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# THE RELATIONSHIP BETWEEN RECRUIT SCHOOL EVALUATIONS AND FUTURE JOB PERFORMANCE IN PREDICTING JOB SUCCESS FOR MICHIGAN STATE POLICE TROOPERS

By

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ABSTRACT

THE RELATIONSHIP BETWEEN RECRUIT SCHOOL EVALUATIONS AND FUTURE JOB PERFORMANCE IN PREDICTING JOB SUCCESS FOR MICHIGAN STATE POLICE TROOPERS

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This research was undertaken to determine if future job performance of Michigan State Police Troopers could be predicted by utilizing recruit school performance criteria including academic ability, attitude and interest, initiative and dependability, relationships with others, and driving, marksmanship, and physical abilities as the predictor variables.

A stratified random sample (N = 101) of Michigan State Police Troopers was taken from the graduates of seven recruit schools between December of 1972 and July of 1975. The recruit school performance factors measured during recruit training by the academy staff were used to predict field job performance factors of job knowledge and judgment, interpersonal relations, and job involvement as measured by an Achievement and Development Inventory (ADI).

The findings indicated that approximately 27% of the variance in future field job performance could be accounted for by recruit school performance. A recruit's attitude and interest,

personal relationships and initiative had the highest predictive value (10%), followed by personality traits, physical abilities, and personal bearing (10%), academic ability (5%), and age and experience (4%), while marksmanship ability had very little predictive value (1%) for future job performance.

Dedicated to my wife, Chris,

my daughter, Heather, and my son, Bill

who endeavored to persevere.

And also to my mother and dad,

the late William John Parviainen Sr.,

who would have been proud.

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My thanks to my program guidance and thesis committee members: Dr. Kenneth E. Christian, my chairman, who kept my ship headed into the wind; Dr. Robert C. Trojanowicz, whose kindness and support were always welcomed; and Dr. Frank Horvath, for his suggestions on my statistical analysis. A special thanks also to Dr. Jon Kayne of Hillsdale College for his technical guidance and assistance in the final statistical analysis.

And finally, I wish to thank my wife Christine, and my children Heather and Bill, for their understanding and patience while I was involved in my academic pursuits.

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No man was ever endowed with a judgement so correct and judicious, but that circumstances, time and experience would teach him something new, and appraise him that of those things with which he thought himself the best acquainted, he knew nothing, and that those ideas which in theory appeared the most advantageous were found, when brought into practice, to be altogether impractical.

Terence

# CHAPTER I

# INTRODUCTION

## The Problem

In this age of unprecedented technological advances, the human resources of an organization remain the most crucial input in the attainment of organizational goals. This is particularly true of a law enforcement organization, where the individual police officer serves as a direct representative in providing services to the public.

The police have gone through many cataclysmic changes in the past several decades, some of which were taken in stride, some of which were agonizingly painful. Many of these changes have reflected the evolution of the attitudes and values of contemporary society, while others have reflected the positive efforts made by enlightened police practitioners to upgrade their agencies and their profession.

The rapid changes in contemporary society have resulted in mandates by the courts that all standards relating to selection and hiring must be job related or be eliminated. This in and of itself has placed many police agencies in a chaotic paradox, that of conforming to judicial mandate to satisfy these decrees while at the same time attempting to upgrade the delivery of services by hiring only the best qualified applicants.

Selection standards must relate closely to future job performance or they will be ruled discriminatory. Hopefully, only those persons who will perform successfully on the job will be selected for training and assignment. However, the ability to predict future job performance is a complex and difficult task.

The difficulty of predicting the success of a candidate for the position of police officer is increased by the conflicting demands made upon that role. Police officers have different beliefs and attitudes about the role of a police officer. They assign different magnitudes of importance to each of the functions performed and expect these duties to be carried out in a variety of ways, depending on the present situation.

For many reasons it is exceedingly difficult to predict job performance. Rubinstein asks how we can predict future behavior when we do not even know what a policeman does.[1] To a significant degree, although improving our ability, we are still unable to define, to everyone's satisfaction, the job of a police officer clearly enough to be able to create tests that evaluate an applicant's potential for performing police duties and meeting the responsibilities of the position.

Predicting job performance is, indeed, a complex undertaking. With the addition of each new or distinct task, the complexity of the overall job is intensified. In addition to the

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[1]Jonathan Rubinstein, City Police (New York: Ballantine Books, 1973), pp. ix-xix.

skills required by the job, intricate personality makeups are also involved in the ultimate outcome of job performance. Prediction of successful police officers is a case in point.

For the recruit, two distinct situations can be identified: academy training and on-the-job performance.[2] Both training and the job require performance in a variety of situations. In some cases, the skills required in the training situation may not overlap with the skills required on the job. Furthermore, personality makeup required for success in training may only weakly reflect the personality make-ups required for successful performance in interpersonal and decision-making situations involved with the job. This study will attempt to shed some light on this very important issue.

## Need

Performance is often hypothesized to be a function of the interaction of ability and motivation but past studies of this hypothesis have been sparse, and the researchers have often used inadequate measures and inappropriate statistical analyses. Ability measures have been demonstrating their power to differentiate between potentially high and low performers since the turn of the century. Many approaches to raising validity coefficients for ability tests and evaluations have been used in an attempt to

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[2]Richard J. Shavelson, Leonard C. Beckum, and Brian Brown, "A Criterion Approach to Selecting Patrolmen," The Police Chief, Vol. 41, No. 9 (September 1974), p. 55.

refine criterion measurement. Although many advances have been made on this front, resulting predictive validity has not been markedly improved. Attempts to raise validity coefficients by attention to predictors have included careful selection of evaluation measures and tests that are appropriate to the abilities required by the job.

Studies indicate that one of the best predictors of future job performance is past behavior.[3] Many police personnel selection programs use elements of past behavior to attempt to predict which applicants have the potential to succeed as police officers in the field. However, very little research has been accomplished wherein performance has been measured during recruit training and later compared with performance measures in the field.

## Purpose of Study

The purpose of this study is to compare and analyze selected performance criteria of subjects in recruit training with selected performance criteria gathered on the same subjects while performing the duties of a police officer in the field operation.

A review of previous studies concerning the prediction of job performance illustrates that the most powerful and consistent

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[3]John F. Duignan, "Education's Role in the Quest for Professionalism," The Police Chief, Vol. 65, No. 8 (August 1978), p. 29; Charles L. Weirman, "A Review and Report on the Literature Concerning the Validity of Biographical Data Inventories as Effective Personnel Selection Devices" (unpublished research project, Michigan State University, East Lansing, 1974), pp. 49-50.

predictors have derived from an objective and qualitative evaluation of the applicant's personal history and academy performance.[4] This study will utilize the individual's subjective as well as objective academy performance as a basis for predicting future on-the-job performance. It is hoped that the results of this study will provide the Michigan State Police administrator with pertinent information to make competent decisions in regard to the management of assigned personnel. For example, if it is found that a strong correlation exists between academy performance and future field performance, a post commander will have a basis for initiating managerial action if individual performance does not measure up to anticipated levels.

## Theory

It is expected that future job performance can be accurately predicted by gathering both subjective and objective data early in an individual's career and the results should have relevance for future performance. If early performance is marginal, future performance will also be marginal. If early performance is exceptional, future performance should also be exceptional. As McGregor pointed out, human behavior may be predictable, but, as

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[4]Duignan, loc. cit.; Weirman, loc. cit.; Bernard Cohen and Jan M. Chaiken, "Police Background Characteristics and Performance: Summary" (New York: Rand Institute), a report prepared for the National Institute of Law Enforcement and Criminal Justice, Grant Award NI-71-030-G, May 1972, p. 1.

in the physical sciences, accurate prediction hinges upon the correctness of underlying theoretical assumptions.[5] There is, in fact, no prediction without theory. All managerial decisions rest on assumptions about behavior. Only as we examine and test these theoretical assumptions can we hope to make them more adequate and remove inconsistencies thus improving our ability to predict.

In this study we enter the field of Ergonomics (Greek--laws of work), the study of the relationships between man and his occupation, equipment, and environment, and particularly the application of anatomical, physiological, and psychological knowledge to the problems arising therefrom. It will be seen that the most important part of the research is that of developing a taxonomy of situations or attributes that will assist in the accomplishment of the predictability studies.

## Hypothesis

The hypothesis of this study is that there is a positive relationship between an individual's Final Recruit Evaulation (FRE) score in the Training Academy and his subsequent Achievement and Development Inventory (ADI) score received in the field.

Independent variable: FRE score
Dependent variable: ADI score
Intervening variable: Individual rater bias

Hopefully, the results of this research will provide managers and supervisors in the Michigan Department of State Police

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[5]Douglas McGregor, The Human Side of Enterprise (New York: McGraw Hill Book Company, Inc., 1960), p. 11.

with a valuable basis for early predictability of new employees' individual job potential. This will give the manager and supervisor valuable insight into individual performance and allow for corrective action to be taken when observed performance does not measure up to predicted levels.

## Overview

In this chapter we have reviewed some of the problems associated with predictability of job performance. Using the preceding hypothetical statement as a basis for investigation, this study identifies and reviews research that has been carried out concerning this issue. The literature is reviewed in Chapter II.

In Chapter III, the population, the measures, and the analyses are explained. The hypothesis is restated operationally and the terms and rationale for using various indices are summarized.

The results of the analysis are presented in Chapter IV.

# CHAPTER II

# REVIEW OF THE LITERATURE

## Introduction

The purpose of the police selection process is to ascertain which applicants for the positions have the highest potential for developing into successful police officers. Much research has been accomplished with this goal in mind. However, after successful completion of training and subsequent graduation from the academy, these new officers are assigned to field operations and begin to pursue their careers. Which ones are successful in the field? Very little logitudinal research has been undertaken in an attempt to shed light on this question.

Psychologists have developed a technology of prediction that is widely used in industry and education; the method depends almost wholly on individual differences, with heavy reliance on such characteristics as abilities, attitudes, interests, personality traits, and items of biographical history.[6] The method works reasonably well when the problem is to make comparative statements about probable performance of many individuals--candidates for admission to college or applicants for a job. But the personnel psychologist,

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[6]Norman Frederiksen, Ollie Jensen, and Albert E. Beaton, Prediction of Organizational Behavior (New York: Pergamon Press, Inc., 1972), p. 1.

at least, is likely to be stumped when asked to make predictions about how a single individual's behavior will vary from one occasion to another over a period of time. Individual differences (at least as usually conceived) do not necessarily provide a solution to the problem, since they do not exist for a single individual.[7]

A criterion is an evaluative standard against which measurements of a person's attitude, aptitude, and performance can be evaluated. Thus, any method of evaluation has the potential for becoming a criterion measure, providing the method is sensitive enough to discriminate among individuals.[8]

In the management of personnel, accurate information is needed about several criteria:[9]

1. Present job performance
2. Potential for other jobs in the organization.
3. Potential for promotion.
4. How the individual's talents can best be used by the organization.

More often than not, all of this information and more is sought by use of one rating form or system. This all-encompassing rating system often lacks a historical background of the individual's past

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[7]Ibid.

[8]Gavriel Salvendy and W. Douglas Seymour, Prediction and Development of Industrial Work Performance (New York: John Wiley and Sons, 1973), p. 185.

[9]David E. Balch, "Performance Rating Systems--Suggestions for the Police," Journal of Police Science and Administration, Vol. 2, No. 1 (September 1974), p. 40.

performance. This biographical data is a key element that would be of significant value in rating an employee.

Basically, a rating system should have three approaches:[10]

1. Work centered--traits that can be observed or recorded are rated. These include quality and quantity of work, work habits, etc.

2. Person or group centered--inferred traits such as adaptability, personal or social relations, etc.

3. Promotability--again, inferred traits of leadership approachability, emotional control, etc., are rated in an attempt to determine who is deserving of promotion and to predict who will succeed.

A number of contemporary studies have been conducted in an attempt to predict future job performance (success) utilizing these various rating systems and measuring devices.

## Prediction Studies

A review of previous studies of predictability of job performance based on empirical data shows that many were directed primarily at validating the predictive power of psychological, mental, or aptitude tests. The most consistent predictors appear to have been derived not from written tests but from elements of the candidates prior personal history, such as occupational mobility, education and early family responsibility.

The major finding in a study by one group of researchers was that the mean productivity scores are significantly affected

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[10]Ibid.

by the consistency of the climate (working) conditions.[11] Productivity is increased when climate conditions are consistent and decrease when climate conditions are inconsistent. This held true in both physical and psychological working conditions. The predictor variables employed in this study included cognitive ability tests, scores on personality inventories and similar data.

A study conducted by Maryland University (1976) found that ability and intrinsic motivation combined in an additive way but not in an interactive way in predicting job performance.[12] Intrinsic motivation was predicted only by enriched job characteristics, and growth satisfaction was predicted positively by the enriched job characteristics and negatively by growth need strength. A modified model demonstrated that ability, enriched job characteristics, and growth need strength each add significantly and positively to the prediction of job performance, but no interactions among the variables made significant contributions to the prediction. It was suggested that intrinsic motivation is a useful construct that is not yet well measured.

