subscales (IPI-CT-A), Wilson found that acceptability scales of Legitimate Position and Legitimate Dependence formed a factor (Legitimate Power); acceptability scales of Information, Expert, Referent, and Personal Reward formed another (Credible Person) factor.

Relational Power is mainly composed of items in the Personal Reward and Personal Coercive scales, and it is a new conceptualization of power base in clinical supervision in counseling. This power factor is based on clinical supervisors’ use of emotional connection with their supervisees. For example, supervisors can use their emotional approval or disapproval to shape supervisees’ behaviors. Similar to Compensatory Obligation, this factor has been found to be relatively stable across previous studies. The same factor was also found for instructors in higher education (Elias and Mace, 2005) and for organizational supervisors (Raven et al., 1998); however, Personal Reward and Coercive subscales were included into different factors for school psychologists (Erchul, Raven, & Ray, 2001). This factor is new concept in counseling

supervision literature. Previously, researchers in counseling supervision studied supervisors' power bases mainly based on French and Raven's (1959) older power base theory in which there are only generic types of reward and coercive power. Later, Raven (1992; 1993) distinguished the personal/relational aspect of these power bases from the more impersonal/practical aspect. Relational Power corresponds to this personal aspect of reward and punishment. Clinical supervisors in counseling can use their emotional connections or relationship to influence their supervisees.

Second-order Factors and the SL Solutions

Research Question 1b explored if the second-order power factors could be extracted from the six first-order factors of the IPI-CV-U. The second-order and the first-order power factors inform of different aspects of the power construct. The second-order power factors reflect more universal aspects of the construct of interest, compared with the first-order factors which reflect more focused aspects (Gorsuch, 1983; Thompson, 2004). In the present study, based on previous findings and theories (e.g., Elias & Mace, 2005; Raven et al., 1998), two higher-order factors (Harsh and Soft) were forced to be extracted from the four main and two tentative first-order factors. The two tentative first-order factors were included in the analysis to make the second-order factor reflect more diverse information about the power construct. Higher-order factor analysis is one method of singling out more stable and genuine factors over the item-level first-order factors, which can be relatively unstable and erroneous (Gorsuch, 1997). The result supported the two-factor solution, and the structure of the resulting two higher-order factors generally corresponded to those found in previous research and theories. In addition, the SL solution (Schmid & Leiman, 1957) was obtained to aid in the interpretation of these higher-order factors from their relationship with items, instead with the lower-order factors. In this study,

three-level SL solution was obtained with additional third-order factor (General) because this solution requires uncorrelated highest-order factor(s) (Gorsuch, 1983). It should be noted that the original correlated second-order factors were reduced to be uncorrelated or *orthogonalized* second-order factors (i.e., unique part) in the SL solution, after their correlated aspect was extracted to form the third order factor (i.e., common part). Result of the SL solution indicated that the original correlated second-order factors (Harsh and Soft) which consist of the third-order factor (common part) and the orthogonalized second-order factors (unique part) has a meaningful amount of universal information about the power construct on the IPI-CV-U, accounting for about 2/3 of overall variability of the items in the solution. The original first-order factors including two tentative ones have more focused information about the power construct over the higher-order factors, which accounted for the remaining 1/3 of overall variability in the solution.

In this study, Soft-factor was comprised almost entirely of a single first-order factor (Idealized Expert) and, to much lesser extent, of Collaborative Alliance. The latter cross-loaded more heavily on Harsh factor than Soft factor. This is not well-fit to the common factor analysis framework in which a factor requires at least two variables to load on it clearly (Gorsuch, 1983). However, Gorsuch noted that a weakly defined second-factor is still meaningful. Therefore, this factor was retained as the second-order factor. The result of the SL solution revealed that orthogonalized Soft factor was defined by the same items which originally loaded on Idealized Expert, not by those items on Collaborative Alliance. Instead, the items originally defined Collaborative Alliance loaded only on the orthogonalized Harsh factor and General Factor. This means that the salient loading of Collaborative Alliance on Soft factor in the original correlated solution was actually induced indirectly through its relationship to more universal aspect of Soft factor (or General third-order factor in three-level solution). Also in the SL solution, the items

which originally loaded on both Idealized Expert no longer loaded on orthogonalized Idealized Expert. As expected from the substantial overlap between them, Idealized Expert added little focused information beyond Soft factor, although Collaborative Alliance retained additional information over both Soft and Harsh factor. In other words, Idealized Expert constitutes the core of Soft-factor. In addition, like Idealized Expert, Soft factor seems to reflect some authoritative aspect because one item (Item 13, “I understand it is my supervisor’s job to tell me how to handle this situation”) from Legitimate Position scale, which was excluded from Collaborative Alliance, loaded on orthogonalized Soft factor in the SL solution. In sum, Soft factor is generic power which is almost identical to Idealized Expert, reflecting some authoritative resources (i.e., positional authority). This probably reflects supervisors’ role as counselor educator (or counselor-educator-to-be), because supervisors in this study were limited to professors and Ph.D. students in an academic setting. Soft factor also seems to be directive but less imposing in nature, by appealing to supervisees’ needs for instructions and a professional model.

Soft factor of clinical supervisors in this study is generally similar to that found in previous studies. In this study, at the scale level, Soft factor was comprised primarily of the items of Expert, Referent, and Information scales (Idealized Expert) as well as the items of Legitimate Position and Legitimate Dependence scales (Collaborative Alliance). Similarly, in previous studies, these scales generally loaded on Soft factor. The first set of scales (Expert, Referent, and Information) consistently loaded on Soft factor. Among the second set of scales, Legitimate Dependence scale also tended to be included in Soft factor (Erchul, Raven, & Ray, 2001; Koslowsky, Schwarzwald, Ashuri, 2001; Schwarzwald, Koslowsky, Agassi, 2001; Raven et al., 1998; Wilson et al., 2008), although it also cross-loaded on Harsh and Soft factor in some studies

(Koslowsky, Schwarzwald, & Ashuri; Schwarzwald, Koslowsky, & Agassi) and was included in Harsh factor for academic professors in Elias's (2007) study. On the other hand, Legitimate Position scale tended to cross-load on Soft and Harsh factor (Raven et al.; Koslowsky, Schwarzwald, & Ashuri; Schwarzwald, Koslowsky, & Agassi; Elias & Mace, 2005; Elias; Wilson et al.).

