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The Delineation of Factors Influencing Physical Therapists to Accept a Position at a Rural Hospital in Michigan

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THE DELINEATION OF FACTORS INFLUENCING PHYSICAL THERAPISTS TO ACCEPT A POSITION AT A RURAL HOSPITAL IN MICHIGAN

By

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THESIS

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1994
THE DELINEATION OF FACTORS INFLUENCING PHYSICAL THERAPISTS TO ACCEPT A POSITION AT A RURAL HOSPITAL IN MICHIGAN

ABSTRACT

This descriptive study seeks to identify the primary factors influencing physical therapists to accept a position as a physical therapist (P.T.) at a rural hospital in the state of Michigan and is designed to enhance the body of knowledge regarding rural hospital recruitment of physical therapists. Of the 63 rural hospitals in Michigan, (rural as defined by the Michigan Hospital Association), 55 agreed to participate in this study. One hundred and twenty-three questionnaires were distributed. Eighty-three were completed and returned to obtain a 67% response rate. Frequency distribution, cluster and factor analysis, coefficient alpha, multivariate analysis of variance and the Tukey-B test were performed on the data. Several categories were empirically formed from the analyzed data. Of these categories, "salary and benefits" were ranked as most important, closely followed by "opportunities and growth" and "work environment". The categories ranked as least important when choosing a place of employment were "leisure", "family considerations" and "politics".
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CHAPTER 1
Introduction

In the United States there is a nationwide shortage of physical therapists. According to data collected by the American Physical Therapy Association (APTA) in 1992, there are presently more then 15,000 unfilled physical therapist positions in this country (Adams, 1993). It appears this skewed balance between supply and demand will escalate in the coming years due to the increased focus of the health care system on preventative medicine, the increased number of elderly in the population, increased utilization of outpatient services, decreased length of time in acute care hospitals, and increases in independent practice (Gibbens and Olson, 1990). In a study prepared by the National Rural Health Association in 1992, it was estimated that the vacancies for physical therapists in this country will rise at a rate of 1,000 to 2,700 annually (Johnson, 1992). These figures become even more distressing when one focuses on the rural sectors. Nonmetropolitan areas account for 15% of all hospital physical therapy positions available, yet a disproportionate 18.7% of full time physical therapist vacancies are in these rural settings. Therefore, while urban communities have approximately 21.1 physical therapists per 100,000 people, rural communities have only 12.7 physical therapists to supply services to each 100,000 people (Adams, 1993).

The major reason for the increased shortage of physical therapists in rural settings is not known, but the following theories have been proposed as possible factors in this shortage: Lack of rural clinical affiliation sites for students, an increase in travel time to work and/or continuing education classes, lack of rural education in academic programs leading to false perceptions of rural therapy, and rural hospital's financial inability to hire physical therapy assistants (PTAs) who often perform the "more routine and less
interesting" jobs in the P.T. clinic (Johnson, 1992, p.266). Although rural hospitals cannot adequately address all of these issues, they have developed their own strategies to fill vacant physical therapy positions. These strategies include sign on bonuses, scholarship programs, advertising, foreign recruitment, student loans, contract services, temporary staffing, relocation expenses, increased salaries, flexible schedules, as well as a variety of benefit packages. These recruitment strategies are expensive, costing the average hospital in Michigan a total of $65,000 each year (Struthers and Kneisley, 1993). Besides being expensive, these recruitment methods seem to be failing in that "evidence is mounting that the physical therapist supply in rural areas is reaching a crisis situation" (Johnson, 1992, p.285). This point is well illustrated in a recent survey done by the Michigan Hospital Association (MHA), in which physical therapists were reported to be the most difficult health care professional in Michigan to recruit and retain (Struthers, Kneisley and Pietruk, 1992).

Because of the difficulties rural hospitals have in responding to these shortages, the investigators in this study found it important to attempt to identify the primary factors that influence physical therapists to accept a position as a physical therapist at a rural hospital in the state of Michigan. The investigators believe an increase in information regarding successful rural recruitment of physical therapists may lessen the disparity between rural and urban P.T. shortages, increase cost effectiveness of hospital monies used for recruitment, and decrease medical costs for P.T. services. It may also decrease turnover rate of therapists, and increase the quality of rural physical therapy care by decreasing workload and allowing more time for physical therapists and other health care professionals to develop strong working relationships. The latter is very important because of the desire of the health care system to further implement the use of interdisciplinary teams in treatment plans. The information obtained in this survey may be useful to policy makers, human resource directors, educators, and business leaders in Michigan rural communities.
CHAPTER 2
Review of Literature

National data collection regarding the shortage and/or recruitment of health care personnel is a relatively recent trend commenced in the 1970s. This reflects concerns regarding the decline in supply of various allied health personnel. In attempting to compile such data it was found that there were problems in the research conducted while gathering such data (Johnson, 1992). For example, a major difficulty in researching allied health personnel shortages is defining which occupations are included in the category of allied health. Even for a given occupation it is difficult to discern which individuals qualify for membership in that occupational group secondary to inconsistent terminology used by occupational groups, employers, and the general public. In addition to the above problem, the existing data on allied health personnel rarely provide a base from which to perform any type of trend analysis. Furthermore, it is unusual for such data to have been stratified by urban and rural locations consistently so that actual geographic distribution can be measured (Johnson, 1992).

Lack of an accepted standard definition of "rural" also impedes the compilation of data. The two most widely used definitions for urban and rural areas are from the Office of Management and Budget (OMB) and the Bureau of the Census. Rural areas are not included in either the OMB's "metropolitan statistical area" (MSA) designation or in the Census' urban or urbanized area classifications. The rural definition utilized by the Michigan Hospital Association is based on the U.S. Bureau of Census definition of non-urbanized; that definition is used for the purpose of this study. The building blocks of metropolitan statistical areas are one or more counties, thus MSAs are easy to use because county-based data are readily available. An MSA is formed on the basis of population size, population density and the degree of area-wide economic integration as observed in
commuting patterns. The urban and urbanized area definitions from the Bureau of the Census rely on settlement size and density without following county boundaries thus making them more difficult to use. Both methods identify about 25% percent of the country as being rural but the populations are not identical. Forty percent of the Bureau of Census defined rural population live within metropolitan statistical areas and 14% of the MSA population live in the Census defined rural areas. Also, the Census includes residents of small towns and cities but excludes those living in towns larger than 2,500, many of whom might be considered rural. Conversely, metropolitan statistical areas can include areas that are sparsely populated and could be considered rural (Hewitt, 1989).

Another limitation in the collection of data is that there is no one source for all information on allied health professions. Some of the professional organizations have some data on their membership but not all the professionals are members of their respective professional organizations. Thus, the professionals are not equally represented in the data. Also, even in widely licensed professions where a periodic census of the practitioners is possible, the unduplicated counts of professionals across the nation are not yet available. Licensing requirements also vary from state to state. The above is compounded when attempting to collect data for rural practitioners because data collection organizations are typically located in urban environments and focus mainly on the urban constituents (Johnson, 1992). This being the case, rural populations often suffer from not being included in data reported.

