INVESTIGATION OF POLICE OFFICER SELECTION PROCEDURES

A Dissertation by
Jessica Lynn Provines

Master of Arts, Wichita State University, 2004
Bachelor of Arts, Wichita State University, 2001

Submitted to the Department of Psychology
and the faculty of the Graduate School of
Wichita State University
in partial fulfillment of
the requirements for the degree of
Doctor of Philosophy

December 2006
INVESTIGATION OF POLICE OFFICER SELECTION PROCEDURES

I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Psychology.

_____________________________________
Darwin Dorr, Committee Chair

We have read this dissertation
And recommend its acceptance:

_____________________________________
Louis Medvene, Committee Member

_____________________________________
Gregory Meissen, Committee Member

_____________________________________
Don Nance, Committee Member

_____________________________________
Delores Craig-Moreland, Committee Member

Accepted for the College of Liberal Arts and Sciences

_____________________________________
William Bischoff, Dean

Accepted for the Graduate School

_____________________________________
Susan Kovar, Dean
DEDICATION

To my loving and supportive husband and family
ACKNOWLEDGEMENTS

I would like to thank my advisor, Darwin Dorr, for his many years of thoughtful, patient guidance and support. I would also like to extend my gratitude to members of my committee, Louis Medvene, Greg Meissen, Don Nance, and Delores Craig-Moreland, for their helpful comments and suggestions on all stages of this project. I also want to thank the Wichita Police Department along with Captain Darren Moore, Lieutenant Lori Marceau, and Lieutenant Paul Moser for their assistance with this research and for allowing the use of police records. Finally, special thanks are also extended to Bruce Nystrom and David Bowman with Riverpark Psychology Consultants for their support of the project.
ABSTRACT

In the current dissertation, the relationship between police officer selection procedures and officer performance during the first year of employment was investigated within a metropolitan law enforcement agency. Ninety-two officers were followed during their first year of employment including the hiring process, academy and field training, and yearly evaluations. Data on education, aptitude, physical agility, personality, academy performance, supervisor ratings, and terminations were collected. The results reveal that the psychologists’ recommendations predict whether or not an individual will leave the department before the completion of their first year as an officer. In addition, the aptitude test administered by the municipal human resources department accounted for the most variance in academy scores. Weak predictions were demonstrated for field training ratings and yearly evaluations.
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>II. LITERATURE REVIEW</td>
<td>3</td>
</tr>
<tr>
<td>Cognitive Ability</td>
<td>3</td>
</tr>
<tr>
<td>Education</td>
<td>7</td>
</tr>
<tr>
<td>Personality Inventories</td>
<td>10</td>
</tr>
<tr>
<td>Minnesota Multiphasic Personality Inventory</td>
<td>12</td>
</tr>
<tr>
<td>Inwald Personality Inventory</td>
<td>19</td>
</tr>
<tr>
<td>Interviews</td>
<td>19</td>
</tr>
<tr>
<td>Physical Ability Tests</td>
<td>22</td>
</tr>
<tr>
<td>Measures of Applicant History</td>
<td>24</td>
</tr>
<tr>
<td>Less Common Predictor Variables in Police Selection</td>
<td>25</td>
</tr>
<tr>
<td>Correlations among Performance Criteria</td>
<td>26</td>
</tr>
<tr>
<td>Sex, Race, Age, and Tenure</td>
<td>27</td>
</tr>
<tr>
<td>Summary</td>
<td>28</td>
</tr>
<tr>
<td>III. METHODOLOGY</td>
<td>30</td>
</tr>
<tr>
<td>Participants</td>
<td>30</td>
</tr>
<tr>
<td>Materials</td>
<td>30</td>
</tr>
<tr>
<td>Education</td>
<td>31</td>
</tr>
<tr>
<td>Law Enforcement Aptitude Test Score</td>
<td>31</td>
</tr>
<tr>
<td>Physical Agility Composite Score</td>
<td>32</td>
</tr>
<tr>
<td>Oral Interview Board Score</td>
<td>33</td>
</tr>
<tr>
<td>Psychological Inventories</td>
<td>35</td>
</tr>
<tr>
<td>Wonderlic Personnel Test</td>
<td>35</td>
</tr>
<tr>
<td>Minnesota Multiphasic Personality Inventory-2</td>
<td>36</td>
</tr>
<tr>
<td>Inwald Personality Inventory</td>
<td>37</td>
</tr>
<tr>
<td>Psychologists’ Recommendations</td>
<td>38</td>
</tr>
<tr>
<td>Academy Scores</td>
<td>39</td>
</tr>
<tr>
<td>Field Training Ratings</td>
<td>40</td>
</tr>
<tr>
<td>Probationary Performance Appraisals</td>
<td>40</td>
</tr>
<tr>
<td>Terminations/Resignations</td>
<td>41</td>
</tr>
<tr>
<td>Procedure</td>
<td>42</td>
</tr>
<tr>
<td>IV. RESULTS</td>
<td>47</td>
</tr>
<tr>
<td>Descriptive Statistics</td>
<td>48</td>
</tr>
<tr>
<td>Correlation Analyses</td>
<td>50</td>
</tr>
<tr>
<td>Multiple Regression Analyses for Academy Scores</td>
<td>54</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS (continued)

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Regression Analyses for Field Training Ratings</td>
<td>56</td>
</tr>
<tr>
<td>Multiple and Logistic Regression Analyses for Yearly Evaluations</td>
<td>57</td>
</tr>
<tr>
<td>Logistic Regression Analyses for One Year Employment Status</td>
<td>59</td>
</tr>
<tr>
<td>V. DISCUSSION</td>
<td>61</td>
</tr>
<tr>
<td>Description of Findings</td>
<td>61</td>
</tr>
<tr>
<td>Descriptive Statistics</td>
<td>62</td>
</tr>
<tr>
<td>Correlation Coefficients</td>
<td>63</td>
</tr>
<tr>
<td>Academy Scores</td>
<td>64</td>
</tr>
<tr>
<td>Field Training Ratings</td>
<td>65</td>
</tr>
<tr>
<td>Yearly Performance Evaluations</td>
<td>65</td>
</tr>
<tr>
<td>Employment Status</td>
<td>67</td>
</tr>
<tr>
<td>Implications/Application of the Findings</td>
<td>68</td>
</tr>
<tr>
<td>Limitations</td>
<td>69</td>
</tr>
<tr>
<td>Directions for Future Research</td>
<td>70</td>
</tr>
<tr>
<td>LIST OF REFERENCES</td>
<td>72</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>78</td>
</tr>
<tr>
<td>A. Description of the MMPI-2 Scales</td>
<td>79</td>
</tr>
<tr>
<td>B. Entrance Requirements and Minimum Standards</td>
<td>80</td>
</tr>
<tr>
<td>C. Applicant Screening Questionnaire</td>
<td>82</td>
</tr>
<tr>
<td>D. Consent Form</td>
<td>118</td>
</tr>
<tr>
<td>E. Terminated due to Cause Variable Scores</td>
<td>119</td>
</tr>
<tr>
<td>F. Resigned for Personal Reasons Variable Scores</td>
<td>120</td>
</tr>
</tbody>
</table>
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aamodt’s (2004a) Meta-analysis Results for Cognitive Ability</td>
<td>6</td>
</tr>
<tr>
<td>2. Aamodt’s (2004a) Meta-analysis Results of the Validity of Education</td>
<td>8</td>
</tr>
<tr>
<td>3. Aamodt’s (2004a) Meta-analysis Results for the Validity of the MMPI in Predicting Academy Grades</td>
<td>14</td>
</tr>
<tr>
<td>4. Aamodt’s (2004a) Meta-analysis Results for the Validity of the MMPI in Predicting Supervisor Ratings of Performance</td>
<td>15</td>
</tr>
<tr>
<td>5. Law Enforcement Sample Mean MMPI-2 T Scores (Butcher, 2001)</td>
<td>16</td>
</tr>
<tr>
<td>6. Aamodt’s (2004a) Meta-analysis Results for the Validity of the IPI in Predicting Performance Ratings</td>
<td>20</td>
</tr>
<tr>
<td>7. Aamodt’s (2004a) Meta-analysis Results for the Validity of Interviews</td>
<td>22</td>
</tr>
<tr>
<td>8. Aamodt’s (2004a) Meta-analysis Results for the Validity of Physical Agility Tests in Predicting Supervisor Ratings</td>
<td>23</td>
</tr>
<tr>
<td>9. Answers to Basic Meta-analytic Questions (Aamodt, 2004a)</td>
<td>29</td>
</tr>
<tr>
<td>10. Independent and Dependent Variables</td>
<td>42</td>
</tr>
<tr>
<td>11. Descriptive Statistics of the Predictor and Performance Variables</td>
<td>49</td>
</tr>
<tr>
<td>12. Frequencies for the Categorical Variables</td>
<td>49</td>
</tr>
<tr>
<td>13. Correlations between Criterion and Predictor Variables</td>
<td>52</td>
</tr>
<tr>
<td>14. Correlations among Predictor Variables</td>
<td>53</td>
</tr>
<tr>
<td>15. Academy Scores Regression Model Summary</td>
<td>55</td>
</tr>
<tr>
<td>16. Academy Scores Regression Coefficients for Final Model</td>
<td>55</td>
</tr>
<tr>
<td>17. Field Training Ratings Regression Model Summary</td>
<td>56</td>
</tr>
<tr>
<td>18. Field Training Ratings Regression Coefficients for Final Model</td>
<td>56</td>
</tr>
<tr>
<td>19. Yearly Overall Performance Ratings Logistic Regression Coefficients</td>
<td>59</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>20. Employment Status Logistic Regression Coefficients</td>
<td>60</td>
</tr>
</tbody>
</table>
CHAPTER 1
INTRODUCTION

The current study is a collaborative effort between the researcher and a metropolitan police department. The findings of this investigation are a result of a four-year relationship created to examine the selection procedures utilized by the law enforcement agency. Data have been collected on the various selection methods employed by the department, which include cognitive, personality, and physical ability assessments, education history, interviews, and background investigations. These measures are used to screen applicants to the academy and are believed to predict later on-the-job performance. Performance measures were also collected by the researcher and include academy scores, supervisor ratings, and termination records. Such measures have been traditionally used in the literature on police selection to indicate performance of law enforcement personnel. Continued investigation and validation of selection procedures utilized by law enforcement is necessary to ensure a scientific approach to officer selection. Future policy and practice must be guided by strong empirical support to make certain quality individuals are selected to serve. This dissertation evaluates the effectiveness of the police department’s pre-employment screening procedures in predicting police officer performance during the first year of employment by using academy scores, field training and yearly supervisor ratings, as well as employment status at one-year tenure as the criterion variables.

There has been an extensive amount of research conducted in the area of law enforcement selection. Michael Aamodt (2004a) of Radford University has conducted the most comprehensive review of the literature in the area of police selection to date. His review included an active search, where the goal was to include all relevant studies within set
parameters of all journal articles, theses, and dissertations pertaining to police selection from 1970 – 2003. When studies were located outside these parameters, they were also included. He restricted the inclusion of studies in the analyses to those empirical investigations that reported correlation coefficients or those that presented data that could be converted into correlation coefficients. Therefore, hundreds of articles that did not meet the inclusion criteria were excluded from the analyses. However, his search resulted in an impressive 339 studies on the topic of police selection being incorporated in the review (Aamodt, 2004b). Sources for studies not only included journal articles, dissertations and theses but technical reports, books, and conference presentations as well. The studies spanned six decades of research on police selection dating back to the earliest investigations conducted in the 1950s.

Aamodt (2004a) has performed meta-analyses on the various predictor variables of police performance including cognitive ability, education, previous military experience, background problems, personality inventories, vocational interest inventories, assessment centers, interviews, and physical ability tests. Meta-analysis is a statistical method for combining research results across a large number of independent studies, and it provides a useful means for understanding the research findings in the area of police selection. Aamodt’s meta-analyses on the various predictors of police selection attempt to provide the reader with mean validity coefficients for a given selection method, an estimate of the “true correlation” between a given selection method and performance, free of measurement error and range restrictions. Finally, his meta-analyses provided the reader with an idea of the generalizability of the results to other law enforcement agencies. The selection procedures utilized by the current police department will be compared to the results of this meta-analysis.
CHAPTER 2
REVIEW OF LITERATURE

Due to the extensive review of the literature in police selection conducted by Aamodt (2004a), this review heavily focuses on presenting his findings and attempts to include any research on the topic since the publication of his impressive meta-analysis on the research in law enforcement selection.

Cognitive Ability

Various measures of cognitive ability are commonly used by police departments to aid in law enforcement selection. Some departments choose to assess general intelligence, where others assess more specific areas of cognitive ability such as vocabulary, math, and reading skills. Many departments measure both general ability and specific ability. Cognitive ability tests are believed to indicate an applicant’s ability to perform such necessary behaviors as learning new information, writing reports, calculating mathematical equations during investigations, and ability to solve problems.

In Aamodt’s (2004a) meta-analytic review of the literature on cognitive ability, he discusses four types of tests used to assess cognitive ability. The first type of test includes publisher developed general cognitive ability tests. These tests are not designed specifically for use in law enforcement, but have been found to assess aspects of intelligence that are believed to be important in police work. Examples of nationally published tests include the Nelson-Denny Reading Test (Brown, Fishio, & Hanna, 1993), the Wechsler Adult Intelligence Scale (Wechsler, 1997), and the Wonderlic Personnel Test (Wonderlic, 2000), which is probably the most commonly used cognitive test in law enforcement and the test utilized by the department in this
study. The second type of cognitive ability tests include nationally developed law enforcement tests which are developed by consultants or trade organizations for their specific use with police personnel such as the Law Enforcement Candidate Record (Richardson, Bellows, & Henry, 1989) or the International Personnel Management Association’s A-3 (IPMA, 1992). The third set of tests was developed by the federal government to assist in the selection of military recruits. The Army General Classification Test (Richardson, 1940) was used by many police departments in the 1960’s and 1970’s. The last set of cognitive ability tests used in police selection are locally developed civil service exams, often constructed by various municipal and civil service commissions. The police department being studied in this dissertation also purchases an entry level police aptitude from a national publisher along with the Wonderlic to assist with the selection of personnel.

Despite the Wonderlic’s popularity among law enforcement agencies as a measure of cognitive ability, there have been few published studies on its predictive power for police performance. The review of the literature found two studies relating the Wonderlic to police performance. The first study (Super, 1995) found a .19 correlation between scores on the Wonderlic and supervisor ratings of patrol performance, where the second study (Hankey, 1968) found a .28 correlation between the Wonderlic and academy performance. Similar findings in the overall literature on cognitive ability find that cognitive ability correlates more highly with academy grades over other indicators of police performance, including supervisor ratings.

Investigations of locally developed civil service exams have yielded moderate to large correlation coefficients with academy scores such as .27 (Hausknecht, Trevor, & Farr, 2002), .38 (Boehm, Honey, & Kohls, 1983), .42 (Wexler & Sullivan, 1982), .51 (Scarfo, 2002) and .62 (Cortina, Doherty, Schmitt, Kaufman, & Smith, 1992). Smaller correlations have been reported
for civil service cognitive ability exams and performance ratings (Cortina et al., 1992; Wexler & Sullivan, 1982).

It is important to note the work of Cohen (1988) and Hemphill (2003) when interpreting the magnitude of correlation coefficients in applied psychological literature. According to guidelines presented by Cohen, correlation coefficients in the behavioral sciences of .10 are considered small, .30 medium, and .50 large. Hemphill (2003) further studied these guidelines empirically by extensively reviewing the literature in psychological assessment, and he concluded that one third of the correlations found in the literature fell below .20, the middle third fell between .20 and .30, and the upper third was greater than .30. He found that correlations of .50 occurred quite infrequently in the psychological literature and suggested that a lower benchmark might be warranted.

The results for Aamodt’s (2004a) meta-analysis on cognitive ability combine all measures of cognitive ability and compare them to various measures of police performance. There were 61 studies included in the meta-analysis examining the relationship between cognitive ability with academy grades and supervisor ratings. Based on the results of the meta-analysis, it is concluded that the validity of cognitive ability in predicting academy grades is .41. When correcting for criterion unreliability, predictor unreliability, and range restriction, $\rho$ yields a correlation coefficient .62. This coefficient represents what the “true validity” of cognitive ability would be if we had a perfectly reliable measure of cognitive ability, academy grades, and no range restriction. Aamodt also found that 78% of the observed variance in correlations would have been expected by sampling error and study artifacts. Because the percentage is greater than 75%, the finding can be generalized. In terms of cognitive ability as a predictor of supervisor ratings of on-the-job performance, the meta-analysis yielded an uncorrected validity coefficient
of .16 and .27 after correcting for artifacts with 80% of the variance being accounted for. These results indicate that cognitive ability tests are valid predictors of academy and supervisor ratings with aptitude being a stronger predictor of academy scores.

There were only seven studies that examined cognitive ability’s predictive power for terminations indicating a negative relationship between cognitive ability and termination ($r = .12$, $\rho = .21$), which suggests that highly intelligent officers are less likely to be terminated. Given the few number of studies investigating this relationship, it is important that this dissertation examine further the relationship between cognitive ability and termination as well as the relationship between termination and other various selection variables to determine which predict termination most powerfully. Refer to Table 1 for a complete review of the meta-analysis results for cognitive ability.

### Table 1

<table>
<thead>
<tr>
<th>Criterion</th>
<th>K</th>
<th>N</th>
<th>$r$</th>
<th>95% Confidence Interval</th>
<th>90% Credibility Interval</th>
<th>Var</th>
<th>$Q_w$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy Grades</td>
<td>61</td>
<td>14,437</td>
<td>.41</td>
<td>.33 .48</td>
<td>.62 .78</td>
<td>78%</td>
<td>77.82</td>
</tr>
<tr>
<td>Supervisor Ratings</td>
<td>61</td>
<td>16,231</td>
<td>.16</td>
<td>.12 .20</td>
<td>.27 .38</td>
<td>80%</td>
<td>76.40</td>
</tr>
<tr>
<td>Commendations</td>
<td>7</td>
<td>2,015</td>
<td>-.01</td>
<td>-.06 .03</td>
<td>-.02 .04</td>
<td>91%</td>
<td>7.71</td>
</tr>
<tr>
<td>Activity</td>
<td>6</td>
<td>656</td>
<td>.19</td>
<td>.11 .27</td>
<td>.33 .33</td>
<td>100%</td>
<td>5.56</td>
</tr>
<tr>
<td>Absenteeism</td>
<td>5</td>
<td>1,402</td>
<td>-.03</td>
<td>-.08 .02</td>
<td>-.05 .05</td>
<td>100%</td>
<td>2.11</td>
</tr>
<tr>
<td>Injuries</td>
<td>3</td>
<td>1,891</td>
<td>-.06</td>
<td>-.13 .02</td>
<td>-.08 .16</td>
<td>18%</td>
<td>16.35</td>
</tr>
<tr>
<td>Discipline Problems</td>
<td>13</td>
<td>4,850</td>
<td>-.06</td>
<td>-.12 .00</td>
<td>-.11 .18</td>
<td>26%</td>
<td>49.94*</td>
</tr>
<tr>
<td>Fired or suspended</td>
<td>7</td>
<td>3,019</td>
<td>-.12</td>
<td>-.15 .08</td>
<td>-.21 .21</td>
<td>100%</td>
<td>6.74</td>
</tr>
<tr>
<td>Complaints</td>
<td>6</td>
<td>1,831</td>
<td>.03</td>
<td>-.04 .10</td>
<td>-.21 .30</td>
<td>31%</td>
<td>19.54*</td>
</tr>
</tbody>
</table>

K=number of studies, N=sample size, $r$ = mean correlation, $\rho$ = mean correlation corrected for range restriction, criterion unreliability, and number of predictor reliability, Var = percentage of variance explained by sampling error and study artifacts, $Q_w$ = the within group heterogeneity
There were no additional studies found investigating the relationship between cognitive ability and police performance since Aamodt’s (2004a) meta-analytic review of the literature in law enforcement selection. The findings on cognitive ability as a predictor of police performance give way to some possible hypotheses for the current sample. It could be concluded that scores from the Wonderlic and the municipal aptitude test will be stronger predictors of academy grades than other indicators of performance. However, it is likely that there will be a relationship between cognitive scores and supervisor ratings and terminations.

Education

The issue of education in law enforcement has been studied for decades. There have been three law enforcement commissions since the 1960’s that have recommended a bachelor’s degree as the minimum requirement for police personnel including the President’s Commission on Law Enforcement and Administration (COLEA) of 1967, the National Advisory Commission on Criminal Justice Standards and Goals in 1973, and the Police Executive Research Forum (PERF) of 1989. The rationale for this recommendation has been based on various reasons such as the belief that a better education will help an officer make difficult judgments, the belief that police officer’s must remain as educated as the general population, and that performance of law enforcement personnel will improve with higher educational standards. Attempts to justify increased educational requirements include support from case law and support from qualitative and quantitative research such as the case of *Davis v. Dallas* (1985) where the courts upheld the Dallas Police Department’s minimum requirement of 45 college credit hours.

Aamodt’s (2004a) review of the education literature in police selection attempts to answer four questions. The first question addressed whether education is a valid predictor of police performance. In a review of 86 empirical studies containing 15,273 officers on the
relationship between education and police performance, Aamodt found that education is positively related to academy grades and supervisor ratings of patrol performance and negatively related to absenteeism, injuries, automobile accidents, and tenure. For a complete review of the meta-analysis results on the validity of education as a predictor of officer performance refer to Table 2. An analysis of variance also revealed significant effects for education and supervisor ratings indicating that people with associate’s degrees and bachelor’s degrees significantly outperformed those with high school diplomas in both academy and in patrol performance, and people with bachelor’s degrees performed significantly better in academy than those with associate’s degrees.