The Influence of Education

Extensive research on the value of education in the satisfactory performance of police duties indicates that education

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[11]Frederiksen, op. cit., p. 5.

[12]Maryland University, Intrinsic Motivation and Its Determinants as Factors Enhancing the Prediction of Job Performance from Ability (Washington, D.C.: Office of Naval Research, U.S. Department of Commerce, May 1976), AD-A026-530.

does make a difference. Christian (1976) found that generally, college graduates are more intellectually curious, autonomous in their thinking, tolerant of ambiguity, less authoritarian, and more receptive and responsive to a wider environment than those who did not attend college.[13]

Finnigan (1976) reported on a study of the relationships between college education and police performance completed on the Baltimore (Maryland) Police Department. The purpose of the study was to examine the effect of higher education on the performance of that department's police officers. The evaluation form which was used to measure performance was divided into four main categories: (1) performance of various type duties; (2) exhibition of various traits and characteristics; (3) overall general value to the department; and (4) the willingness of the rater to have the officer under his command, based on perceptions of his ability in crisis situations. In the study, police agents (who hold a college degree of some type) were compared with a random sample of general police officers (who apparently had no college). An assumption made was that the performance evaluations used were valid measures of actual performance. The primary finding of the research indicated that police agents (with college degrees) were consistently rated higher than police officers in the performance

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[13]Kenneth E. Christian, "A Comparison of the Behavior Styles of College-Educated and Non-College Police Officers" (unpublished Ph.D. dissertation, Michigan State University, 1976).

characteristics outlined in the Baltimore Police Department's performance evaluation.[14]

Cascio (1976) reported on a study of the Dade County (Florida) Public Safety Department to determine the relationship between education and performance. In general, although the correlations were low, a consistent pattern was evident that showed that higher levels of formal education tended to be associated with fewer injuries, fewer injuries by assault and battery, fewer disciplinary actions from accidents, fewer preventable accidents, fewer sick times per year, fewer physical force allegations, and so forth. However, he found that none of the behaviorally anchored performance rating dimensions were related to the amount of formal education (i.e., job knowledge, judgment, initiative, dependability, demeanor, attitude, relations with others and communications).[15]

In a study of the Los Angeles Police Department personnel, Sanderson (1977) attempted to equate the value of education to performance. Education levels were compared to performance variables including: (1) police academy performance; (2) disciplinary history; (3) absenteeism; (4) terminations; and (5) career

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[14]James C. Finnigan, "A Study of Relationships Between College Education and Police Performance in Baltimore, Maryland," The Police Chief, Vol. 43, No. 8 (August 1976), pp. 60-65.

[15]Wayne F. Cascio, "Formal Education and Police Officer Performance," Journal of Police Science and Administration, Vol. 5, No. 1 (March 1977), pp. 89-96.

advancement. For each of the five performance variables tested in this study, college education showed a positive effect.[16]

Weirman (1977) found no significant difference between college educated recruit's performance (academic achievement) and non-college educated recruit's performance during basic recruit training. He attributed this lack of difference to the selection procedures of the Michigan Department of State Police, the subject of his study.[17]

Duignan (1978) commented on a recent study conducted by the Rand Institute under a grant from the National Institute of Law Enforcement and Criminal Justice (Grant Award N1-71-030G). The report concluded that "the most powerful and consistent predictors have been derived not from written tests, but from elements of the candidate's personal history such as occupational mobility, education, and early family responsibility." The report concluded that as a group, the men with at least one year of college education who remain on the force were found to be very good performers.[18]

## Performance Criteria

In the course of describing research in the area of selection and prediction, we have referred to a number of criteria of

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[16]B. E. Sanderson, "Police Officers: The Relationship of College Education to Job Performance," The Police Chief, Vol. 44, No. 8 (August 1977), pp. 62-63.

[17]Charles L. Weirman, "Variances of Ability Measurement Scores Obtained by College and Non-College Educated Troopers," The Police Chief, Vol. 45, No. 8 (August 1978), pp. 34-36.

[18]Duignan, loc. cit.

police performance, e.g., number of arrests, tenure on the job, or supervisor's ratings. Despite their wide usage, a number of questions can be raised about the value of such criteria. First, different criteria may be needed in different police jobs. Some officers may concentrate on traffic, so that felony arrests may be of little importance. Different districts may require different types of police work. Some officers may stay in one district while others are rotated. Thus, the tests for the validity of the predictors should be made with appropriate statistical controls for these differences. Furthermore, several different types of officers may be needed to fill the various types of needs. Secondly, ratings and evaluations made by supervisors are often made on the basis of difficult to define global characteristics of "wholesome" or "opinionated."[19] Thirdly, there is little agreement on what does in fact constitute good police work. Is a good police officer one who arrests frequently or one who settles minor problems on the street? Is a good police officer one who maintains the peace or one who disturbs it to enforce the law? These are profound questions that must be dealt with before making any conclusions about successful performance. The issue then is finding a valid basis for predicting which candidates will become successful police officers. The U.S. President's Commission on Law Enforcement and

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[19]David H. Smith and Ezra Stotland, "A New Look at Police Officer Selection," in The Urban Policeman in Transition--A Psychological and Sociological Review, ed. John R. Snibbe and Home M. Snibbe (Springfield, Illinois: Charles C. Thomas, Publisher, 1973), pp. 11-12.

Administration of Justice states that "psychological tests, such as the MMPI and interviews to determine emotional stability should be conducted in all departments." A number of studies in the 1960s indicated that the use of personality screening techniques is not widespread but is increasing.

In one study, criterion variables used were ratings completed by management.[20] Areas covered by the ratings included:

1. Leadership (personality traits)
2. Knowledge
3. Dependability and judgment
4. Initiative and creativeness

A significant correlation was found between job success and intelligence in this study. The other variables appeared to have had a "halo" effect on the ratings.

The Woman Traffic Officer Project completed for the California Highway Patrol (1976) made several conclusions concerning performance.[21] The study found that academy grades were strongly correlated with men's and women's performance in the field. Finally, it also indicated that some background characteristics and selection procedures are correlated with men's and women's performance in the academy and in the field.

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[20] Psychological Monographs: General and Applied (Vol. 67, No. 12), Whole number 362, 1953.

[21] California Highway Patrol, "Woman Traffic Officer Project--Final Report," Sacramento, 1976.

A study made by Byrd (1976) on the impact which physical fitness makes on police performance indicated that good physical fitness impacted favorably on areas of police performance dealing with actual behavior of the police officer (police presence, self control, human relations skills, and job adjustment). A significant increase in performance of the experimental group was also noted by supervisors in their evaluations.[22]

The term moderator variable means a variable that influences the predictive value of another variable, the predictor. It is reasonable to suppose that situational variables as well as personal characteristics of subjects might serve as moderators by influencing the relationships between predictors and criteria. Two moderator variables, performance to reward contingency and self-esteem, were incorporated into multiple regression equations in an attempt to increase the predictability of job performance ratings from job satisfaction information. Subjects received scores on four self-report inventories covering the areas of job satisfaction, self-esteem, and contingency of rewards on job performance. Additionally, each subject was rated by an immediate supervisor on the quality of overall job performance. Results indicated that the moderator variable approach, operationalized

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[22]Donald A. Byrd, "Impact of Physical Fitness on Police Performance," The Police Chief, Vol. 43, No. 12 (December 1976), pp. 30-32.

via moderated regression, substantially increased the relationship between satisfaction and performance.[23]

One of the more important applications associated with the overall problem of the prediction of attributes, or categories, from continuous measurement is that of selection. Within the police selection process, the interview is widely used for making decisions about police academy appointments. Landy (1976) examined the validity of the interview for predicting on-the-street performance of police officers in the Dade County (Florida) Public Safety Department.[24] A principal components analysis of the averaged interview trait ratings indicated that there were three major components in the trait ratings. A principal components analysis of supervisory ratings of performance identified four oblique performance factors. A validity analysis demonstrated that rated performance could be predicted from averaged interview factor scores, but not from averaged overall recommendations of the interviewers.

The Influence of Biographical Data

The rationale for using indices of past performance such as grades and achievement test scores is that past achievement is

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[23]Rick Jacobs and Trudy Solomen, "Strategies for Enhancing the Prediction of Job Performance from Job Satisfaction," Journal of Applied Psychology, Vol. 62, No. 4 (August 1977), pp. 417-421.

[24]Frank J. Landy, "The Validity of the Interview in Police Officer Selection," Journal of Applied Psychology, Vol. 61, No. 2 (April 1976), pp. 193-198.

often one of the best indices of future accomplishment. Consequently, tests are frequently used as tests of aptitude for related types of activity.[25] For example, Ghiselli (1966) in his summary of job prediction data, reported an average correlation of 0.27 between intelligence test scores and proficiency as a patrolman or detective.[26]

The data on traditional measures as predictors of successful performance of patrolmen are consistent with the data on prediction of job success in general. In one study, data was presented on the ability of various subtests on the General Aptitude Test Battery (GATB) to predict successful performance of patrolmen.[27] Thorndike and Hagen indicated that, for the most part, the subtests do an adequate job of distinguishing successful from unsuccessful patrolmen.

McClelland and Rhodes combined Biographical Data Inventory (BDI) with the MMPI personality survey.[28] The results of the research indicated that the MMPI was more successful in predicting individual job performances, but that the BDI scores were better

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[25]D. E. Soper, Appraising Vocational Fitness by Means of Psychological Tests (New York: Harper and Row, 1949).

[26]E. E. Ghiselli, The Validity of Occupational Aptitude Tests (New York: John Wiley and Sons, 1966).

[27]R. L. Thorndike and E. Hagen, Measurement and Evaluation in Psychology and Education (New York: John Wiley and Sons, 1969).

[28]J. N. McClelland and F. Rhodes, "Prediction of Job Success for Hospital Orderlies and Aides from MMPI Scores and Personal History Data," Journal of Applied Psychology, Vol. 53, No. 1 (January 1969), pp. 49-54.

predictors of the composite job performances. The ten items used from the job application were: age, marital status, number of dependents, education, health record, tenure on past job, related job experience, salary differences, restrictions on hours available for work, and length of local residency.

On the other hand, in an extensive review of studies on this topic, Kent and Eisenberg (1972) concluded that there is no stable, significant relationship between traditional predictor variables and success as a policeman.[29] In fact, only form perception correlated significantly with success as a patrolman ($R = 0.20$), but variability on form perception accounted for only four percent of the variability between successful and unsuccessful patrolman. But, as McClelland (1973) points out, "Researchers have in fact had great difficulty demonstrating that grades in school are related to any other behaviors of importance other than doing well on aptitude tests."[30] If, as McLelland suggests, past scholastic achievement only predicts future academic performance and not success within a job, the utility of achievement test scores and grades as predictors of success as a patrolman is questionable. Hopefully, the present endeavor shall shed light on this issue.

Weirman (1974), in a review of selected BDI research, suggested that biographical data has demonstrated a great potential

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[29]D. A. Kent and T. Eisenberg, "The Selection and Promotion of Police Officers," The Police Chief, Vol 39, No. 2 (February 1972), pp. 20-29.

[30]D. C. McLelland, "Testing for Competence Rather than for Intelligence," American Psychologist, Vol. 28 (1973), pp. 1-12.

for predicting those persons who will make the best police officers.[31] His research indicated that an objective, qualitative evaluation of a candidate's personal history and background seemed to be the selection technique with the highest potential. However, as Weirman pointed out, there appears to be a major problem with the police being able to define what a "good" police officer is supposed to be. Thus, a succinct definition of criterion scales must be formulated to overcome this problem and then the police can effectively develop BDI instruments which are sensitive to those individuals who would make "good" police officers.

## Longitudinal Research

Very little longitudinal research has been accomplished, i.e., attempts to use tests or other criteria to predict the performance of police officers over long periods of time. Colrarelli and Seigel (1964) tested Kansas Highway Patrolman. They then correlated the test scores with indices of performance on the job. Finally, they planned to give the tests to new recruits to determine whether the tests could predict their future performance. No results have been published of the last phase of their project.[32]

Two longitudinal studies which attempted to delineate variables contributing to and predicting successful police performance

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[31]Charles L. Weirman, "A Review and Report on the Literature Concerning the Validity of Biographical Data Inventories as Effective Personnel Selection Devices" (unpublished Research Project, Michigan State University, 1974), pp. 49-50.

[32]Smith and Stotland, op. cit., p. 9.

were carried out in the Los Angeles County Sheriff's Department. Subjects for both studies were law enforcement officers appointed to the LACSD during the years 1947-1950. The first study, a ten year predictive efficiency study, was undertaken by Stewart Marsh in 1958.[33] His findings identified certain psychological, aptitudinal, and biographical variables which showed promise in differentiating between successful and unsuccessful officers. The second study, a twenty-year follow-up study, was undertaken in 1970.[34] The purposes of this study were to validate Marsh's findings and to evaluate Marsh's significant variables as twenty-year predictors of success and performance of the same law enforcement officers.

