

A DESCRIPTIVE STUDY OF THE CURRENT STATUS
OF PHYSICAL LEISURE ACTIVITIES IN
WISCONSIN NURSING HOMES

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ABSTRACT

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A detailed questionnaire was sent to 100 nursing homes in WI and 69% returned a usable questionnaire. Of these facilities, 96.9% were classified as skilled with an average of 110.5 residents per facility, 2.2 females to each male. There were 4.4 staff members per facility, a ratio of 25 residents per staff member. The majority (51%) of the respondents felt they had adequate space for physical leisure activities (PLA) and 84.5% had a budget allotment for PLA of less than 10%. Thirteen groups of PLA were identified with the PLA group, exercise activities including balls, being most frequently offered (86.2%). An average session lasted from 30.6 to 60.9 mins for 1.2 to 3.9 sessions/week. More females than males participated and more participants were active than passive. Eleven categories of equipment were identified with balls being used by the most facilities (97.1%). Modified equipment and staff assistance were used to help residents participate in PLA, and occupational, physical, recreational, and speech therapies were also utilized by residents. Respondents listed additions they would like to incorporate and problems preventing these changes. Only one of the 33 returned mission statements included PLA.

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CHAPTER I

INTRODUCTION

Nursing homes in our society serve a variety of purposes. Some members of the elderly population reside in a nursing home for a short period of time to recover from an illness or surgery. They receive the specific therapy and care needed so they may return to independent living. Others, however, reside in nursing homes for an extended period of time or on a permanent basis.

Originally, long term care for the elderly was designed primarily to manage the physical care of the elderly as efficiently as possible. As a result, the major priority of institutional care was, and in some cases continues to be, physical maintenance and medical intervention. Unfortunately, these facilities are designed in a way that fosters dependence, and therefore they assume the responsibility that dependency may contribute to the physical deterioration of the elderly (DePoy & Archer, 1992). Currently, a realization of the importance of regular physical activity for persons of all ages has created a demand for improvements within the structure of nursing home facilities. These nursing homes must initiate measures to help residents maintain their present physical and mental state of health and whenever possible, improve their condition (DePoy & Archer, 1992; LaRocque & Campagna, 1983).

A nursing home can provide for the physical and psychological needs of its residents, and ensure a reasonably high quality of life using various forms of rehabilitation as well as physical and recreational activity programs. Rehabilitation services are essential for the development of what some nursing home facilities call a short term stay program. This type of program allows some residents to leave the nursing home after a short period of time, and return to their previous living arrangements. Rehabilitation is also beneficial to those long term residents who may otherwise not participate in any physical movement and lose whatever skills associated with daily living that they had upon entering into the home.

It is important to have activities aside from rehabilitation services for the residents that stimulate, entertain, and provide for social and emotional gratification as well as physical maintenance and improvement. Physical activities can help to promote greater range of motion, postural stability, emotional and social satisfaction, and an increase in ability to perform activities of daily living with less assistance (Barry, Rich, & Carlson, 1993).

Purpose of the Study

The purpose of this study was to determine and describe the types of physical activities currently available in nursing homes located throughout Wisconsin.

Assumptions

The following assumptions were made for this study:

1. Staff employed in nursing homes recognized that physical leisure activities for the elderly are important.
2. Respondents answered the questions honestly and accurately.
3. Respondents understood the definitions and questions.
4. The questionnaire was completed by the appropriate staff member.

Delimitations

The study had the following delimitations:

1. The questionnaire was limited to a random sample of 100 nursing homes located throughout Wisconsin.
2. The data collected were limited to that which were asked for on the questionnaire.
3. The questionnaire was designed for those nursing homes licensed as skilled and intermediate.

Limitations

The study had the following limitations:

1. The population used in the investigation was limited to the number of nursing homes that completed the questionnaire.
2. There was a set number of nursing homes in Wisconsin.
3. Those counted as a participant in the activity groups may or may not have been actively participating.

Definition of Terms

Activities of Daily Living (ADL) - the self-care, communication, and mobility skills required for independence in everyday living (Thomas, 1993, p. 35).

Developmentally Disabled - mental retardation or a related condition, such as cerebral palsy, epilepsy, or autism, but excluding mental illness and infirmities of aging (Wisconsin Department of Health and Social Services [WDHSS], 1995, p. 340).

Functional Capabilities - any sort of muscular efforts used to improve or maintain flexibility, range of motion, and condition the muscular and skeletal systems of the body, all of which assist in the activities of daily living (O'Hagan, Smith, & Pileggi, 1994, p. 39).

Group - two or more people participating in the same activity.

Institution For Mentally Disabled (IMD) - a facility that meets the definition of an institution for mental diseases (WDHSS, 1995, p. 340).

Intermediate Care Facility (ICF) - a nursing home which is licensed by the department as an intermediate care facility to provide intermediate nursing care which is further defined as basic care consisting of physical, emotional, social, and other rehabilitative services under periodic medical supervision which: 1. requires the skill of a registered nurse for observation and recording of reactions and symptoms, and for supervision of nursing care; and 2. provides essential supportive consultant services (WDHSS, 1995, p. 340).

Maximal Aerobic Power (VO_{2max}) - indicates the rate of oxygen uptake and utilization during maximal exercise (American College of Sports Medicine, 1995, p. 270).

Nursing Home - a term used to describe institutions that care for individuals with chronic illnesses and physical impairments. There are officially two types of nursing homes, the skilled nursing facility and the intermediate care facility (Miller, 1992, p. 1045).

Physical Leisure Activity - an activity involving physical participation as well as mental, social, or emotional participation in contrast to idleness or complete rest. The aim is to create and/or redevelop the mental and physical functions of the nursing home resident. (Edginton, Compton, & Hanson, 1980, p. 9; Kurasik, 1965, p. 556).

Resident - an individual who is registered as living in a nursing home.

Skilled Nursing Facility (SNF) - a nursing home which is licensed by the department to provide skilled nursing services which are further defined as those services furnished pursuant to a physician's orders which: 1. require the skills of professional personnel such as registered or licensed practical nurses; and 2. are provided either directly by or under the supervision of these personnel (WDHSS, 1995, p. 342).

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

As the population of the U.S. gets older, the focus of exercise must change to meet the needs of the elderly. The elderly do not need to be able to run a marathon or lift weights as would a professional athlete, but they need to remain functional. They need to have the ability to perform daily demands, to be able to take walks with a friend or through the grocery store, and to be able to carry on a conversation without periodically gasping for breath (Rikkers, 1986). It is important for the elderly to be able to perform those activities of daily living. Unfortunately, due to sedentary living habits acquired over the years and the physiological processes of aging, many elderly men and women in the U.S. are unable to carry out the basic functional activities needed in every day life.

Historically, as a person ages, there is a feeling of decline and frailty which promotes a sedentary lifestyle among the majority of the elderly population (Conrad, 1976). There is a belief that at retirement a person should slow down and enjoy a well earned rest (Sidney & Shephard, 1976). Traditional concern for the elderly has been to make every day tasks physically easier, when instead, the elderly should be encouraged to walk,

bend, move, and stretch (Conrad, 1974). Inactivity in the elderly can also be attributed to periods of bed rest, acute and chronic illnesses, limited opportunities for movement, and a fear of falling (Fiatarone et al., 1991).

Physiological Changes Associated With Aging

Aging results in the loss of a normal range of physiological functions. Specific changes that occur as the aging process progresses are: reduced aerobic fitness, loss of postural reflexes, loss of skeletal muscle mass and strength, decreased bone density, decreased nerve conduction, and decreased range of joint motion (Barry et al., 1993; Fiatarone & Evans, 1993; Ostrow, 1984). Physical leisure activities can offset these physical declines brought on by the physiological aging process. Studies have shown increases in the rate of oxygen uptake and utilization by the muscles, flexibility and range of joint motion, and muscular strength and endurance (Blumenthal et al., 1989; Frontera, Meredith, O'Reilly, Knuttgen, & Evans, 1988; Heyneman & Premo, 1992; Hopkins, Murrah, Hoeger, & Rhodes, 1990; Hurley, 1995; Morey et al., 1989; Pollock et al., 1991; Rhodes et al., 1995; Takeshima, Tanaka, Kobayashi, Watanabe, & Kato, 1993; Work, 1989; Young & Skelton, 1994).

