1993

The Psychological Types of Physical Therapy Administrators

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THE PSYCHOLOGICAL TYPES OF PHYSICAL THERAPY ADMINISTRATORS

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THESIS

Submitted to the Department of Physical Therapy
of Grand Valley State University
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE IN PHYSICAL THERAPY

1993

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ABSTRACT

The purpose of this study was to describe the distribution of psychological types among physical therapy administrators. Our random sample was taken from the membership roster of the Section on Administration of the American Physical Therapy Association. We used the Myers-Briggs Type Indicator to assess psychological types and a demographic questionnaire to collect data on the administrators.

The most common psychological types among the participants (n = 45) were found to be ISFJ, ESFJ, ISTJ, INTJ, and ENTJ, respectively. Although no explicitly predominant type was found, a clear preference toward judging (J) was noted. (Key words: psychological type, physical therapy administrators, Myers-Briggs Type Indicator (MBTI).)

ACKNOWLEDGEMENTS

The investigators would like to extend their appreciation to the following individuals: the physical therapy administrators for taking the time to participate in our study; Dr. Jane Toot and Dr. Alex Nesterenko for accepting the responsibility of committee membership; and the Physical Therapy Department for their support. The investigators would also like to extend a special thanks to Elizabeth Mostrom, committee chairperson, whose many long hours of assistance in organization of this study and preparation of our thesis helped provide a valuable learning experience.

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CHAPTER ONE

INTRODUCTION

In recent years, the Myers-Briggs Type Indicator (MBTI) has been used with health care personnel to explore whether persons with a particular profile of psychological type tend to populate certain health care fields or clinical specializations. Our study utilizes the MBTI to describe the psychological types among physical therapy (PT) administrators.

Introduction to Psychological Type Theory and the MBTI

The MBTI is a psychometric tool that is based on a theory of psychological type developed by Dr. Carl Jung.[1-4] Jung's theory and the MBTI examine and describe the different preferences which people use regarding how they obtain, evaluate, and store data. The MBTI consists of forced-choice questions which have no right or wrong answers but are determined by the person's personal preferences toward opposing attitudes or functions. These preferences are categorized into four indices or dichotomous scales: extraverted/introverted (E/I), sensing/intuition (S/N), thinking/feeling (T/F), and judging/perceiving (J/P). The extraverted/introverted scale represents preferences of attitude, whereas sensing/intuition and thinking/feeling scales represent preferences toward mental functions.

The first three indices of the MBTI are based on Jung's explicit writings and psychometric procedures,[2,4,5] combined with the personal observations, testing, and experience of Katherine Myers and Isabel Briggs Myers.[4] The first index evolved from Jung's distinction between two widespread attitudes toward life, the extraverted

(E) and introverted (I).[1,6] Jung[1] stated that the two types are so essentially different, presenting such a striking contrast, it becomes obvious once attention has been brought to it. Jung felt that this differentiation in attitude begins very early in life and that it might possibly be innate.[1,6] As Jung tried to distinguish psychological types, he was mainly dealing with the conscious attitudes. When people are described as extraverted or introverted, it means that their habitual, conscious attitude is toward either extraversion or introversion.[1,6] These attitudes are defined by one's preference for obtaining information and the sources from which one draws one's energy. Individuals who prefer extraversion are thought to acquire their information and energy from other people and to be oriented toward the "outer" world[1,2(p13),7-9]; on the other hand, introverts are believed to receive information primarily from reflection upon the concepts and ideas of their "inner" world.[1,2(p13),7-9]

The second and third indices of the MBTI pertain to Jung's theory of how people prefer to take in experiences and evaluate them to make decisions. The preferences on these two dimensions were considered by Jung[1] to be "core preferences", that is, they were key building blocks of an individual's psychologic type. Jung[1] suggested that there are two primary mental functions through which individuals obtain data. The first process is sensing (S) where the individual exhibits a preference for empirical, sensory-based data.[1,2(p12),7,10] The other process for collecting data is known as intuition (N). Individuals who prefer intuition as a mode of data collection appear to be mainly concerned with internally, self-generated information, hunches, or the "sixth sense".[1,2(p12),7,10]

The method by which data are evaluated and decisions are made involves

thinking (T) and feeling (F). Individuals who prefer thinking like to make decisions by logical, synthetic, and analytical approaches with attention to cause and effect; individuals who prefer feeling like to base their decisions on personal, subjective, and human-value oriented assessments of information.[1,2(p12),7,8]

The fourth and final index of the MBTI is that of the judging (J) and perceiving (P) functions. This index was developed by Myers and Briggs[2,4,7,9] for the MBTI to expand on Jung's theory. It describes one's preference toward mental functions (S/N or T/F) and how one mental function will tend to dominate over the other in everyday interactions with the environment.[2(p12),4,7,9] Judging attitudes are indicative of individuals who prefer to plan, organize, and control their environment. In contrast, individuals who adopt perceiving attitudes try to understand, experience, and adapt to their environment.[7,8] This last index in conjunction with the E/I index indicates whether the judging (decision-making) functions of thinking and feeling or the perceiving (data-collecting) functions of sensing and intuition are dominant.[2(p13),7,11] The addition of this index provides for an array of 16 possible psychological types.

With the above paired attitudes (E/I and J/P) and mental functions (S/N and T/F), the MBTI regards one of each pair as a dominant function and the other as an auxiliary function.[2,11] This means that an individual tends to use one function (dominant function) most of the time but may use the auxiliary function in other situations.

Each of the indices was dichotomized at a theoretically fixed zero point to show a preference between the two. A numeric score can then be given to indicate the strength of each preference.[2(p9),11] Combining the preferred preference from each

of the four indices gives a four-letter code.

This code provides the type classification for individuals (Table 1). Included in Table 1 are brief type descriptions for each of the 16 possible types. Type descriptions provide individuals with knowledge about their preferences for receiving, processing and reacting to information. When looking at one's opposite psychological type, an individual will be able to recognize specific areas which he or she may need to develop.

Need for Research on Psychological Type in Physical Therapy

At this time, there is a paucity of research available on the MBTI with physical therapists. There are studies in which other psychological tests have been used but they do not represent Jung's theory. Due to the lack of articles available, we searched for articles on the use of the MBTI in other areas involving medicine, allied health, and business administration. Our study is designed to simply describe psychological types among a sample of PT administrators but it may provide a basis for future studies. These studies might explore how the psychological types of PT administrators appear to affect their leadership style, negotiation style, or their relationships with other staff members. This information could potentially enlighten therapists on how different psychological types can make the department a functional team. Concurrently, therapists and administrators should be aware that, initially, people are attracted to others because of differences in psychological type. After the initial attraction subsides, however, people can become quite intolerant of these differences and have difficulty making allowances for them.[12] Therefore, a group with a variety of psychological types may have to expend energy in order to work

together effectively.

Aims and Purposes

The purpose of this study was to describe the distribution of psychological types of a random sample of PT administrators who are members of the Section on Administration of the American Physical Therapy Association (APTA). We sought to determine whether a predominant psychologic profile of type existed in our sample. Based on existing data,[3] we wanted to explore whether differences exist between the distribution of psychological types of PT administrators and physical therapists in general. We aim to inform the participants in our study of the dominant profile of psychological types among the surveyed PT administrators in order to enlighten them as to the dominant style in which their peers are likely to receive, process, and respond to information.

Benefits and Significance to Physical Therapy

Our study is intended to provide information that may be interesting, significant, and educational to physical therapists. Administrators involved in this study have been offered the opportunity to receive a summary of results of this research project. This will provide them with knowledge of the dominant profile of psychological types in this sample. It may increase their awareness of the different psychological types of other PT administrators in the sample. This study also exposes the participating administrators to the MBTI as a tool for assessing psychological type and may encourage supervisors to use it with their own employees to facilitate the assembly of functional groups.

The results of this study may be beneficial in academic courses of physical

therapy administration. By setting up mock situations that could arise in an administrator's day, the students will have the opportunity to utilize all the preferences from the four scales. Even though there may be a dominant psychological type or profile among the PT administrators, this does not mean that other PTs with different psychological types will not become effective administrators.

Problems With Using the MBTI

A major problem with using the MBTI is that the results are not always valid. With the MBTI being a self-report instrument, the correctness of the exam depends on how well the questions have been answered.[2(pp52-53)] If the people taking the test feel they have nothing to gain or fear they have something to lose, the answers may not represent the person's true preferences.[2(pp52-53)] To combat this problem, we assured participants that the results would be treated confidentially and offered them the option to receive the results of this study.

Another problem with using the MBTI is the tendency to suggest that an individual is restricted to one psychological type. This interpretation of MBTI data is not accurate because every individual utilizes all eight preferences from the four scales at one time or another. In the early years, individuals develop a dominance of (or preference for) using one of the preferences from each of the four scales.[12] This does not mean that individuals are incapable of using less preferred functions or attitudes from time to time.[12] In fact, for people to be "balanced", they need to adequately develop the auxiliary (or less preferred) functions or attitudes.[4] The more people use their less preferred functions or attitudes, the easier it becomes to use them again. Neither of the paired preferences is superior over its opposite.

CHAPTER TWO

LITERATURE AND CONCEPTUAL FRAMEWORK

Validity and Reliability of the MBTI

Numerous investigations have been undertaken to determine the reliability and validity of the MBTI. Murray[5] conducted a review of literature and found the indices of reliability and validity to be acceptable. Although a skeptic of typologic theory, John Carlson[9,10] also reported support for the MBTI as a tool for research.