**TABLE 2**

AAMODT’S (2004A) META-ANALYSIS RESULTS OF THE VALIDITY OF EDUCATION

<table>
<thead>
<tr>
<th>Type of Test</th>
<th>K</th>
<th>N</th>
<th>r</th>
<th>Lower</th>
<th>Upper</th>
<th>ρ</th>
<th>Lower</th>
<th>Upper</th>
<th>Var</th>
<th>Qw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy Grades</td>
<td>32</td>
<td>6,153</td>
<td>.26</td>
<td>.24</td>
<td>.29</td>
<td>.38</td>
<td>.38</td>
<td>.38</td>
<td>100%</td>
<td>19.78</td>
</tr>
<tr>
<td>&lt;20 week academy</td>
<td>16</td>
<td>2,477</td>
<td>.31</td>
<td>.27</td>
<td>.35</td>
<td>.46</td>
<td>.46</td>
<td>.46</td>
<td>100%</td>
<td>7.49</td>
</tr>
<tr>
<td>&gt;20 week academy</td>
<td>15</td>
<td>3,473</td>
<td>.25</td>
<td>.22</td>
<td>.28</td>
<td>.36</td>
<td>.36</td>
<td>.36</td>
<td>100%</td>
<td>4.68</td>
</tr>
<tr>
<td>Supervisor Ratings</td>
<td>54</td>
<td>9,120</td>
<td>.17</td>
<td>.12</td>
<td>.21</td>
<td>.28</td>
<td>.16</td>
<td>.40</td>
<td>80%</td>
<td>67.52</td>
</tr>
<tr>
<td>Activity</td>
<td>17</td>
<td>4,751</td>
<td>.05</td>
<td>.03</td>
<td>.08</td>
<td>.09</td>
<td>.03</td>
<td>.14</td>
<td>89%</td>
<td>19.09</td>
</tr>
<tr>
<td>Commendations</td>
<td>24</td>
<td>6,737</td>
<td>-.03</td>
<td>-.11</td>
<td>.04</td>
<td>-.04</td>
<td>-.30</td>
<td>.21</td>
<td>21%</td>
<td>111.33*</td>
</tr>
<tr>
<td>Outliers removed</td>
<td>22</td>
<td>6,427</td>
<td>-.03</td>
<td>-.09</td>
<td>.03</td>
<td>-.04</td>
<td>-.24</td>
<td>.16</td>
<td>29%</td>
<td>74.71*</td>
</tr>
<tr>
<td>Discipline problems</td>
<td>54</td>
<td>21,416</td>
<td>-.08</td>
<td>-.10</td>
<td>-.05</td>
<td>-.12</td>
<td>-.21</td>
<td>-.04</td>
<td>73%</td>
<td>73.51*</td>
</tr>
<tr>
<td>Outliers removed</td>
<td>51</td>
<td>20,896</td>
<td>-.07</td>
<td>-.09</td>
<td>-.06</td>
<td>-.12</td>
<td>-.17</td>
<td>-.07</td>
<td>89%</td>
<td>55.97</td>
</tr>
<tr>
<td>Absenteeism</td>
<td>18</td>
<td>5,669</td>
<td>-.10</td>
<td>-.13</td>
<td>-.07</td>
<td>-.14</td>
<td>-.14</td>
<td>-.14</td>
<td>100%</td>
<td>15.56</td>
</tr>
<tr>
<td>Vehicle Accidents</td>
<td>4</td>
<td>1,281</td>
<td>-.17</td>
<td>-.23</td>
<td>-.12</td>
<td>-.23</td>
<td>-.23</td>
<td>.06</td>
<td>82%</td>
<td>12.20</td>
</tr>
<tr>
<td>Injuries</td>
<td>10</td>
<td>3,865</td>
<td>-.06</td>
<td>-.12</td>
<td>.00</td>
<td>-.08</td>
<td>-.25</td>
<td>.09</td>
<td>32%</td>
<td>31.48*</td>
</tr>
<tr>
<td>Times assaulted</td>
<td>3</td>
<td>1,399</td>
<td>-.11</td>
<td>-.17</td>
<td>-.04</td>
<td>-.14</td>
<td>-.24</td>
<td>-.04</td>
<td>56%</td>
<td>5.40</td>
</tr>
<tr>
<td>Use of force</td>
<td>10</td>
<td>5,217</td>
<td>-.07</td>
<td>-.10</td>
<td>-.04</td>
<td>-.12</td>
<td>-.17</td>
<td>-.06</td>
<td>82%</td>
<td>12.20</td>
</tr>
</tbody>
</table>

K=number of studies, N=sample size, r = mean correlation, ρ = mean correlation corrected for range restriction, criterion unreliability, and number of predictor reliability, Var = percentage of variance explained by sampling error and study artifacts, Qw = the within group heterogeneity
The second question addressed by Aamodt’s review concentrates on education’s validity as a predictor early in an officer’s career versus later in his or her career. As discussed previously, the literature shows that there is a clear relationship between education and academy performance as well as on-the-job performance. However, it is not so clear as to whether this relationship is true for both new and experienced officers. In order to get a better sense of the moderating effect of experience on the relationship between education and performance, Aamodt (2004a) performed a series of statistical analyses on data from some 1,000 officers on education, performance, and tenure. These analyses indicated that the beneficial effects of a college education on performance ratings are not as noticeable in the first two years of duty. However, after two years, officers with a bachelor’s degree outperform officers with associate’s degrees or high school diplomas. This finding indicates that beneficial effects of a college education on performance ratings do not show up until after two years of tenure, which may suggest that new, inexperienced officers make a similar amount of mistakes but that the more educated officers learn from those mistakes and avoid them in the future.

The third question that his research addressed examined whether or not education adds incremental validity to cognitive ability tests as a predictor of performance. As indicated earlier, cognitive ability tests were found to be significant predictors of both academy and patrol performance. Aamodt (2004a) found that education correlated with cognitive ability at a .29 level indicating a relationship between the two but not a strong enough relationship to argue that they are simply measuring the same construct. The meta-analysis revealed that education added incremental validity to cognitive ability in both academy and patrol performance providing justification for using both as selection variables in law enforcement, which is the case for the department in this research study.
The final question addressed by Aamodt’s (2004a) review of the literature on education and police performance examined the relationship between various college majors and performance. One might wonder whether receiving a degree in criminal justice versus another college major would affect police performance. The meta-analysis confirmed previous research (Weirman, 1978; Finnigan, 1976) revealing that there is no significant difference between criminal justice majors and other college majors. Therefore, it can be concluded that criminal justice majors perform at similar levels to other majors.

Since the publication of Aamodt’s (2004a) meta-analysis results, there were no additional studies found investigating the relationship between education and police performance. Given the strong evidence for education as a predictor of police performance, it is hypothesized that a higher level of education will predict better performance in the academy and higher supervisor ratings for the sample being investigated in this dissertation. The literature review did not reveal education’s predictive power for officer termination. Therefore, it is difficult to predict the results for this sample. Although, it is possible that education will have a negative relationship with terminations, with officer’s having more education being less likely to be terminated.

Personality Inventories

Personality inventories are frequently part of law enforcement selection procedures. There are several various inventories that have been used in the process, and they generally fall within two categories, measures of psychopathology and measures of normal personality. Measures of psychopathology assess abnormal aspects of personality such as depression and thought disorders. They are used in police selection to “screen out” applicants with psychological disturbances that might cause future on-the-job performance problems. Aamodt (2004a) found research on five different measures of psychopathology in his review of the
literature on police selection. They include the first and second edition of the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1943; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), the Inwald Personality Inventory (Inwald, 1992), the Millon Clinical Multiaxial Inventory (Millon, Millon, & Davis, 1994), the Clinical Analysis Questionnaire (Krug, 1980), and the Personality Assessment Inventory (Morey, 1991). These are all “screen out” instruments.

Measures of normal personality, on-the-other-hand, attempt to assess aspects of normal personality traits expressed by typical individuals in everyday life such as shyness and friendliness. They are often used in police selection to “screen in” applicants that would be well suited for police work. Aamodt’s (2004a) review of the literature yielded an additional five measures of normal personality being included in the meta-analysis. They include the California Psychological Inventory (Gough & Bradley, 1996), the Sixteen Personality Factor Questionnaire (Cattell, Cattell, & Cattell, 1993), the Edwards Personal Preference Schedule (Edwards, 1959), the Employee Personality Inventory (Aamodt, 1995), and the Guildford-Zimmerman Temperament Survey (Guilford & Zimmerman, 1956).

The various personality inventories used in law enforcement selection give way to hundreds of different personality scales being used as predictors of police performance. The department under investigation in this dissertation uses the Minnesota Multiphasic Personality Inventory 2 (MMPI-2) and the Inwald Personality Inventory (IPI) as tools to assist in “screening out” those applicants that are not well suited for police work. They are both considered measures of abnormal behavior or psychopathology. Therefore, the review of the literature on personality inventories in law enforcement selection will focus heavily on those two tests.
Minnesota Multiphasic Personality Inventory

As Aamodt (2004a) points out, measures of psychopathology have been determined by the Americans with Disabilities Act (ADA) of 1990 to be medical exams. This resulted in their use only being legal after a conditional offer of employment has been extended to an applicant. Before the act, it was common to administer such exams to the entire applicant pool. However, since the act, only the few applicants that receive job offers are administered such tests. Therefore, the data that is available on tests of psychopathology’s use in police selection since 1990 is expected to differ from the previous research, and those scores are anticipated to be more normal and homogeneous in nature than prior to 1990.

The MMPI and its revision are the most commonly used “screen out” inventories in police selection and are also the most researched (Aamodt, 2004a). The scales on the MMPI were developed by empirical criterion keying where the 567 items on the inventory were administered to previously diagnosed clinical samples and compared to answers of a normal control group, which consisted of visitors and relatives of psychiatric patients (Graham, 2000). The intended purpose of the test was to detect psychopathology and assist with differential diagnosis in psychiatric populations. It was never designed to be a measure of normal personality. However, its popularity led to it being used for expanded purposes beyond its original aim. It is also important to note that the interpretation of individual scales is not standard practice. Scales on the MMPI were intended to be interpreted in terms of profiles or configurations. As the literature review will reveal, the test demonstrates little predictive validity in police selection, although the use of some scale configurations have more recently demonstrated some promise. This is not surprising given its original intent. Its extensive use in the area, however, warrants a review of the literature.
The MMPI yields several validity scales, the basic nine scales along with the Social Introversion scale yielding ten primary clinical scales, and hundreds of special scales developed by various MMPI researchers. Aamodt’s (2004a) meta-analysis on the use of the MMPI in police selection focused on the original validity (\(L = \text{Lie}, \ F = \text{Infrequency}, \ K = \text{Defensiveness}\)) and primary clinical scales (\(Hs = \text{Hypochondriasis}, \ D = \text{Depression}, \ Hy = \text{Hysteria}, \ Pd = \text{Antisocial}, \ MF = \text{Masculinity/Femininity}, \ Pa = \text{Paranoia}, \ Pt = \text{Psychasthenia}, \ Sc = \text{Schizophrenia}, \ Ma = \text{Mania}, \text{ and } Si = \text{Social Introversion}\)). Refer to Appendix A for further explanation of the MMPI scales. Perhaps surprisingly, his results reveal that the MMPI individual scales possess little predictive power in police performance. The correlations involving individual scales with measures of academy performance and patrol performance are low and few are statistically significant. The minimally significant relationship between the F scale, which is a measure of infrequency and indicates an odd response pattern to the items, and academy grades (\(r = -.11\)) and supervisor rating (\(r = -.09\)) is probably the most useful individual MMPI scale although this relationship is minimal in nature. For a complete review of the relationship between individual MMPI scales and academy and supervisor ratings, refer to Tables 3 and 4.

Aamodt (2004a) also examined the relationship between the MMPI scales and other indicators of police performance. Again, there was little relationship found between the individual scales and discipline problems, commendations, and records of absenteeism. In addition, there were no studies found correlating the MMPI scales with terminations. The absence of studies using terminations as performance criteria further implicates the importance of this dissertation as the relationship between the MMPI and employment status at one year tenure will be examined.
### TABLE 3

AAMODT’S (2004A) META-ANALYSIS RESULTS FOR THE VALIDITY OF THE MMPI IN PREDICTING ACADEMY GRADES

<table>
<thead>
<tr>
<th>MMPI Scale</th>
<th>K</th>
<th>N</th>
<th>r</th>
<th>Lower</th>
<th>Upper</th>
<th>ρ</th>
<th>Lower</th>
<th>Upper</th>
<th>Var</th>
<th>Qw</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>9</td>
<td>1,469</td>
<td>-.02</td>
<td>-.11</td>
<td>.07</td>
<td>-.03</td>
<td>-.32</td>
<td>.25</td>
<td>30%</td>
<td>29.57*</td>
</tr>
<tr>
<td>F</td>
<td>9</td>
<td>1,469</td>
<td>-.11</td>
<td>-.17</td>
<td>-.04</td>
<td>-.16</td>
<td>-.31</td>
<td>.00</td>
<td>61%</td>
<td>14.82</td>
</tr>
<tr>
<td>K</td>
<td>8</td>
<td>1,364</td>
<td>.08</td>
<td>.02</td>
<td>.14</td>
<td>.12</td>
<td>-.01</td>
<td>.24</td>
<td>71%</td>
<td>11.31</td>
</tr>
<tr>
<td>Hs</td>
<td>6</td>
<td>973</td>
<td>-.09</td>
<td>-.15</td>
<td>-.02</td>
<td>-.13</td>
<td>-.13</td>
<td>-.13</td>
<td>100%</td>
<td>1.00</td>
</tr>
<tr>
<td>D</td>
<td>7</td>
<td>1,073</td>
<td>-.07</td>
<td>-.13</td>
<td>-.01</td>
<td>-.11</td>
<td>-.11</td>
<td>-.11</td>
<td>100%</td>
<td>2.80</td>
</tr>
<tr>
<td>Hy</td>
<td>7</td>
<td>1,073</td>
<td>.02</td>
<td>-.04</td>
<td>.08</td>
<td>.04</td>
<td>.04</td>
<td>.04</td>
<td>100%</td>
<td>4.66</td>
</tr>
<tr>
<td>Pd</td>
<td>7</td>
<td>1,105</td>
<td>-.04</td>
<td>-.10</td>
<td>.02</td>
<td>-.06</td>
<td>-.06</td>
<td>-.06</td>
<td>100%</td>
<td>1.65</td>
</tr>
<tr>
<td>MF</td>
<td>9</td>
<td>1,411</td>
<td>-.02</td>
<td>-.10</td>
<td>.05</td>
<td>-.04</td>
<td>-.27</td>
<td>.20</td>
<td>42%</td>
<td>21.66*</td>
</tr>
<tr>
<td>Pa</td>
<td>8</td>
<td>1,387</td>
<td>.04</td>
<td>-.01</td>
<td>.09</td>
<td>.06</td>
<td>-.05</td>
<td>.16</td>
<td>77%</td>
<td>10.38</td>
</tr>
<tr>
<td>Pt</td>
<td>7</td>
<td>1,105</td>
<td>-.03</td>
<td>-.09</td>
<td>.03</td>
<td>-.05</td>
<td>-.05</td>
<td>-.05</td>
<td>100%</td>
<td>3.46</td>
</tr>
<tr>
<td>Sc</td>
<td>6</td>
<td>973</td>
<td>-.07</td>
<td>-.14</td>
<td>-.01</td>
<td>-.11</td>
<td>-.11</td>
<td>-.11</td>
<td>100%</td>
<td>5.04</td>
</tr>
<tr>
<td>Ma</td>
<td>6</td>
<td>973</td>
<td>-.11</td>
<td>-.20</td>
<td>-.02</td>
<td>-.16</td>
<td>-.40</td>
<td>.08</td>
<td>40%</td>
<td>15.01*</td>
</tr>
<tr>
<td>Si</td>
<td>9</td>
<td>1,478</td>
<td>-.01</td>
<td>-.11</td>
<td>.09</td>
<td>-.02</td>
<td>-.36</td>
<td>.32</td>
<td>24%</td>
<td>37.44*</td>
</tr>
</tbody>
</table>

K=number of studies, N=sample size, r = mean correlation, ρ = mean correlation corrected for range restriction, criterion unreliability, and number of predictor reliability, Var = percentage of variance explained by sampling error and study artifacts, $Q_w$ = the within group heterogeneity
# TABLE 4

AAMODT’S (2004A) META-ANALYSIS RESULTS FOR THE VALIDITY OF THE MMPI IN PREDICTING SUPERVISOR RATINGS OF PERFORMANCE

<table>
<thead>
<tr>
<th>MMPI Scale</th>
<th>K</th>
<th>N</th>
<th>r</th>
<th>Lower</th>
<th>Upper</th>
<th>ρ</th>
<th>Lower</th>
<th>Upper</th>
<th>Var</th>
<th>Qw</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>25</td>
<td>3,279</td>
<td>-.03</td>
<td>-.07</td>
<td>.00</td>
<td>-.05</td>
<td>-.08</td>
<td>-.03</td>
<td>49%</td>
<td>51.14*</td>
</tr>
<tr>
<td>F</td>
<td>23</td>
<td>3,304</td>
<td>-.09</td>
<td>-.12</td>
<td>-.05</td>
<td>-.15</td>
<td>-.39</td>
<td>.10</td>
<td>49%</td>
<td>46.99*</td>
</tr>
<tr>
<td>K</td>
<td>26</td>
<td>3,519</td>
<td>.04</td>
<td>-.04</td>
<td>.11</td>
<td>.06</td>
<td>-.24</td>
<td>.36</td>
<td>39%</td>
<td>67.03*</td>
</tr>
<tr>
<td>Hs</td>
<td>24</td>
<td>2,663</td>
<td>-.02</td>
<td>-.09</td>
<td>.04</td>
<td>-.04</td>
<td>-.27</td>
<td>.20</td>
<td>56%</td>
<td>41.14*</td>
</tr>
<tr>
<td>D</td>
<td>23</td>
<td>3,715</td>
<td>-.06</td>
<td>-.11</td>
<td>-.01</td>
<td>-.10</td>
<td>-.24</td>
<td>.04</td>
<td>67%</td>
<td>29.89*</td>
</tr>
<tr>
<td>Hy</td>
<td>24</td>
<td>3,222</td>
<td>.02</td>
<td>-.04</td>
<td>.08</td>
<td>.03</td>
<td>-.19</td>
<td>.26</td>
<td>54%</td>
<td>44.60*</td>
</tr>
<tr>
<td>Pd</td>
<td>24</td>
<td>3,273</td>
<td>-.08</td>
<td>-.15</td>
<td>-.01</td>
<td>-.14</td>
<td>-.16</td>
<td>-.11</td>
<td>49%</td>
<td>49.16*</td>
</tr>
<tr>
<td>MF</td>
<td>21</td>
<td>3,768</td>
<td>-.06</td>
<td>-.10</td>
<td>-.03</td>
<td>-.11</td>
<td>-.20</td>
<td>-.02</td>
<td>89%</td>
<td>23.71</td>
</tr>
<tr>
<td>Pa</td>
<td>27</td>
<td>3,314</td>
<td>-.01</td>
<td>-.08</td>
<td>.07</td>
<td>-.01</td>
<td>-.29</td>
<td>.27</td>
<td>45%</td>
<td>60.56*</td>
</tr>
<tr>
<td>Pt</td>
<td>22</td>
<td>2,585</td>
<td>-.07</td>
<td>-.13</td>
<td>-.01</td>
<td>-.12</td>
<td>-.31</td>
<td>.07</td>
<td>63%</td>
<td>33.68*</td>
</tr>
<tr>
<td>Sc</td>
<td>22</td>
<td>2,585</td>
<td>-.09</td>
<td>-.17</td>
<td>-.01</td>
<td>-.15</td>
<td>-.45</td>
<td>.16</td>
<td>43%</td>
<td>50.81*</td>
</tr>
<tr>
<td>Ma</td>
<td>24</td>
<td>3,204</td>
<td>-.09</td>
<td>-.16</td>
<td>-.03</td>
<td>-.16</td>
<td>-.40</td>
<td>.08</td>
<td>52%</td>
<td>45.84*</td>
</tr>
<tr>
<td>Si</td>
<td>23</td>
<td>2,861</td>
<td>-.01</td>
<td>-.05</td>
<td>.02</td>
<td>-.02</td>
<td>-.16</td>
<td>.12</td>
<td>76%</td>
<td>30.39</td>
</tr>
</tbody>
</table>

K=number of studies, N=sample size, r = mean correlation, ρ = mean correlation corrected for range restriction, criterion unreliability, and number of predictor reliability, Var = percentage of variance explained by sampling error and study artifacts, $Q_w$ = the within group heterogeneity
As Aamodt (2004a) points out, it is not surprising that the MMPI scales demonstrate little relationship with police performance given the practice of interpreting the scales. Scales on the MMPI are interpreted by using cutoff scores or those scores that are outside the normal range. Cutoff scores for the MMPI-2 are 65. It is rare that an individual scoring past the cutoff score on an individual scale would be hired. In other words, it would be rare for a police applicant to be so grossly disturbed that he or she would have a T score of greater than 65, which would place him or her close to two standard deviations above the mean. Butcher (2001) presents the law enforcement sample mean scores on the individual MMPI-2 scales, all of which fall within the normal range and between a T score of 41 and 63. Refer to Table 5 for a complete listing of the law enforcement sample mean validity and clinical scale scores. It is interesting to note that the mean sample profile indicates a slight “bump” on the Pd scale, which may reflect the sensation seeking traits of individuals in high-risk jobs. The existing research on the MMPI and police performance indicates that scores within the normal range of personality have little value in predicting police performance.

**TABLE 5**

**LAW ENFORCEMENT SAMPLE MEAN MMPI-2 T SCORES (BUTCHER, 2001)**

| MMPI-2 Validity and Clinical Scales | VRIN | TRIN | F | F(B) | F(P) | L | K | S | Hs | D | Hy | Pd | Mf | Pa | Pt | Sc | Ma | Si |
|------------------------------------|------|------|---|------|------|---|---|---|-----|---|----|----|----|----|----|----|----|----|----|
| Male                               | 41   | 54   | 43 | 44   | 47   | 57 | 59 | 63 | 48  | 46 | 49 | 51 | 42 | 47 | 47 | 47 | 49 | 42 |
| Female                             | 42   | 55   | 45 | 44   | 47   | 56 | 59 | 61 | 46  | 44 | 48 | 52 | 60 | 57 | 46 | 47 | 51 | 41 |

The interpretation of scores within the normal range has not been a useful practice. Therefore, researchers often use extreme scores and score patterns to interpret the MMPI. Aamodt (2004a) discovered four methods of interpreting score patterns in the law enforcement selection literature. However, there were very few studies conducted investigating these profile
patterns. Therefore, Aamodt (2004a) ran analyses with existing data on 1,970 law enforcement personnel and found three of the four profiles to be promising. The first is the Good Cop/Bad Cop Profile (Blau, Super, & Brady, 1993), which predicts that an applicant will be a “good cop” when the applicant’s T scores are less than 60 on the $Hy, Hs, Pd$, and $Ma$ scales and less than 70 on the other clinical scales. Aamodt (2004a) found a .15 correlation between the Good Cop/Bad Cop Profile and terminations for cause. The second promising MMPI profile pattern found in the literature is the Goldberg Index (Costello, Schneider, Schoenfeld, & Kobos, 1982). Combing T scores in the following formula $L+Pa+Sc-Hy-Pt$ forms this index and scores above a 60 are believed to be a sign of psychosis. The three scales on the left of the equation represent psychotic like symptoms, where the two right scales represent neurotic symptoms. Aamodt (2004a) found a .14 correlation with this configuration and termination for cause. That is, the more the profile leans in the psychotic direction the more likely the individual is to be fired. The final promising MMPI profile pattern in the law enforcement literature is the Husemann Index (Costello & Schneider, 1996), which is believed to be a measure of aggression and is formed by summing the T scores of the $F, Pd$, and the $Ma$ scales. The maximum cutoff score for the index is 192. Aamodt (2004a) also found a moderate correlation for this index with terminations for cause ($r = .20$). It is interesting to note the Psychopathic Deviate and the Mania scales used in this index form the classic “4-9” profile, which is a measure of psychopathy. Further research is indicated for these three indices to determine how useful they are in law enforcement selection. Little evidence was established for use of a fourth index, which is the Gonder Index (Gonder, 1998) created by summing the T scores for the $Pd, Pt, Mf, Ma, Hs$, and $Hy$ scales.