Improvements Seen Utilizing Endurance Training

Both Ostrow (1984) and Dehn and Bruce (1972) showed that as sedentary male participants advanced in age, their $VO_{2\max}$ values decreased. This is the expected physiological response. This same effect was shown by Robinson, Dill, Robinson, Tzankoff, and Wagner (1976) in a longitudinal

study of champion runners. Robinson et al. showed that although the VO_2max was higher in the runners than the average population of the same age, the VO_2max still showed a significant decline as the ages of the runners increased. This does not mean that improvements in VO_2max cannot be made by the elderly, however. In fact, the following studies have shown that improvements can be made by this population using aerobic exercise at relatively safe intensities. Pollock et al. (1991) randomly assigned 70 to 79 year old volunteers to a walk/jog program. This training was for 30-45 minutes, 3 days a week, at an intensity equal to 40-70% heart rate max reserve for 13 weeks. The results showed a significant increase in VO_2max in the participants. Takeshima et al. (1993) utilized stationary cycle ergometers for a training period of 30 minutes, 3 days a week for 12 weeks. As a result of the training period, similar increases were found in VO_2max values. Rhodes and associates (1995) again showed significant increases in VO_2max in 70 year old women who were randomly assigned to either a land or water aerobic exercise group three times a week for 45 minutes a session for a total training period of 12 weeks.

Although the aging process is inevitable, elderly men and women who participate in physical leisure activities may delay the effects of age related physiological declines. Aquatic exercise programs using water walkers, buoyancy devices attached to the waist of the individual, were shown to

increase the elderly participants' range of motion, cardiovascular endurance, and strength (Heyneman & Premo, 1992). Hopkins et al. (1990) found improvements in cardiovascular endurance, flexibility, balance, and body fat percentages in sedentary, elderly women using a low intensity aerobic dance program. Elderly men and women participating in a four month aerobic exercise program also showed improvements in cardiovascular endurance (Blumenthal et al., 1989).

Improvements Seen Utilizing Strength Training

As aging progresses, a decline is seen in the tissues surrounding the joints, and in the muscles. The joint tissues increase in thickness and lose their elasticity causing impaired movements, decreased flexibility, and a decrease in range of motion (Conrad, 1974). Furthermore, according to Fiatarone et al. (1991), the physiological muscle loss which is enhanced by sedentary lifestyles and inactivity results in decreased power and endurance. Studies in both men and women have shown that across the ages of 65 to 84, strength in both handgrip and quadriceps decrease by 1.5% per year, and power in the lower limbs decreases by 3.5% per year (Young & Skelton, 1994). When these degenerative factors affect the muscles in the lower body, alterations occur in gait, postural control, and stability, thereby increasing the chances of falls and impaired mobility.

Province et al. (1995) has shown an association between lower body muscle weakness in the elderly and an increased risk of falls and fall related

injuries. Falls can result in minor injuries or fractures, both of which decrease mobility and restrict the activity of the elderly which can worsen the underlying muscle weakness and instability. Strength training programs, especially those which involve the muscles of the lower extremities, have been shown to safely increase strength and muscle mass in older men and women (Work, 1989). Strength training also has positive effects on many risk factors for age related diseases such as decreased range of joint motion and flexibility, low bone mineral density, osteoarthritis, abnormal lipid profiles, hypertension, glucose tolerance, and insulin resistance (Hurley, 1995).

An aerobic and strength training program performed three times a week for 90 minutes showed significant gains in cardiovascular fitness, hip flexibility, and abdominal strength (Morey et al., 1989). The unique feature of this study was that the elderly subjects all were chronically ill instead of relatively healthy as is found to be the case in most other training studies involving elderly subjects. A strength training program of 80% of one repetition maximum, three days a week, showed strength gains in older men which were associated with an overall increase in muscle mass (Frontera et al., 1988). An observational study conducted by Simonsick et al. (1993), concluded that physical activities offer benefits to older adults primarily in reducing the risk of physical functional declines. Young and Skelton (1994) found improvements in quadriceps and biceps strength, and an increase in lower limb extensor power in women aged 75 years or older who underwent

a strength training program three times a week for 12 weeks. Pollock et al. (1991) also showed significant improvements in chest press and leg extension strength. Their strength training program consisted of one set of 10-12 repetitions of ten different resistance exercises performed to fatigue.

Psychological Benefits Associated with Physical Leisure Activities

Old age is a time characterized by many losses such as physical ability, friends, family, work identity, and independence. The diminishing physical capabilities and the lack of ability to fully participate in those activities once enjoyed in their younger years contribute to feelings of helplessness, lack of control, and depression. The physical and psychological aspects of aging make participation in an organized exercise program beneficial, both as a means of physical improvements, and as a social outlet (Heyneman & Premo, 1992). Bennett, Carmack, and Gardner (1982) indicated that in those elderly persons exhibiting signs of depression, a structured physical exercise program significantly improved their level of depression. An earlier study by Sidney and Shephard (1976) showed improved attitudes towards physical activity and health and fitness, and also a relief from tension. It has ultimately been found that successful physical activity programs are those in which socialization is possible, and in which the patients perceive an increase in their quality of life (Barry et al., 1993; Lampman, 1987).

Benefits of Physical Leisure Activities on Nursing Home Residents

In the last decade there has been an increasing amount of research done on the effects of physical leisure activities on the elderly population.

However, not much of this research has been done with the elderly who reside in nursing homes. The research which has been done with the institutionalized elderly, however, shows very positive results.

Functional Capabilities

Functional capabilities have been shown to improve through range of motion exercises (Dawe & Curran-Smith, 1994), and through regular exercise classes (Binder, 1995; Jirovec, 1991; O'Hagan et al., 1994). In a low intensity seated exercise program consisting of 25 minutes of isometric exercises designed to strengthen major muscle groups and improve joint flexibility and muscle tone, improvements were again shown in functional capacities as well as flexibility (McMurdo & Rennie, 1994).

Flexibility and Range of Motion

Flexibility and range of motion were also found to improve in a different type of exercise program which utilized rhythmic exercise. Rhythmic exercise is movement performed with equipment such as towels, flags, dowels, and balls. According to LaRocque and Campagna (1983), using this type of equipment helps to promote unconscious movement of limbs through a natural range of motion performed in synch to music. Brill, Drimmer, Morgan, and Gordon (1995) instituted a strength and flexibility training program for elderly nursing home residents. Training sessions included a warm up and cool down to improve flexibility and a variety of exercises using Therabands to improve strength. At the end of the 11

week training program improvements occurred in both strength and flexibility. A slightly different outcome was found in nursing home residents utilizing range of motion exercises. Dawe and Moore-Orr (1995) investigated the effect of range of motion exercises on residents' cognitive performance. The results of this study indicate that range of motion programs are a low cost intervention that can enhance memory and independence.

One skilled nursing facility implemented teaching programs in rehabilitation. Over a three month period, improvements in abilities to perform activities of daily living and range of motion were made (Schuman et al., 1980). Flexibility was also listed as a secondary benefit in studies that utilized low intensity aerobic group or individual activities (Lampman, 1987; McMurdo & Rennie, 1993; Morey et al., 1989; & O'Hagan et al., 1994).

