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The Use of MMPI Lie Scale Scores in the Selection of Law Enforcement Personnel

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THE USE OF MMPI LIE SCALE SCORES IN THE
SELECTION OF LAW ENFORCEMENT PERSONNEL

Van-Lear Philip Eckert, B.A.

An Abstract Presented to the Faculty of the Graduate
School of Lindenwood College in Partial
Fulfillment of the Requirements for the
Degree of Master of Art

1996



Abstract

The present study was designed to determine if scores of seven or more on the Minnesota Multiphasic Personality Inventory (MMPI) Lie-scale (L) resulted in a law enforcement applicant not being hired as a police officer. The subjects in this study were 66 applicants to police departments in the St. Louis, MO area. All of the subjects completed the MMPI as part of a preemployment psychological evaluation. The efficacy of utilizing the MMPI in law enforcement screening procedures is discussed. The legal responsibilities of police departments in relation to preemployment psychological assessment are also analyzed. Two independent variables, employment status and Lie scale score, were measured and a 2 x 2 chi-square analysis was completed. The results were not significant and indicated that whether an individual is hired as a law enforcement officer is independent of their Lie scale score. Recommendations for future research are discussed.

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1996

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DEDICATION

This paper is dedicated to my parents, Philip and Sara Eckert, for all of their love and support.

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Chapter I

Introduction

The critical role of law enforcement personnel has become increasingly complicated in recent years as a result of the many psychological stressors that impact individual officers. Because it is difficult to determine how an officer will respond in a stressful situation, it is important that police departments identify officers who may represent a risk to the public, to fellow officers, or to themselves prior to employment. A myriad of research studies have shown that the most effective way to identify these individuals is through preemployment psychological testing (Meier, Farmer, & Maxwell, 1987; Hiatt & Hargrave, 1988; Grossman, Haywood, Ostrov, Wasyliv, & Cavanaugh, 1990). By implementing a comprehensive preemployment screening process, police departments are able to screen out those candidates who are not psychologically suited for law enforcement. The Minnesota Multiphasic Personality Inventory (MMPI) has become the most widely used and accepted instrument in the preemployment psychological screening of law enforcement personnel (Hiatt & Hargrave, 1988).

As a result, it has been subjected to numerous studies designed to determine its efficacy in police officer selection. The majority of these results have concluded that the MMPI is the best measurement of psychopathology in law enforcement applicants and have recommended its continued use in the complicated process of selecting healthy and effective police officers (Meier et al., 1987; Bartol, 1991; Dunaway, 1980; Grossman et al., 1990).

Hypothesis

The present study was designed to determine if scores of seven or more on the MMPI Lie scale resulted in a law enforcement applicant not being hired as a police officer. The null hypothesis states that whether or not a law enforcement applicant is hired as a police officer is independent of their Lie scale score.

Research has shown that many police officer applicants attempt to fake-good on the MMPI (Bartol, 1990; Ganellen, 1994; Graham, Watts, & Timbrook, 1991; Grossman et al., 1990). This appears to be associated with attempts to minimize unfavorable personality characteristics such as poor stress tolerance, defensiveness, and immaturity, all

of which are incongruent with success in law enforcement. Therefore, if the MMPI Lie scale is a good measure of "faking-good", when a police applicants Lie scale score reaches seven or greater, they are no longer considered employable.

Chapter II

Review of Literature

As early as 1917, attempts were being made to measure the intelligence level of police officers (Polland, 1978). Since 1950, nationwide surveys of police organizations have revealed an increased reliance upon the use of preemployment psychological screening in decisions about police applicants (Meier et al., 1987). These results led to a declaration by the President's Commission on Law Enforcement and the Administration of Justice in 1967, which stated that "psychological tests.....to determine emotional stability should be conducted in all departments" (p. 338). Further, the national advisory commission offered the following recommendation:

Standard 13.5.2 Every police agency, by 1975, should retain the services of a qualified psychiatrist or psychologist to conduct psychological testing of police applicants to screen out those who have mental disorders or are emotionally unfit for police work (p. 337).

As a result, International Association of Chiefs of Police President John J. Norton noted in 1986 that "psychological services are now recognized as a vital component for a well-run and responsible department" (p. 8).

Shapiro (1981) noted that individuals who may be vulnerable to the demands of police work should be detected as early as possible in the evaluative process and that the risk to departments is too great to accept officers who are temperamentally and intellectually unsuited. The importance of detecting the suitability of officers was also noted by Meier et al. (1987) who stated that "removing the unfit officer from consideration early in the process can reflect significant savings in training and other support, not to mention reducing the possible liability of retaining such an individual" (p. 211). More importantly, Cortina, Doherty, Schmitt, Kaufman, and Smith (1992) felt that psychological testing can identify individuals who are likely to misuse force or weapons on the job, thus reducing the threat to the general population.