To summarize the results of the meta-analysis (Aamodt, 2004a) for the use of the MMPI as a selection measure in police selection, it was found the individual scales were not valid
predictors of police performance. It is believed that the practice of interpreting extreme cutoff scores to eliminate candidates on the MMPI contributes to this finding. Since the publication of Aamodt’s (2004a) meta-analysis results for the individual MMPI scales as predictors of police performance, there have been three studies published with similar results (Gershon, Tiburzi, Lin, & Erwin, 2005; Macintyre, Ronken,& Prenzler, 2005; Varela, Boccaccini, Scogin, Stump, & Caputo, 2004). However, the use of interpreting particular scale configurations has demonstrated potential in the field. Since the publication of the 2004 meta-analysis there were 6 studies published in a special edition of the peer reviewed journal, *Applied H.R.M. Research*, which reported mixed results for the validity of various MMPI scale configurations (Brewster & Stoloff, 2004; Gonder & Gilmore, 2004; Matyas, 2004; Raynes, 2004; Surrette, Aamodt, & Serafino, 2004; Thomas & Kauder, 2004). In particular, one finding from these studies worth noting was the predictive utility of the Good Cop/Bad Cop Profile in terminations for cause (Brewster & Stoloff, 2004). To further examine the use of scale configurations, Aamodt conducted a follow up study (2004c) investigating the use of MMPI scale configurations in law enforcement selection. Using datasets from these six other researchers with a total N of 481, he found that the Good Cop/Bad Cop Profile demonstrated the most promise is predicting performance ratings. The Aamodt Scale (*F+Ma*) was created during this study after the original meta-analysis (2004a) suggested that these two scales were the most successful MMPI scales in predicting academy grades and supervisor ratings. This index was found to correlate the highest with discipline problems compared to all other scale configurations when analyzing data from 2,245 law enforcement personnel. The trend in recent MMPI and law enforcement research appears to show promise in the area of scale configurations; however, they require further investigation. Therefore, it is hypothesized that the individual scales will possess little
predictive power for police officer performance with this sample, but that a relationship between the four promising scale configurations and performance will be observed.

**Inwald Personality Inventory**

Unlike the MMPI, the IPI was specifically designed for use with law enforcement personnel, measuring a variety of behavioral and emotional problems that are believed to interfere with officer performance. The IPI is also considered a measure of psychopathology and is used to “rule out” poorly suited applicants. There are 26 scales assessed by the IPI. Several of these scales were found to yield moderate negative correlations with performance ratings (Aamodt, 2004a) such as the Job Difficulties Scale, which is an indication of previous problems with employment and the Trouble with the Law Scale, which represents previous legal trouble. These results indicate that this test might have more predictive power than the individual MMPI scales. Refer to Table 6 for the complete meta-analysis results on the relationship between the scales on the IPI and supervisor performance ratings.

There were no additional studies found investigating the relationship between scales on the IPI and police performance since Aamodt’s (2004a) meta-analytic review of the literature in law enforcement selection. It is likely that the current investigation will yield similar results with several of the IPI scales demonstrating moderate correlations with performance ratings.

**Interviews**

The interview is a common component of most selection procedures for all kinds of jobs. Interviews are also common in law enforcement selection. They can be structured or unstructured in nature. They can be individual or in panel format. Previous meta-analyses in the area of general personnel selection have found structured interviews not only to be more valid in
## TABLE 6

AAMODT’S (2004A) META-ANALYSIS RESULTS FOR THE VALIDITY OF THE IPI IN PREDICTING PERFORMANCE RATINGS

<table>
<thead>
<tr>
<th>IPI Scale</th>
<th>K</th>
<th>N</th>
<th>r</th>
<th>Lower</th>
<th>Upper</th>
<th>ρ</th>
<th>Lower</th>
<th>Upper</th>
<th>Var</th>
<th>Q_w</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guardedness</td>
<td>6</td>
<td>1,361</td>
<td>-.02</td>
<td>-.09</td>
<td>.04</td>
<td>-.04</td>
<td>-.19</td>
<td>.10</td>
<td>62%</td>
<td>9.73</td>
</tr>
<tr>
<td>Alcohol Use</td>
<td>6</td>
<td>908</td>
<td>-.02</td>
<td>-.12</td>
<td>.07</td>
<td>-.04</td>
<td>-.27</td>
<td>.19</td>
<td>49%</td>
<td>12.38*</td>
</tr>
<tr>
<td>Drug Use</td>
<td>5</td>
<td>765</td>
<td>-.03</td>
<td>-.11</td>
<td>.04</td>
<td>-.06</td>
<td>-.06</td>
<td>.06</td>
<td>100%</td>
<td>1.87</td>
</tr>
<tr>
<td>Driving Violations</td>
<td>4</td>
<td>668</td>
<td>-.07</td>
<td>-.15</td>
<td>.00</td>
<td>-.13</td>
<td>-.13</td>
<td>-.13</td>
<td>100%</td>
<td>3.50</td>
</tr>
<tr>
<td>Job Difficulties</td>
<td>5</td>
<td>765</td>
<td>-.19</td>
<td>-.26</td>
<td>-.12</td>
<td>-.32</td>
<td>-.32</td>
<td>-.32</td>
<td>100%</td>
<td>3.43</td>
</tr>
<tr>
<td>Trouble with the Law</td>
<td>6</td>
<td>1,361</td>
<td>-.16</td>
<td>-.21</td>
<td>-.11</td>
<td>-.27</td>
<td>-.27</td>
<td>-.27</td>
<td>100%</td>
<td>3.77</td>
</tr>
<tr>
<td>Absence Abuse</td>
<td>7</td>
<td>1,504</td>
<td>-.13</td>
<td>-.21</td>
<td>-.06</td>
<td>-.23</td>
<td>-.40</td>
<td>-.05</td>
<td>60%</td>
<td>11.67</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>5</td>
<td>765</td>
<td>-.14</td>
<td>-.22</td>
<td>-.05</td>
<td>-.23</td>
<td>-.34</td>
<td>-.12</td>
<td>83%</td>
<td>6.00</td>
</tr>
<tr>
<td>Antisocial Attitudes</td>
<td>5</td>
<td>765</td>
<td>-.19</td>
<td>-.30</td>
<td>-.07</td>
<td>-.31</td>
<td>-.56</td>
<td>-.07</td>
<td>53%</td>
<td>9.45</td>
</tr>
<tr>
<td>Hyperactivity</td>
<td>5</td>
<td>765</td>
<td>-.16</td>
<td>-.25</td>
<td>-.06</td>
<td>-.26</td>
<td>-.41</td>
<td>-.11</td>
<td>74%</td>
<td>6.79</td>
</tr>
<tr>
<td>Rigid Type</td>
<td>7</td>
<td>1,504</td>
<td>-.07</td>
<td>-.12</td>
<td>-.02</td>
<td>-.13</td>
<td>-.21</td>
<td>-.05</td>
<td>86%</td>
<td>8.18</td>
</tr>
<tr>
<td>Type A</td>
<td>4</td>
<td>668</td>
<td>-.09</td>
<td>-.16</td>
<td>-.01</td>
<td>-.15</td>
<td>-.15</td>
<td>-.15</td>
<td>100%</td>
<td>2.01</td>
</tr>
<tr>
<td>Illness Concerns</td>
<td>5</td>
<td>1,264</td>
<td>-.10</td>
<td>-.17</td>
<td>-.03</td>
<td>-.17</td>
<td>-.28</td>
<td>-.05</td>
<td>72%</td>
<td>6.97</td>
</tr>
<tr>
<td>Treatment Programs</td>
<td>5</td>
<td>1,264</td>
<td>-.01</td>
<td>-.06</td>
<td>.05</td>
<td>-.01</td>
<td>-.01</td>
<td>-.01</td>
<td>100%</td>
<td>4.66</td>
</tr>
<tr>
<td>Anxiety</td>
<td>5</td>
<td>811</td>
<td>-.09</td>
<td>-.16</td>
<td>-.02</td>
<td>-.15</td>
<td>-.15</td>
<td>-.15</td>
<td>100%</td>
<td>0.61</td>
</tr>
<tr>
<td>Phobic Personality</td>
<td>5</td>
<td>811</td>
<td>-.05</td>
<td>-.14</td>
<td>.05</td>
<td>-.08</td>
<td>-.29</td>
<td>.12</td>
<td>54%</td>
<td>9.28</td>
</tr>
<tr>
<td>Obsessive Personality</td>
<td>5</td>
<td>1,264</td>
<td>-.10</td>
<td>-.16</td>
<td>-.05</td>
<td>-.17</td>
<td>-.17</td>
<td>-.17</td>
<td>100%</td>
<td>2.64</td>
</tr>
<tr>
<td>Depression</td>
<td>4</td>
<td>668</td>
<td>-.16</td>
<td>-.27</td>
<td>-.04</td>
<td>-.26</td>
<td>-.48</td>
<td>-.04</td>
<td>54%</td>
<td>7.42</td>
</tr>
<tr>
<td>Loner</td>
<td>6</td>
<td>908</td>
<td>-.15</td>
<td>-.25</td>
<td>-.05</td>
<td>-.25</td>
<td>-.50</td>
<td>.00</td>
<td>50%</td>
<td>12.01*</td>
</tr>
<tr>
<td>Unusual Experiences</td>
<td>5</td>
<td>765</td>
<td>-.14</td>
<td>-.31</td>
<td>.03</td>
<td>-.23</td>
<td>-.71</td>
<td>.25</td>
<td>21%</td>
<td>24.10*</td>
</tr>
<tr>
<td>Lack of Assertiveness</td>
<td>6</td>
<td>908</td>
<td>-.00</td>
<td>-.08</td>
<td>.09</td>
<td>.00</td>
<td>-.18</td>
<td>.18</td>
<td>61%</td>
<td>9.83</td>
</tr>
<tr>
<td>Interpersonal Difficulty</td>
<td>4</td>
<td>668</td>
<td>-.19</td>
<td>-.31</td>
<td>-.07</td>
<td>-.32</td>
<td>-.53</td>
<td>-.12</td>
<td>61%</td>
<td>6.61</td>
</tr>
<tr>
<td>Undue Suspiciousness</td>
<td>6</td>
<td>1,361</td>
<td>-.15</td>
<td>-.24</td>
<td>-.05</td>
<td>-.25</td>
<td>-.49</td>
<td>.01</td>
<td>42%</td>
<td>14.17*</td>
</tr>
<tr>
<td>Family Concerns</td>
<td>5</td>
<td>765</td>
<td>-.13</td>
<td>-.24</td>
<td>-.02</td>
<td>-.22</td>
<td>-.46</td>
<td>.02</td>
<td>50%</td>
<td>9.91*</td>
</tr>
<tr>
<td>Sexual Concerns</td>
<td>4</td>
<td>668</td>
<td>-.13</td>
<td>-.21</td>
<td>-.06</td>
<td>-.22</td>
<td>-.22</td>
<td>-.22</td>
<td>100%</td>
<td>3.74</td>
</tr>
<tr>
<td>Spouse Conflicts</td>
<td>4</td>
<td>668</td>
<td>-.13</td>
<td>-.21</td>
<td>-.06</td>
<td>-.22</td>
<td>-.22</td>
<td>-.22</td>
<td>100%</td>
<td>2.18</td>
</tr>
</tbody>
</table>

K=number of studies, N=sample size, r = mean correlation, ρ = mean correlation corrected for range restriction, criterion unreliability, and number of predictor reliability, Var = percentage of variance explained by sampling error and study artifacts, $Q_w$ = the within group heterogeneity
predicting employment performance than unstructured interviews, but the research has shown the structured interview to be one of the most valid predictors of employee performance (Huffcutt & Arthur, 1994; McDaniel, Whetzel, Schmidt, & Maurer, 1994). Unfortunately, there were few studies found investigating the validity of interview scores with law enforcement performance. The eight studies, every one of them conducted in the 1970’s, that were included in the meta-analysis all involved panel interviews. However, the extent to which they were structured was unclear. The police department examined in this dissertation conducts structured panel interviews with their applicants. One study investigating 57 police officers in a Florida department found that uncorrected interview scores were not related to performance but interview scores corrected for direct restriction of range were related to patrol performance (Landy, 1976). Another study examining the relationship between oral interview scores, cognitive ability, training and experience ratings, and academy grades found a positive relationship ($r = .35$) between interview scores and academy grades (Flynn & Patterson, 1972). The meta-analysis revealed a small relationship between interview scores to both academy and supervisor ratings of job performance (Aamodt, 2004a). For a full review of the meta-analysis results refer to Table 7.
TABLE 7
AAMODT’S (2004A) META-ANALYSIS RESULTS FOR THE VALIDITY OF INTERVIEWS

<table>
<thead>
<tr>
<th>Criterion</th>
<th>K</th>
<th>N</th>
<th>r</th>
<th>Lower</th>
<th>Upper</th>
<th>ρ</th>
<th>Lower</th>
<th>Upper</th>
<th>Var</th>
<th>Qw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy Grades</td>
<td>4</td>
<td>.554</td>
<td>.12</td>
<td>.04</td>
<td>.20</td>
<td>.27</td>
<td>.27</td>
<td>.27</td>
<td>100%</td>
<td>2.33</td>
</tr>
<tr>
<td>Supervisor Ratings</td>
<td>8</td>
<td>1,053</td>
<td>.09</td>
<td>.03</td>
<td>.15</td>
<td>.19</td>
<td>.19</td>
<td>.19</td>
<td>100%</td>
<td>1.80</td>
</tr>
</tbody>
</table>

K=number of studies, N=sample size, r = mean correlation, ρ = mean correlation corrected for range restriction, criterion unreliability, and number of predictor reliability, Var = percentage of variance explained by sampling error and study artifacts, $Q_w$ = the within group heterogeneity

There were no additional studies found investigating the relationship between interview scores and police performance since Aamodt’s (2004a) meta-analytic review of the literature in law enforcement selection. It is hypothesized that total interview score in this sample will reveal moderate relationships with academy, ratings, and terminations.

Physical Ability Tests

Due to the potential physical requirements of police work, it is common practice for law enforcement agencies to assess applicants’ physical agility prior to hiring. Physical agility tests often take the form of stamina or strength tests such as push-ups and sit-ups or job-related simulations where applicants may be required to demonstrate their ability to do such things as run short distances and climb over obstacles. The police department being examined in this study conducts a combination of both types of physical assessments.

Aamodt (2004a) found in his review of the literature on police selection that there have been several studies conducted investigating the content validity of physical ability tests where the researcher attempts to determine whether the physical tasks of the test represent the behavior being measured. However, he only found four studies that assessed the criterion validity of physical agility test scores in which researchers investigate the effectiveness of a test in
predicting an individual’s performance. Results of his meta-analysis indicate that there appears to be no relationship between overall physical ability scores and supervisor ratings of overall job performance. However, some individual, specific, physical components were shown to have a relationship with performance. Job-related simulations also appear to be stronger predictors than specific physical tests like push-ups. Table 8 reveals the complete results of Aamodt’s (2004a) meta-analysis of physical agility tests in predicting supervisor ratings.

**TABLE 8**

AAMODT’S (2004A) META-ANALYSIS RESULTS FOR THE VALIDITY OF PHYSICAL AGILITY TESTS IN PREDICTING SUPERVISOR RATINGS

<table>
<thead>
<tr>
<th>Criterion</th>
<th>K</th>
<th>N</th>
<th>r</th>
<th>95% Confidence Interval</th>
<th>90% Credibility Interval</th>
<th>Var</th>
<th>Qw</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
<td>Upper</td>
<td>Lower</td>
<td>Upper</td>
</tr>
<tr>
<td>Overall fitness score</td>
<td>4</td>
<td>547</td>
<td>-.02</td>
<td>-.16</td>
<td>.11</td>
<td>-.04</td>
<td>.23</td>
</tr>
<tr>
<td>Individual tests</td>
<td>23</td>
<td>3,464</td>
<td>.09</td>
<td>.05</td>
<td>.14</td>
<td>.16</td>
<td>.33</td>
</tr>
<tr>
<td>Running</td>
<td>3</td>
<td>408</td>
<td>.16</td>
<td>.07</td>
<td>.26</td>
<td>.26</td>
<td>.26</td>
</tr>
<tr>
<td>Sit-ups</td>
<td>2</td>
<td>293</td>
<td>.07</td>
<td>-.05</td>
<td>.18</td>
<td>.11</td>
<td>.11</td>
</tr>
<tr>
<td>Strength</td>
<td>14</td>
<td>2,177</td>
<td>.09</td>
<td>.04</td>
<td>.15</td>
<td>.15</td>
<td>.31</td>
</tr>
<tr>
<td>Low body fat</td>
<td>1</td>
<td>115</td>
<td>.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category of Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical ability</td>
<td>16</td>
<td>2,407</td>
<td>.08</td>
<td>.06</td>
<td>.14</td>
<td>.06</td>
<td>.34</td>
</tr>
<tr>
<td>Simulation</td>
<td>7</td>
<td>1,057</td>
<td>.12</td>
<td>.06</td>
<td>.20</td>
<td>.20</td>
<td>.20</td>
</tr>
</tbody>
</table>

K=number of studies, N=sample size, r = mean correlation, ρ = mean correlation corrected for range restriction, criterion unreliability, and number of predictor reliability, Var = percentage of variance explained by sampling error and study artifacts, Qw = the within group heterogeneity

This researcher found no additional studies investigating the use of physical agility tests since the publication of Aamodt’s meta-analysis in 2004. Similar results are anticipated for this sample.
Measures of Applicant History

Aamodt (2004a) also conducted meta-analytic reviews of the data on the use of previous military experience and background problems in law enforcement selection. Although the current police department involved in this dissertation does take both variables into consideration when making hiring decision, data on these particular indicators were not tracked or reported to the researcher and will not be investigated in this study. Therefore the review of the findings in this area will be brief in nature.

There has been a long standing practice of providing preference to law enforcement applicants that have previous military experience based on the idea that it is a legal way of rewarding veterans for their service and implied validity. However, there is little empirical support for the notion that officers with military backgrounds are more successful than their civilian counterparts (Aamodt, 2004a). A slight relationship was observed between military experience and the reception of commendations.

It is also common practice to conduct thorough background investigations of police applicants on such factors as criminal and driving records, credit history, and disciplinary problems at work and school. Aamodt (2004a) found few studies examining the relationship between background variables and performance, perhaps due to the reason that applicants with poor arrest and work records were not hired for law enforcement duty in the first place. Though based on only three studies, the results of the meta-analysis support the practice of conducting such careful background checks with the relationship between background variables and performance being .27 and a corrected validity of .41.

This researcher also found no additional studies investigating the use of previous military experience and background variables since the publication of Aamodt’s meta-analysis in 2004.
Less Common Predictor Variables in Police Selection

The literature review has thus far focused on the more commonly used selection variables in law enforcement including measures of cognitive ability, education, personality inventories, interviews, and physical ability tests. Aamodt (2004a) also conducted meta-analytic reviews of two selection methods used less often by law enforcement departments for entry-level hiring decisions. These methods include the use of vocational interest inventories and assessment centers. Again, due to the fact that the current police department under investigation does not utilize these two selection methods, the review of the findings will be brief.

Vocational interest inventories are typically paper and pencil tests designed to assist people in selecting a career that is best suited to their personal interests and skills. Due to the high face validity and little exhibited value in predicting employee performance (Hunter & Hunter, 1984), there has been a small amount of empirical research conducted on the use of vocational interest inventories with police selection. However, Aamodt did find eight studies in his review of the literature that examined this relationship. He concluded that only a tendency to have a conventional interest pattern was positively related to supervisor ratings. These people function best in structured environments and pay attention to detail. Additionally, artistic interest patterns were somewhat negatively related to police performance.

Assessment centers typically consist of several exercises, some of which simulate job requirements. Often referred to as “situational testing” or “stress interviewing”, assessment centers involve the role-playing of actual job simulations to judge the “in character” actions of the candidate. For example, the agency might have the candidate pretend to be working the front desk of a police department to see how the individual responds to possible crisis situations. They are rarely used as a selection method for entry-level positions due to their expense, timeliness,
and basis on job related experience; however, they are more commonly used for promotional purposes. Aamodt (2004a) found only six studies investigating the use of assessment centers in law enforcement. The analysis of these six studies did demonstrate a moderate prediction of academy ratings, entry-level job performance, and performance of lieutenants and captains. With the estimated cost of assessment centers being $1,750 (Spychlski, Quinones, Gaugler, & Pohley, 1997), it is difficult to determine if the validity of their use justifies their costs.

Again, this researcher found no additional studies investigating the use of vocational interest inventories or assessment centers since the publication of Aamodt’s meta-analysis in 2004.

Correlations among Performance Criteria

The data on commonly used selection measures in law enforcement have been presented. It is now appropriate to turn the focus of this review toward the literature on indicators of performance. Aamodt discovered 47 studies in the field that examined the relationship between performance variables such as academy grades, probationary performance, supervisor ratings, commendations, complaints, disciplinary actions, suspensions, activity, absenteeism, accidents and injuries, and use of force. The meta-analysis results (Aamodt, 2004a) demonstrate that academy scores are correlated with job performance indicating that officers that perform well in the academy receive higher performance ratings, have fewer disciplinary problems, make more arrests, and receive more commendations. This finding supports the use of academy grades as a criterion when investigating selection methods. Aamodt (2004a) also found that correlations between supervisor ratings, commendations, discipline problems, and activity were weak, suggesting that these performance measures are relatively independent. In addition, he discovered that officers who make more arrests and issue more citations receive more complaints
and officers who receive more commendations do not necessarily receive fewer complaints. For
the purposes of this dissertation, performance measures collected during the first year of
employment will be used as criterion variables including academy scores, supervisor ratings, and
termination records. The analyses will attempt to answer the research question of which
predictors are most influential in predicting these criterion variables.