In looking at reliability of the MBTI, one must determine its internal consistency and its replicability over time. Internal consistency is measured by split-half reliability tests from continuous scoring. Myers and McCaulley[2(p265)] found that split-half reliabilities of the MBTI are consistent with those of other personality instruments. Isabel Briggs Myers and Mary McCaulley[2] established a data bank of MBTI results at the Center for Applications of Psychological Type, Inc. (CAPT) in Gainesville, Florida. This computer data bank contains over 250,000 MBTI records dating back to 1971.[2(p226)] Results of studies using the large CAPT MBTI data bank showed reliability coefficients for males, females, different age groups, and level of intelligence.[2(p169)] Reliability for females and males was quite similar. Reliabilities were somewhat lower for teenagers as compared to respondents in their twenties whose reliability scores were stable.[2(p169)] Reliability was also found to be greater in the groups with a higher level of intelligence.[2(p169)] Myers and McCaulley[2(p169)] believed that this intelligence may be related to the MBTI reliability in two ways. First, those with a higher level of intelligence may be able to take in information more accurately

and thus produce better judgments; and secondly, they typically have a higher reading level and may better comprehend the MBTI vocabulary.[2(p169)] Myers and McCaulley[2p(170)] also found test-retest reliabilities to show consistency over time in samples from seventh graders to those in medical school. When subjects did report a change in type, it usually occurred in only one preference and in scales where the original preference score was low.[2(p171)] Carlson[9] also found, through his literature review, that the MBTI yielded generally satisfactory split-half and test-retest reliabilities but concluded that more systematic research needed to be conducted to ensure reliability, particularly with the test-retest among the population consisting mainly of college students. After further investigation of the literature, Carlson[10] determined that criterion-based assessments of the MBTI remained unsystematic yet generally positive.

Myers and McCaulley[2(p175-233)] looked at many different aspects of validity of the MBTI and found them to be generally positive. In addition, Thompson and Borrello[13] investigated the MBTI as to its structure and item performance, using data from 359 college students. Factor analysis was used to assess the 95 scored MBTI items. Factor adequacy and invariance coefficients were computed as well as the appropriateness of the recommended item weights. Results supported the MBTI's construct validity as well as the appropriateness of item weights. In addition, Murray[5] found the MBTI's construct validity to be supported by correlations with other measures of personality, extraversion/introversion (E/I), and Emotionality. Carlson[9] also found through his review of literature that validity assessments, although unsystematic, were similarly favorable.

According to McCrae and Costa,[11] it is important to realize that this instrument is not a pure reflection of Jung's theory. Some theorists argue that Jungian concepts that underlie the MBTI have been distorted.[11,14] As a result, using the Jungian theory to validate the MBTI (or vice versa) must be viewed with caution.

A report by Ware and Yokomoto[15] had subjects rate, in percentages, the extent to which their profile accurately described them. The average similarity between one's profile description and one's MBTI type was 61.7% while the average agreement with one's opposite MBTI type was 28.8%.[15] While this report does not empirically validate the test, it does give some credibility to the instrument.

The Utilization of the MBTI in Health Care Professions

Of the research done with the MBTI in health care, the most frequently cited study is Application of the Myers-Briggs Type Indicator to Medicine and Other Health Professionals.[3] McCaulley set out to determine the prevalence of various personality profiles in medicine and other health professions. In a follow-up study of the Myers Longitudinal Medical Study done in the early 1950's by Isabel Briggs Myers, McCaulley[3] set out to verify if a relationship existed between a specific personality type and physician specialty. Additionally, she sought to determine the predominant personality types of other health professionals. McCaulley found that, of the 16 types, individuals with an ESFJ personality type seem to predominate the PT field as well as other health professions.[8] This does not mean, however, that other individuals with another personality type will not be drawn to PT or that all the individuals with this type will go into PT. A question that remains is whether these individuals are preferentially admitted into PT education programs.

A study by Rovezzi-Carroll and Leavitt[16] was done to determine if there was a difference in personality types between graduating PT students expressing an interest in careers as generalist clinicians and those expressing an interest in careers as specialist clinicians. Students who expressed interest in becoming generalist clinicians scored higher on the sensing (S) and judging (J) scales than those who expressed interest in becoming specialist clinicians. According to Rovezzi-Carroll and Leavitt,[16] people who score higher on the S and J scales tend to enjoy practicing old skills and can become impatient with complexity and novelty. Since generalist clinicians tend to work in stable environments where PT equipment is readily available, the usage of problem-solving is generally reserved for adapting to patients' needs. Those students who expressed interest in becoming specialist clinicians scored higher on the intuitive (N) and perceiving (P) scale.[16] Rovezzi-Carroll and Leavitt[16] indicated that people who score high on the N and P scales generally enjoy working in non-routine and less familiar situations. They are adept at adjusting to new situations, tend to be curious, and enjoy problem-solving.[16] This is fitting for specialist clinicians due to the fact that they tend to work in unfamiliar territory with complicated patients in which extensive problem-solving may be required. Both groups were similar in their preferences for extraversion and feeling[16] which is congruent with previous findings.[3]

Very few studies have been conducted to date concerning specialization and personality types, as determined by the MBTI, among physical therapists. Of the few, a recent study by Pfalzer and Walter[17] examined the personality types of physical therapists who were members of the Oncology Section of the American Physical Therapy Association and who spent 75% or more of their time with patients. Results

showed a significant tendency toward judging (J) preferences with slight tendencies toward feeling (F) and introverted (I) preferences. There was no predominant preference toward either intuition (N) or sensing (S) attitudes.[17] Another study was done by Talbott et al[18] on the personality types of physical therapists working primarily with the geriatric population. Talbott's results also showed a trend toward a predominance of the judging (J) preference types.[18]

In a study performed by Rezler and Buckley,[19] a comparison was made of personality types among female students in medicine, pharmacy, medical technology, PT, occupational therapy (OT), and dietetics. The study indicated that a wide range of personality types was represented within these populations. On the thinking (T) and feeling (F) scale, there was a significant difference between medical students as compared to PT and OT students. Medical students tended to prefer thinking in which they would tend to regard situations with an analytical, logical approach.[19] On the other hand, PT and OT students scored higher on the F scale which indicates that they tend to approach decision-making based on issues of personal importance and values.[19] Therefore, medical students may be more likely to be decisive and objective in work situations, whereas PT and OT students are apt to be considerate and more subjective in their decisions. On the judging (J) and perceiving (P) scale, pharmacy, medical, medical technology and dietetic students were found to have a common preference for judging. They tended to have a strong preference for an orderly environment, and planning and following a schedule.[19] PT and OT students, on the other hand, were on the perceiving (P) end of the scale suggesting that they prefer to live spontaneously and will adapt easily to changing situations.[19] The results of this

study in regards to the J/P dimension stand in contrast to other studies of physical therapists that found J to be the predominant attitude.[3,17,18]

According to the MBTI data bank[2] and the CAPT Atlas of Type Tables,[20] the most frequent psychological type among medical doctors and nurses is ISTJ. People who have a psychological type of ISTJ tend to rely on the facts to determine what action needs to be pursued next.[2,7] They are generally able to hide their emotions and appear to be calm and composed during a crisis.[2,7] Doctors and nurses need to appear calm and composed during a serious situation so that they do not alarm their patients who may become hysterical and make a serious situation worse. It is also important for each of these professions to look into the facts and determine which procedures will be appropriate for each patient.

Friedman and Slatt[21] did a study which examined whether a correlation existed between psychological type of first year students in medical school, as determined by the MBTI, and their choice of specialty in their first post-graduate year. Three of the four dimensions of psychological type (sensing/intuition, thinking/feeling, and judging/perceiving) were found to be statistically predictive for three specialty choices.[21] Post-graduate students who chose family practice indicated a tendency toward sensing, feeling, and judging psychological types; those choosing obstetrics-gynecology indicated a preference for sensing, thinking and judging psychological types; and the students who chose psychiatry indicated a profile of intuitive, feeling and perceiving psychological types.[21]

The MBTI has been used to assess the personality types of counselors in psychotherapy professions.[22] In this study, individuals with a higher preference

toward feeling as compared to thinking tended to regard their supervisors as more facilitative to their careers and professional development when they were trainees in the profession.

Use of the MBTI Among Administrators and Managers in Business

The MBTI has been utilized in the past by managers and supervisors involved in fields not related to health care, such as public and business administration. The MBTI is a tool which can help managers assess their strengths and limitations, and help them increase their effectiveness when dealing with subordinates. Because the MBTI is non-diagnostic, non-evaluative, and relatively easy to understand, it is an ideal tool for use in managerial assessment and development programs.[23] The MBTI and the theory upon which it is based provide a framework for the study of information gathering and decision-making styles. The MBTI can help one understand (1) how one works with one's subordinates, peers, and superiors, (2) how one can delegate appropriately, and (3) how one can put together effective working groups.[23]

In an article by Baran[24] concerning the CIGNA corporation, the Property and Casualty Division Management Council utilized the MBTI to determine the personality types of individual team members. The Management Council was concerned about whether the teams were working together effectively and producing the desired results. Upon learning their individual types, the team members discussed their types with each other in order to better understand each other's ways of processing and attending to information. The team members were able to use the information gathered to improve their effectiveness and working relationships.

McCaulley[25] reports on information found in the MBTI data bank. A group of 7,463 persons who wrote "manager" or "administrator" on their MBTI answer sheets displayed the following predominance of types: 17.0% were ESTJs; 14.9% were ISTJs; and 10.1% were ENTJs. In a comparison of managers in health systems and in business, Hai[26] found more feeling types among managers in health systems than in business, but thinking types were clearly in the majority at Chief Executive Officer (CEO) levels in both settings. In this study, there was a predominance of sensing-thinking business managers (51%), compared with 37% of sensing-thinking hospital administrators. Slightly more extraverts were found in hospitals than in businesses, particularly at the upper levels. According to the data in Hai's study,[26] the extraverted thinking type seemed to be the most common managerial style in both the business and hospital settings. Almost as common at all managerial levels in this study was a preference for introversion with thinking.