Strength Training

Fiatarone et al. (1990), Fiatarone et al. (1991), and Fiatarone et al. (1994) conducted three different studies which utilized a high intensity strength training program with nursing home residents. The results of these studies showed improved physiological responses such as decreased body fat, increased lean body mass, increased functional mobility, increased gait velocity, and improved stair climbing power. There were also improvements in muscle force by way of neural recruitment as well as in the hypertrophy of muscle fibers. Evans (1995), using a similar program, also found significant gains in strength in nursing home men and women. High intensity weight

training of the lower extremities in addition to a program of stationary cycling was also found to result in limited although significant improvements in mobility, strength, muscular endurance, and certain gait parameters (Sauvage et al., 1992).

Using maximal isometric contractions, isotonic contractions, and range of motion exercise at different hip angles Fisher, Pendergast, and Calkins (1991) found lasting improvements in both muscle and functional performance in elderly nursing home residents. These participants, as a result of the training program, were reported by nursing home staff to be more active and independent. Fiatarone et al. (1994) concluded that high intensity strength training is an effective means of counteracting muscle weakness and physical frailty in elderly men and women.

Walking Capabilities

Improvements in walking capabilities and length of distances walked have also been shown in those institutionalized elderly who participate in physical leisure activities. In a program developed by second year medical students, nursing home residents dependent on wheelchairs were assisted with walking. Improvements were shown in both balance and gait patterns of these residents (Conright et al., 1990). Also through regular exercise classes, it was found that residents were able to walk greater distances before tiring (Jirovec, 1991; O'Hagan et al., 1994). Improvements are not only limited to walking, however. Schnelle, MacRae, Ouslander, Simmons, and Nitta

(1995) found that a 6 minute exercise program facilitated by nurses' aides improved walking, wheelchair, and standing endurance in frail nursing home residents. In a recent study, Province et al. (1995) found that in those nursing home residents who performed many different components of exercise such as endurance, flexibility, balance using Tai Chi, and resistance training, there was a reduction in the risk of falls and subsequent injury.

Physical Therapy

Physical therapy has also been shown to be effective in increasing the overall physical function of residents, by using both high and moderate intensity physical therapy techniques (Chiodo, Gerety, Mulrow, Rhodes, & Tuley, 1992). It also has been found that nursing home residents who are classified as long-stay residents can benefit from regular physical therapy. The long-stay resident is characterized by an impaired physical and functional status, frequent falls, and a high mortality rate. Physical therapy for these residents can reduce the cost and utilization of health care as well as improve their quality of life (Mulrow, Gerety, Kanten, DeNino, & Cornell, 1993). Mulrow et al. (1994) found moderate mobility benefits in the frail, long-stay nursing home residents with physical therapy sessions three times a week.

Purposeful Activities

When physical leisure activities are combined with a purpose and are supported by encouragement and reinforcement, gains in physical ability are shown. One study conducted an exercise in which the nursing home

residents imagined they were reaching up to pick apples and reaching down to pick up coins. When this purposeful imagery was used, it was found to elicit more repetitions of the exercise than did the regular, nonimagery exercise group (Riccio, Nelson, & Bush, 1990). A similar study utilized a rotary arm exercise in the control group, while in the study group the residents stirred cookie dough. Again, it was found that the exercise group that had an added purpose performed more exercise repetitions (Yoder, Nelson, & Smith, 1989). Another study utilized goal setting with feedback and positive reinforcement as the purpose for increasing stationary bike riding in elderly male nursing home residents. The gains in riding time were made without an increase in perceived effort or a decrease in enjoyment. Furthermore, when the reinforcement was removed, the increased exercise level was maintained (Perkins, Rapp, Carlson, & Wallace, 1986). A similar study also using positive feedback and social reinforcement found an increase in ambulation using an assisted walking program three times a week (Allen & Miller, 1989).

Nursing Home Licensure Requirements

The State of Wisconsin Department of Health and Family Services (DHFS) is a contract agency for the Federal government and licensed nursing homes. The DHFS also acts as an enforcement agency so that each nursing home can keep their licensure and Federal Certification by adhering to the rules and regulations as stated in the Chapter HSS 132 Nursing Home Rules

which includes revisions through January 1, 1995 and Federal Certification Rules (J. Radloff, personal communication, December, 1996). The State licensure codes and Federal certification rules pertaining to physical leisure activities specify that each nursing home provide specialized rehabilitative services so that each resident may improve and maintain physical functions. Furthermore, the activity regulation in the Federal Code (483.15 (f) (1)) states that the activity program should provide activities which promote physical, cognitive, and/or emotional health and should also enhance all nursing home residents' physical and mental status. Each nursing home must also provide activity programs for groups and individuals which are designed to meet the needs and interests of each resident and that fulfills each resident's plan of care. The plan of care is set up for each resident upon entry into the facility and after assessment, and it is designed to meet their social and rehabilitation needs.

The Chapter HSS 132 Nursing Home Rules and the Federal Code do not specifically require Wisconsin nursing homes to offer physical leisure activities, only activities which involve the interests of the residents. The rehabilitation department instead of the activity department is responsible for maintaining the physical condition of each resident. Because the State licensure codes and Federal certification rules require activity programs, it would seem that there would be a large data base full of the current activity programs offered at each facility from which those classified as physical

leisure activities could be ascertained, however, there is no such data base. What is done to enforce these rules is to evaluate a random sample of residents at each Wisconsin nursing home to ensure that their needs are being met according to the requirements. Simply because an activity is listed on the schedule does not mean it is being actively participated in. State surveyors observe a sample of residents and evaluate whether or not the facility is meeting the needs of each resident in terms of resident assessments and care plans. Each individual facility may share information that is nonconfidential regarding activity programming (J. Radloff, personal communication, December, 1996).

Summary

Unfortunately, men and women who reside in nursing homes, and who have varying physical abilities and limitations are often times overlooked. For these residents, the opportunities to engage in physical leisure activities can be a rarity rather than commonplace (Dawe & Curran-Smith, 1994). There is a definite need for further research on the status of physical leisure activities currently existing in nursing homes, and the effects of these activities on the physiological, psychological, and cognitive abilities of the elderly nursing home residents.

CHAPTER III

METHODS AND PROCEDURES

Subject Selection

A complete listing of nursing homes in Wisconsin was obtained from the Wisconsin Bureau of Quality Compliance (B. Carey personal communicator, August 7, 1995). This listing of licensed long term care facilities contained the name and address of the facility, the administrator's name and telephone number, the licensee type, the level of licensure, the number of beds, and the title and level of certification. The level of licensure consists of five categories: skilled, intermediate, developmentally disabled, skilled-IMD, and intermediate-IMD. The total nursing home population in Wisconsin consists of 471 licensed nursing homes. Those eligible for this survey were facilities classified as skilled and intermediate only, and those classified as developmentally disabled, skilled-IMD, and intermediate-IMD were not included in this study.

Thus, out of 417 nursing homes, a random sample of 100 skilled and intermediate facilities were sent a questionnaire (see Appendix A) to assess what type of physical leisure activities currently take place in their facility. The entire population of Wisconsin nursing homes was listed in alphabetical order according to the name of the city in which the facility was located, and

were assigned a number accordingly. A sample of 100 random numbers was obtained from a computer statistical package (EPISTAT) which included all numbers up to 417. These 100 numbers corresponded to a nursing home from the listing and each facility was then contacted.

Institutional Review Board

This study was reviewed by the Institutional Review Board at the University of Wisconsin-La Crosse, and determined not to place subjects at risk. By their request a statement of informed consent was added to the bottom of the questionnaire.