Harsh factor is composed of Compensatory Obligation, Collaborative Alliance, Relational Power, and two tentative factors (Personal Favor and Personal Disfavor). Compensatory Obligation loaded most strongly on Harsh factor; the other factors loaded more moderately. The SL solution also showed that orthogonized Harsh factor was defined by a broad range of items which originally loaded on these first-order factors. As expected from the substantial overlap between them, Compensatory Obligation added little information beyond Harsh factor, although Collaborative Alliance, Relational Power, and two tentative factors retained additional information over Harsh factor. In other words, Compensatory Obligation constitutes the core of Harsh factor. In addition, although two tentative factors (Personal Favor and Personal Disfavor) were not clearly defined by the items of Impersonal Reward and Impersonal Coercive subscale, 5 of the 6 items in these subscales clearly loaded on Harsh factor. Therefore, Harsh factor also reflects power bases of conventional reward and punishment. In summary, Harsh factor, which has Compensatory Obligation as its foundation, is a universal type of power which seems to be controlling in nature, such as resorting to obligation, physical/emotional reward and punishment, and legitimate authority.

Harsh factor of clinical supervisors in this study was generally similar to that found in previous studies, although there were some differences. Harsh factor, corresponding to its subordinate first-order factors, is generally comprised of items of Legitimate Equity and

Legitimate Reciprocity scales (Compensatory Obligation), Legitimate Position and Legitimate Dependence scales (Collaborative Alliance), Personal Reward and Personal Coercive scales (Relational Power), Impersonal Reward scale (Personal Favor), and Impersonal Coercive scale (Personal Disfavor). These IPI scales generally were included into Harsh factor in previous studies (Raven et al., 1998; Koslowsky, Schwarzwald, & Ashuri, 2001; Schwarzwald, Koslowsky, & Agassi, 2001; Elias & Mace, 2005; Elias, 2007; Wilson et al., 2008). Specifically, those scales which basically constitute Compensatory Obligation and Personal Disfavor were consistently included into Harsh factor in previous studies. Two scales which basically constitute Relational Power were generally included in Harsh Factor, except that the Personal Reward subscale was included into Soft factor in a study by Raven et al. with a U.S. sample and in a study by Erchul, Raven, and Ray (2001). However, two scales which basically constitute Collaborative Alliance were often included in Soft factor with a tendency of cross-loading on Harsh factor across previous studies, except that Legitimate Dependence scale in Elias's (2004) study and Legitimate Position scale in studies by Raven et al. (with a U.S. sample) and Koslowsky, Schwarzwald, and Ashuri were included in Harsh factor.

In summary, the results of the analysis suggested that clinical supervisor in counseling might possess power sources based on at least four main first-order and two second-order power factors. The universal aspect of their power sources was represented by Harsh and Soft factor. Harsh factor is more controlling in nature although mainly by using indirect means (i.e., appearing sense of obligation); Soft factor is more instructive or exemplifying in nature based on supervisors' professional identity. Beyond the universal aspect, supervisors' power sources also include unique aspects, which are basically Harsh-type, such as their promise of influencing supervisees through authority which requires supervisees' agreement (Collaborative Alliance)

and emotional reward/punishment (Relational Power). As expected from some variability of past findings, power base constructs of clinical supervisors in counseling were generally similar to those of supervisors/superiors in other work settings, but they also have some distinct aspects.

Secondary results: Tentative factors

Among the first-order factors, two tentative factors were extracted from the IPI-CV-U items along with four main factors. Some researchers consider it prudent to extract some extra factors to avoid under-extraction which could result in more serious biases in solutions (Wood, Tataryn, & Gorsuch, 1996). Also, these tentative factors in this study were theoretically meaningful. Future revision of the IPI-CV-T could capture these potential factors in a more stable manner. Two tentative factors are Personal Favor and Personal Disfavor. The interpretations of these factors were based on the concept of Impersonal Reward and Impersonal Coercive scales. In previous studies, these scales were consistently combined together to form a factor for organizational supervisors (Raven et al., 1998), academic instructors (Elias & Mace, 2005), and school psychologists (Erchul, Raven, & Ray, 2001). In the present study, however, items from these scales did not cling together. Personal Favor was comprised primarily of only two items: one item of the Impersonal Reward scale (Item 23, “My supervisor can help me get a job after I graduate.”) and one item of the Legitimate Reciprocity scale (Item 24, “My supervisor has done some nice things I requested in the past.”). These items seem to reflect availability of supervisors to give personal help not necessarily related to supervision. Personal Disfavor consisted primarily of two items of the Impersonal Coercive scale (Item 22 “My supervisor can make it more difficult for me to get a job after I graduate.” and Item 29 “My supervisor can make it more difficult for me to get more autonomy/independence in my clinical work.”), reflecting supervisors’ possible punishment not necessarily related to the supervision process. There could

be two main reasons for the weak structure of these factors in this study. First, clinical supervisors often do not possess clearly defined reward/punishment resources (such as financial incentives or penalties) in academic settings, compared with their administrative counterparts in on-site settings. Second, weak factor structures based on these scales in this study may have resulted from inadequate content of the items in Impersonal Reward/Coercive scales, which were modified from the original IPI for the purpose of this study. For example, *undesirable work assignment* (Item 3) as punishment may need to be replaced by a more appropriate term such as *undesirable performance evaluation*.

Part2: The relationship between Supervisory Styles and Power Base Factors

The second part of this study examined the relationship between power base factors (found in part 1 of the present study) and supervisory styles. For Hypotheses 2a and 2b, correlation analyses were used to test associations between supervisory styles and first-order/second-order power factors. For Hypotheses 3a and 3b, regression analyses were conducted to test the pre-determined directional relationships between supervisory styles and the second-order power factors. Because supervisor type (professor vs. PhD student) and participants' sex (female vs. male) were found to be potential extraneous variables in the preliminary analysis, correlation analyses for hypothesis 2 were conducted for these four subgroups of supervisors (professor supervisors, PhD student supervisors, supervisors of male supervisees, supervisors of female supervisees). For regression analyses for hypothesis 3, these variables were included as predictors.