In a study performed by Marcic et al[27] on supervisors in three health-care organizations in western New York, there was a majority of individuals who preferred introversion, sensing, thinking, and judging. The two hospitals had a prevalence of ISTJ supervisors, and personnel in the rehabilitation center showed a predominance of the ESTJ profile.

Johnson[28] has suggested that psychological type can be used to plan meetings. A checklist, drawing upon all aspects of personality, can help the director of a business meeting attend to ways of preparing for and directing a meeting so that all aspects of each person's personality can be taken into account. Paying attention to each pole of the four scales helps a director make the most of the personalities of

those attending the meeting.

The MBTI has been integrated into public administration curricula.[29] It has been used to make students more aware of their strengths and areas to be developed and to illustrate various archetyp al conflicts occurring within organizations.

In another study on County Extension Directors in Pennsylvania,[30] the MBTI was utilized to ascertain personality types of supervisors. In this sample, more than 60% of the participants were extraverted; 80% were sensing types; 75% preferred thinking; and over 80% held a judging attitude. The directors then reviewed their results to better understand themselves and the potential impact of their styles on group interaction.

In summary, the MBTI has been used in a variety of business settings and professions to identify, explore, and develop managerial traits and decision-making styles. In health care professions it has been used to determine if there is a dominant profile of psychological type in a particular field and the specialties of those within the field. The MBTI has also been used to determine if a correlation exists between psychological type of medical students and their choice of specialty. There remains a need for research concerning the psychological types of administrators or managers working in health care settings. Our aim is to describe psychological type, as determined by the MBTI, among PT administrators who are members of the Section on Administration of the American Physical Therapy Association.

CHAPTER THREE

METHODOLOGY

Our study involved the use of the MBTI to assess the psychological types of PT administrators. We administered the MBTI by mail to a random sample of members of the Section on Administration of the American Physical Therapy Association (APTA). Along with an MBTI question booklet and answer sheet, we sent a demographic questionnaire (Appendix A) in order to compile a list of specific characteristics of the administrators who responded to our mailing and the settings in which they practice. The chosen administrators were asked to fill out both forms and return them by mail along with the MBTI question booklet. Those who chose not to participate were asked to return the MBTI question booklet. Those individuals who indicated an interest in receiving results of this research project were sent a summary of the dominant profile of psychological types among PT administrators in this sample.

The MBTI has never been systematically and randomly administered to members of this section of the American Physical Therapy Association. Our study is a descriptive study; we gathered data which may lead to hypotheses or encourage further correlational studies with the MBTI and PT administrators.

As with most survey research, we anticipated the possibility of a low return rate. Because the participants were not receiving their individual MBTI results, the response rate may have been affected. For this reason, we drew 150 names randomly from the membership roster of the APTA Section on Administration and sent forms

to the first 100 names drawn. The next 50 names drawn were placed on a reserve list and would have been utilized if less than 40% of the original 100 people responded. We anticipated a possible slow return rate because of the time required to complete the MBTI and our questionnaire (45 minutes). To encourage return, we sent out reminder postcards two weeks after the original mailing of the MBTI materials. We offered the participants the option to receive a summary of results of this research project which we hoped would encourage participation.

We restricted our survey to those individuals who are members of the Section on Administration of the American Physical Therapy Association. We acknowledge the fact that this was a sample of convenience of PT administrators, but it was one which was time- and cost-effective and should have provided a sample of PT administrators from around the United States practicing in a variety of settings. By mailing questionnaires, booklets, and response forms to those individuals who are members of the Section on Administration, we dealt with PTs who, in all likelihood, hold a position as an administrator. Random sampling of PTs would have been much less efficient because the possibility existed that the first mailing would have reached PTs employed as staff therapists and not as administrators. The fact that we sent forms directly to places of residence, in most cases, rather than to a facility was more personal and may have yielded a better return rate. Our use of an exploratory and descriptive study was a suitable procedure for data collection to develop a data base in an area which had not yet been explored.

Population and Sample

Our sample consisted of physical therapists who are members of the Section

on Administration of the American Physical Therapy Association. The president of this section agreed to furnish our research committee with the mailing list of current members. We placed the names from this list into a hat and drew 150 names. The first 100 names drawn were sent the questionnaire and MBTI packet. The following 50 names were held in the order they were drawn. If the return rate appeared to be low, we would have sent out sequentially the last 50 mailings as needed. Thus, the inclusion criteria for our sample population included the following: (1) licensure as a physical therapist, (2) membership in the Section on Administration of the APTA, and (3) employment as an administrator of a PT department. Data received from a participant not currently employed in a position of PT administration was excluded from our study.

Instrumentation

Our measurement tool was the MBTI. This tool was developed by Katherine Myers and Isabel Briggs Myers to make the theory of psychological types described by C. G. Jung understandable and useful for people. There have been extensive studies[2,5,10,11,13-15] done on the MBTI and it has been proven to be both reliable and valid.

Participants were mailed the question booklets and response forms. The instructions for completing the forms were included on the cover letter (Appendix B), the cover of the question booklet, and on the response sheets. All who received the mailings were asked to return the question booklets regardless of whether they chose to participate in our study. The participants were asked not to copy or distribute the test booklet because it is protected by copyright. The results were hand-scored by the

researchers with the guidance and supervision of those research committee members who have completed the Association for Psychological Type (APT) training program and are qualified to administer and interpret the MBTI.

Procedures

Before mailing, the test booklets, answer sheets, and demographic questionnaires were given a matching code number and a master list was prepared identifying participants and their code numbers. This enabled us to determine which test booklets were not returned. It also provided us the opportunity to examine relationships between the psychological type of a participant and the characteristics of the participant and of the facility in which the participant works.

There were four variables associated with each participant. These variables included the participant's name, a coded number randomly assigned to that person, the psychological type of that individual, and the demographic data. A non-investigator had access to the participant's name and the code number assigned to that person, whereas the investigators had access to the coded number, the psychological type, and the demographic data of a participant. Confidentiality of a participant was maintained by not allowing any one person access to all four variables.

As completed questionnaires and answer sheets were received by the researchers in the mail, a non-investigator opened the mail and separated the returned materials. Consent forms (Appendix C) were placed in one of two piles, depending on whether the participant had requested a summary of this research project. The MBTI answer sheets and demographic questionnaires were placed in another pile and distributed to the investigators. With the use of the coded number placed on the test

booklet, a non-investigator compiled a list of participants who had not returned their test booklets. These participants were contacted by mail requesting the return of the test booklet. The list of participant names with the associated numbers was destroyed following the investigation.

Potential Hazards

We anticipated no potential hazards associated with this investigation.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

Techniques Used for Scoring the MBTI and Analysis of Demographic Data

Investigators were taught the proper procedures for scoring the MBTI answer sheets by an instructor certified in the administration and interpretation of the MBTI. One investigator scored all the answer sheets, then another investigator again scored the answer sheets, double checking the numbers for accuracy. After both preferences from each scale were scored, the preference receiving the most points was circled. This was done with each of the four scales to produce the four-letter code which indicates an individual's psychological type. Forty-five answer sheets were scored in this manner and Table 2 was constructed to indicate the number and percentage of each psychological type that was represented in our surveyed population.

From the returned demographic questionnaires, the data were tabulated into frequencies and percentages of responses in each category. This information is shown in Tables 3 through 8.

Characteristics of Subjects

Fifty percent of our surveyed population (n=100) responded to our survey. Of these 50 respondents, 45 participants qualified for our study. Each qualified participant met the following criteria: (1) licensure as a physical therapist, (2) employment as an administrator of a PT department, and (3) a member of the Section on Administration of the American Physical Therapy Association (APTA). Of the five participants who did not qualify, two were retired, one did not hold a position as

an administrator, one was not a member of the APTA, and the other returned incomplete forms.

The administrators who were included in our survey had an average age of 40 years and 6 to 10 years of experience as an administrator (Table 3). The ratio of women to men was 2:1 (Table 3). Several administrators supervised over 15 employees with the most common types of supervisees being physical therapy aids/technicians, physical therapists, and physical therapist assistants, respectively (Table 4). The average number of patients treated per day among all facilities was over 100 (Table 5). The majority of the administrators work in hospitals (Table 6) with a bed capacity of 101 to 300 beds (Table 7).

Hypothesis and Research Questions

The primary purpose of our study was to determine whether a predominant profile of type exists within our sample of physical therapy administrators. As shown in Table 2, 13 of the 16 possible psychological types were represented in our sample with ISFJ being depicted in 15.6% of the participants. Although this psychological type was indicated more often than the other types, this should not be considered the dominant profile of type among the PT administrators because four other types were represented almost as equally (Table 2). The breakdown of the population was 15.6% for ISFJ; 13.3% for ESFJ; and 11.1% for ISTJ, INTJ, and ENTJ respectively (Table 2).

Other Findings of Interest

Tables 9 and 10 show the male and female distribution of type among PT administrators. Among the 15 males, 7 of the 16 possible psychological types were

represented (Table 9). Of these seven psychological types, there were relatively insignificant differences in the representation of each type; therefore, there appeared to be no predominant type. Five of the seven types represented between 13.3% to 20% of the male population in the sample and the two remaining types represented less than 7% of the male population. Interpretation of this data is difficult because of the relatively small sample size (n = 15). Among females, 13 of the 16 types were represented (Table 10). ISFJ was represented in 13.3% of the surveyed female population. Although this type was portrayed more often than the others, it should not be considered a majority type because several other types were represented nearly as equally as ISFJ.

