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The Validation of an Instrument to Measure Hourly Worker Acceptance of Counseling in Industry

Frank H. Jeremy
Western Michigan University

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THE VALIDATION OF AN INSTRUMENT TO MEASURE
HOURLY WORKER ACCEPTANCE OF COUNSELING
IN INDUSTRY

by

Frank H. Jeremy

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
Degree of Doctor of Education

Western Michigan University
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August 1978
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I would like to express my appreciation to all of the individuals who took part in the study, with sincere thanks to the management of the participating companies.

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And for my "two" daughters Kelly and Ivy, thank you for your love and concern. No words could ever express the amount of support and love supplied by my partner in this as in all things; accordingly, I dedicate this dissertation to my wife, Jamie.

Frank H. Jeremy

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WESTERN MICHIGAN UNIVERSITY, ED.D., 1978
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CHAPTER I

INTRODUCTION

The recruitment, selection, and utilization of manpower represents a major enigma to industrial managers. This problem has been primarily assigned to the personnel office staff. The personnel office has been forced to handle government legislation, rising labor costs, and increased pressure for skilled workers. The management of manpower has caused the expansion of the normal personnel functions of hiring and firing. Personnel staff have taken on the functions of planning, training, development, and organizational structuring (Killian, 1976). The personnel office has also been responsible for the function of medical services. Some of these medical services included the provision for psychiatric care.

One professional resource used by the personnel office has been the industrial staff psychologist. The staff psychologist has operated as an adjunct to the personnel office, working with environmental factors, job enrichment, testing programs, and motivational seminars. Such programs represent a traditional approach to working with the industrial population. The industrial environment has been studied by Feldman (1971), Fraser (1962), Mayo (1933), Münsterberg (1913), and Taylor (1911) with varying results. Such studies, while
useful, have not struck at the core of the human problem in industry. In a special report of a special task force to the Secretary of Health, Education, and Welfare, the study made the following conclusions regarding the nature of work:

Because work is central to the lives of so many Americans, either the absence of work or employment in meaningless work is creating an increasingly intolerable situation. The human costs of this state of affairs are manifested in worker alienation, alcoholism, drug addiction, and other symptoms of poor mental health. (Work in America, 1973, p. 98)

While useful in understanding what may cause worker problems, the industrial psychological answer to the question of what to do about problem employees has not led to the resolution of the personal dilemmas facing employees. Further attempts to humanize the industrial environment may lead to the alleviation of many problems within industry. However, this approach alone may not meet the challenges of mental health care facing the world of work.

Taylor's (1911) work, entitled Scientific Management, represents an approach to developing a more scientifically based response to operational dilemmas. The professional concerns of the industrial psychologist have centered on environmental and management problems; the current use of psychological professionals has shifted to human resource development (Feldman, 1971). "No company will be successful unless it finds solutions that will be available through a comprehensive, well-designed human resource plan" (Ginzberg,
1975, p. 231). Such human resource plans indicate a shift from the traditional personnel functions to one of personal emphasis. Of all the costs that go into our economy and come out in income, approximately three-quarters are personnel-related costs (Ginzberg, 1975).

The problems of industry have grown in scope and cost. Many problems of productivity revolve around the individual employee. The existing machinery has trained employees to service malfunctions, while the human element often goes unattended. Many of the problems of industry are in fact the problems of its employees. The industrial environment does not operate in a vacuum, unaffected by societal or personal pressures; it suffers with its employees. The workers are bombarded by stress, pressure, and radical changes. These facets of our societal environment contribute to a growing concern on how best to treat these disorders. Depression, suicide, hysteria, and substance abuse are some of the general problems that require treatment by trained mental health professionals.

The psychological community is constantly seeking new and better methods to ameliorate the increase of mental disorders. Federal, state, and private mental health treatment centers have instituted outreach programs to take action in the community. In spite of these efforts, the working community operates with decreasing efficiency attributable to drug abuse, alcoholism, and mental disorder. The
establishment of industrial mental health services provides an alternative treatment mode for personal psychological problems. While mental health services have grown gradually within Michigan, national growth has not been substantial. In an article published in Newsweek (Mayer & Simons, 1977), the national estimate on current numbers of psychological professionals working in industry stood at 500. The current figures in Michigan show approximately 40 treatment programs of some sort available (Erfurt & Foote, 1977).

One factor that restrains further growth in Michigan is the lack of pertinent information concerning industrial hourly workers, management, and the work environment. Insightful research in this field could provide substantiation of the premise that industry needs trained mental health professionals to effectively operate in this changing societal environment.

Statement of the Problem

If psychological services are to be created within the industrial sector, it is imperative that data concerning this prospective clientele be collected. If psychological treatment centers within industry are going to succeed, research on all areas of impact should be initiated. The major treatment population in terms of size is that of the hourly worker. This segment also represents a key facet in profit or loss for the manager. Any decision regarding programs
which will affect the hourly worker should also have an impact on production and output.

The acceptance of on-site psychological treatment by the hourly worker is dependent upon the perception of such services. This fact illustrates the need for research into the hourly worker's perception of industrial counseling.

More simply, would the hourly industrial worker accept and use a company counselor, if that person were available? This study will attempt to develop and validate an instrument designed to measure the hourly worker acceptance of counseling services in industry. Should the instrument demonstrate some measure of construct validity, further analysis for differences between industries will be statistically computed.

Organization of the Dissertation

Chapter I is an introduction to the problem which includes a rationale for the study. The rationale is primarily based and supported through a review of the pertinent literature.

Chapter II is a discussion of the methodological procedures that were conducted. Included in the discussion is the development of the survey instrument.

Chapter III is the report of all research results and includes the full analysis of the data.

Chapter IV contains the summary and conclusions pertaining to the study.
Chapter V is a discussion of the limitations of the study and the implications for further research.

Rationale for the Study and Review of the Literature

Industry represents an area of interest to the social scientist. The limited contact by the psychological researcher makes industry a fertile area for investigation. The policies, internal operation, and daily routines are not part of the experience of those who do not work in the industrial complex. Lawyers, merchants, and educators who have never worked or visited an industrial operation have difficulty relating to the realities of this world of work. Research in the field of industry has dealt primarily with such topics as organization, development, management techniques, and employee motivation.

The area of industrial mental health services began in 1916 with the Cheney Silk Mills' work conducted by Dr. C. C. Burlingame. Longitudinal work was conducted at the Hawthorne plant of Western Electric from 1927 to 1956. In spite of these and other studies, the industrial hourly worker has often been ignored. Part of this problem has centered around a desire to study the conditions and methods rather than those who work within the environment.

In a report of a task force to the Secretary of Health, Education, and Welfare, the phrase "blue collar blues"
illustrates one label that has been placed on the hourly worker's state of mind (Work in America, 1973). More contact and research with this segment are required. In order to adequately service the employees, the psychological treatment center must tailor research and programs to fit the problems of this population. What has worked in the university counseling center and in the existing community agencies may not fit the needs of the industrial sector. The conditions, the pressures, and the interpersonal relationships that operate within industry make this environment unique.

Many people suffer from depression, boredom, and a lack of purpose or goal orientation. Such feelings, although common to many in our society, have a profound effect on mental health and job performance. Unlike the other members of society who may share these woes, the industrial worker often is in the middle between union and management. The worker seldom feels like part of the team. In fact, the hourly employee experiences the impression of being exploited or prostituted. These perceptions and attitudes drain the vitality of the worker, reflecting adversely on his/her contribution to industry. A direct result of these effects on industries and unions is the loss of large sums of money through the costs caused by problem employees who experience psychologically debilitating conditions. According to the National Institute on Alcohol Abuse and Alcoholism, alcoholism alone costs industry 15.6 billion dollars a year in
absenteeism and medical care (Mayer & Simons, 1977). Alcoholism stands out as a major contribution to industrial losses. However, in a presentation to a conference on Alcoholism for Union and Management, Presnall (1976) identified alcoholism and drug abuse as only part of the total problem that falls under the rubric of behavior-medical referrals. Personal and family problems make up approximately 35 percent of the referrals, with alcohol and drugs comprising another 35 percent (Presnall, 1976). These figures illustrate that the creation of specialized services such as alcohol treatment services ignores other aspects of the extensive mental health problems that exist in industry. Creating an industrial service that is multi-responsive to the entire range of human problems does nothing to limit alternatives, while affording the client the necessary assistance. A comprehensive mental health service would seem to meet best the needs of the industrial population (Erfurt & Foote, 1977).

The industrial worker suffers from many of the same psychological problems that plague the general population. It is generally accepted that between 15 and 30 percent of the general population suffer from impaired efficiency because of mental or emotional problems (Carone, Pasquale, Kieffer, Sherman, Krinsky, & Yolles, 1976). The identification and treatment of such cases can save time, money, and human suffering. The establishment of an on-site counseling referral service for employees would fill a void. This type
of mental health system is accessible to the clientele and places the psychological professional where problems most often occur. It was concluded by Akabas and Weiner (1973) that the survival of problem employees depends on an increasingly proficient psychological treatment network. The key to such proficiency is the improvement of existing mental health delivery systems. The creation of psychological treatment services which are linked with work or job performance couples the program to a method of sound case discovery. Employees who establish declining attendance records, increased accident occurrence, increased interpersonal conflicts, and increased sick or medical leave are creating an observable behavior pattern for employers and mental health workers to diagnose and treat. Through the use of work histories, it is possible to find the problem employee and reach that person.

"Industry has a unique opportunity to detect emotional problems early, because variations in work performance are relatively visible and measurable" (Carone et al., 1965, p. 60). The work place becomes a mirror that reflects the personalities and problems that the industrial worker experiences. The job or career has the capacity of adding satisfaction, reward, and a feeling of accomplishment to the life of the employee. "The research concerning the needs satisfaction hypothesis of career choice generally substantiates the hypothesis that different kinds of needs
satisfaction potential are perceived in occupations" (Osipow, 1968, p. 178). The search for value and satisfaction in a career often proves fruitless. Where satisfaction from work is difficult for some to find, frustration and anger have become parts of the job. Work problems spill over from the factory into other activities of life (Work in America, 1973).

Psychological problems are not a recent development in the industrial picture. The development of psychological problems and their treatment can be observed from a historical perspective in the literature. The area of mental health in industry has a historical development stemming from the early 1900's. With such people as Beers, Burlingame, Southard, and Anderson, the industrial psychiatric unit was introduced to the work place. Burlingame's efforts at the Cheney Silk Mills in Connecticut in 1916 marked the beginning of this movement (Ferguson & Fersing, 1965). The mental health movement in industry was growing with the industrial revolution. At this point, the industrial psychiatric movement stalled while industry continued to expand technologically. Unfortunately, interpersonal technology lagged while technical innovations accelerated. With the constant introduction of new inventions and new procedures, the field of human development paled by comparison to the excitement generated by advanced mechanization.