The preemployment psychological screening of police candidates is designed to detect emotional instability of law enforcement applicants and is separate from the use of testing as a means of predicting police performance. According to Meier et al. (1987) the "selecting-in of candidates has as its goal the choosing of individuals who possess certain positive traits believed to be associated with effective performance in law enforcement" (p. 211). This process is differentiated from screening-out, which attempts to eliminate individuals "who demonstrate significant signs of psychopathology, emotional instability, or who lack the basic ability or mental acuity to perform the job in a safe and responsible manner" (Meier et al., 1987, p. 211). Meier et al. (1987) currently feel that "there is no convincing evidence for the use of psychological instruments to predict long-term successful performance in the field of law enforcement" (p. 213). Therefore, they concluded that "the preferred choice is the use of psychological instruments to identify current conditions or problems that impair the performance of police" (p. 213).

The most common test used for this purpose has been the Minnesota Multiphasic Personality Inventory (MMPI) (Cortina et al., 1992; Grossman et al., 1990; Hiatt & Hargrave, 1988).

Description of the MMPI

The MMPI was developed in the late 1930's at the University of Minnesota's School of Medicine by psychologist Starke Hathaway and psychiatrist Charnley McKinley. Dahlstrom, Welsh, and Dahlstrom (1972) described the MMPI "as a standardized inventory designed to elicit a wide range of self-descriptions from each test subject and to provide in quantitative form a set of evaluations of his personality status and emotional adjustment" (p. 3). Bartol (1991) stated that the MMPI "was specifically designed and empirically constructed to differentiate 'abnormal groups' from the 'normal population'" (p. 131).

Since its development, the MMPI has been the subject of not fewer than 9000 published scientific research studies and has become the most widely used psychometric instrument in the world (Parker, Hanson, & Hunsley, 1988). Research results have demonstrated that the MMPI provides a firm

scientific basis for differential diagnosis and that it remains matchless as the objective instrument for the assessment of psychopathology (Graham, 1987).

The MMPI consists of 566 statements which subjects endorse as either True or False in relation to themselves. It is essentially a self administering, paper and pencil test, written on a fourth grade reading level (Pallone, 1992). Designed for use with individuals aged 16 to adult, the test can be administered either individually or to groups (Dahlstrom et al., 1972). The MMPI requires an hour to an hour and a half to complete and is easily scored either by hand or by computer. Standard scoring procedures generate a test profile composed of four validity indicators and ten clinical scales (See table 1). Raw scores are obtained for both the validity indicators and the clinical scales and are recorded on a profile sheet which contains the T score conversions for all raw score values (Dahlstrom et al., 1972). Pallone (1992) noted that scores within the range of $T = 40$ through $T = 60$ are regarded as normal. A score equivalent to the 97th percentile (represented by a value of 70 on the normalized "T" distribution) constitutes the customary threshold level for the assessment of a serious mental health disorder (Pallone, 1992).

Table 1

Basic Minnesota Multiphasic Personality Inventory Scales

Scale Name	Abbreviation	Code Number	Number of Items
<i>Validity Scales</i>			
Cannot Say Score	?		
Lie	L		15
Infrequency	F		64
Correction	K		30
<i>Clinical Scales</i>			
Hypochondriasis	Hs	1	33
Depression	D	2	60
Conversion hysteria	Hy	3	60
Psychopathic deviate	Pd	4	50
Masculinity-femininity	Mf	5	60
Paranoia	Pa	6	40
Psychasthenia	Pt	7	48
Schizophrenia	Sc	8	78
Hypomania	Ma	9	46
Social introversion	Si	0	70

Note: From An MMPI Handbook Volume 1 (p. 4) by W. G. Dahlstrom, G. S. Welsh, & L. E. Dahlstrom, 1972, Minneapolis: University of Minnesota Press. Copyright 1972 by the University of Minnesota.

Research Supporting the Use of the MMPI in
Law Enforcement Applicant Selection

As a result of extensive research, a large body of literature has developed that details the efficacy of using the MMPI in police officer selection (Hiatt & Hargrave, 1988; Bartol, 1991; Cortina et al., 1992; Borum & Stock, 1993; Hargrave & Hiatt, 1987; Hargrave, 1985). These studies have reported significant relationships between MMPI scales and law enforcement variables such as automobile accidents, job tenure, academy performance and attrition, supervisor's ratings, promotions, and job problems (Hargrave & Hiatt, 1987). However, research on the MMPI has not demonstrated its ability to predict future police performance. Therefore, preemployment screening of police officers relies upon assessing an individual's emotional stability at the present time and analyzing the scores in conjunction with information from clinical interviews and other instruments.

The validity of the MMPI in measuring current emotional stability has resulted in widespread acceptance and usage of the test in preemployment evaluations of law enforcement personnel. Shapiro (1981) stated that "of the police agencies

practicing some form of psychological testing procedure, at least half use the MMPI as either a preliminary or the sole instrument in this process" (p. 314). The MMPI appears to contribute to the process of identifying behavioral components of psychopathology that contribute to an individual's inability to perform responsibly as a law enforcement officer. These results were supported by Hiatt and Hargrave (1988) who found that "screening decisions that included the use of the MMPI differentiated officers with satisfactory job performance from those whose performance was unsatisfactory" (p. 723).

These studies have documented the efficacy of the MMPI in screening out applicants that are not psychologically suited to police employment. However, the overall success of preemployment psychological screening is also contingent upon the clinical judgment of the psychometrician. According to Flanagan (1986) preemployment screening of law enforcement personnel is more complicated than the usual screening performed by clinicians. This contention is mainly the result of the dangerous errors associated with hiring an armed police officer who might pose a threat to the public, himself, or other officers (Flanagan, 1986).