Gender distribution and total sample distribution on individual preference scales are presented in Table 11. On the individual scales for the total population, a judging (J) attitude was held by 71.1% of the administrators, whereas the percentages for the remaining three scales closely approximated each other (Table 11). The most significant differences for men were on the S/N scale where S was represented twice as often as N. On the J/P scale, J was represented 6.5 times as often as P in males. For the females, J was represented almost twice as often as P. The scales involving procedures in which a person takes in experiences (perception) and evaluates them for decision-making (judgment) are S/N and T/F, respectively. The combination of SF was represented in the majority of the males, whereas the NF scale was without representation. The NT preference combination was represented most often for females.

Table 12 describes the distribution of types among PT administrators

according to the type of facility in which they work. For administrators working in hospital settings, the most marked difference involved the J/P scale, where J was indicated approximately four times as often as P. INTJ and ENTJ were the two most prevalent types among administrators of hospitals. The numbers and percentages for rehabilitation center and private practice employees revealed no substantial differences on individual preference scales or on overall psychological types. The number of respondents working in rehabilitation centers and private practice was far lower than those working in hospital settings. Administrators who indicated they worked in places other than hospitals, rehabilitation centers, or private practice showed a 4:1 preference on the E/I scale and a 1:4 preference on the J/P scale. There was no predominant psychological type among these administrators.

The majority of the administrators who responded supervised over 15 employees (Table 4). When looking at individual preferences according to number of supervisees, there were no significant differences on the E/I, S/N, or T/F scales (Table 13). On the J/P scale, however, J was indicated 2.5 times as often as P. There was no single predominant psychological type that emerged when data were examined using this categorization.

The largest group of administrators, in terms of years of experience, came under the category of 6 to 10 years (Table 3). In this category, I was indicated twice as often as E. Overall, the most notable difference was on the J/P scale where J was depicted more often than P in 4 of the 5 categories (Table 14). The exception was in the category of 16 to 20 years of experience where J and P were evenly represented. Of interest is the fact that no participants with greater than 20 years of experience had

a preference for P. There was no predominant psychological type except in the category of over 20 years of experience where ESFJ appeared to be a predominant type (Table 14).

Table 15 was constructed to determine whether different age groups presented with different psychological types. N was indicated six times as often as S in the age category of 31 to 35 years. In the 36 to 40 year category, 14 administrators were Js, whereas seven administrators were Ps. J was indicated 4 times as often as P in the 51 to 55 year category. There was no significant difference in type distribution among the varying age categories.

CHAPTER FIVE

DISCUSSION AND IMPLICATIONS

The types found most commonly in our sample were ISFJ, ESFJ, INTJ, ENTJ, and ISTJ. The four-letter codes can be broken down into singular preferences and varying combinations. These preferences and combinations characterize ways in which people may interact with the outside world and others.

Administrators who prefer sensing (S) will tend to be oriented to facts which are presented directly to their senses.[7] These administrators also tend to be oriented to the "here-and-now".[7] Administrators in our study who prefer sensing (51.1%) may be adept at gathering all the necessary facts on which to base a decision. When presenting ideas to the top level supervisors in an organization, they most likely will have concrete facts and figures to back up their ideas. On the other hand, if these administrators do not develop their opposite intuition preference, they may become stuck in a particular way of doing things and will not see the possibilities associated with new and different situations or approaches to problems. Another disadvantage is that they may not be able to see what effects their present decisions have on the future.

Administrators in our study who prefer intuition (N) (48.9%) will tend to focus on the relationships and possibilities associated with a situation, according to type theory.[7] They can "go beyond" the information presented to their senses.[7] These administrators may be adept at seeing future possibilities when putting teams together or implementing new programs for their departments. These administrators

will tend to work with their "hunches" when making decisions. One disadvantage for administrators preferring intuition is that they may not have all the concrete facts to back up or justify their hunches.

The thinking/feeling scale describes ways of making decisions. Administrators who prefer thinking (T) (48.9%) will tend to make decisions objectively, based on cause and effect.[7] These administrators will tend to be adept at making impartial decisions and will probably appear to be fair to everyone affected by the decision. They may run into problems, though, if they do not develop their feeling preference and thus may appear distant and unfeeling to their employees. On the other hand, administrators who prefer feeling (F) (51.1%) will tend to make decisions based on what is important to them.[7] These administrators may ask the employees what their opinions are and then make a decision based on those opinions. Administrators who prefer feeling may encounter problems when their values differ from those of the employees or when their value-based decisions run counter to the good of the department.

The judging (J) preference was found in approximately 71% of our sample. People who prefer judging like to be in control of their lives and their environment.[7] They tend to want projects completed before they tackle new ones and are generally very structured and organized in their day-to-day activities.[7] This preference would be expected of PT administrators due to the daily tasks in which they are involved. Tasks need to be completed on schedule, decisions need to be made on a timely basis, and new programs need to be implemented in an organized fashion.

In our study, a preference for judging (J) was indicated more often than a

preference for perceiving (P) in the age categories of 36 to 40 years and above. Theoretically, psychological type is believed to be relatively stable after early adulthood. If this holds true, our data suggest that individuals with a preference for judging (J) may have increased longevity in administrative positions. This may be due to the apparent match between this preference and the daily tasks that are required of administrators.

In our study, the combination of extraverted (E) with judging (J) was represented in 15 participants (33.3%). EJs have been described as fast moving, decisive, confident looking, and enjoy making things happen.[2p33] A study by Camiscioni[31] described two samples of medical students who showed significant differences between the row type groupings. In this study, EJ types scored the highest in leadership, followed by EP, IJ, and IP types. The combination of introverted (I) with judging (J) was found to be the preference of 17 (37.7%) of the participants in our study. IJs tend to be introspective, persevering, and hard to convince or change.[2p33] IJ types ranked third highest out of the 4 types on the test for leadership in the Camiscioni study.[31]

Particularly in regards to career choice, the combinations of perception (S/N) with judgment (T/F), which make up the columns of the type table, were considered by Isabel Myers to be the most important of the type groupings.[2p33] Individuals who prefer SF have been called the sympathetic and friendly types.[2p33] According to Myers and McCaulley these individuals ". . . rely primarily on sensing for purposes of perception, but prefer feeling for purposes of judgment."[2p34] SFs enjoy gathering facts directly through the senses and they make decisions based on subjectivity and

personal warmth.[2p34] Their trust of feeling gives rise to their warmth and subjectivity.[2p34] In our research, 16 (35.6%) of the participants were SFs. This finding correlates with studies performed by McCaulley[3,8] which found that individuals with an ESFJ psychological type appear to predominate the field of PT and other health professions. In theory, the best chances for success for individuals who prefer sensing and feeling are in fields where their personal warmth can be applied to actual situations.[2p34] According to Myers and McCaulley,[2p35] this SF combination can be valuable in health fields involving direct patient care.

Individuals who prefer NT are considered to be logical and ingenious types.[2p35] In our study, there were 15 (33.3%) NTs. Myers and McCaulley have written that "NT people prefer intuition for purposes of perception, but they prefer the objectivity of thinking for purposes of judgment."[2p35] NTs prefer to focus on possibilities and theoretical relationships and, unlike the SFs, they tend to judge these possibilities with impersonal analysis.[2p35] They are proficient at problem-solving within their field of interest, whether it be scientific research, complex aspects of finance, or development in technical or administrative areas.[2p35] In our sample, SF and NT were represented in 31 of the participants (68.9% of the sample). NF and ST represented only 14 of the participants (31.1% of the sample). Given available data on physical therapists in general, we would expect to find administrators with sensing and feeling preferences in our sample, especially if they are still involved in direct patient care. Administrators with intuition and thinking preferences tend to be adept at problem-solving and so we would expect to find these people in positions of administration, especially those that require a high level of problem-solving and possibly less direct

patient care.

The SJ, SP, NP, and NJ type groupings incorporate differences in perception (S/N) with the use of perception or judgment in external behavior (J/P).[2p36] In our study, there were 20 SJs and 12 NJs representing 71.1% of the sample, so we have restricted our discussion to these two groupings. Note that the two groupings represented most often contain the judging preference, which is consistent with the large representation of the J preference found in our study. NP and SP were both represented but not nearly as often as SJ and NJ. SJs have been described as realistic decision-makers.[2p36] They tend to seek order in their environment and can be conservative and dependable.[2p36] They dislike ambiguity and are organized people.[2p36] SJs tend to rely on past experiences when solving problems.[2p36] The characteristics of SJs can be useful to administrators because organization allows them to use their time efficiently and run their departments effectively. These individuals may be proficient at setting priorities and following time-lines.

Individuals who present with a preference combination of NJ are known as visionary decision-makers.[2p36] They strive to accomplish goals and are determined and persistent.[2p36] The characteristics associated with administrators preferring intuition and judgment are helpful in that determination and persistence may be necessary in order to accomplish all the tasks that are required of an administrator. Because of the characteristics described above, we might expect to find SJs and NJs in positions of administration.

The type groupings of TJ, TP, FP, and FJ combine the functions of judgment (T/F) with the use of perception or judgment in extrinsic behavior (J or P).[2p36] There

were 17 TJs and 15 FJs in our sample. Again, note the overall predominance of J which comprises 71.1% of our sample. TJs have been described as logical decision-makers.[2p36] They tend to be tough-minded, administrative, and analytical.[2p36] In positions of leadership, TJs can be instrumental leaders.[2p36] FJs, on the other hand, have been described as expressive leaders.[2p37] Because they are observant of people and their needs, FJs are apt to be involved in establishing harmonious relationships.[2p37] They have been known as the benevolent administrators and use feeling in their outer behavior.[2p37] Both TJs and FJs possess characteristics important for administrators. Expressive leaders may tend to listen carefully to their subordinates. They may be apt to be the peace-makers between high level management and staff employees. Instrumental leaders may look at situations and assess the importance and impact on the organization itself. They may be aggressive in instituting changes for the good of the department.