Hypothesis 2 posited that relationships exist between clinical supervisors' supervisory styles and their usage of power factors, based on the SAS model of supervision (Holloway, 1995). Hypothesis 2a was applied to the first-order factors found in part 1. Hypothesis 2a

assumed that clinical supervisors' task-oriented style is positively related to their usage of both Harsh-type factors (Compensatory Obligation, Relationship Power, and Collaborative Alliance) and Soft-type factor (Idealized Expert). Clinical supervisors' interpersonally-sensitive and attractive styles are positively related only to their usage of Soft-type factor (Idealized Expert). At the second-order level of power factors, Hypothesis 2b assumed that clinical supervisors' task-oriented style is positively related to both their usage of Harsh and Soft factors and that attractive and interpersonally-sensitive style are positively related to usage of only Soft factor. The result of correlation analyses only partially supported these hypotheses. As was assumed in Hypotheses 2a and 2b, in general, all three supervisory styles were positively correlated with usage of Soft-type factor or Soft factor across four subgroups, but they were not strongly associated for the majority of supervisors. Three supervisor styles were significantly and positively related to usage of Soft factor across four subgroups, except for a non-significant relationship for Ph.D. student supervisors which was probably due to the small sample size. For majority of supervisors (professor supervisors or supervisors of female supervisees), relationships between styles and Soft power were not strong with r_s of 20s and 30s. For a minority of supervisors (Ph.D. student supervisors or supervisors of male supervisees), correlation coefficients were somewhat higher (r_s of .40s and 50s), except that between task-oriented style and Soft factor for Ph.D. student supervisors ($r_s = .28$, which was not significant but comparable to the majority of supervisors). In addition, although no significance test was conducted, the pattern of correlations between Soft-type factor (Idealized Expert) and supervisory styles was similar to those between Soft factor and supervisory styles as expected from the considerable similarity between these power factors.

On the other hand, Hypotheses 2a and 2b were not supported in that clinical supervisors' task-oriented style was not significantly related or only was weakly related to their usage of Harsh or Harsh-type factors (Relational Power and Collaborative Alliance) with some exceptions. For the majority of supervisors (Ph.D. student supervisors, professor supervisors, or supervisors of female supervisees), correlation coefficients of task-oriented style with Relational Power and Collaborative Alliance were weak (with r_s s of less than .20 in absolute value), and only the coefficient between task-oriented style and Collaborative Alliance for professor supervisors was significant ($r_s = .19$). By contrast, for supervisors of male supervisees, correlation coefficients of task-oriented style with Harsh factor, Relational Power, and Collaborative Alliance were moderate (r_s s around .30s), although only the coefficient with Collaborative Alliance was significant ($r_s = .44$). This was most likely due to the small sample size. In addition, although no significance test was conducted, the pattern of correlations of task-oriented style with Compensatory Obligation was similar to the pattern with Harsh factor as was expected from the similarity of these power factors, with one exception: for supervisors of male supervisees, correlation coefficient (r_s) of task-oriented style with Compensatory Obligation (-.11) was negative and smaller than the coefficient with Harsh factor (.35).

Finally, although not a formal part of hypothesis 2, it was indirectly assumed that attractive and interpersonally-sensitive styles are not related to Harsh or Harsh-type factors. As expected, correlation coefficients between these styles and Harsh or Harsh-type power factors were generally very weak (r_s s less than .10). Among Harsh-type factors, some correlation coefficients between these supervisory styles and Compensatory Obligation had negative correlation coefficients of weak effect size (r_s s around .10s). In addition, unexpectedly, for supervisors of male supervisees, correlation coefficients of attractive style with Relational Power

and Collaborative Alliance were positive with weak to moderate effect size (r_s of .16 and .34, respectively), and those of interpersonally-sensitive style were also positive with weak effect (r_s s of .10s).

Similar to Hypothesis 2, Hypothesis 3 that directional relationships exist among clinical supervisors' supervisory styles and their usage of the second-order power factors (Harsh and Soft) was only partially supported. In Hypothesis 3a, task-oriented style was assumed to predict the Harsh factor at the first regression model; in Hypothesis 3b, all supervisory styles as well as Harsh factor were assumed to predict the Soft factor. The result of regression analyses did not support Hypothesis 3a. Supervisory styles as a set did not improve any prediction of Harsh factor over the demographic variables (supervisor type and supervisee sex). Hypothesis 3b was only partially supported. As was assumed in Hypothesis 3b, three styles as a set positively predicted Soft factor over the demographic variables, and Harsh factor positively predicted Soft factor over both demographic variables and supervisory styles. The contribution of supervisory styles as a set was only a moderate one (R^2 Increment = .11), although the contribution of Harsh factor was much larger (R^2 Increment = .42). However, among the individual supervisory styles, only interpersonally-sensitive style significantly predicted Soft factor, after the impact of the demographic variables, the other supervisory styles, and Harsh factor were controlled. The prediction of Soft factor by Interpersonally-sensitive style became significant only after Harsh factor was included as another predictor, which possibly worked as covariate by eliminating the systematic relationship between Harsh factor and Soft factor. However, it was not clear why the coefficient of only interpersonally sensitive style increased (and those of the other styles decreased) after Harsh factor was added to predictors. The unique contribution of

interpersonally-sensitive style was very weak ($sr^2 = .02$), likely due in part to moderate to high inter-correlations among the SSI scales.

In summary, the results of correlation analyses for Hypothesis 2 and regression analyses for Hypothesis 3 supported only parts of these hypotheses. As expected, in general, supervisors who engage in their supervision with any one of supervisory style(s) also tend to use more Soft (or Soft-type power). This tendency is slightly stronger for those who use more interpersonally-sensitive style than other styles when impacts of demographic variables, the other styles, and Harsh factor are controlled. The relationship between clinical supervisors' supervisory styles and power bases were generally not strong. However, supervisors who engage in supervision with task-oriented style (as well as the other styles) generally do not systematically use Harsh factor or Harsh-type factors, although those with task-oriented style might use slightly more Collaborative Alliance.

There are several possible explanations for the finding that clinical supervisors' supervisory styles are not strongly related to their usage of power base factors. The first possibility is simply that they are not strongly related to each other in actual practice, despite the assumptions made by the SAS and ACT models. It is possible that clinical supervisors' usage of power bases might be related to how comfortable they are in influencing their supervisees when there are disagreements, regardless of how strongly they interact with their supervisees using a specific supervisory style. If supervisors are not comfortable in influencing their supervisees when there are disagreements, even those who usually use an instructive approach (task-oriented style) might be reluctant to use instructive means to influence their supervisees (Soft or Idealized Expert), let alone Harsh or Harsh-type factor(s). The second possibility is that clinical supervisors might tend to take a supervisory style during disagreements/conflicts with their

supervisees that is different from their usual style. In the IPI-CV-U, supervisors' usage of power bases during disagreements/conflicts in supervision was measured. Then, supervisors' supervisory style during disagreements in supervision might be strongly related to their usage of power bases, even though their usual style was not. The third possibility is that clinical supervisors might perceive a stronger relationship between their supervisory styles and usage of power factors. In this study, relationships between these factors were examined in terms of supervisees' perspectives. The fourth possibility is that the true relationships between supervisory styles and power factors were underestimated due to some technical issues in analyses. First, supervisory styles defined by the SSI might not be broad enough to capture a possible relationship to Harsh factor. For example, the SSI contains no adjectives with negative connotations as variables (Friedlander & Ward, 1984), and supervisory styles measured by the SSI are similar constructs as indicated by moderate to high inter-correlations among the SSI scales (see chapter 3). Second, these high inter-correlations among supervisory styles are also likely to limit the unique contributions of individual supervisory styles to predict Soft factor in the result of regression analyses. Moreover, because the SSI scales have highly skewed distribution, most likely due to ceiling effect, the analyses suffered range restriction and some violation of homoscedasticity and linearity assumptions. Therefore, the relationships between supervisory styles and power factors reported in this study might be somewhat underestimated, although Spearman's rho (non-parametric correlation coefficient) in correlation analyses is relatively unaffected by the nature of variables' distributions. Finally, the general finding of very weak relationship between supervisory styles and Harsh or Harsh-type factor(s) might have resulted from the social desirability responses of participants who might have been hesitant to rate their supervisors' use of Harsh or Harsh type factors.

