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PSYCHOPATHIC DEVIATE SUBSCALES IN THE MMPI PROFILES OF MARITAL COUNSELEES: A COMPARISON OF THOSE WHO REMAIN MARRIED AND THOSE WHO DIVORCE

By

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ABSTRACT

PSYCHOPATHIC DEVIATE SUBSCALES IN THE MMPI PROFILES OF MARITAL COUNSELEES: A COMPARISON OF THOSE WHO REMAIN MARRIED AND THOSE WHO DIVORCE

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A longitudinal study was conducted on 52 marital counselee couples, following their progress from the beginning of marital counseling to six months beyond the end of treatment. Comparisons between the group of 32 couples who remained continuously married (CM) and the group of 20 couples who decided to divorce (DV) were made on the main clinical scales of the MMPI, as well as on the Harris and Lingoes Pd (Psychopathic deviate) subscales.

As hypothesized, the couples, husbands, and wives in the DV group had significantly higher Pd (Psychopathic deviate) scores than did the CM group. Hypotheses regarding the Pd4a (Social Alienation) subscale were not supported. However, the Pd1 (Family Problems) subscale was found to be significantly associated with divorce for the couples as a whole and for the husbands.

Hypotheses regarding similarity and complementarity of personality characteristics within the Pd subscales met with mixed results. Husbands and wives did not correlate significantly on the parent Pd (Psychopathic deviate) scale. Husbands and wives in the CM group correlated significantly on the Pd1 (Family Problems) subscale and on the Pd4ab

(combined Social and Self-alienation) subscales, suggesting that the CM couples had a shared perception as to the amount of dysfunction and alienation within the marital relationship.

DV couples correlated significantly on the Pd4a (Social Alienation) subscale, indicating that the DV couples shared a felt sense of external blame for their problems. Neither hypothesized complementary relationship between the Pd4a (Social Alienation) and the Pd4b (Self-alienation) subscale was supported in either the CM or DV groups.

Hypotheses regarding the existence of typical "mini" Pd (Psychopathic deviate) subscale profiles were statistically supported for the husbands. However, the results were believed to be an artifact of the high intercorrelation between the Pd4a (Social Alienation) and the Pd4b (Self-alienation) subscales rather than actual group differences.

Post hoc analysis showed significant differences on the Pd (Psychopathic deviate) scale as the high main scale point on the MMPI profile of at least one member of the DV couples as compared to the CM couples. In addition, the DV couples showed a strong positive correlation on the Hy (Hysteria) scale, indicating mutual use of degree of defensive denial in the DV couples.

To my best friend and spouse, Doreen

To my sons, Ian and Evan

To my parents, Tom and Barbara

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CHAPTER I

INTRODUCTION

Statement of the Problem

In 1971, Paul Arnold, in an unpublished doctoral dissertation at the University of Minnesota, completed the first comprehensive study of the Minnesota Multiphasic Personality Inventory used in the assessment of marital dysfunction. Arnold's effort was particularly useful, in that he focused on the marital pair profiles as a single unit of analysis. When compared to "normal" couples, Arnold was able to construct eleven objective signs that differentiated couples in troubled marriages from normals. Of these eleven, the Pd (Psychopathic deviate) scale proved to be the most powerful discriminator.

Arnold's work was built upon the few studies undertaken in the previous two decades that used the MMPI to investigate different aspects of marital maladjustment. He drew particularly upon the work of Swan (1957), who did a scale by scale comparison of happily and unhappily married couples. Swan found that the more happily married couples had lower scores on the Pd, Pt (Psychasthenia), and Ma (Mania) scales. Although Swan did not look at the overall configural patterns of the couples, he laid the groundwork for the use of the MMPI in this area.

Arnold also drew upon the dyadic interactional research of Brantner (1965), Neubeck (1965), Phillips (1967), and Murstein and Glaudin (1968). All of these investigators found recurring patterns in the profiles of troubled marriages, which suggested conflicts around role expectations, communication, and interactional power styles. The one theme which kept recurring throughout these investigations was the prominence of the Pd scale in the MMPI profiles of both spouses. All of these studies reported prominent Pd elevations in at least 40-50% of their subjects, with higher scores being reported more frequently for the wives.

Since Arnold's definitive work in 1971, much of the literature has focused on homogeneity versus heterogeneity of personality characteristics (Yom, Bradley, et al., 1975) and complementarity of need (Brown, 1979). Both the Yom and the Brown studies found significant positive relationships between spouses on the Pd scale and suggested that wives and husbands experience similar degrees of rebellion and alienation with respect to society and family. The Brown study also concluded that complementarity of need existed in his population, particularly between the husbands' D (Depression) scale and the wives' Pd scale. Brown also found that Pd was the most frequently elevated scale, with 43% of his subjects scoring 70 T-score units, or above.

In addition to being the primary discriminator of marital difficulty, the Pd scale has also been found to be

the highest mean MMPI scale in the personality profiles of non-marital counseling subjects who later divorce (Loeb, 1966). Loeb concluded that the personality characteristics of those who remain married are different from those who eventually divorce. These results suggest that there may be relatively stable and enduring characteristics, reflected in MMPI Pd scores, that are detectable prior to marriage, which figure prominently into both marital difficulty and divorce.

While Pd has consistently been found to be the primary discriminator of marital discord, none of the research, to date, has addressed the factorial make up of the scale. All of the research cited above makes the assumption, either implicitly or explicitly, that significant Pd elevations represent rebellion, authority conflict, and alienation with respect to family and society. The degree to which the individual is believed to experience these thoughts and feelings has been tied to the T-score elevation alone, which also includes a correction factor (K correction). Thus, clinical interpretation of the profile with respect to the individual or the marital dyad has relied upon overall scale height, in combination with the height of other scales.

This approach to Pd scale interpretation ignores the nuances within the scale itself and may lead the clinician to make assumptions about an individual's personality makeup, or interactive style, that may be erroneous. Harris and Lingoes (1959) addressed this issue by identifying factors within five of the clinical scales, including the Pd

scale, that they believed would aid in the interpretation of the test profile by more clearly delineating which factors were contributing to the particular scale elevations. In the case of the Pd scale, they identified Family Problems (Pd1), Authority Problems (Pd2), Social Imperturbability (Pd3), Social Alienation (Pd4a), and Self-Alienation (Pd4b). The affective and behavioral correlates of these subscales indicate that the Pd scale is a heterogeneous measure, rather than a measure of homogeneous characteristics.

Examination and understanding of the Pd subscales with respect to each spouse, and their interactional implications, appears essential to assessment and treatment planning in marital counseling, since the Pd scale has consistently been shown to be strongly associated with marital discord. These issues were the scope of the current study. In particular, it focused on understanding prominent Pd scale elevations in the MMPI profiles of wives and husbands entering marital counseling through examination of the Harris-Lingoes subscale scores. Also examined were the dyadic relationships of the subscale scores and their corresponding therapeutic implications, as well as the relationship between the subscale scores and the subsequent decision to remain married or to divorce.

Need for the Study

The MMPI is being used increasingly in marital counseling settings for therapeutic intervention purposes

(Ollendick, Otto, and Heider, 1983) as well as for assessment purposes (Hackney and Ribordy, 1980, and Olsinski, 1980). When the marital counselor is assessing the individual and interactional difficulties occurring within a given marriage, a primary objective is to identify potentially helpful therapeutic strategies. These strategies are developed in part from the presenting problems described by the couple, as well as an assessment of strengths, resources, and limitations of each individual spouse. In addition, the counselor must make a determination of the interactional dynamics of the couple, and attempt to evaluate how the individual characteristics of each spouse contribute to the overall relational dysfunction and to the exacerbation of symptoms in the other spouse. In other words, the reciprocally interactive qualities of the relationship must be included in both the assessment and treatment plan, not just the individual personality characteristics. As Swan (1957) noted, the clinician has a threefold concern: "the husband himself, the wife herself, and the field of interaction between them".

If the MMPI is to be used effectively and accurately in a marital counseling setting, it is imperative for the counselor to know what the test is measuring with respect to the population being served. In the case of the Pd scale, this task can be confused by not knowing specifically what a given prominent elevation on this scale is measuring. Since

the Pd scale has been found to be the primary discriminator of many other types of dysfunctional behavior such as abusive parents, (Paulson, Schwemer, and Bendel, 1976), alcoholic marriages, (Rae and Drewery, 1972) and criminal behavior, (Anderson and Holcomb, 1983), the question arises as to what a prominent elevation on Pd is measuring in a marital counseling population. Is the specific Pd elevation measuring antisocial personality characteristics only, or are there, perhaps at least two groups of individuals, one of which is reflecting situational unhappiness as opposed to more antisocial attitudes?

Related to the question of situational affect versus intractable attitudes and behaviors, is the complete lack of longitudinal information regarding what happens to couples after they leave marital counseling. Which spouses have been able to resolve their differences and remain married, and which ones eventually end up divorcing? Although the Loeb (1966) study investigated non-marital counseling couples with respect to decisions to marry and subsequently divorce, no MMPI research has focused on those couples who actually enter marital counseling and then followed the couples longitudinally to identify the personality characteristics that are associated with continued marriage or divorce. An answer to this question would be of considerable value in the areas of both marital and premarital counseling. The ability of the counselor to apprise clients of the types of attitudes that are

associated with continued marriage or future divorce would provide useful information for the prospective spouses. Clinical experience suggests that couples are much more open to change and mutual negotiation in the early part of the relationship before there is a history of spousal blame and intractability.

Feedback regarding potential interpersonal problem areas during the various stages of relationship formation, whether premarital or marital, would provide the couple an opportunity to address these issues. Most importantly, it would provide each individual the opportunity to assess the amount of flexibility and openness, and the willingness to change and negotiate in both self and other prior to a decision to marry.

In a clinical treatment setting, MMPI interpretations are most commonly done by looking at the highest two or three T-score points on the test profile, as well as evaluating the three validity scales, and any low T-score points that occur (Greene, 1980, and Graham, 1987). Since the Pd scale has consistently been found to be the prominent feature in marital counselee profiles, if it is found to be one of the top three scales, its individual and interactional interpretation becomes a very important part of the counseling process.

Where the marital counselor can run into trouble with interpretation of the Pd scale is when it is unclear why the scale is elevated in the first place. Two different MMPI

profiles may have the same two or three point codes with Pd elevated to the same level and in the same configural position. However, upon examination of the Harris and Lingoes subscales, it may be that there are very different factors that account for the overall elevation of the scale. Some of these factors may be shared by both the wife and the husband and may indicate situational depression, alienated interpersonal intractability, current or historical struggles with family, authority conflicts, superficial social confidence, or a combination of some but not all of these characteristics.

Of particular interest in this study was the examination of the Harris and Lingoes Pd subscales and their relationship to the overall personality characteristics of wives and husbands as measured by the MMPI. Are there particular subscale patterns that are shared by spouses, and are they predictive of relational resolution or divorce? Are some of these characteristics similar or complementary, and do they, as Yom, Bradley, et al. (1975) suggest, represent similarity and complementarity of pathology rather than similarity and complementarity of healthy needs? It may be that some couples are mutually engaged in defending against the outside world, as opposed to growth oriented philosophies.

The questions posed above are faced by the marital counselor each time the MMPI is used in the assessment and treatment of marital dysfunction. None of the studies, to

date, in the marital relations area have examined the heterogeneous nature of the Pd scale and its relationship to these questions, or the associated therapeutic implications.

Purpose of the Study

The general purpose of the study was to clinically understand prominent elevations on the Pd scale of husbands and wives entering marital counseling. Harris and Lingoes subscale mini-profiles were examined to determine if there were consistent groupings of scores with differing clinical implications. In addition, some of the studies previously cited have shown husbands and wives to correlate positively on this scale (Yom and Bradley, 1975, and Brown, 1979). This study explored the relationships between spouses on the Pd scale by examining the correlations of their Pd subscales to determine whether similarity and complemen- tarity co-existed within the parent scale. Finally, the Pd scale and the Social Alienation (Pd4a) subscale was examined in both husbands and wives with respect to its relationship to subsequent decision to divorce.

General Assumptions and Theoretical Perspective

Varied clinical experience with marital counselees suggests there are several different reasons that could account for prominent elevations in the Pd scale of marital counselees. Hackney and Ribordy (1980) concluded that one of these is situational distress, which is typically

reported by spouses as a result of their marital conflict. These authors found that marital counselees had significantly higher Pd scores than either happily married couples, or couples who were divorcing, suggesting that the marital interaction itself was contributing to the Pd elevations. It is possible that the Harris and Lingoes subscales tap this situational distress, as well as measuring more enduring antisocial characteristics, and thus when examined statistically, it was hypothesized that at least two different groups would emerge. One of these hypothesized groups was predicted to reflect the antisocial characteristics described in the MMPI literature, while the other was thought to reflect situational distress, and perhaps some depression, without the antisocial components. The literature review that follows will detail the factorial makeup of the Harris and Lingoes Pd subscales and provide the rationale for this assertion.

In addition, other clinical investigations suggest that angry, hostile interpersonal intractability in one spouse is often accompanied by depression in the other spouse (a position supported by Brown, 1979). Since the Pd subscales appear to measure both of these characteristics through the Social Alienation and Self-Alienation items, respectively, it was predicted that this would be reflected in a correlational analysis of these subscales. As mentioned previously, the Pd scale has been found to correlate significantly between spouses (Yom et al., 1975, and Brown,

1979). However, rather than look at this from a one-dimensional perspective, it may be that within the parent Pd scale, such as degree of Familial Discord, while other subscale relationships such as Social and Self- Alienation operate in a complementary fashion.

The theory underlying the complementarity of needs perspective is based primarily on the work of Winch (1954), and researched with marital counseling couples by Brown (1979). Winch believed that spouses base their selection on complementary needs. Two types of complementarity were posited: Type I, which was based on differing intensity of the same need, and Type II, which was based on a difference in the kind of needs expressed by each spouse.

Brown's research in 1979 supported the theory of complementarity, as assessed by the MMPI with a marital counseling population. Brown's measure of complementarity was positive or negative correlations between husbands' and wives' scale scores. One of Brown's conclusions supported the view of Kopp (1974), who posited that spouses select each other in a complementary fashion to achieve interpersonal balance, but that later in the marriage these differences become the focal point of the marital conflict. The view taken in this study posited that during times of marital distress this complementarity would show up in the Pd subscales and take on the flavor of mutual defense, i.e., as the hostility and resentment (Pd4a) of one spouse increased, the depression and agitation (Pd4b) of the other

would increase.

Prior to Brown's study, the research on the complementarity of needs produced mixed results. According to Brown, Winch (1955, 1955a) carried out two studies which supported his original work, as did the research of Ktasanes (1955), Kerchoff and Davis (1962), and Reiter (1970). Another group of studies used the Edwards Personality Preference Schedule to assess the complementarity theory (Banta and Hetterington, 1963, Murstein, 1961, 1967, and Saper, 1965). These studies lent little support to Winch's position and supported the idea of similarity of needs.

Due to the conflicting results of the research regarding his theory from 1955 to 1973, Winch revised it in 1974. The changes incorporated the disparity of previous research findings into a combination theory that encompassed both complementarity and role theory. Complementarity was posited to be a general or global variable that guides marital choice. Role theory looks at the interaction of the spouses with respect to what is considered situationally appropriate. Thus, a marital couple whose complementary attraction to each other is not consistent with the role specification will be more discordant and less stable than a couple who is congruent on both levels.

When discordant and unstable interaction between spouses intensifies to the point that the couple seeks counseling, one of the possible outcomes is divorce. Since the literature already suggests the prominence of the Pd

scale in such a situation, the defensive complementarity question emerges, with respect to the subscale relationships between spouses. Is there a potential subscale discriminator between those who remain married and those who divorce? They hypothesis researched in this study asserted that the most powerful discriminator would be the Pd4a (Social Alienation) subscale, as opposed to the other subscales. The reason for looking so closely at the Pd4a (Social Alienation) subscale, is that from an item content perspective, it appears to be the heart of the antisocial trait characteristics that the Pd scale purports to measure.

These general observations and assumptions underlie the research questions, hypotheses, and design that comprised this study.

Research Questions

1. Are there recurring 2 point groupings of Harris and Lingoes Pd subscales for husbands entering marital counseling?

2. Are there recurring 2 point groupings of Harris and Lingoes Pd subscales for wives entering marital counseling?

3. Is there a relationship between the Pd scores of husbands and wives entering marital counseling?

4. Is there a relationship between the Harris and Lingoes Pd subscale scores of husbands and wives entering marital counseling? Specifically, are there similarities between Family Discord subscales and are there complementary

relationships between the Social and Self- Alienation subscales?

5. Of husbands entering marital counseling, are there differences on the clinical scales between those who remain married and those who subsequently divorce?

6. Of wives entering marital counseling, are there differences on the clinical scales between those who remain married and those who subsequently divorce?

7. Of husbands entering marital counseling, are there differences on the Harris and Lingoes Pd subscales between those who remain married and those who subsequently divorce?

8. Of wives entering marital counseling, are there differences on the Harris and Lingoes Pd subscales between those who remain married and those who subsequently divorce?

9. Of couples entering marital counseling, are there differences in the clinical scales of those couples who remain continuously married as compared to those who divorce, when combining the MMPI profiles of both spouses?

10. Of couples entering marital counseling, are there differences in the Harris and Lingoes Pd subscales of those couples who remain continuously married as compared to those who divorce, when combining the MMPI profiles of both spouses?

Glossary of Terms

The following information will be of use to those readers unfamiliar with the MMPI. Reference will be made

throughout this dissertation to the validity scales, main scales, and the Harris and Lingoes Pd (Psychopathic deviate) subscales. The validity scales include:

L (Lie)

F (unusual responses)

K (correction)

A complete description of the content of these scales can be found in Appendix A.

The main clinical scales include:

1-Hs (Hypochondriasis)

2-D (Depression)

3-Hy (Hysteria)

4-Pd (Psychopathic deviate)

5-Mf (Masculinity-femininity)

6-Pa (Paranoia)

7-Pt (Psychasthenia)

8-Sc (Schizophrenia)

9-Ma (Mania)

0-Si (Social Introversion).

A complete description of the content of these scales can be found in Appendix A.

The Harris and Lingoes Pd (Psychopathic deviate) subscales are logically derived from the items of the Pd (Psychopathic deviate) scale. There is some item overlap between the subscales and there are several items that have been taken from other main scales on the MMPI that logically relate to the content of the particular subscale. The

subscales include:

Pd1 (Familial Discord)

Pd2 (Authority Problems)

Pd3 (Social Imperturbability)

Pd4a (Social Alienation)

Pd4b (Self-alienation)

Pd4ab (Combined 4a and 4b Alienation)

A complete list of the items that comprise the Harris and Lingoes subscales can be found in Appendix B.

Originally, the MMPI was used to assess diagnostic groups, and the test profile analysis was limited to describing the diagnostic category which received the highest normalized T-score value. Since this method proved to be inaccurate (Graham, 1987), profile interpretation was changed to describe the behavioral correlates of the highest 2 or 3 main scales. According to Graham, this method proved to be much more accurate and reliable, leading to the development of 2 and 3 point code types. It has become traditional in the MMPI literature to refer to the test profiles by their highest 2 or 3 point code, in descending order. Thus a 4-3-9 profile has its highest elevation on the Pd (Psychopathic deviate) scale, the next highest elevation on the Hy (Hysteria) scale, and the third highest elevation on the Ma (Mania) scale.

In keeping with this traditional manner of describing MMPI profiles, the section of the dissertation that deals with the Harris and Lingoes subscale "mini" profiles

incorporates this descriptive style. Thus the highest two T-scores of the subscales are examined statistically to look for typical "mini" profile code types that would describe different clusters of behavioral correlates. Each subscale has behavioral correlates associated with it that vary in quantity and intensity, depending upon the T-score value. Computer scoring programs routinely print the Harris and Lingoes subscale scores, as well as many other special scale scores.

CHAPTER II

REVIEW OF THE LITERATURE

The review section of this study will be divided into four parts:

1. Construction and use of the Minnesota Multiphasic Personality Inventory.

2. Construction of the Pd (Psychopathic Deviate) scale, or scale 4, as it is currently labelled.

3. Development and use of the Harris and Lingoes (1955) subscales for the MMPI.

4. Research in the area of marital dysfunction using the MMPI as a primary tool of investigation.

    a. Research pertaining to marital discord not using marital counselees as subjects

    b. Research using pair-profile analysis

    c. Research using marital counselees

MMPI Construction

The MMPI is an empirically constructed objective personality measure composed of 566 true and false self reference items. Graham (1987) states that "the relatively unambiguous stimuli and the structured response format qualify the MMPI for classification as an objective technique of personality assessment" (p.3). It was

developed and published by Starke Hathaway, PhD and J. Charnley McKinley, MD, in 1943 in Minnesota. The original use of the test was psychodiagnostic. The empirically keyed items were developed by looking at which of 504 items selected by the authors discriminated major psychiatric groups from normal individuals. The normal population used in the test construction came mainly from relatives and visitors of the patients in the University of Minnesota Hospitals. The clinical sample was comprised of patients that had been clinically diagnosed as: hypochondriacal, depressed, hysterical, psychopathic deviate, paranoid, psychasthenic, schizophrenic, and hypomanic. These diagnostic categories formed the basic clinical scales labelled Hs, D, Hy, Pd, Pa, Pt, Sc, and Ma. In addition to these scales, a masculinity-femininity (Mf) scale was developed several years later and added to the basic clinical scales, as was the social introversion (Si) scale.