Despite these limitations in data collection, it is widely accepted that one of the leading issues currently plaguing the profession of physical therapy is the shortage of physical therapists. Beyond this, the number of positions projected to be vacant through the advent of the next century is expected to increase disproportionately to the number of P.T.s. (Johnson, 1992). The Institute of Medicine and the Bureau of Labor Statistics have developed national estimates based on the current demand for various allied health professionals as well as those projected for the year 2000. Demand was defined as" the
number of individuals that employers will hire given certain economic conditions and consumer preferences" (Johnson, 1992, p.273). Demand is created by new jobs due to growth, technology, and economic factors; deaths and retirement of existing personnel; transfers and promotions; and changes in occupation (Johnson, 1992). For physical therapists, the Institute of Medicine estimated the demand to be 61,200 physical therapists in 1986 and projected the demand to be 114,700 in the year 2000. Additionally, allied health jobs per 100,000 population were estimated. The estimates for physical therapists were 25.4 per 100,000 in 1986 and 42.8 per 100,000 in year 2000. The Bureau of Labor Statistics projections were very similar: 68,000 physical therapists in 1988, or 27.7 per 100,000; and 107,000 in year 2000, or 39.9 per 100,000. Even more striking is the disparity between rural and urban availability of allied health professionals. For example, the availability for physical therapists per 100,000 population is estimated to be 12.7 in rural areas versus 21.1 in metro areas, resulting in a 40% disparity for rural communities. (Johnson, 1992). A possible explanation for the disparity between urban and rural supply is found in a quote from the Institute of Medicine:

Allied health education, like most health care education, takes place primarily in metropolitan areas. Most often, clinical experience is provided in acute care settings with sufficient patient volumes to support state-of-the-art, high-technology services. Graduates are subsequently drawn to employment in similar settings for several reasons. They perceive these settings as offering high-quality care, personal challenges, full use of their education, and the stimulation of contact with peers and supervisors. By contrast, to city-reared workers, rural facilities are an unknown setting, often perceived as isolated, technologically backward, and with little room for advancement in their field (Gibbens et al., 1990, p.x-4).

Although precise quantifiable predictions cannot reliably be forecast for the disparity between rural and urban availability, crude methods have been developed by Cordes and Wright (Cordes & Wright, 1985). They used practitioner per 100,000 ratios and utilizing the year 2000 population predictions as the denominator, they predicted the number of persons practicing in a given discipline for the year 2000. The estimates were based on the assumption that the distribution of allied health professionals between urban and non-
urban areas has not changed over the previous decade and will not change during the
decade prior to year 2000. It is admitted that those estimates are not reliable due to many
changes in the allied health disciplines over the previous decade and also those which will
occur over the next decade. Those changes include growth and decline of different
training programs, an aging population, an increase in outpatient services, a decrease in
average length of stay in an acute setting as well as changes that directly affect the
profession of physical therapy; for example, the increased entry level education of physical
therapists from a baccalaureate level to masters entry level and the push for autonomous

Despite the errors in data collection and the arguments of critics, both urban and
rural health facility P.T. positions often remain unstaffed for up to six months (Strakal,
1990). According to Marc Goldstein, Director of Research Services at the APTA, there
was a shortage of 2,500 physical therapists in 1987, in 1990 it was 7,000 and presently the
demand has more than doubled (Adams, 1993). These figures are alarming particularly for
small hospitals serving the rural population. Conversely, physical therapists are searching
for employment that fulfills their career needs. Factors that satisfy those needs have been
delineated as achievement, responsibility, and salary (Pearl, 1990). The aforementioned
factors were drawn from a sample of American Physical Therapy Association (APTA)
members. Factors important specifically to physical therapists working in the rural
hospitals were not drawn from the sample. Furthermore, the sample selected from the
APTA may be a biased sample when delineating factors important to rural health
therapists. The need to be a member of the professional organization (APTA) may have
lower precedence for rural therapists, thus, their position in the realm of physical
therapists may be more easily overlooked compared to their urban counterparts.

Critics argue that demands for physical therapists can be artificially created. They
claim that if physical therapists practiced longer hours and weekends "the shortages
perceived by the administrators would in effect disappear or at least dissipate quite a bit"
(Adams, 1993, p.10). However, research statistics collected by various agencies are not without flaw. Data collected by the Bureau of Labor Statistics contained two errors of data collection thus compromising the validity of their data. First, the Bureau sent data collection forms only to businesses that employ 10 or more people. If a physical therapist was an owner of a practice or a partner with less than 10 employees then they were not included in the survey. The second error was from the bureau's form. The respondents were instructed to self-report their occupation, thereby increasing the possibility of erroneously classifying themselves as physical therapists (Adams, 1993). Physical therapist assistants, aides, athletic trainers and other supportive staff could potentially classify themselves as "physical therapists", ignorant to the protection of physical therapist as a restricted title.

Studies of Other Health Professions

In addition to the APTA, other health care disciplines have published in their professional journals studies that address personnel shortages in rural communities. In a study conducted by Katherine Riley et al. the investigators collected data via survey methods to identify factors important to physicians when accepting their first post-residency placement. They found that referrals from faculty were the best source of information, and most job searches were initiated during the first six months of the third year of training. Communities that displayed less than receptive attitudes and a spouse or partner that were reluctant to move were problems that resident physicians reported when visiting sites in rural communities (Riley, Myers, & Schneeweiss, 1991). The authors further explained the results as follows: First, physicians preferred faculty contact which could possibly supply a "balanced picture of the potential position" (Riley et al. 1991, p. 500). Next, they preferred interaction with prospective future colleagues, suggesting that they desired personal impressions of the employers and or future colleagues. The desire for personal contact with knowledgeable sources about specific practice details was more desirable than merely knowing of an available position. Lower in importance to physicians
were classified ads, direct-mail contacts, referrals from family and friends and recruitment fairs. An additional questionnaire was sent to each respondent to be completed by their spouse or partner, if appropriate. Results suggested that the spouse or partner was less likely to agree to move to a rural area. The authors suggested that this may reflect the communities over focusing on recruiting a physician while ignoring the needs of the physician's family (Riley et al. 1991). Therefore, needs such as employment for the spouse, day care, and community receptiveness may be important factors influencing spousal appeal for rural living.