Instrumentation

A questionnaire (see Appendix A) was used to assess the physical leisure activities offered in the sample of nursing homes. This questionnaire was sent along with a cover letter (see Appendix B) addressed to the administrator of the nursing home according to the listing which was obtained from the Wisconsin Bureau of Quality Compliance. The purpose of this letter was to inform the administrator of the need and purpose of this study. The preferred employee to complete the questionnaire was the activity director or that staff member who was most knowledgeable of the physical leisure activities that currently take place in their facility. The content of the questionnaire highlighted the following areas:

1. General information about the facility and the employee(s) responsible for organizing physical activities.

2. Information on the design of the facilities pertaining to physical activity.
3. A listing of potential physical activities which may take place in the facility.
4. A request to return a copy of the nursing home's mission statement along with the completed questionnaire.

At the end of the questionnaire was a statement of informed consent which was signed by the person who completed the questionnaire.

Approximately one week following the questionnaire return deadline, a second mailing was done using a slightly modified cover letter (see Appendix C) and the same questionnaire. These questionnaires were directed to the administrator of the nursing homes. One week following this second return deadline, follow up phone calls were made to each facility that had not yet returned the completed questionnaire. The purpose of the phone call was to acknowledge the purpose and importance of the facility's participation in the study. If necessary, a third cover letter (see Appendix D) and questionnaire were again mailed to those facilities who failed to respond. The phone conversation was held with a member of the activity department of each facility. It was found that the majority of these activity staff members had not received the questionnaire from the administrator, so the third questionnaire was then mailed specifically to the activity department of the nursing home. The address list was updated on August 2, 1995 and there were no problems with incorrect mailing addresses. At the completion of the study a thank you

letter (see Appendix E) was sent with a summary of the results of the study to those nursing homes who participated by returning a completed questionnaire.

Statistical Analysis

The BMDP statistical software (University of California Press, Los Angeles, CA) was used for data analysis. Descriptive statistics, including means and standard deviations, were computed for all variables.

CHAPTER IV

RESULTS AND DISCUSSION

General Information

A total of 69 nursing homes returned completed questionnaires which corresponds to a 69% response rate. These results were obtained after three mailings and 59 phone calls to a randomly selected sample of 100 nursing homes located throughout Wisconsin. This moderate response rate may be attributed to the length of the survey, the fact that the first mailing was sent out during the busy Christmas holiday time period, and the number of open ended questions which tend to be more time consuming. Of the responding nursing homes, an overwhelming 96.9% were classified as skilled and 3.1% were classified as intermediate.

The cover letter sent with the questionnaire requested that a nursing home staff member who was the most knowledgeable about the facility's physical leisure activities complete the questionnaire. The majority of questionnaires were completed by the activity director (70.6%) and the remaining questionnaires were completed by the administrator (11.8%), recreational therapist (7.4%), or assistant activity director (1.5%).

The questionnaire inquired about the respondents' educational backgrounds. Approximately 56.3% had a bachelor of science or bachelor of

arts degree, 3% had a master of science degree, 1.6% had a doctor of philosophy degree, and 39.1% had other levels of education including a high school diploma, workshops, and related certification classes. The average number of physical leisure activity staff members per facility was 4.4 (± 4.1) with 2.2 (± 2.2) being full time and 2.5 (± 2.8) part time employees.

The number of residents in each facility averaged 110.5 (± 101.4) with females outnumbering males 2.2 to 1. More females than males were expected since the ratio of 1.8 females to 1 male found in the population aged 75 and older in the 1990 census (Schick & Schick, 1994). Overall there was an average of 25 residents per one physical leisure activity staff member.

The nursing homes were asked for information on how much of the facility's budget was allotted for physical leisure activities. On average, the majority (84.5%) of nursing homes had a budget allotment for physical leisure activities of less than 10%, 13.7% allocated between 10-20%, and 1.7% had a budget allotment of greater than 20%.

Only 17 nursing homes replied that they offer a type of reward for residents who accomplish physical goals. Of these, 11 facilities offered a type of prize such as food, money, or trophy and 6 facilities offered praise. One function of a nursing home is to offer short term care to those who may need specialized rehabilitation services before returning to independent living and 35% replied that they have such a program. The average number of residents who stay for 3 months or less in these facilities was 4.7 (± 5.8). In

the questionnaire, this question was written as "Do you have some type of early release program?" Based on comments written on returned questionnaires, "early release" apparently was not the proper terminology. Instead a "limited stay" program or "short term stay" program would have been a better way to word this question.

Facility and/or Equipment

A section of the questionnaire inquired about how the respondent felt concerning the amount of space allotted for physical leisure activities within their facility. Approximately 54% of the facilities have a room set aside specifically for physical leisure activities, 97% of the facilities have physical leisure activities in a room which serves other purposes, and 52% of the respondents felt they had adequate space for their physical leisure activity programs. A fourth question in this section asked whether the facility had a room in which equipment related to physical leisure activities was used and 65% responded yes.

Physical Leisure Activities

This section of the questionnaire required the greatest amount of writing by the respondent, possibly explaining why 65 of the 69 nursing homes responded to this question. As previously mentioned only four of the 69 returned questionnaires did not include any physical leisure activities. Those four facilities may not have filled in this section of the questionnaire because they viewed the question as threatening, too broad, and/or too time

consuming. This section required the respondent to write information on the physical leisure activity offered, the title of the staff member who supervised the activity, the equipment used, and numbers of residents who participated. The directions to this question emphasized that activities listed should require physical exertion on the part of the resident proportional to the resident's ability and fitness level. Also emphasized were any activities that include group participation, one on one interaction, water and outdoor activities, and social activities. The exact format of these questions can be seen in Appendix A.

A variety of physical leisure activities were identified by the nursing homes who responded to this question. The overall average number of activity programs offered per week was 47.7 (± 113.9) and were categorized into 13 groups (see Table 1).

The most popular physical leisure activity offered was exercise activities with balls as 86.2% of the responding nursing homes offered this activity. Exercise activities with balls included such specific activities as kickball, golf, baseball, mittball, handball, as well as any general physical leisure activity group which utilized a ball. It is easy to see why this large category was offered by the greatest number of facilities as it includes numerous types of activities. This could be because it is relatively inexpensive to buy a large, brightly colored, lightweight ball, and many residents are familiar with games that utilize a ball. Kickball for example

Table 1. Physical leisure activities offered by nursing homes surveyed, the percentage of facilities who offer the activity, the average length of the session, and the average number of sessions offered per week (N = 65).

Physical Leisure Activity	% of facilities that offer this activity	Length of session	# of sessions per week
Walking groups	21.5%	27.0 (10.3)	3.7 (2.1)
Exercise activities	83.1%	26.1 (10.9)	2.7 (1.7)
Exercise activities with balls	86.2%	30.6 (14.1)	3.4 (3.0)
Volleyball	30.8%	30.1 (14.1)	1.5 (1.1)
Basketball	24.6%	40.7 (13.6)	1.8 (1.6)
Bowling	50.8%	52.0 (21.1)	1.3 (.99)
Toss activities	47.7%	38.1 (12.8)	1.9 (1.6)
Bean bag toss	44.6%	43.0 (16.1)	1.2 (.63)
Ring toss	20.0%	42.8 (14.6)	1.7 (1.5)
Parachute	29.2%	32.8 (9.8)	1.4 (.53)
Simulated work	32.3%	55.2 (25.1)	3.9 (5.0)
Exercise equipment	4.6%	30.0 (0.0)	1.8 (.96)
Other	40.0%	60.9 (27.2)	1.5 (.88)

Note. Numbers in parentheses denote standard deviation.

can be done with residents seated in a circle which includes those in a wheelchair. Also it takes less coordination by a resident to utilize the large muscles of the leg to kick a large colored ball and few staff members are needed to keep the ball within the confines of the circle.

Aerobic and range of motion exercises done by nursing home residents who are seated or are wheelchair users have been shown to strengthen major muscle groups, and improve joint flexibility and functional capacities (Conright et al., 1990; McMurdo & Rennie, 1994; Schnelle et al., 1995).