In order to assess the validity of the clinical scales, Hathaway and McKinley developed four scales that were designed to ferret out problematic or deviant test taking attitudes (Greene, 1980, and Graham, 1987). The Cannot Say (?) scale is composed of the total number of items left blank by the test taker, and the validity of the clinical scales is reduced as the number of Cannot Say responses increases. The Lie (L) scale measures an individual's willingness to admit to minor faults and assesses the degree

to which one presents oneself in a favorable manner. The F scale attempts to detect unusual or atypical ways of responding to the test items. It includes content areas such as peculiar experiences, strange thoughts, bizarre sensations, and feelings of isolation and alienation (Dahlstrom et al., 1972). As scores increase on the F scale, the amount of psychopathology increases. Finally, the K scale measures clinical defensiveness and is used as a correction factor for some of the clinical scales, ranging in value from .2 to 1.0.

Although the MMPI was originally developed to differentiate patients in the several psychodiagnostic categories, it fails to do so reliably. Graham (1987) states that there is high intercorrelation between many of the clinical scales and also significant unreliability in the psychiatric diagnoses, both of which contribute to the difficulty of distinguishing clinical groups.

As research on the MMPI has developed over the years, clinicians have changed the manner in which the test is used. Rather than assign diagnostic labels, the T-score elevations on the clinical scales are looked at in combination to describe behavioral characteristics and interpersonal patterns that have been shown to correlate with each other. Many behavioral-empirical correlates have been developed that have been shown to be helpful in generating inferences and descriptions of individuals based on their configural scale patterns (Graham, 1987). By 1984,

according to Lubin, Larsen, and Matarazzo, it was believed that the MMPI was the most widely used and researched personality test in the United States.

Because of the MMPI's standardization and ease of administration and scoring, its use became widespread in many different clinical populations. Prior to the advent of mini-computers and software packages that routinely report up to 130 research scales, in addition to the clinical scales, the majority of MMPI studies focused on the ten major clinical scales, the Ego Strength scale, and the four validity scales. This has been true of the marital counseling literature as well. All of the research, to date, in the marital counseling area has not addressed any of the research scales developed by Wiggins, Tryon, Stein and Chu, or Harris and Lingoes.

The Pd (Psychopathic Deviate) Scale

Greene (1981) describes in succinct fashion the makeup of the Pd scale:

> "General social maladjustment and the absence of strongly pleasant experiences are assessed by the 50 items of Scale 4 (McKinley and Hathaway, 1944). The major content areas of the items are diverse and in some cases seem contradictory. Items tap complaints about family and authority figures in general, self-and social alienation, and

boredom. Other items assess the denial of social shyness and the assertion of social poise and confidence. As with Scale 3, the simultaneous endorsement of apparently contradictory groups of items was particularly characteristic of the criterion group used to construct Scale 4. Scale 4 was constructed empirically using a criterion group of young persons primarily between the ages of 17 and 22 diagnosed as psychopathic personality, asocial and amoral type, who were referred for testing by the courts because of their delinquent activities. None of the criterion cases was a major criminal type; most were characterized by a long history of minor delinquency. When they engaged in delinquent behavior, they generally did so without planning or forethought and with little effort to avoid being caught. All members of the criterion group, which included more females than males, were involved in legal proceedings, and many were incarcerated. Hence, their emotional responses of depression and boredom could have reflected their current circumstances rather than any real, inherent characteristics. The responses of this

> criterion group were contrasted with those of a sample of the married members of the original Minnesota normative group and a sample of college students. This procedure resulted in the 50 items currently on Scale 4."...
>
> McKinley and Hathaway called this scale psychopathic deviate to indicate that it was not expected to differentiate all cases of psychopathic personality. Rather Scale 4 could identify about one-half or more of those clients diagnosed as psychopathic personality, if they obtained a T-score of 70 or above (p.85).

Of particular interest in Greene's quotation is the statement regarding the simultaneous endorsement of apparently contradictory groups of items. If one ignores the relative strengths of the heterogeneous factors that make up the scale, the clinical interpretation tends to assume the existence of all of them, the strength of which is determined by the overall Pd scale height. This issue is addressed by Butcher and Tellegen (1978) who discuss some of the methodological problems common to the MMPI. Some of the clinical scales are thought to measure enduring personality characteristics and are referred to as "trait" scales; such

as Pd, Pa, and Sc. Others are thought to measure more transient affective states, such as D and Pt. However, as factor research on the parent scales advances, it is becoming more apparent that there are both "trait" and "state" items contained within the parent scales. The authors suggest that a significant change on the Pd scale from one testing to another may be due to a change in a homogenous group of items that reflect a negative affective state that is transient in nature. Thus an elevated score on the Pd scale may not be reflective of overall antisocial tendencies, but rather fairly intense situational distress and unhappiness.

A prominent elevation on Pd in an individual who is experiencing marital distress may mean something very different than the same elevation in an individual not experiencing marital conflict. As a result, the two or three point diagnostic code may change as a function of interpersonal distress, rather than just reflecting personality trait characteristics that are contributing to the couple's dysfunction. The implications of this issue for the clinician who is evaluating the potential for change in the individual spouses and the marital unit as an interactional whole are important. It is at this point that the knowledge and use of the Harris and Lingoes subscales becomes relevant. As Greene (1981) states, examination of the Harris and Lingoes subscales may suggest the contributions of "trait and state" responses, better

enabling the clinician to assess accurately the dynamics of the marital discord.

Harris-Lingoes Subscales

The Harris and Lingoes (1955) subscales have become the most widely used and reported factor subscales. They were developed for the D, Hy, Pd, Pa, Sc, and Ma scales through a process of logical construction. The authors grouped items together that appeared similar or homogeneous in content, and believed to be reflective of a single trait or attitude. The scales were then labelled according to the clinical emphasis of the questions.

When constructing the Pd subscales, Harris and Lingoes added two to six items to each subscale not found on the parent Pd scale. This procedure was not followed for any of the other scales and the authors offered no rationale for these additions. There is also considerable item overlap between subscales, as Harris and Lingoes made no attempt to keep from placing an item in more than one subscale. This may account for the high intercorrelations among some of the subscale scores. The intercorrelations for the Pd subscales are shown below, as reported by Graham (1987):

Table 2.11

Intercorrelations of the Harris and Lingoes Psychopathic deviate subscales, Graham (1987, p.112)

	Pd	Pd1	Pd2	Pd3	Pd4a
Pd1	.58				
Pd2	.48	.12			
Pd3	-.33	-.39	-.03		
Pd4a	.72	.44	.25	-.53	
Pd4b	.77	.37	.29	-.56	.74

It is surprising that Harris and Lingoes did not use a statistical approach to the identification of the factors they believed to be present in the subscales. However, empirical investigations by other researchers have tended to support the existence of heterogeneous factors within the main clinical scales for which Harris and Lingoes developed their subscales. For the Pd scale, five factors have generally been found: shyness, hypersensitivity, delinquency, impulse control, and neuroticism (Greene, 1981). Astin (1959, 1961), Comrey (1957, 1958) and Comrey and Margraff (1958), all identified factors similar to the Harris and Lingoes scales and supported the premise that the scales are heterogeneous.

Although Harris and Lingoes believed that their subscales were more homogeneous than the parent scales from which they were drawn, the only empirical research that specifically tests this assertion is the factor analytic

work of Lingoes (1960) and Calvin (1974). Lingoes investigated the factor structure of both the Harris-Lingoes subscales and the Weiner subtle-obvious subscales. He found strong support for many of the subscales, including two of the Pd subscales; Self-Alienation and Social Alienation. Calvin investigated only the D (depress) scale. He found four of the five subscales to be unidimensional and the fifth to be two-dimensional. Thus, although the literature does not uniformly support the existence of all the Harris-Lingoes subscales, there is general agreement that the logically derived subscales correlate strongly enough with the empirically derived factors to be considered valid for both the purposes of research and clinical application (Graham, 1987).

With respect to clinical application, Graham further states that there are two specific clinical conditions in which the use of the Harris-Lingoes subscales is very helpful. The first is in ascertaining why a subject received an elevated score on a clinical scale that would not have been predicted from other clinical and historical information available. The second is their usefulness in increasing precision when interpreting marginal elevations where the T-score values range from 60-70. Both of these uses are central to the purpose of the present study. In a marital counseling population, the responses of the individual test taker reflect his/her perceptions of self and others during a time of marked interpersonal distress.

Thus, the test interpretation must be made understanding that items or scales that reflect situational factors are likely to have higher elevations than during times of relative marital calm. Jacobson and Margolin (1979) addressed this issue in research on distressed and non-distressed couples. They found that the distressed couples perceived their difficulties as far more global than the non-distressed couples and viewed themselves, their spouses, and their life situation as more unhappy.

The clinical research regarding the use of the Harris and Lingoes subscales, especially that regarding the Pd scale, often focused on variables associated with successful psychotherapy and the discrimination of differing pathological groups. Graham (1987) has provided an extensive summary of this research, some of which will be highlighted here. In 1946, Harris and Christiansen studied the differences between successful and unsuccessful psychotherapy clients. They found that successful therapy outcomes were associated with lower scores on the Pd1 (Familial Discord), Pd2 (Authority Problems), Pd4a (Social Alienation), Pa1 (Persecutory Ideas), Sc2c (Defective Inhibition), and Sc3 (Bizarre Sensory Experiences) subscales. The authors did not address the differences in the efficacy of prediction between the parent scales and the subscales, but concluded that the subscales were helpful in understanding how successful psychotherapy clients view themselves and their interpersonal environment.

Panton (1959) compared the Harris-Lingoes subscale scores of prisoners with a psychiatric population. The prisoners were found to have higher scores on Pd4a (Social Alienation), Pd4b (Self-Alienation), and Ma1 (Amorality). The prisoners were also found to score lower on D1 (Subjective Depression), D2 (Psychomotor Retardation), D4 (Mental Dullness), Hy2 (Need for Affection), Hy3 (Lassitude-Malaise), Hy5 (Inhibition of Aggression), Sc2a (Lack of Cognitive Ego Mastery), Sc2b (Lack of Cognitive Ego Mastery), and Ma2 (Psychomotor Acceleration).

Paulson, Schwemer, and Bendel (1976), in a study of the MMPI profiles of abusive parents found that Pd and Ma were significant contributors to abusive behavior. However, within the Pd scale, they discovered that Subtle-Obvious, Pd2 (Authority Conflict), Pd4a (Social Alienation), and Pd4b (Self-Alienation) all discriminated abusers from non-abusers.

The overlapping subscale, when taking together the Panton research, the Harris and Christiansen study, and the Paulson, et al. investigation, is Pd4a (Social Alienation). It is associated with general criminal behavior, abusive behavior in parents, and poor prognosis in psychotherapy. Of all the subscales, Social Alienation appears to have the most "characterological" feel to it, in that it identifies attitudes towards life and others that externalize blame and indicates little, if any, personal self-insight.

Graham (1987) provides descriptions of individuals who

score high or low on each of the subscales. These descriptions are based on item content, the information provided by Harris and Lingoes (1955, 1968), and the validity studies mentioned previously. They are as follows from Graham (1987):

Familial Discord (Pd1)

A high score on the Pd1 subscale is indicative of an individual who (is):

1. describes his/her home and family situation as quite unpleasant
2. has felt like leaving the home situation
3. describes his/her home as lacking in love, understanding, and support
4. describes his/her family as critical, quarrelsome, and refusing to permit adequate freedom and independence

A low score on the Pd1 subscale is indicative of an individual who (is):

1. describes his/her home and family situation in very positive terms
2. sees his/her family as offering love, understanding, and support
3. describes his/her family as not being overly controlling or domineering

Authority Problems (Pd2)

A high score on the Pd2 subscale is indicative of an individual who (is):

1. resentful of societal and parental standards and customs
2. admits to having been in trouble in school or with the law
3. had definite opinions about what is right and wrong
4. stands up for what he/she believes
5. not greatly influenced by the values and standards of others

A low score on the Pd2 subscale is indicative of an individual who (is):

1. tends to be very socially conforming and accepting of authority
2. does not express personal opinions or beliefs openly
3. easily influenced by other people
4. denies having been in trouble in school or with the law

Social Imperturbability (Pd3)

A high score on the Pd3 subscale is indicative of an individual who (is):

1. presents himself/herself as comfortable and confident in social situations

2. likes to interact with other people
3. experiences no difficulty in talking with other people
4. tends to be somewhat exhibitionistic and "showoffish"
5. has strong opinions about many things and is not reluctant to defend his/her opinions vigorously

A low score on the Pd3 subscale is indicative of an individual who (is):

1. experiences a great deal of discomfort and anxiety in social situations
2. does not like to meet new people
3. finds it difficult to talk in interpersonal situations
4. is socially conforming
5. does not express personal opinions or attitudes

Social Alienation (Pd4a)

A high score on the Pd4a subscale is indicative of an individual who (is):

1. feels alienated, isolated, and estranged
2. believes that other people do not understand him/her
3. feels lonely, unhappy, and unloved
4. feels that he/she gets a raw deal from life

5. blames other people for his/her problems and shortcomings
6. concerned about how other people react to him/her
7. self-centered and insensitive to the needs and feelings of others
8. acts in inconsiderate ways toward other people
9. verbalizes regret and remorse for his/her actions

A low score on the Pd4a subscale is indicative of an individual who (is):

1. feels that he/she belongs in his/her social environment
2. sees other people as loving, understanding, and supportive
3. finds interpersonal relationships gratifying
4. not overly influenced by the values and attitudes of others
5. willing to settle down; finds security in routine

Self-Alienation (Pd4b)

A high score on the Pd4b subscale is indicative of an individual who (is):

1. describes himself/herself as uncomfortable and unhappy
2. has problems in concentrating

3. does not find daily life interesting or rewarding
4. verbalizes regret, guilt, and remorse for past deeds but is vague about the nature of this misbehavior
5. finds it hard to settle down
6. may use alcohol excessively

A low score on the Pd4b subscale is indicative of an individual who (is):

1. presents himself/herself as comfortable and happy
2. finds daily life stimulating and rewarding
3. willing to settle down
4. denies excessive use of alcohol
5. does not express regret, remorse, or guilt about past misdeeds (p.128-130).

While Pd is found frequently to figure prominently in the profiles of troubled spouses, the overall elevations tend to fall into the "marginal" range, i.e. T-scores of 60-70 (Arnold, 1971, Brown, 1979, and Ollendick, Otto, and Heider, 1983). Here, the Harris and Lingoes subscale scores may vary considerably, with one or two of them dominating, thereby elevating the scale to a prominent position (Greene, 1981, Graham, 1987). When the scores pass T=70, although there will still be several high points, many of all of the subscales become elevated, and the overall scores begin to

reflect the simultaneous endorsement of contradictory items that Greene states is descriptive of antisocial characterological behavior.

It is in the marginal Pd elevation area that the marital clinician will spend considerable time assessing personality characteristics and interactive issues, and developing therapeutic interventions. Here the interpretive meaning of the Pd elevation is more difficult to tease out. Hence, the importance of understanding the importance and relevance of particular subscale elevations and configurations.

MMPI Research in the Marital Area

Research in the area of marital counseling using the MMPI has been sparse, although it has increased somewhat in the 1980's. Many of the early studies focused on married couples, but not marital counseling populations specifically. It was not until the 1970's that marital counseling couples were studied as a unit of analysis. The MMPI has also been used to study couples in an indirect manner, when looking at the parents of children in therapy. All of these areas contribute to the understanding of troubled marriages, and thus they will be included in the current review.

Research Pertaining to Marital Discord Not Using Marital Counselees as Subjects

On a humorous but important note, Pd was found to be the most important predictor of unmarried cohabiting college students along with Ma and Sc, (Catlin, Croake, and Keller, 1976). Along similar lines, Dworkin and Widom (1977) found in a longitudinal study of Harvard undergraduate men that individuals with a high point Pd code were much more likely to have "ever married" than individuals with a high Sc or "no high point" code. Both of these studies cite the impulsivity, immaturity, lack of concern for family and friends, manipulativeness, and selfishness that tend to characterize people with high Pd scores. They may also indirectly suggest that people with higher Pd scores may be more likely to enter impulsive relationships and show up several years later with spousal conflicts.

Loeb (1966) also studied college students. She was able to obtain MMPI profiles that were administered during student years prior to marriage. She then tracked down these individuals eleven years later to see if they were still married or had divorced. When she compared those who had married and subsequently divorced with those who had remained continuously married, she was <u>not</u> able to show that those who had divorced were more psychologically disturbed than those who had remained marrried. However, she did demonstrate that those who divorced had more psychopathic deviate tendencies. For the men, the Pd, Hs, Sc, and Hy scales differentiated the two groups, while for the women, the Pd scale was the sole discriminator.

Loeb also demonstrated, through mean ranks, that psychopathic deviate was the most prominent trait when compared with all others reflected in the MMPI scales for both the divorced men and women. The clinical implications of this study revolve around the use of the MMPI as a premarital counseling tool. Loeb's results suggest that there are stable personality traits associated with those individuals who later divorce and that these characteristics may be detectable prior to marriage. One must take these conclusions with a grain of salt, however. While prominent Pd elevations may be associated with divorce, the assumption that an elevated Pd score is associated with an intractable degree of spousal conflict may far overstate the case, especially in the case of marginal elevations (T=60-70), which comprised all of the cases in this study. Assuming the heterogeneous nature of the Pd scale, there may be particular subscale factors which are more predictive of divorce than others. In other words, perhaps elevations on some of the Harris and Lingoes subscales are relatively benign with respect to divorce, and may actually be predictive of resolution of marital conflict.

The MMPI has also been used to study differences in alcoholic males with respect to differing levels of marital maladjustment (Barry, Anderson, and Thomason, 1967). As the quality of marital adjustment lessened, the subjects scored increasingly higher on F, Pd, Pa, Sc, Ma, and A (Anxiety), and lower on Es (Ego Strength). This particular study used

very large sample groups, ranging in size from 120 to 247. It should be remembered that it is fairly easy to obtain statistically significant results with such large samples, and whether or not such differences are useful to the clinician may be another issue. Additionally, the means of the three groups (Well Adjusted, Moderately Adjusted, and Poorly Adjusted) on the Pd scale were 68.9, 72.2, and 75.4, respectively. Thus the mean of the Well Adjusted group falls within the range of Pd scores most commonly reported for maritally conflicted couples. Subscale data in this study would have provided additional information that may have helped discriminate the three groups from each other and also from maritally conflicted couples who did not contain an alcoholic spouse.

The MMPI has also been used to assess other areas of family dysfunction and distress. Parents have been the focus of much of this research, in particular parents of emotionally disturbed, behavior-disordered, and abused children. Although these parents are not the subject of this dissertation, the results of such studies are interesting in light of what may be a measure of interpersonal family distress when looking at the D, Pd, Pa, L, and Ma scales. Friedman (1974) compared the MMPI characteristics of mothers of emotionally disturbed, behavior-disordered, and control children. He found that the mothers of emotionally disturbed children had significantly higher elevations on D, Pd, Pa, Sc, and Ma.

Due to the similarity of the profiles between the control mothers and the mothers of kids with behavior problems, as opposed to the higher scores of the mothers of the emotionally disturbed children, he suggests that maternal maladjustment may well play a causal role in the development of emotional problems in children, rather than suggesting a parental reaction to a problem child. Although the merits of this particular conclusion are beyond the scope of this investigation, the interesting element is that these clinical MMPI scales are generally the ones with higher elevations during periods of marital distress, (Hackney and Ribordy, 1980). It is entirely possible that these scales are sensitive to interpersonal familial distress, be it spousal or parental. Thus it may well be that the clinician can expect higher elevations on these scales during periods of prolonged family dysfunction, and that these elevations need to be interpreted in light of the individual's total social environmental situation, rather than any isolated part. The "cart and horse" issue imbedded in these results suggests further work in the area, particularly longitudinal studies that can assess change over time in relation to family dysfunction or health.

McAdoo and Connolly (1975) also found that parents in dysfunctional families had a much higher incidence of Pd elevations than parents in control families. These results again underscore the importance of clearly identifying the subscale components of Pd before drawing any conclusions as

to the characteristics or expected interpersonal behavior of any given individual.