In a similar study, published in the American Journal of Hospital Pharmacy, the factors influencing pharmacists to accept a rural or urban place of employment were delineated. Questionnaires were implemented, and sent to all of the licensed pharmacists living in Nebraska. "The survey included questions pertaining to practice characteristics (setting, years of practice, workload), job satisfaction, location of rearing, location of spouse's rearing, and prepharmacy and clerkship training" (Scott, Neary, Thilliander, & Ueda, 1992, p.1941). All respondents were classified as rural or urban: Rural being defined as those pharmacists not living in Omaha or Lincoln, Nebraska and their suburbs (Scott et al. 1992). The results of this study indicated that both rural and urban pharmacists reported financial gain to be the most important factor in job selection, and that most respondents indicated spouse and family considerations were important in their decision. The study also indicated that urban pharmacists were more concerned with spousal influence, cultural advantages, social opportunities, an urban preference, access to continuing education, and regular pharmacist contact, while the rural respondents rated being reared in a rural community and having a rural preference as being more important in their job selection decision (Scott et al. 1992).

This study, like many that have sought to differentiate between rural and urban populations, has a shortcoming in it's definition of rural. The definition utilized makes it difficult, if not impossible, to make generalizations regarding rural pharmacists as it does
not take into account the diversity between communities of 5,000, 20,000, or even 50,000 people. This definition is also very unconventional, and due to it's wording (the use of specific city boundaries), it is not possible to replicate this study in any other place but Nebraska, or to extrapolate it's findings to other states. A second limitation is that this study does not differentiate between people who married before and those that were married after they accepted a rural position. This oversight would therefore invalidate correlations concerning marital status and selection of a job site.

Other occupations that may be grouped under the heading of allied health are also concerned with personnel shortages as shown in the literature. This shortage is addressed in a 1989 study on attrition of occupational therapists by Bailey, an assistant professor at Tufts University - Boston School of Occupational Therapy. She writes," Some positions are lost when employers cannot fill them. Many patients are thus denied the benefits of occupational therapy, and occupational therapy loses its importance in that facility" (Bailey, 1989 p.23).

The purpose of Bailey's study was to find ways to prevent attrition and also to bring back therapists who had left the profession. The study consisted of questionnaires from 696 female occupational therapists who had left the profession. Questionnaires were sent only to females due to the fact that occupational therapy positions are staffed predominately by women. The top four most common reasons for leaving were (1) childbearing and child rearing; (2) geographic relocation and subsequent inability to find a job; (3) extensive paperwork and (4) desire for increased salary and promotional opportunities (Bailey, 1989).

Although the study questioned females only and only those who had already left the profession, P.T. is also a female dominated profession and individuals may be leaving P.T. for some of the same reasons. What Bailey's study also demonstrates is the concern within the health professions regarding shortages of professional staff and the need to develop strategies to help alleviate it.
In summary, well founded research is difficult to obtain secondary to problems sampling the population of rural health personnel, defining rural, inconsistent terminology, as well as problems defining the health care occupations themselves. Hence, there is only a minimal amount of research on the subject of physical therapists practicing in rural hospitals. This fact, as well as the nationwide shortage of P.T.s coupled with an increased need and demand for P.T. services, justifies the need for further research in this area.

Definitions

This study is in response to the problems discussed above, as the authors attempt to answer the following question: "What are the primary factors that influence physical therapists to accept a position at a rural hospital in Michigan?". The following definitions were used to describe the sample population in this study: **Rural**-As defined by the U.S. Bureau of the Census: The population "living outside of urbanized areas in "places" with less than 2,500 residents and those living outside of "places" in the open countryside. Census-recognized "places" are either: 1) incorporated places such as cities, boroughs, towns, and villages; or 2) closely settled population centers that are outside of urbanized areas, do not have corporate limits, and have a population of at least 1,000" (U.S. Department of Commerce Economics and Statistics Administration). The areas in Michigan deemed "urbanized" by the Bureau of the Census, can be found in the 1990 Census of Population and Housing: Summary Population and Housing Characteristics in Michigan. **Physical Therapist**-As defined by the Michigan Physical Therapy Association (MPTA): Health professionals whose practice constitutes a segment of the total health care available to the public. Entry into the physical therapy profession is through successful completion of a curriculum in physical therapy approved by the American Physical Therapy Association. Educational preparation is at baccalaureate and post-baccalaureate levels through undergraduate or graduate study and follows the basic essentials of education preparation as defined by the American Physical Therapy Association. Physical therapists cooperate with other health professionals in meeting the
needs of society. As practitioners they evaluate patients, plan physical therapy programs
and render direct patient services; as consultants, they analyze and evaluate physical
therapy health care programs in terms of the stated objectives of the program and quality
of services, and recommend plans to accomplish desired changes; as administrators, they
prepare operational budgets, formulate and establish personnel policies and advise and
guide the development of programs of patient care, research studies, and continuing
education (MPTA, 1983, p.12.)
CHAPTER 3
Methodology

Rationale

The investigators of this study found insufficient information in the literature to answer the question of what factors are most important when a physical therapist, licensed in Michigan, decides to accept employment in a rural hospital in Michigan. Initially it was expected that money plays a primary role in the decision to accept employment but many other factors were soon suspected of being important enough to affect the final decision. Beyond this, the literature that was found, focused not on rural but metropolitan areas. This led to the decision to investigate the factors which influence acceptance of a position as a physical therapist in a rural hospital in Michigan.

The Instrument

In order to discern the most widely reported factors, the authors revised a questionnaire in which respondents could rate the delineated factors, list their primary factor(s), as well as answer other related questions that will be used to stratify the collected data. The original questionnaire by Marcia Pearl (appendix a) focused on academia, and with the permission of the author (appendix b) was revised to suit this study. A questionnaire was utilized due to the fact that such a method lends itself well to the descriptive nature of the study and interviews were not feasible due to time and monetary constraints. However, the authors do acknowledge that there are possible shortcomings with this type of investigation, most notably inaccurate information from the respondents. The authors attempted to minimize this problem by assuring the respondents anonymity by including self-addressed stamped envelopes so that respondents could return the completed questionnaires directly to the investigators. The instrument (appendix c) is composed of open and closed-ended questions, in addition to questions using a Likert-like
rating sale. The open-ended questions were designed primarily for gaining anecdotal information to be used in further studies as well as to satisfy the curiosity of the investigators. The questionnaire also requested demographic information such as age, gender, marital status, etc. for use in stratification of collected data.

Human Research Review

A summary of the project's scope, rationale, methods, design, and subjects was submitted to the Grand Valley State University's Human Subject Review Committee along with the hypothesized results. The authors also gave their assurance that all information gathered will be used solely for the purpose of the study and that the anonymity of the subjects will be respected. The Human Research Review Committee approved the study on January 11, 1994 (appendix d) deeming it exempt from the regulations by section 46.101 of the Federal Register 46(16):8336, January 26, 1981.