The physical leisure categories of bowling, basketball, and volleyball are also activities which utilized balls but were listed in their own category due to the significant amount of nursing homes who offered these physical leisure activities. As seen in Table 1, the percentages of facilities that offered bowling, basketball, and volleyball were less than half. These physical leisure activities utilize a specific set of equipment which may not be available to those nursing homes with a small budget allotted for physical leisure activities, the physical leisure activity may require more staff assistance, or may not be easily adaptable for those with greater physical limitations who therefore can not participate. Because this study included 96.9% skilled nursing facilities, most of the residents included in this study required more care and possibly had a considerable degree of physical limitations which limited the physical leisure activities in which they could participate. It is also possible that many types of equipment may be used in a type of therapy rather than the activity department.

Exercise activities was the next most frequently offered physical leisure category, offered by 54 of the 65 responding facilities. Exercise activities included activities such as range of motion, stretching, chair exercises, and exercises utilizing video or audio tapes. This group also includes a variety of physical leisure activities which can be easily adapted to include those residents who have various physical limitations. This category represents "activity" or "exercise" groups that sometimes required more explanation or

description by the respondent. Flexibility and range of motion exercises have been found by Dawe and Moore-Orr (1995) to improve nursing home residents' memory and independence. Province et al. (1995) also found that nursing home residents who performed flexibility and range of motion exercises as a part of an overall exercise and walking program reduced their risk of falls and injury. Other benefits found in nursing home residents who performed range of motion and/or flexibility exercises included: increases in muscle strength, flexibility, range of motion, and independence in activities of daily living (Brill et al., 1995; Schuman et al., 1980).

The physical leisure activity entitled "toss activities" included activities such as horseshoes, shuffleboard, darts, and foam dice. This broad category of toss activities was offered by slightly less than half or 31 of the 65 responding facilities. More specific physical leisure activities which contain the "toss" motion are bean bag toss and ring toss. Again, these physical leisure activities were offered by fewer than half of the responding facilities, but were considered significant enough to be their own category due to the specificity of the activity. Toss activities generally use the upper body muscles and encourage a nursing home resident to make gains in flexibility and range of motion as do exercise activities. LaRocque and Campagna (1983) used music with upper body exercises to help promote range of motion exercises.

The other category included a variety of physical leisure activities to which 40% of the facilities responded. This category included: fishing,

olympics, band, crafts, and dancing. Similarly, the category entitled "simulated work" was listed by 21 of the 65 responding facilities. This category included activities such as baking, gardening, woodworking, and folding towels. Riccio et al. (1990) had one group of nursing home residents stir cookie dough, while the second group mimicked the action. They found that the group who actually stirred the cookie dough performed more repetitions of the exercise. Studies (Allen & Miller, 1989; Perkins et al., 1986; Yoder et al., 1989) have also shown that when physical leisure activities are combined with a purpose, gains in exercise repetitions, exercise time, and physical capabilities are made by nursing home residents.

A parachute was used by 29.2% of the facilities surveyed presumably to increase strength, range of motion, and flexibility. While no research has focused on the use of a parachute exclusively with nursing home residents, similar benefits can be gained as from other types of exercises which enhance strength, flexibility, and range of motion.

Walking groups, which were offered by 21.5% of the facilities, included a program of indoor and/or outdoor walking, groups of walkers, or one on one assistance including restorative aids. One program designed by Conright et al. (1990) assisted nursing home residents with walking. Improvements were shown in balance as well as in gait patterns. Nursing home residents who participated in a regular exercise class could walk greater distances before tiring (Jirovec, 1991; O'Hagan et al., 1994). Overall, regular walking programs

have been shown to improve the length of distances walked, balance and gait patterns, and a reduction in the risk of falls and injury (Province et al., 1995; Schnelle et al., 1995).

Exercise equipment included the use of hand weights, Therabands, scarves, or sticks to increase flexibility, range of motion, or strength in the elderly nursing home residents. This category also included those few facilities which had stationary exercise bikes for their residents to use. This category included the fewest amount of facilities as only 4.6% included one of the above types of equipment. Brill et al. (1995) utilized a variety of exercises and Therabands while Perkins et al. (1986) utilized a stationary bike to improve strength in nursing home residents. Studies have also focused on strength training using hand weights to increase the muscle strength of the elderly. Fiatarone et al. (1994) concluded that strength training is an effective way to counteract muscle weakness and physical frailty in elderly nursing home residents. LaRocque and Campagna (1983) utilized towels, flags, dowels, and balls to improve range of motion in nursing home residents.

The main reason for the low response rate (4.6%) to this physical leisure activity group may have been the way the question was presented. The question asked to briefly describe the activity. In many cases the respondent wrote "exercise group" and failed to list equipment used when they actually did include Therabands or scarves for instance. Only two

nursing homes replied they had an exercise room with equipment such as a stationary bike or treadmill and in both facilities there were no staff present in this room.

The physical leisure activity which lasted on average the longest period of time was the "other" category, whose average session was 60.9 minutes. Looking at the nature of these activities (i.e., fishing, olympics, band, crafts, and dancing) it is easy to see that these "fun" physical leisure activities may hold the residents' attention longer. Fishing may also require travel time making the session length longer and increasing the group's average time. Exercise activities lasted on average 26.1 minutes which is the shortest length of all the physical leisure activities. The range of average number of sessions per week for all 13 physical leisure activity groups was 1.2 (bean bag toss) to 3.9 (simulated work).

The total ratio of female residents to male residents in all of the responding nursing homes throughout Wisconsin was 2.2 females to 1 male resident. This corresponds to the majority of the physical leisure activity categories where the range of female to male ratios was 1.9 (ring toss and simulated work) to 2.9 (bowling and bean bag toss). The two exceptions to this comparison were the parachute and exercise equipment activity groups. The ratio of females to males in the parachute group was four to one while the ratio of females to males for the exercise equipment group was .86. Looking back to the activities participated in by the generation of the nursing home

residents, if any type of traditional exercise was done it would have predominately been participated in by men, and rarely would women have been encouraged to "exercise". This could, in part, explain for the ratio of more males participating in this physical leisure activity than females.

It was requested that the questionnaire respondents determine who was an active or passive participant in each group. This was due to the fact that not all residents perform the activity physically but participate socially and emotionally because of their physical inability to participate by "doing" the activity. While it is important that residents receive emotional and psychological enjoyment from all activities of daily living in a nursing home, this questionnaire was looking for the number of residents who participated physically. The range of ratios found for each of the 13 physical leisure activity categories was from 2.0 (exercise activities) to 3.6 (other) active participants to passive participants.

Table 2 summarizes the different types of physical leisure activity groups offered, the average number of male residents who attended, the average number of female residents who attended, the average number of residents who actively participated in the physical leisure activity, and the number of residents who passively participated in the physical leisure activity.

Table 2. Physical leisure activities offered by nursing homes surveyed and the number of female, male, active, and passive participants (N = 65).

Physical Leisure Activity	Female	Male	Active	Passive
Walking groups	10.3 (6.5)	5.2 (4.1)	13.2 (8.4)	5.3 (4.9)
Exercise activities	13.6 (8.3)	4.9 (4.3)	14.0 (8.3)	6.9 (6.1)
Exercise activities with balls	10.5 (4.3)	4.4 (2.9)	13.2 (4.8)	5.4 (5.6)
Volleyball	10.2 (5.0)	5.1 (4.7)	13.6 (5.2)	5.0 (3.3)
Basketball	12.4 (5.6)	4.8 (4.0)	14.0 (4.2)	5.2 (4.0)
Bowling	11.7 (5.1)	4.1 (2.5)	13.3 (4.6)	5.4 (4.6)
Toss activities	10.9 (3.6)	4.8 (3.4)	14.6 (5.2)	5.3 (4.9)
Bean bag toss	11.6 (5.4)	4.0 (2.1)	14.2 (6.2)	6.9 (6.1)
Ring toss	11.9 (7.6)	6.3 (6.5)	15.8 (5.0)	5.4 (5.6)
Parachute	13.1 (6.7)	3.2 (1.6)	16.0 (6.2)	5.0 (3.3)
Simulated work	8.5 (4.9)	4.4 (3.8)	11.2 (5.2)	5.2 (4.0)
Exercise equipment	6.7 (5.0)	7.8 (10.9)	10.8 (7.9)	5.1 (3.2)
Other	10.0 (6.6)	4.8 (3.8)	13.5 (6.6)	3.8 (3.1)

Note. Numbers in parentheses denote standard deviation.