The combinations of the extraverted (E) or introverted (I) attitudes with the functions of perception (S/N) compose the four quadrants of the type table (Table 1); therefore, these type groupings (IN, EN, IS, and ES) are referred to as "the quadrants".[2p37] IS and EN types were each found in 13 participants comprising a total of 57.8% of our sample. ENs have been called the action-oriented innovators.[2p37] These people are agents of change and they view possibilities as challenges.[2p37] They enjoy seeing new relationships and patterns within their wide range of interests.[2p37] ISs have been called thoughtful realists.[2p37] They like to deal with things that are real and factual.[2p37] They determine whether ideas are supported by facts by testing those

ideas.[2p37] IN and ES types represented a smaller proportion of our total sample (42.2%).

The last grouping involves the combinations of ET, EF, IF, and IT. There were 13 EFs, 12 ITs, 10 ETs, and 10 IFs in our study; hence, these combinations were fairly evenly distributed in our sample. EFs have been called the action oriented cooperators.[2p38] EFs are likely to be sociable and friendly; they tend to be sympathetic and enjoy making things happen in order to please others.[2p38] ITs, as opposed to EFs, tend to prefer quietude and contemplation; they are concerned about the basic principles explaining causes and consequences of events.[2p38] This may explain why ITs are known as the reflective reasoners.[2p38] ETs have been identified as the action-oriented thinkers.[2p38] They are energetic and active and make things happen through the use of their logic, reason, and analysis.[2p38] Individuals who have IF preferences are reflective harmonizers.[2p38] They are quiet and caring and have concern for deep and enduring values.[2p38]

ISFJ was the psychological type of seven of the participants in our study and was the most frequently represented type (15.6%). People with ISFJ preferences are dependable and accept responsibilities beyond that which is expected of them.[2p27] They like facts to be accurate and things to be stated clearly.[2p27] Their private reactions remain private, and they have an ability to look calm and composed, even during a crisis situation.[2p27] ISFJs are thorough and hard-working and will do what needs to be done in order to complete a project.[2p27] They often choose careers, such as the health professions, where their observation skills can be combined with their caring traits.[2p27] The traits that they possess, such as kindness, tact, sympathy, and

genuine concern, help them to be very supportive to people in need.[2p27] Their concern for organization and accuracy often leads them into supervisory positions.[2p27] ISFJs back their evaluations and decisions with facts.[2p27] The characteristics associated with an ISFJ preference appear well-suited to PT administrators. Often administrators must deal with problem situations but need to appear calm and composed in order to provide a sense of stability for the staff members around them. It also makes sense that these administrators tend to be hard-working and thorough. These traits probably helped them attain their positions of administration. Their traits of kindness and sympathy are indicative of people working in the physical therapy field.

Six administrators (13.3%) were ESFJs. According to Myers and McCaulley, "People with ESFJ preferences radiate sympathy and fellowship."[2p24] They have concern for people around them and are apt to be friendly and tactful.[2p24] They focus attention on the admirable qualities they find in others and tend to find value in the opinions of others.[2p24] They tend to be realistic and down-to-earth people because they concentrate on the realities their five senses perceive.[2p24] ESFJs tend to perform optimally in people-oriented jobs.[2p24] They are often attracted to the health professions where they are able to provide comfort and patient caring.[2p24]

There were five participants in each category of INTJ, ENTJ, and ISTJ. INTJs are relentless innovators.[2p29] They trust their intuition regarding relationships and meanings of things and "their faith in their inner vision can move mountains."[2p29] INTJs are stimulated by problems and highly value competence.[2p29] They are the "most independent of all the types".[2p29] They have perseverance and conviction and tend to drive themselves and others.[2p29]

Individuals whose type is ENTJ enjoy administrative action and long-range planning.[2p22] They tend to be logical, analytical, and objectively critical due to the fact that they rely on thinking.[2p22] They have been described as preferring "to focus on the ideas, not the person behind the ideas."[2p22] They enjoy thinking ahead and make every effort to meet their objectives on a timely basis.[2p22] ENTJs like to organize plans and situations associated with a project.[2p22] Their interests lie in seeing possibilities beyond that which is already known.[2p22] Problems tend to excite ENTJs and they may gravitate toward occupations requiring them to formulate and implement new solutions.[2p22] Such formulation and implementation of solutions to problems is clearly a task for many PT administrators.

ISTJs are very similar to ISFJs which were described earlier. As with ISFJs, people with ISTJ preferences are extremely dependable and accept responsibility readily.[2p27] They rarely reveal their private reactions to the outside world and so tend to look calm and composed during a crisis.[2p27] ISTJs are thorough and systematic, and they often choose careers in which they can put their talents for accuracy and organization to good use.[2p27] Examples include accounting, health careers, and office work.[2p27] ISTJs can often be found in positions of management[2p27] and this holds true for our sample of PT administrators.

Comparison of Our Findings to Other Studies

Other studies that have been done with physical therapists[3,8,17,18,26] have found similar results in terms of individual scale preferences and in terms of overall psychological type. McCaulley[3,8] conducted a study on health professionals, including physical therapists. She found that individuals with an ESFJ psychological type seem

to predominate the field of physical therapy as well as other health fields.[3,8] Although ESFJ was not a predominant psychological type in our study, it was the second most common type and was represented in six of the 45 administrators (13.3%). McCaulley[3,8] also found that the combination of sensing with feeling was represented in 36.4% of the physical therapists tested. In our study, 35.6% of the administrators had SF preferences. A difference noted between McCaulley's studies and ours was that McCaulley[3,8] found 35.1% of the therapists to be NFs, whereas our study indicated only 15.6% of the administrators were NFs. Because McCaulley did not identify in her studies the positions or titles of the physical therapists tested, we do not know how many of the participants were administrators. This may explain the differences noted between our findings and those of McCaulley.

In a study by Pfalzer and Walter[17] on PTs specializing in oncology, it was found that the predominant psychological type was ISFJ. Our study found seven of the 45 participants to be ISFJs, which comprises 15.6% of our sample. The most notable similarity between our findings and those of Pfalzer and Walter concerns the judging preference. Pfalzer and Walter's[17] results showed a significant tendency toward judging. Our study also found that approximately 71% of the administrators prefer judging. Pfalzer and Walter[17] found slight tendencies toward feeling and introversion whereas our study found slight tendencies toward feeling and extraversion. A study by Talbott[18] on PTs practicing in geriatric settings showed a trend toward a predominance of the judging preference, as did our study.

McCaulley[25] reported on people in general management or administrative positions. The predominant types were ESTJ, ISTJ, and ENTJ. Our study differed

in that ESTJ was not one of the common types, but it was similar in that ISTJ and ENTJ were common psychological types in our sample of PT administrators. Marcic and colleagues[27] also found a majority of ISTJ psychological types in their study on supervisors in three health-care organizations.

Hai's[26] study indicated a trend toward feeling among managers in health systems (34.1%), as opposed to managers in business settings (24.4%). Our study also found a trend toward feeling (51.1%) in PT administrators.

The results of our study can be compared to MBTI types in the general population. Myers[2p45] made the following estimates of type in the general population: about 75% of the population in the United States prefer E; about 75% prefer S; about 60% of males prefer T; about 65% of females prefer F; and about 55% to 60% of the population in the United States prefer J. Our study showed the following results: about 51% of the administrators prefer E; about 51% prefer S; about 53% of the males prefer T; about 53% of the females prefer F; and about 71% of the administrators prefer J.

Our study found a higher percentage of Js which would be expected due to the administrative tasks required of our participants, as stated earlier. We may have found a lower percentage of Ts among the males in our study because the roles of physical therapists may encourage more feeling types to enter a profession in which they often deal with people and make decisions based on person-centered values. Studies done in the past by McCaulley[3] and Hai[26] suggest that more feeling types tend to populate the field of physical therapy and health care administration. Our study found a lower percentage of Fs among the females, as compared to the general

population. Because females in general tend to prefer the feeling preference, females as PT administrators may need to develop their thinking preference in order to succeed in this role. Characteristics of the thinking preference, such as making decisions objectively and viewing situations logically, may be necessary for administrators to develop in order to make a department function smoothly.

Application to Practice, Administration and Education in PT

The administrators who participated in our study were offered the chance to receive a summary of results of our research. This provides them with knowledge of the most common psychological types found within their field of interest. The most interesting finding involves the judging preference. Over 70% of the respondents prefer judging. This preference might be expected to be predominant among administrators due to the tasks that are required of them. In order to run a department efficiently, most administrators need to function in a planned and orderly manner. Other characteristics of the judging preference include making decisions, coming to closure, and then moving on. We would expect these characteristics to be found in administrators because they make many decisions and cannot leave options open for long.

These results are also applicable to physical therapy education. By knowing that judging appears to be an important preference for an administrator, students and professionals can work to develop their judging preference as they move toward administrative roles or tasks. Those students with a perceiving preference may need to concentrate on setting time-lines and following a schedule even though they prefer to be spontaneous and flexible. This is not to say that being spontaneous and flexible

are not desirable characteristics for administrators; it simply recognizes that the administrator's role may require setting rules and regulations and adhering to time constraints.

This study will expose administrators to the MBTI and its use in determining psychological types. Administrators may become interested in the MBTI as a tool to use with their own departmental staff. The MBTI could provide information regarding the psychological types of their employees and may make it easier for the administrators to assemble functional teams. They may put together teams of people with complimentary psychological types. As the employees learn their own types, they may discuss their types with the other group members and come to understand the characteristics associated with each type. This may then encourage them to develop an appreciation for the differences between team members.