On the first study, consisting of 619 male law enforcement officers appointed as deputy sheriffs on the LACSD, two sets of variables were collected and analyzed. The first set, called the subject variables, consisted of Civil Service test scores, personal and biographical information, and the grade received in the Sheriff's Academy. The subject variables also included a battery of personality and interest test scores for 95 of the 619 officers. The second set, called the criterion variables, measured the success and field performance of the officer during his period of employment up to 1958 or just prior to his termination date. These variables

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[33]Stewart H. Marsh, "Validating the Selection of Deputy Sheriffs," Public Personnel Review, Vol. 23, No. 1 (January 1962), pp. 41-44.

[34]Homa M. Snibbe et al., "Predicting Job Performance of Law Enforcement Officers: A Ten and Twenty-Year Study," in The Urban Policeman in Transition, ed. John R. Snibbe and Homa M. Snibbe (Springfield, Ill.: Charles C. Thomas, Publishers, 1975), pp. 101-114.

were: tenure, accident record, and factors of job performance (a five category rating developed by Marsh and called the Marsh Special Job Performance Rating; MSPR). The MSPR was filled out by supervisors based on a scale of 1-5 and then mean averaged. This study is interesting and valuable since it identified certain biographical, aptitudinal and personality variables as predictors of success and job performance. Significant predictor variables were identified as high civil service written test scores, high sentence completion score (part of the civil service test), and high weighted average which were indicative of a high MSPR.[35]

The twenty-year study was very similar to the first study. The subject variables chosen for this study were most of the predictors found significant by Marsh. Basic differences between the subject variables of the twenty-year study and the predictors of the ten-year study are due to changes in the techniques of analysis. One of the objectives of this study was to evaluate the ten-year predictors as to their continued significance as twenty-year predictors. Results indicated that the best predictor for rank status is the civil service written test total score; for job type, age; and for average supervisor's rating, the mechanical score on the Kuder Preference Record.[36]

The results of the ten-year study indicated that certain biographical and aptitudinal variables (e.g., height, previous

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[35]Marsh, loc. cit.

[36]Snibbe et al., loc. cit.

occupational status, civil service test scores and the grade in the Sheriff's Academy) as well as some psychological test variables (e.g., scales 1, 2, and 9 of the MMPI, Mechanical and Social Service scales on the Kuder, and the General Activity scale on the Guilford-Martin) are significant predictors of tenure, automobile accident risk and job performance.[37]

The twenty-year study indicated that seven of the predictors found significant at 10 years were significantly related to one or more criteria at 20 years. Interestingly enough, the Academy rating was a significant predictor at 10 years but not so at 20 years. This could be because of the decreased sample size in the second study (619 in the first and 95 in the second study) and the fact that this variable was made discrete in the twenty-year study.[38]

Furcon et al. (1971) conducted a study on the Chicago Police Department which was a follow-up to previous research conducted for a 19 month period in 1966-1968.[39] The original study investigated the objective and psychological assessment of patrolman job performance. It had two primary goals: (1) the development of effective procedures and the establishment of general standards for patrolman selection; and (2) the identification of "patrolman types," as defined by field performance, which cannot be defined by the

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[37]Marsh, loc. cit.

[38]Snibbe et al., loc. cit.

[39]John Furcon et al., "A Longitudinal Study of Psychological Test Predictors and Assessments of Patrolman Field Performance" (Washington, D.C.: National Institute of Law Enforcement and Criminal Justice--LEAA, 1971), p. 5.

phrase "average patrolman." An occupational analysis was conducted which was aimed at identifying specific personal qualifications necessary for successful performance of the patrolman's job. It included reviewing formal job descriptions and case reports as well as extensive field observation in many police districts in the city of Chicago. The information and experience gained in the occupational analysis was used as the basis for selecting psychological tests for use in the study. These tests were then classified into three general categories: (1) motivational measures (e.g., biographical data, work interests); (2) measures of intellectual ability (e.g., reasoning ability, perceptual skills, special aptitudes); and (3) behavioral measures (e.g., temperament, stress tolerance).[40] Various criteria were used in making the actual selections. Preference was given to standardized paper and pencil tests which would be group administered and which did not require elaborate apparatus; objective scoring was emphasized. The next step was the identification of meaningful indices of patrolman performance against which to guage the relative value of the tests. Obtaining an accurate index of employee performance is one of the more difficult tasks facing any organization and this difficulty increases in the case of police officers because of the complexity and independence of their job. The Chicago Police Department

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[40]Melany E. Baehr, John E. Furcon, and Ernest C. Froemel, "Psychological Assessment of Patrolman Qualifications in Relation to Field Performance" (Washington, D.C.: U.S. Government Printing Office, 1969).

routinely compiled information in a number of significant areas of patrolman performance. Selected information was chosen (e.g., semi-annual departmental performance rating, tenure, departmental awards, disciplinary actions, arrest performance and attendance) and a paired-comparison appraisal technique using a man-to-man comparison to provide a composite performance index based upon the combined ratings of supervisors who were familiar with an individual's performance was used. Two supervisory (subjective) ratings (the paired-comparison and the semi-annual departmental rating) and six objective performance indicators were then used to assess on-the-job performance. These performance measures served as the criterion variables in the validation study, and were thought to provide a comprehensive picture of the many facets of patrolman performance.

The sample consisted of 490 patrolmen who were tested in two separate groups, about five months apart. One conclusion drawn from the results was that, for the total group of patrolmen, there was a statistically significant and meaningful relationship between test battery scores and independent measures of police officer performance. This was especially true of the three major performance criteria; the paired comparison rating, the departmental rating, and tenure, but also held for all other performance measures used in the study. According to Furcon et al., perhaps the best way to summarize these findings is to say that the critical attributes for patrolman success are related to stability--stability in the parental, personal family, and occupational

situations, stability in the maintenance of cooperative rather than competitive or hostile problem solving modes, stability stemming from personal self-confidence and control of emotional impulses, and stability deriving from a capacity to tolerate stress and from a realistic rather than a subjective orientation to life.[41]

In the above study (Furcon et al.) predictions made from original measures of job performance and test results (in 1966) were correlated with succeeding assessments of job performance made in 1967, 1968 and 1969. The correlations derived were used to estimate the stability and predictive validity of subjective and objective tests administered in 1966. Also studied were the use of racial group differences for predicting performance and the use of patrolman sub-groups for predicting stability of performance.[42] The plan included four principal research goals: (1) determination of the stability of the main supervisory and objective measures of police officer performance utilized in the 1966-68 study; (2) investigation of the predictive validity of the psychological test batteries used in the 1966-68 study; (3) examination of the nature and stability of the racial-group differences found in response to the test batteries from the 1966-68 study; and (4) conduct a longitudinal study of the performance levels of the eight patrolman sub-groups identified in

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[41] Ibid.

[42] Furcon et al., "A Longitudinal Study," loc. cit.

the 1966-68 study.[43] As the complexity of an occupation increases, its demands become more diverse, and there is increasing latitude for individuality of style in meeting these demands. Under these circumstances, the occupational group will no longer be composed exclusively of members approximating a single behavioral prototype, all performing with varying degrees of success along a unified dimension or criterion. Instead, occupational subgroups will begin to emerge, internally homogeneous but differing among themselves in style of performance.[44] These are the subgroups that Furcon studied to measure their performance levels.

Overall, the principal conclusions drawn from the 1971 Chicago study correlated closely with the previous study completed in 1969. In the performance appraisal area acceptable levels of stability were established for a number of the supervisory and objective measures of patrolman performance evidencing their desirability for use in personnel research and personnel practice. A multi-faceted approach to performance assessment, i.e., an approach that includes both supervisory and objective measures of job performance, is likely to provide the most comprehensive and most meaningful assessment of patrolman performance for developmental and promotional purposes. The paired-comparison rating technique, successfully implemented for the second time in the follow-up study, is thought to hold considerable promise for

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[43] Ibid., pp. 10-11.

[44] Ibid., p. 215.

application in the assessment of current performance or promotability in law enforcement organizations. The exploratory application results suggest that peer-ratings of patrolman performance are technically feasible. The peer ratings appear to overlap to a certain degree with supervisory ratings, but to a large degree provide unique performance information.[45] The results suggest that adequate training and preparation of patrolman peer-raters will be essential to successful applications of this technique.

A number of additional conclusions were drawn from the results of the predictive validity inquiry. The predictive validity of the psychological test battery was verified over time for both of the supervisory measures of patrolman success as well as for a number of the more objective measures of police officer performance. Using predicted performance levels based on test scores obtained in 1966, it was possible to establish statistically significant and meaningful correlations with subsequent performance in 1967, 1968, and 1969. These results present compelling evidence of the utility of a number of test dimensions in predicting the various measures of police officer performance.[46] A number of the test dimensions contributing to the successful prediction of police officer performance were specific to one of the racial groups or to the total group. Several test dimensions were found to be predictive across all groups for a particular performance

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[45] Ibid., p. 186.

[46] Ibid., p. 187.

criterion, such as the total score on the Test of Social Insight and the socially-at-ease trait on the Temperament Comparator in predicting the paired comparison performance rating. A number of test dimensions such as Perceptual Speed were found to be predictive across performance criteria for a number of groups.[47] With respect to the patrolman pattern subgroups, it was concluded that the job performance patterns identified in 1966 as being significantly different from the average maintained their significance in the follow-up study. The three newcomer groups depicted patterns of development which may represent younger officers in a large urban department, and the three established officer and two long-service subgroups were considered to represent stable patterns of career patrolman performance. The subgroup results were important in presenting the variety of job performance styles which may exist in a large group of patrolmen and were useful in providing insight into the varieties of psychological makeup and associated performance patterns which may be found in a large city organization.[48]

Two advances are thought to be particularly significant in the area of psychological testing in law enforcement organizations. The results of the occupational analysis in this study suggested that tests of aptitude, personality, and motivation were relevant to the selection of police officers. Thus, a type

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[47] Ibid.

[48] Ibid., p. 188.

of testing which extended beyond the scope of intelligence testing was brought to bear. Of even more significance is the fact that a test battery composed of tests of motivation, intellectual ability, and behavior showed a meaningful relationship to measures of on-the-job performance in police work. The results of the study are an advance over earlier attempts (DuBois and Watson)[49] in which relationships were established between test scores and training academy performance, but not between scores and actual on-the-job field performance. The basic contribution of the study has been the identification and validation of psychological tests for use in police organizations. The specific implementation of the test battery itself is probably of foremost interest to the police manager.

In an excellent study conducted by Cohen and Cahiken (1972), a comparison was made of the background characteristics of a large group of officers in the New York City Police Department with available measures of their performance on the job to determine the type of candidate who is likely to display specific patterns of performance.[50] No personality tests were administered to the subjects, nor were any specific performance evaluations undertaken. The information for this study was obtained

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[49]P. H. DuBois and R. J. Watson, "The Selection of Patrolmen," Journal of Applied Psychology, Vol. 34 (1950), pp. 90-95.

[50]Bernard Cohen and Jan M. Chaiken, "Police Background Characteristics and Performance: Summary," a report prepared for the National Institute of Law Enforcement and Criminal Justice, Grant Award NI-71-030-G (New York: Rand Institute, 1972), p. 1.

about the background and performance of 1,915 officers appointed to the NYCPD in 1957, of whom 1,608 were still active members of the force in 1968 when most of the data were collected. Two of the four objectives are of particular interest to this research: (1) to identify attributes currently thought to be negative or positive indicators which in fact are not related to later good or poor performance; and (2) to identify methods for sharpening the estimates of a recruit's future performance by using information from his probationary period on the force, and for determining which information is relevant to future performance.[51] Only quantifiable measures of background and performance of a type commonly maintained in personnel files by police departments was used in this study. Predictor variables used were race and age, mental examinations, family descriptors, occupational history, military history, personal history, incidents involving police and courts, early performance, and later experience. Performance measures used were career development (advancement), disciplinary actions, absenteeism, and others (including claims of injury and extreme misconduct cases).

Findings indicated that older officers were least likely to advance beyond patrol assignments, had low absenteeism for sickness and had fewer civilian complaints against them. In general, men with higher I.Q. advanced through the civil service route to a greater extent than men with a lower I.Q. A high

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[51] Ibid., p. 2.

civil service score was slightly predictive of good grades in the police academy but did not appear to predict any aspect of job performance measured, other than the ability to pass later civil service examinations for promotions.[52] Occupational mobility and military history were not found to be indicative of performance. However, a prior history of disciplinary incidents was found to be a strong predictor of future misconduct. Men who had been arrested for non-violent crimes performed no differently from other officers. An officer's recruit training score was found to be the strongest predictor of his later performance. Men who scored high on written examinations in the police academy were subsequently much better performers than average. They advanced more rapidly through special assignments and civil service promotions. The officer's rating while on probation was found to be the second strongest predictor of later performance. The men who obtained college degrees, either before or after appointment to the force, exhibited good job performance.[53] Through multiple regression analysis, the strongest predictor was the recruit training score of the officer, followed by his probationary evaluation, and so on down to I.Q. The data showed that the strongest predictors of later performance are derivable from

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[52]Ibid., pp. 14-19.