There are also some discrepancies in the result of correlation and regression analysis in terms of demographic variables (supervisor type and supervisee sex). In the correlation analysis, the relationship between supervisory styles and power factors seemed to be somewhat different among subgroups (supervisors of female supervisees vs. supervisors of male supervisees; professor supervisors vs. PhD student supervisors), although no statistical test was conducted. In terms of supervisor type, PhD student supervisors with attractive style (and, to a lesser extent, interpersonally-sensitive styles) seemed to be more likely to utilize Soft factor (or Idealized Expert) than professor supervisors. This is understandable because student supervisors might feel pressured to prove themselves as competent professionals. However, PhD student supervisors with task-oriented style seem less likely to use Soft factor than PhD student supervisors with the other styles. This indicated a possibility that PhD supervisors' attempts to influence supervisees by making themselves look like competent professionals (i.e., using Soft or Soft type power) might be discounted by supervisees when these supervisors approach supervision like a knowledgeable teacher. Rather, PhD student supervisors might be more effective in influencing supervisees by Soft or Soft-type factor when they approach supervision from counselor or consultant roles (corresponding to the interpersonally-sensitive and attractive styles, respectively). In terms of supervisee sex, supervisors with all supervisory styles (especially task-oriented style) seemed to use more Soft or Soft-type factor with male supervisees than with female supervisees. Supervisors with task-oriented style also seemed to use more Harsh or Harsh-type power (Relational Power and Collaborative Alliance) with male supervisees than female supervisees, and those with attractive style seem to use more Harsh-type power (Collaborative Alliance) with male supervisees. It could be that clinical supervisors, especially with task-oriented style, try to influence/control male supervisees more strongly than

female supervisees primarily through Soft factor. Otherwise, clinical supervisors might allow mutual influences through Soft power more with male supervisors than with female supervisees. The latter case follows the findings of Nelson and Holloway (1990) and Granello (2003) in which supervisors in general allow male supervisors to influence their supervision by granting them a certain level of expertness. However, a limited amount of past research on the impact of gender in clinical supervision showed no simple patterns (Granello, 1996), partly because counseling is not a traditional male-dominated profession. In a female-dominated profession, females can be effective in influencing others (Carli, 2001). In the preliminary step in regression analysis, these possible interactions were tested by adding interaction terms between the demographic variables and supervisory styles as predictors (with the SSI scales centered). However, the interaction terms as a set did not added any significant contribution to the prediction of Harsh or Soft factor. This result might have occurred in part because outliers were eliminated from the correlation and regression analysis in different ways. Outliers in correlation analyses were detected separately for each subgroup; those in the regression analysis were detected for the overall sample. This difference might help to explain different relationships between supervisory styles and power factors within each subgroup in correlation analyses and regression analyses. Also, correlation and regression analyses in this study were non-parametric and parametric in nature, respectively. It is possible these different analytical approaches might have captured slightly different aspects of relationships between supervisory styles and power factors for each subgroup. Finally, large difference in sample sizes in each demographic variable could have also decreased the statistical power for detecting their interaction effect with supervisory styles in preliminary regression analyses. Based on the findings of the present study, no conclusions can be drawn regarding whether these demographic variables have an interaction

effect. Further studies using larger and equivalent sample sizes of subgroups could clarify this issue.

The results of correlation and regression analyses were more supportive of the SAS model of supervision than the ACT model. As assumed in both the SAS and the ACT models, all three supervisory styles were positively related to Soft style or Soft-type factor (Idealized Expert) at a moderate level, although not statistical test was conducted for the latter. Against both the SAS and the ACT models, task-oriented style was only weakly associated with Harsh or Harsh-type factor. Specifically, task-oriented style was significantly but weakly related only to Collaborative Alliance. In the ACT model, attractive style and interpersonally-sensitive style are further expected to be related to Harsh or Harsh type factors which correspond to legitimate power and reward power, respectively, though their relationship to Harsh or Harsh-type factors is less emphasized than their relationship to Soft or Soft-type factor. The results of this study, however, showed that these relationships are generally weak (R^2 of less than .04), if they exist at all. As an exception, for supervisors of male supervisees, the coefficients of the predicted correlations by the SAS and ACT models between task-oriented style and Harsh or Harsh-type factor (Relational Power and Collaborative Alliance) were moderately large. Also, the predicted correlation between attractive style and Harsh-type factor (Collaborative Alliance) by the ACT model was also moderate. However, despite the moderate level of correlations in this subgroup, only the coefficient between task-oriented style and collaborative alliance was significant. The relationship between clinical supervisors' supervisory styles and usage of power factors should be re-tested by future researchers using a larger sample size of this subgroup.

On the other hand, the results only partially replicated results of the leadership study by Han et al. (1996) and Stoeberl et al. (1998). These researchers found that Soft-type powers