Further review of the pertinent literature in the field illustrates the development of industrial mental health care.
Two studies have been conducted which speak to the development of professional mental health care delivery by psychologists and psychiatrists. The first complete study was conducted in 1956 in Minnesota, with the second being conducted by the Bureau of Business Research at the University of Texas in 1962. Both studies concluded that there have been few substantial gains since the inception of the program by Burlingame (Ferguson & Fersing, 1965). The employment of psychiatrists and psychologists has not spread throughout industry.

The psychiatrist has been closely identified with management. These particular mental health professionals are often hired on retainer or act only as consultants. In this type of role, the psychiatrist is observed as a staff consultant who acts in the best interests of the company. Past practices have indicated that confidential psychological interviews have been shared by staff psychiatrists with upper management. With the sharing of confidential communications, the rights of the individual would be placed secondary to the best interests of the company (Ferguson & Fersing, 1965). Past practices have shown the psychiatrist to be useful in working with upper management's mental disorders. Nervous breakdowns and serious chemical addictions have been treated by the psychiatrist. The cost of most forms of psychiatric care often prohibits extensive use of these services. Therefore, only higher levels of management have been privy to
this type of mental health care.

Another aspect of the staff consultant role also deals with the perception of the workers in terms of being referred to the staff psychiatrist. Many of the workers who are referred to the staff professional suffer from low levels of anxiety. Generally, the psychiatrist has been reluctant to work with this type of client. There is also the accompanying reluctance on the part of the worker to be treated by such a psychological "heavyweight." One worker expressed this opinion during an interview with the writer: "Hey, I'm not crazy, I'm just upset."

The lack of development of mental health care in the industrial sector cannot be attributed to the psychiatrist or the psychologist alone. The actual climate within industry offers a clue to approaching this subculture. "The stigma of mental illness in industry is even more severe than in society in general; for in industry the subculture relationships of employer-employee and employer-union are brought into question" (Ferguson & Fersing, 1965, p. 91). While the industrial worker and his/her attitudes about the creation of mental health services are one factor, the roles of the union and management are also part of the total equation. The adversary relationship which often is part of the union-management interchange has spawned a climate of mistrust by both factions.

Unions are often faced with making gains in all arenas
of negotiation. This excerpt from a book by Akabas and Weiner (1973) illustrates the part played by the union in the industrial dyad:

1. The union is in the market for new personal services which help maintain the loyalty of its membership.

2. The union is under pressure to maintain an experienced labor force in industry.

3. The union, in its concern for tradition and community image as a socially responsible pacesetter, seeks to be involved in pioneering social and welfare programs. (p. 45)

If the company grows or prospers, the employee expects to grow and prosper simultaneously. Unions have made great gains in the area of benefits. Some of the benefits that have been bargained for in major contracts include full medical compensation, dental services, optometry, and other health care services. Some current union-management agreements include payments for minimal amounts of psychological treatment. They also include a provision for paid sick leave and non-paid time off without penalty or loss to the employee.

On the other side of the bargaining table, management is faced with higher production costs, increases in wage demands, and diminishing profit returns. The maximization of return on investment is vital. One such area of investment is the human element within industry. "People are industry's major resource, and the company which can best and most successfully utilize its manpower will be able to
acquire an edge over its competitors" (McClean & Taylor, 1958, p. 32). Such commercialization sounds crass, but this view can be offset by another opinion concerning manpower utilization. In a book entitled *The Emotionally Troubled Employee: A Challenge to Industry*, Carone et al. (1965) stated, "Each and every employee who picks up a paycheck is a person, a whole person. And unless that whole person is healthy, both physically and emotionally, the employee cannot make a maximum contribution on the job" (p. 63). Maximizing individual potential is not totally a commercial goal. The growth and improvement of individual efficiency would add to the industrial picture. The tapping of this resource benefits the individual, the company, and the total community. Feelings of accomplishment, worth, and satisfaction can replace depression, boredom, and anger. The conceptualization that mental health is a communal problem that affects the lives of the individual, his/her family, co-workers, and the business is gaining credence with managers and mental health professionals. "As industry begins to accept this idea as part of its responsibility, it can make many contributions to the mental health of its employees and therefore to the efficiency of the work force" (Cohen, 1969, p. 8).

Having discussed the role of union and management, it is now necessary to examine the role of the hourly worker in the mental health picture. This population itself has been identified through efforts by various professionals (Akabas...
& Weiner, 1973; Carone et al., 1976; Ferguson & Fersing, 1965). The identification of such individuals at the work site would have a real impact on productivity, profits, and human suffering. Those problems that are observable and evident are easily recognized by the untrained eye. However, the problem worker does not always make public displays of deviant behavior that are symptomatic of some type of problem. Unless business experiences a dramatic or crisis situation, the reality of psychological trauma costing money does not become evident.

The more seriously disturbed the individual is, the easier the problem is to cope with. The acute psychotic episode is frightening to the individual, the fellow workers, to management, but any competent health professional can make arrangements for immediate treatment. The more subtle disturbances become more troublesome at work. Personality disorders, phobias, and depressions masked by excessive drinking or poor performance are often very difficult to deal with and difficult to recognize. (Carone et al., 1965, p. 4)

It is extremely difficult to separate the job from the personal life of any employee. So much of how the employee acts, feels, and performs is interdependent. Dr. Ralph Collins, from the medical department of Eastman Kodak Corporation, stated, "Even those emotional problems which arise off the job cause frictions within the plant, and give rise to accidents, absenteeism, morale problems, personality clashes, and other costly inefficiencies" (Levinson, 1955, pp. 24-25). The worker reflects the environment
and stress that is part of his/her daily existence.

The examination of the industrial environment and the participants points out the complexity of creating any type of service that works within the environment. The prevailing attitudes and biases that exist form definite blocks to the establishment of adequate mental health care treatment. The prior experiences of the psychiatrist and the psychologist have shown industry to doubt and in fact question the need for such professionals. While tracing this history through the literature, it is evident that there is little mention of counselors or counseling. Further, the lack of real research in the industrial sector does not provide the necessary data that are needed about the factory employee. If the creation of mental health care services becomes an important goal of management, it will be necessary to assess real need areas within their operation. One such method of assessment is the use of a specifically designed instrument to measure problem areas. Aside from assessing problem areas, it is important to measure the acceptance of such a mental health care service.

It is the intention of this study to investigate:

1. The construct validity of a 40-item survey instrument; this primary aspect of the study is designed to determine whether the instrument used does measure the hourly worker acceptance of counseling in the industrial setting.

2. Whether there are measurable differences between the workers at three selected
industries on a total test score and on the various subscores that are generated in the primary analysis.

**Research Questions**

The primary part of the study will investigate the structure, hypothesizing that the instrument will produce a factor structure that matches the logic of the survey master plan. In other words, those items which were designed to produce evidence in a single conceptual area will empirically show a strong relationship with each other.

This study will test the null hypothesis that there are no differences in the mean acceptance levels at the three industries. Symbolically, this hypothesis is represented by the following:

\[ H_0 = \mu_1 = \mu_2 = \mu_3 \]

Should the instrument show evidence of a stable factor structure, finer analyses of the acceptance of counseling in specified areas, as shown in factor design subscores, is necessary.
CHAPTER II

DESIGN AND METHODOLOGY

This chapter will focus on the research design that was implemented for the two studies with a description of the specific procedures that were employed in the data collection. Included in the description is a discussion of the development of a survey instrument, the selection of a population, and the pertinent data analysis techniques.

Background and Review of the Problem

The field of industrial counseling represents an emerging professional psychological service area. In order to establish how best to service this segment of society, it is necessary to gather data about the general working population. Due to the current lack of substantial data concerning the counseling of the industrial hourly employee, it is vital that this problem be investigated. One aspect of the industrial hourly counseling question is the acceptance of a counseling service by the clientele. The establishment of viable psychological treatment systems is dependent upon worker acceptance of counselors and counseling. Although worker acceptance of counseling is only one factor in the success of industrial counseling, it does represent a major area for investigation. To complete this investigation, it
was necessary to develop and validate a survey instrument. How that process was formulated and brought to fruition will be covered in the following section on instrumentation.

Instrumentation

Prior to the inception of the investigation, several instruments were evaluated. Rather than use a survey that was not designed specifically for the measurement of worker acceptance of counseling, it was decided to begin with an instrument that was used in a prior study. The original instrument was used by Dr. Gilbert Mazer from Western Michigan University in a study conducted at a Kalamazoo industry. Mazer's questionnaire contained 79 items which dealt with alcohol, drugs, personal problems, supervisory roles, job attitudes, and company policies. From the master plan developed by the writer, a core of items were selected from the original instrument.

Proper instrument development requires precise procedures. The necessary procedures for instrument construction are: planning the constitution of a pool of items, an analysis of internal structure of the pool of items and selection of items to form a scoring key, and correlation of test scores with a criterion and other variables (Lovevinger, 1957).

Due to constraints placed on the amount of time that each company would allow their employees for the completion
of the designed survey instrument, the length of the survey was a problem to contend with. The Mazer instrument consisted of 79 items, many of which explored areas that did not fit the master instrument plan. The length also was prohibitive in allowing for release time for the workers. Due to these facts, the original instrument was shortened.

Having decided on a time limit of 10-15 minutes for completion, a length of approximately 40 items was set. The 40 items were distributed across 6 areas. These 6 constructs were specific areas of inquiry that were investigated. The 6 areas also represent respective areas of counseling. The areas are (1) Personal and Family Problems, (2) Alcohol Abuse, (3) Drug Abuse, (4) Careers and the Job, (5) Job Satisfaction/Dissatisfaction, and (6) Job Attendance. All of the specific areas are common topics of concern that are dealt with by practicing counselors. The areas of Personal and Family Problems, Alcohol Abuse, Drug Abuse, and Careers and the Job are common to the average caseload in existing community agencies. Job Satisfaction/Dissatisfaction and Job Attendance were selected as environmental factors that are commonly cited by workers as areas of concern in the workplace.

The selection of the six areas necessitated the tailoring of items to meet the criteria for length in the instrument. Through the removal of items from the Mazer survey and the addition of items that expanded the individual areas,
it was possible to mould the questionnaire into a viable measure of worker acceptance of counseling. Each area was covered through the use of multiple items. This was done to guard against random responses. Each area contained at least four items, while more complex areas such as Personal and Family Problems and Careers consisted of more items. The Personal and Family area dealt with individual and family problems such as depression and suicide. This area also dealt with spouse relations and interpersonal problems with co-workers. The Career and Job area consisted of items concerning education, promotion, and retirement. For a breakdown of the individual items in each area, the reader may refer to the Instrument Plan in Appendix A.