Limitations of Our Study

There were several limitations with our study. Our sample size was small and may not have provided a good representation of psychological types among PT administrators. Our study provided a good representation of administrators working in hospitals but not in other facilities. We allowed six weeks for return of the MBTI materials which may be viewed as a potential cause for the small sample size. We also did not find a clearly predominant psychological type among the administrators and so can only discuss common types that were found in our study. Because the participants did not receive their individual results, they cannot read the descriptions and determine if their psychological types were truly accurate for them.

Another limitation was that we surveyed only those administrators who are

members of the Section on Administration of the APTA. We do not know whether the administrators who responded are directly involved with patient care as opposed to spending their time with administrative functions only. We also do not know whether the participants actively pursued an administrative role, or whether they were simply promoted into administrative positions as longevity increased. Another interesting question involves whether the administrators who actively pursued the administrative role completed formal management courses or not.

Suggestions for Modifications and Further Research

A larger sample may give a better representation of psychological types among PT administrators. Also, surveying a broader spectrum, not just the APTA section, may give a better representation. Another modification would have been to administer the MBTI in person and give individual results and feedback to the participating administrators.

One suggestion for further research in this area involves the use of the MBTI in PT departments. The MBTI could be administered to the employees and the supervisors and a study could be performed analyzing the interactions between these two groups based on similarities and differences between psychological types.

Another suggestion for a future study would be to target administrators in private practice settings because our study did not provide a good representation of administrators involved in private practice. Also, administrators in private practice may have aggressively pursued a position in administration as opposed to hospital administrators who may have been promoted into administrative positions without actively seeking administrative roles per se.

Finally, we wish to conclude with a reminder that our data should not be construed as suggesting that only certain types of individuals will be effective PT administrators. We do not wish to suggest that any individual is restricted to one psychological type. Each individual uses all eight preferences at one time or another and no preference is superior over its opposite.

We also do not wish to suggest that people with the common types found in our study will only populate the field of physical therapy or that people with other types will not be successful in administrative positions in physical therapy.

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Table 1. - Characteristics Frequently Associated With Each Type*

Sensing Types	
ISTJ Serious, quiet, earn success by concentration and thoroughness. Practical, orderly, matter-of-fact, logical, realistic, and dependable. See to it that everything is well organized. Take responsibility. Make up their own minds as to what should be accomplished and work toward it steadily, regardless of protests or distractions.	ISFJ Quiet, friendly, responsible, and conscientious. Work devotedly to meet their obligations. Lend stability to any project or group. Thorough, painstaking, accurate. Their interests are usually not technical. Can be patient with necessary details. Loyal, considerate, perceptive, concerned with how other people feel.
ISTP Cool onlookers—quiet, reserved, observing and analyzing life with detached curiosity and unexpected flashes of original humor. Usually interested in cause and effect, how and why mechanical things work, and in organizing facts using logical principles.	ISFP Retiring, quietly friendly, sensitive, kind, modest about their abilities. Shun disagreements, do not force their opinions or values on others. Usually do not care to lead but are often loyal followers. Often relaxed about getting things done, because they enjoy the present moment and do not want to spoil it by undue haste or exertion.
ESTP Good at on-the-spot problem solving. Do not worry, enjoy whatever comes along. Tend to like mechanical things and sports, with friends on the side. Adaptable, tolerant, generally conservative in values. Dislike long explanations. Are best with real things that can be worked, handled, taken apart, or put together.	ESFP Outgoing, easygoing, accepting, friendly, enjoy everything and make things more fun for others by their enjoyment. Like sports and making things happen. Know what's going on and join in eagerly. Find remembering facts easier than mastering theories. Are best in situations that need sound common sense and practical ability with people as well as with things.
ESTJ Practical, realistic, matter-of-fact, with a natural head for business or mechanics. Not interested in subjects they see no use for, but can apply themselves when necessary. Like to organize and run activities. May make good administrators, especially if they remember to consider others' feelings and points of view.	ESFJ Warm-hearted, talkative, popular, conscientious, born cooperators, active committee members. Need harmony and may be good at creating it. Always doing something nice for someone. Work best with encouragement and praise. Main interest is in things that directly and visibly affect people's lives.

Introverts

Extraverts

Table 1. - Characteristics Frequently Associated With Each Type* (cont.)

Intuitive Types	
INFJ Succeed by perseverance, originality, and desire to do whatever is needed or wanted. Put their best efforts into their work. Quietly forceful, conscientious, concerned for others. Respected for their firm principles. Likely to be honored and followed for their clear convictions as to how best to serve the common good.	INTJ Usually have original minds and great drive for their own ideas and purposes. In fields that appeal to them, they have a fine power to organize a job and carry it through with or without help. Skeptical, critical, independent, determined, sometimes stubborn. Must learn to yield less important points in order to win the most important.
INFP Full of enthusiasms and loyalties, but seldom talk of these until they know you well. Care about learning, ideas, language, and independent projects of their own. Tend to undertake too much, then somehow get it done. Friendly, but often too absorbed in what they are doing to be sociable. Little concerned with possessions or physical surroundings.	INTP Quiet and reserved. Especially enjoy theoretical or scientific pursuits. Like solving problems with logic and analysis. Usually interested mainly in ideas, with little liking for parties or small talk. Tend to have sharply defined interests. Need careers where some strong interest can be used and useful.
ENFP Warmly enthusiastic, high-spirited, ingenious, imaginative. Able to do almost anything that interests them. Quick with a solution for any difficulty and ready to help anyone with a problem. Often rely on their ability to improvise instead of preparing in advance. Can usually find compelling reasons for whatever they want.	ENTP Quick, ingenious, good at many things. Stimulating company, alert and outspoken. May argue for fun on either side of a question. Resourceful in solving new and challenging problems, but may neglect routine assignments. Apt to turn to one new interest after another. Skillful in finding logical reasons for what they want.
ENFJ Responsive and responsible. Generally feel real concern for what others think or want, and try to handle things with due regard for the other person's feelings. Can present a proposal or lead a group discussion with ease and tact. Sociable, popular, sympathetic. Responsive to praise and criticism.	ENTJ Hearty, frank, decisive, leaders in activities. Usually good in anything that requires reasoning and intelligent talk, such as public speaking. Are usually well informed and enjoy adding to their fund of knowledge. May sometimes appear more positive and confident than their experience in area warrants.

Introverts

Extraverts

Table 2. - Distribution of Type Among PT Administrators (n = 45)

Sensing Types		Intuitive Types		
With Thinking	With Feeling	With Feeling	With Thinking	
ISTJ N = 5 % = 11.1 IIIII	ISFJ N = 7 % = 15.6 IIIIIII	INFJ N = 0 % = 0.0	INTJ N = 5 % = 11.1 IIIII	Judging
ISTP N = 0 % = 0.0	ISFP N = 1 % = 2.2 I	INFP N = 2 % = 4.4 II	INTP N = 2 % = 4.4 II	Perceptive
ESTP N = 0.0 % = 0	ESFP N = 2 % = 4.4 II	ENFP N = 3 % = 6.7 III	ENTP N = 3 % = 6.7 III	Judging
ESTJ N = 2 % = 4.4 II	ESFJ N = 6 % = 13.3 IIIIII	ENFJ N = 2 % = 4.4 II	ENTJ N = 5 % = 11.1 IIIII	Perceptive

Introverts

Extraverts

Table 3. - Profile of Physical Therapy Administrators	
Feature	**n = 45**
Age, y (mean ± SD)	40 ± 7
Ratio of men to women	1:2 (15 : 30)
Years of experience, No. (%)	
less than 1	0 (0.0)
1 to 5	6 (13.3)
6 to 10	15 (33.3)
11 to 15	9 (20.0)
16 to 20	8 (17.8)
over 20	7 (15.6)

Table 4. - Characteristics of Supervisees (n = 45)	
Feature	**No. (%)**
Number of supervisees	
1 to 5	5 (11.1)
6 to 10	4 (8.9)
11 to 15	8 (17.8)
over 15	28 (62.2)
Type of Supervisees	
Physical Therapist	40 (88.9)
Physical Therapist Assistant	34 (75.6)
Physical Therapist Aides/Technicians	42 (93.3)
Occupational Therapist	27 (60.0)
Certified Occupational Therapy Assistant	12 (26.7)
Speech Pathologist	18 (40.0)
Athletic Trainer Certified	9 (20.0)
Volunteers	25 (55.6)
Other	22 (48.9)

Table 5. - Average Number of Patients Treated Per Day Within All Facilities (n = 45)

Feature	No. (%)
1 to 25	4 (8.9)
26 to 50	10 (22.2)
51 to 75	7 (15.6)
76 to 100	8 (17.8)
over 100	12 (26.7)
unanswered	4 (8.9)

Table 6. - Type of Facility in Which PT Administrators Work (n = 45)*

Facility	No. (%)
Hospital	26 (57.8)
Rehabilition Center	8 (17.8)
School System	0 (0.0)
Private Practice	8 (17.8)
Home Health Agency	0 (0.0)
Other	8 (17.8)

*Five of the participants indicated that they worked in two different facilities.