(expert power and, to a lesser extent, referent power) positively predicted both *structure* and *support* aspects of leadership style. Among Harsh-type powers, coercive power negatively predicted these aspects of leadership style; although legitimate and reward power did not predict either aspect. Based on the ACT model, these results suggest that interpersonally-sensitive style (higher support) and task-oriented style (higher structure) are expected to be more strongly related to Soft or Soft-type factors than attractive style (lower structure and lower support). Also, interpersonally-sensitive style (higher support) and task-oriented style (higher structure) are expected to be more weakly related to Harsh or Harsh-type factor (Relational Power), which partly correspond to coercive power, than attractive style (lower structure and lower support). The positive relationships between supervisory styles and Soft or Soft-type factor in the present study somewhat follow this pattern for the majority of supervisors. Although no statistical test was conducted, the correlation coefficients of interpersonally-sensitive or task-oriented style tended to be higher than those of attractive style (except for PhD student supervisors). However, the differences in these correlation coefficients of each style to Soft or Soft-type factor were small. Also, the predicted relationships between supervisory styles and usage of Soft or Soft-type factor were not seen for PhD student supervisors for whom correlation coefficients of attractive and interpersonally-sensitive styles with Soft or Soft-type factor were higher than task-oriented style. In addition, based on the ACT model, the results of studies by Han et al. and Stoeberl et al. also suggest that interpersonally-sensitive style (high support) and task-oriented style (high structure) are related to a lower level of Harsh or a Harsh-type power (Relational Power, partly corresponding to coercive power) than attractive style (low structure and low support). However, the result of this study revealed that the relationship between all supervisory styles and Harsh or Harsh-type factors was generally weak (less than $R^2 = .04$), if it existed, and

correlation coefficients of task-oriented style to Harsh or Harsh-style factor tended to be generally slightly larger than those of the other styles. As an exception, for supervisors of male supervisees, correlation coefficients between supervisory styles and Harsh or Harsh factor(s) were stronger, but not as predicted by Han et al. and Stoeberl et al. For this subgroup, correlation coefficients of task-oriented style with Harsh or Harsh-factors (except Compensatory Obligation) tended to be higher than those of attractive and interpersonally-sensitive styles. Also, it could be that predicted relationship between supervisory styles and Personal Disfavor (a tentative Harsh-type factor, corresponding to coercive power) might have been observed if it was included in the analyses. Finally, the result of studies by Han et al. and Stoeberl et al. revealed that the effect size of the relationship between power bases and the dimensions of leadership style was relatively larger. In Stoeberl et al.'s study, expert power predicted structure and support dimensions of leadership style most strongly with β of .395 and .289, respectively (after controlled for gender, culture, and the other power bases), and a set of power bases as well as gender and culture strongly predicted the leadership style dimension of structure ($R^2 = .58$) and support ($R^2 = .47$). In the study by Han et al., power bases as a set also strongly predicted structure ($R^2 = .51$) and support ($R^2 = .44$). By contrast, in the present study, interpersonally-sensitive style most strongly predicted Soft factor with β of .29, and a set of supervisory styles improved R^2 of .11 over demographic variables.

The generally weak relationship between supervisory styles and power bases in this study was similar to the findings of Barburo et al. (2001) in which relationships between leadership styles of transactional and transformational and five power bases were examined. The former style is relatively similar to task-oriented style, and the latter is similar to interpersonally-sensitive style. Barburo et al. found that reward power and referent power were negatively

correlated with the personalizing aspect of transformational style ($r = -.23$) and the penalizing aspect of transactional style ($r = -.14$), respectively. None of other relationships were found to be significant. Although, the results of the present study did not matched with the negative relationships in Barburo et al.'s study, in both studies a generally weak relationship was found between power bases and either supervisory or leadership styles. However, because the concepts of leadership styles and supervisory styles are different despite their similarity, it is difficult to generalize findings based on comparison of these studies.

Finally, this study added evidence of the correlation between the second-order power factors, indicating the existence of a generic third-order factor. Although some correlations were expected between Harsh and Soft factor because they measure the same power base construct, most past studies did not report inter-correlations between these factors. In part 1 of the present study, the result of higher-order factor analysis revealed that Harsh factor was positively correlated to Soft factor ($r = .52$, $r^2 = .25$) at a strong level. In part 2 of the present study, the result of regression analysis revealed that Harsh factor strongly predicted Soft factor ($\beta = .66$, $p < .001$; $sr^2 = .42$), after controlling for demographic variables and supervisory styles. Correlation between Harsh and Soft factor calculated as a part of this regression analysis was $r = .65$ ($r^2 = .42$). Furthermore, result of the higher-order factor analysis at third-order level and the SL solution revealed the existence of the generic factor, which accounted for approximately 1/3 of overall explained variability of the IPI-CV-U items. The relationships between Harsh and Soft factor in the present study were comparable to those found in Pierro, Cicero, & Raven (2008). In Pierro et al.'s study, organization supervisors' Harsh and Soft factors correlated to each other at $r = .70$ and $.59$ with different samples.

Limitations of the study

Limitations of the present study are addressed in this subsection. The first limitation related to the sample selected for analyses. Participants were not randomly selected; they voluntarily responded to an online packet through an e-mail invitation via Survey MonkeyTM. Because the e-mail invitation was distributed to unknown numbers of students by program directors/coordinators, the return rate was also unknown. Among those respondents, only those who self-identified as being from counseling programs and who selected clinical supervisors in academic settings were included for further analyses. Furthermore, non-trivial numbers of participants who had incomplete responses or outliers were eliminated from main analyses, instead of being retained by substituting these values. For example, of 492 participants, 141 participants (28.7%) were identified to have either missing data or outliers and were eliminated from factor analyses in part 1. Therefore, the results of this study should not be generalized beyond population who are from counseling programs and working with clinical supervisors in academic settings and those who do not share the characteristics of outliers (see chapter 4).

Secondly, as expected from the item-level factor analysis, several IPI-CV-U items were not normally distributed, resulting in some violation of linearity and homoscedasticity assumptions among some pairs of the IPI-CV-U items. This might have resulted in weakened relationships among certain variables. It is known that item-level factor analysis is prone to form erroneous factors, such as *difficulty factors*, which are pseudo-factors formed by variables which happen to distribute in a similar way, instead of their true relationships (Gorsuch, 1997). Also, this study represents the first known attempt to extract power factors from the IPI for clinical supervisors in counseling. Although some similarity between power factors found in this

analysis and those in previous studies ensure some validity, confirmatory factor analysis should be conducted to further validate power factors found in this analysis.

Third, the SSI scales were found to suffer from possible ceiling effect, resulting in some violation of linearity and homoscedasticity. For correlation analysis, non-parametric coefficient (i.e., Spearman's ρ) was used to minimize potential biases due to general violations of bivariate normal distribution assumption of parametric correlation model. On the other hand, for regression analysis, parametric regression model (i.e., ordinal least-square regression), which requires conditional normal distribution between each independent variable and a dependent variable, was used. In this model, non-linearity was found especially around the upper extremity of the SSI scales, but potential biases seem to be minimized. The values of parametric correlation coefficients (i.e., Pearson's r) obtained as a part of this analysis were similar to those of non-parametric counterparts in correlation analysis. The regression coefficients in this analysis were also similar to those in supplemental regression analysis with partial least-square method without maximum value of the SSI scales. Therefore, parametric regression in this study seems to successfully have captured a roughly linear trend of conditional relationship of supervisory styles on power factors, assuming the normal distribution of the SSI scales as latent variables. However, with supervisory style defined by the current SSI scales, the result of regression analysis should not be generalized to populations who have scores around maximum value on SSI scales.