Even when employment decisions are based upon a comprehensive evaluation of the individual, clinicians cannot predict future performance. As a result, Flanagan (1986) stated that clinicians "must strive to avoid Type I errors - passing a candidate that should not be passed" (p. 377). She added that "Type II errors - not passing a candidate that should be passed - also should be avoided, but are not as dangerous, obviously, as Type I errors" (p. 377). The psychometrician must understand police work, its physical dangers, and its psychological stresses and should always analyze scores on tests such as the MMPI in conjunction with information from other instruments prior to specifying an opinion as to the degree of risk involved in hiring an individual.

Legal Issues Related to Preemployment

Psychological Screening

As a result of widespread acceptance and usage, psychometricians and police departments have been subjected to a variety of legal challenges regarding the use of preemployment psychological screening of law enforcement personnel.

Flanagan (1986) cites several court cases in which the psychological testing of police candidates was upheld.

In McCabe v. Hoberman (1969) an officer who was not hired because of a "personality disorder" obtained the opinions of two experts who maintained that he was qualified for police work. The court opined that as long as the department acted responsibly in determining which opinion to accept, it was not for the courts to decide. In Peluso v. Gourdine (1982), the court ruled that a department's decision not to hire an individual diagnosed with mixed personality disorder, in the opinion of the departments experts, does not constitute illegal discrimination against the handicapped. Finally, in United States v. Georgia Power Company (1973), it was determined that Title VII of the Civil Rights Act of 1964 specifically provides that:

It is not unlawful employment practice for an employer to give and act upon the results of any professionally developed ability or psychological test, provided that such test, its administration, and action based upon the results is not designed, intended, or used to discriminate because of race, color, religion, sex, or national origin (Flanagan, 1986, p.378).

The utility of the MMPI in preemployment decisions was also challenged in court by a New Rochelle, New York exprobationary officer named Bartucca. He was fired in 1983 as the result of a poor score on the MMPI. The New York Supreme Court ruled that the department did not have to rehire him. Supreme Court Justice Walsh stated:

As long as all who take the test are treated fairly and uniformly, there can be no judicial interference concerning the efficiency of the test employed. The fact that the MMPI test is widely used to test the psychological competence of probationary police officers affords a reasonable basis for reliance on that test to determine Bartucca's fitness as such an employee (Flanagan, 1986, p. 376).

The courts have also ruled in cases in which police departments were found liable as a result of not utilizing proper preemployment psychological screening. Meier et al. (1987) noted that recent court decisions have held that a "police organization can be held negligently responsible for its employees who have not been adequately prepared for their jobs" (p. 213). They stated that instances of negligence were demonstrated in two separate court cases.

In Hild v. Bruner (1980), Federal District Judge Whipple commented that "the court is of the opinion that the jury reasonably could have inferred

that Newton's (town) failure to conduct some kind of psychological tests of its police officers, at least after 1975 (when according to expert testimony, such testing became widely accepted), constituted gross negligence" (Meier et al., 1987, p. 214). Meier et al. (1987) also cited the case of Bonsignore v. City of New York (1981), in which the city of New York was found liable for a shooting by a mentally disturbed police officer. The court stated that the jury properly decided that the city was negligent in failing to adopt adequate mechanisms for detecting officers who are mentally or emotionally unfit to carry guns. According to Meier et al. (1987) the case summary noted that the "officer had not been required to take a psychological examination either at the time of employment or any time during his career" (p. 214).

These cases illustrate that law enforcement agencies are expected to take precautionary measures to prevent negligent appointment and retention. This is supported by Borum and Stock (1993) who state that "the courts have determined that police agencies have the right to conduct psychological evaluations and may be held liable for employees who were not properly evaluated" (p. 157). According to Dunaway (1980) preemployment psychological testing

"appears to be critical in terms of negating liability where charges of negligent admission might arise as a result of misconduct of an officer following employment" (p. 42). As a result of these decisions, employers must demonstrate that they instituted proper precautions to avoid hiring and retaining persons who are psychologically unsuited for law enforcement (Flanagan, 1986). Failure to take these precautionary steps to identify officers who may not be fit can be sufficient for a finding of negligence.

Description of Police Officer Applicants

Although extensive research has focused upon the importance of screening out law enforcement candidates who are not suited for police work, many studies have found that the majority of law enforcement officers are emotionally stable and well-adjusted. Carpenter and Raza (1987) concluded that MMPI profiles of police represent a psychologically healthy group and that police officer MMPI profiles often differ from the normal population. Research concluded that police applicants are "somewhat more psychologically

healthy than the normative population and more assertive and interested in making and maintaining social contacts" (Carpenter & Raza, 1987).

Matarazzo, Allen, Saslow, and Wiens (1964) also found that the average police officer is more intelligent, dependable, straightforward, and conscientious relative to others.