The instrument was subjected to a readability analysis by Dr. Ted Kilty of the Education and Professional Development Department at Western Michigan University. Readability is "an objective measure of difficulty [of reading material] in terms of average sentence length and vocabulary load" (Schubert, 1969, p. 255). The Dale-Chall readability analysis was formulated in 1948 and is a standard in the reading field. The analysis is based on the number of words not included in a list of 3,000 words known by 80 percent of fourth graders and the average number of words per sentence. The regression formula that was applied uses a correlation of variables already stated plus a grade correction constant. The specific formula is:
\[ X_{c50} = 0.1579X_1 + 0.0496X_2 + 3.6365 \]

when

\[ X_{c50} \] = Reading grade score of a pupil who could answer 1/2 of the test questions correctly

\[ X_1 \] = Dale score (relative number of words outside Dale list of 3,000 words)

\[ X_2 \] = Average sentence length

3.6365 = Constant

The multiple correlation coefficient of these two factors with the criterion is .70.

For the purpose of the reading analysis, the sentence items were amended to make each one a complete sentence. The original question was stated as follows: "feeling that the work is boring." The question was amended to read: "Do you feel the work is boring?" The incomplete statements were transformed to complete sentences, thus allowing for analysis by the reading program. The results indicated that the vocabulary level ranges from grade 5 to grade 7, with an average reading level of grade 6-7. The grade 6-7 level of reading indicates that the survey instrument can be reasonably regarded as being comprehensive to the average industrial worker (Norcutt, 1975).

The individual items were placed by random number in the questionnaire. This was done to focus attention by the respondents on the individual items. By varying the nature of the questions, each particular item was answered individually rather than in clusters.
The respondents answered each item using the 5-point Likert interval scale. The interval measure is comprised of the following choices: 1 = yes; 2 = probably; 3 = uncertain; 4 = doubtful; and 5 = no. Such a pattern was chosen to provide a range of responses for the individuals in the survey population.

Survey Population

The target population selected was the industrial hourly worker. This group was chosen due to its size, the incidence of psychological or personal disorder, and the development of treatment systems that are growing to service this clientele. This segment represented a large market for psychological treatment systems. The hourly worker group also represents a group that is seldom used in psychological research.

The blue collar workers who were studied came from four area industries. Company A is a fine tooling operation of approximately 200 employees. The facility specializes in fine tooling of pumps and gauges. Demographic data reflecting the age, job seniority, and educational levels of Company A will appear in Chapter III.

Company B is a sheet metal and stamping operation that employs approximately 275 people from the Kalamazoo area. The factory specializes in metal racks and furniture which requires stamping and assembly. Demographic data regarding
age, job seniority, and educational levels of Company B will appear in Chapter III.

Company C is a stamping, tooling, and assembly operation that employs approximately 1,000 people from the Kalamazoo area. The factory conducts all forms of metal forms, precision tooling, and product assembly. Demographic data reflecting the age, job seniority, and educational levels of Company C will appear in Chapter III.

Company D is a precision tooling and assembly operation that employs approximately 600 employees from the Allegan area. The factory conducts fine tooling and assembly of component parts for a large multinational corporation. No demographic data were collected regarding age, job seniority, and educational level. This was due to a reluctance on the part of union officials to have such information provided.

Companies A, B, and C were contacted through the personnel offices. The fourth industry was contacted through their regional union office. At this point the writer was directed to a factory in Allegan and its union president. Through this contact, approval was gained for the purpose of the study. The addition of Company D was vital to the completion of both parts of the study. Company D provided the necessary numbers to allow for the primary statistical analysis. The fourth company was not included in the secondary analysis. The first three companies were actively involved in the entire testing process. It was decided
the union's role in the process might create a different mind set than what had occurred at the first three companies. The lack of demographic data also would have made it difficult to explain why any differences occurred if they appeared in the analysis. Not knowing the age, seniority, and educational levels of the respondents would make comparative analysis suspect.

Prior to the inception of the study, four other companies were contacted, and they chose not to take part in the investigation due to time, costs, and the nature of the study.

Sampling Procedures

All 200 of the employees at Company A received a copy of a letter (Appendix C, Letter A) asking for their assistance in the study. The employees who chose to take part in the study signed the letter and dropped the form in a drop box provided on the site. Each employee who agreed to participate was given the survey (Appendix B).

At Company B, all the 275 employees received a self-addressed, stamped envelope which contained an explanatory letter (Appendix C, Letter B) and a copy of the survey. The study was explained in the letter and the employees were asked to return the questionnaire through the use of the stamped mailer. The mailer was returned to the Department of Counseling and Personnel, Western Michigan University.
The Counseling and Personnel mailing address was used to lend further credibility to the study and to remove any connection with the company and its personnel office.

At Company C, 400 employees were selected at random from the approximate total of 1,000 through the use of random numbers. The 400 employees received a letter (Appendix C, Letter C) asking for their assistance in the gathering of information for the study. The response letter was signed and dropped in boxes provided by the writer.

All of the approximately 600 employees received a copy of the survey from the local union representatives at Company D. Prior to this, a letter (Appendix C, Letter D) was posted on the union bulletin board explaining the study and asking for their assistance.

Due to the differences in operations, company size, and personal preferences at each company, separate procedures were adapted to draw the sample from the population.

Data Collection Procedures

Company A had agreed to allow those people who wished to take part in the survey the necessary time to do so during their working shift. The survey was given to the people at the end of the first shift and at the beginning of the second shift. The survey was given to the employees in the hourly cafeteria area. On the assigned day, 25 of the 26 employees came to the cafeteria. The one person who was absent on the
assigned day was left a copy of the survey with a self-addressed, stamped envelope. The assigned day was agreed upon by the personnel director who arranged contact with the employees. The respondents were given as much time as needed to complete the survey. No verbal directions were given, with all necessary directions contained on the front page of the survey questionnaire. Upon completion of the survey, the forms were dropped in a container provided at the front of the cafeteria area. The respondents averaged approximately 15 minutes to complete the survey.

Company B was unable to grant release time to its employees to complete the survey due to the cost involved. All 275 employees received a stuffed survey mailer that they could fill out and return in the self-addressed guaranteed mailer. The mailers were handed out to all of the employees at the end of their shifts by a person from the Company B personnel office. No verbal directions were given; all pertinent information was included in the stuffed mailer. Thirty-eight mailers were returned.

Company C agreed to allow release time to those employees who wanted to take part in the survey. From the original sample of 400, 82 employees agreed to take part. The survey was distributed in break areas in the factory as well as unused factory office space on the production floor. By agreement with the personnel department at Company C, hourly workers who wished to take part in the survey but
were not part of the original sample were allowed to do so. This group was added because the writer was able to give the survey directly to individuals. A total of 140 people completed the survey in the various areas at Company C. A breakdown of the respondents according to age, job seniority, and educational level will appear in Chapter III.

Company D's union leadership distributed the copies of the survey questionnaire to all of the employees at the conclusion of their respective shifts, near the main exit. Upon completion of the instrument, the people were instructed to drop the survey in a drop box that was provided in the union office. Approximately 570 forms were handed out by the union membership leaders. The union leadership collected 129 survey forms.

Data Analysis

The final aspect of the research methodology was the analysis of the resultant data. The primary analysis which comprises the first study was a factor analysis of the total N. The factor analysis used was from Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). A major technique in the factor analysis was the use of an oblique rotation, which was employed to further delineate any resultant factor patterns. The particular method of analysis was employed to show that the instrument had construct validity. Showing that the
instrument measures what it is intended to measure is the result of this analysis.

Factor analysis represents one method for the reduction of large quantities of data into more manageable and interpretable form. This particular procedure also allows for the identification of any underlying patterns (Kim, 1975). Through the preparation of a correlation matrix and the necessary rotation technique, it is possible to search for more comprehensible solutions (Kim, 1975). A factor is a hypothetical causal influence underlying and determining the observed relationships among a set of variables (Eysenck, 1953). The primary factor analysis and oblique rotation were designed to investigate whether the six specific areas of Personal and Family Problems, Careers and the Job, Job Satisfaction/Dissatisfaction, Alcohol Abuse, Drug Abuse, and Job Attendance, which comprise the instrument's planned structure, form the empirical measure of worker acceptance of counseling. Oblique rotation allows for the simplification of rows. Simplification means the reduction of values in the factor columns to as close to zero as possible. More simply, this technique allows for more definition of positively loaded factors, through the reduction of distortion in less positively loaded factors. The actual technique allows for free rotation to best summarize any clustering of variables (Kim, 1975). This method can be used because this technique does not require the principles of strict orthogonality.
Orthogonal rotation seeks out non-correlated or independent constructs, while oblique rotation looks for dependent constructs that are correlated. Therefore, according to the original instrument plan, which hypothesized definite construct areas, oblique rotation was chosen as an appropriate statistical technique, since it is reasonable to suspect that the six conceptual areas will be independent.

The one-way analysis of variance will test the dependent variables of the total test score and the subscores. The total test score was the sum of all the responses on the 40-item survey by each participant at Companies A, B, and C. The subscores are generated through the removal of sets. Sets form when loadings appear primarily on one factor. These loadings form a cluster of items that pertain to a particular factor. The subscores were the simple sum of the responses on particular subscales of items at the individual companies.

The independent variable was the company type, while the dependent variables were the total score on the survey and the selected subscores. The null hypothesis can be stated symbolically as: \( H_0 = \mu_1 = \mu_2 = \mu_3 \). The null hypothesis means that Companies A, B, and C will be approximately the same in their acceptance of counseling on a total score basis, and on the generated subscores selected from the primary analysis.
CHAPTER III

RESULTS

The primary aspect of this study investigated the construct validity of a 40-item survey instrument. In the quest for construct validity, the writer was attempting to establish whether or not the instrument was an accurate measure of the hourly worker acceptance of counseling. It was hypothesized that the instrument was accurate in the sense that empirical data supported the logic of the original master plan.

The method of analysis that was implemented was selected from *Statistical Package for Social Sciences* (Nie et al., 1975). A principal components factor analysis with an oblique rotation procedure was used to analyze the data. Through the use of the principal components program, the linear relationships that were exhibited in the data were chosen. This method was used due to the hypothesis of related factors. The hypothesized factors stemmed from the original questionnaire master plan. Because related constructs were defined in the master plan, it was possible to use an oblique rotation. Conversely, orthogonal rotation would have sought independent solutions which were not in the form of relative constructs.
The secondary aspect of this study involved the examination of three industries for differences on a total score basis and on selected subscales that were generated from the factor analysis.