Finally, although efforts were made to minimize possible family-wise type I error (FEW) inflations, FEW is larger than .05. For correlation analysis, FEW was controlled at .20 as a compromise between controlling FEW and retaining statistical power. For regression analysis, FEW was controlled at .05 for omnibus model testing. Therefore, FEW in this study is at

least .25, indicating that there is at least a 25% chance that any significant relationship found in this study is actually not a significant in reality. Therefore, the results of the correlation and regression analyses in this study were exploratory in nature and should be treated as such.

Practical Implication

Although no definite conclusion can be drawn from this exploratory study, several tentative implications for practice are suggested. First, as suggested by previous theories and models in counseling supervision (Dixon & Claiborn, 1987; Dorn, 1984, 1985; Holloway, 1995; Howard et. al., 1986), social power constructs (or power base factors) are identified in terms of the IPI-CV-U. According to the results of the factor analysis in this study, clinical supervisors possess at least four power base factors. One is a Soft-type factor as a model of ideal counseling professional (Idealized expert), and the others are Harsh-type factors: (a) power base factor from mutual authority reflecting their teamwork (Collaborative Alliance), (b) power base factor through emotional connections (relational power), and (c) power bases factor by appealing to supervisees' sense of ethical obligation to repay their personal/formal imbalance with supervisors (Compensatory Obligation). Second, results of this study further suggest that clinical supervisors who engage in supervision with any of three supervisory style (especially interpersonally-sensitive style) also more or less influence their supervisee with Soft or Soft-type (Idealized Expert) power when there are disagreements, instead of with Harsh or Harsh-type powers. However, the relationship between supervisory styles and usage of power base factors was not strong. It might suggest that clinical supervisors do not utilize their power bases sufficiently to approach supervision effectively. The SAS and ACT models inform us that clinical supervisors need to use a specific combination of Soft/Soft-type (Idealized Expert) power and Harsh/Harsh-type (Compensatory Obligation, Relational Power, and Collaborative

Alliance) power to be effective in each role/function/style they adopt (Howard et al.; Holloway). Clinical supervisors might need to use power base factors (especially Harsh-type factors) more frequently. On the other hand, according to previous empirical research in business/organization, higher-education, and school psychology (see chapter 2), using Soft or Soft-type power leads to more productive outcomes than using Harsh or Harsh-type powers. Therefore, clinical supervisors must be cautious about overusing Harsh or Harsh-type powers. Considering these points, tentative suggestions for clinical supervisors are that (a) they should at least be aware of several Soft- and Harsh-type powers that are available in influencing students' learning, (b) they might be not using their powers sufficiently to make their particular style/role/function effective, and (c) they need to balance Soft-type and Harsh-type powers to maximize supervisees' learning experience in the long term.

In addition, Relational Power, and Collaborative Alliance seem to be related to two aspects of supervisory working alliance: emotional attachment and joint work aspects, respectively (Bordin, 1983; Efstation, Patton, Karsash, 1990). In his interpersonal power interaction model, Raven (1992, 1993) suggested that supervisors need to boost their power assets before they exercise these powers to make them more effective. Clinical supervisors might be able to boost their asset of Relational Power and Collaborative Alliance by increasing their working alliance. The more a clinical supervisor and a supervisee usually work together under close consensus and have stronger emotional attachment, the more easily the supervisor might influence their supervisees on occasions of disagreements/conflicts . Additionally, if strong supervisory working alliance is established based on mutually accepted expert-apprentice roles, supervisors might also enhance their Idealized Expert power. Finally, again, these

suggestions are tentative and should be treated as such, due to the exploratory nature of this study.

Theoretical Implications and Implications for Future Research

The results of part 1 of this study provide preliminary evidence of clinical supervisors' power bases defined in terms of Raven's (1992, 1993) new power base typology. They are four main first-order factors and two second-order factors. Previous research using the IPI in business/organization, higher education, and school psychology found the second-order factors (Hash and Soft) as stable constructs across occupations or fields, although their composition of primary power bases differs somewhat depending on occupations or fields. The first-order factors, however, seem to be more varied depending on occupations or fields. The results of this study follow this trend. The second-order factors found in this study were similar to those in previous studies, although Soft factor in this study was defined more narrowly than those in the previous studies. The factor structures of power base factors at first-order level differed more from those in previous studies than the structures at the second-order level. Also, the dissimilarity of power factors found between this study and previous studies could result not only from the different nature of supervisory dyads across studies but also from the focus of the IPI. Most of previous studies use the original or some version of the IPI which measures the effectiveness of power bases to elicit supervisees/subordinates' compliance; this study used a modified IPI which measures the odds of using power bases.

Previous theorists of counseling or counseling supervision did not adopt Raven's (1992, 1993) new typology of interpersonal power bases (Dorn, 1984, 1985; Dixon & Claiborn, 1987; Goodyear & Rabyak, 1981; Holloway 1995; Howard et al., 1986; Strong, 1968; Strong & Matross, 1973). This is the first known attempt to conceptualize clinical supervisors' power

bases in counseling in terms of this new typology, which basically created subcategories from the older typology (French & Raven, 1959; Raven, 1965). The factors found in this study are combinations of these more specific power bases at different levels. No other empirical study in counseling supervision has explicitly utilized the second-order factor (Harsh and Soft). The second-order factors are used to measure the universal aspect of power constructs (Gorsuch, 1983), and the findings of this study suggest that the second-order factor effectively summarizes the information of power bases construct defined by the IPI-CV-U (about two-thirds of the information). With the second-order power factors, researchers can simplify their analysis and interpretation and still obtain generic information regarding the power base construct. The first-order factors found in this study are different from previous theories and studies in counseling or counseling supervision literature. Although most of power bases advocated in these previous theories were directly relevant to Raven's (1992, 1993) new typology, the first-order factors in this study are generally combinations of these old power bases or subsets of them. These first-order factors convey different aspect of power base construct.