Table 7. - Characteristics of Hospitals (n = 26)

Feature	No. (%)
Bed capacity	
1 to 100	5 (19.2)
101 to 300	10 (38.5)
301 to 600	9 (34.6)
over 600	2 (7.7)
Average number of patients treated by PT Dept.	
1 to 25	1 (3.8)
26 to 50	5 (19.2)
51 to 75	4 (15.4)
76 to 100	6 (23.1)
over 100	10 (38.5)
Percentage of inpatient clients	
100% to 75%	4 (15.4)
74% to 50%	5 (19.2)
49% to 25%	14 (53.8)
25% to 0%	2 (7.9)
unanswered	1 (3.8)
Percentage of outpatient clients	
100% to 75%	3 (11.5)
74% to 50%	14 (53.8)
49% to 25%	6 (23.1)
24% to 0%	2 (7.7)
unanswered	1 (3.8)

Table 8. - Characteristics of Rehabilitation Centers (n = 8)

Feature	No. (%)
Bed capacity	
1 to 100	3 (37.5)
101 to 300	3 (37.5)
301 to 600	1 (12.5)
over 600	1 (12.5)
Average number of patients treated by PT Dept.	
1 to 25	2 (25.0)
26 to 50	3 (37.5)
51 to 75	0 (0.0)
76 to 100	0 (0.0)
over 100	2 (25.0)
unanswered	1 (12.5)
Percentage of inpatient clients	
100% to 75%	8 (100)
74% to 50%	0 (0.0)
49% to 25%	0 (0.0)
24% to 0%	0 (0.0)
Percentage of outpatient clients	
100% to 75%	1 (12.5)
74% to 50%	0 (0.0)
49% to 25%	0 (0.0)
24% to 0%	4 (50.0)
unanswered	3 (37.5)

Table 9. - Type Distribution Among Male PT Administrators (n = 15)

Sensing Types		Intuitive Types		
With Thinking	With Feeling	With Feeling	With Thinking	
ISTJ N = 3 % = 20.0 ▮▮▮	ISFJ N = 3 % = 20.0 ▮▮▮	INFJ N = 0 % = 0.0	INTJ N = 2 % = 13.3 ▮▮	Judging
ISTP N = 0 % = 0.0	ISFP N = 0 % = 0.0	INFP N = 0 % = 0.0	INTP N = 0 % = 0.0	Perceptive
ESTP N = 0 % = 0.0	ESFP N = 1 % = 6.7 ▮	ENFP N = 0 % = 0.0	ENTP N = 1 % = 6.7 ▮	Judging
ESTJ N = 0 % = 0.0	ESFJ N = 3 % = 20.0 ▮▮▮	ENFJ N = 0 % = 0.0	ENTJ N = 2 % = 13.3 ▮▮	Perceptive

Introverts

Extraverts

Table 10. - Type Distribution Among Female PT Administrators (n = 30)

Sensing Types		Intuitive Types		
With Thinking	With Feeling	With Feeling	With Thinking	
ISTJ N = 2 % = 6.7 II	ISFJ N = 4 % = 13.3 IIII	INFJ N = 0 % = 0.0	INTJ N = 3 % = 10.0 III	Judging
ISTP N = 0 % = 0.0	ISFP N = 1 % = 3.3 I	INFP N = 2 % = 6.7 II	INTP N = 2 % = 6.7 II	Perceptive
ESTP N = 0 % = 0.0	ESFP N = 1 % = 3.3 I	ENFP N = 3 % = 10.0 III	ENTP N = 2 % = 6.7 II	Judging
ESTJ N = 2 % = 6.7 II	ESFJ N = 3 % = 10.0 III	ENFJ N = 2 % = 6.7 II	ENTJ N = 3 % = 10.0 III	Perceptive

Introverts

Extraverts

Table 11. - Gender Distribution Among PT Administrators

	Male n = 15		Female n = 30		Total n = 45	
	No.	%	No.	%	No.	%
E	7	46.7	16	53.3	23	51.1
I	8	53.3	14	46.7	22	48.9
S	10	66.7	13	43.3	23	51.1
N	5	33.3	17	56.7	22	48.9
T	8	53.3	14	46.7	22	48.9
F	7	46.7	16	53.3	23	51.1
J	13	86.7	19	63.3	32	71.1
P	2	13.3	11	36.7	13	28.9
ST	3	20.0	4	13.3	7	15.6
SF	7	46.7	9	30.0	16	35.6
NF	0	0.0	7	23.3	7	15.6
NT	5	33.3	10	33.3	15	33.3

Table 12. - Distribution of Types of PT Administrators According to Type of Facility*

	Hospital n = 26		Rehabilitation Center n = 8		Private Practice n = 8		Other n = 8	
Type	No.	%	No.	%	No.	%	No.	%
E	15	57.7	3	37.5	4	50.0	4	50.0
I	14	53.8	4	50.0	4	50.0	1	12.5
S	15	57.7	3	37.5	3	37.5	2	25.0
N	14	53.8	4	50.0	5	62.5	3	37.5
T	18	69.2	2	25.0	3	37.5	2	25.0
F	11	42.3	5	62.5	5	62.5	3	37.5
J	23	88.5	5	62.5	5	62.5	1	12.5
P	6	23.1	2	25.0	3	37.5	4	50.0
ST	5	19.2	1	12.5	1	12.5	0	0.0
SF	10	38.5	2	25.0	2	25.0	2	25.0
NF	1	3.8	3	37.5	3	37.5	1	12.5
NT	13	50.0	1	12.5	2	25.0	2	25.0
ISTJ	4	15.4	1	12.5	0	0.0	0	0.0
ISFJ	4	15.4	2	25.0	1	12.5	0	0.0
ISTP	0	0.0	0	0.0	0	0.0	0	0.0
ISFP	1	3.8	0	0.0	0	0.0	0	0.0

Table 12. - Distribution of Types of PT Administrators According to Type of Facility* (cont.)

	Hospital n = 26		Rehabilitation Center n = 8		Private Practice n = 8		Other n = 8	
Type	No.	%	No.	%	No.	%	No.	%
INFJ	0	0.0	0	0.0	0	0.0	0	0.0
INTJ	5	19.2	0	0.0	1	12.5	0	0.0
INFP	0	0.0	1	12.5	1	12.5	0	0.0
INTP	0	0.0	0	0.0	1	12.5	1	12.5
ESTP	0	0.0	0	0.0	0	0.0	0	0.0
ESFP	1	3.8	0	0.0	0	0.0	1	12.5
ESTJ	1	3.8	0	0.0	1	12.5	0	0.0
ESFJ	4	15.4	0	0.0	1	12.5	1	12.5
ENFP	1	3.8	1	12.5	1	12.5	1	12.5
ENTP	3	11.5	0	0.0	0	0.0	1	12.5
ENFJ	0	0.0	1	12.5	1	12.5	0	0.0
ENTJ	5	19.2	1	12.5	0	0.0	0	0.0

*None of the participants indicated School System or Home Health Agency as a place of employment.

Table 13. - Distribution of Types of PT Administrators According to the Number of Staff Under Their Supervision

	1 to 5 n = 5		6 to 10 n = 4		11 to 15 n = 8		over 15 n = 28	
Type	No.	%	No.	%	No.	%	No.	%
E	4	80.0	1	25.0	3	37.5	15	53.6
I	1	20.0	3	75.0	5	62.5	13	46.4
S	2	40.0	2	50.0	5	62.5	14	50.0
N	3	60.0	2	50.0	3	37.5	14	50.0
T	3	60.0	1	25.0	3	37.5	15	53.6
F	2	40.0	3	75.0	5	62.5	13	46.4
J	3	60.0	3	75.0	6	75.0	20	71.4
P	2	40.0	1	25.0	2	25.0	8	28.6
ST	2	40.0	0	0.0	1	12.5	4	14.3
SF	0	0.0	2	50.0	4	50.0	10	35.7
NF	2	40.0	1	25.0	1	12.5	3	10.7
NT	1	20.0	1	25.0	2	25.0	11	39.3
ISTJ	1	20.0	0	0.0	1	12.5	3	10.7
ISFJ	0	0.0	2	50.0	2	25.0	3	10.7
ISTP	0	0.0	0	0.0	0	0.0	0	0.0
ISFP	0	0.0	0	0.0	1	12.5	0	0.0

Table 13. - Distribution of Types of PT Administrators According to the Number of Staff Under Their Supervision (cont.)

	1 to 5 n = 5		6 to 10 n = 4		11 to 15 n = 8		over 15 n = 28	
Type	No.	%	No.	%	No.	%	No.	%
INFJ	0	0.0	0	0.0	0	0.0	0	0.0
INTJ	0	0.0	0	0.0	1	12.5	4	14.3
INFP	0	0.0	0	0.0	1	12.5	1	3.6
INTP	0	0.0	1	25.0	0	0.0	1	3.6
ESTP	0	0.0	0	0.0	0	0.0	0	0.0
ESFP	0	0.0	0	0.0	0	0.0	2	7.2
ESTJ	1	20.0	0	0.0	0	0.0	1	3.6
ESFJ	0	0.0	0	0.0	2	25.0	4	14.3
ENFP	2	40.0	0	0.0	0	0.0	1	3.6
ENTP	0	0.0	0	0.0	1	12.5	2	7.1
ENFJ	0	0.0	1	25.0	0	0.0	1	3.6
ENTJ	1	20.0	0	0.0	4	50.0	0	0.0

Table 14. - Distribution of Types of PT Administrators According to Years of Experience*

	1 to 5 n = 6		6 to 10 n = 15		11 to 15 n = 9		16 to 20 n = 8		over 20 n = 7	
Type	No.	%	No.	%	No.	%	No.	%	No.	%
E	4	66.7	5	33.3	6	66.7	3	37.5	5	71.4
I	2	33.3	10	66.7	3	33.3	5	62.5	2	28.6
S	2	33.3	6	40.0	6	66.7	3	37.5	6	85.7
N	4	66.7	9	60.0	3	33.3	5	62.5	1	14.3
T	3	50.0	6	40.0	7	77.8	4	50.0	2	28.6
F	3	50.0	9	60.0	2	22.2	4	50.0	5	71.4
J	5	83.3	9	60.0	7	77.8	4	50.0	7	100.0
P	1	16.7	6	40.0	2	22.2	4	50.0	0	0.0
ST	0	0.0	1	6.7	4	44.4	1	12.5	1	14.3
SF	2	33.3	5	33.3	2	22.2	2	25.0	5	71.4
NF	1	16.7	4	26.7	0	0.0	2	25.0	0	0.0
NT	3	50.0	5	33.3	3	33.3	3	37.5	1	14.3
ISTJ	0	0.0	1	6.7	2	22.2	1	12.5	1	14.3
ISFJ	1	16.7	3	20.0	1	11.1	1	12.5	1	14.3
ISTP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ISFP	0	0.0	1	6.7	0	0.0	0	0.0	0	0.0

Table 14. - Distribution of Types of PT Administrators According to Years of Experience* (cont.)