Pilot Study

Before mailing questionnaires to participating facilities, a pilot study was completed at a nearby health care facility not to be included in the primary investigation. Four physical therapists were given an explanation of the study and were asked to complete the questionnaire. Later they were encouraged to critique the questionnaire and offer suggestions which could be implemented to improve the instrument. In response to the recommendations offered, the following revisions were made to the questionnaire in order to decrease ambiguity and/or any misunderstanding of the questions. a) Verbiage changes were made for the purpose of increasing clarity of three questions which misled respondents; b) one question, regarding the amount of academic training devoted to the topic of rural health care, was removed from the instrument because the participants in the pilot study were unable to accurately recall the information; c) other changes were structural, cosmetic, or both.

Following completion of the instrument, the therapists were asked to provide written responses to six orally presented questions (appendix e) dealing with their attitudes
and feelings concerning rural physical therapist shortages and practicing in a rural setting. These questions were designed to obtain anecdotal information that may be used to support objective findings of the study and to provide ideas for future studies. To summarize the answers to the oral questions, all responses revealed that there is a shortage of rural physical therapists but there was no agreement in how they felt the shortage could be overcome. No other information pertinent to this study was gained from their answers.

Data Collection

The authors received from the Michigan Hospital Association a definition and list of rural hospitals in Michigan. The investigators contacted each hospital's director of physical therapy by telephone to ask for their cooperation in the study. If cooperation was granted the investigators then also asked for the total number of licensed physical therapists currently employed at the facility. The next step was to send each hospital the appropriate number of questionnaires along with a cover letter (appendix f) explaining the study as well as thanking them for their time and cooperation. Each questionnaire was enclosed in its own pre-addressed envelope to ensure the anonymity of the respondents.

Data Analysis

The accumulated data collected was stratified for descriptive analysis to discern if age, gender, marital status, years of clinical experience, etc. had a significant bearing on the factors involved in their decision to be a physical therapist in a rural hospital. Statistical analysis was performed to realize the measures of central tendency, namely the mean, frequency ratings of all answers, cluster analysis, coefficient alpha and factor analysis, multivariate analysis of variance and the Tukey-B test for post hoc comparison.
CHAPTER 4
Results/Data Analysis

Techniques

A Rural Clinician Questionnaire was sent to each of the participating physical therapists of the entire population practicing in hospitals located in rural areas in Michigan; it was revised from a previously constructed instrument utilized by a researcher in 1989. The purpose of the survey was to find which factors were most important to the respondents in choosing their current place of employment in a rural setting. The survey also included a section which asked respondents to subjectively list factors which they felt were important in making their decision to practice in rural health. Those results were used to support empirical findings from the objective section of the instrument.

The questionnaire was divided such that there were a relatively equal number of items which the researchers predicted would represent the issues important to physical therapists in making a decision regarding where to work. Those apriori categories were politics, financial concerns, leisure opportunities, work environment, cultural/ethical issues, career development, and family opportunities. The Statistical Package for the Social Sciences (SPSS) was utilized. Tests for coefficient alpha, primary-axis factor analysis using varimax rotation, multivariate analysis of variance (MANOVA), and the Tukey-B test for post-hoc comparisons were conducted. The acceptable level of reliability for coefficient alpha (Cronbach's alpha) for this study was chosen as 0.500. Following the apriori category analysis, empirical categories were formed by using the results of the factor analysis, reliability analysis, and cluster analysis. Those categories were formed by using their strong factor loading as evidenced by high correlation with the other factors in their group and by the high reliability as demonstrated in coefficient alpha. Those empirical categories were politics, family considerations, leisure, work environment,
opportunities and growth, and salary and benefits. Both groups of categories, apriori and empirical, were included in the results of the study. These categories were formed by using items from question number fifteen of the Rural Clinical Questionnaire.

Results of Data Analysis

Frequency Distribution

Frequency distribution was extracted from the data to support the empirical findings noted above. For example, of the 123 questionnaires distributed to the 55 participating rural hospitals, 83 completed questionnaires were returned by the requested deadline and used in the data analysis (67.5%). Demographical analysis indicated that 50.6% of the respondents were males and 74.7% were married. The ages of the respondents were varied, 30.1% between 20 and 29 years old, 39.8% between 30 and 39, 24.1% between 40 and 49, while the remaining 6.0% were older than 49 years of age. This survey indicated that 80.7% of the respondents were Caucasian, 7.2% were Asian, 6.0% were Native American, 3.6% checked the answer "other", and no therapists reported to be Hispanic. Sixty two point seven percent of the respondents had lived in a rural area an average of 13.6 years prior to accepting their present job. Forty nine point four percent of the respondents had an average of three years of rural clinical experience prior to accepting their present position. Only 26.5% of the respondents reported receiving instruction on rural health care during their college/university academic years.

Respondents heard about their present job through word of mouth 27.7% of the time, from a recruiter 25.3%, in the Physical Therapy Journal 6.0%, in a local newspaper 4.8%, and from clinical experience at the facility as a student 3.6% of the time. A large number of respondents, 32.5%, heard about their present job through different avenues, as they marked the answer "other" on this question. The majority of the respondents, 90.4%, work full time and have worked at their present place of employment for less than five years.
Apriori Categories

Coefficient alpha and multivariate analysis of variance (MANOVA) were calculated for the apriori categories. The means were significant $F(3, 240)=164.32$, $p<.001$ for those categories which were included in the analysis. Three categories: leisure, cultural/ethnic concerns, and financial concerns were not included due to their unacceptable reliability as evidenced by their weak coefficients of alpha. Table 1 lists the reliability coefficients of alpha and the MANOVA means.

Table 1

<table>
<thead>
<tr>
<th>Category</th>
<th>Coefficient alpha</th>
<th>MANOVA mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Politics</td>
<td>0.6340</td>
<td>0.352</td>
</tr>
<tr>
<td>Work environment</td>
<td>0.6525</td>
<td>2.052</td>
</tr>
<tr>
<td>Career development</td>
<td>0.7119</td>
<td>1.931</td>
</tr>
<tr>
<td>Family opportunities</td>
<td>0.6925</td>
<td>1.654</td>
</tr>
<tr>
<td>Financial concerns</td>
<td>0.3131</td>
<td>--</td>
</tr>
<tr>
<td>Leisure</td>
<td>0.0132</td>
<td>--</td>
</tr>
<tr>
<td>Cultural/ethnic</td>
<td>0.2684</td>
<td>--</td>
</tr>
</tbody>
</table>

The Tukey-B test for post hoc comparisons on the four reliable apriori categories was performed. The pattern of pairwise differences demonstrates that rural physical therapists in Michigan rated politics least important in accepting employment. Also low in importance was family opportunities. The two categories ranked as most important were work environment and career development, respectively. Work environment and career development had means very close to one another, but clearly greater than the means of the politics and family opportunities categories. A brief discussion of the apriori categories follows.
Discussion of Apriori Categories

Politics

Physical therapists rated very low in importance the two items representing politics: Local political association and opportunity for political involvement. Less than 2% rated politics in the top four factors influencing the therapists to choose the rural location at which to work. MANOVA tests yielded a very low mean for the politics category as represented in Table 1. The Tukey-B test also supported the low rating of politics.