These results have lead some researchers to describe a "police personality" (Hargrave, Hiatt, & Gaffney, 1986). According to Hargrave et al. (1986) police officers are psychologically defended, energetic, competitive, dominant, independent, achievement oriented, spontaneous, flexible, and socially ascendent. Police officers also demonstrate a traditional work ethic and show potential for leadership. However, these results were tempered by Hargrave, Hiatt, and Gaffney (1988) who noted that law enforcement employees and applicants appear well adjusted on MMPI profiles "due primarily to the fact that psychological screening occurs relatively late in a selection process that includes various other disqualifying procedures" (p. 268). The fact that the majority of law enforcement candidates are screened out prior to undergoing any psychological testing appears to be responsible for the well adjusted MMPI profiles of

applicants.

As noted by Hargrave et al. (1988) psychological screening is the last aspect of the law enforcement application process. The employment process, as described by Shapiro (1981), typically begins with a written examination, which usually eliminates 70% of the candidates. This is followed by a physical examination, agility testing, clinical interview, background check, and finally, a psychological evaluation of the finalists. Research has revealed that the MMPI is almost always included in the psychological examination of police officer applicants because of its ability to detect personality characteristics that may be incongruent with law enforcement employment. Therefore, a variety of research has focused upon determining how to detect those applicants who are unsuited for employment as law enforcement officers through the use of the MMPI.

Grossman et al. (1990) noted several response patterns on the MMPI in police officers undergoing psychological evaluation. They stated that a moderate level of minimization should be expected and that candidates are prone to exaggerate or minimize emotional difficulties or characterological problems, both of which constitute "faking-good".

Carpenter and Raza (1987) noted that police applicants have a greater tendency to present a good impression of themselves than the normative population and that this difference is the result of having taken the MMPI as part of an employment selection process. The desire to "fake-good" on the MMPI was also supported by Ganellen (1994) who stated that law enforcement candidates have considerable incentive to attempt to create a favorable impression and may deny psychological difficulties during the evaluation as their career and livelihood are at stake.

One instance in which subjects might be expected to attempt to create a positive impression by minimizing psychological difficulties occurs when subjects who are motivated to work undergo preemployment psychological testing (Ganellen 1994). Costello, Schneider, and Schoenfeld (1993) stated that the typical police officer applicant attempts to "fake-good" by "minimizing the endorsement of items suggesting psychopathology and maximizing the self-reported ability to cope with ordinary stresses and strains" (p. 179). According to Pallone (1992) the MMPI is without equal in the detection of malingering, factitiousness, and even of

"faking-good" (i.e., denial of symptomology, or responding in what are perceived to be socially desirable ways).

The "faking-good" response set is contradicted by "faking-bad", which Graham et al. (1991) describe as claiming symptoms and problems that do not exist. However, Wetzler and Marlowe (1990) stated that "the 'faking-bad' response set is considered to be a relatively rare phenomenon" (p. 1117). Because honesty and integrity are considered integral aspects of being a police officer, many departments have begun to rely on the validity scales of the MMPI to recognize "faking-good" profiles (Costello et al., 1993).

MMPI Validity

Scales

The MMPI consists of four validity scales; Cannot Say Score (?), Lie (L), Infrequency (F), and Correction (K). Dahlstrom et al. (1972) provided the following descriptions of each scale. The Cannot Say Score (?) is simply the number of items left blank on the answer sheet. The Lie scale (L) is a fifteen item scale designed to identify deliberate attempts to evade answering the

test honestly. All of the L - scale items are scored significantly if answered false (p. 109). The Frequency scale (F) was designed to detect unusual responding or atypical ways of answering the test items. Item content ranges from bizarre sensations, strange thoughts, and peculiar experiences to feelings of alienation and isolation from family members, from others, or from social institutions, or to atypical attitudes towards laws, religion, or authority and to a number of unlikely or contradictory beliefs, expectations, and self-descriptions (p. 114). The Correction scale (K) was designed to increase the sensitivity of the validity indices on the MMPI, to identify the impact of subtle score-enhancing or score-diminishing factors, and to provide a means of statistically correcting the values of the clinical scales themselves to offset the effects of these factors on the clinical profile (p. 120). Although all of these scales are utilized in the overall evaluation of MMPI profiles of law enforcement candidates, research has shown that the Lie scale (L) is not only effective in determining "faking-good" profiles, but also correlates well with a variety of personality characteristics associated with success in law enforcement.

Description of the
MMPI Lie Scale

In general, subjects attempting to "fake-good" on the MMPI produce an elevation on the L - scale (Ganellen, 1994). This was supported in research by Grossman et al. (1990) who determined that minimization attempts of police candidates during preemployment screening were evidenced by higher L - scale scores. In addition, Hiatt and Hargrave (1988) noted that research done on employed police personnel revealed that officers who had been involved in serious disciplinary actions had significantly higher L - scale scores than nonproblem officers. They also noted that higher supervisors' ratings were found to be related to lower L - scale scores. They stated that:

Taken together, these results may be interpreted as reflecting a relatively greater self-presentation of conventionality and social desirability by the nonproblem officers. It would thus appear that relatively subtle differences in self-presentation on the validity scales are associated with the likelihood of experiencing job problems. Problem officers appear more willing to endorse deviant beliefs, attitudes, or unusual experiences, whereas nonproblem officers present themselves as free of negative content, consistent with moderate scores on scale L (Hiatt & Hargrave, 1988, p. 729).