Hanvik and Byrum (1959) investigated the MMPI profiles of parents of child guidance clients. They found a preponderance of 34 codes in the parental profiles, and it occurred most often with individuals who were situationally maladjusted and had a large degree of hostility, which was directed at the spouse. This study also produced the "Pd minus Ma" index, which later became one of Arnold's Signs. The authors found that a Pd minus Ma index of at least 15 T-score points was a pathological sign indicating intense acting out against the marital partner, as opposed to society as a whole. They also noted that this index, when accompanied by elevations on Si and D represented the most severe and intractable marital problems.

Loeb and Price (1966) also investigated the parents of emotionally impaired children. They compared the MMPI characteristics of continuously married and divorced or separated parents. The divorced/separated group had a 50% rate for Pd high point elevations as compared to 3% of the continuously married group. They concluded that an elevated Pd scale is an indication of extensive anger and hostility, that can be of such intensity that it leads to separation or divorce. This study was replicated in 1967 by Dunteman and Wolking, who found similar significant differences on the Pd scale.

Research Using Pair-Profile Analysis

The first significant effort at utilizing the MMPI in pair-profile analysis was undertaken by Swan (1957). He took an empirical approach to marital adjustment, using the Marital Adjustment Scale, developed by Locke in 1951, to differentiate happily married and unhappily married couples. The study was composed of 101 married couples who agreed to participate in a longitudinal study on marriage adjustment conducted by the University of Minnesota. Thus, although the population studied was marital in nature, it was not a marriage counseling population.

Swan also administered the MMPI to his sample of couples in an attempt to use it as a predictor of interactional maladjustment between husband and wife. Significant findings indicated that the more happily married couples scored lower on the Pd, Pt, and Ma scales and higher on the Re (Social Responsibility) scale than did the unhappily married couples. In addition, he found that the spouse most unhappy with the marriage scored higher on the D scale and that the greater the difference between the husband's and wive's scores on the Pt scale, the less happy the marriage. This indicator was found to be the most powerful single predictor of the quality of marital adjustment. Swan suggested his findings be applied in a clinical setting by viewing them in an interactional context. He viewed the differences in scale scores as arising largely out of the frustration or unhappiness that

the individuals experienced, rather than just the differences in personalities between two married people.

Swan's analysis was performed by dividing his sample according to level of adjustment, as measured by the Marital Adjustment Scale, and comparing their scale means on the MMPI. Other trends that he found were: the most happily married couples scored in the masculine direction on the Mf scale, and the opposite being the case for the least happily married couples.

Although Swan studied the pair-profiles, he did this by using a scale by scale comparison, rather than looking at the overall configural patterns of the marital unit. In addition, his findings cannot be generalized to a marital counseling setting. Thus his study is of limited utility to clinicians working within a treatment context.

Following Swan's study, there was a nine year drought in pair-profile analysis. In 1966, Stennett used a variation of this approach in studying the marital couples in families with disturbed children. He believed that a disturbed child is an "emmisary" from a troubled family. In examining the marital profiles, he attempted to determine whether the couple had "complementary or conflicting" personality characteristics. To test his hypotheses, Stennett took both the fathers and mothers as groups and established expected frequencies of two-point code types. He then computed the actual frequencies with which the various two-point code combinations occurred in the profiles

of the couples. Using a Chi-square analysis, he was not able to obtain significant differences and concluded that "there are no real marital-pair types". However, he did conclude that there is a tendency for distress in one spouse to be accompanied by distress in the other. This particular conclusion is a theme that appears frequently in the marital counseling MMPI literature and is central in the examination of the Pd subscale relationships between spouses in the current study.

Another aspect of MMPI investigation in the marital area has focused on the homogeneity vs. heterogeneity of personality characteristics, (Yom, Bradley, et al., 1975), with respect to mate selection. This research team investigated couples who had remained married for at least five years. All couples were administered the MMPI. The authors found that the scale that correlated most highly between spouses was Sc. They viewed this as a continuum of neuroticism-psychoticism and posited that couples tend to share this dimension as a "homogamous" trait. These results supported the view of Murstein (1967) who stated that marital partners should be similar in their degree of neuroticism.

Yom, et al., also found a significant positive relationship on the Pd scale for spouses, suggesting spousal similarity in the degree to which they experience rebellion and alienation with respect to society and family (clearly assuming homogeneity of personality characteristics within

the Pd scale).

The final contributing characteristic found by Yom, et al., was Hs. Here the correlation was negative, indicating a complementary mode of functioning. This was viewed as a measure of optimism-pessimism, indicating complementarity of needs. Yom, et al., concluded that their results support Winch's (1954) theory that personality similarities contribute heavily to spouse selection, but that there is another influence, complementarity of needs, which operates within the parameters defined by these similarities. They also suggest that an alternative view may suggest complementarity of psychopathology, rather than complementarity of healthy needs. This points to couples mutually engaged in defending against the outside world, as opposed to growth oriented philosophies. Perhaps what is being demonstrated is that couples will select each other based on similarity and complementarity of needs, whether or not those needs are "healthy". This position was also taken by Brown (1979), in his study of complementarity of needs in a marital counseling population, mentioned in the introductory chapter.

MMPI Research Using Marital Counselees

Actual studies using a marriage counseling population did not emerge until 1962 when Nuebeck and Schletezer studied extra-marital relations. They attempted to use the Pd scale to measure the degree of moral conscience in each

spouse. They found that spouses with Pd scores greater than 60 were more likely to have affairs than those with lower Pd scores. This study pointed to a pattern that has become a dominant theme in the marital research area, namely that the Pd scale is generally a prominent variable in the MMPI profiles of marital counselees.

Several years after his collaborative work with Schletezer, Nuebeck presented some hypotheses regarding marital interaction patterns in troubled marriages (Nuebeck, 1965). His work was presented in the form of an unpublished paper and focused on what he believed to be three recurring interactional patterns within troubled marriages. These three patterns he labelled Dominance, Sociability, and Succorance-Nurturance. Dominance was seen to be high Pd and Pa, with low Mf for the husband or high Mf for the wife. Low elevations on these scales were believed to reflect minimal controlling behaviors. Sociability was reflected by high Ma and low Si, Sc, and D. Conflict around these socializing needs was represented by opposing configural patterns in the profiles of the couples. Succorance-Nurturance was looked at from a complementarity of needs perspective, in the context of wanting or needing emotional support. Nurturing qualities were expressed in Mf scores in the "masculine" direction and succoring qualities were reflected in scores in the "feminine" direction.

The need patterns that Nuebeck describes were examined within the interactional framework of the marriage rather

than looking at each spouse individually. Based on his extensive experience, Nuebeck believed that these hypotheses were true. However, Nuebeck did not have criterion measures for his three categories and thus his assumptions remain hypothetical. His main contribution came from his analysis of the MMPI profiles as a unit of interaction between spouses, rather than focusing on each spouse individually.

In an unpublished exploratory study, Brantner (1965) looked at several aspects of MMPI couple characteristics using marital counseling subjects. About one-fourth of the couples had 34 or 43 two-point codes, and one-third had an Mf-differential of 15 or more T-score units (husband higher). He also found that "normal" husbands were more apt to have either 36, 63, or 27, 72 codes than husbands from the clinical group. His two main conclusions from this data were that the Mf-differential suggested a disparity of role expectations within the marriage centering around dependency conflicts, and that the 34 or 43 two-point code pattern pointed to a communication breakdown rather than overt acting out.

Phillips (1967) studied the high and low points of MMPI profiles of marital counselees to assess the interpersonal power relationship with respect to unconscious power motivation. The foundation of his criterion measures was the work of Leary (1957) regarding the interpersonal diagnosis of personality. His sample was comprised of 113 middle class married couples who sought marital counseling

from therapists in the Los Angeles area. The therapists were asked to classify each spouse in terms of power in the marriage relationship. The therapists were given a forced choice format that included Dominant, Aggressive-overt, Aggressive-covert, Cooperative, and Submissive.

Once the clients were rated on the power dimensions, Phillips then looked at the four highest and three lowest ranking clinical scales. He found that Pd was the highest ranking scale for the Dominant, Aggressive-overt, and Aggressive-covert groups for both husbands and wives, with the exception of Mf in the husbands Aggressive-overt group. He also found that Submissive husbands ranked highest on D and Mf and Submissive wives ranked highest on K.

The mean Pd score for the entire clinical sample was 64.7 for the husbands and 65.1 for the wives and Pd had the highest average elevation of any of the clinical scales for both husbands and wives. The clinical implications of Phillips' findings are obscured somewhat by the lack of subscale data in his different criterion groups. Had he been able to incorporate the Harris and Lingoes subscale data into his analysis, the relationship between the interactional power types and the peak subscale elevations could have provided empirical behavioral correlates in this population for the subscales.

Murstein and Glaudin (1968) used the MMPI to assess the level of marital maladjustment by examination of the regular clinical scales and some of the special research scales.

The additional scales they chose were Hostility, Dominance, Anxiety, Repression, and Ego Strength. Separate factor analyses were performed for the husbands and wives in an attempt to determine the personality dimensions associated with marital adjustment and maladjustment. Two factors were obtained for both men and women. For men, good marital adjustment was associated with high negative loadings on D, Pd, Pt, Sc, Do (Dominance), F, and A (Anxiety), and was labelled Lack of Psychiatric Character Disorder. The second factor was labelled Insensitive-Rigid and was defined primarily by loadings on L and Mf. Denial of minor antisocial conduct and narrowly defined masculine interests seemed to be associated with poor marital adjustment.

For wives, the first factor, Psychiatric Complaints, was composed of a wide variety of clinical scales including those designed to measure neurotic and psychotic syndromes, i.e., Hs, D, Hy, Pd, Pa, Pt, and Sc. The second factor was given the same label as the characterological factor in the husband's group, Insensitive-Rigid. It loaded substantially on L, Mf, and Low Ego Strength. As with men, High L and "masculine" Mf were associated with poor marital adjustment.

Osborne (1971), followed up on the idea of the Mf-differential and studied married couples in an intensive group psychotherapy setting. He found that couples in which the husband scores 20 or more T-score points higher than his wife on the Mf scale experience significantly more distress than couples with a low Mf index. He also found that such

couples appeared to benefit more from psychotherapy than did couples with a low Mf index. Distress was measured by significantly higher scores on D by the high index couples. Improvement was measured by changes on Hs, D, Pd, Pt, and Si. However, in a replication study my Newmark and Toomey (1972), the authors found significant differences only on the Si scale. Since Si measures social interaction tendencies (in their belief), not distress, they concluded that Osborne's results occurred by chance and that there was no evidence to support the assumption that couples with a high Mf index experience more distress than those with a low Mf index.

Smith (1967), examined MMPI scales related to therapeutic movement in marital counseling. He examined both the K and Es (Ego Strength) scales with respect to the length of time couples were willing to participate in counseling. He found that the Es scale significantly differentiated short-term and long-term couples. The differences in mean Es scores were 51.2 and 57.1, respectively. Smith assumed that long-term counseling was a good thing, but did not have an external criterion measure to evaluate his belief. Thus, while these findings are interesting, it is unclear what his results are really measuring.

The few studies mentioned above led to the most ambitious undertaking in the study of pair-profile analysis of marital counselees and the development of "Arnold's

Signs," (Arnold, 1971). In an unpublished doctoral dissertation, Arnold hypothesized fifteen different signs that would discriminate couples in marital therapy from married couples in general. His proposed signs are listed below with significant findings indicated by an "*":

* 1. Marriage counseling wives have a higher proportion of profiles that exhibit the "46-5" (High 46, low 5) pattern than do wives from the general population.

* 2. More husbands and wives in marriage counseling have either a 34 or 43 code type in their profiles than do husbands and wives from the general population.

* 3. More husbands and wives from the general population have either a 36 or 63 code type in their profiles than do husbands and wives in marriage counseling.

4. More husbands from the general population have either 27 or 72 code types than do husbands in marriage counseling.

* 5. Pd is a more prominent feature in the profiles of husbands and wives in marriage counseling than in the profiles of husbands and wives from the general population.

* 6. Pa is a more prominent feature in the profiles of marriage counselee wives than in the profiles of wives from the general population.

* 7. The Es (Ego Strength) scale has a T-score of less than 50 in a higher proportion of the profiles of husbands and wives in marriage counseling than in the general population.

* 8. A "Pd-Ma" index of 15 or more T-score units appears more often in the profiles of husbands and wives in marriage counseling.

9. The proportion of couples in which both the husband and wife have profiles with 34 or 43 code types is greater for marriage counselees than for couples from the general population.

10. Husband and wife profile pairs in which the husband's Mf score is at least 15 T-score units higher than his wife's Mf score are found more often among the profiles of couples in marriage counseling.

* 11. Husband and wife profile pairs in which there is at least a 20 T-score unit difference between their Si scores (irrespective of which made scores higher or lower) are found more often among the profiles of couples in marriage counseling.

* 12. Differential configural patterns with respect to the Ma and Si scales are found more often in the profiles of marriage counselees.

* 13. A marked difference on the Es scale of at least 15 T-score units is found more often among husband and wife profiles of marriage counselees.

14. Husband and wife profiles that have elevations of at least 65 T-score units on their Es scales are found more often among marriage counselees.

* 15. The husband and wife profiles of marriage counselees, on the average, reflect a greater mean

difference between their scores on the Pt scale.

Arnold found Pd to be the most powerful discriminator of maritally conflicted couples (T=66 Husbands, T=69 Wives). Pd was found in two point codes (34, 43, 24, 42, 46, 64, 49, 94) in 55% of the marriage counselees as opposed to 25% of the Normals. Additional significant findings showed that Hy predominated in Normal husbands and that 49 and 94 was the most common code for Normal wives.

The fact that Arnold found 49 and 94 to be the most common code for Normal wives and yet found 4 (Pd) to be the most powerful discriminator of marital discord underscores the question of what the Pd scale is measuring in a marital counseling population. Arnold's findings suggest that prominent Pd elevations are not necessarily associated with marital problems, at least in the profiles of his "Normal" women. What factors accounted for the Pd elevations in the profiles of the Normal wives? What factors accounted for the Pd elevations in the profiles of the Counseling groups? Harris and Lingoes subscale analysis in this study would have provided a wealth of information regarding the factors that are associated with relative psychological well being and those associated with marital problems. It is conflicting results such as these that suggest that the meaning of the Pd scale in a marital counseling population is masked by the heterogeneous nature of the scale.

Arnold's findings appear to be quite important, although one needs to take into account the limitations of

his design. His group of normals was composed of profile pairs taken from the files of a psychologist that tested corporate employees and their spouses for fitness for overseas assignment. As such, they represent middle to upper middle class subjects who worked for a particular corporation. This sample clearly is not representative of the many socio-economic levels of society. Additionally, his clinical sample came from marriage counselees at a particular hospital setting. However, he did cross-validate his signs on two other groups of marriage counselees, one being a group of blue collar workers, and the other a group of college graduates.

The primary utility of Arnold's findings lies in the clinical application arena. His results assist the marital clinician with the identification of dependency conflicts, passive-aggressive behavior styles, interpersonal rigidity, chronic intransigence, and poor interpersonal resources. All of these issues are pertinent to the development of effective intervention strategies by the therapist.

Ollendick, Otto, and Heider (1983) investigated the usefulness of Arnold's Signs in a clinical setting. They examined three groups of couples seen at an outpatient mental health facility; those seeking marital counseling, those in the process of a divorce, and those seeking help for their children. They consistently found that the marital counseling group revealed more discord, as measured by Arnold's Signs, than either of the other two groups.

Significant results were found for six of the Signs; husbands with higher 27 or 72 profiles, husbands and wives with higher Pd scores, wives with higher Pa scores, wives with more 46-5 profiles, husbands and wives with higher Pd-Ma indices, and more profiles with a difference of at least 20 T-score points between husbands and wives on Si. Interestingly, Ollendick, Otto, and Heider found less discord consistently in the divorcing group than in the counseling group.

The importance of these findings is severalfold. The preponderance of Pd in combination with D, Hy, Pa, or Ma suggests indirect, passive-aggressive, and acting out styles of communication in conflict generating situations. Differences in Si scores highlights the complementarity of needs (Burgess and Wallin, 1953), that may operate during the courtship phase but tends to place stress on the relationship as differing social needs and preferences solidify over the years. In addition to these differences, the likelihood of an individual taking responsibility for change in the marital situation can be generally assessed by looking at the differences in Pt scores. This can provide an indication of the differences in insight, motivation, internalized anxiety, and ability to mobilize internal resources for problem solving.

When attempting to evaluate the potential effectiveness of a therapeutic strategy with a marital couple using Arnold's signs, the individual clinician should take caution

in interpreting the individual profile configurations. The findings of Ollendick, et al., which indicate that the majority of the distress in the individual dissipates once the decision to divorce has been made is particularly interesting. These findings suggest that the marital discord itself may raise the elevations not only in the more transient "state" scales such as D and Pt, but also in the "trait" scales such as Pd, Pa, and Sc. This dovetails with the position of Butcher and Tellegen (1978) which was mentioned previously, and underscores the importance of understanding significant "trait" scale elevations via subscale examination, particularly when the elevations are marginal.

Investigation in the area of divorce adjustment was also done by Hackney and Ribordy (1980). They examined the emotional reactions to divorce using the MMPI as an indicator of distress. They described three phases in the adjustment process for divorcing/divorced individuals; the Traumatic, Prolonged stress, and the Readjustment phase. The first two phases describe the time frame in which a couple undergoes the transition from being happily married, through the period when they realize their marriage is in trouble, to the actual divorce. Individuals in these phases were found to differ from Happily Married and Divorced on the D, Pt, Sc, Hs, Pd, and Pa scales. These results further highlight the importance of interpreting the MMPI profiles on the individual within the context of the marriage, rather

than just stable measures of personality.

Another study in the area of divorce was done by Olsinski (1980), in which he used the MMPI to study the adjustment of Married, Marriage counseled, and Divorced individuals. Olsinski looked at the degree and kind of psychological maladjustment related to marital success. The similarity or difference of maladjustment in husbands and wives was also examined. Significant differences were found between all three groups, with the normals having the lowest average clinical elevations, the divorced group the next highest, and the marriage counseled group the highest, suggesting that the marital interaction itself contributes to the relative pathology of the individual partners.

Olsinski also found that husbands have a broader range of pathology than do wives in the counseled group. The counseled husbands were the most agitated and tense and had the highest levels of self-deprecation and guilt feelings. They were also highly passive-dependent and submissive, making concessions to avoid confrontations. The wives of the counseled group were the most withdrawn, shy, fearful, and anxious about their relations with others. Although these findings clarify the picture of maritally maladjusted pathology, it is unclear how much the interaction factor contributes and how much is due to the psychologically maladjusted person who is maladjusted at the time of marriage.

Summary

The one consistent finding throughout the 35 year history of investigation of marital dysfunction using the MMPI, is the prominence of the Pd scale in the profiles of both husbands and wives. As stated in the review, the Pd scale has also been found to be a primary discriminator of criminal behavior, child abusers, and parents of emotionally impaired children. The vast majority of the studies in these areas have focused on the Pd scale as a whole and have neglected the Harris and Lingoes subscales, with the exceptions of Harris and Christiansen (1946), Panton (1959), and Paulson, et al., (1976).

While the research that has been done has contributed much to the understanding of the general personality characteristics of these various subgroups of society, the MMPI measures employed have not been sensitive enough to the specific characteristics of each population. While it was beyond the scope of this study to compare the differences between these groups, it was possible through this investigation to identify the specific characteristics of marital counselees, with respect to the Pd scale. The hypotheses tested have provided increased understanding of the major clinical subgroups of marital counselees within this scale, the interactional relationships of husbands and wives on the scale, and have helped identify which of the subscales are more likely to be associated with continued marriage and divorce. It should also be remembered that the

utility of the Pd (Psychopathic deviate) scale or the Harris and Lingoes subscales will differ depending on the context in which they are used. The utility in a clinical setting is measured by the usefulness in assisting a particular couple come to a resolution of their marital difficulties, while from a research perspective the efficacy of group description and prediction becomes the focus. Ultimately, the integration of the two areas is one of the goals of the use of the MMPI in couples counseling. Neither area should stand in isolation from the other.

CHAPTER III

METHODOLOGY

The purpose of this chapter is to present the plan of operation for the study. The following sections will be included:

1. Selection and description of the sample.
2. Measures.
    a) Minnesota Multiphasic Personality Inventory (MMPI).
    b) Harris and Lingoes subscales for the MMPI.
3. Procedures for collecting data.
4. Statistical Hypotheses.
5. Design.
6. Analysis.
7. Potential limitations.

Selection and Description of the Sample

The majority of subjects in this study consisted of married couples who sought marital counseling services at Delta-Waverly Psychology and Counseling Associates, a private outpatient psychological clinic in Lansing, Michigan. Part of the sample was collected from the client files of former clients, to whom the MMPI was administered during the first four weeks of marital counseling, prior to

the undertaking of this study. Since 1983, the MMPI has been routinely administered to couples seeking marital counseling at the Delta-Waverly clinic. The test has been given in order to assess the nature of the marital dysfunction, and to assist with therapeutic treatment planning and intervention.