[53]Ibid., p. 20.

quantitative measures reflecting the subject's primary behavior and experiments as observed over a period of time.[54]

Poland (1976) in a study completed on the Michigan State Police compared social background factors with field performance and made several observations.[55] His research indicated that several variables did appear relevant to the selection process. They were: (1) educational achievement beyond high school increases competence on the job; (2) older candidates were more successful on the job than their younger counterparts; (3) the employment history of the candidates is a strong predictor of future police performance if three background variables (last occupation, prior jobs, employment disciplinary record) are combined. In addition, the prior driving record of the candidate was found to be an important predictor of success as a police officer. Those candidates with a large number of traffic tickets and automobile accidents prior to appointment were the least "successful" on the job. Poland also surmised that the performance of prospective police candidates during probation is also somewhat predictive of police performance.

A fairly consistent finding in the limited literature is that traditional aptitude measures predict performance in police

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[54]Ibid., p. 21.

[55]James M. Poland, "An Exploratory Analysis of the Relationship Between Social Background Factors and Performance Criteria in the Michigan State Police" (unpublished Ph.D. dissertation, Michigan State University, 1976), pp. 137-139.

academies.[56] In most cases, this finding is not surprising because traditional measures such as aptitude tests are designed to measure academic success in traditional academic programs such as those represented in most public schools in the United States. Since most training in police academies replicate this type of educational approach, the aptitude tests generally predict the academic or scholastic performance of the trainee in the academy. What is important to note, however, is that many of the academic skills required in the academy are, at least to some extent, unrelated to the skills required of the patrol officer on the job.[57] A number of researchers have found that aptitude measures do not necessarily predict job performance to any great degree. Mormon et al. designed tests to predict success in interpersonal relations and found that they also predict on-the-job success.[58] These findings suggest that a two-part battery, one part with traditional measures to predict academy success and another part

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[56]A. Abbatiello, "A Study of Police Candidate Selection," a paper presented at the 77th annual convention of the American Psychological Association, Washington, D.C. 1969; Dubois and Watson, loc. cit.; R. B. Mills et al., "Situational Tests in Police Recruit Selection," Journal of Criminal Law, Criminology, and Police Science, Vol. 57 (1966), pp. 99-104; and Robert R. Morman et al., "Predicting State Traffic Officer Cadet Academic Performance from Theoretical TAV Selection System Scores," Police, Vol. 10, No. 3 (March 1966), pp. 54-58.

[57]Shavelson, op. cit., pp. 59-60.

[58]Morman et al., op. cit., pp. 54-58.

to predict on-the-job success, may be an appropriate approach in predicting successful police officers.

## Summary and Conclusions

A number of conclusions can be drawn from the various studies which have been reviewed. The first is that most prediction studies have been based upon historical data compiled prior to entry into the police service. Second, it does not appear clear what constitutes a "good" performance and ultimately a "good" police officer to everyone concerned. Third, very little longitudinal long-term research has been accomplished to measure future field performance.

With respect to the general problem of prediction in the social sciences most statistical theory and practice have centered about the case in which both the dependent and one or more independent variables are described by continuous measurements on their respective (linear) scales. However, there are many instances in life in which dichotomous evaluations of persons can be conceived under the general headings of "success" or "failure" and in which no finer discrimination is required.[59] In fact, final decisions leading to administrative actions must often be dichotomous. In the formation of a dichotomy in the dependent variable, however, the question frequently arises as to the nature of its

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[59]J. P. Guilford and William B. Michael, The Prediction of Categories From Measurements: With Applications to Personnel Selection and Clinical Prognosis (Ann Arbor: Edwards Brothers, Inc., 1949), p. 1.

distribution. As mentioned, the dependent variable may be considered either a genuine or artificial dichotomy, depending upon the interpretation given. A few examples of what might be considered an artificially dichotomized continuous variable would be a civil-service employee being promoted or not promoted. In this example, different degrees of the dependent variable exist, but a dichotomy has been created. The prediction of an individual falling into one of two categories from measures on an independent variable would call for an assumption of continuity in the dependent variable.[60]

There are certain situations in which it is difficult to decide whether a dichotomy is actually a qualitative one or an artificial separation of a variable which is essentially continuous. For example, whether a person is an alcoholic or not an alcoholic; a person is successful or not successful, a drunkard or not a drunkard, is a situation which must be examined and allowed for in the analysis of research findings.

The problems involved in gathering information about subjects in a social-psychological experiment are analogous to the problems of measurement in any field of psychology. The personnel psychologist's solution to the prediction problem requires that we have a measure of criterion performance, y (e.g., average freshman grade or a rating of job performance), and at least one measure of a personal characteristic, x (e.g., aptitude or

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[60]Ibid.

interest), that is correlated with y. The regression of y on x provides the basis for prediction of criterion performance.[61] There are obvious instances where a test which has predictive power for some individuals has little or no predictive power or value for others. For example, a mathematics test might be used effectively as a predictor of grades in advanced mathematics courses for people who have studied elementary mathematics, but it would probably have very little or no predictive value for people who had not studied mathematics at all. There are also more subtle examples of differential predictability. Some of these differences can be controlled for in a police-type situation if all sample subjects have received some type of training. Obviously, some moderator variables would still exist.

In summary, it appears that various aspects of the success and future performance of a police officer may be predicted with some degree of success by certain biographical, psychological, and aptitudinal variables if they are measured both objectively and subjectively.

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[61] Frederiksen, et al., op. cit., p. 2.

# CHAPTER III

# DESIGN OF THE STUDY

## Introduction

Occupational psychologists, administrators and managers of all persuasions have long been aware of the problems inherent in predicting future job performance. As has been found, the police profession is certainly not spared the complexities of this problem. While many business managers can measure specific work output (i.e., number of items manufactured or piecework, etc.), of the employee to quantify performance, the sole commodity of the police is service, and service, although qualitatively and quantitatively measurable, is indeed a difficult and complex subject to measure.

In this longitudinal study, a comparison was made of categories of performance measured during basic recruit training with categories of performance measured on-the-job after assignment to the field operation. The categories from both sources are similar in nature and it is hypothesized that a close correlation will exist between them.

## Source of Data

The population utilized in this study consisted of the 309 male graduates of the Michigan Department of State Police 83rd through 89th Recruit Schools. The period of time included was from

September 25, 1972, the beginning of the 83rd Recruit School, until July 17, 1975, the last day of the 89th Recruit School. The number of schools sampled totaled seven.

A stratified random sample (without replacement) of 33 1/3% was made from each school (N = 103) (see Table 3.1). The total number of graduates from each school was first determined by researching recruit school records filed with the Training Division of the Department of State Police. These names were then compared with current personnel records filed in the Personnel Division and the sample was then compiled.

TABLE 3.1.--Source of Population and Sample.

| Recruit School | Number of Male Graduates | Number Selected |
|---|---|---|
| 83rd 09-25/12-22-72 | 54 | 18 (17) |
| 84th 01-15/04-18-73 | 42 | 14 (13) |
| 85th 05-21/08-24-73 | 48 | 16 |
| 86th 11-05-73/02-08-74 | 42 | 14 |
| 87th 02-25/05-31-74 | 39 | 13 |
| 88th 09-09/12-13-74 | 45 | 15 |
| 89th 03-23/07-17-75 | 39 | 13 |
| TOTAL 7 | 309 | 103 (101) |

Final Sample Size: N = 101

Two subjects, one from the 83th Recruit School and one from the 84th Recruit School were eliminated from the sample due to an inability to gather data on their field performance. (Both had been transferred to a specialist position where ADI data was not required.) Therefore, the final sample consisted of 101 subjects (N = 101).

All female officers were excluded from the study because they had not been trained in all aspects in an identical manner as their male counterparts. Specifically, during Defensive Tactics Training (holds and releases and boxing), they did not engage in individual combat with their male counterparts for final evaluation purposes. They also were not evaluated in the same manner in regard to physical conditioning and general physical prowess.

The sample selected included representatives from all eight field districts in the department and two Headquarter's divisions. Forty-two of the sixty-four posts were represented. (Table 3.2 shows the source of the sample by district and post.) At the time of the data gathering (April 1979), the Department of State Police had a total authorized enlisted strength of 2376 and an actual strength of 2301.

## Measurement Instruments

### Final Recruit Evaluation

During the final three weeks of each recruit school trained by the Michigan Department of State Police, each staff officer assigned to the Basic and Probationary Training Section (which has the responsibility for training all recruits) completes a Final

TABLE 3.2.--Source of Sample by District and Post.

DISTRICT 1: LANSING

| | |
|---|---|
| Lansing Post | 3 |
| Brighton Post | 1 |
| Ionia Post | 2 |
| Ithaca Post | 2 |
| Total | 11 |

DISTRICT 2: NORTHVILLE

| | |
|---|---|
| Northville Post | 4 |
| Romeo Post | 1 |
| St. Clair Post | 3 |
| New Baltimore Post | 3 |
| Flat Rock Post | 1 |
| Ypsilanti Post | 6 |
| Pontiac Post | 4 |
| Erie Post | 2 |
| Detroit FW Post | 17 |
| Total | 41 |

DISTRICT 3: BAY CITY

| | |
|---|---|
| Bay City Post | 3 |
| Bad Axe Post | 1 |
| Sandusky Post | 1 |
| West Branch Post | 2 |
| Bridgeport Post | 4 |
| Lapeer Post | 1 |
| Total | 12 |

DISTRICT 4: JACKSON

| | |
|---|---|
| Jackson Post | 2 |
| Clinton Post | 4 |
| Jonesville Post | 1 |
| Battle Creek Post | 2 |
| Total | 9 |

DISTRICT 5: PAW PAW

| | |
|---|---|
| Paw Paw Post | 1 |
| White Pigeon Post | 1 |
| Niles Post | 4 |
| Benton Harbor Post | 1 |
| Total | 7 |

DISTRICT 6: ROCKFORD

| | |
|---|---|
| Rockford Post | 1 |
| Mt. Pleasant Post | 1 |
| Grand Haven Post | 1 |
| Newaygo Post | 1 |
| Hart Post | 1 |
| Total | 5 |

DISTRICT 7: TRAVERSE CITY

| | |
|---|---|
| Traverse City Post | 1 |
| Cheboygan Post | 1 |
| Houghton Lake Post | 3 |
| Cadillac Post | 1 |
| Manistee Post | 1 |
| Petosky Post | 2 |
| Total | 9 |

DISTRICT 8: NEGAUNEE

| | |
|---|---|
| Negaunee Post | 2 |
| St. Ignace Post | 1 |
| Munising Post | 2 |
| Total | 5 |

HEADQUARTERS DIVISIONS

| | |
|---|---|
| East Lansing | 2 |
| Total | 2 |

Posts Represented: 42
Total Individuals: 101

Recruit Evaluation (FRE) consisting of fifteen categories on each graduating recruit from information which has been compiled since the beginning of the school.

Each category includes a Likert-type five-step semantic scale rating from weak (lowest rating), to needs improvement, to acceptable, to strong, to outstanding (highest rating). During the period of time from which the sample was drawn, the staff consisted of three permanently assigned officers and from four to seven officers assigned on a temporary basis from the field operation. The number of officers varied with the size of the recruit school. A safe assumption can be made that a minimum of seven FREs were completed on each recruit at the end of all of the schools in the sample. These FREs were then reviewed by the Commanding Officer of the Basic and Probationary Training Section and two of the permanently assigned staff officers. The statements describing each category were analyzed and discussed in depth and weighted for their descriptive value. Finally, a composite FRE was developed for each recruit based on a summary of these descriptors. Statements describing both strengths and weaknesses were made on these final FREs to formulate an accurate profile for each recruit evaluated. Each category was then given a rating based on a summary of these statements.

The categories, and suggestions for comments, were as follows:

1. Academic Ability: indicate specific problem areas if the trainee is having academic difficulty, i.e., be specific in comments, explaining just where the problems lie in terms of subject areas, concepts, memory, reading and comprehension, etc.

2. Personality Traits: indicate those who may be over or under aggressive, any possible loner traits, lack of confidence, reluctance to speak out or assert himself, signs of temper or self discipline problems, etc.

3. Personal Bearing and Appearance: indicate any need for posture improvement, lack of cleanliness and neatness, military bearing and understanding of military command structure, possible hygiene problems, any requirements for dental care, etc.

4. Attitude and Interest: indicate the presence or lack of interest and cite specific examples supporting your rating. Indicate the attitude of the trainee when counseled and particularly when advised of some deficiency. Comment on overall attitude as reflected by the recruit toward the program, the instructors, the department and the job in general.

5. Initiative and Dependability: cite specific examples, i.e., during the recruit's role as a group leader, class commander, or any other time when efforts to motivate others is observed; completing tasks with little or no direction or on his own, etc.

6. Leadership Potential: indicate specific examples of leadership ability being shown or when an opportunity was present and the recruit did not take it. Cite examples such as other recruits going to this recruit for advice, ability to organize a group and direct them, etc. Does he lead by example?

7. Composure and Control: cite specific examples where composure and control was evident or not evident in a given situation, i.e., boxing, water safety, inspections, interviews, classroom situations, etc.

8. Relationship and Cooperation with Others: pay particular attention to the trainee's interpersonal relationships with his peers, while off duty in the evenings, while engaged in work group assignments, sense of humor with others, etc.