Sex, Race, Age, and Tenure

It is illegal to base hiring decisions upon variables such as sex, race, and age. Therefore,
these variables are not viewed as selection measures as the other variables examined in this
review. Although, there were 57 studies found that investigated the relationship between such
variables and performance criteria. Results of the meta-analysis (Aamodt, 2004a) indicate that
women and minorities had lower academy scores and performance ratings than that of male,
white officers. They also received lower supervisor ratings. However, they did not receive
fewer commendations, have more disciplinary problems, or show more absenteeism suggesting a
possible bias in the supervisors’ rating style. It was demonstrated that older, more experienced
officers received higher ratings, more commendations, had fewer injuries, and utilized force less
than younger, less experienced officers. Although, they did display more discipline problems
and issued less citations and made less arrests than their younger counterparts. Information on
gender was obtained in this particular dissertation and it is anticipated that gender differences
will exist in our sample based on previous literature that suggests that women officers approach
police work differently from their male counterparts (Darien, 2002). However, race and age of
participants were not released to the researcher for confidentiality purposes. Therefore, this
study will not investigate the relationship between those variables and performance.
Summary

The previous sections provide information on what is known and what needs to be investigated further in the area of police selection. Table 9 summarizes the validity and generalizability of the various predictors of law enforcement performance. Based on the literature Aamodt (2004a) presents what he believes to be the ideal selection battery in law enforcement selection. He first recommends that an associate’s degree be the minimum requirement for employment consideration. He also recommends that applicants with a pattern of disciplinary or legal problems be eliminated. Aamodt (2004a) endorses the use of cognitive ability tests and suggests using one specifically designed for police selection or the assessment of reading ability. Although this review did not cover the literature on the use of the California Personality Inventory (CPI), Aamodt (2004a) endorses its use particularly the use of the tolerance scale. Given that this scale on the CPI has the most research support, its use is advised. A standard, structured interview should be conducted, which addresses job-related questions and adheres to a standard scoring system. He recommends that after a conditional offer of employment has been made that applicants undergo a medical and psychological evaluation. Aamodt (2004a) believes that a test of psychopathology be used to screen out applicants with clear indications of work-related pathology for liability reasons despite their lack of support as being a strong predictor of performance. Lastly, he advocates for the use of background investigations and polygraph examinations to ensure accuracy of information provided by the applicant.
<table>
<thead>
<tr>
<th>Predictor/Criterion</th>
<th>K</th>
<th>Significant Predictor?</th>
<th>True Validity (ρ)</th>
<th>Can results be Generalized?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cognitive ability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academy grades</td>
<td>61</td>
<td>Yes (r = .41)</td>
<td>.62</td>
<td>Yes</td>
</tr>
<tr>
<td>Performance ratings</td>
<td>61</td>
<td>Yes (r = .16)</td>
<td>.27</td>
<td>Yes</td>
</tr>
<tr>
<td>Commendations</td>
<td>7</td>
<td>No (r = -.01)</td>
<td>-.02</td>
<td>Yes</td>
</tr>
<tr>
<td>Activity</td>
<td>6</td>
<td>Yes (r = .19)</td>
<td>.33</td>
<td>Yes</td>
</tr>
<tr>
<td>Discipline</td>
<td>13</td>
<td>No (r = -.06)</td>
<td>-.11</td>
<td>No</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academy grades</td>
<td>32</td>
<td>Yes (r = .26)</td>
<td>.38</td>
<td>Yes</td>
</tr>
<tr>
<td>Performance ratings</td>
<td>54</td>
<td>Yes (r = .17)</td>
<td>.28</td>
<td>Yes</td>
</tr>
<tr>
<td>Activity</td>
<td>17</td>
<td>Yes (r = .05)</td>
<td>.09</td>
<td>Yes</td>
</tr>
<tr>
<td>Commendations</td>
<td>24</td>
<td>No (r = -.03)</td>
<td>-.04</td>
<td>No</td>
</tr>
<tr>
<td>Discipline problems</td>
<td>50</td>
<td>Yes(r = -.07)</td>
<td>-.12</td>
<td>Yes</td>
</tr>
<tr>
<td>Absenteeism</td>
<td>18</td>
<td>Yes (r = -.10)</td>
<td>-.14</td>
<td>Yes</td>
</tr>
<tr>
<td>Injuries</td>
<td>10</td>
<td>Yes (r = -.06)</td>
<td>-.08</td>
<td>No</td>
</tr>
<tr>
<td>Use of force</td>
<td>10</td>
<td>Yes (r = -.07)</td>
<td>-.12</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Military Experience</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academy grades</td>
<td>9</td>
<td>No (r = .02)</td>
<td>.04</td>
<td>Yes</td>
</tr>
<tr>
<td>Performance ratings</td>
<td>16</td>
<td>No (r = -.03)</td>
<td>-.05</td>
<td>No</td>
</tr>
<tr>
<td>Commendations</td>
<td>8</td>
<td>Yes (r = .07)</td>
<td>.10</td>
<td>Yes</td>
</tr>
<tr>
<td>Discipline problems</td>
<td>14</td>
<td>No (r = -.02)</td>
<td>-.04</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Police Interest</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance ratings</td>
<td>8</td>
<td>No (r = -.03)</td>
<td>-.06</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Interviews</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance ratings</td>
<td>8</td>
<td>Yes (r = .09)</td>
<td>.19</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Participants

The sample consisted of 92 newly hired police officers (72 males and 20 females). The participants were recruited to participate in a longitudinal study investigating law enforcement selection. Five cohorts, academy classes, were recruited over a three-year period from fall 2002 to spring 2005. During the three years of recruitment, all newly hired police recruits were solicited to participate, and the study established an overall participation rate of 95%. The participants were recruited during academy training. Therefore, the participants in this study have already gone through an extensive screening process and are the elite among a much larger total applicant pool. Available data indicate that between 400 and 600 applicants apply to each academy class. There were 1,858 applicants from the fall of 2002 to the spring of 2005 with only four percent of those applicants receiving offers of employment. The age of participants at time of recruitment ranged from 21 to 43 with a mean age of 26. Twenty-six percent of the officers were of minority racial or ethnic status. The police department is located in a Midwest metropolitan city. It is the largest city in the state with an estimated population of 350,000. The police department is the largest department in the state with approximately 653 commissioned officers and 192 civilian employees serving a 153 square mile area.

Materials

All potential candidates undergo standardized hiring procedures set forth by the police department. Candidates are evaluated for hire on several measures. Due to the quantitative nature of the study, those measures that are more qualitative and do not yield a score of some
kind will not be included in the study. There are numerous quantifiable pre-employment measures that can be included in the analyses, and it is necessary to reduce the number of predictors used in the study to the most important screening measures in order to satisfy statistical limitations. The rationale used to reduce the number of predictor variables used in the study and descriptions of the predictors is provided below.

**Education**

The first step in the hiring procedure is to ensure that the applicant meets all entrance requirements and minimum standards for employment (See Appendix B). Of the minimum requirements set forth by the police department, education is the only variable that was included in the study. The police department requires a high school diploma or equivalent to be eligible for employment. However, level of education and grade point averages (GPA) are considered in the hiring process. Information on the number of years of education, high school GPA, and college GPA have been collected. However, in order to reduce the number of independent variables in the study, the analyses will utilize level of education as the education predictor variable. The decision to use level of education as an independent variable came from information revealed in the literature review, which indicated that academy scores and supervisor ratings improved as a function of level of education. Years of education was coded into four categories including no college = 0, some college = 1, bachelor’s degree = 2, and master’s degree = 3.

**Law Enforcement Aptitude Test Score**

Early in the hiring process, the applicant must file an application with the city’s human resource office and pass a written aptitude test, which is also scheduled through human
resources. The test is published by the International Public Management Association for Human Resources (IPMA-HR, Alexandria, VA). This aptitude test heavily assesses reading comprehension. Applicants are allowed one hour and forty-five minutes to complete the test. Prior to the test, applicants are allowed twenty-five minutes to review a study guide and recall of this information is assessed later during the testing portion of the exam. The test also evaluates vocabulary knowledge and map reading ability. The aptitude test yields an overall percentage score with a minimum of 60% considered passing.

**Physical Agility Composite Score**

After an initial contact interview, those candidates that are still in consideration are required to meet minimum fitness requirements to remain eligible. Prior to participating in any physical fitness testing, the candidates must receive physician’s approval at the expense of the candidate. The physical agility testing requires the candidate to demonstrate his or her strength, endurance and fitness on a series of scheduled tests in order to evaluate the candidate’s physical capacity to perform the duties of an entry-level police officer. The first task is a body drag simulation where the candidate must drag a 5’9” tall and 158-pound mannequin a distance of thirty feet in nine seconds or less. This task measures the candidate’s ability to remove an incapacitated person from a hazardous area. The second task is a simulated suspect chase where the candidate completes an obstacle course in which one must scale a five-foot wooden fence, hurdle a three-foot obstacle, climb through a window four feet above the ground, and run a total of 160 yards. The obstacle course must be completed within forty-seven seconds. If the candidate fails to complete the two tasks within the allotted time frames after two attempts, the candidate is disqualified. Completion times in seconds will be recorded for each of the participants. The completion times for these two tasks and the Cooper’s Run, another physical
test, which is administered later in the hiring process, will be used to calculate an overall physical agility composite score. The Cooper’s Run originates from the Cooper Institute for Aerobic Research (1986). Researchers at this institute have studied and published a standard that has been adopted by numerous agencies to evaluate physical fitness of law enforcement candidate based on job requirements. The Cooper’s Run is a mile and a half timed run. The maximum time allotted is fourteen minutes. Any time exceeding fourteen minutes is deemed a failure. Candidates are allowed additional opportunities to complete this test if initially failed; however, if unable to complete the run in the allotted time, the candidate is disqualified from consideration of employment at that time. Each participant will yield a completion time in minutes and seconds. This completion time will be summed with the completion times for the previously discussed body drag and obstacle course tasks to yield an overall completion time in seconds for the physical selection measures with lower values representing faster completion times. The sample’s completion times ranged from the fastest performance of 528.87 seconds for all three physical tasks to 893.43 seconds. The calculation of a composite score for physical ability allows the number of independent variables in the analyses to be reduced.

**Oral Interview Board Score**

One of the final steps in the selection process, prior to extending a conditional offer of employment to potential candidates, is an interview conducted by the training bureau. Those candidates that are still in consideration are invited to an oral interview. A panel of four board members conducts the interview. Three of the board members are selected from within the police department and the fourth board member is a respected member of the community. In addition, at least one of the board members must qualify as a member of a recognized minority group. The interview is a structured interview with all applicants receiving a standardized list of
questions. In order to maintain the integrity of the interview process, the list of questions will not be included in this manuscript. However, the interview questions are designed to assess nine various behavioral dimensions of the candidates including decisiveness, ethical standards, skills in human relations, impact, initiative, judgment, motivation for law enforcement work, oral communication skills, and problem analysis ability. Each of these nine behavioral dimensions are rated individually by each board member on a nine-point Likert scale with one being the lowest rating and nine being the highest rating possible. Board members are instructed to assume that all candidates begin the interview with a rating of five on each of the dimensions with the rating moving up and down accordingly. After the board members’ ratings are tallied, each of the behavioral dimensions is weighted differently in calculating the final oral board score. Again, to maintain the integrity of the interview process, the specific weightings for each category will not be included in this manuscript. After the weighting of the various dimensions, the minimum score required to pass this task is a thirty-six with the highest score that can be achieved is a sixty-five. Higher scores indicate stronger performance. In order to reduce the number of independent variables used in the analyses, the oral board score will be the variable used to represent the interview as a selection measure. The decision to use the oral board score as opposed to the initial interview score was determined by the structured nature and use of panelists on the oral board scores.

Those candidates that have successfully completed the previous selection criteria and have been selected as the most qualified candidates by the training bureau are invited for the final step in the selection process before a conditional offer of employment is extended. This final step is a personal interview with command staff of the police department. There is no score associated with this interview and thus it will not be included in the study. However, if the
command staff recommends the hire of a potential candidate, the second phase of the selection process will begin. The second phase and the final step of the hiring process is initiated after a conditional offer of employment has been extended to the candidate and it includes the Cooper’s Run Test, which was discussed earlier as part of the physical ability composite score, and a thorough psychological and physical examination. Results from the physical examination will not be included in the study as this is a pass or fail measure and all participants in the study have passed this portion of the selection procedures.

Psychological Inventories

Due to the psychological focus of this study’s investigation, the procedures utilized by the psychology consultants in conducting the psychological evaluations are of considerable interest. The psychological evaluations include an administration of the Wonderlic Personnel Test (WPT, Wonderlic, 2000), the Minnesota Multiphasic Personality Inventory-2 (MMPI-2, Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), the Inwald Personality Inventory (IPI, Inwald, 1992), general informed consent and legal release, a biographical information questionnaire, a public safety profile, and finally, a structured interview with a licensed psychologist. The elements of the evaluation are not necessarily conducted in this order. The WPT, MMPI-2, IPI, and the psychologists’ recommendations will be included in the study. However, the remaining sections of the psychological evaluation will not be included as variables in the study due to their qualitative nature.

Wonderlic Personnel Test

The Wonderlic Personnel Test (WPT) is a brief test of general intelligence. It is comprised of 50-items and can be administered in 12 minutes. Raw scores range from 0 to 50,
with the average raw score for patrol applicants nationwide being 21. The test also yields a percentile rank allowing evaluators to compare applicants to the general working population. Items include word and number comparisons, disarranged sentences, serial analysis of geometric figures and story problems that require mathematical and logical solutions. The most recent user’s manual (Wonderlic, 2000) cites the test as correlating very highly with the WAIS-R Full Scale Intelligence Quotient yielding correlation coefficients ranging from .89 to .96. The manual also provides a conversion table allowing investigators to convert Wonderlic scores to their WAIS Full Scale IQ equivalent. Wonderlic scores were converted into IQ equivalents, with a mean of 100 and a standard deviation of fifteen, in order to ease with the interpretation of the analyses.

**Minnesota Multiphasic Personality Inventory-2**

The Minnesota Multiphasic Personality Inventory-2 (MMPI-2) is one of the most widely used assessment tools for personality style and psychopathology. The psychologists use the aid of The Minnesota Report: Revised Personnel System (Butcher, 2001) to assist them in scoring and interpreting the MMPI-2. The Minnesota Report is a computerized scoring and report system designed to help psychologists make employment recommendations for high risk, high stress, public safety positions such as law enforcement, firefighters, and airline pilots. The report provides a profile or listing of scores for more than 100 MMPI-2 scales, including validity scales, clinical scales, clinical subscales, content scales, content component scales, and supplementary scales. In addition, the report provides occupation specific mean profiles and provides graphically presented scores for five important work-related dimensions. Based on meta-analytic findings of Aamodt (2004a), this study will focus on the four scale configurations presented in the research on law enforcement selection. The Good Cop/Bad Cop Profile (Blau,
Super, & Brady, 1993) was configured by determining those participants that scored above a 60 on the Hy, Hs, Pd, and Ma scales and above a 70 on the other basic nine clinical scales. High T scores on the clinical scales are believed to be an indication of pathology (Refer to Appendix A for descriptions of the various scales). Any T score above these cutoffs indicate a bad cop profile, while those profiles with T scores below were considered to be a good cop profile.

Those participants that met the criteria for the good cop profile and those for the bad cop profile were coded using a dichotomous variable (1 = Good Cop and 2 = Bad Cop). The Goldberg Index was calculated by using the following formula with the T scores for, L+Pa+Sc-Hy-Pt. The L, Pa, and Sc scales are believed to measure psychotic like symptoms where the Hy and Pt scales are more neurotic measures, which serve a dampening function for the psychotic scales. While the total score on the Goldberg Index was entered in the data set for each participant, scores above a 60 on the Goldberg Index are believed to be a sign of psychosis in the law enforcement literature (Costello, Schneider, Schoenfeld, & Kobos, 1982). The Husemann Index was calculated by summing the T scores for the F, Pd, and Ma scales with a maximum cutoff score of 192 (Costello & Schneider, 1996). These scales measure deviant behavior and the total score on the index was entered for each participant. Finally, the Aamodt Scale (Aamodt, 2004a) was calculated by summing the T scores for F and Ma scales, which also measure deviant behavior. Although there was no cutoff score published for this scale, lower scores are more desirable for applicants. In order to reduce the number of independent variables utilized in the analyses these four scale configurations were the only MMPI-2 variables used in the analyses.

**Inwald Personality Inventory**

The Inwald Personality Inventory (IPI) is a paper and pencil self-report measure specifically developed for the assessment of law enforcement personnel. It was designed to
assess the personality, attitudes, and behavioral characteristics of law enforcement applicants. It yields five police performance prediction scales along with scale scores on 26 various employment dimensions. In order to reduce the number of variables, the five prediction scales will be the only scales included in the analyses. The prediction scales predict public safety performance difficulties (1 = low performance risk, 2 = moderate performance risk, 3 = high performance risk), tardiness (1 = late ≥ 3 times, 2 = Late < 3 times), number of absences (1 = absent ≥ 3 times, 2 = absent < 3 times), disciplinary actions (1 = disciplinary action during the first year, 2 = no disciplinary action within the first year), and possible terminations during the first year of employment (1 = terminated, 2 = not terminated). For all of the prediction scales higher scores indicate positive performance except for the prediction of performance difficulties scale where higher scores indicate more negative performance. These five predictions were coded and used as the only IPI independent variables in the analyses in order reduce the number of predictors.

Psychologists’ recommendations

The psychologists provide the law enforcement agency with a written evaluation reporting the results from their assessments and clinical interpretations. They draw clinical conclusions based on the integration of the information provided by the department and their evaluations. From these conclusions they provided recommendations to the department on each applicant. The recommendations section of the psychological reports were reviewed and coded into three categories including low = 1, moderate = 2, and high risk = 3 for employment problems. Therefore, lower scores indicate more positive recommendations.
The psychological evaluations conclude the screening procedures for the selection of law enforcement personnel and are the final measures collected during the pre-employment phase. Therefore, the study will investigate the predictive value of the previously described pre-employment selection measures in predicting officer performance. The independent variables are level of education, the Law Enforcement Aptitude Test Score, the physical agility composite time, the Oral Interview Board Score, the Wonderlic score IQ equivalent, the four MMPI-2 scale configurations, the five Inwald Personality Inventory prediction scales, and the psychologists’ recommendations. Gender will also be included as one of the independent variables totaling sixteen possible prediction variables. These pre-employment law enforcement selection measures will be analyzed in order to determine their ability to predict performance of law enforcement personnel. Performance measures will be collected throughout the first year of employment during academy training, field training, and the remainder of the probationary year period. Academy scores, field training ratings, yearly performance ratings and termination records will be the post-employment performance measures included in this study. Post-employment, performance measures to be included in the study are listed as follows in the order in which they are collected through the first year.

**Academy Scores**

Those applicants that have been selected for employment begin academy training as a police recruit. The academy consists of 23 weeks of basic law enforcement training in a classroom setting. Training during the academy focuses on legal aspects of law enforcement, defense tactics and control techniques, criminal investigation, and police response to community problems. Performance indicators obtained during the academy include scores on academic quizzes/exams, fitness assessments, and demonstration of firearms capability. Exams vary in
form and content across academy classes. Because the average GPAs ranged from 85.65 to 92.85 across the 5 academy classes (overall average was 88.27), cadet grades in each class were standardized by subtracting the cadet’s average from the class average and dividing by the class standard deviation creating z-scores.

**Field Training Ratings**

After graduating from the academy, recruits are promoted to police officer and begin eight weeks of field training that pairs each new officer with a veteran officer. Training with veteran officers assists the new officers in applying their classroom training to practical situations in the field. Performance in field training is indicated by supervisory ratings. Officers in training are evaluated daily by their supervisor on 21 dimensions of law enforcement such as, knowledge of the law, driving skills, and report writing. Every two weeks in field training, the supervisor completes an end-of-phase report evaluating the new officer’s overall performance for the previous two weeks yielding four end-of-phase reports for each officer. Officers are rated on the various dimensions using a five-point Likert scale ranging from unacceptable performance to outstanding performance. A composite field training rating score was calculated by averaging the four end-of-phase reports on each of the 21 dimensions. Then the averages for those dimensions were summed to yield a final composite score with higher scores indicating better performance.

**Probationary Performance Appraisals**

The first year of employment as a law enforcement officer is considered a probationary period of employment. Upon completion of the probationary year, supervisors complete an evaluation. The probationary appraisals changed in content after the first two academy classes.
The original form rated officers on nine dimensions of job performance such as initiative, quality of work, and interpersonal skills along with an overall performance rating. The revised version reduced the number of dimensions to six and continued to include the overall performance rating. Therefore, the overall performance rating was used as the criterion variable for this performance measure. The same five-point Likert scale is utilized to assess performance ranging from unacceptable performance to outstanding performance.

Terminations/Resignations

Officer’s employment may be terminated during that first year due to personal reasons, transfers, or due to cause. It may be helpful to think of this performance criteria as a continuation measure where officers will belong to one of two groups, those that are still employed as law enforcement officers at the end of one year and will continue with patrol duty or those that have been terminated due to cause or personal reasons and will not be continuing past the first year. This variable was coded as a dichotomous variable with the two categories being those that continue past the first year = 1 and those that do not = 2. Of the officers that were no longer employed at the end of the first year, eight were terminated due to cause and six resigned for personal reasons. Although this study will not examine the differences between the two groups that leave the department, the reader can refer to Appendices E and F for individual score profiles for those officers no longer employed at one year.

The previously described pre-employment selection measures will be analyzed to determine the strongest predictors of officer performance within the first year of employment. However, these original possible sixteen predictors may not all be used in each analysis given the their individual contribution toward prediction of the various criterion variables and statistical
limitations. Refer to Table 10 for a list of the sixteen possible independent variables and the four dependent variables used in this dissertation.