Family Opportunities

Less than 15% of the respondents chose the items representing family opportunities in the top four reasons for selecting their current place of employment. Additionally, a greater percentage selected those items as being not at all important. For example, 36.1% rated quality of school systems as being not at all important; and only 12% rated that item in their top four choices. However, an equal amount (36.1%) did rate quality of school systems as very important. For the question of leisure opportunities for family members, 30.1% rated that not at all important; and only 4.8% rated it in the top four choices. With respect to career opportunities for family members, 13.3% ranked it in the top four factors and 21.7% ranked it as very important. Twenty-two point nine percent rated it not at all important. The Tukey-B showed that family opportunities were next in the hierarchy of categories important in the rural hospital employment decision.

Career Development

Respondents chose favorably most of the items representing career development. Three of the items were similar in representing career development: access to continuing education, professional growth opportunities, and amount of responsibility. They were chosen in the top four 33.7%, 20.5%, and 19.3% of the time, respectively. The other two items: reputation of institution, and opportunity to do research were represented in the top
four only 7.2% and 0.0%, respectively. Career development fell below work environment as a category most important to respondents in selecting their place of employment.

**Work Environment**

Work environment was the most important category to the physical therapists according to MANOVA and the Tukey-B test for post-hoc comparisons. The items that appeared to be highly selected in importance were management philosophy, and location. They were chosen in the top four 19.3% and 36.1% respectively, and they were rated very important 43.4% and 42.2%, respectively. Peers with whom the respondents work was also a factor important in selection of employment. It was selected in the top four factors 18.1% of the time and was rated very important by 28.9% of the respondents. The physical aspects of the facility and reputation of the institution were less represented in the top four factors.

Three categories: financial, leisure, and cultural/ethnic are not discussed. Their reliability coefficients were too low to be included in MANOVA. Leisure and salary/benefits, however, are categories that were formed from the empirical categories which will be discussed next.

**Empirical Categories**

Following the analysis of the apriori categories, cluster analysis was performed to see which items went together and to find out if groups of the items were somewhat in accord with those that the researchers predicted. Six categories were formed from the cluster analysis: politics, work environment, family considerations, professional growth and responsibility, salary and benefits, and leisure. Factor analysis was performed on all the items to check for their respective loadings as demonstrated by correlation coefficients. They were compared to the items grouped together by cluster analysis. Some items were excluded from the study because they demonstrated low loading by factor analysis; only items demonstrating correlation coefficients of .40 and greater were saved for further interpretation. The items that remained from factor analysis and cluster
analysis were again tested for coefficient alpha. Five of the six categories presented alpha levels at .7 or greater. Politics had only one item because one of the items representing the politics category was dropped due to its low factor loading; thus, coefficient alpha could not be calculated for politics. MANOVA was then performed on the means of the categories to determine significant differences; the means were significant $F(5, 400)=114.53$, $p<.001$. Table 2 lists the means and alpha coefficients of the empirical groups.

Table 2
Reliability Coefficients (alpha) and Means from MANOVA for Empirical Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Coefficient alpha</th>
<th>MANOVA mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>salary/benefits</td>
<td>0.8160</td>
<td>2.395</td>
</tr>
<tr>
<td>work environment</td>
<td>0.7486</td>
<td>2.045</td>
</tr>
<tr>
<td>family considerations</td>
<td>0.7641</td>
<td>1.368</td>
</tr>
<tr>
<td>leisure</td>
<td>0.8013</td>
<td>1.889</td>
</tr>
<tr>
<td>opportunities/growth</td>
<td>0.6887</td>
<td>2.296</td>
</tr>
<tr>
<td>politics</td>
<td>--</td>
<td>0.272</td>
</tr>
</tbody>
</table>

Further analysis was performed on the six categories to compare their relative importance. The Tukey-B test for post-hoc comparisons was used to compare all pairs of those means to investigate the extent of differences. A discussion of each of the six factors found to be significant follows in order from least important to most important.

Discussion of Empirical Categories

Politics

Physical therapists as a group ranked politics very low in importance when choosing a location for employment. Seventy-four point seven percent ranked opportunity for political involvement as being not at all important. Sixty-three point nine
percent reported local political association as being not at all important. The Tukey-B test for post-hoc comparisons demonstrated that political involvement was least important for physical therapists in making decisions to accept a position as physical therapist at a particular location.

Family Considerations

Family considerations were also rated less important in the spectrum of categories thought by the researchers to be influential for physical therapists to accept employment. A greater proportion of physical therapists ranked career opportunities for family, accessibility of child care, and school system quality as being not at all important (22.9%, 50.6%, and 36.1%, respectively) in comparison to those who ranked them as very important (21.7%, 10.8%, and 36.1%, respectively).

Leisure

The respondents ranked leisure and recreation opportunities as being very important in 33.7% of cases; leisure opportunities for family members were chosen 30.1% of the time as being very important. Overall, the Tukey-B demonstrated that leisure opportunities were ranked somewhat equally with work environment but significantly less than opportunities/growth and salary and benefits.

Work environment

Issues pertaining to work environment were included in the top three reasons why physical therapists accepted their current position as demonstrated by the higher rates of response. For example, the physical aspects of the facility were ranked very important by 18.1% of the respondents; institutional reputation was very important for 25.3%; and management philosophy was rated very important for 43.4% of the respondents. All three items pertaining to work environment were ranked as not at all important by less than 6.5% of the respondents. The Tukey-B test for post-hoc comparisons indicated that work environment was somewhat equal in importance to opportunities and growth but significantly less important than salary and benefits.
Opportunities and Growth

Of the remaining categories important to physical therapists, opportunities and growth also share similar importance as salary and benefits. Respondents rated the items representing professional growth opportunities and amount of responsibility as being very important in 48.2% and 44.6% of the cases, respectively. Less than 4% of the responses indicated that these issues were not at all important.

Salary and Benefits

Three of the four items the researchers believed to reflect the category of salary and benefits were used in the analysis. Respondents rated salary as being very important in 49.4% of the cases, benefits 61.4%, and vacation time 39.8%. The fourth item, access to continuing education, was dropped due to its weak loading in factor analysis and its failure to be grouped with the other three items in the cluster analysis; it finished last. Salary was chosen as being one of the top four most important factors by 54.2% of the physical therapists, while benefits was chosen in the top four by 38.6%.