9. Typing, Printing, and Spelling Ability: indicate where the specific weak points are as well as strong points in each category and then make an overall rating. Indicate the number of words per minute the trainee can type, whether printing is legible, spelling proficiency, etc.

10. Report Composition and Language Usage: comment on the trainee's ability to put a given situation on paper in a clear, concise, and presentable manner. Comment on ability or lack of in this area with a specific recommendation for improvement.

11. Physical Ability, Stamina, Condition: indicate those who need additional practice in Defensive Tactics; any need for additional physical conditioning; weight problems, and those with special prowess in this area.

12. Driving Ability: list specific weaknesses and strengths, in addition to recommendations for improvements.

13. Marksmanship Ability: indicate top and poor shooters, those with problems in confidence, recommendations for further training, etc.

14. Water Safety Ability: indicate any expert or poor swimmers, note who had a possible undue fear of the water or extreme lack of confidence; add recommendations for remedial classes to improve ability and confidence.

15. Prior Police Experience: list the agency with whom the trainee had experience, how long, type of experience, specific skills learned with that agency, etc.

16. Age: this category was added for the purpose of statistical analysis. It is the age of the trainee at the time that the FRE was completed.

The Final Recruit Evaluation (FRE) was compared with the Achievement and Development Inventory, which was developed by the Michigan Department of State Police as a technique for evaluating Troopers.

## The Achievement and Development Inventory

Performance evaluation is one of the most controversial issues in personnel management.[62] For many years authorities in the

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[62] O. W. Wilson and Roy Clinton McLaren, Police Administration (New York: McGraw Hill Book Company, 1977), p. 272.

personnel field, in public as well as private management, have tried to devise foolproof systems for the evaluation of individual performance. For thousands of years, man has rated his fellow man through observations of his actions. Jourgensen traces the evaluation process back as far as 220 A.D. He quotes an old Chinese philosopher, Chen Yu: "The imperial rater seldom rates men according to their merits, but always according to his likes and dislikes."[63] Unfortunately, this same philosophy permeates many of the personnel evaluation concepts in use today. In contemporary society, the legal and ethical demands for improved efficiency in law enforcement service are constantly growing and becoming more stringent. Therefore, it is imperative that law enforcement practitioners develop valid, fair, impartial and consistent systems of performance evaluation.[64]

The Michigan Department of State Police initiated a project in 1974 to research, develop and implement a valid system of performance evaluation for troopers. The following reflects the rationale that led up to this project.

Historical background. Personality tests have generally been found wanting when applied to the selection and ultimate successful prediction of job performance of police officers. We

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[63]Clifford E. Jourgensen, "Employee Performance Appraisal Re-examined," Part I: Personnel Association Report, No. 613, pp. 1-10.

[64]Ritchie T. Davis, "Development of a Valid Performance Appraisal System," The Police Chief, Vol. 44, No. 1 (January 1977), pp. 38-40.

have needed to look directly and clearly at the role for which we are selecting men and women and then work back from our analysis of this role to ascertain the most important characteristics to seek out in police recruits. However, we must keep in mind that job analysis is a combination of art and science; some of its components are objective and some others are subjective.[65] It appears that personality tests have not significantly tapped the particular subjective aspects of emotional maturity or ego strength which are most pertinent to the role of police officers. We need to be more specific. For example, an examination of the role of a police officer indicates that one of the central problems he faces is the management of conflict, both intrapersonal and interpersonal.[66] Conflict can arise from the officer's contact with fellow officers, persons he arrests, and out of relationships with the community. The decisions he often makes are not trivial and sometimes involve human life. Unfortunately, it is very difficult to predict or measure the ability of an individual to deal with conflict except in a real-life or role-playing situation. In our study, however, specific skills such as these are not considered the sole determinant of successful job performance. There are also interest, everyday or people skills, and the like, which must be included in predicting performance. Some of these competencies may be rather traditional

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[65]Salvendy, op. cit., p. 41.

[66]Smith and Stotland, "A New Look at Police Officer Selection," Snibbe and Snibbe, The Urban Policeman, op. cit., pp. 15-16.

cognitive skills involving reading, writing and calculating skills. Others should involve what traditionally have been called personality variables, although they might better be considered competencies. These would include communication skills, composure and control, and dependability.

Reporting on research conducted in the Chicago Police Department, Furcon et al. (1966) suggested that the scope of selection procedures for new police officers should be broadened to include measurements of personality, motivation, and aptitude, in addition to measures of intelligence.[67] It is significant that one of the areas that Furcon found to be most predictive of success was that of dealing with interpersonal skills and social aptitude.

In an important paper challenging the traditional approach to the prediction of job success, McClelland and Rhodes (1969) proposed an alternative approach in a set of recommendations.[68] The first recommendation was that the best testing is criterion sampling. This recommendation rests upon the finding that the best predictors of job success are measures of an applicant's performance on samples of the job itself. In specific terms, this means that "if you want to test who will be a good policeman, go find out what a good policeman is and what he does."

The Michigan Department of State Police followed this suggestion and in 1974 began to analyze the job of a Trooper. The

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[67]Furcon et al., "Psychological Predictors," op. cit., p. 64.

[68]McClelland and Rhodes, loc. cit.

ultimate objective was to identify individual limitations and strong points of an officer and to provide for a meaningful method of guidance and development.[69] To meet the guidelines put forth for test construction by the Equal Employment Opportunity Commission (EEOC), a valid performance evaluation system must be based on significant elements of the job to be performed.

To meet this requirement, all enlisted personnel of the State Police were asked to write an essay describing the best Trooper they had ever known. The purpose of this essay was to produce a list of behavioral descriptive statements referring to commonly occurring behaviors in the Trooper's job. Of the 1200 essays analyzed, 752 distinct phrases were extracted from the essays. These statements were then classified into four categories: Interpersonal Relations, Job Knowledge and Judgment, Job Involvement, and Standard Proficiency. Seventy-two Troopers were involved in the classification process. If at least 50 of the 72 Troopers did not agree as to which category a statement belonged, it was eliminated from the statement pool. This was done to assure that the statements were meaningful and unambiguous. After categorization, 180 statements remained in the statement pool.

Each of the 180 statements described a behavioral incident which might be typical of any State Trooper; thus the job analysis requirement was met. The Achievement and Development Inventory (ADI)

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[69]State of Michigan, Department of State Police Personnel Division, "Achievement and Development Inventory - Counseling and Coaching Techniques," East Lansing, Michigan, January 1978.

was then constructed. It was based on a dual-system approach to employee performance and appraisal. It consisted of two parts, a forced choice performance appraisal section and a structured interview guide to be used as the basis for employee performance counseling. There were three primary steps in the construction of the forced choice scale used in Part I: (1) Development of a Discrimination Index; (2) Development of the Job Importance Index; and (3) Construction of a Forced Choice Scale. Numerous steps were taken to articulate the ADI within the department to assure understanding of the scale and its development in order to facilitate its acceptance by all personnel.

ADI administration. The first administration of the scale was in August 1974. The ADI Part I had twenty tetrads.[70] The post commander and four post sergeants were asked to complete the scale, independently, on each trooper under their respective commands. Part II was completed by the post commander after consulting the post sergeants.

The second administration of the scale was in January 1976. The ADI Part I had twenty-five tetrads. The post commander and three post sergeants were asked to complete the scale, independently, on each trooper under their respective commands. Part II was completed as indicated above.

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[70]Tetrad: a block of four positively worded, descriptive statements, e.g., does not act upon impulse; is very familiar with the work area; practices good first aid; and has pride in himself and the department.

The third administration of the scale was in January 1977. The ADI Part I had twenty tetrads. The post commander and three post sergeants were asked to complete the scale, independently, on each trooper under their respective commands. The results of Part I were communicated to the post commander and the individual troopers on a computer printout which expedited the process considerably. Part II was completed as indicated earlier and had become somewhat standardized.

Validation research. The Equal Employment Opportunity Commission requires that any instrument used to select people for jobs must be proven to be reliable and valid. Furthermore, the scale should not be subject to the usual problems of rater bias, halo, and central tendency. Thus, the following ADI research was conducted by the state police to examine three questions: (1) Does the scale generate a normal distribution of scores? (2) Is the scale valid? and (3) Is the scale reliable?

With the initial administration of the ADI, it was necessary to establish a sound criterion for trooper job performance to conduct the necessary validity study. The criterion used was peer evaluations since the literature tended to indicate that peer evaluations, if carefully done, were valid indicators of performance. A forced-distribution approach to peer evaluations was used. Peer evaluation forms were prepared for each post using the following format:

1. Performs in the top 10% of Troopers at the Post.
2. Performs in the upper 20% of Troopers at the Post.
3. Performs in the middle 40% of Troopers at the Post.
4. Performs in the lower 20% of Troopers at the Post.
5. Performs in the bottom 10% of Troopers at the Post.

The obtained peer ratings were averaged to improve reliability. Each trooper in the analysis sample was rated by the post commander and at least four post sergeants, and, in addition, each trooper had at least two peer evaluations. The data were coded onto IBM punch cards and analyzed on the CDC 6500 computer at Michigan State University.

A score on Part I was obtained by averaging across the five raters. Since twenty tetrads were used in the August 1974 administration of the ADI, a maximum score of 40 was possible, with a minimum possible score of 0. The actual range of scores was 6 to 34.8. The mean of the distribution was 20.4 with a standard deviation of 5.5 Thus, 97% of the troopers scored between 9.4 and 31.4. Most trooper scores centered around the mean score of 20.4, nearly as many scored above the mean as below. This indicates that in evaluating performance, bias and halo effect were largely eliminated, which was one of the goals of the research. The raw scores were then transformed into percentile scores. For the peer ratings in this sample, the reliability coefficient was .78. The ADI reliability was also determined. Averaged over all the posts in the state, the reliability coefficient for the ADI ratings was .88. The highest reliability was .95 and the lowest was .69.

This meant that every post had a great deal of agreement among the supervisors completing the rating.

To determine the validity of the ADI, ADI scores were correlated with the peer ratings. The correlation of trooper ADI ratings and peer ratings was .71.

The ADI Part I was administered a second time in January 1976. Two significant changes were made from the previous administration of the ADI. The number of tetrads was increased from twenty to twenty-five and the number of describers (post commander and post sergeants) was reduced from five to four dropping one post sergeant. The distribution of ADI scores for the second administration was very similar to the distribution at the first administration. This lent very strong support to the belief that the scale produces scores which are not subject to rater bias, since at both administrations, a normal shaped distribution of scores was obtained from Part I of the ADI.

The reliability of the describers at the second administration was .85 averaged over 64 posts. This compared quite favorably with the reliability of .88 obtained at the first administration. The first administration scores and the second administration scores were then correlated to determine the consistency of scores across time. The correlation was .78, indicating a high degree of consistency across time. In summary, the reliability, validity and bias of the scores were investigated at both administrations and the empirical evidence strongly supported the notion that the ADI was valid, reliable, and free from rater bias.

## Design

### Research Design

The previous discussion gave an overview of the Final Recruit Evaluation (FRE) and the Achievement and Development Inventory (ADI) instruments (see Appendices B and C for examples of these instruments). Although an attempt was made to support a stated hypothesis in this study, it is more of an exploratory look at the relationship between certain behavioral characteristics and performance factors observed during both the training period in recruit school and on the actual job.

General research questions. The central questions of this study are:

1. Can the performance of Michigan State Police Troopers be predicted on the basis of recruit school performance?
2. What characteristics measured during recruit school show the greatest positive relationship with performance factors measured on the job?
3. What variables measured during recruit training show the highest relationship to variables measured on the job?

Level of significance. The .05 level of significance will be the criterion for the acceptance of a relationship between variables.

Independent variables. The independent variables are the sixteen categories listed on the Final Recruit Evaluation (FRE). The semantic Likert-type scale will be operationalized by assigning

a numerical value of 5 to outstanding, 4 to strong, 3 to acceptable, 2 to needs improvement, and 1 to weak for categories 2 through 14. Category 1, Academic Ability, will list the individual's actual grade point average in percent. Category 15, Prior Police Experience, will list experience in years to the nearest half year. Category 16, Age, will list the individual's age in years at the time of graduation from recruit school.

Dependent variable. The dependent variables will be the four categories measured on the Achievement and Development Inventory. They are:

Category 1 = Interpersonal Relations:

The person high in this category relates well to others (public and fellow employees), maintains composure, tolerates stressful situations and communicates clearly to others in a confident manner.

Category 2 = Job Knowledge and Judgment:

The person high in this category possess an outstanding knowledge of work related material, knows the job well, has a good sense of judgment, is constantly upgrading job knowledge, is meticulous, and gathers all available data before making a decision.

Category 3 = Job Involvement:

The person who is high in this category works hard at the job, is especially loyal, very involved, welcomes responsibility, has the ability to influence others, admirable, and can be counted on when necessary.

Category 4 = Standard Activities Proficiency:

> The person high in this category maintains equipment, report writing is excellent, conforms to rules and regulations, and handles routine work especially well and without complaint.

These four categories are the result of condensing seven subcategories on Part II of the ADI consisting of job knowledge, judgment, post operations, interpersonal relations and attitude, care and use of equipment, personal appearance, and work quality and quantity. The scores for the four categories range from 70 to 99 and the actual scores were the values utilized for statistical analysis.