The second part of the sample was composed of married couples receiving marital counseling services at the Delta-Waverly clinic, or other Lansing area outpatient clinics, during the time of this study. The couples selected had a lower age limit of 18 and no upper age limit. Couples who were excluded from the study included:

1. Couples with invalid MMPI profiles.
2. Couples in which either spouse exhibited symptoms of a thought disorder, as measured by the marital counselor.
3. Couples on which follow up data regarding divorce was not obtainable.
4. Any couples not seen conjointly in treatment at least one time.

Due to the longitudinal nature of the study, random selection of subjects was not possible. Delta-Waverly Psychology and Counseling Associates is the only outpatient counseling clinic in the greater Lansing area that routinely administers the MMPI to marital counseling clients and scores the Harris and Lingoes subscales. In order to obtain a group of subjects that was large enough to work with

statistically, it was necessary to use all available data.

Several of the important group comparisons that were made in this study depended upon the existence of couples who had divorced (or who had decided to divorce when the data collection period ended) since they were first given the MMPI in the early phase of marital counseling. It would have been ideal if each couple could have been observed over a several year interval, once counseling was completed. However, there are inherent time restrictions that exist with dissertation research that precluded this ideal condition. The practical solution was to combine the data collected from previous years with current data. This provided a data gathering period that was long enough to insure testable group sizes.

After assessing validity issues, the Divorce (DV) and Continuously Married (CM) group sizes were entirely determined by the number of couples divorcing. It was not anticipated that the DV group would be large, which underscored the need to include all usable data. The final lower limit of the DV (Divorce) group was set at 20 couples as a compromise between the need for a statistically workable sample and the time constraints placed on the study. Statistically, it would have been ideal to work with groups of equal size. However, since the group sizes were determined by the data itself, the statistics employed had to adjust for these differences. The original group sizes were 40 couples for the CM (Continuously Married) group and

24 couples for the DV (Divorce) group. The final numbers, after eliminating invalid profiles, were 32 couples in the CM group and 20 couples in the DV group. Descriptive statistics regarding educational level, age, time in counseling, source of payment, previous marital counseling, previous marriage, presence of children, and length of marriage can be found in Appendices G through N.

Measures

The following section will provide a description of the two measures used in this study: the Minnesota Multiphasic Personality Inventory and the Harris and Lingoes Pd (Psychopathic deviate) subscales.

Minnesota Multiphasic Personality Inventory

A description of the MMPI was included in Chapter II, pages 18-23. Its use as an appropriate measure of personality and marital distress in a marital counseling population is suggested by the number of studies using it as a marital research instrument and also by the positions of Good and Brautner (1961), Butcher (1969), Greene (1981), and Graham (1987). These authors concluded that the joint interpretation of husband and wife MMPI profiles provides important and useful information about marital conflict, specifically areas of incompatibility, levels of anger and hostility, and communication styles.

Subject couples were administered either Form R or the Group form, depending on availability at any given point in time. The two test versions differ only in the order of item arrangement. All items are identical in wording and content, and each form has the same number of items.

Test profiles were scored by a computer generated program (Weathers, 1987), using the new age specific norms developed by Colligan, et al., (1983). This scoring program routinely scores the validity and main clinical scales, as well as the Harris and Lingoes subscales and other research scales.

MMPI profile validity was assessed by using the conventional T-score cutoff of 70 on any of the three validity scales, L, F, and K. Originally, profile validity was going to be assessed on an individual basis rather than by arbitrarily assigning L, F, and K, values or by F-K absolute difference scores, as has been done in much of the MMPI research. The individual approach is suggested by Graham (1987), especially when testing individuals from higher socio-economic groups, as is often the case in private outpatient clinics.

The possibilities of "faking bad", "faking good", and "random responding" were also taken into account. "Fake bad" profiles are often examined with respect to several variables. Both Gough (1950) and Meehl (1951) suggest that when the F-K raw score index is positive and greater than 9 that it should be considered a "fake bad" profile. A cutoff

score of +11 has been suggested by Carson (1969). Rather than arbitrarily selecting a number, Graham suggests that the F-K index be examined along with the Gough (1954) Dissimulation (Ds) scale, the test-retest (TR) index developed by Buechley and Ball (1952), the Carelessness scale (Greene, 1978), and the Weiner (1948) subtle-obvious (S-O) items. From a clinical perspective, especially when the test administrator is also the clinician providing the counseling services, such an individualized approach makes a great deal of sense, since the clinician has a much more complete picture of the individual client. However, in the interest of future research replication, it was decided not to take such an individualized approach to profile validity when making final exclusion criteria in the present study. The final criteria for exclusion was to use the arbitrary cutoff of F=T-score of 71 or more. This cutoff not only dealt with the issue of "fake bad" profiles, by selecting out those who were admitting to an unusually high number of pathological characteristics, it also eliminated those who were in severe psychological distress, which was not the province of this study. As indicated in Chapter II (Page 20), the F scale attempts to detect unusual or atypical ways of responding to the test items, such as admitting to peculiar experiences, strange thoughts, bizarre sensations, and feelings of isolation and alienation. Six couples were eliminated from the study in which at least one member of the couple had an F score of 71 or more.

"Fake good" profiles are usually identified by the presence of a V-shaped configuration on the L-F-K scales. According to Graham (1987), the F score will be in the 40-50 range, and most of the clinical scales will be in the 30-50 range, with 3, 5, and 9 the highest clinical scales. However, Graham also states that individuals from higher socio-economic backgrounds tend to score higher on the K scale than those from the lower socio-economic strata, and that a T-score of 60-70 in higher SES individuals does not necessarily imply a "faking good" test taking attitude. Much of the literature, in addition to Graham, i.e., Greene (1981), and Dahlstrom et al. (1972), supports this position and suggests that using the absolute value of the F-K index as a measure of profile validity is less appropriate for the "fake good" as opposed to the "fake bad" profiles. In order to deal with this issue, and in the interest of consistency and future replication, it was decided to use a T-score cutoff on the K scale and the L scale of 71 or more. As stated in Chapter II (pages 17-18), the L scale measures an individual's willingness to admit to minor faults and assesses the degree to which one presents oneself in a favorable manner. Three couple profiles were eliminated from the study in which at least one of the individuals in the couple had an L score greater than 70.

The K scale is thought to measure clinical defensiveness, but there is considerable research to indicate that in a normal population, high K scores may be a

measure of personality integration and healthy adjustment (Heilbrun, 1961; Smith, 1959;, Sweetland and Quay, 1953; Tyler and Michaelis, 1953; and Yonge, 1966). Since the vast majority of this subjects in this study were college educated, with 4.8% having advanced degrees, 26.9% having bachelor's degrees, and 37.5% having at least some college, it is entirely possible that some of the couples who were eliminated from the study due to the K cutoff score of 71 or more may have been needlessly weeded out. In all, three couples were eliminated from the study as a result of high K scores.

"Random responding" profiles were also assessed by examining the L-F-K scale heights and by some additional criteria suggested by Graham. According to Graham, the random response profile typically has a spike on scale 8, and the L and K scores are usually above the mean. The "all true" profile will show an F score greater than 120 and the F and K scores will be below the mean. "All false" profiles will have the three validity scales elevated simultaneously and the main clinical scales will have a negative slope. No profiles were found to fall into these categories.

The MMPI scales and scale descriptors can be found in Appendix A.

Harris and Lingoes Pd subscales for the MMPI

A description of the construction, use, and validity of the Harris and Lingoes subscales was provided in Chapter II,

pages 25-35. Since the Pd subscales are comprised of the items that already appear on the MMPI, the scores of both the parent clinical scales, and the subscales are obtained from a single administration of the MMPI to each subject. Subscale scores are reported in the same fashion as the parent clinical scales; each subscale raw score is converted into a T-score and graphed in combination with the other subscale scores. The norms for the parent clinical scales and the Harris and Lingoes subscales are based on the current MMPI norms developed by Colligan, et al. (1983). The computer scoring package developed by Weathers (1987) automatically scores and graphs the subscale T-scores of each subject.

Procedures for Collecting Data

MMPI and demographic data was collected from the clinical files of couples who were seen in marital counseling at Delta-Waverly Psychology and Counseling Associates between 1983 and 1989. If there was knowledge of current marital status of the clients who were no longer clinically active, this data was automatically included in the study. If this information was not known, an attempt was made to obtain it through the public records regarding divorce, available through the county court files. When these efforts did not secure the necessary information, telephone contact was made to these former clients, requesting current marital status information and permission

to use this information in the group data base. If the former client indicated a verbal willingness to allow the use of this data in the study, an Informing and Participation Request form (Form B, Appendix D) and a Departmental Research Consent form (Appendix E) were sent to them, along with a stamped, self-addressed return envelope.

In the case of clients who became active during the study, each subject was asked to complete an Informing and Participation form (Form A, Appendix C), a demographic sheet (Appendix F), and an MMPI. The consent form covered both the participation in the testing phase of the study and also willingness to be called by phone approximately six months following the termination of marital counseling in order to collect information regarding marital status at that time.

Individual and interactional feedback regarding the MMPI results was given to the subjects by their therapist. The author provided assistance to each therapist with respect to the use and interpretation of the MMPI with a marital counseling population.

Consent for participation in this study was handled in several different ways, depending on the clinical status of the subject. Some of the subject couples were former clients of the author. As a result of this previous therapeutic involvement, and regular clinical follow-up, the author already had knowledge of the MMPI profile information, and current marital status. Since the MMPI administration was a regular and integral part of treatment

for the couple during their marital counseling, and no new data or measures were necessary, the ethical guidelines of the American Psychological Association (1982), suggest that informed consent is not necessary when the information appears as part of group data, with no individual identifying characteristics. Thus in these instances, no consent was requested.

The MMPI has also been used by other counselors at Delta-Waverly Psychology and Counseling Associates for assessment and treatment of marital dysfunction since October, 1986. Research access to this data, i.e., the demographic data, MMPI profiles, and marital status of these former clients, was handled through a blind coding procedure, whereby the identities of the subjects were concealed. Subject couples were identified by a couple identification number and a counselor number.

Subjects were recruited during the study from counselors at the Delta-Waverly clinic and marital counselors at other outpatient counseling clinics in the Lansing area. All such subjects were informed of the conditions of participation in the study, and formal consent was requested from each. As in keeping with APA guidelines, each potential subject was free to participate or not participate, with no penalty of any sort for non-participation or future withdrawal.

All of the counselors who provided subject couples for this study maintained a code list which identified their

particular couples' data by name. All code lists, including the one maintained by the author, will be kept in secured file cabinets, within locked professional offices. Two years after the end of the study, all counselors who have maintained such lists will be asked to destroy them.

Statistical Hypotheses

The following research hypotheses were tested in the study:

Hypothesis 1

There will be differences in some of the relative frequencies of the highest 2-point codes of the Harris and Lingoes Pd subscales for husbands entering marital counseling, in both the CM (continuously married) and DV (divorce) conditions.

Hypothesis 1a

Hypothesis 1a is a conditional hypothesis and will be tested if significant results are found in Hypothesis 1. If there is statistical evidence of recurring 2-point patterns in the Harris and Lingoes Pd subscales of the husbands, there will be no differences in the mean Pd scores between these groups of husbands, in both the CM (continuously married) and DV (divorce) conditions.

Hypothesis 2

There will be differences in some of the relative frequencies of the highest 2-point codes of the Harris and Lingoes Pd subscales for wives entering marital counseling, in both the CM (continuously married) and DV (divorce) conditions.

Hypothesis 2a

Hypothesis 2a is a conditional hypothesis and will be tested if significant results are found in Hypothesis 1. If there is statistical evidence of recurring 2-point patterns in the Harris and Lingoes Pd subscales of the wives, there will be no differences in the mean Pd scores between these groups of wives, in both the CM (continuously married) and DV (divorce) conditions.

Hypothesis 3

There will be a positive relationship between the Pd scores of husbands and wives entering marital counseling, in both the CM (continuously married) and the DV (divorce) conditions.

Hypothesis 3a

There will be a positive relationships between some of the Harris and Lingoes Pd subscale scores of husbands and wives entering marital counseling. Specifically, the Pd1

(Family Discord) subscales will show a positive relationship, and the Pd4a (Social Alienation) and the Pd4b (Self-Alienation) subscales will show a complementary positive relationship for both husbands and wives in the CM (continuously married) and DV (divorce) conditions.

Hypothesis 4

Of the couples who divorce (DV), there will be differences in their main clinical MMPI scale elevations compared to those couples who remain continuously married (CM). In particular, the Pd scale of the DV group will be higher, when combining the profiles of both spouses.

Hypothesis 5

Of the couples who divorce (DV), there will be differences in their Pd subscale scores compared to the Pd subscale scores of those couples who remain continuously married (CM). In particular, the Pd4a (Social Alienation) subscale will be higher for the DV group, when combining the profiles of both spouses.

Hypothesis 6

Of the husbands who divorce (DV), there will be some differences between the main clinical MMPI scale scores compared to those husbands who remain continuously married

(CM). In particular, there will be differences on the Pd scale, with the DV group higher than the CM group.

Hypothesis 7

Of the wives who divorce (DV), there will be some differences between the main clinical MMPI scale scores compared to those wives who remain continuously married (CM). In particular, there will be differences on the Pd scale, with the DV group higher than the CM group.

Hypothesis 8

Of the husbands who divorce (DV), there will be some differences in their Pd subscale scores compared to those husbands who remain continuously married (CM). In particular, the Pd4a (Social Alienation) subscale will be higher for the DV group.

Hypothesis 9

Of the wives who divorce (DV), there will be some differences in their Pd subscale scores compared to those wives who remain continuously married (CM). In particular, the Pd4a (Social Alienation) subscale will be higher for the DV group.

Design

The general design of the study was descriptive. The purpose of this endeavor was explore what kinds of marital counselee personality characteristics, as measured by the MMPI, are associated with continued marriage as opposed to divorce. An additional purpose of the study was to further the understanding of the clinical meaning of Pd elevations in a marital counselee population, and to investigate which of the Pd characteristics marital counselee husbands and wives share in a similar or complementary fashion. It was hoped that this research would generate new information that would help marital therapists better understand the clinical significance of MMPI Pd elevations in a marital counseling population, with the goal of improving marital and premarital counseling interventions.

The statistical analysis of the study was divided into three parts:

1. The Chi-square "goodness of fit" test was used to address Hypotheses 1 and 2, the relative frequencies of high 2-point subscale scores. This statistic was chosen because it is in keeping with traditional MMPI clinical profile analysis that utilizes the highest 2-point codes. In addition, examining relative frequencies allowed the inspection of the data from a "subject" perspective, in that actual numbers of subjects could be compared (Weiss and Hassett, 1982). The two conditional hypotheses (1a and 2a)

were analyzed by Analysis of Variance to test for mean differences between the groups.

2. Pearson correlation coefficients were utilized to address Hypothesis 3 and 3a, the relationship between husbands and wives on both the parent Pd scale and the Pd subscales. This statistic was chosen because it could summarize the magnitude and direction of the relationship between husbands and wives on these continuous variables (Hopkins and Glass, 1978), and it was in keeping with statistical analysis of much of the MMPI research literature.

3. A Multivariate Analysis of Variance was used to address Hypotheses 4, 5, 6, 7, 8, and 9, the differences between the continuously married (CM) and the divorce (DV) groups of couples, husbands, and wives on the MMPI main scales and the Harris and Lingoes Pd subscales. This model allowed for the statistical control of potentially confounding variables (these variables are listed below).

Analysis

Descriptive statistics (means, standard deviations, frequencies, etc.) were run on all the variables studied and can be found in Appendices G - R. In addition, all the potential confounding variables listed below were examined statistically in order to determine which, if any, needed to be included in the final MANOVA. Confounding variables were any variables that were related to the outcome variable and

related to each other. Depending on the variable type, the statistics used to analyze the potential confounds were 1) correlation for continuous predictor and continuous outcome variables, 2) ANOVA for the combination of categorical predictor and continuous outcome variables, and 3) Chi-square for categorical predictor and categorical outcome variables. All variables were coded and entered into the MSU mainframe computer, using SPSSX to perform the necessary statistical procedures.

The variables that were statistically analyzed in the study included:

1. Marital status: a categorical variable measured as divorce (DV), or continuously married (CM). The exact criteria for group membership will be defined as: DV: those who have decided to divorce or who have divorced since the date of MMPI administration or, CM: those who have decided not to divorce and who have remained continuously married since the date of MMPI testing.

2. MMPI main clinical scale scores: continuous variables measured in T-score units.

3. Number of years continuously married: a continuous variable that will be measured in years from the time of marriage to the time of MMPI testing.

4. Age: a continuous variable measured in years at the time of MMPI testing.

5. Educational level: a categorical variable measured as 1) less than high school, 2) high school graduate,

3) some college, 4) college graduate, 5) advanced graduate education.

6. Number of children from current marriage: a categorical variable measured in whole numbers.

7. Pd subscale scores: continuous variables measured in T-score units.

8. Source of Payment: a categorical variable measured as 1) self (private) pay or 2) third party pay.

9. Length of time spent in marital counseling: a continuous variable measured in months.

10. Previous marital counseling: a categorical variable measured as 1) yes or 2) no.

As a result of the preliminary statistical analysis, two of the variables, 1) the number of children, and 2) the existence of a previous marriage, were thought to be potentially confounding variables. Preliminary MANOVA's were run on both the husbands and wives that included each of these variables, and it was found that neither of them contributed in any significant way to the final MANOVA model. Thus the final model included only marital status (CM or DV) as the predictor variable, and MMPI main scales and Pd subscales as the outcome variables.

Potential Limitations

Both the population selected for this study, primarily marital counselees in outpatient marital counseling at the Delta-Waverly clinic in Lansing, Michigan, and the

longitudinal nature of the study, precluded random sampling. These limitations in selection affect the external validity of the study and limit the degree to which it can be generalized. Although these limitations exist, the study was undertaken due to the relative absence of longitudinal data regarding the personality characteristics/marital status outcomes of marital counselees. The clinical value of the study will arise from the assistance it will provide the marital counselor who is trying identify potentially intractable characteristics early in the marital counseling process. Once identified, the counselor can develop clinical strategies that take these characteristics into account.

CHAPTER IV

ANALYSIS

In Chapter IV, the results of the data regarding the major hypotheses and the post hoc tests will be presented. The following sections are included:

1. Major Hypotheses.
2. Post hoc comparisons.
3. Summary.

Major Hypotheses

All of the results presented in this chapter will be based on a total sample of 52 couples. When the research period ended, 20 of these couples had divorced or decided to divorce, creating comparison groups of unequal sizes (CM=32, DV=20). While the statistics used in the analysis of the data took into account the differences in group sizes, some of the results that will be presented clearly have been affected by the small number of subjects in the DV group.

Hypothesis I

There will be differences in some of the relative frequencies of the highest 2-point codes of the Harris and Lingoes Pd subscales for husbands and wives

entering marital counseling, in both the CM (continuously married) and DV (divorce) conditions.

The first hypothesis, stating that there will be frequently recurring Harris-Lingoes Pd subscale "mini" profiles for the husbands entering marital counseling, was tested using the Chi-square "goodness of fit" statistic. The test yielded significant results (Chi-square = 24.9, p=.003), and inspection of the frequency data showed that the "mini" subscale profile of Pd4a (Social Alienation) and Pd4b (Self-Alienation), was endorsed with much greater frequency than any other combination. This pattern was followed next by Pd1-Pd4b, and then by Pd1-Pd4a (Table 4.11).

These results represent the total group of husbands (DV and CM) as they entered marital counseling. When further dividing this group by marital status, it was found that the CM group was most responsible for the endorsement of the Pd4a-Pd4b pattern, Chi-square = 18.0, p=.035 (Table 4.12). The DV group's most frequent category of endorsement was also the Pd4a-Pd4b category, but the Chi-square = 12.0, p=.213 did not attain statistical significance (Table 4.13). Inspection of the data in both tables shows that it was the CM husbands that most emphasized a sense of social and self-alienation over other factors in the Pd scale.