The one-way analysis of variance was used on the total test scores and on the selected subscores. Through the use of the one-way analysis of variance, it was possible to determine whether there were statistical differences between Companies A, B, and C in their acceptance of counseling at the .05 level of significance. As stated in Chapter II, Company D was not included in the analysis of variance primarily due to the lack of demographic data. It was decided that without the information concerning age, job seniority, and educational levels it would be difficult to account for any differences if they were to have occurred.

Factor Results

A total \( N \) of 333 factory employees completed the survey. The population was deemed sufficient to run the two forms of analysis. A total number of 360 surveys were returned, with 4 being thrown out due to response format errors; 3 forms were received from Company B after the input deadline; and 20 were received from Company D after the input deadline. The decision that an \( N \) of 333 was sufficient to proceed with analysis precluded any further input of data. It was felt that the additional number of surveys would not have made
the total N sufficiently large enough to have any direct effect on the research results.

The composition of the total N and the forms of analysis used are broken down in Table 1.

Table 1  
Composition of Total N and Forms of Analysis Used

<table>
<thead>
<tr>
<th>Company</th>
<th>N</th>
<th>Form of Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Factor</td>
</tr>
<tr>
<td>A</td>
<td>26</td>
<td>Yes</td>
</tr>
<tr>
<td>B</td>
<td>38</td>
<td>Yes</td>
</tr>
<tr>
<td>C</td>
<td>140</td>
<td>Yes</td>
</tr>
<tr>
<td>D</td>
<td>129</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Statistical Analysis

As stated in the overview, factor analysis is implemented to determine whether variables cluster. Selection of factors is usually done by the rule of thumb of accepting all factors with eigenvalues greater than 1. However, in this study a different system was used. In this study the criterion for factor selection begins before the point on a graph of eigenvalues where the graph is linear. The eigenvalues for the four factors which were chosen are shown in Figure 1. The reader will note that eigenvalues for factors 5, 6, and 7 form a straight line and thus, while larger than 1, are not part of the study.
Figure 1. Plot of eigenvalue points.
The four factors that were selected account for 34.3 percent of the variance (factor 1), 11.6 percent of the variance (factor 2), 4.8 percent of the variance (factor 3), and 4.1 percent of the variance (factor 4), for a total of 54.8 percent of the variance. These percentages and their respective eigenvalues are shown in Table 2.

Table 2
Percentages and Eigenvalues of Four Factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenvalue</th>
<th>Percent Variance</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Mental/physical disorders and substance abuse</td>
<td>13.72016</td>
<td>34.3%</td>
<td>34.3%</td>
</tr>
<tr>
<td>2) Careers</td>
<td>4.63422</td>
<td>11.6%</td>
<td>45.9</td>
</tr>
<tr>
<td>3) Family and personal problems</td>
<td>1.91018</td>
<td>4.8%</td>
<td>50.7</td>
</tr>
<tr>
<td>4) Job satisfaction</td>
<td>1.64893</td>
<td>4.1%</td>
<td>54.8%</td>
</tr>
</tbody>
</table>

An aspect of the oblique rotation is the inclusion of a correlation matrix among the factors. Since the matrix is symmetrical, only the upper diagonal was reproduced in Table 3. The correlations have been rounded to two places. It should be noted that there is relative strength in the relationship between factors 1 and 3 and between factors 2 and 4.

Each subscale was comprised of items with loadings primarily on that particular factor. To be considered primarily loading on one factor, the numerical value was + or -.50, with no other substantial loading on another factor. Table 4

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Table 3

Correlation Matrix Among Factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.00</td>
<td>.17</td>
<td>-0.52</td>
<td>.30</td>
</tr>
<tr>
<td>2</td>
<td>1.00</td>
<td>-0.28</td>
<td>.52</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1.00</td>
<td>-0.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

illustrates the first factor, which was titled Mental/Physical Disorders and Substance Abuse, with the listed key words showing the major thought intent in the particular item. The entire item may be cross-referenced in Appendix B. The loadings are strong and do, in fact, load only on factor 1.

Factor 2, Careers, is shown in Table 5. As can be seen, the key word illustrates the focus of the particular item.

Factor 3 was named Family and Personal Problems. The items or questions in this particular area deal with personal or familial concerns. Factor 3 is shown in Table 6.

The final factor, shown in Table 7, was titled Job Satisfaction. With such key words as "frustration" and "suggestions," it is evident that worker attitudes concerning their jobs are represented.

In sum, the four factors which accounted for 54.8 percent of the variance were: Factor 1, Mental/Physical Disorders and Substance Abuse; Factor 2, Careers; Factor 3,
Table 4
Factor Loadings for Items on Subscale 1:
Mental/Physical Disorders
and Substance Abuse

<table>
<thead>
<tr>
<th>Item/Key Word</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>4) Tardiness</td>
<td>0.5314</td>
<td>0.1341</td>
<td>0.0106</td>
<td>0.0428</td>
</tr>
<tr>
<td>5) &quot;Get high&quot;</td>
<td>0.8045</td>
<td>0.0185</td>
<td>0.0253</td>
<td>0.0163</td>
</tr>
<tr>
<td>7) Drink</td>
<td>0.8842</td>
<td>0.0063</td>
<td>0.0506</td>
<td>-0.0481</td>
</tr>
<tr>
<td>8) Sick</td>
<td>0.6881</td>
<td>0.0854</td>
<td>0.0341</td>
<td>0.0978</td>
</tr>
<tr>
<td>11) Feeling good</td>
<td>0.7955</td>
<td>0.0029</td>
<td>-0.0501</td>
<td>-0.0841</td>
</tr>
<tr>
<td>13) Drugs</td>
<td>0.8038</td>
<td>-0.0395</td>
<td>-0.1229</td>
<td>-0.0577</td>
</tr>
<tr>
<td>16) Drugs</td>
<td>0.7479</td>
<td>-0.0350</td>
<td>-0.1353</td>
<td>-0.0620</td>
</tr>
<tr>
<td>25) Hung over</td>
<td>0.6365</td>
<td>-0.1292</td>
<td>-0.1139</td>
<td>0.0434</td>
</tr>
<tr>
<td>29) Absent</td>
<td>0.6507</td>
<td>0.1673</td>
<td>-0.0287</td>
<td>0.0210</td>
</tr>
<tr>
<td>30) Drinking</td>
<td>0.8178</td>
<td>0.0241</td>
<td>-0.0822</td>
<td>-0.1018</td>
</tr>
<tr>
<td>32) Drug</td>
<td>0.8532</td>
<td>-0.0234</td>
<td>-0.0384</td>
<td>-0.0375</td>
</tr>
<tr>
<td>37) Drug</td>
<td>0.8448</td>
<td>-0.0896</td>
<td>-0.1009</td>
<td>-0.0555</td>
</tr>
</tbody>
</table>

Table 5
Factor Loadings for Items on Subscale 2:
Careers

<table>
<thead>
<tr>
<th>Item/Key Word</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>10) Skills</td>
<td>0.0574</td>
<td>0.6724</td>
<td>0.0666</td>
<td>0.1024</td>
</tr>
<tr>
<td>15) Education</td>
<td>0.0055</td>
<td>0.6933</td>
<td>-0.0233</td>
<td>-0.0146</td>
</tr>
<tr>
<td>19) Careers</td>
<td>0.0309</td>
<td>0.8176</td>
<td>-0.0446</td>
<td>-0.0452</td>
</tr>
<tr>
<td>33) Career</td>
<td>0.1538</td>
<td>0.7472</td>
<td>-0.0225</td>
<td>-0.0212</td>
</tr>
</tbody>
</table>

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Table 6
Factor Loadings for Items on Subscale 3:
Family and Personal Problems

<table>
<thead>
<tr>
<th>Item/Key Word</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>12) Spouse</td>
<td>.1022</td>
<td>.0478</td>
<td>-.6015</td>
<td>-.0122</td>
</tr>
<tr>
<td>20) Personal</td>
<td>.0705</td>
<td>.0472</td>
<td>-.7288</td>
<td>-.0176</td>
</tr>
<tr>
<td>28) Family</td>
<td>.0235</td>
<td>.0277</td>
<td>-.7731</td>
<td>-.0800</td>
</tr>
</tbody>
</table>

Table 7
Factor Loadings for Items on Subscale 4:
Job Satisfaction

<table>
<thead>
<tr>
<th>Item/Key Word</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Suggestions</td>
<td>-.0464</td>
<td>-.0554</td>
<td>.0859</td>
<td>.6484</td>
</tr>
<tr>
<td>6) Company attitude</td>
<td>.0078</td>
<td>.0821</td>
<td>.0917</td>
<td>.6265</td>
</tr>
<tr>
<td>23) Frustration</td>
<td>.0328</td>
<td>.0267</td>
<td>-.0494</td>
<td>.6306</td>
</tr>
<tr>
<td>31) Complaints</td>
<td>.0797</td>
<td>.0694</td>
<td>-.0291</td>
<td>.5579</td>
</tr>
</tbody>
</table>

Family and Personal Problems; and Factor 4, Job Satisfaction.

There were five items which loaded on two separate factors. Item 24 with the key word "depression" and item 35 with the key words "family troubles" loaded on the factors of Mental/Physical Disorders and Substance Abuse (factor 1) and Family and Personal Problems (factor 3). Item 9 with the key words "job boredom" and item 27 with the key words "job challenge" loaded on the factors of Careers (factor 2)
and Job Satisfaction (factor 4). These particular items illustrate the statistical correlation and the conceptual relationship that existed between factors 1 (Mental/Physical Disorders and Substance Abuse) and 3 (Family and Personal Problems). The same statistical correlation and conceptual relationship was shown between factors 2 (Careers) and 4 (Job Satisfaction). Table 8 shows the respective numerical factor loadings.

Table 8

<table>
<thead>
<tr>
<th>Item/Key Word</th>
<th>Factora</th>
<th>Factor</th>
<th>Factor</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>24) Depression</td>
<td>.2788</td>
<td>-.0814</td>
<td>-.5355</td>
<td>.0298</td>
</tr>
<tr>
<td>35) Family troubles</td>
<td>.2428</td>
<td>.0353</td>
<td>-.5280</td>
<td>.0666</td>
</tr>
<tr>
<td>9) Job boredom</td>
<td>.0539</td>
<td>.2638</td>
<td>.1015</td>
<td>.4610</td>
</tr>
<tr>
<td>27) Job challenge</td>
<td>.0513</td>
<td>.3262</td>
<td>.1056</td>
<td>.3257</td>
</tr>
</tbody>
</table>

aFactor 1 = Mental/Physical Disorders and Substance Abuse; factor 2 = Careers; factor 3 = Family and Personal Problems; factor 4 = Job Satisfaction.