	1 to 5 n = 6		6 to 10 n = 15		11 to 15 n = 9		16 to 20 n = 8		over 20 n = 7	
Type	No.	%	No.	%	No.	%	No.	%	No.	%
INFJ	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
INTJ	1	16.7	2	13.3	0	0.0	2	25.0	0	0.0
INFP	0	0.0	2	13.3	0	0.0	0	0.0	0	0.0
INTP	0	0.0	1	6.7	0	0.0	1	12.5	0	0.0
ESTP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESFP	0	0.0	1	6.7	0	0.0	1	12.5	0	0.0
ESTJ	0	0.0	0	0.0	2	22.2	0	0.0	0	0.0
ESFJ	1	16.7	0	0.0	1	11.1	0	0.0	4	57.1
ENFP	0	0.0	1	6.7	0	0.0	2	25.0	0	0.0
ENTP	1	16.7	0	0.0	2	22.2	0	0.0	0	0.0
ENFJ	1	16.7	1	6.7	0	0.0	0	0.0	0	0.0
ENTJ	1	16.7	2	13.3	1	11.1	0	0.0	1	14.3

*None of the participants indicated less than one year of experience as an administrator.

Table 15. - Distribution of Types of PT Administrators According to Age (n = 45)

	under 31		31 to 35		36 to 40		41 to 45		46 to 50		51 to 55		over 55	
Type	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
E	2	4.4	4	8.9	10	22.2	3	6.7	1	2.2	3	6.7	1	2.2
I	1	2.2	2	4.4	11	24.4	3	6.7	3	6.7	1	2.2	0	0.0
S	1	2.2	0	0.0	13	28.9	2	4.4	3	6.7	3	6.7	1	2.2
N	2	4.4	6	13.3	8	17.8	4	8.9	1	2.2	1	2.2	0	0.0
T	2	4.4	3	6.7	8	17.8	5	11.1	3	6.7	1	2.2	0	0.0
F	1	2.2	3	6.7	13	28.9	1	2.2	1	2.2	3	6.7	1	2.2
J	2	4.4	3	6.7	14	31.1	5	11.1	3	6.7	4	8.9	1	2.2
P	1	2.2	3	6.7	7	15.6	1	2.2	1	2.2	0	0.0	0	0.0
ST	0	0.0	0	0.0	4	8.9	1	2.2	2	4.4	0	0.0	0	0.0
SF	1	2.2	0	0.0	9	20.0	1	2.2	1	2.2	3	6.7	1	2.2
NF	0	0.0	3	6.7	4	8.9	0	0.0	0	0.0	0	0.0	0	0.0
NT	2	4.4	3	6.7	4	8.9	4	8.9	1	2.2	1	2.2	0	0.0
ISTJ	0	0.0	0	0.0	2	4.4	1	2.2	2	4.4	0	0.0	0	0.0
ISFJ	0	0.0	0	0.0	5	11.1	0	0.0	0	0.0	1	2.2	0	0.0
ISTP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ISFP	0	0.0	0	0.0	1	2.2	0	0.0	0	0.0	0	0.0	0	0.0

Table 15. - Distribution of Types of PT Administrators According to Age (n = 45) (cont.)

	under 31		31 to 35		36 to 40		41 to 45		46 to 50		51 to 55		over 55	
Type	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
INFJ	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
INTJ	1	2.2	0	0.0	2	4.4	2	4.4	0	0.0	0	0.0	0	0.0
INFP	0	0.0	1	2.2	1	2.2	0	0.0	0	0.0	0	0.0	0	0.0
INTP	0	0.0	1	2.2	0	0.0	0	0.0	1	2.2	0	0.0	0	0.0
ESTP	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
ESFP	0	0.0	0	0.0	2	4.4	0	0.0	0	0.0	0	0.0	0	0.0
ESTJ	0	0.0	0	0.0	2	4.4	0	0.0	0	0.0	0	0.0	0	0.0
ESFJ	1	2.2	0	0.0	1	2.2	1	2.2	1	2.2	2	4.4	1	2.2
ENFP	0	0.0	1	2.2	2	4.4	0	0.0	0	0.0	0	0.0	0	0.0
ENTP	1	2.2	0	0.0	1	2.2	1	2.2	0	0.0	0	0.0	0	0.0
ENFJ	0	0.0	1	2.2	1	2.2	0	0.0	0	0.0	0	0.0	0	0.0
ENTJ	0	0.0	2	4.4	1	2.2	1	2.2	0	0.0	1	2.2	0	0.0

APPENDIX A

Demographic Questionnaire Completed by the Participating PT Administrators

Please check all spaces which apply to you and the facility in which you are employed.

1. Gender: female ___ male ___

2. Age:
   30 or under ___ 41 to 45 ___ over 55 ___
   31 to 35 ___ 46 to 50 ___
   36 to 40 ___ 51 to 55 ___

3. Years of experience in Physical Therapy Administration:
   less than 1 ___ 11 to 15 ___
   1 to 5 ___ 16 to 20 ___
   6 to 10 ___ over 20 ___

4. Number of staff under your supervision:
   1 to 5 ___ 11 to 15 ___
   6 to 10 ___ over 15___

5. Type of staff members that are under your supervision:
   Physical Therapist ___
   Physical Therapy Assistant ___
   Physical Therapy Aides/Technicians ___
   Occupational Therapist ___
   Certified Occupational Therapist Assistant ___
   Speech Pathologist ___
   Athletic Trainer Certified ___
   Volunteers ___
   Other _____

6. Average number of patients treated by the Physical Therapy Department per day:
   1 to 25 ___ 76 to 100 ___
   26 to 50 ___ over 100 ___
   51 to 75 ___

7. Type of facility in which you are currently working:
   Hospital ___ Rehabilitation Center ___
   School System ___ Private Practice ___
   Home Health Agency ___ Other _____

If you work at a hospital or rehabilitation center, please answer the next two questions.

8. Percentage of patients treated in your facility:

Inpatient	Outpatient
100% to 75% ___	100% to 75% ___
74% to 50% ___	74% to 50% ___
49% to 25% ___	49% to 25% ___
24% to 0% ___	24% to 0% ___

9. Bed capacity at your facility:

0 to 100 ___	301 to 600 ___
101 to 300 ___	over 600 ___

APPENDIX B

Cover Letter Included With the MBTI Packet

January 6, 1993

John Doe
123 College Lane
Heartland, USA

Dear John,

We are students from Grand Valley State University in Allendale, Michigan, pursuing our Master of Science in Physical Therapy. In order to fulfill the degree requirements, we are conducting a survey of Physical Therapy Administrators to determine their psychological type as indicated by the Myers-Briggs Type Indicator (MBTI). You have been randomly selected from a population of members of the APTA Section on Administration to participate in this study. Your voluntary participation in this research project is greatly appreciated.

As a participant, you will need to complete a short demographic questionnaire and MBTI test questions which will require approximately 45 minutes of your time. The instructions for completing the MBTI questionnaire are located on the front cover of the MBTI questionnaire booklet. Please read the instructions carefully and thoroughly. Please **do not** put your name on the MBTI answer sheet but complete all other items. Your results are completely confidential and will be coded so that identification of individual participants will not be possible. A summary of the research results will be mailed to you upon your request.

Please return the MBTI Form F test booklet with your completed demographic questionnaire and answer sheet in the enclosed envelope. The MBTI Form F test booklet is copyright protected and is meant to be used and interpreted only by individuals who are qualified to administer and interpret the MBTI. The booklet must not be copied or distributed.

We will be sending reminder cards in approximately 2 weeks. **Should you choose not to participate in this study, please return the test booklet in the enclosed envelope.** If you have any questions, please feel free to contact Heather Despres at (555) 555-5555. Thank you for your prompt completion and return of the enclosed materials.

Sincerely,

Heather Despres, SPT
Kelly Myers, SPT
Sue Wood, SPT

APPENDIX C

Consent Form for Participation

I have read the preceeding information and fully understand the following:

1) My participation is completely voluntary.
2) My individual MBTI results are strictly confidential.
3) The research results will provide data on type profiles and type distribution of Physical Therapy Administrators in the sample and are not intended to be
used for counseling, evaluation, or recruitment purposes.
4) The MBTI test booklet is copyrighted and must be returned to the researchers.
5) If I have any questions, a phone number has been provided so that I may contact the researchers.

Please return this consent form along with the MBTI materials and demographic questionnaire.

_____

(Participant Signature) (Date)

If you wish to receive the results of this study please provide your mailing address below (please print):

Name: _____

_____

_____

_____

AUTOBIOGRAPHICAL STATEMENT

Heather Despres, Kelly Myers, and Sue Wood were students at Grand Valley State University in Allendale, Michigan pursuing their Master of Science in Physical Therapy at the time this thesis was written.