Table 4.11

Chi-square analysis of Harris and Lingoes Pd subscale "mini" profiles of husbands entering marital counseling

Mini Profile Combinations		Cases Observed	Expected Frequency
Pd1-Pd2,	Pd2-Pd1	4	5.2
Pd1-Pd3,	Pd3-Pd1	5	5.2
Pd1-Pd4a,	Pd4a-Pd1	6	5.2
Pd1-Pd4b,	Pd4b-Pd1	8	5.2
Pd2-Pd3,	Pd3-Pd2	3	5.2
Pd2-Pd4a,	Pd4a-Pd2	5	.2
Pd2-Pd4b,	Pd4b-Pd2	0	5.2
Pd3-Pd4a,	Pd4a-Pd3	5	5.2
Pd3-Pd4b,	Pd4b-Pd3	2	5.2
Pd4a-Pd4b,	Pd4b-Pd4a	14	5.2

N=52
Chi-square = 24.9, df=9, p=.003

Table 4.12

Chi-square analysis of Harris and Lingoes Pd subscale "mini" profiles of the CM (continuously married) husbands

Mini Profile Combinations		Cases Observed	Expected Frequency
Pd1-Pd2,	Pd2-Pd1	2	3.2
Pd1-Pd3,	Pd3-Pd1	4	3.2
Pd1-Pd4a,	Pd4a-Pd1	3	3.2
Pd1-Pd4b,	Pd4b-Pd1	4	3.2
Pd2-Pd3,	Pd3-Pd2	3	3.2
Pd2-Pd4a,	Pd4a-Pd2	4	3.2
Pd2-Pd4b,	Pd4b-Pd2	0	3.2
Pd3-Pd4a,	Pd4a-Pd3	3	3.2
Pd3-Pd4b,	Pd4b-Pd3	0	3.2
Pd4a-Pd4b,	Pd4b-Pd4a	9	3.2

N=32
Chi-square = 18.0, df=9, p=.035

Table 4.13

Chi-square analysis of Harris and Lingoes Pd subscale "mini" profiles of DV (divorced) husbands

Mini Profile Combinations		Cases Observed	Expected Frequency
Pd1-Pd2,	Pd2-Pd1	2	2.0
Pd1-Pd3,	Pd3-Pd1	1	2.0
Pd1-Pd4a,	Pd4a-Pd1	3	2.0
Pd1-Pd4b,	Pd4b-Pd1	4	2.0
Pd2-Pd3,	Pd3-Pd2	0	2.0
Pd2-Pd4a,	Pd4a-Pd2	1	2.0
Pd2-Pd4b,	Pd4b-Pd2	0	2.0
Pd3-Pd4a,	Pd4a-Pd3	2	2.0
Pd3-Pd4b,	Pd4b-Pd3	2	2.0
Pd4a-Pd4b,	Pd4b-Pd4a	5	2.0

N=20
Chi-square = 12.0, df=9, p=.213

Hypothesis Ia

> If there is statistical evidence of recurring 2-point patterns in the Harris and Lingoes Pd subscales of the husbands, there will be no differences in the mean Pd scores between these groups of husbands, in both the CM (continuously married) and DV (divorce) conditions.

Since the Chi-square statistic in the parent hypothesis attained statistical significance, an Analysis of Variance was computed on the overall Pd scores of the three highest "mini" profiles in order to investigate the possibility that the different "mini" combinations endorsed in this study may represent different clinical populations as measured by the parent Pd scale. The different "mini" groups tested for the husbands were the Pd4a-Pd4b, Pd1-Pd4b, and the Pd1-Pd4a categories. The ANOVA did not attain significance (F=.05, p=.95, Table 4.14), indicating that there were no significant differences in the overall Pd scores of these three "mini" profile groups.

The husbands were further broken down by marital status, DV and CM. In the CM group the "mini" profiles compared were the Pd4a-Pd4b, Pd2-Pd4a, Pd1-Pd4b, and the Pd1-Pd3 categories. The ANOVA was not significant for the

Table 4.14

ANOVA comparisons of the parent Pd scale score means of the prominent Harris and Lingoes "mini" profiles for the husbands

Marital Group	Source of Variation	Sum of Squares	df	Mean Squares	F	Signif. of F
Total CM+DV	Between	18.1	2	9.1	.05	.95
	Within	4230.6	25	169.2		
CM	Between	28.3	3	9.4	.06	.98
	Within	2581.0	17	151.8		
DV	Between	304.1	3	101.4	.91	.47
	Within	1114.2	10	111.4		

Pd mean differences between the groups (F=.06, p=.98, Table 4.14), indicating that the groups did not represent different clinical populations as measured by the parent Pd scale. In the DV group, the categories compared were Pd4a-Pd4b, Pd1-Pd4b, and Pd1-Pd4a. The ANOVA was not significant (F=.91, p=.47, Table 4.14), again indicating that the groups did not represent different clinical populations as measured by the parent Pd scale.

Hypothesis 2

> There will be differences in some of the relative frequencies of the highest 2-point codes of the Harris and Lingoes Pd subscales for wives entering marital counseling, in both the CM (continuously married) and DV (divorce) conditions.

This hypothesis, as hypothesis 1, was tested with the Chi-square "goodness of fit" statistic. Results for the total sample of wives did not achieve significance, p=.573 (Table 4.15). The mini profile frequencies were spread out fairly evenly across most of the categories. This trend also held when the groups were broken down by marital status, CM p=.789, and DV p=.834 (Tables 4.16 and 4.17 respectively). Inspection of the frequency data indicates a fairly even distribution of cases in both groups, with

Table 4.15

Chi-square analysis of Harris and Lingoes Pd subscale "mini" profiles of wives entering marital counseling

Mini Profile Combinations		Cases Observed	Expected Frequency
Pd1-Pd2,	Pd2-Pd1	7	5.2
Pd1-Pd3,	Pd3-Pd1	4	5.2
Pd1-Pd4a,	Pd4a-Pd1	6	5.2
Pd1-Pd4b,	Pd4b-Pd1	6	5.2
Pd2-Pd3,	Pd3-Pd2	6	5.2
Pd2-Pd4a,	Pd4a-Pd2	6	5.2
Pd2-Pd4b,	Pd4b-Pd2	0	5.2
Pd3-Pd4a,	Pd4a-Pd3	6	5.2
Pd3-Pd4b,	Pd4b-Pd3	4	5.2
Pd4a-Pd4b,	Pd4b-Pd4a	7	5.2

N=52
Chi-square = 7.6, df=9, p=.563

Table 4.16

Chi-square analysis of Harris and Lingoes Pd subscale "mini" profiles of CM (continuously married) wives

Mini Profile Combinations		Cases Observed	Expected Frequency
Pd1-Pd2,	Pd2-Pd1	4	3.2
Pd1-Pd3,	Pd3-Pd1	3	3.2
Pd1-Pd4a,	Pd4a-Pd1	3	3.2
Pd1-Pd4b,	Pd4b-Pd1	4	3.2
Pd2-Pd3,	Pd3-Pd2	3	3.2
Pd2-Pd4a,	Pd4a-Pd2	5	3.2
Pd2-Pd4b,	Pd4b-Pd2	0	3.2
Pd3-Pd4a,	Pd4a-Pd3	4	3.2
Pd3-Pd4b,	Pd4b-Pd3	2	3.2
Pd4a-Pd4b,	Pd4b-Pd4a	4	3.2

N=32
Chi-square = 5.5, df=9, p=.789

Table 4.17

Chi-square analysis of Harris and Lingoes Pd subscale "mini" profiles of the DV (divorced) wives

Mini Profile Combinations		Cases Observed	Expected Frequency
Pd1-Pd2,	Pd2-Pd1	3	2.0
Pd1-Pd3,	Pd3-Pd1	1	2.0
Pd1-Pd4a,	Pd4a-Pd1	3	2.0
Pd1-Pd4b,	Pd4b-Pd1	2	2.0
Pd2-Pd3,	Pd3-Pd2	3	2.0
Pd2-Pd4a,	Pd4a-Pd2	1	2.0
Pd2-Pd4b,	Pd4b-Pd2	0	2.0
Pd3-Pd4a,	Pd4a-Pd3	2	2.0
Pd3-Pd4b,	Pd4b-Pd3	2	2.0
Pd4a-Pd4b,	Pd4b-Pd4a	3	2.0

N=20
Chi-square = 5.0, df=9, p=.834

the exceptions of Pd2-Pd4b, in which there were no cases registered for either group. Interestingly, no cases were registered for this mini-profile in either of the husbands' groups.

Hypothesis 2a

> If there is statistical evidence of recurring 2-point patterns in the Harris and Lingoes subscales of the wives, there will be no differences in the mean Pd scores between these groups of wives for both the CM (continuously married) and DV (divorce) conditions.

Since the Chi-square "goodness of fit" statistic was not significant for the total group of wives (CM and DV combined), Hypothesis 2a was not tested.

Hypothesis 3

> There will be a positive relationship between the Pd scores of husbands and wives entering marital counseling, in both the CM (continuously married) and DV (divorce) conditions.

The prediction that there would be a significant positive relationship between the Pd scores of all the couples was not supported. The Pearson correlation coefficient of r=.23, p=.11 (Table 4.18) suggested a positive relationship between the Pd scores of all the couples and it approached, but did not achieve, significance. When breaking down the couples by final marital status, the results were again non-significant, although somewhat dissimilar. The CM group showed a positive non-significant relationship, r=.30, p=.10 (Table 4.19), and the DV group had a non-significant negative relationship, r=-.08, p=.71 (Table 4.20).

Hypothesis 3a

> There will be positive relationships between some of the Harris and Lingoes Pd subscale scores of husbands and wives entering marital counseling. Specifically, the Pd1 (Family Discord) subscales will show a positive relationship, and the Pd4a (Social Alienation) and Pd4b (Self-alienation) subscales will show a complementary positive relationship for both husbands and wives in the CM (continuously married) and DV (divorce) conditions.

Table 4.18

Pearson correlation coefficients between Pd main scale and Harris and Lingoes Pd subscales for husbands and wives entering marital counseling

	PdW	Pd1W	Pd2W	Pd3W	Pd4aW	Pd4bW	Pd4abW
PdH	.23	.17	.02	.10	.06	.13	.10
Pd1H	.21	.29*	.14	.10	.11	.10	.12
Pd2H	.17	.23	.15	.01	.19	.18	.20
Pd3H	.13	-.08	.08	-.05	.05	.10	.07
Pd4aH	.36	.12	.21	.21	.35*	.25	.33*
Pd4bH	.24	.06	.08	-.03	.33*	.38*	.39**
Pd4abH	.31*	.10	.16	.09	.35*	.31*	.36**

N of Couples=52
H=Husbands
W=Wives

*p<.05 **p<.01

Table 4.19

Pearson correlation coefficients between Pd main scale and Harris and Lingoes Pd subscales for CM (continuously married) couples

	PdW	Pd1W	Pd2W	Pd3W	Pd4aW	Pd4bW	Pd4abW
PdH	.30	.28	.11	.04	.13	.25	.19
Pd1H	.29	.40*	.33	.10	.28	.14	.23
Pd2H	.17	.14	.21	.10	.06	-.04	.00
Pd3H	.16	.08	.11	-.07	.05	.20	.11
Pd4aH	.46**	-02	.28	.22	.26	.20	.25
Pd4bH	.32	-.02	.32	-.15	.45*	.43*	.49**
Pd4abH	.40*	.00	.31	.02	.35*	.29	.35*

N of Couples=32
H=Husbands
W=Wives

*p<.05 **p<.01

Table 4.20

Pearson correlation coefficients between Pd main scale and Harris and Lingoes Pd subscales for DV (divorced) couples

	PdW	Pd1W	Pd2W	Pd3W	Pd4aW	Pd4bW	Pd4abW
PdH	-.08	-.12	-.08	.20	-.03	-.12	-.07
Pd1H	-.08	.07	.02	.08	-.06	-.03	-.03
Pd2H	.08	.32	.09	-.20	.40	.50*	.51*
Pd3H	.04	-.43	.04	-.03	.04	-.08	.00
Pd4aH	.16	.24	.17	.20	.46*	.28	.40
Pd4bH	-.03	.12	-.24	.16	.18	.26	.24
Pd4abH	.07	.19	-.02	.21	.36	.29	.35

N of Couples=20
H=Husbands
W=Wives

*p<.05 **p<.01

The hypothesis that husbands and wives would correlate on the Pd1 (Family Discord) subscale was supported, r=.29, p=.04 (Table 4.18). Interestingly, the statistical significance of this relationship was due to the CM group, r=.40, p=.02 (Table 4.19), whereas the same relationship for the DV group was relatively non-existent, r=.07, p=.76 (Table 4.20).

The final portion of Hypothesis 3a, regarding the complementary positive relationships between Pd4a (Social Alienation) and Pd4b (Self Alienation) for both husbands and wives had mixed results. The correlation of Pd4bHusband x Pd4aWife was statistically significant, r=.33, p=.02, while the correlation of Pd4aHusband x Pd4bWife, r=.25, p=.07, approached but did not achieve significance (Table 4.18).

The clinical importance of the hypothesized complementary relationships between Pd4a and Pd4b of both husbands and wives was contingent upon finding non-significant positive relationships between Pd4a x Pd4a, and Pd4b x Pd4b for both husbands and wives. However, as Table 4.18 illustrates, there were significant positive correlations between Pd4aHusband x Pd4aWife, r=.35, p=.01, and between Pd4bHusband x Pd4bWife, r=.38, p=.01, as well as a significant positive correlation between the combined Alienation scores Pd4abHusband x Pd4abWife, r=.36, p=.01. It will be remembered that the Pd4a and Pd4b subscales have an intercorrelation of r=.74 (Table 2.11, Page 26). It would appear that this high degree of interrelatedness

between Pd4a and Pd4b accounts for the experimental results obtained in this study, rather than the hypothesized complementary relationships. The Pd4a and Pd4b subscales have five items out of eighteen that overlap, making it difficult to separate out the specific effects of each subscale. This artifact appears to have obscured the individual contributions of each subscale. Both the husbands and wives in this study have high intercorrelations between the Pd4a and Pd4b subscales; Husbands r=.64 (Appendix Q) and Wives r=.66 (Appendix R). Thus, when correlating the husbands and wives together on these subscales, the item overlap between the subscales may have driven up all of the values. What the results do indicate is that the husbands and wives entering marital counseling in this study shared a significant sense of overall alienation, as measured by both the Pd4a (Social Alienation) and Pd4b (Self-Alienation) subscales.

When dividing the couples into the CM and DV groups, and then examining the Pd4a and Pd4b relationships, different trends emerged between the two groups. In the CM group the Pd4aHusband x Pd4bWife correlation of r=.45, p=.01, was significant, but the complementarity issue was confounded by the fact that the Pd4bHusband x Pd4bWife correlation of r=.43, p=.01, was also significant (Table 4.19). The other proposed complementarity correlation of Pd4aWife x Pd4bHusband was not significant, r=.20, p=.28.

Overall, the combined Alienation scores were significant, r=.35, p=.04 (Table 4.19), and the strength of this relationship was almost identical to that of the combined groups (r=.36, p=.01, Table 4.18).

In the DV group, neither of the Pd4a x Pd4b complementary relationships attained significance (Table 4.20). There was, however, a significant correlation between the Pd4a subscales, r=.46, p=.04, indicating that husbands and wives in the DV group shared a sense of external social alienation. In addition, there was a significant correlation between the Pd2Husband (Authority Problems) and the Pd4bWife (Self-alienation) subscales, r=.50, p=.03, indicating that rebelliousness in the husband is associated with a measure of alienated depression in the wife for the divorcing group.

The overall Alienation correlation for the DV group was of the same strength as that of the CM group and the combined groups, although it did not attain statistical significance, r=.35, p=.13 (Table 4.20). Though the strength of the correlations were virtually identical, the smaller size of the DV group made the results statistically unreliable. The implications of sample size and the use of an unbalanced design, i.e., groups of different sizes, will be discussed in more detail in Chapter V, Summary and Conclusions. Both interpretive use in a clinical setting and predictive efficacy from a research perspective will be evaluated.

Hypothesis 4

> Of the couples who divorce (DV), there will be differences in their main clinical MMPI scale elevations compared to those couples who remain continuously married (CM). In particular, the Pd scale of the DV group will be higher, when combining the profiles of both spouses.

This hypothesis, which highlights the prominence of the Pd scale in the MMPI profiles of those couples who decided to divorce is illustrated in Table 4.21. The MANOVA for all the cales taken collectively was not significant, F=.97, p=.52. However, the individual scale univariate F-tests indicated that the Pd (Psychopathic deviate) scale was the only main scale to significantly predict divorce outcome, F=7.8, p=.008, when looking at both members of the couple as a unit of analysis. The only other main scale to approach significance as a predictor of divorce outcome was the Pt (Psychasthenia) scale, F=3.3, p=.08.

Hypothesis 5

> Of the couples who divorce (DV) there will be differences in their Pd subscale scores compared to the

Table 4.21

The association of marital status (DV-CM) with main scale and Pd subscale scores when combining the profiles of both members of the couple

Scale	Univariate F-tests with 1,50 df: Hypoth. Mean Sq.	Error Mean Sq.	F	Signif. of F
L	123.6	157.3	.8	.380
F	349.0	200.0	1.7	.192
K	178.3	164.0	1.1	.302
Hs	470.2	179.4	2.6	.112
D	469.3	190.1	2.5	.123
Hy	850.4	342.9	2.5	.122
Pd	1865.8	240.7	7.8	.008**
Mf	14.7	155.0	.1	.759
Pa	.4	211.3	.0	.968
Pt	577.5	177.1	3.3	.077
Sc	566.0	234.8	2.4	.127
Ma	328.0	257.6	1.3	.265
Si	10.2	164.9	.1	.804
Pd1	1944.3	296.4	6.6	.013*
Pd2	37.2	263.4	.1	.709
Pd3	41.6	164.2	.3	.617
Pd4a	157.3	233.8	.7	.416
Pd4b	391.2	210.8	1.9	.179
Pd4ab	236.3	210.7	1.1	.295

*p<.05 **p<.01

Note: Means and standard deviations for all scales and subscales are listed in Appendix O, p.176, and Appendix P, p.177.

Pd subscale scores of those couples who remain continuously married (CM). In particular, the Pd4a (Social Alienation) subscale will be higher for the DV group, when combining the profiles of both spouses.

The Pd4a (Social Alienation) hypothesis was not supported, F=.7, p=.416 (Table 4.21). Thus the Pd4a subscale did not turn out to be a significant predictor of divorce outcome. However, the Pd1 (Family Problems) subscale was a significant predictor, F=6.6, p=.013 (Table 4.21). The breakdown of this factor will be discussed in Hypotheses 8 and 9.

Hypothesis 6

Of the husbands who divorce (DV), there will be some differences between the main clinical MMPI scale scores compared to those husbands who remain continuously married (CM). In particular, there will be differences on the Pd scale, with the DV group higher than the CM group.

This hypothesis was found to be statistically significant for the univariate F-tests, although the collective MANOVA was not, F=.69, p=.80. The Pd scale was the only main MMPI scale that significantly predicted divorce outcome, F=4.6, p=.038 (Table 4.22). The only other main scale to approach significance was the Sc (Schizophrenia) scale, F=3.3, p=.075 (Table 4.22).

Hypothesis 7

> Of the wives who divorce (DV), there will be some differences between the main clinical MMPI scores compared to those wives who remain continuously married (CM). In particular, there will be differences on the Pd scale, with the DV group higher than the CM group.

This hypothesis, regarding the prominence of the Pd scale score in the wives of the DV group, was statistically supported by the univariate F-tests, F=4.4, p=.04 (Table 4.23), although the overall MANOVA was not significant, F=.69, p=.80. No other main scale score approached significance.

Table 4.22

The association of marital status (DV-CM) with main scale and Pd subscale scores for husbands

Scale	Univariate F-tests with 1,50 df: Hypoth. Mean Sq.	Error Mean Sq.	F	Signif. of F
L	135.0	81.1	1.7	.203
F	380.1	78.4	4.9	.032*
K	4.2	81.5	.1	.822
Hs	181.8	96.6	1.9	.176
D	148.1	84.7	1.7	.192
Hy	156.8	109.2	1.4	.236
Pd	543.3	119.3	4.6	.038*
Mf	34.3	85.4	.4	.529
Pa	66.5	110.9	.6	.442
Pt	245.8	114.7	2.1	.150
Sc	425.7	128.9	3.3	.075
Ma	406.0	166.3	2.4	.125
Si	10.1	98.1	.1	.749
Pd1	959.9	131.5	7.3	.009**
Pd2	137.1	111.3	1.2	.272
Pd3	19.8	102.7	.2	.662
Pd4a	150.2	94.5	1.6	.213
Pd4b	160.6	87.9	1.8	.183
Pd4ab	148.1	89.3	1.7	.204

*p<.05 **p<.01

Note: Means and standard deviations for all scales and subscales are listed in Appendix O, p.176, and Appendix P, p.177.

Table 4.23

The association of marital status (DV-CM) with main scale and Pd subscale scores for wives

Scale	Univariate F-tests with 1,50 df			
	Hypoth. Mean Sq.	Error Mean Sq.	F	Signif. of F
L	.3	66.5	.0	.951
F	.7	82.3	.0	.927
K	236.9	67.3	3.5	.066
Hs	67.2	84.0	.8	.375
D	90.1	95.6	.9	.336
Hy	277.0	156.1	1.8	.189
Pd	395.5	89.3	4.4	.040*
Mf	4.1	89.2	.0	.832
Pa	76.5	87.2	.9	.353
Pt	69.8	67.5	1.0	.314
Sc	10.0	89.5	.1	.740
Ma	4.2	87.0	.1	.828
Si	40.7	78.8	.5	.476
Pd1	171.9	106.1	1.6	.209
Pd2	31.5	115.0	.3	.603
Pd3	4.0	70.7	.1	.813
Pd4a	.1	78.3	.0	.974
Pd4b	50.5	67.2	.8	.391
Pd4ab	10.2	66.9	.2	.697

*p<.05 **p<.01

Note: Means and standard deviations for all scales and subscales are listed in Appendix O, p.176, and Appendix P, p.177.