Occasionally, a respondent reported activities which included little or no physical exertion (i.e., bingo, puzzles, church services, playing cards, playing checkers, reading, and watching television). While these activities are social and enjoyable, the definition asked for activities which required a level of physical exertion by the resident. A resident clearly exerts more energy walking or playing basketball than by playing bingo or listening to a church service.

There were a variety of staff members who supervised the physical leisure activities. Positions listed included activity director (29.0%), assistant activity director (12.9%), recreational therapist (4.8%), recreation aide (1.6%), other (1.6%), and 50% were classified under "staff". The staff category includes those who listed two or more staff members with different titles listed. Most common staff was a director and an assistant.

Types of Physical Leisure Activity Equipment

A variety of physical leisure activity equipment was used by the nursing homes in this study. The different types were placed into 11 categories which are presented in Table 3.

Table 3. Physical leisure activity equipment.

Category of Equipment	Percentage of facilities that utilized equipment
Balls	97.1%
Therabands/rubber tubing	54.4%
Bowling set	51.5%
Bean bag toss set	48.5%
Airdyne & stationary bike	41.2%
Exercise machines	27.9%
Music equipment	48.5%
Aerobic video tapes	47.1%
Exercise equipment	69.1%
Game equipment	47.1%
Other	38.2%

The first category, balls, included golf, baseball, velcro, hand, beach, balloon, punch, and light-weight balls. The greatest number of all responding nursing homes had one or more of these types of balls. This was also the largest category because balls are used for many physical leisure activities such as kickball, volleyball, basketball, golf, baseball, stretching and strengthening exercises, and range of motion activities.

Bowling balls and pins were placed in their own category as over half of the facilities offered bowling as a physical leisure activity. Approximately 54.4% of nursing homes had Therabands or rubber tubing for their residents to use and 48.5% offered their residents a bean bag toss set. Bean bag toss set was quite common among nursing homes as it was part of a larger game called "greenseth game" which includes bean bag toss and ring toss.

Although only two nursing homes had exercise rooms with a variety of aerobic exercise equipment, 41.2% had either an Airdyne or a stationary bike for their residents to use. It seems that many of these bikes may not get much use as only 4.6% of the facilities offered their use as a physical leisure activity. The smallest percentage of facilities used exercise machines such as a NordicTrack, stair stepper, arm ergometer, treadmill, or rowing machine. These machines may take more physical ability than many nursing home residents have.

Music equipment was utilized by 33 of the 68 facilities. This included audio tapes and musical instruments, and 32 had aerobic video tapes.

Because the questionnaire listed aerobic tapes as a possible physical leisure activity related piece of equipment, respondents may not have considered other video tapes which have stretching, range of motion, or chair exercises.

Exercise equipment including pulleys, ropes, sticks, scarves, hand weights, and parachutes was available in 69.1% of the facilities. Game equipment was offered by slightly fewer nursing homes and included horseshoes, shuffleboard, golf clubs, basketball hoop, dart set, foam dice, and frisbees. The last category, other, offered the nursing home residents an instructor, whirlpool, art supplies, baking supplies, gardening supplies, and chairs, and was found in 38.2% of the responding nursing homes.

Additional Information

Nursing home residents may have physical limitations which make their participation in physical leisure activities difficult. A variety of adaptations were used by the nursing homes surveyed to allow those with physical limitations to participate in physical leisure activities. An example of an adaptation would be a bowling ball ramp placed in the lap of wheelchair users so they could participate in bowling from their wheelchair. Other modified equipment includes raised garden beds, large targets, brightly colored objects, and soft light-weight balls. Approximately 45.2% utilized one or more of these adaptations, 35.7% of the nursing homes used both modified equipment and staff assistance, and 19% used staff assistance alone.

Different types of therapy for rehabilitation are an integral part of nursing homes' care plans for their residents. Depending on the need, size, and budget of the individual nursing home, therapy services were either part of nursing home staff or hired as an ancillary service. Table 4 presents data concerning therapy services.

Table 4. Types of therapy services provided for nursing home residents and how they are employed.

Therapy	N	Percent employed by the facility	Percent employed as an ancillary service
Occupational	61	21.3%	78.7%
Physical	63	17.5%	82.5%
Recreational	30	96.7%	3.3%
Speech	59	16.9%	83.1%

An unusually small percentage (3.3%) of recreational therapy services were provided as an ancillary service because activity programs are often synonymous with recreational programming. All nursing homes are required to have an activity department although some facilities choose to call their department "recreation" instead of "activity".

One of the questions asked on the questionnaire was "If given the opportunity, what would you wish to add to your current physical leisure activity programs?" (see Appendix A, page 59). Over half, or 44 of the 69 nursing homes responded to this question with 26.9% indicating they would like access to a pool; 21.2% would like to have additional physical leisure

activity programs; 19.2% would like to add a walking program; 17.3% would like to add more equipment such as a treadmill, exercise bike, wheel chair accessible van, weights, pool table, dart board, player piano, and a greenhouse; 11.5% would like to have a pet day, more community involvement, a physical leisure activity specific room, or a music therapist; and 3.8% would like to enhance exercise stimulation for those who are cognitively impaired.

Comments were encouraged by those who completed the questionnaire, however only 11 questionnaires listed comments throughout the questionnaire or in the space provided (see Appendix A, page 59). The comments written were categorized into four groups. Comments written about their mission statement included: the mission statement is updated yearly, not available, currently being written, or the facility has a philosophy instead of a formalized mission statement. Comments were also written concerning therapy and included: the recreation department works to maintain physical, mental, and psychosocial levels for residents, residents attend physical, occupational, and speech therapy most of the day, restorative aids walk patients on a daily basis, the therapy department works on physical exertion, and the activity department is geared for leisure enjoyment. Some wrote comments concerning their residents such as: there is a large percentage of elderly, residents are very social and enjoy parties, bingo, music, and special dinners, and it is hard to give a definite number of how many residents attend programs as it varies due to the health of the residents.

Problems listed by facilities that prevented additions to their physical leisure activity programming were limited amount of staff, increased cost of more equipment or programs, limited physical abilities of the residents, and a lack of programming ideas.

Mission Statements

Along with returning the questionnaire, the nursing homes were requested to return a copy of their mission statement. Only 33 facilities returned a copy and of these only 21%, or 7 mission statements, included activity or recreational programming. Of these seven, only one mission statement specifically included physical leisure activities.

Summary

For the physical and emotional well being of nursing home residents, physical leisure activities are an integral part of elderly men and women resident's stay. This study attempted to identify the various types of physical leisure activities currently being offered in nursing homes throughout Wisconsin and the number of residents participating.

By utilizing the Physical Leisure Activity Questionnaire (see Appendix A) a long list of physical leisure activities was identified as were various types of equipment used by nursing homes to implement physical leisure activities and to improve and maintain the physical condition of the residents. This questionnaire did not accurately determine resident participation in each activity due to possible improper terminology and respondents' difficulty in, or refusal to, fill in numbers of male, female, active, and passive participants.