Missing values. During the course of gathering data, it was discovered that the Final Recruit Evaluation had been improved in 1973 when six additional categories were added to the format. These categories were attitude and interest, initiative and dependability, leadership potential, composure and control, relationships and cooperation with others, and report composition and language usage. The FRE was renumbered using the original categories as well as the new categories in the new format of the form. Statistical programming recognizes the missing data which includes the 83rd, 84th, and 85th Recruit Schools and affects 50 subjects in the sample of 101.

## Data Analysis

The relationship between variables was determined by simple correlations. The computer program used in this study is the

Statistical Package for the Social Sciences (SPSS). The importance and reliability of the relationship between variables was determined by internal consistency of associations and formal statistical tests.

The statistical analysis used was the Pearson Product-Moment Correlation Coefficient subprogram of the Bivariate Correlation Analysis program. A factor analysis using principle components and R factoring in a 20 x 20 correlation matrix finding the mean and standard deviation was utilized. A Kaiser cut was the criterion for the number of factors to extract. A varimax orthogonal rotation was also employed in the analysis.

A number of social science methodologists argue that the Pearson correlation coefficients (and other statistics originally designed for interval-level variables) may be used even if the data satisfy only the assumptions of ordinal level measurement. Labovitz (1970) goes further by arguing that, except for extreme situations, interval statistics can be applied to any ordinal-level variable. He argues, "Although some small error may accompany the treatment of ordinal variables as interval, this is offset by the use of more powerful, more sensitive, better developed, and more clearly interpretable statistics with known sampling error." Some statistical purists disagree with some of these suggestions but more and more data analysts are following them, especially when the research is exploratory or heuristic in nature.[71]

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[71]Norman H. Hie, et al., SPSS, Statistical Package for the Social Sciences (New York: McGraw Hill Book Co., 1975), pp. 6, 276, citing Sanford Labovitz, "The Assignment of Numbers to Rank Order Categories," American Sociological Review, Vol. 35 (1970), pp. 515-

Factor analysis is used to simplify the process of interpreting correlations between variables. Data reduction capability is the most distinctive characteristic of factor analysis and in effect, factors are merely clusters or groups of variables which have common attributes. Given an array of correlation coefficients for a set of variables, factor-analytic techniques enable one to see whether some underlying pattern of relationships exist such that the data may be rearranged or reduced to a smaller set of factors or components that may be taken as source variables accounting for the observed interrelations in the data.[72]

Multiple regression analysis was the next procedure used in the data analysis. Multiple regression is a general statistical technique through which one can analyze the relationship between a dependent or criterion variable and a set of independent or predictor variables while taking into account the interrelationships among the independent variables. The basic goal of multiple regression is to produce a linear combination of independent variables which will correlate as highly as possible with the dependent variable. This linear combination can then be used to predict values of the dependent variable, and the importance of each of the independent variables in that prediction can be assessed.[73] Multiple regression

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524,, and Labovitz, "Statistical Usage in Sociology: Sacred Cows and Ritual," Sociological Methods and Research, Vol. 1 (1972), pp. 13-38.

[72]Ibid., pp. 468-514.

[73]Ibid., pp. 320-367.

is used to describe the entire structure of linkages between independent and dependent variables and to assess the logical consequences of a structural model that is posited a priori from some causal theory. In effect, multiple regression analysis is used in this study to determine which measures of performance in the academy will help predict performance in the field as measured by the ADI.

# CHAPTER IV

# ANALYSIS OF THE DATA

## Introduction

In this chapter an analysis of the data, obtained as a result of comparing recruit school final evaluations (FREs) with job performance measured in the field (ADIs), is presented. The general hypothesis is restated, the operational hypothesis is analyzed, and findings are discussed.

## Primary Analysis of Data

The primary research question was whether one can predict future job performance in the field based on recruit school performance. If a recruit performs well in recruit school, it is thought that he will perform well in the field. The hypothesis (null h) that was tested was that there is no correlation between recruit school performance and future job performance in the field. Therefore, for the hypothesis to be rejected, a majority of the categories when compared would need to be significant at the .05 level. For example, if the independent variable of attitude and interest is significant when compared with the dependent variable of standard score, the null hypothesis, that there is no relationship between recruit school performance and future job performance in the field, would be rejected.

The first operation carried out in the analysis was the Person Product Moment Correlation. The means and standard deviations of the variables utilized in the study are shown in Table 4.1. A factor matrix was then developed from the Pearson Correlation after varimax rotation with Kaiser normalization. The results of the rotated factor matrix are presented in Table 4.2.

The factor analysis took the intervariable correlations and then determined which variables tended to measure the same thing. In effect, this reduced and simplified the number of variables. It also showed how the variables tended to cluster together to determine what they were measuring.

An initial stepwise multiple regression analysis was carried out using the four ADI categories and their weighted mean, standard score, as the fifth category in addition to the sixteen categories listed on the Final Recruit Evaluation (FRE). Referring to Table 4.2, Factor 1 reflects a combination of variables that includes attitude and interest, initiative and dependability, leadership potential, composure and control, relationship and cooperation with others, and report composition and language usage. It appears that the label, attitude, adequately identifies this factor.

Factor 2 reflects the ADI scores and measures post academy job performance, the dependent or predictive variable in this study. Factor 3 reflects a combination of variables that include personality traits, personal bearing and appearance, physical ability,

TABLE 4.1.--Means and Standard Deviations of the Variables Used in the Study.

| Variable | Mean | Standard Deviation | Cases |
|---|---|---|---|
| Academic Ability | 85.8798 | 3.5281 | 101 |
| Personality Traits | 3.8020 | .8369 | 101 |
| Personal Bearing and Appearance | 3.9307 | .8397 | 101 |
| Attitude and Interests | 2.1683 | 2.0399 | 51 |
| Initiative and Dependability | 1.9208 | 1.8476 | 51 |
| Leadership Potential | 1.8119 | 1.7647 | 51 |
| Composure and Control | 2.0099 | 1.9209 | 51 |
| Relationship & Cooperation with Others | 2.1089 | 2.0194 | 51 |
| Typing, Printing and Spelling Ability | 3.9307 | .8747 | 101 |
| Report Composition and Language Usage | 1.8515 | 1.8132 | 51 |
| Physical Ability, Stamina & Condition | 3.9208 | 1.0167 | 101 |
| Driving Ability | 3.2871 | .7917 | 101 |
| Marksmanship Ability | 3.5347 | .9334 | 101 |
| Water Safety Ability | 3.5050 | 1.0642 | 101 |
| Prior Police Experience | .3415 | -- | 101 |
| Age | 24.1584 | 2.0772 | 101 |
| Interpersonal Relations | 82.8515 | 7.5397 | 101 |
| Job Knowledge and Judgment | 84.3267 | 8.2123 | 101 |
| Job Involvement | 83.0297 | 7.5808 | 101 |
| Standard Activities Proficiency | 83.4554 | 8.6851 | 101 |
| Standard Score | 84.1386 | 8.2317 | 101 |

TABLE 4.2.--Varimax Rotated Factor Matrix After Rotation with Kaiser Normalization (N = 101).

| Variable | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 |
|---|---|---|---|---|---|---|
| Academic Ability | -.02065 | .15601 | .13613 | .45383 | .10153 | .00385 |
| Personality Traits | .09524 | .02315 | .51532 | .04701 | -.02233 | -.02710 |
| Personal Bearing and Appearance | .02918 | .06842 | .59251 | -.02901 | -.01222 | .18764 |
| Attitude and Interest | .08092 | .02572 | -.05280 | .01262 | .08535 | .01098 |
| Initiative and Dependability | .09076 | .01789 | .00018 | -.01878 | .08098 | .03945 |
| Leadership Potential | .97091 | .02075 | .04214 | -.01985 | .09295 | .04219 |
| Composure and Control | .97660 | -.01219 | .01828 | -.04555 | .06378 | .01814 |
| Relationship and Cooperation with Others | .97830 | .03297 | -.01265 | -.00664 | .10988 | -.03971 |
| Typing, Printing and Spelling Ability | -.38471 | .06026 | .01726 | .33241 | .21560 | -.13297 |
| Report Composition and Language Usage | .91999 | .02586 | -.04265 | .07842 | .21320 | .01471 |
| Physical Ability, Stamina and Condition | -.24888 | .21065 | .52236 | .01918 | -.25454 | .09990 |
| Driving Ability | -.15363 | .17810 | .25174 | -.37364 | .10298 | .03970 |
| Marksmanship Ability | .05942 | .02837 | .14359 | -.08110 | .04561 | .41890 |
| Water Safety Ability | -.17400 | -.15064 | .27634 | .00772 | -.31456 | -.06713 |
| Prior Police Experience | .15344 | .01870 | -.07023 | -.03746 | .45860 | .02999 |
| Age | .03453 | .00888 | .03051 | -.38667 | .25161 | .04604 |
| Interpersonal Relations | .09881 | .62229 | .09104 | -.13596 | -.02294 | -.52844 |
| Job Knowledge and Judgment | .02331 | .92964 | .02447 | .03550 | .03792 | .07251 |
| Job Involvement | .00442 | .94424 | .01204 | .01015 | -.06013 | .01667 |
| Standard Activities Proficiency | -.02733 | .84189 | .16390 | .12744 | .16391 | .07142 |
| Standard Score | .02776 | .00605 | .06234 | .01063 | .03861 | -.08588 |

driving ability, and water safety ability. This factor is labeled under the heading of image.

Factor 4 reflects the variable of academic ability. Factor 5 reflects two variables, age and prior police experience which is labeled experience. Factor 6, the last factor, reflects the variable of marksmanship ability.

After analyzing the results of the factor analysis, it was concluded that the variable, standard score would be utilized in a final stepwise multiple regression analysis using the remaining factors determined in the initial factor analysis. This was accomplished because the factor analysis indicated that standard score adequately took into account the remaining ADI categories and their resultant scores.

The results of this stepwise multiple regression analysis between standard score and the various factors are reflected in Tables 4.3 through 4.7. A summary of the analysis is reflected in Table 8..

Factor 1 (Attitude) accounts for approximately 10% of the variance in the dependent variable, standard score. In effect, the combination of variables that identify Factor 1 reflect the strongest predictive value of all of the factors identified.

Factor 3 (Image) accounts for approximately 10% of the variance in the dependent variable, standard score. This combination of variables, that identify Factor 3, reflect the next strongest predictive value of the factors identified.

TABLE 4.3.--Stepwise Multiple Regression Analysis Between Standard Score and Factor 1 (Attitude).

| Factor 1 (Attitude) | R Square | R Square Change | Significance |
|---|---|---|---|
| Relationship and Cooperation with Others | .05987 | .05987 | .072 |
| Attitude and Interest | .07265 | .01277 | .141 |
| Composure and Control | .08770 | .01506 | .193 |
| Leadership Potential | .09219 | .00449 | .294 |
| Report Composition and Language Usage | .09537 | .00318 | .494 |
| Initiative and Dependability | .09652 | .00115 | .535 |

TABLE 4.4.--Stepwise Multiple Regression Analysis Between Standard Score and Factor 3 (Image).

| Factor 3 (Image) | R Square | R Square Change | Significance |
|---|---|---|---|
| Driving Ability | .04735 | .04735 | .111 |
| Personality Traits | .05929 | .00194 | .204 |
| Water Safety Ability | .07202 | .01273 | .278 |
| Physical Ability, Stamina, and Condition | .08240 | .0139 | .356 |
| Personal Bearing and Appearance | .10316 | .02076 | .358 |

Factor 4 (Academic Ability) accounts for approximately 5% of the variance in the dependent variables, standard score. This variable, which identifies Factor 4, reflects the third strongest predictive value of the factors identified.

TABLE 4.5.--Stepwise Multiple Regression Analysis Between Standard Score and Factor 4 (Academic Ability).

| Factor 4 (Academic Ability) | R Square | R Square Change | Significance |
|---|---|---|---|
| Academic Ability | .04128 | .04128 | .137 |

Factor 5 (Experience) accounts for approximately 4% of the variance in the dependent variable, standard score. This combination of variables reflect the next strongest predictive value of the factors identified.

TABLE 4.6.--Stepwise Multiple Regression Analysis Between Standard Score and Factor 5 (Experience).

| Factor 5 (Experience) | R Square | R Square Change | Significance |
|---|---|---|---|
| Age | .01052 | .01052 | .456 |
| Prior Police Experience | .02776 | .01724 | .481 |

Factor 6 (Marksmanship Ability) accounts for less than 1% of the variance in the dependent variable, standard score. This variable reflects negligible predictive value of the factors identified.

TABLE 4.7.--Stepwise Multiple Regression Analysis Between Standard Score and Factor 6 (Marksmanship Ability).

| Factor 6 (Marksmanship Ability) | R Square | R Square Change | Significance |
|---|---|---|---|
| Marksmanship Ability | .00357 | .00357 | .665 |

In summary, the five factors identified account for approximately 27% of the variance in the dependent variable, standard score (see Table 4.8).