As a result, Hiatt and Hargrave (1988) concluded that applicants who present themselves as conventional and free of psychopathology on the MMPI tend to experience fewer serious job problems as officers when compared to applicants who show moderate levels of maladjustment as measured by both the clinical and validity scales of the MMPI. Overall, these results indicate that any degree of psychopathology, as reflected by MMPI profile elevations, increases the likelihood of job performance problems.

The utility of the L - scale in detecting job performance problems during preemployment psychological screening of police applicants has been documented by a variety of researchers. Burish and Houston (1976) reported that the L - scale does possess construct validity as a measure of defensiveness. They noted that the L - scale is related to how people cope with stress and that the defensive maneuvers employed by high L - scale scorers are not successful in stressful situations. Fjordbak (1985) reported that high L - scale scores are potentially indicative of neurotic characteristics, the excessive use of denial and repression, and poor tolerance for stress. Bartol (1991) noted that police administrators continually

report that high L - scale scoring police officers demonstrate poor judgment in the field, particularly under high levels of stress.

Borum and Stock (1993) also reported that the L - scale is related to minimization/defensiveness. In a study attempting to detect deception among law enforcement applicants, they found that several applicants had intentionally lied or falsified sworn and notarized documents in order to cover up a potential difficulty. Borum and Stock (1993) stated that this type of behavior, regardless of an inherent bias toward presenting favorably during preemployment screening, "goes beyond the acceptable scope of positive impression management and calls into question the integrity of an applicant" (p. 164). Similar results were reported by Bartol (1991) who found that individuals with high L - scale scores:

Were often described as 'immature' and 'inappropriate' in the field and were frequently reprimanded for such behaviors as excessive or inappropriate use of authority in dealing with the public, frequent accidents with police vehicles, inappropriate use of firearms and other equipment, and little commitment to police work or the department as demonstrated by frequent tardiness, not submitting written work on time, absenteeism, and inadequate care of the uniform.

In addition, supervisor's often questioned whether they could be trusted in times of crisis or under highly stressful conditions (p. 129).

However, the L - scale is not a "lie-detector". While it does measure defensiveness and attempts at minimization, the L - scale "was designed to detect rather unsophisticated and naive attempts on the part of the individuals to present themselves in an overly favorable light" (Graham, 1987, p. 6). The L - scale provides information about the way in which the respondents are trying to present themselves and high L - scale scores reveal when an applicant is distorting self-report information in an attempt to make himself appear more favorable. Therefore, the use of the L - scale as a measure of defensiveness may assist in raising the index of suspicion for detecting deceptive characteristics which may be problematic in sworn law enforcement officers (Borum & Stock, 1993).

Raw Score Cut-offs for the MMPI Lie Scale

Research studying the L - scale of the MMPI as a component of preemployment psychological screening has resulted in a general consensus of its efficacy

to detect minimization among law enforcement applicants. Clinicians may discover personality traits of an individual that may be incongruent with law enforcement. However, the level at which L - scale scores become predictive has not been determined. Therefore, psychometricians have varied in their interpretations of when L - scale scores begin to significantly assess defensiveness and attempts at "faking-good".

Although there is no unanimity regarding an exact cut-off score, several researchers have reported that L - scale scores greater than six appear to correlate with defensiveness and minimization. Fjordbak (1985) stated that a raw L - scale cutting score of seven showed discriminative sensitivity with cognitively well organized patients. In the Minnesota Multiphasic Personality Inventory Manual: Revised (1967), Hathaway and McKinley stated that a raw score of seven on the L - scale should equal a T score of 70. Pallone (1992) stated that a T score of 70 represents the customary threshold level for the assessment of serious psychological disorder. However, Hathaway and McKinley (1967) stated that the raw score is generally utilized in the interpretation of the L - scale. Although most

researchers have established arbitrary L - scale cut-offs, the use of a raw score of seven as a criterion for establishing significant defensiveness and minimization appears justified.

Comparison of the MMPI and the MMPI-2

In 1989, the MMPI was updated and a revised version issued. However, Bartol (1991) stated that there is very little evidence that the MMPI - 2 will replace the original MMPI and its extensive empirical foundation. Pallone (1992) noted that the original MMPI continues to be widely utilized in the selection of candidates for appointment to law enforcement agencies. Woychyshyn, McElheran, and Romney (1992) found that both the traditional MMPI and the newer MMPI - 2 validity indices were equally good at detecting fake-good responding. Graham et al. (1992) also concluded that the validity scales of the MMPI - 2 are operating very much as the validity scales of the original MMPI. Reports of equivalency were also found by Borum and Stock (1993); Gass and Lawhorn (1991); and Joiner, Schmidt, and Metalsky (1994), who stated that, based

upon the evidence supporting the continuity and comparability between the MMPI and the MMPI - 2, their conclusions were likely to apply to both the MMPI and the restandardized version. These results appear to support the continued use of the original MMPI in preemployment psychological screening of law enforcement applicants.