It is important for nursing home staff to realize the benefits residents can obtain by participating in physical leisure activities. Gains in cardiorespiratory endurance, muscle strength, flexibility, range of motion, and improvements in the ability to perform activities of daily living are merely a sample of benefits received by nursing home residents (Brill et al., 1995; Evans, 1995; Fiatarone et al., 1990, 1991, 1994; Fisher et al., 1991; Sauvage et al., 1992; Schuman et al., 1980).

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

There is a definite need for current information concerning the type of activities nursing homes offer their residents for mental and physical maintenance and growth. Recent research states the importance of aerobic, strength, range of motion, and flexibility exercises for the physical well being of elderly men and women currently residing in nursing homes. This study attempted to discover what types of physical leisure activities currently exist in Wisconsin nursing homes.

A random sample of 100 nursing homes in Wisconsin was sent up to two questionnaires and those that still had not responded were telephoned and were sent a third questionnaire to complete. In total, 69% returned a usable questionnaire. This questionnaire consisted of five pages and many detailed questions which required a written answer (see Appendix A). The random sample of nursing homes was obtained from a listing of nursing homes from the State of Wisconsin. The questionnaires were addressed originally to the administrator of the nursing home until the third mailing when the questionnaires were addressed to the activity director or employee of the activity department.

It was found that 96.9% of the returned questionnaires were from skilled nursing homes. The average number of residents living in a Wisconsin nursing home was 110.5 which was further broken down into a ratio of 2.2 females to each male resident. The majority of those who completed the questionnaire were activity directors (70.6%) and most (56.3%) had a bachelor of science or arts degree. The most common staff member who supervised the residents participating in physical leisure activities was "staff" which included two or more employees of the activity department. Overall, there were 4.4 physical leisure staff members per facility and each staff member supervised approximately 25 residents.

One function of a nursing home is to offer short term care to those who may need specialized rehabilitation services before returning to independent living. Approximately 35% of the nursing homes replied they offer such a service and the average number of residents who stay three months or less was 4.7. In the majority of nursing homes, the types of therapies offered were occupational, physical, recreational, and speech.

Nursing home residents tend to do more repetitions of an exercise if there is a reward or praise associated with the activity (Allen & Miller, 1989; Perkins et al., 1986; Riccio et al., 1990; Yoder et al., 1989). In this study, 17 nursing homes offered a type of reward, 11 offered a type of prize, and 6 offered praise for the completion of a physical goal.

The questionnaire included a section about the facility and its space available for physical leisure activities. The majority of the respondents

replied they have enough space for their physical leisure programs as they have a room set aside specifically for physical leisure activities, a room in which equipment related to physical leisure activities was used, and/or have physical leisure activities take place in a room which is also utilized for other functions. Respondents also provided information concerning their budget allotment for physical leisure activities. The majority of the facilities (84.5%) had a budget allotment of less than 10%, 13.7% had a 10-20% budget allotment, and only 1.7% of the facilities had a budget allotment of greater than 20%.

A large section of the questionnaire focused on the types of physical leisure activities offered by the nursing homes. Exercise activities including balls was the activity group offered most frequently. This was a broad category which included any physical leisure activity that utilized a ball except for bowling, basketball, and volleyball which were included in their own individual categories due to the significant number of facilities that offer these.

The length of exercise session ranged from 30.0 to 60.9 minutes and the number of sessions per week ranged from 1.2 to 3.9. When looking at the breakdown of the participants of these physical leisure activities, it is seen that overall a greater number of women participated and more participants were active instead of passive.

The types of physical leisure activity equipment used were also assessed from the respondents' replies on the questionnaire. The most frequently

used pieces of equipment were balls which corresponds to the most frequently offered physical leisure activity, activities using balls.

Nursing home residents have a variety of physical limitations which may make their participation in physical leisure activities difficult. To account for this, a variety of adaptations were used by the responding nursing homes. Adaptations included modified equipment and staff assistance.

The last page of the questionnaire (see Appendix A) left space for the respondents to add comments. The comments included: they would like access to a pool, more physical leisure activity programs, more equipment, to have a pet day, more community involvement, a room set aside for physical leisure activities, a music therapist, and to enhance exercise stimulation for those who are cognitively impaired.

Along with the return of the questionnaire, respondents were asked to return a copy of their mission statement. Of the 69 returned questionnaires, only 33 included a mission statement. Of these 33, only 7 included activity or recreational programming and of these 7, only 1 included physical leisure activities.

Conclusions

This study showed evidence of a variety of physical leisure activities being offered and actively participated in. The majority (94.2%) of the 69 responding nursing homes indicated they offered at least one physical leisure activity which would allow each nursing home resident to maintain

or improve their current level of fitness. The overall numbers of participants are higher for those who actively participate than for those who passively participate. This may imply that in nursing homes throughout Wisconsin, physical leisure activity programs are maintaining and possibly even improving the physical abilities of their residents.

Added together, almost 100% of the responding nursing homes offered modified equipment, staff assistance, or both to allow residents with varying abilities to participate in the physical leisure activities offered. This is not surprising because 96.9% of the responding nursing homes were classified as skilled, which means the elderly men and women have a higher degree of health problems and/or physical frailty.

The majority (65%) of the facilities indicated they have enough space for their physical leisure programming. Approximately 97% indicated they have access to a room which serves for physical leisure activities as well as other functions while a smaller percentage (54%) replied they have a room specifically for physical leisure activities. Smaller nursing homes, which have fewer residents as well as less space, may use other rooms such as the dining room for their activity programs while the larger facilities may have their own room as well as other rooms for different activities. The smaller nursing homes expressed comments concerning the wish for a room specifically allocated for physical leisure activities as well as ideas for activity programming that could take place in a small area.

The majority of the facilities also indicated that they had a budget allotment of less than 10% of the nursing home's overall budget. Generally light-weight, colorful balls, which were listed as the most common piece of physical leisure equipment, are not very expensive and are also durable. Scarves, dowels, rubber tubing, and towels as seen in a study by LaRocque and Campagna (1983) are also an inexpensive way to promote movement and increases in range of motion and flexibility. The equipment that costs a significant amount of money such as an exercise bike, treadmill, or gardening supplies was offered by the least amount of nursing homes. Some pieces of exercise equipment may also be shared by the rehabilitation services within the facility to cut down on costs.

While this study stressed the importance of activities that required physical exertion on the part of the resident, activities such as bingo, puzzles, church services, playing cards, playing checkers, reading, and watching television were also listed by the respondents. It is possible that the respondent's focus or the focus of the nursing home was on activities that the residents have enjoyed throughout their lifetime rather than activities that promote an increase in functional capacity or the ability to do activities of daily living. This focus can be seen in the mission statements, as only one of the 33 submitted included physical leisure activities yet many included activities in general. It is important to have social events and activity programming that mirror the activities residents enjoyed in the past. The

current generation of nursing home residents rarely participated in a traditional exercise class, however many may have played cards or checkers for enjoyment.

Recommendations

In pursuing the study of physical leisure activities in nursing homes it would be beneficial to use this questionnaire again with the changes in wording to the proper terminology such as changing "early release" to "short term stay". It would also be necessary to further clarify the need to discover the overall number of all activities offered by the facility and also the number of those activities which include physical activity relative to each resident's ability. This could provide a ratio as to how many of the total activities offered to Wisconsin nursing home residents actually involve physical effort. In using this questionnaire it would be helpful to visit the site and ask a member of the activity staff the questions in person. This would facilitate more accurate answers, a more clearly understood definition of physical leisure activity, and less confusion concerning any improper terminology and/or poorly worded questions.

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APPENDIX A
PHYSICAL LEISURE ACTIVITY
QUESTIONNAIRE

PHYSICAL LEISURE ACTIVITY QUESTIONNAIRE

As previously stated in the cover letter, exercise provides many benefits for the well being and healthy living for the elderly population. It is the goal of this study to determine and describe the current physical leisure activities existing in nursing homes throughout Wisconsin. The activities included in this survey are those that require physical exertion by the resident proportional to the resident's ability and fitness level. This survey is interested in group as well as individual activities, and recreational as well as traditional activities. As much detailed information that you can provide will be greatly appreciated.