TABLE 10

INDEPENDENT AND DEPENDENT VARIABLES

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td>1. Academy Z-scores</td>
</tr>
<tr>
<td>2. Level of education</td>
<td>2. Field training ratings composite score</td>
</tr>
<tr>
<td>3. Law enforcement aptitude test score</td>
<td>3. Overall performance rating from the yearly evaluations</td>
</tr>
<tr>
<td>4. Physical agility composite time</td>
<td>4. 1 year employment status</td>
</tr>
<tr>
<td>5. Oral interview board score</td>
<td></td>
</tr>
<tr>
<td>6. Wonderlic score IQ equivalent</td>
<td></td>
</tr>
<tr>
<td>7. MMPI-2 Good Cop/Bad Cop Profile</td>
<td></td>
</tr>
<tr>
<td>8. MMPI-2 Goldberg Index</td>
<td></td>
</tr>
<tr>
<td>9. MMPI-2 Husemann Index</td>
<td></td>
</tr>
<tr>
<td>10. MMPI-2 Aamodt Scale</td>
<td></td>
</tr>
<tr>
<td>11. IPI prediction of public safety scale</td>
<td></td>
</tr>
<tr>
<td>12. IPI prediction of tardiness</td>
<td></td>
</tr>
<tr>
<td>13. IPI prediction of absenteeism</td>
<td></td>
</tr>
<tr>
<td>14. IPI prediction of disciplinary problems</td>
<td></td>
</tr>
<tr>
<td>15. IPI prediction of termination</td>
<td></td>
</tr>
<tr>
<td>16. Psychologists’ recommendations</td>
<td></td>
</tr>
<tr>
<td>1. Academy Z-scores</td>
<td></td>
</tr>
<tr>
<td>2. Field training ratings composite score</td>
<td></td>
</tr>
<tr>
<td>3. Overall performance rating from the yearly evaluations</td>
<td></td>
</tr>
<tr>
<td>4. 1 year employment status</td>
<td></td>
</tr>
</tbody>
</table>

Procedure

Now that the pre-employment selection measures and the post-employment performance measures have been discussed, the process in which applicants are screened and procedures of data collection will be reviewed. Although some of the procedures discussed below are not included in the study, they will be explained here in order for the reader to gain a better understanding of the process by which officers are selected and particularly the highly selective nature of the task. The police department’s training bureau is responsible for the recruitment, hiring, and training of police recruits. To become a police recruit there are several steps one
must complete in the law enforcement selection process. The initial steps to becoming a police recruit are conducted by the bureau. There are ten steps in this first phase of the hiring procedure, and they are as follows: The very first step to becoming an officer is to meet all entrance requirements and minimum standards set for the by the city. The police department has customary entrance requirements for the academy applicants including minimum 21 years of age, U.S. citizenship, high school diploma or G.E.D., valid driver’s license, physical requirements, and no previous felonies (See Appendix B). Then an application with the city’s human resource office must be completed as well as a city personnel aptitude test. The applicant will then have an initial interview with the training bureau staff, which also conducts a physical agility test, a polygraph examination, and a thorough background investigation. Successful applicants will also complete a personal history form. The last steps in the initial phase include an oral interview with a panel of training department staff before a final interview with the police department’s command staff.

Those applicants that have successfully made it through this first phase and are selected by the training department are extended a conditional offer of employment before initiating the final phase of the selection process. The final phase consists of a comprehensive physical examination conducted by a contracted physician and a Cooper’s Run, which is a timed mile and a half run. Completing the final phase of the selection process is the psychological evaluation conducted by licensed psychologists. The psychological evaluation consists of general informed consent and legal release, a biographical information questionnaire, the Public Safety Profile, which is a subjective sentence completion task, and a structured interview with the psychologist. As discussed in the measures section, the psychological evaluations also consist of three objective assessment instruments including the Wonderlic Personnel Test, the MMPI-2, and the
Inwald Personality Inventory. The psychologists draw from and integrate this information in order to provide their recommendations. Upon successful completion of the final selection phase, the individual begins academy training as a police recruit.

The 23-week comprehensive academy training takes place at the training bureau and is conducted by professional law enforcement instructors and begins the first probationary year of employment. Academy training is carried out in an academic, classroom style format. Training in several areas of law enforcement is covered. Recruits learn such things as state statutes and city ordinances when focusing on legal aspects of law enforcement. The use of firearms and emergency vehicle operation are some examples of topics covered in area of defense tactics and control techniques. When learning how to conduct criminal investigations, recruits are trained in such things as principles and techniques of interviewing, crime scene investigation, and report writing. Police recruits also must be taught how to respond to community problems, receiving training in such areas as conflict resolution, mental illness, and first aid/CPR. Evaluation during the academy includes regular quizzes and examinations.

After graduating the academy, the police recruit will be promoted to police officer and will then begin field training. During field training the newly promoted police officers are assigned to work with an experienced field training officer for a period of eight weeks. The field training experience allows the new officers the chance to gain on-the-job training that will equip them with the special skills and knowledge necessary in the law enforcement field. New officers are learning such things as how to navigate their patrol, respond to calls, handle suspects, maintain paperwork, and how to problem solve and make decisions on the street. Performance evaluations during field training are conducted regularly in the form of supervisory ratings. Upon completion of the eight-week field training, officers are typically assigned their own patrol
duty on either first, second, or third shift. However, the training department has the authority to terminate the individual for poor performance or recommend some further on-the-job training to focus on remediation of areas of weakness.

Those that successfully complete the field training work the remainder of the probationary year performing typical police officer duties. Indicators of performance during this period include any commendations or disciplinary actions as well as yearly supervisory evaluations. At any stage during this probationary year, an individual may be disqualified or terminated. Some officers may choose to quit the job due to personal reasons or transfer to another law enforcement agency. Records of termination and transfers are maintained by the training bureau as well as all other data collected during the probationary year including information obtained during the law enforcement selection process, academy, and field training. The training bureau staff number codes the data to ensure officer confidentiality before transferring the data to the university researchers to be analyzed. In addition, limited demographic information (i.e. gender and education level) is released to the researchers in effort to protect the officers’ identities. Therefore, racial and minority status information was not released to the researcher.

During the academy, recruits are solicited to participate in the longitudinal study and give their consent to release their information to the researchers (See Appendix D). The tracking and transferring of data has been prepared for the previous five academy classes through fall of 2002 to spring of 2005. Academy class size varies between recruit classes with the range being 11 to 25 recruits per class. The class size varies because the number of open positions and available funding determines the number of applicants hired in a given period. There are generally two
academy classes recruited in a given year. However, there was no academy class during the fall of 2003 due to unusually low attrition rates within the department.
CHAPTER 4

RESULTS

In order to examine which law enforcement selection measures predict police job performance, a series of statistical analyses were conducted. The statistical procedures included descriptive statistics, correlation analyses between the independent and dependent variables and several multiple and logistic regression analyses with the various criterion measures. Not all sixteen possible predictor variables were utilized in each regression analyses in order to reduce the number of predictors further and eliminate those that did not contribute to prediction or did not meet statistical limitations. All analyses were performed with the Statistical Package for Social Sciences – version 11.5 (SPSS Inc., Chicago, IL).

Prior to initiating the statistical analyses, data screening led to the elimination of two cases due to excessive amounts of missing data. Screening also revealed that there were missing data for five cases for the level of education variable. Therefore, missing data for that variable was replaced with the mode, which was “some college credit”. Univariate outliers were detected by transforming the data to z scores. According to guidelines presented by Mertler and Vannatta (2001), any z value greater than +3.00 or less than -3.00 was considered a possible outlier. Three variables presented with possible univariate outliers. The first being IQ equivalents for the Wonderlic score. One candidate was assessed to have an unusually high IQ for the sample, 140, which is 3.16 standard deviations above the sample mean. Therefore, it was determined to replace the outlying value with the maximum score for the sample range of that variable, which was 128. Possible outliers were also identified for the Inwald Personality Inventory Prediction of Public Safety Performance and Prediction of Termination within the First Year Scales. Very few cases were predicted to be high public safety risks or terminated within the first year.
contributing to those seven cases that were to be above three standard deviations from the mean. However, due to the low base rate prediction of these categorical variables and the importance of identifying predictors for low occurring negative performance indicators, the researcher determined that the information obtained from those cases were valuable to the analyses and the decision was made for them to remain in the sample.

Descriptive Statistics

Descriptive statistics were calculated for the law enforcement selection measures and the performance measures presented in Table 11. As shown in Table 11, several of the variables displayed marked skewness and kurtosis. Many of these variables include variables that are more categorical in nature with small ranges of 1 or 2 such as gender, the MMPI-2 Good Cop/Bad Cop Profile, the psychologists’ recommendations, and the prediction scales from the Inwald Personality Inventory. Table 12 presents frequencies of these categorical variables. Although the aptitude scores were not categorical in nature, they also displayed negative levels of kurtosis.
<table>
<thead>
<tr>
<th>Predictor</th>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Gender</td>
<td>90</td>
<td>.22</td>
<td>.00</td>
<td>.00</td>
<td>.42</td>
<td>.00</td>
<td>1</td>
<td>1.36</td>
<td>-.16</td>
</tr>
<tr>
<td>Level of education</td>
<td>Level of education</td>
<td>90</td>
<td>1.42</td>
<td>1</td>
<td>1</td>
<td>.56</td>
<td>.00</td>
<td>3</td>
<td>.25</td>
<td>-.28</td>
</tr>
<tr>
<td>Physical agility</td>
<td>Physical agility</td>
<td>90</td>
<td>734.06</td>
<td>725.06</td>
<td>528.87</td>
<td>80.67</td>
<td>528.87</td>
<td>893.43</td>
<td>-.06</td>
<td>-.71</td>
</tr>
<tr>
<td>Oral interview</td>
<td>Oral interview</td>
<td>90</td>
<td>49.51</td>
<td>49.35</td>
<td>47.83</td>
<td>5.58</td>
<td>37.23</td>
<td>60.08</td>
<td>-.11</td>
<td>-.72</td>
</tr>
<tr>
<td>Wonderlic</td>
<td>Wonderlic</td>
<td>90</td>
<td>107.58</td>
<td>106</td>
<td>106</td>
<td>9.84</td>
<td>86</td>
<td>128</td>
<td>.13</td>
<td>-.58</td>
</tr>
<tr>
<td>MMPI-2 Good/Bad</td>
<td>MMPI-2 Good/Bad</td>
<td>90</td>
<td>1.26</td>
<td>1</td>
<td>1</td>
<td>.44</td>
<td>1</td>
<td>2</td>
<td>1.14</td>
<td>-.72</td>
</tr>
<tr>
<td>MMPI-2 Goldberg</td>
<td>MMPI-2 Goldberg</td>
<td>90</td>
<td>59.94</td>
<td>60.50</td>
<td>59</td>
<td>14.24</td>
<td>17</td>
<td>92</td>
<td>-.34</td>
<td>-.02</td>
</tr>
<tr>
<td>MMPI-2 Husemann</td>
<td>MMPI-2 Husemann</td>
<td>90</td>
<td>143.52</td>
<td>144</td>
<td>143</td>
<td>9.66</td>
<td>121</td>
<td>164</td>
<td>.01</td>
<td>-.49</td>
</tr>
<tr>
<td>MMPI-2 Aamodt</td>
<td>MMPI-2 Aamodt</td>
<td>90</td>
<td>91.19</td>
<td>90.50</td>
<td>90</td>
<td>7.24</td>
<td>77</td>
<td>109</td>
<td>.27</td>
<td>-.17</td>
</tr>
<tr>
<td>IPI Public Safety</td>
<td>IPI Public Safety</td>
<td>90</td>
<td>1.17</td>
<td>1</td>
<td>1</td>
<td>.43</td>
<td>1</td>
<td>3</td>
<td>2.64</td>
<td>6.67</td>
</tr>
<tr>
<td>IPI Late</td>
<td>IPI Late</td>
<td>90</td>
<td>1.89</td>
<td>2</td>
<td>2</td>
<td>.32</td>
<td>1</td>
<td>2</td>
<td>-2.52</td>
<td>4.43</td>
</tr>
<tr>
<td>IPI Absent</td>
<td>IPI Absent</td>
<td>90</td>
<td>1.61</td>
<td>2</td>
<td>2</td>
<td>.49</td>
<td>1</td>
<td>2</td>
<td>-.46</td>
<td>-1.83</td>
</tr>
<tr>
<td>IPI Discipline</td>
<td>IPI Discipline</td>
<td>90</td>
<td>1.78</td>
<td>2</td>
<td>2</td>
<td>.42</td>
<td>1</td>
<td>2</td>
<td>-1.36</td>
<td>-1.57</td>
</tr>
<tr>
<td>IPI Termination</td>
<td>IPI Termination</td>
<td>90</td>
<td>1.94</td>
<td>2</td>
<td>2</td>
<td>.23</td>
<td>1</td>
<td>2</td>
<td>-3.95</td>
<td>13.88</td>
</tr>
<tr>
<td>Psych rec.</td>
<td>Psych rec.</td>
<td>90</td>
<td>1.14</td>
<td>1</td>
<td>1</td>
<td>.35</td>
<td>1</td>
<td>2</td>
<td>2.06</td>
<td>2.28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy scores</td>
<td>Academy scores</td>
<td>86</td>
<td>.00</td>
<td>.00</td>
<td>-.14</td>
<td>.99</td>
<td>-2.19</td>
<td>1.88</td>
<td>-.16</td>
<td>-.89</td>
</tr>
<tr>
<td>Field Trng Ratings</td>
<td>Field Trng Ratings</td>
<td>81</td>
<td>66.60</td>
<td>65.50</td>
<td>65</td>
<td>2.87</td>
<td>61.50</td>
<td>75.25</td>
<td>1.04</td>
<td>.67</td>
</tr>
<tr>
<td>Yearly ratings</td>
<td>Yearly ratings</td>
<td>69</td>
<td>3.17</td>
<td>3</td>
<td>3</td>
<td>.38</td>
<td>3</td>
<td>4</td>
<td>1.76</td>
<td>1.13</td>
</tr>
<tr>
<td>1 yr employ. status</td>
<td>1 yr employ. status</td>
<td>90</td>
<td>1.17</td>
<td>1</td>
<td>1</td>
<td>.37</td>
<td>1</td>
<td>2</td>
<td>1.82</td>
<td>1.34</td>
</tr>
</tbody>
</table>

**TABLE 12**

**FREQUENCIES FOR THE CATAGORICAL VARIABLES**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male = 70 Female = 20</td>
</tr>
<tr>
<td>Psych rec.</td>
<td>Low risk = 77 Moderate risk = 13 High risk = 0</td>
</tr>
<tr>
<td>MMPI-2 Good/Bad</td>
<td>Good Cop = 67 Bad Cop = 23</td>
</tr>
<tr>
<td>IPI Public Safety</td>
<td>Low risk = 77 Moderate risk = 11 High risk = 2</td>
</tr>
<tr>
<td>IPI Late</td>
<td>Late ≥ 3 times = 10 Late &lt; 3 times = 80</td>
</tr>
<tr>
<td>IPI Absent</td>
<td>Absent ≥ 3 times = 35 Absent &lt; 3 times = 55</td>
</tr>
<tr>
<td>IPI Discipline</td>
<td>Disciplinary action = 20 No disciplinary action = 70</td>
</tr>
<tr>
<td>IPI Terminate</td>
<td>Terminated = 5 Not Terminated = 85</td>
</tr>
<tr>
<td>1 yr. employ. Status</td>
<td>Employed = 75 Not employed = 15</td>
</tr>
</tbody>
</table>
Correlation Analyses

Bivariate correlations using the Pearson’s $r$ statistic were obtained to examine the relationship between variables. Calculating Pearson’s $r$ correlations between the independent and dependent variables allowed the researcher to establish which law enforcement selection procedures were related to police officer performance.

In the following paragraphs, the statistically significant correlation analyses between the predictor and criterion variables are reported. Table 13 provides a complete list of correlations between the four potential criterion variables (academy $z$ scores, field training ratings’ composite score, yearly evaluations’ overall performance rating, and employment status at one-year tenure) and the sixteen potential predictor variables (gender, level of education, law enforcement aptitude test score, physical agility tasks’ composite time, oral interview board score, Wonderlic score IQ equivalent, MMPI-2 Good Cop/Bad Cop Profile, MMPI-2 Goldberg Index, MMPI-2 Husemann Index, MMPI-2 Aamodt Scale, IPI Prediction of Public Safety Scale, IPI Prediction of Tardiness Scale, IPI Prediction of Absenteeism Scale, IPI Prediction of Disciplinary Problems Scale, IPI Prediction of Termination Scale, and the coded psychologists’ recommendations). Refer to Table 14 for a list of correlations among the sixteen predictor variables.

The academy $z$ scores were the first indicators of police performance that were examined. Overall, correlations between the academy $z$ scores and the predictor variables yielded values that ranged from -.25 to .50 with a median correlation coefficient of .045. Significant positive correlations were found between the academy $z$ scores and aptitude test scores ($r = .50, n = 86, p < .01$, two-tailed), Wonderlic score IQ equivalent ($r = .40, n = 86, p < .01$, two-tailed), IPI Prediction of Disciplinary Problems Scale ($r = .29, n = 86, p < .01$, two-tailed), and level of education ($r = .22, n = 86, p < .05$, two-tailed). One significant negative correlation occurred
between academy z scores and the IPI Prediction of Public Safety Scale ($r = -.25, n = 86, p < .05$, two-tailed).

The second indicator of police performance that was examined involved the field training ratings’ composite score. Correlations between the field training ratings’ composite score and the law enforcement selection measures demonstrated values that ranged from -.31 to .21 with a median correlation coefficient of .025. One negative correlation existed between the field training ratings’ composite score and the MMPI-2 Goldberg Index ($r = -.31, n = 81, p < .01$, two-tailed).

The yearly evaluations’ overall performance rating was the third performance variable that was analyzed. Correlations between this variable and the predictor variables yielded values that ranged from -.31 to .27 with a median correlation coefficient of .095. One significant positive correlation was demonstrated with the MMPI-2 Good Cop/Bad Cop Profile ($r = .27, n = 69, p < .05$, two-tailed) and one negative correlation with the IPI Prediction of Absenteeism Scale ($r = -.31, n = 69, p < .05$, two-tailed).

The final indicator of police performance was employment status at one year tenure. Overall correlations between employment status and the predictor variables ranged from -.12 to .33 with a median correlation coefficient of .05. There were two significant positive correlations observed between employment status and the psychologists’ recommendations ($r = .33, n = 90, p < .01$, two-tailed) and the IPI Prediction of Public Safety Scale ($r = .24, n = 90, p < .05$, two-tailed).
<table>
<thead>
<tr>
<th></th>
<th>Academy scores</th>
<th>Field Training Ratings</th>
<th>Yearly ratings</th>
<th>1 yr employment status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.17</td>
<td>.12</td>
<td>.17</td>
<td>.12</td>
</tr>
<tr>
<td>Level of education</td>
<td>.22*</td>
<td>.04</td>
<td>.22</td>
<td>-.12</td>
</tr>
<tr>
<td>Aptitude score</td>
<td>.50**</td>
<td>.21</td>
<td>.09</td>
<td>-.04</td>
</tr>
<tr>
<td>Physical agility</td>
<td>-.12</td>
<td>.01</td>
<td>-.01</td>
<td>.14</td>
</tr>
<tr>
<td>Oral interview</td>
<td>.07</td>
<td>.07</td>
<td>-.10</td>
<td>-.03</td>
</tr>
<tr>
<td>Wonderlic</td>
<td>.40**</td>
<td>.12</td>
<td>-.10</td>
<td>.04</td>
</tr>
<tr>
<td>MMPI-2 Good/Bad</td>
<td>.11</td>
<td>.07</td>
<td>.27*</td>
<td>.15</td>
</tr>
<tr>
<td>MMPI-2 Goldberg</td>
<td>-.08</td>
<td>-.31**</td>
<td>.15</td>
<td>.02</td>
</tr>
<tr>
<td>MMPI-2 Husemann</td>
<td>.02</td>
<td>-.21</td>
<td>.13</td>
<td>.06</td>
</tr>
<tr>
<td>MMPI-2 Aamodt</td>
<td>-.13</td>
<td>-.20</td>
<td>.12</td>
<td>.13</td>
</tr>
<tr>
<td>IPI Public Safety</td>
<td>-.25*</td>
<td>-.02</td>
<td>-.05</td>
<td>.24*</td>
</tr>
<tr>
<td>IPI Late</td>
<td>-.03</td>
<td>-.04</td>
<td>.18</td>
<td>.06</td>
</tr>
<tr>
<td>IPI Absent</td>
<td>.07</td>
<td>.04</td>
<td>-.31*</td>
<td>-.07</td>
</tr>
<tr>
<td>IPI Discipline</td>
<td>.29**</td>
<td>.09</td>
<td>-.04</td>
<td>-.05</td>
</tr>
<tr>
<td>IPI Termination</td>
<td>-.01</td>
<td>-.18</td>
<td>.10</td>
<td>-.02</td>
</tr>
<tr>
<td>Psych rec.</td>
<td>-.11</td>
<td>-.07</td>
<td>-.15</td>
<td>.33**</td>
</tr>
</tbody>
</table>

Note: ** Indicates significance at $p < .01$ (two-tailed), * Indicates significance at $p < .05$ (two-tailed)
TABLE 14
CORRELATIONS AMONG PREDICTOR VARIABLES