Chapter III

Methodology

Subjects

The subjects in this study were 66 individuals applying for a position as a law enforcement officer in one of 10 urban police departments located in either southwestern Illinois or St. Louis County. The applicants were tested between August 22, 1992 and November 22, 1995. All 66 subjects were white. Sixty of the subjects, or approximately 91%, were male. These 66 candidates represent all of the finalists tested for positions as police officers in 10 separate communities. The ten municipalities ranged in population from 7300, with a police department of 13 full-time sworn officers, to 40,000, with 53 full-time sworn officers.

The average age of the subjects was 27, ranging from 21 to 44. The median age was 26.5 and the mode age for this sample was 29 (See table 2). No educational information was available for the applicants.

Table 2

Stem and Leaf diagram of police applicant age

Stem & Leaf

1 .
 2 . 1112223333333333444445555566666666677778888888999999999999
 3 . 223456
 4 . 034
 5 .

Note: Stem width: 10

Each leaf: 1 case

Design

Two experimental variables were subjected to a Chi-square analysis. The first variable, employment, consisted of (1) yes, the applicant was hired as a law enforcement officer by one of the 10 municipalities involved in this study and (2) no, the applicant was not hired as a law enforcement officer. The second variable, MMPI L - scale score, consisted of (1) high L - scale score ($L > 6$) and (2) low L - scale score ($L < 7$).

Materials

As a part of the preemployment psychological screening of applicants, each law enforcement candidate was required to complete a battery of tests which included: The Minnesota Multiphasic Personality Inventory, the Rorschach, the Thematic Apperception Test, the Otis Quick Scoring Mental Abilities Test, Sentence Completion, Draw-A-Person, the Bender Visual Motor Gestalt Test, the Szondi, the Alcoholism Questionnaire, Beck Depression Inventory, Measurement of Psycho-Social Stressors, Wide Range Achievement Test - Reading subscale, and the Digit Span subscale of the Wechsler Adult Intelligence Scale. For the purpose of this study, only raw scores from the MMPI Lie scale were used in calculating a Chi-Square analysis to determine if elevated scores ($L > 6$) resulted in failure to be hired as a police officer.

Procedure

Each of the subjects was tested individually by a licensed psychologist. The testing of candidates for positions in St. Louis County was conducted at the municipalities police department. Preemployment screening was completed for two municipalities in St. Louis County.

This represented 14 law enforcement applicants, or approximately 22% of the sample. The other 52 candidates were tested at Southwest Family and Children's Testing and Therapy Clinic, Inc., located in O'Fallon, IL. The remaining municipalities were located in southwestern Illinois, within a 25 mile radius of O'Fallon, IL and the City of St. Louis, MO.

Psychological preemployment screening of police officer applicants was the final step in the hiring process. Prior to testing, each candidate had passed a background check, an oral interview, a polygraph test, a physical agility test, and a written examination as part of each police departments hiring procedure. The finalists, usually two to three candidates, depending on how many officers were being hired, were then referred to Southwest Family and Children's Testing and Therapy Clinic, Inc. for a complete psychological evaluation.

In addition to administering the thirteen tests listed in the Materials section, each candidate also participated in an intensive clinical interview, which included a medical, educational, and social history. The clinician then made a recommendation to each department regarding the suitability of the

candidate for employment as a law enforcement officer. The Lie scale of the MMPI was one component utilized in the determination of aptitude.

Each department then determined which candidate(s) to hire, based upon their evaluations and the overall recommendation provided by the clinician (See table 3). Police departments are not obligated to base their hiring decisions on the recommendations of clinicians, therefore, some law enforcement applicants may be hired regardless of the information obtained through psychological screening.

Table 3

Sample of table used for the recommendation of law enforcement applicants

Above Average	_____
Average to Above	_____
Average	_____
Average to Below	_____
Below Average	_____
Not Recommended	_____

Note: This table is utilized by the clinicians at Southwest Family and Children's Testing and Therapy clinic, Inc. It is not meant to be representative of tables used by other clinicians.

Chapter IV

Results

This research sought to determine if a score of 7 or greater on the MMPI Lie scale resulted in a law enforcement applicant not being hired as a police officer. The MMPI Lie scale consists of 15 items which are scored positively when answered false. The range of raw scores on the L - scale in this study was 1 to 11. The means, medians, modes, and standard deviations for both of the treatment groups and the entire sample are presented in table 4.

Table 4

The means, medians, modes, and standard deviations of Lie scale scores for both of the treatment groups and the research sample

	Research Sample (n = 66)	Applicants hired (n = 46)	Applicants not hired (n = 20)
Mean	5.6	5.3	6.3
Median	5.5	5	6
Mode	7	7	5,7
SD	2.1	2.2	1.6

Note: Applicants who were not hired represented 30% of the overall sample.

A 2 x 2 chi-square analysis was performed investigating the effects of L - scale scores on the employment of law enforcement candidates. The subjects were classified as either hired or not hired and their L - scale scores were divided into high (L > 6) and low (See table 5).

Table 5

2 x 2 contingency table of employment status and L - scale scores

	Applicant hired	Applicant not hired	
Low L score	30	11	25
High L score	16	9	41
	46	20	66

The obtained X^2 (1, n = 66) = .59, $p < .05$, was not significant. Therefore, the null hypothesis was accepted. Whether an individual is hired as a police officer is independent of his MMPI L - scale score. Cramer's Phi revealed a degree of association of .009, which indicates that .9% of the variability in hiring is accounted for by L - scale scores.