TABLE 4.8.--Stepwise Multiple Regression Analysis Summary Between Standard Score and Factors 1, 3, 4, 5 and 6.

| Factors | R Square |
|---|---|
| Factor 1 | .09652 |
| Factor 3 | .10316 |
| Factor 4 | .04128 |
| Factor 5 | .02776 |
| Factor 6 | .00357 |
| Total R Square | .27229 |

## Summary

In the stepwise multiple regression analysis of the factor analysis, no statistically significant findings were determined at the .05 level between the individual's final recruit evaluation (FRE) and his subsequent field performance as measured by the Achievement and Development Inventory (ADI). Moreover, the FRE accounted for only 27% of the variance in the future job performance as measured by the ADI.

# CHAPTER V

# SUMMARY AND CONCLUSIONS

## Summary

### Purpose

Many attempts have been made to predict future job performance in various professions.[74] Few, however, have been directed toward the police service in particular. This research effort was undertaken with the purpose of determining if future job performance of Michigan State Police Troopers could be predicted utilizing recruit school performance criteria as the predictor variables.

### Method

A sample (N = 101) of Michigan State Polite Troopers was taken from the graduates of seven recruit schools who completed training between December of 1972 and July of 1975. A Pearson Product Moment Correlation was made followed by a factor analysis which created a varimax rotated factor matrix after rotation with Kaiser normalization. Using the resultant factors as variables, a stepwise multiple regression analysis was completed to determine which measures of performance in the academy would help predict

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[74] L. J. Cronbach, Essentials of Psychological Testing (New York: Harper & Row, 1970; D. C. McClelland, loc. cit.; and R. L. Thorndike and E. Hagen, loc. cit.

future job performance in the field. The seventeen categories listed on the Final Recruit Evaluation (FRE) were the independent or predictor variables and the five cateogries listed on the Achievement and Development Inventory (ADI) were the criterion or dependent variables.

A general research question was tested: could job performance of Michigan State Police Troopers be predicted successfully based on recruit school performance?

### Results

Based on the data analysis, the findings indicated that approximately 27% of the variance in future job performance could be accounted for by recruit school performance. These results indicate that one cannot accurately predict future job performance in a field operation based on performance measured while in a recruit training mode in the academy.

## Conclusions

### Limitations of the Study

It would appear from the findings that performance of Michigan State Police Trooper recruits while in training at the academy has little relationship with future job performance in the field. Several important limitations in this study, however, must be considered. First, the initial problem encountered was that of limited data for the first three recruit schools. It was found that the Final Recruit Evaluation (FRE) used for those schools was limited in scope and measured only nine performance categories as

compared with seventeen performance categories in the later revised FRE utilized in the last four schools of the sample. The ultimate result of this discovery was that the original sample of 101 subjects for all seventeen categories on the FRE (independent variable) was reduced to 51 subjects for the seventeen categories.

Discussion

It is important to note that Factor 1, which reflects the categories of attitude and interest, initiative and dependability, leadership potential, composure and control, relationship and cooperation with others, and report composition and language usage were found to have the highest predictive value on future job performance. These categories, which were found statistically to be highly correleated, were labeled attitude, because that descriptive term most closely described each category individually and all categories collectively. It is interesting to note that these are the categories that were added to the latest change of the final recruit evaluation form for evaluation purposes. This FRE was utilized for the last four schools in the sample. Thus, it is possible that if all of the categories on the latest final recruit evaluation form could have been utilized for the entire sample, a more significant finding would have resulted. There are measurable types of performances which, when exhibited in various training situations, are analogous to performance in the field situation. However, one must first properly identify and measure them. It would appear that a person's behavior styles are determined by innate characteristics

acting in combination with his life experiences. These predispositions can be measured and they generally reflect the success a person has in dealing with everyday situations, whether routine or crisis oriented. These predispositions are the measurable categories reflected in Factor 1 and 3 which accounted for approximately 20% of the predictive value of the independent variables.

Factor 3, labeled Image, which reflected the categories of driving ability, personality traits, water safety ability, physical ability, and personal bearing and appearance, had the second highest predictive value for future job performance. Factor 4, Academic Ability, and Factor 5, Age and Experience, had the third highest predictive values for future job performance but were only half as strong as Factors 1 and 3. Factor 6, Marksmanship Ability, had very little predictive value for future job performance.

It is interesting to note that the predictor explaining the greatest amount of variance (10%) was the attitude a recruit reflected while in training, followed closely by his personal image (10%). Academic ability explained 5% while experience explained only 4% of the variance. Marksmanship explained the smallest amount of variance, less than 10%.

In the Michigan State Police, historically, an assumption has been made by troopers in the field concerning a recruit's status upon graduation from the academy. In addition to other factors, he has successfully demonstrated: perserverance by completing recruit school; a willingness to work hard because of the well-known demands

of the training program; sufficient intellect to pass the examinations required to complete recruit school; and, a sufficiently high degree of proficiency to qualify with the departmental service revolver. Although the field trooper does not negate the value of these qualities and skills, he feels there is no need on his part to measure them in the field operation. In other words, the recruit school experience was viewed as the first step of an initiation into the organization. What remained after graduation from the academy was to determine how he "fit in," what kind of attitude he displayed around other troopers, and finally, could he carry out the duties of a trooper?

The ADI was developed and validated based on input from troopers who more than likely used these assumptions in developing the statement pool used to describe a good trooper. Although some statements were probably developed from past experiences in recruit school, most were developed from experiences relating to the job. Although some attributes are analogous to both recruit training and real-life job situations, many are not. This would tend to explain the partial correlations found in this research study.

Although the ADI categories have been validated, the FRE categories have not been. FRE categories were originally developed by Training Division staff members. Categories were later added based upon recommendations from field personnel as well as staff officers. Although the categories generally reflected those suggested in the then current literature, no validation studies were completed on them. In order to make the ADI and FRE more compatible,

additional descriptors must be added to the FRE which reflect the descriptors in the ADI. However, one must acknowledge the fact that they will never be completely compatible due to the nature of the training environment as contrasted with the real world.

Sample

The study may be criticized because the sample was taken from only one organization, the Michigan State Police. However, the data which were compiled on recruit performance were able to be gathered because of the uniqueness of their organization. The State Police trains its recruits in a live-in academy for approximately fourteen weeks. The candidates report in on Sunday evening and remain until week-end pass on Friday evening. Through the years, the Michigan State Police have maintained their traditional military style of training their recruit personnel. The recruits are required to conform to strict regimentation and are also required to meet stringent organizational standards. They are trained to be self-sufficient and self-reliant in a variety of situations and are evaluated accordingly. This live-in controlled atmosphere is ideal for evaluating individual performance in subjective areas such as those reflected in the Final Recruit Evaluation (FRE). This situation is what makes the Michigan State Police unique as a basis for research of this type.

After graduation from the academy, these now-probationary troopers are assigned to the field operation. They are again evaluated during their probationary period and if they fail to

achieve and maintain minimum departmental standards on the job they are released from employment. After their probationary period of one year from entering the academy is completed, they come under the control of the Achievement and Development Inventory (ADI). The ADI was the basis of the dependent variable in the research design.

## Recommendations

As a direct result of this research effort, the Final Recruit Evaluation (FRE) used by the Training Division of the Michigan State Police is being redesigned to reflect criteria similar to that found in the Achievement and Development Inventory (ADI). It is felt that there is validity in the hypothesis that future job performance of police officers can be accurately predicted based upon performance in recruit training provided the criteria is sufficiently diversified and the evaluations are completed in an objective manner.

In addition to redesigning the FRE to more adequately reflect specific categories such as those reflected in the ADI, standardized evaluation guidelines are also being designed to accurately describe the various levels of measurement for each category. This will hopefully enhance the overall evaluation and ensure a standardized format for all future recruit evaluations. This newly developed evaluation form will provide future researchers with invaluable information and data to pursue further research in this vital area.

The results of this preliminary research can be used to generate further hypotheses for predicting future job performance based on recruit school performance variables. In summary, this

study was a modest attempt to determine if there is validity in attempting to predict job performance of troopers in the Michigan State Police based upon evaluations completed during recruit school.

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# APPENDICES

# APPENDIX A

# THE MICHIGAN STATE POLICE

## APPENDIX A

## THE MICHIGAN STATE POLICE

The Michigan State Police (MSP) had their origin during World War I. The departure of the National Guard for foreign service left the state without any reserve force to protect internal security. Therefore, in 1917 the Legislature, in enacting legislation creating the War Preparedness Board, gave the Governor authority and funds to organize State Troops for home defense.

The record of these troops was outstanding and in 1919 the Legislature, in response to widespread demand, reorganized them as the Michigan State Police. Today the department is regarded as one of the finest of its kind in the nation and has steadily grown in the esteem and confidence of the public.

The director of the State Police, under whom the department is administered, is Colonel Gerald L. Hough, himself a trooper who rose from the ranks to the top position in the organization.

Unlike some State Police Organizations whose authority is confined to highway patrol and offenses committed on the highways, general police powers are conferred on the Michigan State Police. This enables them to render a much greater and more comprehensive service to the public. In addition to highway patrol, a large percentage of the time of the Michigan State Police Trooper is spent

investigating and disposing of criminal complaints ranging from the most minor offenses to the major crimes of bank robbery and murder.

At present the department comprises 64 posts, eight district headquarters and the headquarters at East Lansing. Nearly all occupy state-owned buildings which were erected solely for this use, including a seven-story academy and training facility that was placed into operation in 1974. Present authorized enlisted strength, including detectives and others on specialized assignment is 2350.

# APPENDIX B

# FINAL RECRUIT EVALUATION

TD-2 (Rev. 11-73)

Michigan Department of State Police
TRAINING DIVISION

## FINAL RECRUIT EVALUATION

NOTE: This evaluation reflects the consensus ratings of the Training Division Staff instructors. These instructors are knowledgeable concerning the recruits' relative standing in the various areas of Recruit School instruction. Wherever possible each individual recruit's performance is compared with the average level of performance of the entire Recruit School in a given topic area.

| Recruit | Date of Birth | Recruit School No. | Enlistment Date | Date of Evaluation |
|---|---|---|---|---|
| | | | | |

**(1) ACADEMIC ABILITY:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Individual Grade Point Average _____ % Class Grade Point Average _____ %

Weaknesses: _____

Strengths: _____

**(2) PERSONALITY TRAITS:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(3) PERSONAL BEARING AND APPEARANCE:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(4) ATTITUDE AND INTEREST:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(5) INITIATIVE AND DEPENDABILITY:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(6) LEADERSHIP POTENTIAL:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(7) COMPOSURE AND CONTROL:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(8) RELATIONSHIP AND COOPERATION WITH OTHERS:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(9) TYPING, PRINTING AND SPELLING ABILITY:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(10) REPORT COMPOSITION AND LANGUAGE USAGE:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(11) PHYSICAL ABILITY, STAMINA, CONDITION:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(12) DRIVING ABILITY:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(13) MARKSMANSHIP ABILITY:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(14) WATER SAFETY ABILITY:**

☐ Outstanding ☐ Strong ☐ Acceptable ☐ Needs Improvement ☐ Weak

Weaknesses: _____

Strengths: _____

**(15) PRIOR POLICE EXPERIENCE:**

Agency: _____

Location: _____ Length of Service: _____

Equipment familiar with, i.e., L.E.I.N., Radio, V.A.S.C.A.R., Radar, Breathalyzer, etc.: _____

# APPENDIX C

# ACHIEVEMENT AND DEVELOPMENT INVENTORY

State of Michigan
DEPARTMENT OF STATE POLICE

# ACHIEVEMENT & DEVELOPMENT INVENTORY


**Personnel Division**

March 1977

# APPENDIX C

## ACHIEVEMENT AND DEVELOPMENT INVENTORY

### Introduction

The Achievement and Development Inventory is a performance evaluation and development system for trooper employees. Its purpose is to provide a fair and objective appraisal of the troopers performance and to indicate areas for improvement. This performance report shall be completed for every non-probationary trooper.

The Achievement and Development Inventory consists of two major parts. Part I is an achievement scale (forced-choice) and has been successfully validated in accordance with professional guidelines. It provides a numerical ranking for each employee and identifies strong and weak areas of performance. The information derived from Part I will be furnished to post commanders for use in their coaching sessions. The post commander and three post sergeants will complete Part I of the Inventory for each non-probationary trooper. The post commander will select the three sergeants, based on their knowledge of the trooper's performance. Unlike the first ADI administration, it is <u>not</u> necessary to have the same sergeants serve as describers for every trooper. It is especially important that Part I be completed <u>without</u> consultation among those completing it.

Part II of the ADI provides post commanders with a tool for guidance and development of his employees. Part II of the ADI must be completed by the post commander after consultation with post sergeants. In this case the sergeants are to be selected by the post commander, based on the sergeant's knowledge and familiarity with the trooper being evaluated.

The post commander shall review the results of Part I and the three sections of Part II with each trooper; providing the trooper with information on areas of needed improvement and areas in which performance is satisfactory or superior.

INSTRUCTIONS: PART I

A. Remember: The post commander and three post sergeants must complete Part I for each non-probationary trooper assigned to their post. This must be done on an independent basis and it is important to consider the items in Part I from the standpoint of describing rather than rating.