Hypothesis 8

> Of the husbands who divorce (DV), there will be some differences in their Pd subscale scores compared to those husbands who remain continuously married (CM). In particular, the Pd4a (Social Alienation) subscale will be higher for the DV group.

The Pd4a (Social Alienation) hypothesis regarding the husbands was not supported, F=1.6, p=.213 (Table 4.22). However, the Pd1 (Family Problems) subscale was found to be a statistically significant predictor of divorce outcome, F=7.3, p=.009 (Table 4.22). No other Harris and Lingoes Pd subscales approached significance as predictors of divorce outcome.

Hypothesis 9

> Of the wives who divorce (DV), there will be some differences in their Pd subscale scores compared to those wives who remain continuously married (CM). In particular, the Pd4a (Social Alienation) subscale will be higher for the DV group.

Pd4a (Social Alienation) was not found to be a significant predictor of divorce outcome for the wives, F=.0, p=.974 (Table 4.23). In fact, the mean scores for the two groups were virtually identical, with CM=54.5 and DV=54.6. None of the Pd subscales approached significance as predictors of divorce outcome for the wives (Table 4.23).

Post Hoc Analyses

As data inspection occurred during the course of analyisis, it became apparent that an important comparison regarding the Pd scale had been overlooked in the major hypotheses. Of particular interest, was the relative position of prominence of the Pd scale in the MMPI profiles of those couples who decided to divorce, as opposed to those who remained continuously married. Although the Pd scale scores were found to be the only significant main scale predictors of divorce outcome in both the profiles of husbands and wives, the main scale high points were overlooked as a source of information regarding differences between the two groups.

Looking at both members of the couple is important, but this tends to imply that both spouses will have prominent Pd elevations, when it may be that the relative prominence of the Pd elevation in the profile of one of the two members of the couple may be a significant indicator of divorce, regardless of the actual Pd score.

In order to test this hypothesis, each couple's MMPI profiles were analyzed to see which main scale was the highest, irrespective of score. In the CM group, 12 of the 32 couples, or 38%, had at least one member with the Pd scale as the highest main scale T-score. The DV group had 13 of 20 couples, or 65%, with at least one member having Pd as the highest main scale score. A comparison of the proportions of these two groups yielded a z score of 2.05, which was statistically significant at p=.04, two-tailed. Thus it appears, at least in the couples tested in this study, that the relative position of the Pd score as the highest point in the overall profile configuration of at least one member, regardless of actual score, is significantly associated with divorce outcome.

The second post hoc analysis arose from an inspection of the MANOVA table for the DV husbands (Table 4.22). The DV husbands not only had a significant Pd score differential from the CM husbands, they also had a significant difference on one of the validity scales, notably the F scale, F=4.86, p=.03, with the DV husbands having a mean score of 58.0 and the CM husbands a mean score of 52.4. It will be remembered that the F scale measures unusual clinical responses. Thus the DV husbands were admitting to considerably more unusual experiences than the CM husbands.

The last post hoc analysis performed was to test the correlation between the Hy (Hysteria) scales in the CM and DV groups. In clinical practice, the Hy scale is often

associated with the Pd scale, which is frequently indicative of passive-aggressive behavior. Such behavior is often characterized by denial, defensiveness, and avoidance of direct and constructive problem solving. Since such behaviors generate and prolong relational conflict, it was believed that statistical comparison of this relationship between the CM and DV groups might provide more information regarding the personality characteristics of those couples who were able to resolve their differences and those who ended up divorcing.

The Pearson product moment correlation coefficient was used to compare the relationships between the couples in the two groups. In the CM group the Hy correlation was found to be non-significant statistically, $r=.08$, $p=.66$. In the DV group, the Hy correlation was $r=.72$, $p=.00$. This correlation of .72 was the largest obtained in the study, and is worthy of note. According to Greene (1980) the Hy (Hysteria) scale measures the tendency of an individual to deny social and emotional adjustment problems, and who is prone to the development of conversion symptoms as a way of avoiding both responsibility and dealing directly and openly with conflict. Thus examination of the large differences between the two groups would suggest that there is a moderately strong tendency in the DV group for both members of the couple to use this denial characteristic in very similar amounts. As the results of the univariate F tests have indicated (Tables 4.22 and 4.23), the Hy scale was not

found to be a significant predictor of divorce outcome. However, the correlation of .72 underscores a tendency toward mutual use of degree of superficiality and denial in the DV group. This suggests that either a high degree of defensive denial in both spouses or, conversely, the mutual inability of either spouse to repress minor conflicts, leads to a dissolution of the marriage. In the CM group, the lack of a positive relationship on the Hy scale between spouses suggests that there may have been more emotional balance and less mutual defensive denial or hyperreactivity in these relationships.

Summary

The major hypotheses investigated and presented in this chapter were designed to assess the importance of the Pd (Psychopathic deviate) scale of the MMPI, and the Harris and Lingoes Pd subscales, in two related aspects of marital counseling. Of primary interest was the prediction of which couples entering marital counseling were likely to resolve their differences and which couples were more likely to divorce. Additionally, the issue of similar and complementary personality characteristics, that may indicate mutual defensiveness were investigated. It was found that the Pd scale itself was the only consistently significant predictor of relational resolution or divorce. In investigating the Harris and Lingoes Pd subscales, it was found that the Pd1 (Family Discord) subscale was useful in

predicting divorce in the husbands but not in the wives, although the wives score did approach statistical significance. The Pd4a (Social Alienation) subscale was not found to be a significant factor in the decision to divorce, in either husbands or wives.

In the investigation of similar and complementary personality characteristics, as measured by the correlations of the Harris and Lingoes Pd subscales, the CM couples shared a mutual sense of familial discord, Pd1 r=.40, p=.02, (Table 4.19) and a shared sense of combined alienation, Pd4ab r=.35, p=.04, (Table 4.19). The strength of this relationship was primarily determined by the contribution the Self-alienation, or depressive component.

In the DV group, the husbands and wives did not share a common sense of familial discord, Pd1 r=.07, p=.76, (Table 4.20), nor did they share a statistically significant sense of combined alienation, Pd4ab r=.35, p=.13 (Table 4.20). In examining the relationships within the alienation section, the DV husbands and wives shared a statistically significant characteristic on the Social Alienation dimension, Pd4a r=.46, p=.04 (Table 4.20), but neither of the hypothesized complementary relationships occurred between the Pd4a (Social Alienation) and Pd4b (Self-alienation) subscales.

Post hoc analysis of the high points of the MMPI main scales within each couple also showed the Pd scale, as the highest scale point in the profile of at least one of the members of the couple, to be significantly associated with

divorce, z=2.05, p=.04, two-tailed. In addition, the correlation of the Hy (Hysteria) scale was found to be a significant factor in the DV group, r=.72, p=.00.

The following chapter, chapter V, will summarize and analyze the results of the study in a more detailed fashion. A discussion of the implications of the results for future research and therapy will also be presented.

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of Chapter V is to present a more in depth understanding of the results and limitations of the study, and to look at clinical applications and future research directions. The chapter will be organized as follows:

1. Review of the study.
2. Conclusions regarding major hypotheses.
    a) Harris and Lingoes "mini" profiles.
    b) Harris and Lingoes Pd subscale predictions.
    c) Pd main scale and Pd subscale relationships.
    d) Pd main scale predictions.
3. Conclusions regarding post hoc comparisons.
4. Limitations.
    a) Sampling limitations.
    b) Measurement limitations.
5. Clinical implications.
6. Future research directions.

Review of the Study

This study represents a preliminary attempt to investigate the use of the MMPI as a predictive indicator of marital status/therapeutic outcome in marital counseling. The focus on the Pd (Psychopathic deviate) scale overall,

and the Harris and Lingoes subscales in particular, was designed to further the understanding of the already documented prevalence of the Pd scale in the MMPI profiles of marital counselees, Arnold (1971), Butcher (1989). As discussed in the research section (pages 33-58), the Pd scale has been found to be significantly associated with child abusers, prisoners, and parents of emotionally disturbed children, as well marital counselees. In examining some of the statistical relationships within the Harris and Lingoes subscales, it was hoped that specific factors would emerge from the overall heterogeneity of the parent Pd scale that would clarify the meaning of the elevated Pd scales in the MMPI profiles of marital counselees. It was further hoped that these Pd subscale relationships would help differentiate those couples who were able to resolve their differences, and those who decided to divorce.

Conclusions Regarding Major Hypotheses

Harris and Lingoes "mini" profiles

The first hypothesis regarding the Pd subscale "mini" profiles of the husbands did achieve statistical significance, Chi-square = 24.9, p=.003 (Table 4.11). The purpose of this hypothesis was to identify subgroupings of Harris and Lingoes Pd subscales in the profiles of the husbands which would clarify the meaning of Pd scale elevations. The data inspection showed that there was

really only one prominent subgrouping, the Pd4a (Social Alienation) - Pd4b (Self-Alienation) combination. When further broken down by marital status, this combination held true for both the CM and DV groups, although it was statistically significant only for the CM group, Chi-square = 18, p=.035 (Table 4.12).

The same data for the wives did not achieve significance for the two groups as a whole or separately, Tables 4.15, 4.16,and 4.17, respectively. The frequency data showed that the dispersion of "mini" profiles for the wives was evenly spread out across the categories for both the CM and the DV groups.

One conclusion that could be drawn from these results is that the husbands in this study were characterized by a marked sense of social and self-alienation, while the wives had no discernable patterns. However, as Table 2.11 indicates, the intercorrelation listed by Graham (1987) between Pd4a and Pd4b is r=.74, which is close to the intercorrelation found in this sample, Husbands Pd4a x Pd4b r=.64 (Appendix Q). It is quite possible that the results for the husbands can be accounted for by this high intercorrelation. The fact that there were really no other prominent subscale groupings for the husbands or the wives in either the CM or the DV groups, lend credence to this.

Another line of reasoning was also explored to see whether the choice of statistical method for this comparison

camouflaged what may have been clearly identifiable subgroups. The use of two-point codes tends to obscure the importance of each subscale by itself. Thus crosstabulation Chi-squares were run using only the highest subscale score to see if particular patterns would emerge that could characterize each group. These tests did not achieve statistical significance for the couples, the husbands or the wives, Chi-square Couples = 3.97, p=.41 (Table 5.11), Chi-square Husbands = 5.74, p=.22 (Table 5.12), and Chi-square Wives = 1.25, p=.87 (Table 5.13). The trends which did emerge from this data, however, point to a non-significant tendency in the DV couples to emphasize Pd1 (Family Discord) as the high point t-score, and for the CM couples to emphasize Pd1 (Family Discord) and Pd3 (Social Imperturbability). The DV husbands had a tendency to emphasize the Pd1 (Family Discord) subscale, while the CM husbands emphasized the Pd4b (Self-alienation) subscale. For the wives, the DV group also emphasized the Pd1 (Family Discord) subscale, and also the Pd3 (Social Imperturbability) subscale. However, the CM wives also emphasized the Pd1 (Family Discord) subscale and the Pd3 (Social Imperturbability) subscale. Although these results are not statistically significant, they highlight the lack of identifiable subgroups that would either characterize husbands and wives as they enter marital counseling, or discriminate those couples who remain continuously married

Table 5.11
Percentages of Harris and Lingoes Pd subscale high points for couples

Couples	Pd1	Pd2	Pd3	Pd4a	Pd4b
CM	25%	19%	25%	11%	20%
DV	35%	8%	22%	17%	18%

n-CM=64
n-DV=40

Chi-square = 3.97, df=9, p=.41

Table 5.12

Percentages of Harris and Lingoes Pd subscale high points for husbands

Husbands	Pd1	Pd2	Pd3	Pd4a	Pd4b
CM	16%	19%	25%	9%	31%
DV	40%	5%	15%	15%	25%

n-CM=32
n-DV=20

Chi-square = 5.74, df=4, p=.22

Table 5.13

Percentages of Harris and Lingoes Pd subscale high points for wives

Wives	Pd1	Pd2	Pd3	Pd4a	Pd4b
CM	34%	19%	25%	13%	9%
DV	30%	10%	30%	20%	10%

n-CM=32
n-DV=20

Chi-square = 1.25, df=4, p=.87

from those who divorce, in terms of the particular Pd subscale which is the high point of the "mini" profile.

The lack of meaningful supporting data for the "mini" profile hypothesis suggests that the Pd scale was measuring a heterogeneous group of characteristics for the subjects in this study, and that there were no characteristic "mini" Pd subscale profiles for either the husbands or wives. Thus when looking at group comparisons, the Harris and Lingoes subscales did not yield any clinically useful descriptive information in the "mini" profile area. This underscores the importance of performing individual subscale analysis for each member of the couple when looking for behavioral correlates that will be useful in clinical interpretation.

Harris and Lingoes Pd subscale predictions

Although the subscale high points were not significant for any group, the Pd1 (Family Discord) subscale score was statistically significant as a discriminator of CM and DV husbands, $F=7.3$, $p=.01$ (Table 4.22). Thus the placement of the Pd1 subscale was not significant in the "mini" profile, but the level of the score did discriminate for the husbands, with the DV group having a mean score of 61.6 and the CM group a mean of 52.7. These results may be compared to the study by Harris and Christiansen (1946), which found that successful psychotherapy outcomes were associated with lower scores on the Pd1 subscale.

The Pd1 subscale turned out to be the only significant

Harris and Lingoes subscale predictor of divorce. Although the F-test was significant for the couples taken together, F=6.6, p=.013 (Table 4.21), it was not significant for both the husbands and the wives separately. It was significant for the men, F Husbands = 7.3, p=.01 (Table 4.22), but not the women, F Wives = 1.6, p=.21 (Table 4.23), although the wives scores were approaching significance. The Pd1 (Family Discord) outcome was not emphasized in Hypotheses 5 and 6, but was not totally unexpected, as noted by the Harris and Christiansen study above. Additionally, from an item content perspective, the Pd1 subscale taps perceived family conflict and unpleasantness. Although originally conceived as a measure of family of origin perceptions, the majority of the items are phrased in such a way as to indicate current nuclear family or marital functioning. Thus these results would seem to indicate that the greater the level of experienced family discord, the greater the likelihood of a divorce outcome in marital counseling, which makes intuitive sense.

The Hackney and Ribordy (1980) study referred to in Chapter I (p.10), concluded that one of the reasons for elevated Pd scales in the MMPI profiles of marital counselees was situational distress. These authors had tested happily married, marital counselees, and divorcing couples and found that the marital counselees had the highest Pd elevations. When these results are compared with the findings regarding the Pd1 (Family Discord) subscale in

the current study, one conclusion to be drawn is that the Pd1 subscale may be tapping this felt experience of situational distress. Item content indicates that of all the subscales, Pd1 appears the most transient or "state" oriented, rather than "trait" oriented, as are the others. Thus the overall height of the Pd main scale may be driven up during a period of situational marital conflict, thereby inflating the score somewhat, which would also affect the clinical interpretation of the profile. From a clinical perspective, these findings suggest that inspection of the subscales is very important in sorting out situational issues from overall personality characteristics.

The hypothesized significance of the Pd4a (Social Alienation) subscale did not materialize for the couples, $F=.7$, $p=.42$, the husbands, $F=1.6$, $p=.22$, or the wives, $F=.0$, $p=.97$. This outcome was quite unexpected, and several conditions may have contributed to these results. Perhaps one of the most likely possibilities, which will also be covered in more detail in the limitations section, was the very small sample size, especially in the DV group (20 couples). In addition, while the Pd4a subscale may measure intractable alienated anger with considerable externalizing of blame, this in and of itself may not be predictive of divorce outcome. Clearly, there is another spouse to consider in such an outcome, and if an individual with a high Pd4a is married to someone who is accommodating and understanding, the marriage may not end in divorce. On the

other hand, if both individuals are similar on the Pd4a dimension, and have high scores, this may contribute to divorce outcome. This perspective was supported, in part, by the results of the Pd4a correlation between divorcing spouses, Pd4a Husbands x Pd4a Wives, r=.46, p=.04 (Table 4.20). Of the Pd4a and Pd4b (Self-alienation) correlations for the DV group, this was the only one to achieve statistical significance, indicating that to some extent divorcing spouses shared feelings of social alienation, but not sharing an overall sense of alienation.

Pd main scale and Pd subscale relationships.

The husbands and wives did not share a statistically significant dimension of relatedness on the overall Pd scale, although the CM group did approach significance, Couples r=.23, p=.11 (Table 4.18), CM r=.30, p=.10, (Table 4.19), and DV r=-.08, p=.71 (Table 4.20). Here again, the small sample size may have precluded the finding of significant results, and it may also be that those couples who resolve their differences operate differently statistically on this scale from those who decide to divorce. The results of the Pd subscale correlations, examined below, support this position and underscore the importance of subscale evaluation when using the MMPI with a marital counseling population.

When examining the Pd subscale relationships, it was noted that the CM group was characterized by a significant

positive relationship on the Pd1 (Family Discord x Pd1 (Family Discord) dimension, r=.40, p=.02 (Table 4.19), a significant complementary relationship on the Pd4a (Social Alienation) Husbands x Pd4b (Self-alienation) Wives dimension, r=.45, p=.01, a significant similarity relationship on the Pd4b (Self-alienation) x Pd4b (Self-alienation) dimension, r=.43, p=.01, and a shared sense of combined alienation on the Pd4ab x Pd4ab dimension, r=.35, p=.04. These results suggest that there was some common perception between the spouses who resolved their marital differences regarding the extent of the conflict in their marital relationship. There was also some indication of complementarity of social and self-alienation, which would allow for stability in the relationship. And finally, they placed more emphasis on the "self" portion of the alienation dimension, suggesting more willingness to accept blame rather than externalize or project onto the spouse.

Those couples who decided to divorce, the DV group, shared quite different characteristics than those couples in the CM group who resolved their differences. There was no agreement as to the amount of conflict in the relationship, Pd1 (Family Discord) x Pd1 (Family Discord) r=.07, p=.76 (Table 4.20). In addition, the only shared alienation dimension was a similarity relationship on the Pd4a (Social Alienation) subscale, r=.46, p=.04. The DV group also had a statistically significant result on the Pd2 (Authority Problems) Husbands x Pd4b (Self-alienation) Wives dimension,

r=.50, p=.03 (Table 4.20). This combination of results describes couples who disagree as to the basic perception of dysfunction in the marital relationship, who tend to blame each other rather than accept responsibility jointly, and who have a rebellion/ depression dimension operating between husbands and wives.

The different conceptualizations of the CM and DV couples were made possible by Harris and Lingoes Pd subscale examination. Had the study been limited to the examination of just the parent Pd scale, important clinical information regarding the interactional dynamics of the couples would have been excluded. Although the correlational relationships are not large, perhaps due in part to small group size, and lack of heterogeneity in the subjects due to high educational levels, the relationships are strong enough to suggest that significant clinical information is obtained through subscale examination of the test profiles.

Pd main scale predictions

From an overall perspective, the Pd main scale predictions were the only statistically significant results to apply both to the husbands and the wives. The results for the Couples, F=7.8, p=.01 (Table 4.21), Husbands, F=4.6, p=.04 (Table 4.22), and Wives, F=4.4, p=.04 (Table 4.23), indicate that the Pd scale was the only main scale to significantly separate the CM and DV groups across the sexes. What is particularly useful regarding these results

is the fact that the mean scores were well within what is typically considered "normal limits", i.e., a T-score less than 70. The mean scores for the respective groups were: CM Husbands = 57.2, DV Husbands, 63.8, CM Wives = 56.3, and DV Wives = 62.2. These means are marginal elevations, which are consistent with score levels of marital counselees cited in previous research cited in this study, such as Arnold (1971), Brown (1979), and Ollendick, Otto, & Heider (1983). Thus the groups compared in this study would seem to be comprised of individuals who do not fall into the diagnostic category of Psychopathic or Sociopathic, but who do emphasize family discord and a sense of alienation, be it social, self, or both in their MMPI profiles. As one would expect, the greater the degree of this emphasis, the more likely is the prospect of divorce.

Conclusions regarding post hoc analyses

Since the Pd scale was the only main scale discriminator of divorce and the score means were marginal, it was decided to do a post hoc analysis of the relative position of the Pd scale in the overall profile configuration of each member of the marital couple. As reported in Chapter IV, the CM group had 38% of the couples having at least one spouse with Pd as the main scale high point, while 65% of the DV couples had this configuration. In testing the difference between these proportions, it was found that there was a statistically significant difference,

z=2.05, p=.04. This result suggests that it is not just the scale score level that is important in predicting divorce, but the relative position of the Pd scale in the larger profile regardless of score. Inspection of the raw data indicated that there were several DV couples in which the overall profile heights and patterns were relatively benign, but one spouse did have Pd as the high point, even in the T-score 55-60 range.