Table 8 illustrates that the items can have loadings on more than one factor. The fact that items 24 and 35 load on factors 1 and 3 demonstrates a conceptual relationship between factors, while the dual loading of items 9 and 27 shows the similarity between factors 2 and 4.

With the inclusion of items 24, 35, 9, and 27, a total of 27 items can be directly linked to one or two factors.
The remaining 13 items lack the necessary numerical definition to fit into one or two factors exclusively. These items and their respective key words are shown in Table 9. Many items multiply loadings lower than .5399.

Table 9
Items Lacking Numerical Definition for Factor Exclusivity

<table>
<thead>
<tr>
<th>Item/Key Word</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2) Anger</td>
<td>.4439</td>
<td>.0225</td>
<td>-.2170</td>
<td>.2185</td>
</tr>
<tr>
<td>3) Job security</td>
<td>.4011</td>
<td>.1739</td>
<td>-.0007</td>
<td>.2544</td>
</tr>
<tr>
<td>14) Retirement</td>
<td>-.2214</td>
<td>.3115</td>
<td>-.1241</td>
<td>.0747</td>
</tr>
<tr>
<td>17) Upset</td>
<td>.5340</td>
<td>-.1742</td>
<td>-.3189</td>
<td>.3062</td>
</tr>
<tr>
<td>18) Absenteeism</td>
<td>.3722</td>
<td>.0927</td>
<td>.0151</td>
<td>.1429</td>
</tr>
<tr>
<td>21) Work relations</td>
<td>.0976</td>
<td>.1899</td>
<td>-.1962</td>
<td>.2838</td>
</tr>
<tr>
<td>22) Hopelessness</td>
<td>.4009</td>
<td>-.0999</td>
<td>-.4007</td>
<td>.2105</td>
</tr>
<tr>
<td>26) Retirement</td>
<td>.0122</td>
<td>.3422</td>
<td>-.1874</td>
<td>.0666</td>
</tr>
<tr>
<td>27) Job challenge</td>
<td>.0513</td>
<td>.3262</td>
<td>.1056</td>
<td>.3257</td>
</tr>
<tr>
<td>34) Job motivation</td>
<td>.1476</td>
<td>.0046</td>
<td>-.0699</td>
<td>.4201</td>
</tr>
<tr>
<td>36) Work relations</td>
<td>-.1451</td>
<td>-.0081</td>
<td>-.1691</td>
<td>.4629</td>
</tr>
<tr>
<td>38) Job mobility</td>
<td>.2091</td>
<td>.5399</td>
<td>-.0180</td>
<td>.1418</td>
</tr>
<tr>
<td>39) Helplessness</td>
<td>.2534</td>
<td>.1036</td>
<td>-.3161</td>
<td>.2838</td>
</tr>
</tbody>
</table>

Item Statistics

The individual item means illustrate how the total N responded to each particular question. These scores are based on the 5-point Likert scale with the response of 1 representing yes. More explicitly, the yes response
indicates that the employee would use a company counselor for the particular concern, and thus can be seen as a positive response. Conversely, the response of 5 represents no, or that the employee would not use a company counselor, thus showing a lack of acceptance. Consequently, the lower the mean score, the more an individual would be inclined to accept counseling services. Table 10 presents the key word for each question, with the accompanying item means and item standard deviations.

Table 10

<table>
<thead>
<tr>
<th>Item/Key Word</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Suggestions</td>
<td>3.20</td>
<td>1.52</td>
</tr>
<tr>
<td>2) Anger</td>
<td>3.97</td>
<td>1.43</td>
</tr>
<tr>
<td>3) Job security</td>
<td>3.69</td>
<td>1.59</td>
</tr>
<tr>
<td>4) Tardiness</td>
<td>4.41</td>
<td>1.17</td>
</tr>
<tr>
<td>5) Getting high</td>
<td>4.24</td>
<td>1.42</td>
</tr>
<tr>
<td>6) Company attitude</td>
<td>3.17</td>
<td>1.55</td>
</tr>
<tr>
<td>7) Alcohol</td>
<td>4.33</td>
<td>1.34</td>
</tr>
<tr>
<td>8) Sickness</td>
<td>4.14</td>
<td>1.44</td>
</tr>
<tr>
<td>9) Boredom</td>
<td>3.19</td>
<td>1.65</td>
</tr>
<tr>
<td>10) Skills</td>
<td>2.92</td>
<td>1.74</td>
</tr>
<tr>
<td>11) Alcohol</td>
<td>4.26</td>
<td>1.36</td>
</tr>
<tr>
<td>12) Spouse problems</td>
<td>4.14</td>
<td>1.36</td>
</tr>
<tr>
<td>13) Drugs</td>
<td>4.13</td>
<td>1.53</td>
</tr>
<tr>
<td>14) Retirement</td>
<td>2.58</td>
<td>1.69</td>
</tr>
<tr>
<td>15) Education</td>
<td>3.07</td>
<td>1.69</td>
</tr>
<tr>
<td>16) Drugs</td>
<td>4.32</td>
<td>1.32</td>
</tr>
</tbody>
</table>
Table 10 (Continued)

<table>
<thead>
<tr>
<th>Item/Key Word</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>17) Upset</td>
<td>3.92</td>
<td>1.47</td>
</tr>
<tr>
<td>18) Absenteeism</td>
<td>3.92</td>
<td>1.48</td>
</tr>
<tr>
<td>19) Careers</td>
<td>3.06</td>
<td>1.73</td>
</tr>
<tr>
<td>20) Personal problems</td>
<td>3.89</td>
<td>1.45</td>
</tr>
<tr>
<td>21) Work relations</td>
<td>3.89</td>
<td>1.55</td>
</tr>
<tr>
<td>22) Hopelessness</td>
<td>4.02</td>
<td>1.43</td>
</tr>
<tr>
<td>23) Job frustration</td>
<td>2.99</td>
<td>1.63</td>
</tr>
<tr>
<td>24) Depression</td>
<td>3.83</td>
<td>1.51</td>
</tr>
<tr>
<td>25) Hangover</td>
<td>4.40</td>
<td>1.17</td>
</tr>
<tr>
<td>26) Retirement</td>
<td>3.76</td>
<td>1.53</td>
</tr>
<tr>
<td>27) Job challenge</td>
<td>3.12</td>
<td>1.69</td>
</tr>
<tr>
<td>28) Family problem</td>
<td>4.08</td>
<td>1.40</td>
</tr>
<tr>
<td>29) Absenteeism</td>
<td>4.30</td>
<td>1.24</td>
</tr>
<tr>
<td>30) Drinking</td>
<td>4.25</td>
<td>1.36</td>
</tr>
<tr>
<td>31) Complaints</td>
<td>3.28</td>
<td>1.56</td>
</tr>
<tr>
<td>32) Drugs</td>
<td>4.26</td>
<td>1.40</td>
</tr>
<tr>
<td>33) Career</td>
<td>3.70</td>
<td>1.56</td>
</tr>
<tr>
<td>34) Job motivation</td>
<td>3.66</td>
<td>1.59</td>
</tr>
<tr>
<td>35) Family troubles</td>
<td>4.10</td>
<td>1.36</td>
</tr>
<tr>
<td>36) Worker relations</td>
<td>2.89</td>
<td>1.63</td>
</tr>
<tr>
<td>37) Drugs</td>
<td>4.32</td>
<td>1.36</td>
</tr>
<tr>
<td>38) Job mobility</td>
<td>3.45</td>
<td>1.67</td>
</tr>
<tr>
<td>39) Helplessness</td>
<td>3.56</td>
<td>1.62</td>
</tr>
<tr>
<td>40) Personal behavior</td>
<td>3.47</td>
<td>1.63</td>
</tr>
</tbody>
</table>

The items that range from 3.0 to 4.0 on the scale indicate that 19 questions or concerns were uncertain to doubtful about the use of a counselor. Items 10, 14, 23, and 36 ranged from 2.58 to 2.99. These responses indicate a probable use of company counselors for those particular concerns.

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The remaining questions were 4.0 or higher, indicating that on those items the employees were doubtful about the use of a company counseling service.

Analysis of Variance Results

The group data show how the total survey population responded on the individual items and within the conceptual areas. At this point, it is important to examine the composition of the respondents at Companies A, B, and C. This examination is based on age, job seniority, and educational level.

The first demographic variable presented is the age of the participants. All participants responded on a 5-point scale with the following choices: (1) 18-25 years, (2) 26-35 years, (3) 36-45 years, (4) 46-55 years, and (5) 56 or over. The group figures are shown in Table 11.

Table 11
One-Way Analysis of Variance with Age as the Dependent Variable

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company A</td>
<td>5.139</td>
<td>2</td>
<td>2.57</td>
<td>1.604</td>
<td>.2036</td>
</tr>
<tr>
<td>Company B</td>
<td>26</td>
<td>2.50</td>
<td>1.3038</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company C</td>
<td>38</td>
<td>2.42</td>
<td>1.3682</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company C</td>
<td>140</td>
<td>2.11</td>
<td>1.2296</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
There were no significant statistical differences between the three companies on the age variable. The means ranged from 2.5 at Company A to 2.11 at Company C. The ages of the respondents ranged from the late 20's to the early 30's.

The second demographic variable is the job seniority of the participants. All participants responded on a 5-point scale with the following choices: (1) 0-1 year, (2) 2-5 years, (3) 6-10 years, (4) 11-15 years, and (5) 16 years or more. The group figures are shown in Table 12.

Table 12
One-Way Analysis of Variance with Job Seniority as the Dependent Variable

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>54.799</td>
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<td>27.4</td>
<td>15.93</td>
<td>.0000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company A</th>
<th>N</th>
<th>X</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company A</td>
<td>26</td>
<td>3.27</td>
<td>1.4576</td>
</tr>
<tr>
<td>Company B</td>
<td>38</td>
<td>2.50</td>
<td>1.3705</td>
</tr>
<tr>
<td>Company C</td>
<td>140</td>
<td>1.79</td>
<td>1.2666</td>
</tr>
</tbody>
</table>

There were significant differences between the three companies, with Company A having a mean of 3.27; Company B, 2.50; and Company C, 1.79. The respondents at Company A had a mean average of over 10 years' seniority; the respondents at Company B had a mean average of over 5 years of seniority; and the respondents at Company C had a mean average of less...
than 2 years of experience.

The final demographic variable is the educational level of the survey participants. All participants responded on a 5-point scale with the following choices: (1) grades 1-8, (2) grades 9-12, (3) 1-2 years of college, (4) 3-4 years of college, and (5) more than 4 years of college. The group data are shown in Table 13.