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th>Level of education</th>
<th>Aptitude score</th>
<th>Physical agility</th>
<th>Oral interview</th>
<th>Wonderlic</th>
<th>MMPI-2 Good/Bad</th>
<th>MMPI-2 Goldberg</th>
<th>MMPI-2 Husemann</th>
<th>MMPI-2 Aamodt</th>
<th>IPI Public Safety</th>
<th>IPI Late</th>
<th>IPI Absent</th>
<th>IPI Discipline</th>
<th>IPI Termination</th>
<th>Psych rec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of education</td>
<td>.03</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aptitude score</td>
<td>-.06</td>
<td>.17</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical agility</td>
<td>.32**</td>
<td>-.14</td>
<td>-.10</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral interview</td>
<td>-.06</td>
<td>.13</td>
<td>.03</td>
<td>.11</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wonderlic</td>
<td>-.02</td>
<td>.14</td>
<td>.62**</td>
<td>.02</td>
<td>.08</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMPI-2 Good/Bad</td>
<td>.24*</td>
<td>.18</td>
<td>-.02</td>
<td>.05</td>
<td>.02</td>
<td>-.02</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMPI-2 Goldberg</td>
<td>.03</td>
<td>-.01</td>
<td>-.13</td>
<td>.06</td>
<td>.02</td>
<td>-.13</td>
<td>-.16</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMPI-2 Husemann</td>
<td>.24*</td>
<td>.02</td>
<td>-.20</td>
<td>.01</td>
<td>-.04</td>
<td>-.11</td>
<td>.47**</td>
<td>.26*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMPI-2 Aamodt</td>
<td>.24*</td>
<td>-.13</td>
<td>-.23*</td>
<td>.15</td>
<td>-.06</td>
<td>-.14</td>
<td>.26*</td>
<td>.27**</td>
<td>.75**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPI Public Safety</td>
<td>.10</td>
<td>-.06</td>
<td>-.07</td>
<td>.04</td>
<td>.00</td>
<td>-.12</td>
<td>.07</td>
<td>-.14</td>
<td>.04</td>
<td>.03</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPI Late</td>
<td>.02</td>
<td>-.17</td>
<td>-.12</td>
<td>.07</td>
<td>-.13</td>
<td>.01</td>
<td>-.01</td>
<td>.15</td>
<td>.17</td>
<td>-.11</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPI Absent</td>
<td>-.07</td>
<td>-.09</td>
<td>.01</td>
<td>-.08</td>
<td>-.20</td>
<td>.13</td>
<td>-.11</td>
<td>-.21*</td>
<td>-.19</td>
<td>-.16</td>
<td>-.12</td>
<td>-.06</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPI Discipline</td>
<td>.16</td>
<td>.24*</td>
<td>.23*</td>
<td>-.13</td>
<td>.04</td>
<td>.23*</td>
<td>.19</td>
<td>-.00</td>
<td>.12</td>
<td>.02</td>
<td>-.29**</td>
<td>.15</td>
<td>.18</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPI Termination</td>
<td>.01</td>
<td>.01</td>
<td>.16</td>
<td>.07</td>
<td>.09</td>
<td>.07</td>
<td>.03</td>
<td>-.09</td>
<td>-.07</td>
<td>.14</td>
<td>-.36**</td>
<td>-.09</td>
<td>.21</td>
<td>.22*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Psych rec.</td>
<td>.08</td>
<td>-.24*</td>
<td>-.26*</td>
<td>.05</td>
<td>-.14</td>
<td>-.16</td>
<td>.05</td>
<td>-.05</td>
<td>.00</td>
<td>.02</td>
<td>.21*</td>
<td>.15</td>
<td>.07</td>
<td>-.08</td>
<td>-.18</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: ** Indicates significance at $p < .01$ (two-tailed), * Indicates significance at $p < .05$ (two-tailed)
Multiple Regression Analyses for Academy Scores

Forward multiple regression was conducted to determine which of nine independent variables from the original sixteen possible predictors (gender, level of education, aptitude score, physical agility, oral interview, Wonderlic, MMPI-2 Husemann, MMPI-2 Goldberg, and MMPI-2 Aamodt) were the predictors of academy scores. The seven variables that were not included in the analysis were the five Inwald prediction scales, MMPI-2 Good/Bad, and the psychologists’ recommendations. These seven variables violated the assumptions of multiple regression and were not included in the regression analyses due to their categorical nature, small ranges, low variability, and high levels of skewness and kurtosis. Data screening led to the elimination of four cases due to those individuals leaving the police force before the completion of academy training. Stepwise Regression results indicate two significant models for the prediction of academy scores. The first model consists of only one predictor variable (aptitude score), $R^2 = .246$, $R^2_{adj} = .237$, $F(1, 84,) = 27.43$, $p < .001$. This model accounted for 24.6% of the variance in academy grades. The second model consists of two predictors (aptitude score and gender) that significantly predict academy grades, $R^2 = .287$, $R^2_{adj} = .270$, $F(2, 83,) = 16.72$, $p < .001$. This model accounted for 28.7% of the variance in academy grades. While the second model accounted for 4.1% more variance than the first model, the addition of the gender variable only increased the percent of variance accounted for this much and the first model produced a much larger $F$ statistic (27.43 vs. 16.72). This indicates that aptitude is accounting for the majority of the variance in academy scores and there appears to be a gender difference in academy performance. Females received higher standard scores in the academy ($M = .32$, $SD = .88$, $n = 19$) than their male counterparts ($M = -.09$, $SD = 1.01$, $n = 67$), although, this is not a statistically significant difference $t(84) = -1.59$, $p = .116$. A summary of the regression model is presented in
In addition, bivariate and partial correlation coefficients between each predictor and the dependent variable are presented in Table 16.

### Table 15

**ACADEMY SCORES REGRESSION MODEL SUMMARY**

<table>
<thead>
<tr>
<th>Step</th>
<th>$R$</th>
<th>$R^2$</th>
<th>$R^2_{adj}$</th>
<th>$\Delta R^2$</th>
<th>$F_{chg}$</th>
<th>$F$</th>
<th>$p$</th>
<th>$df_1$</th>
<th>$df_2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aptitude Score</td>
<td>.496</td>
<td>.246</td>
<td>.237</td>
<td>.246</td>
<td>27.43</td>
<td>27.43</td>
<td>&lt;.001</td>
<td>1</td>
<td>84</td>
</tr>
<tr>
<td>2. Gender</td>
<td>.536</td>
<td>.287</td>
<td>.270</td>
<td>.041</td>
<td>4.78</td>
<td>16.72</td>
<td>&lt;.001</td>
<td>1</td>
<td>83</td>
</tr>
</tbody>
</table>

### Table 16

**ACADEMY SCORES REGRESSION COEFFICIENTS FOR FINAL MODEL**

<table>
<thead>
<tr>
<th></th>
<th>$B$</th>
<th>$\beta$</th>
<th>$t$</th>
<th>Bivariate $r$</th>
<th>Partial $r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aptitude Score</td>
<td>.062</td>
<td>.509</td>
<td>5.482*</td>
<td>.496</td>
<td>.516</td>
</tr>
<tr>
<td>2. Gender</td>
<td>.483</td>
<td>.203</td>
<td>2.186*</td>
<td>.171</td>
<td>.233</td>
</tr>
</tbody>
</table>

Note: ** Indicates significance at $p < .001$, * Indicates significance at $p < .05$
Multiple Regression Analyses for Field Training Ratings

Forward multiple regression was conducted to determine which of the nine independent variables from the original sixteen possible predictors (gender, level of education, aptitude score, physical agility, oral interview, Wonderlic, MMPI-2 Husemann, MMPI-2 Goldberg, and MMPI-2 Aamodt) were the predictors of field training supervisor evaluations. Again, the variables for the five Inwald prediction scales, MMPI-2 Good/Bad, and the psychologists’ recommendations were not included in the regression analyses due to their categorical nature, small ranges, low variability, and high levels of skewness and kurtosis. Data screening led to the elimination of nine cases due to those individuals leaving the police force before the completion of field training. Regression results indicate an overall model with only one predictor, MMPI-2 Goldberg Index (L+Pa+Sc-Hy-Pt), that significantly predicts field training evaluations, $R^2 = .097$, $R^2_{adj} = .086$, $F(1, 79,) = 8.53, p < .01$. This model accounted for 9.7% of the variance in field training evaluations. A summary of the regression model is presented in Table 17. In addition, bivariate and partial correlation coefficients between the MMPI-2 Goldberg Index and the field training evaluations are presented in Table 18.

**TABLE 17**

FIELD TRAINING RATINGS REGRESSION MODEL SUMMARY

<table>
<thead>
<tr>
<th>Step</th>
<th>R</th>
<th>$R^2$</th>
<th>$R^2_{adj}$</th>
<th>$\Delta R^2$</th>
<th>$F_{chg}$</th>
<th>$F$</th>
<th>$p$</th>
<th>$df_1$</th>
<th>$df_2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.MMPI-2 Goldberg</td>
<td>.312</td>
<td>.097</td>
<td>.086</td>
<td>.097</td>
<td>8.53</td>
<td>8.53</td>
<td>&lt;.01</td>
<td>1</td>
<td>79</td>
</tr>
</tbody>
</table>

**TABLE 18**

FIELD TRAINING RATINGS REGRESSION COEFFICIENTS FOR FINAL MODEL

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>$\beta$</th>
<th>t</th>
<th>Bivariate $r$</th>
<th>Partial $r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.MMPI-2 Goldberg</td>
<td>-.062</td>
<td>-.312</td>
<td>-2.921*</td>
<td>-.312</td>
<td>-.312</td>
</tr>
</tbody>
</table>

Note: * Indicates significance at $p < .01$
Multiple and Logistic Regression Analyses for Yearly Evaluations’ Overall Performance Rating

Multiple regression analyses were conducted to determine which of the same nine independent variables as used in the previous analyses (gender, level of education, aptitude score, physical agility, oral interview, Wonderlic, MMPI-2 Husemann, MMPI-2 Goldberg, and MMPI-2 Aamodt) were the predictors of the overall performance ratings on the yearly supervisor evaluations. Again, the variables for the five Inwald prediction scales, MMPI-2 Good/Bad, and the psychologists’ recommendations were not included in the regression analyses due to their categorical nature, small ranges, low variability, and high levels of skewness and kurtosis. Preliminary data screening led to the elimination of twenty-one cases due to missing data for the yearly evaluations. In addition, data screening led to the elimination of one multivariate outlier. Forward multiple regression results indicate that there are no significant models possible with the nine predictors for overall performance on the yearly evaluations. Standard multiple regression results with the nine predictors also indicate no significance, $F(9, 58,) = 1.36, p = .23$.

After the preliminary multiple regression results indicated a non-significant relationship between the predictor variables and the dependent variable, it was determined to perform a logistic regression for overall performance on the yearly evaluations. Logistic regression was determined to be appropriate due to the nature of our dependent variable. There was little variance in our criterion variable with all officers receiving a rating of meeting ($n = 56$) or exceeding ($n = 12$) performance expectations despite the possible five-point Likert scale from unacceptable performance to outstanding performance. Therefore, the dependent variable was recoded as dichotomous to fulfill the requirement of binary logistic regression. Due to logistic regression being a more flexible statistic and it not requiring assumptions are met by the predictor variables, the seven categorical, non-normally distributed predictors (five Inwald
prediction scales, MMPI-2 Good/Bad, and the psychologists’ recommendations) were allowed to remain in the analyses. Therefore, forward logistic regression was conducted to determine which of the sixteen independent variables (gender, level of education, aptitude score, physical agility, oral interview, Wonderlic, MMPI-2 Good/Bad, MMPI-2 Goldberg, MMPI-2 Husemann, MMPI-2 Aamodt, the five Inwald prediction scales, and the psychologists’ recommendations) were predictors of overall yearly performance ratings (meets expectations or exceeds expectations). Data screening led to the elimination of twenty-one cases due to missing data for the yearly evaluations. In addition, data screening led to the elimination of one multivariate outlier. Forward logistic regression results indicate the overall model of two predictors (IPI Prediction of Absenteeism and the MMPI-2 Good Cop/Bad Cop Profile) was statistically reliable in distinguishing between officers that met performance expectations and those that exceeded performance expectations (-2 Log Likelihood = 52.556; $\chi^2(2) = 10.819, p < .01$). The model correctly classified 83.8% of the overall cases and correctly classified 94.6% of the meets expectations cases and 33.3% of the exceeds expectation cases. Regression coefficients are presented in Table 19. Wald statistics indicated that the two variables in the model significantly predict overall yearly performance ratings. Odds ratios indicate that as the MMPI-2 Good Cop/Bad Cop Profile variable increases by one or, in other words, when officers display a bad cop profile, officers are 4.357 times more likely to be classified as exceeding expectations. The odds ratio for the IPI Prediction of Absenteeism was below one (.191), indicating that as this variable increases by one, in other words, when they are predicted to have less than three absences in the first year, the odds of being classified as exceeding expectations decreases by the respective ratio. As discussed in the section on correlations, the relationships between yearly evaluations and the predictors appear odd and may be an artifact of restricted range.
Logistic Regression Analyses for One Year Employment Status

After performing several preliminary logistic regression analyses, it was determined to present the results from a standard logistic regression analysis that utilized nine of the possible sixteen predictor variables. This model presented with the best fit for the data and correctly defined a high percentage of the cases. Therefore, standard logistic regression was conducted to determine which independent variables (physical agility, Wonderlic, MMPI-2 Good/Bad, MMPI-2 Goldberg, MMPI-2 Husemann, IPI Public Safety, IPI Absent, IPI Termination, and the psychologists’ recommendations) were predictors of employment status at one-year tenure (employed or no longer employed). Preliminary regression analyses indicated that seven of the possible sixteen predictor variables (gender, level of education, aptitude score, oral interview, IPI Late, IPI Discipline, and MMPI-2 Aamodt) contributed little to prediction of employment status, and thus, they were not included in the final analyses. This was done in order to adhere to the limitation of logistic regression where it is important to reduce the ratio of cases to variables included in the analysis (Tabachnick & Fidell, 2000). Data screening led to the elimination of one multivariate outlier. Standard logistic regression results indicate that the model was statistically reliable in distinguishing between officers that were employed at the end of the first year and those that were no longer employed with the law enforcement agency (-2 Log
Likelihood = 59.012; $\chi^2(9) = 21.723, p = .01$). The model correctly classified 88.8% of the overall cases and correctly classified 97.3% of the employed cases and 46.7% of the no longer employed cases. Regression coefficients are presented in Table 20. Wald statistics indicated that two of the nine variables in the model significantly predict employment status (psychologists’ recommendations and IPI Public Safety). Odds ratios indicate that as the variable psychologists’ recommendations increases by one or, in other words, as the psychologists’ recommendation indicates more risk for future problems, officers are 12.723 times more likely to be classified as no longer employed. As the variable IPI Prediction of Public Safety increases by one, in other words, as the risk for future employment difficulties increases on the IPI scale, officers are 8.462 times more likely to be classified as no longer employed.

**TABLE 20**

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>Wald</th>
<th>df</th>
<th>$p$</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychologists’ Rec.</td>
<td>2.543</td>
<td>9.315</td>
<td>1</td>
<td>.002</td>
<td>12.723</td>
</tr>
<tr>
<td>IPI Public Safety</td>
<td>2.136</td>
<td>6.579</td>
<td>1</td>
<td>.010</td>
<td>8.462</td>
</tr>
<tr>
<td>MMPI-2 Good/Bad</td>
<td>1.442</td>
<td>2.652</td>
<td>1</td>
<td>.103</td>
<td>4.231</td>
</tr>
<tr>
<td>MMPI-2 Goldberg</td>
<td>.045</td>
<td>1.978</td>
<td>1</td>
<td>.160</td>
<td>1.046</td>
</tr>
<tr>
<td>Wonderlic</td>
<td>.039</td>
<td>1.244</td>
<td>1</td>
<td>.265</td>
<td>1.040</td>
</tr>
<tr>
<td>Physical agility</td>
<td>.004</td>
<td>.871</td>
<td>1</td>
<td>.351</td>
<td>1.004</td>
</tr>
<tr>
<td>IPI Absent</td>
<td>-.565</td>
<td>.632</td>
<td>1</td>
<td>.427</td>
<td>.568</td>
</tr>
<tr>
<td>IPI Terminate</td>
<td>1.257</td>
<td>.343</td>
<td>1</td>
<td>.558</td>
<td>3.514</td>
</tr>
<tr>
<td>MMPI-2 Husemann</td>
<td>-.011</td>
<td>.068</td>
<td>1</td>
<td>.794</td>
<td>.989</td>
</tr>
</tbody>
</table>
CHAPTER 5
DISCUSSION

In the current dissertation, the relationship between police officer selection procedures and officer performance during the first year of employment was investigated within a local law enforcement agency. Statistical analyses were conducted to assess the ability of the pre-employment selection measures to predict scores on various indicators of job performance. To accomplish this task, archival and concurrent data were collected over a three-year period for ninety-two newly recruited police officer trainees. All participants completed the standard hiring procedures outlined by the department. The current study examined sixteen of the possible predictor variables and four criterion variables. Highlights from some of the findings in this study reveal that the psychologists’ recommendations offer a strong indication of whether or not an individual will leave the department before the completion of their first year as an officer. In addition, results from the current dissertation on education and cognitive ability are consistent with previous studies (Aamodt, 2004a) demonstrating a predictive relationship between the two selection measures and academy scores. In particular, the aptitude test administered by the municipal human resources department accounted for the most variance in academy scores. Results were not as consistent with previous research (Aamodt, 2004a) for supervisor ratings with weak predictions demonstrated for field training ratings and yearly evaluations.

Description of Findings

For a more detailed review of the results, the discussion will first focus on the descriptive statistics, then a review of the correlation analyses, followed by an examination of the regression analyses.
Descriptive Statistics

To begin, when examining the descriptive statistics and frequencies from Table 11 and 12, there are some noteworthy distinctions. One may notice that several of the variables display high levels of skewness and kurtosis especially the categorical variables. When reviewing the non-normally distributed variables such as the MMPI-2 Good Cop/Bad Cop Profile, the IPI prediction scales, and the psychologists’ recommendations, it is important to remember that the sample consists of elite members from the original applicant pool. Many of the non-normal variables attempt to predict negative performance behaviors, which one would anticipate occurring at a much lower base rate than acceptable performance behaviors. The negative kurtosis levels for the aptitude score variable may also be explained by the elite nature of the sample. The sample consists of individuals whose scores on the aptitude test already exceed the minimum requirements for hire. Therefore, the negative levels of kurtosis indicate that individuals within this sample either score well on the aptitude test or really well.

When examining the sample means and standard deviations for the independent and dependent variables, it is interesting to note that the sample mean for IQ equivalent scores on the Wonderlic (Mean = 107.58) are above the national normative sample mean of 100. This is a half a standard deviation above the normative mean and indicates that the sample mean for the newly hired officers is at about the sixty-fifth percentile. This suggests that the department as a whole is hiring applicants with IQ’s somewhat above average. It is possible that this is related to the department’s unofficial practice of hiring applicants with at least some college credit. It is also interesting to note the unequal distribution of male versus female officers. Only 22% of officers participating in the study were female. Therefore, it is difficult to interpret gender differences in job performance such as the females out performance of males on the academy scores.
Another interesting distinction from the frequencies table deals with the psychologists’ recommendations. After coding the recommendation sections of the psychologists’ narrative reports, 85% of the recruits received low risk recommendations from the psychologist indicating that there was little evidence from the psychological evaluation to suspect future employment difficulties. However, the psychologists’ assessed that there were thirteen officers with whom they anticipated mild to moderate future performance difficulties. There were, on the other hand, no officers for whom the psychologist strongly advised against hiring due to assessing a high risk for future employment difficulties.

**Correlation Coefficients**

After examining the correlation analyses, there were also some noteworthy correlation coefficients found in Tables 13 and 14. Upon reviewing the correlations between the independent and dependent variables, it is not surprising to find significant correlations between the three predictor variables, aptitude score, Wonderlic IQ equivalent, and level of education, with the performance variable, academy score. One might expect these measures of cognitive ability and achievement to relate to academy performance, which operates much like an academic setting where recruits’ ability to learn information about law enforcement is tested. The high intercorrelation between the predictor variables, aptitude scores and Wonderlic IQ, does not come as a surprise either given that these measures purport to assess the similar construct of cognitive ability. There were a couple of unexpected correlations between the yearly evaluations’ overall performance ratings and two of the predictor variables. The positive correlation between scores on the MMPI-2 Good Cop/Bad Cop Profile and the yearly ratings indicate that yearly ratings appear to improve for officers that yield a “bad” cop profile with high T scores on the MMPI-2 clinical scales. In addition, officers that the IPI predicted to have
greater than three absences in the first year receive better yearly ratings by their supervisors than those officers that were predicted to have fewer than three absences in the first year. It is difficult to explain these improbable relationships, and it is likely that the very constricted variance in yearly ratings attributes to these erratic correlations. Therefore, it is doubtful that these correlations represent true relationships, and they are more likely due to statistical artifacts. Finally, gender appears to pose as a possible confound for the analyses due to its intercorrelation among several other predictors including the physical agility composite score, the MMPI-2 Good Cop/Bad Cop Profile, Husemann Index, and the Aamodt Scale.

**Academy Scores**

Now that the descriptive statistics and the correlations analyses have been reviewed, the examination of the regression analyses will begin with academy scores as the criterion variable. The assumptions of multiple regression led to the original sixteen predictors being reduced further to only nine predictors. Of the nine predictor variables entered into the regression analysis for academy scores (gender, level of education, aptitude score, physical agility, oral interview, Wonderlic, and the three MMPI-2 scales, Husemann, Goldberg and Aamodt), aptitude scores accounted for the most variance. The aptitude score variable accounted for 24.6% of the variance in academy scores. Gender also significantly contributed 4.1% in the prediction of academy scores; however, it appears that aptitude scores provide the most useful information when trying to assess a potential recruit’s performance in the academy. As discussed earlier, correlation analyses indicate that the Wonderlic IQ equivalents and level of education were significantly related to academy scores, but when entered into the regression equation with the aptitude score variable, aptitude scores appear to be responsible for most of the prediction. The intercorrelation among these cognitive variables likely explains the reason the Wonderlic and
level of education did not contribute to prediction beyond aptitude. The specific design of the aptitude test, which assesses desired skills for law enforcement work like map reading ability as well as basic cognitive ability skills, may explain why this cognitive measure predicts academy scores better than the other cognitive variables in the study.

Field Training Ratings

After calculating forward regression analyses for supervisor field training evaluations, only one significant predictor was identified from the nine predictor variables entered into the equation. The MMPI-2 Goldberg index (L+Pa+Sc-Hy-Pt) significantly accounted for 9.7% of the variance in supervisors’ rating of the recruits’ performance in the eight week field training. This index combines the first three MMPI-2 scales of the equation which assess odd behavior or psychotic type thinking and accounts for scores on the remaining two MMPI-2 scales in the equation, which serve a dampening function toward the first three scales as they measure more worry and anxiety type traits. Although, regression analyses indicated a significant model for prediction of field training ratings, this model accounted for little variance and only included one predictor. Therefore, it appears that the pre-employment selection measures are not able to predict performance in field training with much accuracy.

Yearly Performance Evaluations

The same is true when attempting to predict supervisor ratings of overall performance on the yearly performance evaluation. Forward regression analyses failed to yield any significant predictor models. When the criterion variable was recoded as a dichotomous variable and logistic regression analyses were calculated in order to predict group membership as opposed to a score, two predictors were identified as offering some significant prediction to overall
performance ratings distinguishing between those officers that met performance expectations and those that exceeded expectations. The two predictors, MMPI-2 Good Cop/Bad Cop Profile and the IPI Prediction of Absenteeism, in the model do not appear to be real strong predictors and the results need to be interpreted with caution when examining the limited variance in our criterion variable and the unusual direction of the correlations as discussed earlier. Therefore, it appears from the data that predicting yearly performance evaluations from the pre-employment screening measures is not likely.