In summary, the greatest category of factors for choosing employment was salary and benefits. The means were fairly close to the next highest factor: opportunities and growth. Opportunities and growth shared means very close to work environment, but were significantly greater than the bottom three factors. Next in order was work environment with a mean were to leisure but greater than the least important two categories. Leisure was found to be significantly greater in importance to family considerations and politics, followed by family considerations which were only more important than politics. A similar hierarchy was formed from the apriori categories but with some differences worth noting.

Three categories of items from both the apriori and empirical categories were relatively similar: politics, work environment, and family opportunities. The politics group from the apriori categories had two items: Local political association and opportunity for
political involvement. The latter of those items was dropped from the empirical grouping due to its low factor loading.

Two items were dropped from the apriori work environment group (peers and location) leaving three in the empirical category: physical aspects of the facility, reputation of the institution, and management philosophy. Peers and location were dropped from the empirical category due to their low factor loading from factor analysis and their failure to be grouped in the cluster sampling.

Family opportunities (considerations) shared two of three items in each of the apriori and empirical categories. Common to both categories were career opportunities for family members, and quality of school systems. Leisure opportunities for family members was the item found in the apriori family opportunities category but absent from the empirical family considerations category. That item was found in the leisure grouping of the empirical categories.

It is also worth noting that one item exhibited high preferences as noticed in the mean rating from respondents but were grouped into neither category. That factor, variety of work, with a mean score of 2.578, was chosen in the top four factors 41.0%, and was rated very important by 60.2% of the respondents. However, due to its low factor loading with other items and its failure to be empirically grouped in the cluster analysis it was excluded from both categories of factors.
CHAPTER 5
Discussion and implications

In an effort to discover what the primary factors are that motivate a physical therapist to choose to work in a rural hospital in Michigan, the investigators had rural physical therapists throughout Michigan rate the importance of 23 factors (question 15) that they may have considered before deciding to accept their present job position. They were asked to rate these factors on a scale of 0-3, with three being a very important factor in their decision and 0 being not at all important. Benefits, variety of work, and access to continuing education were ranked three (very important) most often, 61.4%, 60.2%, and 54.2% of the time, respectively. The factors most often rated as being not at all important were opportunity for political involvement (74.7%), local political association (63.9%), and accessibility of child care (50.6%). These answers suggest which factors in question 15 are important and which ones are unimportant to the rural therapists in Michigan, but it does not specify which factor is of primary importance. To resolve this question, the therapists were asked to choose from the 23 factors given on question 15 and indicate which four were most important to them when deciding to accept their present position. The answers indicated most often were salary (54.2% of the time), variety of work (41.0%), benefits (38.6%), and location (36.1%). The answers least indicated were opportunity to do research and local political association (both 0.0%) and opportunity for political involvement (1.2%).

Due to the multitude and complexity of factors that may play a role in where a physical therapist accepts employment, the authors felt no single factor from question 15 could be labeled as the primary determinant. The investigators felt certain factors from question 15 may be measuring the importance of a single, more encompassing factor. An example of this is the possibility that factors like salary and benefits may be measuring a
more inclusive factor such as financial gain. Prior to distributing questionnaires, seven major groups were identified in which all the factors from question 15 could be sub-grouped.

An analysis of the data demonstrated that the items within four of the groupings; opportunity to increase political involvement, upgrade work environment, develop career, and increased opportunity for family members did indeed show strong correlations. The items within the three remaining groups, opportunity for increased financial gains, leisure activities, and cultural/ethnic pursuits, did not demonstrate strong correlations.

As discussed in chapter four, six categories were formed that demonstrate high correlation between items within their designated group. The category ranked as being most important by therapists when deciding to accept their present position, was "salary and benefits". The other two categories that demonstrated high importance among rural therapists were "opportunity and growth" and "work environment". The importance of these factors is supported by the qualitative data obtained from the instruments open ended questions which will be discussed later in this chapter.

When comparing the demographics of this study to demographical norms of 3,573 randomly chosen APTA members, two disparities are evident. First, there is a much greater percentage of male physical therapists working in rural hospitals in Michigan (50.6%) compared to the percentage of male physical therapists licensed with the APTA (26.4%). The second disparity involves the race or ethnicity of the physical therapists. The data obtained in this study indicated Rural hospitals in Michigan have a much higher percentage of Asian (7.2) and Native American P.T.s (6.0) than the overall APTA population of these groups which are 2.9 and 0.5 percent respectively (American Physical Therapy Association, 1991).

This study, as discussed in the previous paragraphs, identified a number of factors important to physical therapists as they consider a site of employment, yet it also contains some limitations. Questionnaires were sent to the physical therapists in all but eight of the
rural hospitals in Michigan. Of the eight hospitals not receiving questionnaires, four did not have any physical therapists on staff, three refused to participate in the study, and one facility was used in the pilot study. A 67% response rate was obtained, and the investigators feel this percentage allows the accumulated data to be used in making generalizations concerning rural physical therapists in Michigan. However, these generalizations cannot be extrapolated to physical therapists working in urban areas or different types of facilities (i.e. rehabilitation, school systems, private practice etc.), as they may have different reasons for choosing to work in a rural area.

The study's 67% return rate was obtained with a return of 83 out of 123 questionnaires. Although this is considered an acceptable return rate, it could have been higher. Due to time constraints, the authors requested that all questionnaires be returned within two weeks of their initial mailing date. Twelve completed questionnaires were received shortly after the return deadline but were not included because data analysis had already been performed. If the respondents would have been given more time to return the questionnaires, the response rate may have been higher, thereby increasing the strength of the study's statistical analysis. In addition, all seven of the questionnaires sent to one facility, were returned by the P.T. director unanswered. Accompanying the unanswered questionnaires, was a note suggesting that the director felt the investigators were recruiters seeking information about the therapists on his/her staff. The note stated that "the questions at the bottom of pg 2 & on pg 3 are questions that stimulate job searching and that recruiters commonly use."

Another shortcoming was in the questionnaire's construction. Question #17, which asked "Are you happy with your present job?", requested a "yes" or "no" answer. Although 81 out of 83 respondents answered "yes" to this question, this simply implies that the majority of the sample population is happy with their job. If the questionnaire would have allowed the respondents to rate their job satisfaction on a scale of 1-5, the researchers could have compared relative happiness to the factors listed in question #15,
and looked for correlations between which factors were rated as having high importance and the amount of job satisfaction a therapist perceived.

Question #6 also could have been better constructed. A large portion of the respondents (32.5%) did not hear about their present job through any of the choices available in question six. Because the respondents were not given the space or instructed to write in how they had heard about their present job, the information given on this question was unusable. The data would not have been lost and some significant trends may have been found if the investigators would have constructed this question in a manner that allowed all respondents to report how they had heard about their present job.

A final limitation involved is the lack of normative demographic data regarding rural physical therapists in Michigan. The only demographical data that the authors could find was from a 1990 study published by the APTA that analyzed the characteristics of a random sample of participating physical therapists. All of these therapists were APTA members which biased the findings of this study. Beyond this, no distinction is made between rural and urban therapists or between what type of facility the therapists had been working in.