Table 13
One-Way Analysis of Variance with Educational Level as the Dependent Variable

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.420</td>
<td>2</td>
<td>1.71</td>
<td>3.906</td>
<td>.0217</td>
</tr>
<tr>
<td>Treatment</td>
<td>N</td>
<td>X</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company A</td>
<td>26</td>
<td>2.35</td>
<td>.6895</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company B</td>
<td>38</td>
<td>1.90</td>
<td>.5594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company C</td>
<td>140</td>
<td>2.16</td>
<td>.6814</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There were significant differences between companies at the .05 level, with the means ranging from 1.90 at Company B to 2.35 at Company A. The mean educational levels ranged from less than a ninth-grade attainment by the respondents at Company B to more than twelfth-grade attainment by the respondents at Company A.

In summation, the three demographic variables act as descriptors of the respective survey populations at the three companies. Company A's population was the oldest group, but
was not statistically different from the respondents at the other companies; had the most job seniority; and achieved the highest level of education. The respondents from Company B were younger than the respondents at Company A, had less seniority than the respondents at Company A, and had the lowest educational level of the three companies. The respondents from Company C were the youngest in age and seniority, while having a higher educational level than the respondents at Company B.

**Analysis of Total Score and Selected Subscales**

The subscales were formed by the four definable factors of (1) Mental/Physical Disorders and Substance Abuse, consisting of 12 items; (2) Careers, consisting of 4 items; (3) Family and Personal Problems, consisting of 3 items; and (4) Job Satisfaction, consisting of 4 items. The individual items and the key words that formed the four scales were presented in Tables 4-7.

The total score is the sum of the responses on the complete questionnaire. This total score is then compared among the three companies in Table 14.

As shown, there are no significant differences between the three companies at the .05 level. The company score means ranged from 142.5 at Company A to 155.8 at Company B.

The presentation of the first subscale, Mental/Physical Disorders and Substance Abuse, is given in Table 15. There
Table 14

One-Way Analysis of Variance with Total Score as the Dependent Variable

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Company A</td>
<td>26</td>
<td>142.5</td>
<td>35.7248</td>
<td></td>
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<tr>
<td>Company B</td>
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<td>155.8</td>
<td>28.7121</td>
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</tr>
<tr>
<td>Company C</td>
<td>140</td>
<td>146.0</td>
<td>29.0451</td>
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<td></td>
</tr>
</tbody>
</table>

Table 15

One-Way Analysis of Variance with Subscale 1 (Mental/Physical Disorders and Substance Abuse) as the Dependent Variable

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company A</td>
<td>26</td>
<td>49.50</td>
<td>15.2663</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company B</td>
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<td>53.95</td>
<td>9.7978</td>
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<tr>
<td>Company C</td>
<td>140</td>
<td>51.51</td>
<td>11.8014</td>
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<td></td>
</tr>
</tbody>
</table>

There were no significant differences between the three companies, with the range of means extending from 49.50 to 53.95.

The second subscale, Careers, is presented in Table 16. There were no significant differences between the three companies at the .05 level on the variable of Careers.

The third subscale, Family and Personal Problems, is presented in Table 17. There were no significant differences...
Table 16

One-Way Analysis of Variance with Subscale 2 (Careers) as the Dependent Variable

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
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</thead>
<tbody>
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<td></td>
<td>32.210</td>
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<td>16.1</td>
<td>.529</td>
<td>.5903</td>
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</table>

Treatment N X SD

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<td>Company A</td>
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<td>12.71</td>
<td>5.7371</td>
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<tr>
<td>Company C</td>
<td>140</td>
<td>11.68</td>
<td>5.4314</td>
</tr>
</tbody>
</table>

Table 17

One-Way Analysis of Variance with Subscale 3 (Family and Personal Problems) as the Dependent Variable

<table>
<thead>
<tr>
<th>Source</th>
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<th>df</th>
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<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22.023</td>
<td>2</td>
<td>11.01</td>
<td>.863</td>
<td>.4234</td>
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</tbody>
</table>

Treatment N X SD

<table>
<thead>
<tr>
<th></th>
<th>26</th>
<th>11.38</th>
<th>4.1384</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company A</td>
<td>38</td>
<td>12.58</td>
<td>3.3420</td>
</tr>
<tr>
<td>Company C</td>
<td>140</td>
<td>12.09</td>
<td>3.5207</td>
</tr>
</tbody>
</table>

between the three companies at the .05 level on the variable of Family and Personal Problems.

The final factor, Job Satisfaction, is presented in Table 18. There were no significant differences between the three companies at the .05 level on the variable of Job Satisfaction.

The results of the four one-way analyses of variance
Table 18

One-Way Analysis of Variance with Subscale 4 (Job Satisfaction) as the Dependent Variable

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>19.907</td>
<td>2</td>
<td>9.95</td>
<td>.478</td>
<td>.6207</td>
</tr>
<tr>
<td>Company A</td>
<td>26</td>
<td>12.23</td>
<td>3.8085</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company B</td>
<td>38</td>
<td>12.74</td>
<td>5.0064</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company C</td>
<td>140</td>
<td>11.93</td>
<td>4.5639</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

indicate that there are no significant differences between Companies A, B, and C at the .05 level in their acceptance of counseling on a total score basis.

Further, there were no significant differences between Companies A, B, and C at the .05 level in their acceptance of counseling on the four variables of Mental/Physical Disorders and Substance Abuse, Careers, Family and Personal Problems, and Job Satisfaction.
CHAPTER IV

SUMMARY AND CONCLUSIONS

Research Results

The research project was directed at the development of an instrument for use with hourly industrial workers. The survey instrument was designed to measure the hourly worker's acceptance of counseling services in an industrial setting. The major premise of the survey was: Given a particular concern or problem, would that employee meet with and talk to a counselor, if the company employed such a person?

The primary findings from the data indicate that the 40-item survey instrument was not factor-pure. The factor purity of any instrument requires that all questions in the survey fit into the factor pattern and that these items account for approximately 100 percent of the variance. Currently, there are few instruments that have been developed that can make the claim of factor purity. The instrument used in this study did account for 54.8 percent of the variance. The four factors that account for this percentage were: (1) Mental/Physical Disorders and Substance Abuse, (2) Careers, (3) Family and Personal Problems, and (4) Job Satisfaction. These four factors do relate favorably with
the original survey master plan (Appendix A). The original plan designated six factors or areas. The original areas were: (1) Personal and Family Problems, (2) Careers and the Job, (3) Job Satisfaction/Dissatisfaction, (4) Job Attendance, (5) Alcohol Abuse, and (6) Drug Abuse. As presented, the original factors of Alcohol Abuse and Drug Abuse combined with items from Personal Problems to form factor 1, Mental/Physical Disorders and Substance Abuse. The formation of this as the number one factor, in terms of highest eigenvalue and highest percentage of variance accounted for, illustrates the interrelated nature that exists between substance abuse and mental and physical health. This perception on the part of the hourly worker points out one of the major problem areas in business and in our society as a whole.

The original area of Careers and the Job exhibits a strong relationship with the second strongest eigenvalue of factor 2, Careers. The overall responses in this area demonstrate the frustration that many workers feel about their careers. This particular subscale had the highest acceptance level for counseling among the workers. However, conclusions are tentative since no tests of significance between areas of concerns were conducted. This can be attributed in part to the frustration, but also can be accounted to the less personal nature of such counseling, as perceived by the hourly employee.

The original area of Personal and Family Problems was
changed to Family and Personal Problems after reviewing the factor analysis. This can be attributed to the particular factor loadings. The items with loadings primarily on factor 3 dealt with familial relationships rather than strictly individual or personal concerns. The workers expressed a general uncertainty about the use of company counselors for this particular area of concern. This could be attributed to the intensely personal nature of most family problems and an affirmed accompanying reluctance to making such problems evident at the work place. This reluctance illustrates the definite requirement for complete confidentiality.

The original area of Job Satisfaction/Dissatisfaction was shortened to form factor 4, Job Satisfaction. The workers were again rather uncertain concerning the use of counselors for dealing with such situations. The question of using company counselors for working with job complaints brings up the question of job security and reprisals from the company.

The original area of Job Attendance did not cluster to form a separate factor. However, some of the items related to the area did appear in the factor 1 structure of Mental/Physical Disorders and Substance Abuse. This relates well with the findings of Presnall (1976), indicating that substance abusers contribute heavily to attendance and absentee figures.

The survey instrument produced the desired results. The
validation of the questionnaire through the use of factor analysis did give relatively clear results for reference in regard to further instrument development. Twenty-three items loaded primarily on one factor, with four additional questions loading on two factors. The remaining items either relate to some other construct or need rewriting to clarify the intent of the question. Poor sentence structure, inexact wording, and a lack of specificity make revision of these items necessary.

The inclusion of factor analysis as one of the statistical procedures used in this research proved to be a vital decision in the total process. The factor analysis determined the inter-item relationship that existed on the survey. Further, the use of factor analysis generates data that help to define the exactness of each item. The individual information that did not exactly fit into the total factor pattern may have been the result of poor sentence construction. Each factor should contain items that explore the parameters of that construct. Poor construction will elicit multiple loadings or loadings on more than one factor. For this reason, the factor analysis method is an effective way of validating items on a survey instrument. The inclusion of this analysis does insure proper instrument development.

The second analysis examined the possibility of differences between the respondents at Companies A, B, and C on the survey instrument in their acceptance level of counseling.
This was accomplished through the use of a one-way analysis of variance on a total test score and on subscores for the selected subscales developed from the factor analysis. The generated subscores from the factor analysis were analyzed with the following results. The data show there were no significant differences at the .05 level between the respondents at Companies A, B, and C on a total score basis in their acceptance of counseling in industry. The results indicate that on the total score the respondents from the three companies appear to share a similar view of counseling. Although operations, products, and employees differ in the three companies, the evaluation of counselors seems to be an individual decision. The data do not provide enough evidence to reject the hypothesis that all the company means are equal.

The four subscales generated by the factor analysis are in the areas of Mental/Physical Disorders and Substance Abuse, Careers, Family and Personal Problems, and Job Satisfaction. The results indicate that none of the one-way analyses of variance computed on the subscores indicated significant statistical differences at the .05 level with the probabilities ranging from .3252 to .6207. There was no statistical difference in the mean acceptance of counseling at the three industries at the .05 level of significance. There are differences at higher levels of significance; however, no attempt was made to explain these subtle differences.