Overall, the evidence for the ability of the pre-employment screening measures to predict supervisor ratings during field training and at the first anniversary of employment appears to be weak. Aamodt (2004a) found stronger predictors for supervisor ratings than the current study. The small size of the sample may account for this difference as well as the operational differences in the criterion variables. As opposed to calculating a composite score for the yearly evaluations, the overall rating was used which has a restricted range and may have contributed to the different findings. Another reason the results may have differed from Aamodt’s (2004a) is the ratings used by the current department may not have been as sensitive in distinguishing officer performance as other departments’ in Aamodt’s research. The current data does, however, provide more evidence for the prediction of academy scores than supervisor impressions. It appears that screening methods that measure similar constructs as the performance measure do a better job of forecasting future performance such as cognitive ability measures and academy performance.

Aside from the aptitude scores’ ability to predict academy scores, it appears to be difficult to predict exceptional performance during the first year of employment on the police force. This is likely due in large part to the thorough job the training bureau staff does at
selecting qualified recruits for the department. They appear to have narrowed selection down to a homogeneous enough group that predicting which officers will excel during their first year has proved to be a challenge. The regression analyses on academy scores, field training ratings, and yearly evaluations, have focused on finding predictors of top performers in those areas, and it appears that the screening process is doing a good job of selecting a fairly uniform group of individuals to serve that distinguishing above average performers from average performers is difficult except in the case of academy scores.

**Employment Status**

The final regression analyses on employment status, conversely, shift focus from attempting to predict success to attempting to predict employment difficulties. There appears to be evidence to suggest that there are stronger predictors for identifying officers that fail verses succeed than finding predictors for those that excel. Failure within the first year of employment is being categorized here as no longer being employed with the agency at the end of the first year. Perhaps one of the most interesting findings from this study suggests that the recommendations from the psychologists strongly predict which officers will fail during the first year. The logistic regression analyses for the prediction of employment status at the end of year one yielded a regression model that correctly classified 88.8% of the overall cases with 97.3% of the employed officers being correctly classified and 46.7% of the no longer employed officers being classified. The psychologists’ recommendations and the IPI Prediction of Public Safety variables were the two significant predictors in the model, and they accounted for the most variance in employment status.

The psychologists provided recommendations in the form of a narrative within their report submitted to the training bureau. The researcher coded these reports and discovered that
85% of the recommendations were coded as exhibiting low risk for future performance difficulties. These low risk recommendations would often say something like this for example “This evaluation did not indicate issues that would contradict her ability to function as a competent law enforcement officer. It is therefore concluded that she is psychologically suited for the job of police officer”. On the other hand, the remaining 15% received a recommendation that warranted a code of moderate future performance difficulties. Some examples of these include “This was a ‘borderline call’ based on his relatively low level of self-confidence and assertiveness, as well as the possibility that he may find that adapting to unpredictable police work is overly stressful,” or “It should be emphasized to him that academy training will require focus and concentration … if he is preoccupied with personal issues, it may very well jeopardize his career.” These kinds of recommendations were often followed by suggestions for remediation to assist the candidate in improving his or her weak areas. There were no applicants that received a strong recommendation against their hire by the psychologists included in this study. Therefore, no officers warranted a high risk code.

Implications/Application of the Findings

Overall, it appears that the training bureau is doing a satisfactory job of selecting qualified officers to serve the department. The screening process is rigorous with several opportunities along the way to screen out an individual. The results of this study seem to justify the extensive procedures utilized to screen these applicants. There were no findings to indicate that the department is conducting any unnecessary steps in the hiring process. The current procedures appear to be successful at narrowing the applicant pool to a fairly homogeneous group of individuals possessing appropriate characteristics for police work. However, selecting well suited applicants for the job appears to be an easier task than identifying which of those
individuals that met the original entrance requirements will excel during their first year of employment and which will leave the department during the first year of probationary training. Nevertheless, there is evidence in this study to suggest that the police psychologists are somehow able to deduce well educated recommendations from the plethora of psychological data available to them about an applicant’s potential for future job performance difficulties. Somehow this complicated human clinical decision making process is picking up on signs of future problems. These findings suggest that placing strong emphasis on the psychological recommendations appears to be quite important. This finding along with all of the findings in this dissertation need to be understood in the context of the elite nature of the sample. The small sample was chosen from a very large applicant pool of 1,858 individuals. The sequential selection process used, which eliminates potential recruits at every step in the screening process, leads to the researcher finding smaller relationships between predictors and performance and when relationships are found even small ones, these need to be given special consideration. Anastasi and Urbina (1997) illustrate how the smaller the proportion of applicants who are accepted (selection ratio), in this case 4%, which is very selective, increases the predictive validity attributable to a given test. To sum it up, the highly selective nature of the law enforcement selection process increases the meaningfulness of even small relationships.

Limitations

There were numerous limitations to the current study. The first involves the nature of the sample. The exclusivity of the sample restricts the range of the independent variables. All officers in the study have passed an extensive screening process prior to participating in the study leaving little variability in the selection measures. This leaves the researcher with the difficult task of predicting variability in the performance measures from a fairly homogenous
group of individuals. The size of the sample also makes group statistics difficult when the ratio of participants to predictors is large. Furthermore, due to the fact that this was more of a convenience sample collected from one law enforcement agency, the generalizability of the current findings is limited and should be interpreted with caution when applied to the general law enforcement population.

A second limitation of the study involves the restriction of including performance measures only collected during the first year of employment. The current study provides information about performance during the first year for a newly hired officer, but it does not provide performance information past the first year. Therefore, one is only able to investigate the performance of inexperienced officers versus more experienced officers.

A third limitation of the study involves the lack of a control group. It is difficult to determine the incremental validity of the various selection measures used by the department without having a comparison group that did not use all or some of the same selection measures. This kind of control group, however, would be very difficult to find in law enforcement given that many agencies use similar procedures for hiring recruits.

A final limitation of the study involves the lack of information available regarding race and ethnicity. The researcher did not have access to the race/ethnicity of the officers as a precautionary measure to protect the identity of the participants. Therefore, no information regarding race and ethnicity were able to be included in the statistical analyses.

Directions for Future Research

The findings of the current dissertation provide several suggestions for areas of future research. First, in order to learn more about the pre-employment screening measures ability to predict future performance beyond the first year of employment, it is suggested that the law
enforcement agency continue to track the current participating officers. This would allow further investigation of the selection measures especially the psychologist recommendations’ ability to predict performance as an officer beyond the first year. The complex nature of the psychological decision making process might also be examined. It would also be interesting to investigate the relationship between the pre-employment measures and other indicators of police performance such as records of disciplinary actions and commendations. It is also suggested that the agency continue to recruit more officers to participate in the study in order to increase the power of the findings. It is especially important to study more female officers in order to examine gender differences among law enforcement officers in more depth.

Other suggestions for future research involve investigating the differences between the two groups that leave the department. Understanding more about the groups of officers that resign from the department versus being terminated may help to improve selection and prediction of resignation and terminations.
LIST OF REFERENCES


Cooper Institute for Aerobics Research (1986). *Procedures manual for Cooper Clinic technicians*. Dallas, TX: Cooper Clinic.


*Davis v. Dallas*, 777 F.2d 205 (5th Cir. 1985).


APPENDICES
## Description of the MMPI-2 Scales (Graham, 2000)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Psychopathology Category</th>
<th>Description of high scorers</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>Lie</td>
<td>Defensive, dishonest, denying</td>
</tr>
<tr>
<td>F</td>
<td>Infrequency</td>
<td>Random responders, “faking bad”</td>
</tr>
<tr>
<td>K</td>
<td>Defensiveness</td>
<td>Defensive, “faking good”</td>
</tr>
<tr>
<td>Hs</td>
<td>Hypochondriasis</td>
<td>Excessive health concerns</td>
</tr>
<tr>
<td>D</td>
<td>Depression</td>
<td>Depressed mood, hopeless, sad</td>
</tr>
<tr>
<td>Hy</td>
<td>Hysteria</td>
<td>Overwhelmed, poor reactions to stress</td>
</tr>
<tr>
<td>Pd</td>
<td>Psychopathic Deviate</td>
<td>Rebellious, possibly criminal behavior</td>
</tr>
<tr>
<td>Mf</td>
<td>Masculinity-Femininity</td>
<td>Gender stereotypes</td>
</tr>
<tr>
<td>Pa</td>
<td>Paranoia</td>
<td>Suspicious, paranoid</td>
</tr>
<tr>
<td>Pt</td>
<td>Psychasthenia</td>
<td>Obsessive-compulsive</td>
</tr>
<tr>
<td>Sc</td>
<td>Schizophrenia</td>
<td>Psychotic, poor reality testing</td>
</tr>
<tr>
<td>Ma</td>
<td>Hypomania</td>
<td>Mania, elevated mood, excessive motor activity</td>
</tr>
<tr>
<td>Si</td>
<td>Social Introversion</td>
<td>Shy, reserved, introverted</td>
</tr>
</tbody>
</table>
APPENDIX B

ENTRANCE REQUIREMENTS AND MINIMUM STANDARDS

Police Recruit applicants must meet the following initial requirements:

- Be at least 21 years old by the time of hire.
- Be a United States citizen.
- Be a high school graduate or have a GED certificate.
- If you have had military service, discharge must be "honorable," or "under honorable conditions."
- Be able to obtain a valid Kansas driver's license by time of hire.
- Be able to live within the city limits, or within 30 minutes lawful driving time of the city limits, within the required time limits after hire.
- Must pass all the steps listed under "Hiring Procedure."
- Must satisfy all requirements as set forth in K.S.A. 74-5605
- Must satisfy all requirements as set forth by the City of Wichita.
- No evidence of deception or subterfuge demonstrated during the pre-employment process. Applicants who do not meet this qualifier may have their files reviewed on a case-by-case basis at the Training Bureau Commander's discretion.
- No convictions of morals, drugs or weapons charges in the past five years.
- No convictions of misdemeanor crimes of violence, or use of physical force or threat thereof, during the preceding five years.
- No convictions, diversions, or expungements of DUI during the past two years.
- No convictions of misdemeanor property crimes within the past two years.
APPENDIX B (continued)

- No more than two moving violation convictions, or being at fault in more than one traffic accident during the past twelve months.
- No convictions, diversions, or expungements of any felony crime.

The following additional minimum standards involve activities which may to date have been unreported to or undetected by law enforcement, but which will result in disqualification if discovered during the employment process or thereafter.

- No undetected illegal misdemeanor drug possession or use in the past two years.
- No illegal distribution or sale of any drug.
- No undetected misdemeanor crimes involving morals or weapons charges in the past five years.
- No undetected commissions of misdemeanor crime of violence, or use of physical force or threat thereof, during the past five years.
- No undetected commissions of misdemeanor property crimes during the past two years.
- Any undetected commission of felony crime (including usage of felony drugs) will result in immediate disqualification. Any information relative to criminal prosecution will be forwarded to the proper jurisdiction.
- Applicants who are subject to disqualification based on the above criteria may have their files reviewed on a case-by-case basis at the Training Bureau Commander's discretion.
APPENDIX C

APPLICANT SCREENING QUESTIONNAIRE

APPLICANT INFORMATION

Name (Last, First, Middle) __________________________________________________

Date of Birth______________ Driver’s License Number________________________________

Mailing Address ________________________________________________________________

City ______________ County _______________ State ___________ Zip Code________

Telephone Number ____________ Work ___________ Other (pager, cell, etc)________

Current Employer _____________________________________________________________

Employment Address ___________________________________________________________

City ______________ County _______________ State ___________ Zip Code________

YOUR BIOGRAPHICAL DATA

Full Name_________________________ Social Security Number ________________

Aliases/Nickname _____________________________________________________________

Maiden Name/Previously Used Names ____________________________________________

Place of Birth (City, State/Country) ______________________________________________

Address or current place of residence _____________________________________________

Citizenship: ☐ United States ☐ Other ______________________________________________

Naturalization Date ________________ Certificate Number _________________________

Height ____ Weight ____ Race ____ Gender _____ Hair color _____ Eye Color ______

Scars, Marks Tattoos or Other Identifying Characteristics __________________________________________
## APPENDIX C (continued)

<table>
<thead>
<tr>
<th>Parent/Guardian Information</th>
<th>Mother</th>
<th>Father</th>
<th>Other Guardian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (Last, First, Middle)</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Maiden Name</td>
<td>______</td>
<td>N/A</td>
<td>______</td>
</tr>
<tr>
<td>Address (Street)</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>State &amp; Zip Code</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Date of Birth (If known)</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Living (✓)</td>
<td>□ Yes  □ No □ Yes □ No □ Yes □ No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Children:** (List all children you have either fathered, mothered, or had legal responsibility for during your life and contact information for each parental mate)

<table>
<thead>
<tr>
<th>Child’s name</th>
<th>Age</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parental mate</th>
<th>Address</th>
<th>Telephone #</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
REFERENCES

List at least three references, **DO NOT** list relatives or current Wichita Police Officers.

Name (Last, First, Middle) _______________________________________________________

Mailing Address _______________________________________________________________

City __________ State ______ Zip Code _____ Telephone Number _____________

Employer ____________________________________ Telephone Number _____________

Name (Last, First, Middle) _______________________________________________________

Mailing Address _______________________________________________________________

City __________ State ______ Zip Code _____ Telephone Number _____________

Employer ____________________________________ Telephone Number _____________

Name (Last, First, Middle) _______________________________________________________

Mailing Address _______________________________________________________________

City __________ State ______ Zip Code _____ Telephone Number _____________

Employer ____________________________________ Telephone Number _____________

List the names of persons in Law Enforcement, (and their agency) that you are acquainted with.

<table>
<thead>
<tr>
<th>Name</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX C (continued)

EDUCATION INFORMATION

HIGH SCHOOL

Name of High School ________________________________ Dates Attended ________
Address (Street, City, State) _________________________________________________
Diploma Received (✓) □ Yes □ No Highest Grade Completed ______________
High School Equivalency/G.E.D. (✓) □ Yes □ No Date _____ Certificate #_______

COLLEGE / UNIVERSITY ATTENDED

1 2

College/University ____________________________________________
________________________ ____________________________
________________________ ____________________________
Address (Street) ____________________________ ____________________________
(City) ____________________________________________
(State) ____________________________________________
Dates Attended: ____________________________ ____________________________
Total Credits Earned: ____________________________ ____________________________
Degree Received: ____________________________ ____________________________
Date Graduated: ____________________________ ____________________________
Major: ____________________________________________
Minor: ____________________________________________
**CIVILIAN SPECIALIZED TRAINING, SKILLS OR QUALIFICATIONS**

<table>
<thead>
<tr>
<th>Type of Training, Skills or Qualifications</th>
<th>___________________________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>___________________________________________</td>
</tr>
<tr>
<td></td>
<td>___________________________________________</td>
</tr>
<tr>
<td></td>
<td>___________________________________________</td>
</tr>
<tr>
<td></td>
<td>___________________________________________</td>
</tr>
</tbody>
</table>

Provided By (Name and Address of Organization, School, etc.)_____________________
|______________________________________________________________________________|
|______________________________________________________________________________|
|______________________________________________________________________________|

Certification, License or Diploma Received  (✔) ☐ Yes ☐ No  Date ________________
APPENDIX C (continued)

SECTION I: BACKGROUND ISSUES

RESIDENCES

List your residences for the past ten years, beginning with your present residence. Be as accurate as possible.

Address: __________________________   Address: __________________________
City, State, Zip: ______________________   City, State, Zip: ______________________
Date from: __________ to: __________      Date from: __________ to: __________
Landlord: __________________________       Landlord: _________________________

Address: __________________________   Address: __________________________
City, State, Zip: ______________________   City, State, Zip: ______________________
Date from: __________ to: __________      Date from: __________ to: __________
Landlord: __________________________       Landlord: _________________________

Address: __________________________   Address: __________________________
City, State, Zip: ______________________   City, State, Zip: ______________________
Date from: __________ to: __________      Date from: __________ to: __________
Landlord: __________________________       Landlord: _________________________

EMPLOYMENT HISTORY

1. Have you ever applied to or been employed by The Wichita Police Department?  □ Yes □ No (if yes, explain)
   ____________________________________________________________________________
   ____________________________________________________________________________

2. What do you feel may hinder or prohibit you from being appointed to this Department?
   ____________________________________________________________________________
   ____________________________________________________________________________

3. Have you ever been employed with another police department?  □ Yes □ No (if yes, explain)
   ____________________________________________________________________________
4. Have you ever applied to any other police department?
   □ Yes  □ No (if yes, explain)
   ________________________________________________________________

5. Have you ever been rejected as an applicant for any police department?
   □ Yes  □ No (if yes, explain)
   ________________________________________________________________

**MILITARY SERVICE**

Branch of Service: □ Army  □ Air Force  □ Navy  □ Marines  □ Coast Guard  □ Other (specify)
   __________________________

Entrance Date ___________________ Discharge Date ___________________________

Highest Rank Held ____________________________________________________________

Type of Discharge (other than medical) __________________________________________

If less than Honorable, explain
   ________________________________________________________________

   ________________________________________________________________

While in Military Service, did you receive any type of discipline? Include fines, extended duty, loss of rank, etc.
   ________________________________________________________________

   ________________________________________________________________

   ________________________________________________________________

**MILITARY TRAINING, SKILLS OR QUALIFICATIONS**

Date(s) & Types of Training, Skills or Qualifications received.
   ________________________________________________________________

   ________________________________________________________________

   ________________________________________________________________
APPENDIX C (continued)

(List ALL employers, beginning with the current or most recent.)

CURRENT/MOST RECENT EMPLOYER

1. Name of Employer _______________________ Telephone ___________________
   Address _______________________ City State Zip
   Dates Employed From ___________ To ___________ Full Time [ ] Part Time [ ]
   (Hrs per week ______________) Position Held ________________________ Salary:
   Starting ________________ Ending _____________________________
   Reason for Leaving________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

PREVIOUS EMPLOYER(S)

1. Name of Employer _______________________ Telephone ___________________
   Address _______________________ City State Zip
   Dates Employed From ___________ To ___________ Full Time [ ] Part Time [ ]
   (Hrs per week ______________) Position Held ________________________ Salary:
   Starting ________________ Ending _____________________________
   Reason for Leaving________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

2. Name of Employer _______________________ Telephone ___________________
   Address _______________________ City State Zip
   Dates Employed From ___________ To ___________ Full Time [ ] Part Time [ ]
   (Hrs per week ______________) Position Held ________________________ Salary:
   Starting ________________ Ending _____________________________
   Reason for Leaving________________________________________________
   ________________________________________________________________
   ________________________________________________________________
APPENDIX C (continued)

3. Name of Employer _______________________ Telephone _____________________
   Address ________________________________  City ______________ State __________ Zip ______________
   Dates Employed From ___________ To__________ Full Time ☐ Part Time ☐
   (Hrs per week ______________)  Position Held ________________________ Salary: _______________________
   Starting _____________________ Ending ________________________________
   Reason for Leaving _______________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

4. Name of Employer _______________________ Telephone _____________________
   Address ________________________________  City ______________ State __________ Zip ______________
   Dates Employed From ___________ To__________ Full Time ☐ Part Time ☐
   (Hrs per week ______________)  Position Held ________________________ Salary: _______________________
   Starting _____________________ Ending ________________________________
   Reason for Leaving _______________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

5. Name of Employer _______________________ Telephone _____________________
   Address ________________________________  City ______________ State __________ Zip ______________
   Dates Employed From ___________ To__________ Full Time ☐ Part Time ☐
   (Hrs per week ______________)  Position Held ________________________ Salary: _______________________
   Starting _____________________ Ending ________________________________
   Reason for Leaving _______________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________
   _______________________________________________________________________

WORK RECORD / ETHICS

1. Have you ever been discharged from any employment for reasons other than medical? ☐
   Yes ☐ No (if yes, explain)
   ________________________________________________________________________________
   ________________________________________________________________________________
   ________________________________________________________________________________

90
APPENDIX C (continued)

2. Have you ever resigned from a previous employer to avoid termination (discharge or firing)? ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________________________

__________________________________________________________________________________

3. Have you ever resigned from a previous employer, while under investigation?
   ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________________________

__________________________________________________________________________________

4. Have you ever been threatened or involved in a physical confrontation with a co-worker or supervisor? ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________________________

__________________________________________________________________________________

5. What person or employer may not give you a good recommendation? Why?

__________________________________________________________________________________

__________________________________________________________________________________

FINANCIAL / CREDIT ISSUES

1. Have you had any debts/bills that have been turned over to a collection agency?
   ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________________________

__________________________________________________________________________________

2. Are any creditors pressing you for payment?
   ☐ Yes ☐ No (if yes, explain)
3. Have you ever declared or filed bankruptcy?
   □ Yes  □ No (if yes, explain)

4. Have you ever been evicted from a residence?
   □ Yes  □ No (if yes, explain)

5. Have you ever had anything repossessed?
   □ Yes  □ No (if yes, explain)

6. Are you currently behind on alimony and/or child support payments?
   □ Yes  □ No (if yes, indicate terms and amounts)

MOTOR VEHICLE CRASHES AND TRAFFIC RECORD / INFORMATION

1. Do you have a valid drivers license? How long have you been driving? ______
2. State of Issuance License #
3. List all motor vehicle crashes, you have had as the operator of a vehicle. Include dates, if investigated by the police, and if a ticket was issued.
4. Do you have any lawsuits pending because of a motor vehicle crash?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

5. Were you (as the operator) consuming any alcohol, taking prescription medication, or under the influence of any illegal drugs at the time of any motor vehicle crash?
   □ Yes  □ No (if yes, explain)
________________________________________________________________________
________________________________________________________________________

6. Have you ever been involved in a reported or unreported hit-and-run motor vehicle accident?
   □ Yes  □ No (if yes, explain)
________________________________________________________________________
________________________________________________________________________

7. Have you ever possessed a driver’s license from another State?
   □ Yes  □ No (if yes, explain)
________________________________________________________________________
________________________________________________________________________

8. Has your license ever been suspended or revoked?
   □ Yes  □ No (if yes, explain)
________________________________________________________________________
________________________________________________________________________

9. Have you ever been denied vehicle insurance or has your auto insurance ever been canceled?
   □ Yes  □ No (if yes, explain)
________________________________________________________________________
10. List all traffic tickets (NOT parking tickets) you have received in this State or any other State.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