The second post hoc observation regards the validity scales, in particular the F scale for the husbands. As noted in Table 4.22, the F scale, which measures unusual responses, was significantly different for the husbands, F=4.86, p=.03, with the DV group scoring higher with a mean of 58.0 as opposed to the CM husbands mean of 52.4. Both of these means are in the normal range of clients who are willing to acknowledge a typical number of unusual experiences, Greene (1980). However, as a group, the DV husbands were acknowledging more in the way of pathological responses. From this observation, it is not possible to say that the DV husbands were more clinically pathological than the CM husbands, but taken along with the elevated Pd, Pd1, and the Pd4a correlation with the DV wives, it suggests more intensity of emotional distress than the CM husbands.

The last post hoc analysis performed was the examination of the correlation between the Hy (Hysteria) scales of the husbands and wives. As reported in Chapter IV, the results in the two groups were markedly different,

in the CM group, r=.08, p=.66, and the DV group, r=.72, p=.00. As previously mentioned, these results would seem to indicate that the DV couples were more likely to possess a mutual degree of defensive denial, where neither member of the couple was particularly accessible emotionally, or where both spouses were not able to repress minor conflict issues at all. This finding suggests that the Pd scale, in combination with the Hy scale may be a particularly problematic configuration when attempting to resolve marital conflict. One of the findings in the Arnold (1971) study was the preponderance of the Pd-Hy, Hy-Pd combination in the MMPI profiles of marital counselees as opposed to normals. The passive-aggressive behavioral pattern that is associated with this profile configuration is often clinically indicative of masked, indirect hostility, periodic explosiveness, and a lack of emotional intimacy within the marital relationship.

The presence of a mild (T=50-55) elevation on the Hy scale is often seen in a positive clinical light. It may indicate that the individual is able to repress minor conflict issues, and not overreact or personalize the behavior of the spouse. One explanation of the strong correlational results found on this dimension between spouses in the DV group is that if both spouses are low on Hy, they may both be thin skinned and likely to engage in chronic bickering. Such an interactional style could be just as problematic for the marriage as mutual passive-

aggressive behavior. Thus, whether the scores are high or low, when spouses are similar on this dimension, it bodes ill for the marriage.

The integration of the Hy findings in this study with the other major research done in this area leads to several conclusions. Previous research cited indicates that marital counselees in general are characterized by higher Pd scores and more frequent Pd-Hy configurations than are non marital counseling couples in the general population. The results of this study reaffirm this observation and take it one step farther. It is not only that there was a preponderance of Pd elevations and associated Hy involvement in the marital counselees in this study, but it was also this group of counselees that were not able to resolve their marital differences and were most likely to end the marital counseling process with a subsequent decision to divorce.

Sampling Limitations

The subjects in this study were all marital counseling clients of private outpatient counseling clinics in the Lansing, Michigan area, particularly Delta-Waverly Psychology and Counseling Associates. Due to the longitudinal nature of the study and the inherent time restrictions of dissertation research, there was no attempt made to randomly select subject couples from a larger group of marital counselees. All of the available marital counselee subject couples who had valid MMPI profiles were

included in the study. This sample is clearly not representative of the population of potential marital counselees in general.

Marital counselees are frequently seen in diverse settings such as public mental health clinics, private clinics, and by both mainstream and fundamentalist clergy. As a result of studying only clients from a private setting, a large and diverse pool of clients was excluded from the study. Self-selection occurs in terms of who comes to a private clinic for marital counseling services, with the financial cost of such services operating as an automatic screening device. In this study, 60% of the client couples paid for the counseling services out of their own pocket and 40% had insurance coverage that paid for part or all of the services. The socioeconomic level of the 60% who were paying out of pocket had to be such that they could afford $50.00 to $75.00 per session for counseling. Even those with insurance had to be employed in areas that provided outpatient psychological insurance coverage, which tends to be higher level employment that was not associated with the auto industry. This contrasts sharply with the clients of a community mental health clinic where fees are based on ability to pay and cover the UAW employees, Medicaid (public assistance) clients, or a clergyman's office where the services are rendered for free.

The higher socioeconomic level of the clients in this study was also associated with higher than average

educational levels, as would be expected. 99% of the subjects in the study had at least a high school diploma, and 70% had at least some college, with 32% having a bachelors degree or higher. Thus this group of marital counselees reflects the more educated and financially comfortable levels of society.

The sampling limitations of the subjects in this study have external validity implications, Campbell and Stanley (1963). The degree to which the results can be generalized is restricted to subjects of like background who would seek marital counseling services at a private clinic.

Other external validity issues are not as large a concern due to the design of the study. There was no pretest measure to affect performance on a posttest, nor were there maturation effects since the MMPI administration occurred only once during the first four weeks of marital counseling. Additionally, since subjects were self selected on the basis of a desire for marital counseling services, it is clear that the results generalize to other marital counselees in similar circumstances.

Measurement Limitations

One of the problems with correlational designs is that the correlation values can be affected by the variability of the sample, Hopkins and Glass (1978). Due to the sampling limitations already mentioned, it may well be that the corresponding variability of the total subject group was

restricted. As other things are held constant, if the variability among observations increases, the resulting correlation is likely to be larger. The restricted educational and economic levels of the subjects as a whole, and the restricted age range of the DV group (ages 19 to 45) may have lowered the correlational values obtained in the study, affecting internal validity.

The use of the Multivariate Analysis of Variance (MANOVA) design also has implications for the internal validity of the study. The MMPI scales all have overlapping items and thus all of the main scales are related statistically to each other. It is possible that the significant results obtained for the Pd scale in the univariate F-tests in the MANOVA section are due to these interrelationships rather than to the effect of final marital status (DV or CM). The MANOVA design was chosen because of this interrelatedness, but the small number of subjects in both the CM and DV groups weakened the power of the MANOVA. Thus there may have been other main scales or Pd subscales that were significantly associated with divorce that went undetected due to the small sample size. In spite of this shortcoming, the use of MANOVA was deemed most appropriate because it helped reduce the effect of scale interrelatedness.

The use of the Chi-square statistic in the "mini" profile section for the Harris and Lingoes Pd subscales is also not without problems. The use of this statistic is

questionable due to the large number of categories and the small sample size, and the results need to be interpreted in that light. However, in order to look at the hypothesized relationship, it was necessary to employ such a statistic so that actual frequencies could be compared.

The sample size may also contribute to measurement error. The sizes of the two groups compared in this study were quite small and they were of unequal number. Ideally, a balanced design (having groups of equal size) and groups of at least 30 couples might have helped to provide more powerful results.

A further measurement limitation regards the norms used in the scoring of the MMPI profiles. The Colligan (1983) norms were used to score the profiles of the couples in this study. These norms are age graded and tend to give lower T-score values for young adults for the main scales than do the original Minnesota norms. The Pd scale in particular gives substantially lower values when comparing the same raw score in a young adult using the Colligan norms as opposed to the Minnesota norms. The same raw score in an older adult would produce a higher T-score value with Colligan than with Minnesota. Thus, when using this research data in a clinical population, it is important to remember that the mean T-score values derived from this study, and their corresponding divorce implications, will not translate in a 1 to 1 fashion if the clinician is using the original Minnesota norms to score the profiles.

The final measurement limitation relates to a recent change in the MMPI itself. This study was undertaken prior to the introduction of the MMPI-2 (Butcher, 1989). The MMPI-2 has omitted many out of date items, revised the wording of others, and added new items. In addition, the clinical interpretation of the T-score elevations has changed. Clinical significance is now achieved with a T-score of 65, rather than 70, which was true of the original MMPI. Thus a clinician using the MMPI-2 with marital couples needs to apply the results of this study with considerable caution. Any clinician using the MMPI-2 with marital counselees is directed to the work of Hjemboe and Butcher (In Press).

All of the design issues discussed in this section may have affected accurate measurement of the variables of interest. These limitations, along with the sampling limitations discussed in the previous section, limit both the degree to which the results can be trusted and the degree to which they generalized to the larger population of marital counselees.

Clinical Implications

The results of this study have therapeutic implications for both marital and premarital counseling, as long as the limitations of the study are kept in mind. From a marital counseling perspective, the clinician in an outpatient setting will have the knowledge that high point Pd scores,

or that Pd or Pd1 scores in the T-score 62-70 range are often associated with divorce. Although scores in this range are not in the pathological range, they are often associated with the term "characterological flavor". Interpreted with caution, an individual with a "characterological flavor" is one who has a tendency to externalize blame, usually finding fault with others rather than with self, limited insight, anxiety of a crisis nature rather than an internalized nature, and spotty integration of behavioral change.

If disseminated carefully, the results from this study can be used in the process of marital couples counseling to provide motivation for change within such an individual. More caution would be indicated if the individual also had an elevation on the Hy (Hysteria) scale. Such individuals are difficult to confront from a personal perspective and are often more responsive to objective outside information, such as that provided by a test that has behavioral correlates that include other people, not just themselves.

It should also be remembered that the Pd (Psychopathic deviate) scale is thought to operate as an "activator", and the Hy (Hysteria) scale as an "inhibitor" (Graham, 1987). If the Hy score is higher than the Pd score in an individual profile, the propensity for the individual to act out against the spouse in a passive-aggressive manner, with periodic explosive outbursts, is substantial. This would be especially true if the Pd (Psychopathic deviate) score minus

the Ma (Mania) score is 15 T-score units or greater (Arnold, 1971). Thus when examining the implications for therapy, the clinician needs to take into account some of the other MMPI variables, like the Hy (Hysteria) scale, that operate in combination with the Pd (Psychopathic deviate) scale. For further elaboration, the reader is directed to Graham, 1987, and Greene, 1980, and Hjemboe and Butcher, In Press.

MMPI profile information involving Pd and Hy elevations can also be helpful when processed with the spouse of the individual who possesses such a profile, if handled in a facilitative and problem solving manner. MMPI profile feedback, when used in couples counseling, is frequently given jointly, i.e., with both spouses present. When used constructively, this information assists each spouse in understanding the other and how their emotional and behavioral styles interact. Understanding the personality dynamics of the spouse is often helpful in developing constructive new behaviors to employ in the relationship with respect to communication and the processing of anger. It is not uncommon for a marriage to fail because one or the other spouse did not really understand their mate and subsequently did not develop a facilitative problem solving style. In such a relationship the MMPI profile information can assist the spouse in his or her attempt to develop strategies to deal with the "characterological flavor" in the other, whether it is possessed by just one of the spouses or both of them.

The therapeutic implications for premarital counseling are similar to those just mentioned, but with more flexibility attached. Couples who come in for premarital counseling are typically more receptive to mutual change because there is not the history of intractable problems or past resentments. Thus the motivation to create a strong relationship is often present and both individuals are frequently more open to looking at what difficulties may develop in their future marriage if changes are not undertaken and incorporated in the present. Feedback given to an individual with a passive-aggressive MMPI profile regarding his or her future propensity for handling anger in an indirect and punitive manner when under considerable stress, is often met with much more receptivity than if the individual is being confronted in the present. This makes it possible for the premarital couple to anticipate the types of future difficulties they may encounter, providing them with strategies for use should the occasion arise. In addition, it provides the individuals with realistic information that can be used in evaluating the decision regarding whether or not a marriage should take place.

Future Research Directions

Had time permitted, much useful clinical information could have been generated by having the subject couples retake the MMPI at the end of the marital counseling period, or six months later. It is still unclear whether a sizeable

portion of the Pd scale elevations in this population arise from the marital distress itself, or are more a function of individual personality. The Pd1 (Family Discord) results tend to support the situational distress theory, but retesting couples once they had divorced would help answer this question. This knowledge would be very useful to a clinician who is using the MMPI in a marital counseling setting, when attempting to develop effective therapeutic strategies. There is a dearth of longitudinal information in this area.

When evaluating the relevance of the Harris and Lingoes subscales, it is important to distinguish their clinical utility from their research efficacy. It is still believed that these subscales have a significant role in a clinical setting. Here, the profile interpretation of behavioral correlates of each member of the couple can be assessed with increased accuracy, and the clinician is provided with a more in-depth understanding of the relational dynamics than if the parent Pd scale were used alone. From a research prediction standpoint, the item overlap between Pd4a and Pd4b, and the inclusion of items from other scales on several of the subscales confuse the picture. These characteristics greatly impede precise statistical measurement of the subscales' relationships to marital status outcome and the general descriptive analysis of marital counselees.

From a factor perspective, if a large enough sample

could be obtained, the development of a Pd item scale capable of more precise prediction of divorce might be possible. Such a scale would not contain overlapping items as do the Harris and Lingoes subscales, thus eliminating some of the interpretation ambiguity that arises from the item overlap. In the absence of such an ambitious undertaking, continued work with the Harris and Lingoes subscales seems warranted. This study represents a beginning in the area. It has provided the researcher with enough knowledge to avoid the pitfalls associated with related measures, and it has given the marital counseling clinician some useful tools to assist in the process of facilitating relational understanding and change.

APPENDICES

APPENDIX A

MMPI Scales

Validity Scales:

L

F

K

Clinical Scales:

1. Hypochondriasis
2. Depression
3. Hysteria
4. Psychopathic Deviate
5. Masculinity-Femininity
6. Paranoia
7. Psychasthenia
8. Schizophrenia
9. Hypomania
10. Scale, 0 Social Introversion

Scale Descriptors (all descriptors from Graham, 1977)

Validity Scales

Scale 1-L

A high scale 1-L score is indicative of an individual who (is)

1. Trying to create a favorable impression by not being honest in responding to the items

2. Conventional; socially conforming
3. Unoriginal in thinking; inflexible in problem solving
4. Has poor tolerance for stress and pressure
5. Rigid, moralistic
6. Overevaluates own worth
7. Utilizes repression and denial excessively
8. Manifests little or no insight into own motivations
9. Shows little awareness of consequences to other people of his/her own behavior
10. May be confused

High scale 2-F scores

A T-score in the range of 65-79 is indicative of a person who (is)

1. Has very deviant social, political, or religious convictions
2. May manifest clinically a severe neurotic or psychotic condition
3. If relatively free of serious psychopathology, is described as:
   a) moody
   b) restive
   c) affected
   d) restless
   e) dissatisfied
   f) changeable, unstable
   g) curious

h) complex

i) opinionated

j) opportunistic

High scale 3-K scores

A high scale 3-K score is indicative of an individual who (is)

1. May have tried to fake a good profile
2. May have responded false to most of the MMPI items
3. Trying to give an appearance of adequacy, control, and effectiveness
4. Shy, inhibited
5. Hesitant about becoming emotionally involved with other people
6. Intolerant, unaccepting of unconventional attitudes and beliefs in other people
7. Lacks self-insight and self-understanding
8. Not likely to display overt delinquent behavior
9. If clinical scales also are elevated, may be seriously disturbed psychologically but has little awareness of this

Scale 1 (Hypochondriasis)

A high scale 1 score indicates an individual who (is)

1. Has excessive bodily concern
2. Has somatic symptoms that generally are vague, but if specific are likely to be epigastric in nature

3. Complains of chronic fatigue, pain, and weakness
4. Likely to have been given a neurotic diagnosis (hypochondriacal, neurasthenic, depressive)
5. Lacks manifest anxiety
6. Selfish, self-centered, narcissistic
7. Has pessimistic, defeatist, cynical outlook
8. Dissatisfied, unhappy
9. Makes others miserable
10. Complains
11. Whiny
12. Demanding and critical of others
13. Expresses hostility indirectly
14. Rarely acts out in psychopathic manner
15. Dull, unenthusiastic, unambititious
16. Ineffective in oral expression
17. Has long-standing problems
18. In extra-test behavioral adjustment gives no indication of major incapacity but rather seems to be functioning at a reduced level of efficiency
19. Not very responsive in psychotherapy or counseling because of lack of insight and cynical outlook
20. Critical of therapist
21. Tends to terminate therapy when therapist is perceived as not giving enough attention and support

Scale 2 (Depression)

A high scale 2 score indicates a person who (is)

1. Feels blue, depressed, unhappy, dysphoric
2. Pessimistic about the future
3. Self-depreciatory
4. Harbors guilt feelings
5. Refuses to speak
6. Cries
7. Slow moving, sluggish
8. Depressive diagnosis (usually depressive neurosis or reactive depression)
9. Has somatic complaints
10. Complains of weakness, fatigue, loss of energy
11. Agitated, tense
12. Irritable, high-strung
13. Prone to worry
14. Lacks self-confidence
15. Feels like a failure at school or on the job
17. Introverted, shy, retiring, timid, seclusive, secretive
18. Aloof
19. Maintains psychological distance; avoids interpersonal involvement
20. Cautious, conventional
21. Difficulty in making decisions
22. Nonaggressive
23. Overcontrolled, denies impulses
24. Avoids unpleasantness
25. Makes concessions in order to avoid confrontations

26. Because of discomfort, likely to be motivated for psychotherapy.
27. May terminate treatment when immediate stress subsides

Scale 3 (Hysteria)

A high scale 3 score indicates an individual who (is)

1. Reacts to stress and avoids responsibility through development of physical symptoms
2. Has headaches, chest pains, weakness, tachycardia, anxiety attacks
3. Has symptoms which appear and disappear suddenly
4. Lacks insight concerning causes of symptoms
5. Lacks insight concerning own motives and feelings
6. Prone to worry
7. Lacks anxiety, tension, and depression
8. Rarely reports delusions, hallucinations, and suspiciousness
9. Unlikely to be given a psychotic diagnosis
10. If a psychiatric patient, most frequently diagnosed as hysterical neurosis (conversion hysteria)
11. Psychologically immature, childish, infantile
12. Self-centered, narcissistic, egocentric
13. Expects attention and affection from others
14. Uses indirect and devious means to get attention and affection
15. Does not openly express hostility and resentment
16. Socially involved

17. Friendly, talkative, enthusiastic, alert
18. Has superficial and immature interpersonal relationships
19. Interested in other people because of what he/she can get from them
20. Occasionally acts out in sexual and aggressive manner with little apparent insight into his/her actions
21. Initially enthusiastic about treatment
22. Responds well to direct advice or suggestion
23. Slow to gain insight into causes of own behavior
24. Resistant to psychological interpretations and treatment
25. Worries about failure in school or at work
26. Experiences marital unhappiness
27. Feels unaccepted by his/her social group
28. Has problems with authority figures
29. Has a history of a rejecting father

Scale 4 (Psychopathic Deviate)

A high scale 4 score indicates a person who (is)

1. Has difficulty in incorporating values and standards of society
2. Engages in asocial or antisocial behavior
   a) Lying, cheating, stealing
   b) Sexual acting out
   c) Excessive use of alcohol and/or drugs
3. Rebellious toward authority figures

4. Has stormy family relationships
5. Blames parents for his/her problems
6. Has a history of underachievement in school
7. Has a poor work history
8. Experiences marital problems
9. Impulsive; strives for immediate gratification of impulses
10. Does not plan well
11. Acts without considering consequences of actions
12. Impatient, has limited frustration tolerance
13. Shows poor judgement, takes risks
14. Does not profit from experience
15. Immature, childish
16. Narcissistic, self-centered, selfish, egocentric
17. Ostentatious, exhibitionistic
18. Insensitive to others
19. Interested in others in terms of how they can be used
20. Likeable, creates a good first impression
21. Has shallow, superficial relationships
22. Unable to form warm attachments
23. Extroverted, outgoing
24. Talkative, active, adventurous, energetic, spontaneous
25. Intelligent, self-confident
26. Has a wide range of interests
27. Lacks definite goals
28. Hostile, aggressive
29. Sarcastic, cynical

30. Resentful, rebellious
31. Acts out
32. Antagonistic, refractory
33. Has aggressive outbursts, assaultive behavior
34. Experiences little guilt over behavior
35. May feign guilt and remorse when in trouble
36. Free from disabling anxiety, depression, and psychotic symptoms
37. Likely to receive a personality disorder diagnosis (antisocial personality or passive-aggressive personality)
38. Prone to worry, dissatisfied
39. Has an absence of deep emotional response
40. Feels bored, empty
41. Has a poor prognosis for change in psychotherapy or counseling
42. Tends to blame others for his/her problems
43. Uses intellectualization
44. May agree to treatment to avoid jail or some other unpleasant experience but is likely to terminate prematurely

Scale 5 (Masculinity-Femininity)

A high scale 5 score for males indicates a person who (is)

1. Conflicted about his sexual identity
2. Insecure in masculine role
3. Effeminate

4. Has aesthetic and artistic interests
5. Intelligent, capable; values cognitive pursuits
6. Ambitious, competitive, persevering
7. Clever, clear-thinking, organized, logical
8. Shows good judgment, common sense
9. Curious
10. Creative, imaginative, and individualistic in approach to problems
11. Sociable; sensitive to others
12. Tolerant
13. Capable of expressing warm feelings toward others
14. Passive, dependent, submissive in interpersonal relationships
15. Peace-loving; makes concessions to avoid confrontations
16. Has good self-control; acting out is rare
17. May display homoerotic trends or overt homosexual behavior

A high scale 5 score for females indicates a person who (is)

1. Rejects the traditional female role
2. Has masculine interests in work, sports, hobbies
3. Active, vigorous, assertive
4. Competitive, aggressive, dominating
5. Course, rough, tough
6. Outgoing, uninhibited; self-confident
7. Easy-going, relaxed, balanced
8. Logical, calculated
9. Unemotional

10. Unfriendly
11. If a psychiatric patient, may exhibit hallucinations, delusions, and suspiciousness, but is not likely to act out
12. If a psychiatric patient, likely to be given a psychotic diagnosis

Scale 6 (Paranoia)

A moderate scale 6 elevation (T = 65-75) indicates an individual who (is)

1. Has a paranoid predisposition
2. Sensitive; overly responsive to reactions of others
3. Feels he is getting a raw deal from life
4. Rationalizes; blames others for own difficulties
5. Suspicious, guarded
6. Hostile, resentful, argumentative
7. Moralistic, rigid
8. Overemphasizes rationality
9. Has a poor prognosis for psychotherapy
10. Does not like to talk about emotional problems
11. Has difficulty in establishing rapport with therapist
12. Expresses hostility and resentment toward family members

Scale 7 (Psychasthenia)

A high scale 7 score indicates an individual who (is)

1. Experiences turmoil and discomfort

2. Anxious, tense, agitated
3. Worried, apprehensive
4. High-strung, jumpy
5. Has difficulties in concentrating
6. Introspective, ruminative
7. Obsessive in his/her thinking
8. Has compulsive behaviors
9. Feels insecure and inferior
10. Lacks self-confidence
11. Has self-doubts
12. Rigid, moralistic
13. Has high standards for himself/herself and others
14. Perfectionistic, conscientious
15. Guilty, depressed
16. Neat, orderly, organized, meticulous
17. Persistent
18. Reliable
19. Lacks ingenuity and originality in approach to problems
20. Dull, formal
21. Vacillates, is indecisive
22. Distorts importance of problems; overreacts
23. Shy
24. Does not interact well socially
25. Hard to get to know
26. Worries about popularity and acceptance
27. Sentimental, peaceable, soft-hearted, trustful, sensitive, kind

28. Dependent
29. Individualistic
30. Unemotional
31. Immature
32. Has physical complaints
    a) heart
    b) genitourinary
    c) gastrointestinal
    d) fatigue, exhaustion, insomnia
33. Not responsive to brief psychotherapy
34. Shows some insight into problems
35. Intellectualizes, rationalizes
36. Resistant to interpretations in psychotherapy
37. Expresses hostility toward therapist
38. Remains in psychotherapy longer than most patients
39. Makes slow but steady progress in psychotherapy
40. Discusses in therapy problems including difficulties with authority figures, poor work or study habits, and concern about homosexual impulses.