If any differences between the respondents were found,
it would be difficult to attribute these differences to external pressure or environmental factors alone. It could be concluded that the 204 respondents answered the items from an individual perspective and that the choice regarding the use of a company counselor appears to have little relationship with company policies, work conditions, or other extraneous factors. It would appear that each respondent replied from an individual perspective regarding personal concerns.

A final conclusion regarding the use of such a survey to measure worker acceptance of counseling in industry requires discussion. The use of surveys is appropriate for gathering information about a given population. As a director of counseling services, it is important to investigate particular areas of concern. Servicing the needs of the target population could determine future success of an industrial counseling service. A purposeful study that would actually lead to the creation of counseling services might generate a different set of data. The mindset of the respondents would be expected to differ from that of the people who took part in this particular study. As the director of any program, it is important to be familiar with how best to develop, establish, and evaluate such services. The use of a survey instrument could serve this purpose. The limitations of this study and pertinent implications for further research will be discussed in Chapter V.
A major problem with most forms of research hinges on control of the population. This problem is most evident in this study. Working with private profit-making organizations introduces a major blockage for support. The four companies were extremely cooperative. However, none of the operations allowed for exactly the same methods of contact, distribution, and collection. Thus, data collected under more controlled circumstances might have produced different results.

Three of the companies were contacted through their respective personnel offices, with the fourth company being contacted through the union organization. Each of the three offices negotiated specific arrangements for the collection of the data. Company A contacted the workers directly by letter and arranged for all scheduling of survey completion. The writer gave the surveys in the company cafeteria. Company B allowed for a cover letter which accompanied a self-addressed, stamped survey mailer. Company C contacted the workers through a return letter which gave the names of workers who chose to participate to the writer. The personnel office at Company C then arranged for scheduled
release time during working hours. The surveys were given in break areas located on the production floor. In addition to those people who signed up to take part in the survey, volunteers in the work area were given the questionnaire. The fourth company posted an explanatory letter and handed out the surveys to all employees. The union collected surveys through the use of drop boxes in their office. Although the variability of contact and collection differed from company to company, the basic aim of reaching a high total N was achieved. Had the emphasis been directed at factual information, such procedures would not have been acceptable. Due to the fact that no generalizations were made regarding actual personal problems, strict control of the population was less important than in certain other forms of research design. The sampling and collection methods were flexible and allowed for the completion of the survey. It is doubtful that a survey research project would deal with such a variety of organizations. The actual usage of such an instrument by an industrial counseling service would be designed and implemented with greater control in mind. Such control would be dictated by the service and the company that created the center. Solid, factual information will be a vital aspect of the operation, growth, and evaluation of successful industrial counseling services.
Implications for Further Research

The implications for further research from this study fall into two categories. The first is further instrument development. If the instrument has any validity, it is essential that further item definition and refinement be done. The 23 items with loadings on any one factor do need more refinement, while the other 17 items will require extended revision. Through examination of the data, it was evident which items agreed with the original master plan. This was done by checking the factor loadings against the master instrument plan in Appendix A. Those items that load on more than one factor definitely need revision. Once an adequate number of items have been constructed, the instrument would be ready for use and replication.

This particular instrument could be used by an industrial psychological treatment center that is attempting to assess the target population and its particular needs. Such usage would help to define specific areas of emphasis. One example might illustrate the specific need for program development with a particularly large substance abuse problem.

Aside from the obvious need for further instrument development, there remains a definite lack of research dealing with existing industrial treatment systems. All segments of industry should be assessed regarding their psychological

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service needs. No one group has a definitive higher percentage of substance abuse, mental disorder, or need for career counseling. Further research is required to evaluate existing programs and to determine successful areas. Exposing problems that need new and better treatment methods and more accurate assessment procedures should be investigated.

As can be seen in the current literature, no exact method of treatment has been determined for servicing the industrial population directly. This could be attributed to the multi-faceted aspects that operate within the business community. Whatever the circumstances, future research will assist in determining more exact methods of diagnosis, planning, and treatment of behavioral-medical problems in industry.
APPENDIX A

SURVEY PLAN
## Survey Plan

<table>
<thead>
<tr>
<th>Conceptual Areas</th>
<th>Total Number of Items</th>
<th>Examples of Key Words</th>
<th>Items Designated on Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal and Family Problems</td>
<td>11</td>
<td>Anger</td>
<td>2, 8, 12, 17, 20, 22, 24, 28, 35, 39, 40</td>
</tr>
<tr>
<td>Careers and the Job</td>
<td>9</td>
<td>Job security, Skills, Retirement</td>
<td>3, 10, 14, 15, 19, 26, 31, 33, 38</td>
</tr>
<tr>
<td>Job Satisfaction/Dissatisfaction</td>
<td>7</td>
<td>Suggestions, Company attitude, Boring</td>
<td>1, 6, 9, 21, 23, 27, 36</td>
</tr>
<tr>
<td>Alcohol Abuse</td>
<td>4</td>
<td>Alcohol, Alcohol, Hung over</td>
<td>7, 11, 25, 30</td>
</tr>
<tr>
<td>Drug Abuse</td>
<td>5</td>
<td>&quot;Get high&quot;, Drugs, Drugs</td>
<td>5, 13, 16, 32, 37</td>
</tr>
<tr>
<td>Job Attendance</td>
<td>4</td>
<td>Tardiness, Absenteeism</td>
<td>4, 18, 29, 34</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B

Survey of Hourly Employees
Survey of Hourly Employees

Please read the following directions. You may use either a pen or pencil.

Directions

The following statements describe situations or circumstances that you may experience. These situations may cause you discomfort or make you unhappy. It does not matter whether each situation is real for you now. Imagine that it does matter and that you are concerned about the situation.

Your task is to indicate how likely it is that you would go and talk with a counselor if your company employed such a person.

To do this, place a check after the word that most represents your feelings about seeking assistance. Make only one check per answer.

Yes = Very likely or highly probable
Probable = Probably yes
Uncertain = You don't know
Doubtful = Unlikely
No = Very unlikely

Examples:

-- Feeling that you need help planning a career.

Yes ___ Probable ___ Uncertain ___ Doubtful ___ X No

For the above question, this response means that this person would not use a counselor for this concern.

-- Realizing that you need help with a drinking problem.

X Yes ___ Probable ___ Uncertain ___ Doubtful ___ No

For the above question, this response means that the person would use a counselor for help with the problem.

Please open the survey questionnaire and answer all 40 items.

Remember, this is confidential. Please DO NOT sign your name on any part of this booklet.

Thank you again.
Questions

1. Feeling no one wants to hear your suggestions.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

2. Feeling angry all the time without knowing why.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

3. Feeling unsure about keeping your job.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

4. Feeling that you are late to work too often.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

5. Realizing that it is necessary to "get high" before work.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

6. Feeling that your company does not care about you.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

7. Feeling the need to drink on company time.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

8. Feeling sick and missing work often.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

9. Feeling the work is boring.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No
10. Feeling that you need to learn what your real skills are.
  作品 Yes ___Probable ___Uncertain ___Doubtful ___No

11. Realizing you feel good only when you have had a few drinks.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

12. Feeling troubled because you are not getting along with your spouse.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

13. Realizing that you need help to kick a drug habit.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

14. Feeling you need to plan for your retirement.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

15. Feeling you need to discuss furthering your education.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

16. Feeling pressured to use drugs.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

17. Feeling emotionally upset all the time.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

18. Realizing that you don't need a good excuse to miss work.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No

19. Feeling that you need to learn what your real career interests are.
   ___Yes ___Probable ___Uncertain ___Doubtful ___No
20. Realizing you need help to handle your personal problems.

   ___Yes ___Probable ___Uncertain ___Doubtful ___No

21. Feeling afraid to tell a supervisor how you really feel about the work you do.

   ___Yes ___Probable ___Uncertain ___Doubtful ___No

22. Feeling like life just isn't worth it.

   ___Yes ___Probable ___Uncertain ___Doubtful ___No

23. Feeling frustrated by company policies.

   ___Yes ___Probable ___Uncertain ___Doubtful ___No


   ___Yes ___Probable ___Uncertain ___Doubtful ___No

25. Feeling hung over at work often.

   ___Yes ___Probable ___Uncertain ___Doubtful ___No

26. Feeling you don't know what you will do when you retire.

   ___Yes ___Probable ___Uncertain ___Doubtful ___No

27. Feeling that your job is not challenging enough for you.

   ___Yes ___Probable ___Uncertain ___Doubtful ___No

28. Realizing that you need help to handle a family problem.

   ___Yes ___Probable ___Uncertain ___Doubtful ___No

29. Feeling that you are absent from work too often.

   ___Yes ___Probable ___Uncertain ___Doubtful ___No

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30. Feeling concerned that you are drinking too much.
   __Yes __Probable __Uncertain __Doubtful __No

31. Feeling that no one wants to listen to your well-founded complaints.
   __Yes __Probable __Uncertain __Doubtful __No

32. Feeling you need accurate information about where to get help with a drug problem.
   __Yes __Probable __Uncertain __Doubtful __No

33. Feeling you need help to plan your career.
   __Yes __Probable __Uncertain __Doubtful __No

34. Feeling that you do not want to come to work in the morning.
   __Yes __Probable __Uncertain __Doubtful __No

35. Feeling that trouble in your family is affecting the quality of your work.
   __Yes __Probable __Uncertain __Doubtful __No

36. Feeling irritated by the behavior of some of your co-workers.
   __Yes __Probable __Uncertain __Doubtful __No

37. Feeling that you need to talk to someone about a drug problem.
   __Yes __Probable __Uncertain __Doubtful __No

38. Feeling you need help in finding a different job in the company.
   __Yes __Probable __Uncertain __Doubtful __No

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39. Feeling like there is no place to go for help.
   __Yes   __Probable   __Uncertain   __Doubtful   __No

40. Feeling you need to better understand your behavior.
   __Yes   __Probable   __Uncertain   __Doubtful   __No

You have completed the survey. Thank you again for your assistance.

PLEASE DO NOT SIGN YOUR NAME.
APPENDIX C

Letters to Employee Populations
A, B, C, and D
Dear Employee,

This letter is a request asking for your help in gathering some information concerning counseling in the work setting. This will be used for my doctoral study. Your opinions and responses are vitally important to me.

Counseling is a helping relationship. The counselor is a trained professional that listens to people's concerns. Counselors are resource people who work with people and their problems. Through this joint effort between counselor and concerned worker, the worker or client is helped to find a solution to the problem. Such a person can work in the industrial setting.

The information you provide by answering my questionnaire is completely private and confidential. Your responses will have no effect on your future with this company. There are no right or wrong answers. Through your assistance, I hope to determine if there is a need for counselors in business and industry.