11. Have you ever received a moving or parking ticket that you have not paid?
☐ Yes  ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________

ARREST INFORMATION

1. Have you ever been arrested, detained, questioned, or taken into custody for any violation of the laws as a juvenile? ☐ Yes  ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________

2. Have you ever been arrested, detained, questioned, or taken into custody for any violation of the laws as an adult? ☐ Yes  ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________

3. Have you ever had any criminal charge(s) expunged or dismissed?
☐ Yes  ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________

4. Have you ever been served a Summons, Notice to Appear, or Citation that was not traffic related that requested you to appear in court?
☐ Yes  ☐ No (if yes, explain)
APPENDIX C (continued)

5. Have you ever been in jail, training school, family counseling, anger management, community service, etc. because of a motor vehicle or criminal charge?
   ☐ Yes ☐ No (if yes, explain)

6. Have you ever fled from police to avoid arrest, or have you ever resisted arrest?
   ☐ Yes ☐ No (if yes, explain)

7. Have you ever been arrested for an outstanding traffic or criminal warrant.
   ☐ Yes ☐ No (if yes, explain)

8. Do you have any existing criminal, domestic, or traffic warrants?
   ☐ Yes ☐ No (if yes, explain)
Section II – DOMESTIC ISSUES

Marital Status (✓) □Married □Single □Divorced □Separated □Widowed □Other_____

Current Spouse’s Full Name ______________________  Maiden Name ________________

Name of Spouse’s Employer ______________________  Telephone Number ___________

(List the same data for each former spouse, significant other, or domestic cohabitant. Use supplemental page if necessary)

Full Name _________________________ Maiden Name _________________________

Current Address ___________________________________________________________

Telephone Number___________________ Length of Relationship __________________

Date of Separation _______________

Full Name _________________________ Maiden Name _________________________

Current Address ___________________________________________________________

Telephone Number___________________ Length of Relationship __________________

Date of Separation _______________

Full Name _________________________ Maiden Name _________________________

Current Address ___________________________________________________________

Telephone Number___________________ Length of Relationship __________________

Date of Separation _______________

Full Name _________________________ Maiden Name _________________________

Current Address ___________________________________________________________

Telephone Number___________________ Length of Relationship __________________

Date of Separation _______________

Full Name _________________________ Maiden Name _________________________

Current Address ___________________________________________________________

Telephone Number___________________ Length of Relationship __________________

Date of Separation _______________
APPENDIX C (continued)

1. Have you ever been accused of domestic violence, or been served an Ex-Parte Order, Protection from Abuse Order or any similar protection order to prevent domestic violence? □ Yes □ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________

2. Have you ever been involved in any assault with a spouse, former spouse, family member, boyfriend or girlfriend? □ Yes □ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________

3. Have you ever intentionally or maliciously damaged the personal property of a spouse, former spouse, family member, boyfriend or girlfriend? □ Yes □ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________

4. Have you ever used a weapon of any type during a domestic dispute? □ Yes □ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________

5. Have you followed another person in a manner that may have created a sense of fear for their personal safety (Stalking)? □ Yes □ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________

6. Have you ever been accused of making harassing or obscene telephone calls? □ Yes □ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
APPENDIX C (continued)

7. Have you ever been accused of harassing or stalking anyone?  
   □ Yes  □ No (if yes, explain)
   ________________________________________________________________
   ________________________________________________________________

8. Have you ever inflicted physical pain, or suffering on a parent?  
   □ Yes  □ No (if yes, explain)
   ________________________________________________________________
   ________________________________________________________________

9. Have you ever pushed, shoved, slapped or used any physical force on a family 
   member, significant other, boyfriend or girlfriend during a dispute?  
   □ Yes  □ No (if yes, explain)
   ________________________________________________________________
   ________________________________________________________________

10. Have you ever been involved in any incident that could be considered domestic 
    violence? □ Yes  □ No (if yes, explain)
    ________________________________________________________________
    ________________________________________________________________
APPENDIX C (continued)

Section III – SEXUAL ISSUES

1. Have you ever had any sexual contact with a child?
   □ Yes □ No (if yes, explain)

   ___________________________________________________________

   ___________________________________________________________

2. Are you now collecting or have you ever collected or produced child pornography? □ Yes
   □ No (if yes, explain)

   ___________________________________________________________

3. Have you ever used a computer or any other electronic device to collect, manufacture or
distribute child pornography?
   □ Yes □ No (if yes, explain)

   ___________________________________________________________

   ___________________________________________________________

4. Have you ever attempted to contact a child for a sexual purpose with a computer or any
electronic device? □ Yes □ No (if yes, explain)

   ___________________________________________________________

   ___________________________________________________________

5. Have you ever had sexual contact with an animal? □ Yes □ No (if yes, explain)

   ___________________________________________________________

   ___________________________________________________________

6. Other than your spouse, have you ever had any sexual contact with a family member? □
   Yes □ No (if yes, explain)
7. Have you ever had sexual contact with a person, either by force or threat of injury, against that individual’s will or consent? □ Yes □ No (if yes, explain)

__________________________________________________________________

__________________________________________________________________

8. Have you ever had sexual contact with someone who was unable to consent due to a temporary or permanent disabling condition (intoxicated, physically or mentally incapacitated etc.)? □ Yes □ No (if yes, explain)

__________________________________________________________________

__________________________________________________________________

9. Have you ever been involved in an act of indecent exposure?
   □ Yes □ No (if yes, explain)

__________________________________________________________________

__________________________________________________________________

10. Have you ever employed a minor for sexual services?
    □ Yes □ No (if yes, explain)

__________________________________________________________________

__________________________________________________________________

11. Have you ever profited from or organized the services of a prostitute?
    □ Yes □ No (if yes, explain)

__________________________________________________________________

__________________________________________________________________

12. Have you employed the services of a prostitute? □ Yes □ No (if yes, explain how frequently and the date of the last incident.)
Section IV – CRIMINAL ISSUES

For the purpose of this investigation, the following crimes will be consider within the definition of SERIOUS CRIMES:

**MURDER** Have you ever committed the crime of murder or any unlawful act involving the taking of the life of another human being (solicitation to commit murder, voluntary and involuntary manslaughter etc.)?

**ROBBERY** Have you ever participated in the crime of robbery (with or without a weapon of any type, acting as a look-out or being a conspirator in the robbery etc.)?

**ARSON** Have you ever been involved in the crime of arson (setting a fire or causing an explosion)?

**THEFT** Have you ever been involved in the theft of property or services of $500.00 or greater?

**AGGRAVATED ASSAULT** Have you ever participated in any assault incident with a dangerous or deadly weapon?

**NOTE:** Be sure to acknowledge participation, commission, arrest, conviction or questioning for any of the following acts.

1. Have you ever been involved in the act of unlawfully taking the life of another human being? ☐ Yes ☐ No (if yes, explain)
APPENDIX C (continued)

2. Have you ever participated in any act of kidnapping, abducting or holding another person against their will?  □ Yes  □ No (if yes, explain)
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________

3. Have you ever participated in any act of assault by striking another person with the intent to hurt the other person?  □ Yes  □ No (if yes, explain)
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________

4. Have you ever participated in any act involving hurting, harming, or attempting to hurt or harm another person using a weapon or other object?  □ Yes  □ No (if yes, explain)
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________

5. Have you ever participated in any act involving hurting, harming, abusing, striking or injuring any person under the age of eighteen (18)?  □ Yes  □ No (if yes, explain)
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________
APPENDIX C (continued)

6. Have you ever participated in any act of inflicting pain or suffering to an animal which was not the result of, self defense, medical treatment, or lawful hunting?  
   ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________

7. Have you ever participated in any act involving the use of a firearm, knife, deadly weapon, physical force, threats, or intimidation in order to steal or take property from another person?  ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________

8. Have you ever participated in any act involving the unlawful possession or manufacture of any explosive substance or devices?  ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________

9. Have you ever participated in any act of starting a fire or causing an explosion to damage any property?  ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________

10. Have you ever participated in any act of making a false bomb threat or false fire alarm?  ☐ Yes ☐ No (if yes, explain)
11. Have you ever participated in any act of illegally entering any building, structure, or residence?  ☐Yes ☐No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

12. Have you ever participated in any act involving entering or remaining on the property of another with the intent to commit a crime?  ☐Yes ☐No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

13. Have you ever stolen anything from the Government?  ☐Yes ☐No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

14. Have you ever stolen anything from an employer?  ☐Yes ☐No (if yes, complete/explain below)
APPENDIX C (continued)

<table>
<thead>
<tr>
<th>EMPLOYER</th>
<th>ITEM(S)</th>
<th>VALUE</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. Have you ever stolen money from any employer at any time?
   □ Yes   □ No (if yes, explain) (if no, skip to question 18)

16. What is the largest amount of money you have stolen from an employer at one time?

17. How frequently have you stolen money from an employer (daily, weekly, twice a month etc.)?

105
18. Have you ever stolen anything from a parent or other family member’s?
   ☐ Yes ☐ No (if yes, explain) (if no skip to question 21)
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

19. What is the largest amount of money you have stolen from a family member?
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

20. How frequently have you stolen money from a family member? (daily, weekly, twice a month etc.)?
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

21. Have you ever shopped lifted or stolen anything? ☐ Yes ☐ No (if yes, complete/explain)

<table>
<thead>
<tr>
<th>AGE</th>
<th>ITEM</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22. Have you ever participated in any act involving breaking into a coin operated device to steal cash or merchandise? ☐ Yes ☐ No (if yes, explain)
23. Have you ever participated in any act which involved breaking into or entering a vehicle of any kind, including cars, vans, or motor homes, in order to steal any cash, property or merchandise? □ Yes □ No (if yes, explain)

24. Have you ever participated in any act involving theft of a vehicle or any auto parts, use of a vehicle without the owners consent, or joy riding in a stolen vehicle? □ Yes □ No (if yes, explain)

25. Have you ever participated in any act of purchasing, acquiring or receiving any item or property knowing or believing it to be stolen? □ Yes □ No (if yes, explain)

26. Have you ever participated in any act involving the unlawful possession of any machine gun, sawed off shotgun or rifle, armor piercing ammunition, silencer, stolen or altered firearm of any kind? □ Yes □ No (if yes, explain)
27. Have you ever participated in any act involving receiving or obtaining any services (i.e. cable, electric, water, etc.) without paying for it? ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________

28. Have you ever participated in any act involving the forgery of any writing document, signature, money, legal document, license, contract, credit card, check, security agreement, will, deed, or any deed of trust with the intention to defraud any person or business? ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________

29. Have you ever participated in any act of fraudulently using any credit card or credit card number? ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________

30. Have you ever participated in any act of filing or making a falsified insurance claim? ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
APPENDIX C (continued)

31. Have you ever participated in any act involving telling any lie, falsehood, or misrepresenting any fact while under oath or upon sworn or notarized statement? □ Yes □ No (if yes, explain)
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

32. Have you ever participated in any act relating to filing a false report to any police department? □ Yes □ No (if yes, explain)
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

33. Have you ever participated in any act involving disturbing the peace, including using abusive or profane language to incite a breach of the peace, fighting in a public place, or threatening another person in a public place? □ Yes □ No (if yes, explain)
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

34. Have you ever participated in any act involving the intentional damage or destruction of any property belonging to another person? □ Yes □ No (if yes, explain)
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

109
APPENDIX C (continued)

35. Have you ever participated in any act involving the impersonation of a police officer, law enforcement official, or other government official? ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

36. Have you ever participated in any act involving bribing or attempting to bribe any police officer or government employee? ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

37. Have you ever participated in any act involving fleeing from, running from, or evading, by any means, including foot or by vehicle, a police officer who is attempting to arrest, detain or question you or any other person? ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

38. Have you ever participated in any act involving resisting a police officer or any other law enforcement official in making any arrest or detention of any person, including yourself? ☐ Yes ☐ No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

110
APPENDIX C (continued)

39. Have you ever been part of any group that was involved in any illegal activities (street gangs, hate groups, organized militia)?
   □ Yes  □ No (if yes, explain)
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   __________________________

40. Have you ever participated in any act of defacing a religious institution or public institution (including graffiti etc.)? □ Yes  □ No (if yes, explain)
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   __________________________

41. Have you ever participated in any act involving illegal gambling? □ Yes  □ No (if yes, explain)
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   __________________________

42. How much money do you spend on legal or illegal gambling per month?
   ________________________________________________________________
Section V – ILLEGAL DRUGS

Report all past and present involvement with illegal drugs and substance usage by completing the following questions.

<table>
<thead>
<tr>
<th>Have you ever illegally used?</th>
<th># of Times</th>
<th>Date of First Use</th>
<th>Date of Last Use</th>
<th>Method of Administration/Ingestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anabolic Steroids (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>Inhalants (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>Marijuana (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>LSD (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>Cocaine (Powder) (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>Heroin (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>Phencyclidine (PCP) (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>Methamphetamine (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>Amphetamines (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>Barbiturates (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>Crack Cocaine (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>Prescription Drugs (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
<tr>
<td>Other(s) (✓)☐ Yes ☐ No</td>
<td>___</td>
<td>___</td>
<td>___</td>
<td>________________________________</td>
</tr>
</tbody>
</table>

1. Have you ever been arrested for a violation of any drug law? ☐Yes ☐ No (if yes, provide date(s) and indicate final disposition.)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
APPENDIX C (continued)

2. Have you had any involvement in any illegal drug sale (i.e. direct selling, distribution, packaging, storing, transporting or acting as a “lookout” during the sale of any illegal drug or controlled dangerous substance)?
   □ Yes □ No If yes, drug/substance sold?
   _______________________________ How often? _______________________________
   _______________________________ How often? _______________________________
   _______________________________ How often? _______________________________

3. Have you ever purchased any illegal drugs? □ Yes □ No If yes, frequency and amount?
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

4. List every friend or family member who you now associate with, that may be involved with illegal drugs.
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

5. Have you ever used a drug prescribed to another person?
   □ Yes □ No (if yes, explain)
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

113
6. Have you ever used or obtained a forged prescription? ☐Yes ☐No (if yes, explain)

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

7. Are there any issues or incidents in your life not addressed in this section regarding your involvement with illegal drugs or substances?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Motivation and Character

Write a paragraph on why you want to become a police officer.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Why do want to be an officer in Wichita?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
APPENDIX C (continued)

What are your strengths?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

What are your weaknesses?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

If you are accepted for employment by the Wichita Police Department you will be required to work 1st, 2nd, or 3rd shift. Will any of these present a problem for you?

Yes_______     No________

The work schedule will also require you to work on Saturdays, Sundays, and Holidays. Will this present a problem for you?

Yes_______     No________
You have now completed the first contact questionnaire. You should stop for a moment, think about your answers, and insure that you have accurately portrayed all of the information that was requested. Should you now recall any information that was requested which you did not place in the booklet, go back now and make the necessary corrections. Remember that intentional omission or falsification of any material fact is just cause for disqualification or dismissal from the applicant process on grounds of dishonesty.
APPENDIX C (continued)

Interviewers Comments

First Contact Interview Date:________________________________________________

Aptitude Score ___________           Interviewers Score___________

Comments: ________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________


APPENDIX D

CONSENT FORM

WICHITA POLICE DEPARTMENT

CONSENT FOR RELEASE OF INFORMATION

The Wichita Police Department and Wichita State University are collaborating on a project to evaluate the effectiveness of our pre-employment testing and screening process. The goal of the project is to determine the value of each of the current procedures in terms of predicting the performance of a police officer.

In order to complete this project, we will need to provide pre-employment and post-employment data to the researchers. The researchers will never know your identity. The researchers have also signed confidentiality agreements, even though they will never be provided with your name or any other identifying data.

I, (print your name) ________________________________________, (circle one) do / do not grant the Wichita Police Department permission to release my employee information to the WSU researchers. I understand that the WSU researchers will be the only individuals provided with this information, they will never be provided with my name or other identifying data, and all data provided will remain confidential.

__________________________________________ _______ _____________
Officer’s Signature Date

Please return via inter-office mail to Captain Darren Moore, Training Bureau
## APPENDIX E
### TERMINATED DUE TO CAUSE VARIABLE SCORES

<table>
<thead>
<tr>
<th>Subject #</th>
<th>Sample Mean</th>
<th>Sample SD</th>
<th>310</th>
<th>321</th>
<th>322</th>
<th>414</th>
<th>519</th>
<th>602</th>
<th>605</th>
<th>705</th>
<th>Total</th>
<th>Term. Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.22</td>
<td>.42</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>M = 5</td>
<td>F = 3</td>
</tr>
<tr>
<td>Level of education</td>
<td>1.42</td>
<td>.56</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>No = 1</td>
<td>Some = 3</td>
</tr>
<tr>
<td>Aptitude score</td>
<td>77.50</td>
<td>8.10</td>
<td>77</td>
<td>66</td>
<td>75</td>
<td>82</td>
<td>80</td>
<td>85</td>
<td>86</td>
<td>74</td>
<td>78.13</td>
<td></td>
</tr>
<tr>
<td>Physical agility</td>
<td>734.06</td>
<td>80.67</td>
<td>855.65</td>
<td>790.44</td>
<td>788.1</td>
<td>664.47</td>
<td>893.43</td>
<td>656.24</td>
<td>786.31</td>
<td>715.64</td>
<td>768.79</td>
<td></td>
</tr>
<tr>
<td>Oral interview</td>
<td>49.51</td>
<td>5.58</td>
<td>46.6</td>
<td>48.35</td>
<td>41.55</td>
<td>56.7</td>
<td>56.5</td>
<td>51.2</td>
<td>39.5</td>
<td>45.27</td>
<td>48.21</td>
<td></td>
</tr>
<tr>
<td>Wonderlic</td>
<td>107.58</td>
<td>9.84</td>
<td>100</td>
<td>106</td>
<td>118</td>
<td>120</td>
<td>114</td>
<td>126</td>
<td>108</td>
<td>106</td>
<td>112.25</td>
<td></td>
</tr>
<tr>
<td>MMPI-2 Good/Bad</td>
<td>1.26</td>
<td>.44</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>Good = 5</td>
<td>Bad = 3</td>
</tr>
<tr>
<td>MMPI-2 Goldberg</td>
<td>59.94</td>
<td>14.24</td>
<td>49</td>
<td>80</td>
<td>49</td>
<td>69</td>
<td>65</td>
<td>60</td>
<td>42</td>
<td>73</td>
<td>60.88</td>
<td></td>
</tr>
<tr>
<td>MMPI-2 Husemann</td>
<td>143.52</td>
<td>9.66</td>
<td>142</td>
<td>139</td>
<td>123</td>
<td>145</td>
<td>143</td>
<td>146</td>
<td>163</td>
<td>155</td>
<td>144.50</td>
<td></td>
</tr>
<tr>
<td>MMPI-2 Aamodt</td>
<td>91.19</td>
<td>7.24</td>
<td>105</td>
<td>89</td>
<td>78</td>
<td>95</td>
<td>90</td>
<td>104</td>
<td>92</td>
<td>88</td>
<td>92.63</td>
<td></td>
</tr>
<tr>
<td>IPI Public Safety</td>
<td>1.17</td>
<td>.43</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>Low = 4</td>
<td>Mod. = 4</td>
</tr>
<tr>
<td>IPI Late</td>
<td>1.89</td>
<td>.32</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>≥ 3 = 0</td>
<td>&lt; 3 = 8</td>
</tr>
<tr>
<td>IPI Absent</td>
<td>1.61</td>
<td>.49</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>≥ 3 = 5</td>
<td>&lt; 3 = 3</td>
</tr>
<tr>
<td>IPI Discipline</td>
<td>1.78</td>
<td>.42</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>Yes = 2</td>
<td>No = 6</td>
</tr>
<tr>
<td>IPI Termination</td>
<td>1.94</td>
<td>.23</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>Yes = 1</td>
<td>No = 7</td>
</tr>
<tr>
<td>Psych rec.</td>
<td>1.14</td>
<td>.35</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Low = 4</td>
<td>Mod. = 4</td>
</tr>
</tbody>
</table>
# APPENDIX F

RESIGNED FOR PERSONAL REASONS VARIABLE SCORES

<table>
<thead>
<tr>
<th>Subject #</th>
<th>712</th>
<th>317</th>
<th>419</th>
<th>511</th>
<th>514</th>
<th>516</th>
<th>Total</th>
<th>Resign Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.22</td>
<td>.42</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Level of education</td>
<td>1.42</td>
<td>.56</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Aptitude score</td>
<td>77.50</td>
<td>8.10</td>
<td>63</td>
<td>78</td>
<td>69</td>
<td>87</td>
<td>75</td>
<td>87</td>
</tr>
<tr>
<td>Physical agility</td>
<td>734.06</td>
<td>80.67</td>
<td>707.65</td>
<td>865.46</td>
<td>649.4</td>
<td>727.76</td>
<td>600.56</td>
<td>849.53</td>
</tr>
<tr>
<td>Oral interview</td>
<td>49.51</td>
<td>5.58</td>
<td>42.63</td>
<td>59.45</td>
<td>48.08</td>
<td>49.73</td>
<td>56.43</td>
<td>50.9</td>
</tr>
<tr>
<td>Wonderlic</td>
<td>107.58</td>
<td>9.84</td>
<td>88</td>
<td>118</td>
<td>98</td>
<td>125</td>
<td>93</td>
<td>106</td>
</tr>
<tr>
<td>MMPI-2 Good/Bad</td>
<td>1.26</td>
<td>.44</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>MMPI-2 Goldberg</td>
<td>59.94</td>
<td>14.24</td>
<td>67</td>
<td>70</td>
<td>17</td>
<td>85</td>
<td>71</td>
<td>56</td>
</tr>
<tr>
<td>MMPI-2 Husemann</td>
<td>143.52</td>
<td>9.66</td>
<td>143</td>
<td>139</td>
<td>132</td>
<td>151</td>
<td>142</td>
<td>150</td>
</tr>
<tr>
<td>MMPI-2 Aamodt</td>
<td>91.19</td>
<td>7.24</td>
<td>95</td>
<td>93</td>
<td>82</td>
<td>93</td>
<td>88</td>
<td>98</td>
</tr>
<tr>
<td>IPI Public Safety</td>
<td>1.17</td>
<td>.43</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>IPI Late</td>
<td>1.89</td>
<td>.32</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>IPI Absent</td>
<td>1.61</td>
<td>.49</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>IPI Discipline</td>
<td>1.78</td>
<td>.42</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>IPI Termination</td>
<td>1.94</td>
<td>.23</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Psych rec.</td>
<td>1.14</td>
<td>.35</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>