Among the first-order factors, Collaborative Alliance, and Relational Power seem to be directly related to the concept of the supervisory working alliance. Supervisory working alliance is a process in which a supervisor and a supervisee (a) form a trusting personal tie and (b) closely engage in joint work for the supervisee's learning (Bordin, 1983; Efstation et al., 1990). Efstation et al. and Holloway (1995) considered the supervisory working alliance as a process in which supervisors exercise their interpersonal power to influence supervisees' learning experience. The first aspect of this working alliance is a trusting personal tie, which seems to be related to Relational Power. With this emotional connection, clinical supervisors can influence their supervisees more efficiently by providing affection/approval (personal reward) or

dislike/disapproval (personal coercive). In addition, Idealized Exert might be indirectly related to emotional-tie aspect of working alliance, when emotional tie between a supervisor and a supervisee is developed based on their expert-apprentice roles. Bordin (1983) assumed that nature of emotional tie between a supervisor and a supervisee can reflect a variety of roles they take for their joint task. The second aspect of the supervisory working alliance is about working jointly, which seems to be related to Collaborative Alliance. Clinical supervisors' positional authority is not as absolute as that of administrative supervisors; thus, supervisors' authority needs to be shared with their supervisees through supervisees' cooperation/acceptance. Therefore, the stronger the supervisory working alliance, the more that mutually-shared authority (Collaborative Alliance) and emotional reward/punishment (Relational Power) are available for supervisors to influence their supervisees. In addition, when a strong supervisory working alliance is developed based on clearly defined expert-apprentice (or teacher-student) roles, supervisors can influence their supervisees more effectively through their exemplary expert role (Idealized Expert). Only available empirical study, however, was not entirely conclusive in this hypothetical relationship between power base factors (Idealized Expert, Collaborative Alliance, and Relational Power) and working alliance. Schultz et al.(2002) examined relationships between clinical supervisors' power bases based on French & Raven's (1959) typology and supervisory working alliance. Results revealed that only Personal powers (expert and referent) were significantly related to overall strength of the supervisory working alliance. It might be because clinical supervisors and supervisees generally develop supervisory working alliance based on expert-apprentice roles. However, personal aspect of reward and coercive powers (Relational Power) was not measured by the instrument in this study (RLPI; Rehim, 1988). Also, a scale of legitimate power in RLPI, which is related to Collaborative Alliance, had low

reliability ($\alpha = .64$), and it did measure only legitimate position power, not legitimate dependence. Therefore, further empirical studies needs to be conducted to test this hypothesis.

In a supervisory working alliance, a supervisor can take different roles or functions and form appropriate types of partnerships with a supervisee (Bordin, 1983; Holloway, 1995). In the SAS model, supervisors use a particular set of power bases which match with their roles/functions to help supervisees to learn from supervision effectively (Holloway). In this study, the particular relationships between clinical supervisors' style (or functions) and power bases assumed in the SAS model was only partially supported. Specifically, supervisory styles were related to Soft or Soft-type factor (Idealized Expert) at meaningful strength for the majority of supervisors. It is possible that power factors could be more directly related to the supervisory working alliance, rather than through supervisory styles.

In addition, results of this study are more supportive of the SAS model than the ACT model. The SAS model suggested the relationship between supervisory styles and Soft or Soft-type power factors in general. Similarly, the ACT model suggested the relationship between supervisory styles and Soft or Soft-type power factors. However, the ACT model also assumes stronger relationships between supervisory styles and Harsh or Harsh factor than the SAS model does. The result of this study supported a moderate relationship of supervisory styles to Soft factor, and only weak relationship if any to Harsh or Harsh-type factor.

Three suggestions are offered for future researchers. First, two tentative factors (Personal Favor and Personal Disfavor) were found in part 1 of this study. Although these factors were not used for main analyses in part 2 due to their possibly unreliable nature, they are theoretically related to impersonal reward and coercive power in Raven's (1992, 1993) typology. Further revision of the IPI-CV-U items in these power bases to accommodate counseling supervision

could improve the reliability of these tentative factors. Second, the factor analysis in this study was the first attempt to find power base factors for clinical supervision in counseling. The factors found in this study should be subjected to confirmatory factor analyses in future. Third, due to ceiling effect and possibly limited scope of the SSI scales, the relationships between supervisory styles and power factors found in part 2 of this study might have been underestimated. Revision of the SSI scale could improve future analyses.

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APPENDIX A

A Part of Online Questionnaire Packet

- Cover-letter Consent form (for anonymous survey for participants at 18 years of age or older)
- The Demographic Questionnaire

1. Cover Letter

Date: XX-XX-2009

Dear fellow students:

I am a graduate student under the direction of Professor Dr. Zarus Watson in the Department of Educational Leadership, Foundations, and Counseling at the University of New Orleans. I am conducting a research study to explore the relationship between clinical supervisors' manner of shaping supervision and their interpersonal influences.

I am requesting your participation, which will involve responding to a 10 to 15 minute online questionnaire packet. Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty, (it will not affect your grade). The questionnaire is anonymous. The results of the study may be published but your name will not be known.

If you have any questions concerning the research study, please call Dr. Zarus Watson at [omitted]

Return of the questionnaire will be considered your consent to participate.

Sincerely,

Hideyuki Tanaka
Doctoral Student
Counselor Education Program
University of New Orleans

2. Introduction

Dear fellow students,

Thank you very much for joining in the survey for my dissertation research. Upon the completion of this online questionnaire packet, you will be re-directed to another webpage in which you can provide contact information for winning one of 5 ipods (\$150 each).

The purpose of this survey is to explore the relationships between clinical supervisors' manners of shaping supervision and their use of power sources for influencing their supervisees.

This survey consists of (1) Demographic Questionnaire, (2) Supervisory Style Inventory (SSI; Friedlander & Ward, 1984), and (3) Interpersonal Power Inventory-Counselor Version-Usage (IPI-CV-U). (*orders can vary.)

It will take about 10 to 15 minutes to complete.

For this online questionnaire packet, you, "as a supervisee", will be asked to rate items regarding your supervisor in your practicum/internship for counseling clients. Please pick one individual/triadic supervisor (academic instructors, Ph.D. students, or on-site supervisor) whom you are currently working with for more than four consecutive weeks. If you are not currently in practicum/internship, please pick the most recent individual/triadic supervisor whom you had worked with for more than four consecutive weeks within last three years. Please respond to all three inventories based on the same supervisor of your choice.

If you do not have a supervisor whom you are currently working with for more than four consecutive weeks or had worked with for more than four consecutive weeks within last three years, please stop here.

Hideyuki Tanaka
Ph.D student
University of New Orleans

3. Demographic Questionnaire

Please click items regarding the supervisor of your choice.
(*please pick a current individual/triadic supervisor if you are currently in practicum/internship.
Otherwise, pick the most recent supervisor within last three years).

For this study, You picked...

- ☐ Current supervisor (If you are currently in training, please click this option.)
- ☐ The most recent supervisor (If you are NOT currently in training, please click this option.)