A mean of 6.3 with a standard deviation of 1.3 was obtained for the L - scale scores of the six female applicants. A chi-square analysis of the results for the female applicants was not conducted because all of the expected cell frequencies for the 2 X 2 contingency table were below five. When 20% of expected frequencies are less than 5, the chi-square becomes distorted. The 60 male police applicants had a mean L - scale score of 5.5 with a standard deviation of 2.24. The obtained χ^2 (1, n = 60) = 1.01, $p < .05$ was not significant.

Chapter V

Discussion

The results of this study clearly do not support the proposition that law enforcement applicants with high L - scale scores ($L > 6$) on the MMPI are not hired as police officers. These results appear to support the efficacy of utilizing results from the MMPI in conjunction with other psychological inventories and the clinical interview in order to ascertain a more complete evaluation of each law enforcement applicant.

Hargrave and Hiatt (1987) support the utility of combining different assessment procedures and state that each aspect of preemployment psychological screening adds some unique dimension to the overall process of police officer selection. Borum and Stock (1993) also noted that multiple sources of information not only augment the utility of the L - scale, but also provide the clinician with an abundance of information which can be used to construct a more complete summary of a candidates suitability to employment as a police officer. This study examined the effect of L - scale scores on hiring among law enforcement applicants. By restricting the analysis to the L - scale, many

facets of the screening process were ignored. As a result, it is unknown if elevated Lie scores were substantiated by results from other screening instruments. This appears to support the use of multiple indicators in screening applicants.

Recommendations for Future Research

It is possible that the scale utilized in this study was not the most effective measurement of unsuitability among law enforcement applicants. Cassisi and Workman (1992) concluded that the best formula for detecting faking on the MMPI is the F minus K index. This was supported by Ganellen (1994) who stated that "the F minus K index effectively identifies fake-good protocols" (p. 424).

The F minus K index was developed by Gough in 1950 as a special validity scale index for the evaluation of a subjects attitude toward the MMPI when completing the protocol (Dahlstrom et al., 1972, p. 172). Gough indicated that the F minus K score is optimal for identifying faking or deliberate distortions of the test in both self-enhancing and self-depreciating directions.

Grossman et al. (1990) also reported the efficacy of the F minus K index. They stated that the standard L scale of the MMPI was not as effective as the F minus K index in detecting exaggeration among police officer applicants. Future research on the F minus K index and its relationship with police officer hiring may produce more significant results. Additional research would also benefit from a more comprehensive analysis of all of the instruments employed in preemployment screening and their relationship to hiring among law enforcement applicants.

Another obstacle in the study of preemployment psychological screening of police officer candidates is that the results are truncated. Research focuses on scores from psychological inventories administered prior to appointment as a police officer. According to Pallone (1992) the alternate to this would be to hire all applicants and allow them to function as police officers for a suitable period and then compare performance evaluations by superior officers with results from psychological inventories such as the MMPI. However, this procedure would allow even those candidates with flagrant symptomology to become police officers, thus creating substantial threats to public safety.

Thus, research on the job performance of applicants who have been screened out has not been conducted. Hargrave and Hiatt (1987) stated that "the bulk of research which examined the subsequent job performance of 'qualified' applicants obviously suffers from a restricted range in predictor variables which substantially reduces the likelihood of obtaining significant predictor-criterion relationships" (p. 111).

This appears to indicate that research results which attest that police officer candidates are healthier than the normal population also suffer from range restriction. Hargrave et al. (1988) stated that law enforcement applicants are generally well-adjusted due primarily to the fact that the majority of unsuitable candidates are disqualified early in the process. The results of this study appear to support this contention. Mean L - scale scores were below the threshold for symptomology for all of the samples and the majority of the applicants, 70%, were hired.

Overall, the results of this study appear to indicate that regardless of what a study is attempting to detect, clinicians should always utilize several indices in the evaluation of police officer candidates. Research has shown that the

MMPI is effective in measuring pathology among law enforcement applicants and should be integrated into preemployment psychological screening. Research also supports the utility of the Lie scale as a measurement of defensiveness among officer candidates. However, this study failed to obtain significant results when limiting the amount of information available for the investigation of police department hiring practices.

The preemployment psychological screening of police applicants has become an integral aspect of the hiring process. Police departments are legally responsible for screening out candidates unsuited for employment. Therefore, they rely upon the skills of psychometricians to assist them in the evaluation and hiring of psychologically fit officers. As a result, clinicians must strive to utilize the most effective measurements of mental health in providing a comprehensive analysis of a law enforcement applicants ability to perform responsibly.