Scale 8 (Schizophrenia)

A high scale 8 score indicates an individual who (is)

1. May manifest blatantly psychotic behavior
2. Confused, disorganized, disoriented
3. Has unusual thoughts or attitudes; delusions
4. Has hallucinations
5. Shows poor judgment

6. Has a schizoid life style
7. Does not feel a part of social environment
8. Feels isolated, alienated, misunderstood
9. Feels unaccepted by peers
10. Withdrawn, seclusive, secretive, inaccessible
11. Avoids dealing with people and new situations
12. Shy, aloof, uninvolved
13. Experiences generalized anxiety
14. Feels resentful, hostile, aggressive
15. Unable to express feelings
16. Reacts to stress by withdrawing into daydreams and fantasies
17. Has difficulty separating reality and fantasy
18. Plagued by self-doubts
19. Feels inferior, incompetent, dissatisfied
20. Has sexual preoccupation, sex role confusion
21. Nonconforming, unusual, unconventional, eccentric
22. Vague, long-standing physical complaints
23. Stubborn, moody, opinionated
24. Generous, peaceable, sentimental
25. Immature, impulsive
26. Adventurous
27. Sharp witted
28. Conscientious
29. High-strung
30. Has a wide range of interests
31. Creative and imaginative

32. Has abstract, vague goals
33. Lacks basic information required for problem solving
34. Has a poor prognosis for psychotherapy
35. Reluctant to relate in meaningful way to therapist
36. Stays in psychotherapy longer than most patients
37. May eventually come to trust the therapist

Scale 9 (Hypomania)

A high scale 9 score indicates an individual who (is)

1. Manifests excessive, purposeless activity
2. Has accelerated speech
3. Has hallucinations, delusions of grandeur
4. Energetic, talkative
5. Prefers action to thought
6. Has a wide range of interests; involved in many activities
7. Does not utilize energy wisely, does not see projects through to completion
8. Creative, enterprising, ingenious
9. Has little interest in routine or details
10. Easily bored, restless; has low frustration tolerance
11. Has difficulty in inhibiting expression of impulses
12. Has episodes of irritability, hostility, aggressive outbursts
13. Unrealistic, unqualified optimism
14. Has grandiose aspirations
15. Exaggerates self-worth and self-importance

16. Unable to see own limitations
17. Outgoing, sociable, gregarious
18. Likes to be around other people
19. Creates good first impression
20. Friendly
21. Poised, self-confident
22. Has superficial relationships
23. Manipulative, deceptive, unreliable
24. Harbors feelings of dissatisfaction
25. Feels upset, tense, nervous, anxious
26. Agitated, prone to worry
27. May have periodic episodes of depression
28. Has negative feelings toward domineering parents
29. Has difficulties at school or work; exhibits delinquent behaviors
30. If female, may be reflecting stereotyped female role
31. If male, may be concerned about homosexual impulses
32. Has a poor prognosis for therapy
33. Resistant to interpretations in psychotherapy
34. Attends psychotherapy irregularly
35. May terminate psychotherapy prematurely
36. Repeats problems in a stereotyped manner
37. Not likely to become dependent on therapist
38. Becomes hostile and aggressive toward therapist

Scale 10-0 (Social Introversion)

A high scale 0 score indicates an individual who (is)

1. Socially introverted
2. More comfortable alone or with a few close friends
3. Reserved, timid, shy, retiring
4. Uncomfortable around members of the opposite sex
5. Lacks self-confidence, is self-effacing
6. Hard to get to know
7. Sensitive to what others think
8. Troubled by lack of involvement with other people
9. Overcontrolled; not likely to display feelings openly
10. Submissive, compliant
11. Overly accepting of authority
12. Serious, has slow personal tempo
13. Reliable, dependable
14. Cautious, conventional, unoriginal in approach to problems
15. Rigid and inflexible in attitudes and opinions
16. Has difficulty making even minor decisions
17. Enjoys work; gains pleasure from productive personal achievement
18. Tends to worry; is irritable, anxious
19. Moody
20. Experiences guilty feelings, episodes of depression

APPENDIX B

Harris and Lingoes Pd (Psychopathic Deviate) Subscales for the MMPI
* = Items that are not on the Pd scale

Pd 1 Familial Discord

True

20- At times I have very much wanted to leave home.

21- My family does not like the work I have chosen (or the work I intend to choose for my life work).

212- My people treat me more like a child than a grown-up.

216- There is very little love and companionship in my family as compared to other homes.

245- My parents and family find more fault with me than they should.

False

96- I have very few quarrels with members of my family.

137- I believe that my home life is as pleasant as that of most people I know.

235- I have been quite independent and free from family rule.

237- My relatives are nearly all in sympathy with me.

527* The members of my family and my close relatives get along quite well.

Pd2 Authority Problems

True

38- During one period when I was a youngster I engaged in petty thievery.

59- I have often had to take orders from someone who did not know as much as I did.

118- In school I was sometimes sent to the principal for cutting up.

520* I strongly defend my own opinions as a rule.

False

37- I have never been in trouble because of my sex behavior.

82- I am easily downed in an argument.

141- My conduct is largely controlled by the customs of those about me.

173- I liked school.

289- I am always disgusted with the law when a criminal is freed through the arguments of a smart lawyer.

294- I have never been in trouble with the law.

429* I like to attend lectures on serious subjects.

Pd3 Social Imperturbability

True

64- I sometimes keep on at a thing until others lose their patience with me.

479* I do not mind meeting strangers.

520* I strongly defend my own opinions as a rule.

521* In a group of people I would not be embarrassed to be called upon to start a discussion or give an opinion about something I know well.

False

82- I am easily downed in an argument.

141- My conduct is largely controlled by the customs of those about me.

171- It makes me uncomfortable to put on a stunt at a party even when others are doing the same sort of things.

180- I find it hard to make talk when I meet new people.

201- I wish I were not so shy.

267- When in a group of people I have trouble thinking of the right things to talk about.

304* In school I found it very hard to talk before the class.

352* I have been afraid of things or people that I know could not hurt me.

Pd4a Social Alienation

True

16- I am sure I get a raw deal from life.

24- No one seems to understand me.

35- If people had not had it in for me I would have been much more successful.

64- I sometimes keep on at a thing until others lose their patience with me.

67- I wish I could be as happy as others seem to be.

94- I do many things which I regret afterwards (I regret things more or more often than others seem to.

110- Someone has it in for me.

127- I know who is responsible for most of my troubles.

146- I have the wanderlust and am never happy unless I am roaming or traveling about.

239- I have been disappointed in love.

244- My way of doing things is apt to be misunderstood by others.

284- I am sure I am being talked about.

305* Even when I am with people I feel lonely much of the time.

368* I have sometimes stayed away from another person because I feared doing or saying something that I might regret afterwards.

520* I strongly defend my own opinions as a rule.

False

20- My sex life is satisfactory.

141- My conduct is largely controlled by the customs of those about me.

170- What others think of me does not bother me.

Pd4b Self-Alienation

True

32- I find it hard to keep my mind on a task or job.

33- I have had very peculiar and strange experiences.

61- I have not lived the right kind of life.

67- I wish I could be as happy as others seem to be.

76- Most of the time I feel blue.

84- These days I find it hard not to give up hope of amounting to something.

94- I do many things which I regret afterwards (I regret things more or more often than others seem to).

102- My hardest battles are with myself.

106- Much of the time I feel as if I have done something wrong or evil.

127- I know who is responsible for most of my troubles.

146- I have the wanderlust and am never happy unless I am roaming or traveling about.

215- I have used alcohol excessively.

368* I have sometimes stayed away from another person because I feared doing or saying something what I might regret afterwards.

False

08- My daily life is full of things that keep me interested.

107- I am happy most of the time.

APPENDIX C

Informing and Participation Request Form A

My name is Tom Woodward and I am a doctoral student in Counseling Psychology at Michigan State University. I am currently conducting a research project that is being sponsored by the university.

For the past fifteen years, I have been providing counseling services to married couples in the Lansing area. A significant part of my responsibility to the couples with whom I work is to assist them in understanding each other, as well as understanding why they are experiencing difficulties in their marriage. There are many ways for a counselor to approach this task, including the use of questionnaires and personality inventories. The purpose of this research is to investigate the usefulness of a personality inventory called the Minnesota Multiphasic Personality Inventory (MMPI), in marriage counseling.

The MMPI should take approximately one hour of your time. Once you have completed it and returned the answer sheet to your counselor, it should take about one week for your counselor to get the results back. When your counselor discusses the results with you, he or she will provide you with information regarding the personality similarities and

differences between you and your spouse. In addition, your counselor will discuss some of the areas that are most likely to cause friction in your marital relationship.

I realize that receiving information about yourself and your marital relationship may be uncomfortable, at times, for you. If you experience feelings of this nature, it would be helpful if you would discuss them with your counselor. Remember that the MMPI is an instrument that helps you and your counselor better understand your marital relationship, but it is not going to answer all your questions about yourself or your marriage.

An important part of assessing the usefulness of the MMPI is to contact couples at a later date to see how they are doing. With your permission, your counselor will contact you by telephone approximately six months after you complete your marital counseling.

This research is not part of the usual marital counseling provided by your counselor. If, at any time, you choose to withdraw from this study, you are free to do so.

Your MMPI results will be used in this research without your name attached to them, and will be combined with the results of approximately 50 other couples. All MMPI results will be held in strict confidence and you will remain anonymous.

At the end of my study, if you are interested, I would

be happy to provide you with the findings of this research.

I sincerely thank you for your cooperation and appreciate your participation and input.

APPENDIX D

Informing and Participation Request Form B

My name is Tom Woodward and I am a doctoral student in Counseling Psychology at Michigan State University. I am currently conducting a research project that is being sponsored by the university.

For the past fifteen years, I have been providing counseling services to married couples in the Lansing area. A significant part of my responsibility to the couples with whom I work is to assist them in understanding each other, as well as understanding why they are experiencing difficulties in their marriage. There are many ways for a counselor to approach this task, including the use of questionnaires and personality inventories. The purpose of this research is to investigate the usefulness of a personality inventory called the Minnesota Multiphasic Personality Inventory (MMPI), in marriage counseling.

When you and your spouse first came to Delta-Waverly Psychology and Counseling Associates for marital counseling, you both were given the MMPI as part of the counseling process. The results of the MMPI were discussed with you both for the purpose of providing you with information regarding your personality similarities and differences. In addition, you were given information regarding the most likely areas of friction in your marriage, given your

personality styles.

An important part of assessing the usefulness of the MMPI is to contact couples at a later date to see how they are doing. As you know, having received a telephone call from your previous marital counselor, information regarding your MMPI results and your current marital status is important to this study.

Your MMPI results will be used in this research without your name attached to them, and will be combined with the results of approximately 50 other couples. All MMPI results will be held in strict confidence and you will remain anonymous.

At the end of my study, if you are interested, I would be happy to provide you with the findings of this research.

I sincerely thank you for your cooperation and appreciate your participation and input.

APPENDIX E

MICHIGAN STATE UNIVERSITY

Department of Psychology

DEPARTMENTAL RESEARCH CONSENT FORM

1. I have freely consented to take part in a scientific study being conducted by: Thomas Woodward, M.A.
   under the supervision of: William C. Hinds, Ed.D.
   Academic Title: Professor of Counseling Psychology

2. The study has been explained to me and I understand the explanation that has been given and what my participation will involve.

3. I am aware that responding to the instruments in this research might lead to negative and unpleasant emotions.

4. I understand that I am free to discontinue my participation in the study at any time without penalty.

5. I understand that the results of the study will be treated in strict confidence and that I will remain anonymous. Within these restrictions, results of the study will be made available to me at my request.

6. I understand that my participation in the study does not guarantee any beneficial results to me.

7. I understand that involvement in this study may not be part of the usual marital counseling procedures conducted by the agency at which I am receiving (or have received) marriage counseling services.

8. I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

Signed:_____

Date: _____

APPENDIX F

Demographic Data Sheet

Husband	Wife
Age _____	Age _____
Length of Marriage _____	Length of Marriage _____
Number of Children _____	Number of Children _____
Previously Married? (please circle)	Previously Married? (please circle)
1. Yes	1. Yes
2. No	2. No
Educational Level (please circle)	Educational Level (please circle)
1. Less than high school	1. Less than high school
2. High school graduate	2. High school graduate
3. Some college	3. Some college
4. College graduate	4. College graduate
5. Graduate degree	5. Graduate degree
Previous Marital Counseling? (please circle)	Previous Marital Counseling? (please circle)
1. Yes	1. Yes
2. No	2. No

APPENDIX G

EDUCATIONAL LEVELS

Subject Group	Less Than Hi-School	Hi-School Graduate	Some College	College Grad	Grad Degree	n
CM	0%	28%	39%	31%	2%	64
DV	2%	33%	35%	20%	10%	40

CM=Continuously Married
DV=Divorce

APPENDIX H

AGES OF SUBJECTS

Group	Mean	Std. Dev.	Minimum	Maximum	n
CM Husbands	35.3	9.2	23	59	32
DV Husbands	33.7	6.6	21	45	20
CM Wives	33.4	8.6	20	58	32
DV Wives	32.3	6.1	19	39	20

CM=Continuously Married
DV=Divorce

APPENDIX I

TIME SPENT IN MARRIAGE COUNSELING IN MONTHS

Group	Mean	Std. Dev.	Minimum	Maximum	n
CM Couples	4.2	2.2	1	10	20
DV Couples	5.6	3.7	2	12	32

CM=Continuously Married
DV=Divorce

APPENDIX J

SOURCE OF PAYMENT FOR COUNSELING SERVICES

Group	Self Pay	Insurance	n
CM Couples	59.4%	40.6%	32
DV Couples	60.0%	40.0%	20

CM=Continuously Married
DV=Divorce

APPENDIX K

PREVIOUS MARITAL COUNSELING

Group	Yes	No	n
CM Couples	17.2%	82.8%	32
DV Couples	32.5%	67.5%	20

CM=Continuously Married
DV=Divorce

APPENDIX L

PREVIOUS MARRIAGE

Group	Yes	No	n
CM Couples	26.6%	73.4%	32
DV Couples	37.5%	62.5%	20

CM=Continuously Married
DV=Divorce

APPENDIX M

CHILDREN

Subject Group	No Children	One Child or More	n
CM Couples	40.6%	59.4%	32
DV Couples	55.0%	45.0%	20

CM=Continuously Married
DV=Divorce

APPENDIX N

LENGTH OF MARRIAGE

Group	Mean	Std. Dev.	Minimum	Maximum	n
CM Couples	7.9	8.5	1	33	32
DV Couples	7.0	5.7	1	18	20

CM=Continuously Married
DV=Divorce

APPENDIX O

MMPI MAIN SCALE AND PD SUBSCALE SCORES HUSBANDS

MMPI SCALE	CM Husbands n=32		DV Husbands n=20	
	$\bar{x}$	sd.	$\bar{x}$	sd.
L	51.3	9.2	48.8	8.7
F	52.4	8.7	58.0	9.0
K	51.3	9.4	50.7	8.5
Hs	49.9	11.3	53.8	6.8
D	57.0	8.7	60.5	10.0
Hy	53.0	11.4	56.6	8.7
Pd	57.2	11.1	63.8	10.6
Mf	54.0	8.8	55.7	10.0
Pa	52.6	11.1	55.0	9.6
Pt	54.3	10.4	58.8	11.2
Sc	53.5	11.7	59.4	10.7
Ma	48.9	14.9	55.7	8.8
Si	51.3	11.2	52.3	7.3
Pd1	52.7	10.1	61.6	13.4
Pd2	49.8	10.9	53.2	9.9
Pd3	49.8	10.9	55.1	8.8
Pd4a	54.2	8.8	57.7	11.0
Pd4b	55.2	9.6	58.8	9.0
Pd4ab	55.3	9.4	58.8	9.6

CM=Continuously Married
DV=Divorce

APPENDIX P

MMPI MAIN SCALE AND PD SUBSCALE SCORES WIVES

MMPI SCALE	CM Wives n=32		DV Wives n=20	
	$\bar{x}$	sd.	$\bar{x}$	sd.
L	54.4	6.9	54.6	9.8
F	53.4	8.7	53.2	9.5
K	49.1	7.8	53.5	8.8
Hs	52.8	9.1	55.2	9.2
D	57.1	9.3	59.8	10.5
Hy	56.4	12.0	61.2	13.3
Pd	56.5	9.4	62.2	9.5
Mf	51.9	9.5	51.3	9.3
Pa	56.1	9.4	53.6	9.2
Pt	55.0	8.8	57.4	7.2
Sc	53.8	10.2	54.7	8.0
Ma	52.0	8.8	51.5	10.1
Si	51.2	8.1	49.4	10.1
Pd1	54.6	10.0	58.3	10.8
Pd2	53.0	10.4	51.4	11.3
Pd3	53.3	8.6	53.9	8.1
Pd4a	54.5	8.3	54.6	9.7
Pd4b	53.1	7.7	55.2	8.9
Pd4ab	54.2	7.7	55.1	8.9

CM=Continuously Married
DV=Divorce

APPENDIX Q

INTERCORRELATIONS OF HARRIS AND LINGOES SUBSCALE SCORES HUSBANDS

	Pd	Pd1	Pd2	Pd3	Pd4a
Pd1	.68				
Pd2	.53	.33			
Pd3	.37	.57	.38		
Pd4a	.33	.19	.40	.15	
Pd4b	.47	.27	.21	-.01	.64

N=52

APPENDIX R

INTERCORRELATIONS OF HARRIS AND LINGOES SUBSCALE SCORES WIVES

	Pd	Pd1	Pd2	Pd3	Pd4a
Pd1	.54				
Pd2	.35	.25			
Pd3	.23	-.02	.25		
Pd4a	.37	.34	.40	-.01	
Pd4b	.43	.31	.07	-.25	.66

N=52

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