Supervisor's sex

- ☐ Male ☐ Female

Supervisor's race/ethnicity

- ☐ White ☐ African American ☐ Hispanic ☐ Asian ☐ Native American ☐ Others

Supervisor's status

- ☐ University supervisor - Professor/Instructor
- ☐ University supervisor - Ph.D. Student
- ☐ On-site supervisor

4. Demographic Questionnaire- continue -

The second part of this Demographic Questionnaire is about your demographic data.

Please complete following demographic questions.

Age

Gender

☐

Male

☐

Female

Race/Ethnicity

☐

Caucasian

☐

African
American

☐

Hispanic

☐

Asian

☐

Native
American

☐

Others

Student Status

☐

Doctoral Student

☐

Specialist/Post-Master's
Certification Student

☐

Master's Student

Accreditation status

☐

CACREP accredited
Counseling program

☐

Non-CACREP
accredited Counseling
program

☐

Non-CACREP
accredited Counseling
Psychology program

☐

Others

Type of program

Training level.

(*Your current training level if you are currently in training. Otherwise, your training level when working with the most recent supervisor of your choice).

APPENDIX B

Permission to use and modify Instruments

- The Supervisory Style Inventory
- The Interpersonal Power Inventory

Dear Mr. Tanaka:

O course, you have my permission to use the IPI or its derivatives for your dissertation in any form. I am pleased that you also contacted Dr. William Erchul, since he has been carrying out considerable research using the IPI in school counseling situations.

I shall look forward to seeing the results of your study.

With warm regards,

Bert Raven

Dear Hideyuki Tanaka,

Good to hear from you again.

As I stated before, as long as the IPI-CT-Usage is appropriately cited, you have permission to adapt it to study issues in counseling supervision.

FYI, I have copied Drs. Wilson and Raven on this reply.

Continued best wishes on your dissertation research --

Sincerely,

Bill Erchul

William P. Erchul, PhD, ABPP

Professor, Department of Psychology

Past President, American Academy of School Psychology

North Carolina State University

[Omitted]

Dear Hideyuki,

Thank you for your interest in using and adapting the IPI-CT-Usage. Interpersonal Power research sure has come a long way! Best of luck with your research and please let me know how easy (hard) it was to adapt the instrument for on-line usage. Dr. Erchul and I briefly considered trying this approach, but I was under a time crunch and ultimately decided to go the old-fashioned paper/pencil route.

Good luck!

Kristen

Kristen E. Wilson, Ph.D.

Licensed Psychologist

Nationally Certified School Psychologist

Licensed Specialist in School Psychology

[Omitted]

Yes, Hideyuki, you have my permission to use the SSI (attached). The other version's directions (for supervisors) and the scoring can be found in the 1984 JCP article. Good luck with your dissertation!

M. Friedlander

APPENDIX C

The invitation e-mail message for program directors/coordinators and for students.

Dear Program Director/Coordinator,

This is an invitation for counseling students in your program to participate in my dissertation study. I am a doctoral student in the counselor education program at University of New Orleans. My dissertation committee members are Dr. Zarus Watson (Chair), Dr. Barbara Herlihy, and Dr. Louis V. Paradise. My dissertation study is about the relationship between clinical supervisors' ways of shaping supervision and their use of power sources for influencing their supervisees. Students in your program will be asked to complete a 10 to 15 minute online questionnaire packet (via Survey Monkey). Information will be collected anonymously, and no risk more than everyday life will be posed to your students in participating this study. Please forward or distribute the following message to your students. Thank you very much in advance.

Sincerely,
Hideyuki Tanaka, Ph.D. student
University of New Orleans

Dear Fellow Students,

This is a request for joining in my dissertation study for those students who are taking or took clinical supervision in counseling practicum/internship. I really need your assistance in this study. I would greatly appreciate if you would complete the anonymous online questionnaire (*about 10 to 15 minute to complete). You have **a chance to win ipod** (digital music player) for your participation (*** 5 participants will be randomly selected to win ipod nanos – about \$150 each**).

I am a doctoral student in counselor education program at University of New Orleans. My dissertation study is to explore interpersonal influence in clinical supervision. Upon the online questionnaire, you will be asked as supervisee in individual/triadic supervision in your practicum/internship to rate (a) your supervisor' typical manner(s) of conducting supervision, (b) your supervisor's approaches of asking your compliance, and (c) demographic information of you and your supervisor.

This is anonymous online survey, and your contact information (*optional for sending you a possible prize – ipod) will be collected independently from your responses to the online questionnaire. Your contact information will be handled confidentially and will be deleted upon completion of my study. No risk more than everyday life would be posed in participating in my study.

Please help me to complete my study. You can start the online questionnaire by clicking the following link. If clicking the link does not work, you can copy & paste the link to the internet browser, or right-click and select open-hyperlink option.

[Link to the online questionnaire packet]

Thank you very much for your valuable time in advance.

Sincerely,
Hideyuki Tanaka, Ph.D. student
University of New Orleans

APPENDIX D

The IRB Approval.

**University Committee for the Protection
of Human Subjects in Research
University of New Orleans**

Campus Correspondence

Principal Investigator: Zarus Watson
Co-Investigator: Hideyuki Tanaka
Date: February 9, 2009
Protocol Title: "The Relationship between Supervisors' Power Bases and
 Supervisory Styles"
IRB#: 01March09

The IRB has deemed that the research and procedures described in this protocol application are exempt from federal regulations under 45 CFR 46.101category 2, due to the fact that any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Exempt protocols do not have an expiration date; however, if there are any changes made to this protocol that may cause it to be no longer exempt from CFR 46, the IRB requires another standard application from the investigator(s) which should provide the same information that is in this application with changes that may have changed the exempt status.

If an adverse, unforeseen event occurs (e.g., physical, social, or emotional harm), you are required to inform the IRB as soon as possible after the event.

Best wishes on your project.
Sincerely,

Robert D. Laird, Chair
UNO Committee for the Protection of Human Subjects in Research

VITA

Hideyuki Tanaka was born on June 30, 1973 in Aichi-Ken, Japan. He graduated from Yokosuka High School in Aichi-ken, and completed his Bachelor's degree at Otaru University of Commerce in Japan. He came to the US in Summer, 1997 and studied at Nicholls State University. In December 2001, he completed master's degree in psychological counseling at this institution. After the graduation, .he counseled children and adolescents at the Lafourche Parish Juvenile Justice Facility in Thibodaux, LA for about three years, which was composed of the emergency shelter, group home, and detention center units. During his practice at this institution, he gained a license of a professional counselor in Louisiana. He started his doctoral study at University of New Orleans in Spring, 2005. During his study at UNO, he worked as a graduate assistant and helped professors conduct research and administrative duties, and co-taught several classes.