Future research

As mentioned earlier, despite the shortage of physical therapists in rural areas, there is very little research focused on rural physical therapists. This study has sought to add to this limited body of knowledge, yet there remain many questions that need to be answered before the rural P.T. shortage can be successfully addressed. The investigators believe that future P.T. students could help answer many of these questions through further research. Many of the areas discussed in the following four paragraphs particularly lend themselves to the type of work required of most graduate physical therapy students. Those who would benefit most from this research are the administrators, recruiters, and department managers in rural health care facilities, as well as health care educators.
Research from other health care disciplines has suggested that clinical experience and time spent living in a rural area are often correlated with accepting a rural place of employment. Both of these issues are addressed in this study (questions #10-13) as data were gathered regarding the amount of time the respondents had spent living or participating in clinical affiliations in a rural setting. These data were useful in describing our sample, but they do not allow generalizations to be made regarding what factors may predispose a physical therapist to choose to work in a rural setting, as like data on urban therapists is not available.

To answer this question, further research is needed regarding the effect that these two factors have in a physical therapist's decision to select an urban or rural job site. If it is found, as other health care disciplines have suggested, that there is a strong correlation between prior rural exposure and rural job selection, physical therapy recruiters and educators may be able to use this information to help alleviate the rural P.T. shortage. Educators could seek out additional rural clinical sites for their students and encourage them to go there. They could also develop alternative clinical education models aimed specifically at students who are interested in obtaining experience in a rural clinical situation. Recruiters could focus the majority of their time and efforts on therapists who have had clinical experience or have lived in rural areas.

This study also indicated a need for further research in the area of rural physical therapy job satisfaction. Question #17 was answered "yes" in 81 out of 83 returned questionnaires. As noted above, the data suggests that the majority of physical therapists working at rural hospitals in Michigan are satisfied with their job, but it does not indicate what factors cause this satisfaction. Further research in this area could be utilized in recruitment and retainment of physical therapists.

The fact that a large amount of money is spent each year to recruit physical therapists in both rural and urban facilities, also indicates a need for further studies. According to question #6 on the Rural Clinical Questionnaire, of the choices available,
most respondents heard about their present job through word of mouth (27%) or a recruiter (25.3%). The Physical Therapy Journal was checked by 6.0% of the respondents, advertising in a local paper by 4.8%, and clinical experience at the facility as a student was checked only 3.6% of the time. This suggests that these later three methods are far less effective when advertising an open P.T position in a rural hospital in Michigan. If this type of information could be obtained for a larger and more diverse sample of physical therapists, the time and money spent advertising and recruiting therapists could be channeled into techniques that have proven successful at attracting the target population. This strategy would be both time and cost effective.

This study focused only on those P.T.s working in rural hospitals. This presents an opportunity for further research into other rural health care facilities in which P.T.s are employed. Such facilities include private practices, schools, and rehabilitation settings. It also suggests the need to investigate if rural and urban physical therapists differ in what factors are most important to them when deciding to accept a physical therapy position, as there is a shortage in both areas. The authors would permit and encourage others to use the Rural Clinical Questionnaire for such purposes as it could easily be adopted to suit such a study.

Interviews and open ended questions

The researchers sought to gain anecdotal data through the use of interviews during the pilot study and open ended questions on the questionnaire. It was hoped that this qualitative information would help answer the stated thesis question (what are the primary factors etc.) and provide ideas and guidance for future research on this topic. As discussed in chapter three, very little pertinent information was obtained during the pilot study interviews. In analyzing the answers to the open ended questions (21-25) on the Clinical Rural Questionnaire, it was found that some answers were given far more frequently than the rest. Question # 21, which asked "What was the primary determinant in you accepting your present position?", was answered "location" or "career development
opportunities", three times more often than any other answer. Question #22 asked, "Please list four positive factors that come to mind when you think of employment in a rural setting". The most frequently given answers, followed by the number of times it was given, were community (30), case load (27), decreased traffic (19), atmosphere (18), and increased responsibility (18). Looking at question #23, which asked the respondents to list four things they like about their present job, certain answers stood out as they were given far more frequently than any of the others. They included case load mix (43), peers/colleagues (39), salary (25), and flexibility (18). The final open ended question asked respondents "If you were to relocate, list four factors that you would be looking for in a new job?". The answers given, like questions 21-23, were quite varied, yet certain answers again dominated the responses. An increase in salary (48) was by far the most often cited reason for relocation, followed by professional growth opportunities (27), continuing education opportunities (24), and better benefits (22).

When the answers to all the open ended questions are looked at as a whole, it is clear that salary, career development opportunities, and the case load mix are very important factors to the rural therapists in this study. The importance of these items appears even greater when it is noted that professional growth and continuing education opportunities may be two answers addressing approximately the same issue. This may also be the case with the answers salary and benefits, as they may both be looked upon as financial gain. Regardless if some of these answers are measuring the same item or not, the investigators feel facilities that are able to increase financial gains and create career development opportunities for their physical therapists will have an easier time filling vacant P.T. job openings.

Conclusion

It is clear that further research is required to aid in alleviating the shortage of physical therapists in both rural and metropolitan areas. From this study a few generalizations may be made concerning physical therapists working in rural settings in
Michigan. It is hoped that by using this information, improvements will be made in recruiting and retaining physical therapists and that physical therapy positions in rural areas will become and remain filled.
REFERENCES


APPENDIX A

Original questionnaire by Marcia Pearl
APPENDIX B

Permission statement from Marcia Pearl
Mr. E. J. Miller  
11472 Logue Blvd  
Allendale, MI 49401  

Dear Mr. Miller,

I have received the copy of my revised questionnaire. I hereby give you permission to use the revised questionnaire for the research you are conducting for your Master's thesis.

I wish you good fortune in the completion of your studies and thank you for the opportunity of reviewing your material. I would greatly appreciate a copy of your results.

Respectfully yours,
APPENDIX C

Rural clinician questionnaire
Rural Clinician Questionnaire

This questionnaire will focus on why physical therapists accept positions at rural hospitals in Michigan. It will address a number of factors related to job attributes as well as attitudes and feelings of the physical therapist working in a rural hospital. This survey is about your attitudes and feelings. There are no right or wrong answers. Please answer all the questions that apply to you, and leave all questions that do not apply blank.