B. The Response Form calls for identification information and it is very important that you print the information in the blocks to facilitate data processing. Use the following sex designation code: M = Males, F = Females. Race should be designated using the following code: 1 = White, 3 = Black, 5 = Spanish American, 7 = American Indian, and 9 = Oriental.

C. Part I contains 20 sets of four descriptive phrases labeled 1, 2, 3, and 4.

D. For each set of phrases you are to decide which two statements best describe the trooper. He may be greatly like all of the phrases, or only a little like them, but you are to select two, and only two, in each set.

E. When you have decided which two phrases best describe the trooper, simply place an X in the appropriate spaces on the Response Form.

F. For example, in the following set of phrases two statements have been chosen:

Example:

Part I

ACHIEVEMENT SCALE

1. Thinks before he/she acts.
2. Is loyal to his/her unit and supervisor.
3. Patrol techniques are excellent.
4. Finishes everything he/she starts.

RESPONSE FORM

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. | [ ] | [X] | [ ] | [X] |

Here we have selected "Is loyal to his/her unit and supervisor," and "Finishes everything he/she starts," as most descriptive of the trooper being evaluated. Therefore, the corresponding spaces numbered "2" and "4" have been marked with an X. (If you decide to erase, make certain that you do so clearly.)

G. Proceed to select and mark two responses for each of the 20 sets of phrases on the Response Form.

H. Part I must be completed and along with the booklets, returned to the Personnel Division by April 14, 1977.

I. Part I of the booklet is not to be marked, or duplicated in any way.

INSTRUCTIONS: PART II

A. Part II is composed of three major sections.

B. After consulting with post sergeants, the post commander is to prepare Part II, which will reflect a composite of the post commander and sergeants' views.

C. To complete Section III requires considerable thought and planning. Also note that Section III requires the identity of the sergeants consulted, the troopers signature and post commanders signature.

D. The post commander has been provided with no carbon paper required of Part II.

E. Upon completing Section III of Part II, it is to be forwarded immediately to the Uniform Division Commander.

F. Part II is to be completed prior to your receipt of the Part I results and in accordance with the instructions.

Michigan Department of State Police

Personnel Division

ACHIEVEMENT AND DEVELOPMENT INVENTORY

Note: (1) Select two phrases which best describe the trooper.
(2) Remember to treat each set of statements independently.

PART I

ACHIEVEMENT SCALE

1:

1. Usually prompt in answering complaints.
2. Excellent interrogator of both suspects and witnesses.
3. When conducting an investigation, the case is organized carefully.
4. Knows how to operate instruments and equipment related to his/her work.

2:

1. Relays to fellow employees a feeling of genuine interest and understanding.
2. Mature in a way that comes with time, living with and understanding people.
3. Greets fellow officers with a smile and pleasant remarks.
4. Questions whatever he/she does not understand.

3:

1. Has the ability to initiate projects and see that they are carried out.
2. Even tempered.
3. Leaves personal problems at home.
4. Normally sets an example which others endeavor to follow.

4:

1. Makes informative reports that can be easily followed up by others if the need arises.
2. Careful and serious in report preparation.
3. Always listens to both sides before making a decision.
4. As concerned with crime prevention as criminal apprehension.

5:

1. Accepts group decisions without necessarily agreeing.
2. An inspiration to other members of the department.
3. Very outgoing and truly likes people.
4. His/her aggressiveness prompts supervisors to recommend duties with additional responsibility.

6:

1. Does not become involved in compromising situations.
2. Knowledge of working area and use of informants is exceptional.
3. When issued equipment needs repair or replacement, it receives immediate attention.
4. Does well in all aspects of law enforcement.

7:

1. Is a doer--not a talker.
2. Careful with reports, prepares them in detail, so they are of full value when used at a later time.
3. Treats members of other police organizations as fellow police officers.
4. Never officious; does not look down on others.

8:

1. Has respect for fellow officers and command personnel.
2. Thoughtful and considerate to his/her family.
3. Respects danger and does not unnecessarily jeopardize his live or the lives of others.
4. Loyal to fellow workers.

9:

1. Productive in all assigned work.
2. Continuously tries to improve his/her knowledge of new police techniques and policies.
3. Respects the opinions of others.
4. Has the ability to communicate with everyone.

10 :

1. Excellent organizer and planner.
2. Views traffic enforcement on the highway as a serious matter.
3. Tries to instill pride in younger officers.
4. Does not use force except as a last resort.

11:

1. Makes informative reports that can easily be followed up by others if necessary.
2. When in doubt, consults appropriate source for correct procedure.
3. Keeps the firearms which are assigned, clean and in proper working order.
4. Listens to both sides before making a decision.

12:

1. Makes good contacts with both the general public and public officials.
2. Leaves a very good impression of the department with the younger generation.
3. Does not accept or solicit gifts or services from the public.
4. Knows the criminal element in the post area.

13:

1. Strives to maintain a steady and well rounded performance in police work.
2. Resourceful and imaginative in his/her investigations.
3. Able to evaluate a situation easily.
4. Force is only used as a last resort.

14:

1. Does a good job of counseling subordinates.
2. Usually gives the citizen the benefit of the doubt.
3. Continually striving to be the best.
4. Smiles, and listens to citizen's complaints.

15:

1. Treats the public, other departments, courts, news media, etc., with respect and gains their respect in return.
2. Approach to the public is personable and polite.
3. Very familiar with the work area.
4. Uses restraint, instead of force when possible.

16:

1. Knows the departmental rules and regulations very well.
2. Reports are neat, thorough, accurate, and "on time."
3. Does not belittle other departments.
4. Does not permit anyone to enter a patrol car without checking for possible weapons.

17:

1. Commands the respect of both junior and senior officers.
2. Demonstrates initiative and perserverence.
3. Does not have an arrogant attitude because he/she is a state police officer.
4. Treats all people with dignity.

18:

1. Knows when to speak and when not to speak.
2. Makes decisions promptly, but thoughtfully.
3. Usually does not act upon impulse.
4. Writes quality traffic summons rather than quantity.

19:

1. Has a friendly disposition.
2. Never practices racial discrimination.
3. Thoughtful.
4. Can work with anyone at the post without arousing ill feelings.

20:

1. Aware of recent supreme court decisions.
2. Respects the opinions of others.
3. Takes advantage of resource materials throughout the department.
4. Reports convey meaning without using excessive language.

PD (12-78)

Michigan Department of State Police – Personnel Division

## ACHIEVEMENT & DEVELOPMENT INVENTORY
### Response Form – Part I

Trooper's Social Security Number ☐☐☐ – ☐☐ – ☐☐☐☐

Trooper's Name ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ ☐
Last First M.

Enlistment Date ☐☐☐☐☐☐ Sex ☐ Race ☐ Post Number ☐☐

Describer's Name _____
Last First M.

Civil Service Classification ☐☐

## PART I
## ACHIEVEMENT SCALE

| Phrase No. | 1 2 3 4 | | 1 2 3 4 | | 1 2 3 4 |
|---|---|---|---|---|---|
| | 1. ☐☐☐☐ | | 2. ☐☐☐☐ | | 3. ☐☐☐☐ |
| | 4. ☐☐☐☐ | | 5. ☐☐☐☐ | | 6. ☐☐☐☐ |
| | 7. ☐☐☐☐ | | 8. ☐☐☐☐ | | 9. ☐☐☐☐ |
| | 10. ☐☐☐☐ | | 11. ☐☐☐☐ | | 12. ☐☐☐☐ |
| | 13. ☐☐☐☐ | | 14. ☐☐☐☐ | | 15. ☐☐☐☐ |
| | 16. ☐☐☐☐ | | 17. ☐☐☐☐ | | 18. ☐☐☐☐ |
| | 19. ☐☐☐☐ | | 20. ☐☐☐☐ | | 21. ☐☐☐☐ |
| | 22. ☐☐☐☐ | | 23. ☐☐☐☐ | | 24. ☐☐☐☐ |
| | 25. ☐☐☐☐ | | | | |

Describer's Signature _____ Date _____

Michigan Department of State Police — Personnel Division

## ADI — PART II
## TROOPER DEVELOPMENT AND COUNSELING GUIDE

COPIES. ☐ Post File (canary copy) ☐ District File (white copy) ☐ Trooper's Copy (pink copy)

| Trooper's Name |
|---|
| Post |
| Date |

**SECTION I — The following are general statements of performance. Please use the space provided to indicate your comments relative to how well each statement applies to the trooper.**

| | |
|---|---|
| 1. Does a good job of counseling fellow troopers | 2. Work habits are excellent. |
| 3. Is a valuable member of the State Police. | 4. Completes assignments without detailed supervision. |
| 5. Knowledge of the job is excellent. | 6. Has shown consistent improvement and is interested in further improvement. |
| 7. Maintains a proper state of physical fitness. | 8. Shows good judgment in exercising his duties and responsibilities. |
| 9. Accepts assignments willingly. | 10. Gets along well with others and works well as a team member. |
| 11. Helps maintain high morale among fellow troopers. | 12 Contacts with the public are well received. |
| 13. Reports are neat, clearly written, and to the point. | 14. Closely adheres to the department's and post's rules and regulations. |

**SECTION II — In the space provided indicate your comments relative to how well the trooper is performing in each specific area.**

JOB KNOWLEDGE

| | |
|---|---|
| 1. Knowledge of appropriate state and federal laws. | 2. Knowledge of departmental rules, regulations, and policies. |
| 3. Knowledge of criminal law and investigative techniques. | |
| 4. Knowledge of traffic law and traffic allied investigative techniques. | 5. Knowledge of non-criminal traffic matters, i.e. all other service areas. |
| 6. Knowledge of criminal and juvenile adjudication processes. | 7. Knowledge of pertinent court decisions. |
| 8. Knowledge and operation of equipment and instruments related to the job. | 9. Understands the total departmental mission. |
| 10. Other | |

JUDGMENT

| | |
|---|---|
| 1. Makes rational decisions | 2. Interpretation of departmental regulations and procedures. |
| 3. Reaction and response to potentially hazardous situations. | 4. Use of discretion. |
| 5. Ability to arrive at a correct conclusion. | 6. Attempts to get all of the facts before making a decision. |
| 7. Ability to make immediate, most correct decisions in any emergency situation. | 8. Exhibits maturity. |
| 9 Other | |

POST OPERATIONS

| | |
|---|---|
| 1. Knowledge and use of the filing and record system. | 2. Handles the job of post desk officer. |
| 3. Operates the various law enforcement communications systems. | 4. Writes informative reports. |
| 5. Capable of operating the post in the absence of a supervisor. | |
| 6. Other | |

**SECTION II (Continued)**

| | |
|---|---|
| INTERPERSONAL RELATIONS AND ATTITUDES | |
| 1. Relationship with fellow troopers. | |
| 2. Involved in the local community. | 3. Holds the department in high esteem. |
| 4. Instructs others in time of stress. | 5. Counseling of probationary troopers. |
| 6. Maintains (one to one) public contacts. | 7. Goes out of his way to help fellow officers. |
| 8. Other | |
| CARE AND USE OF EQUIPMENT | |
| 1. Knows how to use and take care of firearms. | |
| 2. Knows how to use and take care of emergency equipment. | 3. Knows how to use and take care of fingerprint equipment. |
| 4. Knows how to use and take care of photographic equipment. | 5. Operates departmental vehicles in a legal, safe and efficient manner. |
| 6. Other | |
| PERSONAL APPEARANCE | |
| 1. Grooming. | |
| 2. Uniform neat and clean. | 3. Leather shined. |
| 4. Maintains recommended standards of physical fitness. | 5. Image to the public. |
| 6. Other | |
| WORK QUALITY AND QUANTITY | |
| 1. Displays organized work habits. | 2. Displays initiative. |
| 3. Quantity of work consistently exceeds requirements. | 4. Carries out his/her work without detailed instructions. |
| 5. Follows through until job is completed. | 6. Ensures that his/her work is accurate and thorough. |
| 7. Handles various assignments without difficulty. Is adaptable and flexible. | 8. Works consistently and effectively in all areas of the job responsibility |
| 9. Other | |
| ADDITIONAL COMMENTS | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Michigan Department of State Police – Personnel Division

## ADI – PART II
## TROOPER DEVELOPMENT AND COUNSELING GUIDE

COPIES: ☐ Uniform Division C.O. (white copy) ☐ District File (xerox copy) ☐ Post File (canary copy) ☐ Trooper's Copy (pink copy)

| Trooper's Name | |
|---|---|
| Post | |
| Date | |

**SECTION III – After reviewing the trooper's past performance and discussing it with him you should now use Section III to list some specific performance objectives which the trooper should meet in the coming year. Space is provided below to list performance goals and objectives. A six month review of these goals and objectives should be made to determine progress.**

Sergeants consulted:

Name _____ Name _____ Name _____

Post Commander's Signature and Date Signed:

Signature _____ Date _____

Post Commander's Comments:

Trooper's Signature and Date Signed: I have reviewed and discussed the THREE SECTIONS of Part II of the Achievement and Development Inventory with my Post Commander.

Signature _____ Date _____

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