References

- Bartol, C. R. (1991). Predictive validation of the MMPI for small town police officers who fail. Professional Psychology: Research and Practice, 22, 127-132.
- Borum, R., & Stock, H. V. (1993). Detection of deception in law enforcement applicants. Law and Human Behavior, 17, 157-166.
- Burish, T. G., & Houston, B. K. (1976). Construct validity of the lie scale as a measure of defensiveness. Journal of Clinical Psychology, 32, 310-314.
- Carpenter, B. N., & Raza, S. M. (1987). Personality characteristics of police applicants: Comparisons across subgroups and with other populations. Journal of Police Science and Administration, 15, 10-17.
- Cassisi, J. E., & Workman, D. E. (1992). The detection of malingering and deception with a short form of the MMPI-2 based on the L, F, and K scales. Journal of Clinical Psychology, 48, 54-58.
- Cortina, J. M., Doherty, M. L., Schmitt, N., Kaufman, G., & Smith, R. G. (1992). The big five personality factors in the IPI and MMPI: Predictors of police performance. Personnel Psychology, 45, 119-140.
- Costello, R. M., Schneider, S. L., & Schoenfeld, L. S. (1993). Applicants fraud in law enforcement. Psychological Reports, 73, 179-183.
- Dahlstrom, W. G., Welsh, G. S., & Dahlstrom, L. E. (1972). An MMPI handbook (vol. 1). Minneapolis: University of Minnesota Press.

- Dunaway, J. A. (1980). Police officer selection in the medium-sized department. The Police Chief, 47(1), 42-43.
- Fjordbak, T. (1985). Clinical correlates of high lie scale elevations among forensic patients. Journal of Personality Assessment, 49, 252-255.
- Flanagan, C. L. (1986). Legal issues between psychology and law enforcement. Behavioral Sciences & The Law, 4, 371-384.
- Ganellen, R. J. (1994). Attempting to conceal psychological disturbance: MMPI defensive response sets and the Rorschach. Journal of Personality Assessment, 63, 423-437.
- Gass, C. S., & Lawhorn, L. (1991). Psychological adjustment following stroke: An MMPI study. Psychological Assessment: A Journal of Consulting and Clinical Psychology, 3, 628-633.
- Graham, J. R. (1987). The MMPI: A practical guide (2nd ed.). New York: Oxford University Press.
- Graham, J. R., Watts, D., & Timbrook, R. E. (1991). Detecting fake-good and fake-bad MMPI-2 profiles. Journal of Personality Assessment, 57, 264-277.
- Greene, R. L. (1990). Stability of MMPI scale scores within four codetypes across forty years. Journal of Personality Assessment, 55, 1-6.
- Grossman, L. S., Haywood, T. W., Ostrov, E., Wasyliw, O., & Cavanaugh, J.L. (1990). Sensitivity of MMPI validity scales to motivational factors in psychological evaluations of police officers. Journal of Personality Assessment, 55, 549-561.

- Hargrave, G. E. (1985). Using the MMPI and CPI to screen law enforcement applicants: A study of reliability and validity of clinicians' decisions. Journal of Police Science and Administration, 13, 221-224.
- Hargrave, G. E., & Hiatt, D. (1987). Law enforcement selection with the interview, MMPI, and CPI: A study of reliability and validity. Journal of Police Science and Administration, 15, 110-117.
- Hargrave, G. E., Hiatt, D., & Gaffney, T. W. (1986). A comparison of MMPI and CPI test profiles for traffic officers and deputy sheriffs. Journal of Police Science and Administration, 14, 250-258.
- Hargrave, G. E., Hiatt, D., & Gaffney, T. W. (1988). F+4+9+Cn: An MMPI measure of aggression in law enforcement officers and applicants. Journal of Police Science and Administration, 16, 268-273.
- Hiatt, D., & Hargrave, G. E. (1988). MMPI profiles of problem peace officers. Journal of Personality Assessment, 52, 722-731.
- Joiner, T. E., Schmidt, K. L., & Metalsky, G. I. (1994). Low-end specificity of the beck depression inventory. Cognitive Therapy and Research, 18, 55-68.
- Matarazza, J., Allen, B., Saslow, G., & Wiens, A. (1964). Characteristics of successful policeman and fireman applicants. Journal of Applied Psychology, 48, 123-133.
- Meier, R. D., Farmer, R. E., & Maxwell, D. (1987). Psychological screening of police candidates: Current perspectives. Journal of Police Science and Administration, 15, 210-216.

- National advisory commission on criminal justice standards and goals: Police (1967). Washington, DC: GPO.
- Norton, J. J. (1986). Police psychological service: Providing for human needs. The Police Chief, 53, 8-10.
- Pallone, N. J. (1992). The MMPI in police officer selection: Legal constraints, case law, empirical data. Journal of Offender Rehabilitation, 17, 171-188.
- Parker, K. C., Hanson, R. K., Hunsley, J. (1988). MMPI, rorschach, and WAIS: A meta-analytic comparison of reliability, stability, and validity. Psychological Bulletin, 103, 367-373.
- Polland, J. (1978). Police selection methods and the prediction of police performance. Journal of Police Science and Administration, 6, 374-393.
- Shapiro, S. (1981). Psychiatric examination of law enforcement officer candidates over a 10-year period. Comprehensive Psychiatry, 22, 312-319.
- Wetzler, S., & Marlowe, D. (1990). "Faking-bad" on the MMPI, MMPI-2, and MILLON-II. Psychological Reports, 67, 1117-1118.
- Woychyshyn, C. A., McElheran, W. G., & Romney, D. M. (1992). MMPI validity measures: A comparative study of original with alternative indices. Journal of Personality Assessment, 58, 138-148.