1. Gender: [ ] Male [ ] Female

2. Age: [ ] 20-29 [ ] 30-39 [ ] 40-49 [ ] 50-59 [ ] >59

3. Marital status: [ ] Single [ ] Married [ ] Divorced [ ] Widowed

4. Race: [ ] Native American [ ] Asian [ ] African American [ ] Caucasian [ ] Hispanic [ ] Other

5. I Work: [ ] Full time [ ] Part time

6. How did you hear about your present job?
   [ ] Word of mouth
   [ ] Physical Therapy Journal
   [ ] Advertising in a local paper
   [ ] Recruiter
   [ ] Clinical experience at the facility as a student
   [ ] Other

7. How many years have you worked as a physical therapist at your current place of employment? [ ] 0-5 [ ] 6-10 [ ] 11-15 [ ] 16-20 [ ] >20

8. How many years have you been practicing as a licensed physical therapist?
   [ ] 0-5 [ ] 6-10 [ ] 11-15 [ ] 16-20 [ ] >20

9. Did you receive financial assistance from a rural hospital contingent upon employment after graduation?
   [ ] Yes [ ] No

10. Had you lived in a rural area prior to accepting your present job position?
    [ ] Yes [ ] No

11. If yes, how long? _____Years _____Months

12. Did you have any clinical experience in a rural setting prior to accepting your present position?
    [ ] Yes [ ] No
13. If yes, how much? _____Years _____Months

14. Did you receive instruction on rural health care during your college/university academic years?  [] Yes  [] No

15. Please score the importance of the following factors in your selection of a physical therapist position by circling the appropriate number. (For example: if an item is one of your most important reasons for selecting a job circle number 3; if it is of no importance circle 0, etc.)

Key: 3 = Very important  2 = Somewhat important 1 = Somewhat unimportant  0 = Not at all important

<table>
<thead>
<tr>
<th>Factor</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Salary</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>b. Benefits</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>c. Vacation time</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>d. Flexible schedule</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>e. Access to continuing education program</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>f. Religious association of the community</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>g. Peers</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>h. Variety of work</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>i. Physical aspects of the facility</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>j. Location</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>k. Career opportunities for family members</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>l. Professional growth opportunities</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>m. Amount of responsibility</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>n. Reputation of the institution</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>o. Management philosophy</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>p. Local political association</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>q. Proximity to family members</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>r. Leisure/recreation opportunities</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>s. Opportunity to do research</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>t. Opportunity for political involvement</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>u. Accessibility of child care</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>v. Quality of the school systems</td>
<td>3 2 1 0</td>
</tr>
<tr>
<td>w. Leisure opportunities for family members</td>
<td>3 2 1 0</td>
</tr>
</tbody>
</table>

16. Please list the letters that coincide with the four most important factors, listed in question 15, that determined your present job selection.

1. ___  2. ___

17. Are you happy with your present job?  [] Yes  [] No
18. If you were to relocate, what type of setting would you look for? (check all that apply)

- [] Acute care setting  
- [] Sports medicine  
- [] Rehab setting  
- [] College/University faculty  
- [] Home health  
- [] School system  
- [] Pediatrics  
- [] Orthopedic clinic  
- [] Geriatrics  
- [] Cardio-pulmonary  
- [] Private practice  
- [] Other

19. Here is a list of situations. For each situation listed please tell me whether it is likely, somewhat likely, somewhat unlikely, or very unlikely for you to leave your present position and accept a position as a physical therapist in a metropolitan hospital.

Key:  3 = Likely  2 = Somewhat likely  1 = Somewhat unlikely  0 = Very unlikely

a. Opportunity to increase political involvement ........3 2 1 0
b. Opportunity for greater financial gain .................3 2 1 0
c. Opportunity to increase leisure activities ............3 2 1 0
d. Opportunity to upgrade work environment ..........3 2 1 0
e. Opportunity to increase time spent in cultural/ethical pursuits ........................................3 2 1 0
f. Opportunity to develop your career .....................3 2 1 0
g. Increased opportunities for family members ..........3 2 1 0

20. Which single factor from question #19 would most motivate you to accept a job in a metropolitan hospital? _____

21. What was the primary determinant in you accepting your present position?

22. Please list four positive factors that come to mind when you think of employment in a rural hospital.

1. ___________________________  2. ___________________________
3. ___________________________  4. ___________________________

23. Please list four things you like about your present job.

1. ___________________________  2. ___________________________
3. ___________________________  4. ___________________________

24. If you were to relocate, list four factors that you would be looking for in a new job.

1. ___________________________  2. ___________________________
3. ___________________________  4. ___________________________

25. Additional Comments (optional):
APPENDIX D

Human Subjects Review
January 11, 1994

E.J. Miller, Jon. A. Cummings, Matt Flynn
152 Field House
Physical Therapy

Dear E.J., Jon & Matt:

Your proposed project entitled "The Delineation of Factors Influencing Physical Therapists to Accept a Position at a Rural Hospital In Michigan" has been reviewed. It has been approved as a study which is exempt from the regulations by section 46.101 of the Federal Register 46(16):8336, January 26, 1981.

Sincerely,

Paul Huizenga, Chair
Human Research Review Committee

cc: Dr. Jane Toot
APPENDIX E

Pilot study oral questions
INTERVIEW QUESTIONS FOR RURAL THERAPISTS

1. From what you have observed, do you feel there is a shortage of physical therapists working in rural settings?

2. What do you feel would be the best strategy for a rural hospital to take when trying to alleviate a physical therapist shortage?

3. Do you feel there is any difference between the quality of physical therapy in a rural hospital compared to an urban hospital?
   If you feel there is a difference, please explain.

4. Do you feel health care professionals have many false perceptions about what it is like working in a rural setting?
   If so, please explain.
   What do you feel is the best way to dispel these false perceptions?

5. Have you always wanted to practice physical therapy in a rural setting?
   If not, what influenced you to work in a rural setting?
   If yes, why?

6. If you could choose one place to work in the United States, would you consider it a rural or urban setting?

7. Additional comments:
APPENDIX F

Sample cover letter
Date: Jan. 26

Dear Physical Therapist:

We are physical therapy students in the process of completing our final year of study in an entry level master's program at Grand Valley State University, in Allendale, Michigan. We are presently conducting research in the area of physical therapy in rural settings. We are attempting to gather information that may help alleviate the shortage of physical therapists found in rural hospitals.

The attached questionnaire contains items regarding attitudes and feelings about working in a rural hospital. The population we have chosen to survey is all the physical therapists working at rural hospitals in Michigan. The information obtained from this questionnaire will remain confidential and will only be used for the purpose of our research project. To insure your confidentiality, a pre-addressed, stamped envelope has been attached to each questionnaire.

When you have completed your questionnaire, please place it in the envelope and mail it. We would ask that you please return all completed questionnaires no later than Feb. 15 so that our data may be compiled in a timely manner.

We thank you for taking the time to participate in our research project. If you would like a copy of our results, send your request to one of us in care of Grand Valley State University, Department of Physical Therapy, Allendale, Michigan 49401.

Sincerely,

Jane Toot, Director of Physical Therapy

Jon Cummings, S.P.T.

Matthew Flynn, S.P.T.

E.J. Miller, S.P.T.