Will you take part in my survey? Yes____ (Release time will be provided). If you responded yes, please print your name on the line below and drop this letter in the time card boxes.

Your name is only being used to contact you for your time to fill out the survey. You will be contacted, and given release time at the end of your shift to complete this survey on an assigned day. Thank you for your time and consideration.

Frank H. Jeremy, Doctoral Student
Counseling and Personnel Department
Western Michigan University
Kalamazoo, MI 49008
Phone: 616-383-1975
Dear Employee,

This letter is a request asking for your help in gathering some information concerning counseling in the work setting. This will be used for my doctoral study. Other industries in Michigan have created such services for their employees. I feel that it is necessary to get feedback from workers about their desires on such services. Your opinions and responses are vitally important to me.

Counseling is a helping relationship. The counselor is a trained professional that listens to people's concerns. Counselors are resource people who work with people and their problems. Through this joint effort between counselor and concerned worker, the worker or client is helped to find a solution to the problem. Such a person can work in the industrial setting.

The information you provide by answering my questionnaire is completely private and confidential. Your responses will have no effect on your future with this company. There are no right or wrong answers. Through your assistance, I hope to determine if there is a need for counselors in business and industry.

The self-addressed, stamped envelope contains your copy of the questionnaire. Please completely fill out the survey. Upon completion, place it in the envelope and mail it no later than Wednesday, February 1, 1978.

If you have chosen not to take part in the survey, thank you for your time.

Thank you for your time and consideration.

Frank H. Jeremy, Doctoral Student
Western Michigan University
Kalamazoo, MI 49008
Phone: 616-383-1975
Dear Employee,

This letter is a request asking for your help in gathering some information concerning counseling in the work setting. This will be used for my doctoral study. Other industries in Michigan have created such services for their employees. I feel that it is necessary to get feedback from workers about their desires on such services. Your opinions and responses are vitally important to me.

Counseling is a helping relationship. The counselor is a trained professional that listens to people's concerns. Counselors are resource people who work with people and their problems. Through this joint effort between counselor and concerned worker, the worker or client is helped to find a solution to the problem. Such a person can work in the industrial setting.

The information you provide by answering my questionnaire is completely private and confidential. Your responses will have no effect on your future with this company. There are no right or wrong answers. Through your assistance, I hope to determine if there is a need for counselors in business and industry.

Will you take part in my survey? Yes_____ (Release time will be provided.)

If you responded yes, please print your name on the line below and drop this letter in the box marked SURVEY, by your time clock. If you have chosen not to take part in the survey, thank you for your time.

Name __________________________________

Your name is only being used to contact you for your time to fill out the survey. You will be contacted, and given release time at the end of your shift to complete this survey on an assigned day.

Thank you for your time and consideration.

____________________________
Frank H. Jeremy, Doctoral Student
Counseling and Personnel Department
Western Michigan University
Kalamazoo, MI 49008

Phone: 616-383-1975
Dear UAW Union Member,

This letter is to ask for your help in gathering some information concerning counseling in industry. This assistance is being provided in the form of a survey questionnaire. This survey will be handed out by your local union representatives. The information that you provide will be completely confidential. The survey information will be used by me to complete my doctoral work at Western Michigan University.

_________ and other members of your union local have been of assistance and are supporting my efforts. The company personnel office is aware of this project and has given its approval also. The company and union will not use the surveys for any purpose. The union and personnel are assisting me only through their support and assistance.

The survey is directed at determining the need for counselors in industry. For your information, counseling is a helping relationship. The counselor is a trained professional that listens to people's concerns. Counselors are resource people who work with people and their problems. Such a person can work in industry and help workers who have concerns.

The information you provide by answering my questionnaire is completely private and confidential. Your responses will have no effect on your future with your company. There are no right or wrong answers. Through your assistance, I hope to determine if there is a need for counselors in business and industry.

You will receive the survey during the week of February 13. After you have completed it, please drop it off in the drop box provided in your union office no later than February 17, a Friday.

I would truly appreciate your assistance with matter. Thank you for your time and consideration.

Frank H. Jeremy, Doctoral Student
Industrial Counseling and Personnel Services
Western Michigan University
Kalamazoo, MI 49008
616-383-1975
APPENDIX D

Letters to Company Personnel Offices
A, B, and C
Dear Personnel Director:

This letter is in reference to our recent meeting concerning the completion of my doctoral research at _________. Below is a list of the relevant dates.

Jan. 16, 1978—Letter to employees from Personnel Office
Jan. 17, 1978—Pick up replies (F. Jeremy)
Jan. 20, 1978—Set up people and time for survey
Jan. 23, 1978—Complete survey

At this point, I am planning to complete my work with ________ by the 1st of February. From that time on, I will be working to complete my study to be able to graduate in April.

If anything seems to be missing or you need to talk with me, call me at home or work.

Thank you again for all your help and assistance.

Respectfully,

________________________
Frank H. Jeremy, Doctoral Student
Counseling and Personnel Department
Western Michigan University
Kalamazoo, MI 49008

Phones: 383-8563 (home)
        383-1975 (business)
Dear Personnel Director:

This letter is to confirm our conversation concerning the upcoming study to be done at ________. I would like to express my appreciation for your valuable assistance and cooperation. The letters to your hourly employees and your supervisors will make my work much easier.

In the way of review, I will be giving all hourly employees a copy of the letter that asks for their assistance in the gathering of information for my study. This letter will be attached to their paycheck on Thursday, January 19, 1978. In the letter, they will be asked to respond no later than Monday, January 23, 1978. The survey questionnaire will be given to the supervisors on January 26. This survey envelope will be attached to the hourly employees' paychecks. The self-addressed envelope can then be taken home for completion. Upon completion, the survey should be mailed to me via the self-addressed envelope.

At this point, my official work at ______ will be completed. Upon completion of my study, I will furnish you with a copy of the study. I would also be glad to give an explanatory presentation to you and any interested parties at ______.

Thank you again for your time and consideration.

Sincerely,

__________________________

Frank H. Jeremy
Counseling and Personnel Department
Western Michigan University
Kalamazoo, MI 49008
January 4, 1978

Dear Personnel Director:

This letter is to confirm our schedule for the purpose of my doctoral study. Below is a list of the dates that we discussed:

- Jan. 9, 1978--Complete draw of the random sample
- Week of Jan. 16, 1978--Letter posted by Personnel Office
- Week of Jan. 16, 1978--By Friday, January 20, letter goes to selected sample (400 of 1,335)
- Week of Jan. 23, 1978--Work out logistics of release time
- Week of Jan. 30, 1978--Give survey

My work at _____ should be completed by the second week in February. At that time, I will be working to meet a deadline for an April graduation.

Your company will receive a completed copy of my dissertation and I will be pleased to give a formal presentation of my results at your convenience.

Thank you for your time and consideration.

_____________________________
Frank H. Jeremy, Doctoral Student
Counseling and Personnel Department
Western Michigan University
Kalamazoo, MI 49008
APPENDIX E

Letters to Employees from Company Personnel Officers
A, B, and C
COMPANY A

January 6, 1978

NOTICE TO ALL HOURLY EMPLOYEES..........

Recently, a Doctoral Student at Western Michigan University, Frank H. Jeremy talked with __________, Chairman of the Bargaining Committee and myself. Mr. Jeremy asked if he could survey our company employees for the purpose of his Doctoral Research Program. Both __________ and myself have agreed that we will leave it optional if individual employees would like to participate.

Enclosed with your paycheck that you will receive on Thursday, January 18, 1978, there will be a short statement attached. If you care to participate, follow the direction.

Personnel Director
TO: All Factory Supervisors

Frank Jeremy is a doctoral student at Western Michigan University and is conducting a survey of industrial employees within the Kalamazoo area.

Our company has approved this project and are asking for your assistance in handing the questionnaire to the employees wanting to participate in the survey.

The survey is to be answered during the employees' personal time and mailed back to Frank Jeremy in the self-addressed envelope.

If you have any questions concerning the above, please contact the writer.

Industrial Relations Manager
COMPANY C

Date: January 16, 1978
To: All Hourly Employees
From: Personnel Director
Subject: INDUSTRIAL SURVEY

On January 20, 1978, 400 ______ employees will receive letters with their paychecks requesting help in completing a survey. The survey is being conducted by Mr. Frank Jeremy who is a doctoral student at Western Michigan University and the results will be used as part of the requirements for his doctoral degree.

_________ is one of several companies in Kalamazoo that has granted permission to Mr. Jeremy to conduct the study.

The employees who are being asked to participate have been chosen at random. You are urged to participate if selected but it is not a requirement of your job. If you plan to participate, mark "yes" on the letter, print your name in the box provided, and drop the letter in the box marked "WMU Survey" located by the time clock in your department no later than January 23, 1978.

The survey form will take approximately 10 to 15 minutes to complete and you will be instructed concerning the time and place by your supervisor.
APPENDIX F

Letters to Companies Not Participating in Study: E and F
COMPANY E

1105 Academy Street
Kalamazoo, MI  49007

November 22, 1977

Dear Personnel Director:

This letter is in reference to our telephone conversation on November 21. Enclosed is a copy of my questionnaire.

My study is the final phase in my doctoral program. This document will complete my efforts for the degree of Ed.D. in the area of Counseling and Personnel.

Your company would be one of three Kalamazoo industries that would provide data for my dissertation. The individual companies will not be identified by name, and will be referred to in the document as Companies A, B, and C. The questionnaire will undergo statistical analysis in the Western Michigan University computer. The analysis will be comprised of a factor analysis and a one-way analysis of variance. These data will hopefully show that problems of the workers will vary across company lines.

The end result will be the conclusions concerning the clear-cut definition of an industrial counselor in an industrial setting.

If I can offer any further information, contact me at your convenience. If possible, a decision by December 1 would be of assistance to me.

Thank you for your time and consideration.

Respectfully,

Frank H. Jeremy

Phones: 383-8563 (home)
        383-1975 (bus.)

enc
Dear Personnel Director:

Enclosed is a copy of the letter and the questionnaire that will be used at other companies in Kalamazoo. The granting of release time to employees greatly enhances the return rate of the survey. However, the cost to the company is a definite factor that you will have to assess. The questionnaire consists of 40 items. Completion time is approximately 15 minutes. The employees that agree to take part in the survey would be tested during a period of time according to their shift. All responses are confidential.

At the conclusion of the study, I will make a presentation about the data, and the companies involved will receive a copy of my dissertation. The companies will not be identified in the study, other than the acknowledgement of their valuable assistance in my project.

I will be available to visit with you at your convenience. I would appreciate a decision by you on or prior to December 19.

Thank you for your time and consideration.

Sincerely,

Frank H. Jeremy

enc
REFERENCES