In this study we define physical leisure activity as any activity involving physical participation as well as mental, social, or emotional participation in contrast to idleness or complete rest. The aim is to create and/or redevelop the mental and physical functions of the nursing home resident.

I. GENERAL INFORMATION

1. How is your facility classified? (Please check one)
☐ Intermediate ☐ Skilled
2. What is your professional title? (Please check one)

<input type="checkbox"/> Activities director	<input type="checkbox"/> Certified nursing assistant	<input type="checkbox"/> Recreational therapist
<input type="checkbox"/> Administrator	<input type="checkbox"/> Manager	<input type="checkbox"/> Registered nurse
<input type="checkbox"/> Assistant activities director	<input type="checkbox"/> Occupational therapist	<input type="checkbox"/> Social worker
<input type="checkbox"/> Assistant manager	<input type="checkbox"/> Physical therapist	

 Other: _____
3. What is your educational background. Please include certifications, workshops, as well as a college degree.
 (Please check one) ☐ B.S. ☐ M.S. ☐ Ph.D.
 Other: _____
4. How many years have you worked in this profession? _____
5. How many years have you worked at this facility? _____
6. How many residents currently reside at your facility? _____
 Approximately how many are male? _____
 Approximately how many are female? _____
7. Approximately what percent of the facility's annual budget is allotted for physical leisure activities and/or exercise groups? (Please check one)
☐ Less than 10% ☐ 10% to 20% ☐ Greater than 20%
8. How many activity programs do you offer per week? _____
9. How many staff members facilitate structured physical leisure activities? _____
 Of these, how many are full time? _____
 How many are part time? _____
10. Is there a reward system for accomplishing physical goals? (If so, please describe)
11. Do you have some type of early release program? (Early release is defined as a stay of fewer than six months)
 (Please check one) ☐ Yes ☐ No
 If yes, how many residents, on average, are released per month? _____

II. FACILITY AND EQUIPMENT

Please check either yes or no for questions #1-4.

1. Does your facility have a room or area set aside specifically for physical leisure activities?
☐ Yes ☐ No
2. Does your facility have a room in which physical leisure activities take place but also serves other purposes?
 (For example: Dining area, lounge, spare room)
☐ Yes ☐ No
3. Does your facility have a room in which equipment related to physical leisure activities is used?
☐ Yes ☐ No
4. Do you feel that you have adequate space for physical leisure activity programs?
☐ Yes ☐ No
5. What types of exercise related equipment do you have available for your residents? (Please check all that apply)

<input type="checkbox"/> Aerobic tapes	<input type="checkbox"/> Exercise bike	<input type="checkbox"/> Ropes
<input type="checkbox"/> Aerobic instructor	<input type="checkbox"/> Hand weights	<input type="checkbox"/> Stair stepper
<input type="checkbox"/> Air dyne bike	<input type="checkbox"/> Nordic track	<input type="checkbox"/> Therabands/Rubber tubing
<input type="checkbox"/> Arm ergometer	<input type="checkbox"/> Pool	<input type="checkbox"/> Treadmill
<input type="checkbox"/> Balls	<input type="checkbox"/> Pulleys	<input type="checkbox"/> Whirlpool

 Others: _____

III. ACTIVITIES

In this section we are inquiring about the types of physical leisure activities you regularly schedule. Please disregard those activities offered only during the holiday season. We are interested in those activities that require physical exertion by the resident proportional to the resident's ability and fitness level. Please include all those activities that involve group participation and one on one interaction. Also include water and outdoor activities, as well as social events.

Brief description of activity: _____
 Equipment used: _____
 Title of supervisor: _____
 Number of sessions per week: _____ Length of Session _____
 Number of male participants per session _____ Number of female participants per session _____
 Number of residents who actively participate _____ Number of residents who passively participate _____

Brief description of activity: _____
 Equipment used: _____
 Title of supervisor: _____
 Number of sessions per week: _____ Length of Session _____
 Number of male participants per session _____ Number of female participants per session _____
 Number of residents who actively participate _____ Number of residents who passively participate _____

Brief description of activity: _____
 Equipment used: _____
 Title of supervisor: _____
 Number of sessions per week: _____ Length of Session _____
 Number of male participants per session _____ Number of female participants per session _____
 Number of residents who actively participate _____ Number of residents who passively participate _____

Brief description of activity: _____
 Equipment used: _____
 Title of supervisor: _____
 Number of sessions per week: _____ Length of Session _____
 Number of male participants per session _____ Number of female participants per session _____
 Number of residents who actively participate _____ Number of residents who passively participate _____

Brief description of activity: _____
 Equipment used: _____
 Title of supervisor: _____
 Number of sessions per week: _____ Length of Session _____
 Number of male participants per session _____ Number of female participants per session _____
 Number of residents who actively participate _____ Number of residents who passively participate _____

Brief description of activity: _____
 Equipment used: _____
 Title of supervisor: _____
 Number of sessions per week: _____ Length of Session _____
 Number of male participants per session _____ Number of female participants per session _____
 Number of residents who actively participate _____ Number of residents who passively participate _____

Brief description of activity: _____
 Equipment used: _____
 Title of supervisor: _____
 Number of sessions per week: _____ Length of Session _____
 Number of male participants per session _____ Number of female participants per session _____
 Number of residents who actively participate _____ Number of residents who passively participate _____

Brief description of activity: _____
 Equipment used: _____
 Title of supervisor: _____
 Number of sessions per week: _____ Length of Session _____
 Number of male participants per session _____ Number of female participants per session _____
 Number of residents who actively participate _____ Number of residents who passively participate _____

Brief description of activity: _____
 Equipment used: _____
 Title of supervisor: _____
 Number of sessions per week: _____ Length of Session _____
 Number of male participants per session _____ Number of female participants per session _____
 Number of residents who actively participate _____ Number of residents who passively participate _____

**For any additional activities, please use the back of this questionnaire.

How are your physical leisure activities adapted to those with physical limitations? (Please describe)

What types of therapy do you provide? Are they employed by the facility or hired on as an ancillary service?
(Please check those that apply)

<input type="checkbox"/> Occupational therapy	<input type="checkbox"/> Employed by facility	<input type="checkbox"/> Ancillary service
<input type="checkbox"/> Physical therapy	<input type="checkbox"/> Employed by facility	<input type="checkbox"/> Ancillary service
<input type="checkbox"/> Recreational therapy	<input type="checkbox"/> Employed by facility	<input type="checkbox"/> Ancillary service
<input type="checkbox"/> Speech therapy	<input type="checkbox"/> Employed by facility	<input type="checkbox"/> Ancillary service

If given the opportunity, what would you wish to add to your current physical leisure activity programs?
(Please describe)

Thank you for your time and cooperation in completing this questionnaire. If you have any additional comments that you would like to add, please do so in the space provided below. Please enclose a copy of your mission statement along with this questionnaire in the enclosed self addressed stamped envelope.

The information that you have provided will be held strictly confidential and no individual institution or resident will be identifiable. Please indicate your consent to incorporate the content of this questionnaire into the final report, of which you will receive upon completion of this study.

Please print name _____

Name of facility and address _____

Signature _____

Date _____

APPENDIX B
FIRST MAILING
COVER LETTER



UNIVERSITY OF WISCONSIN-LA CROSSE⁶¹

HUMAN PERFORMANCE LABORATORY

Nancy Kay Butts, Director

(608) 785-8685 (lab)
(608) 785-8177 (Office)

FAX (608) 785-8686
e-mail BUTTS@UWLAX.EDU

January 2, 1996

Dear

As you are aware exercise and physical activity are important aspects for the physical well being of the elderly. Numerous physiological and psychological improvements occur with the implementation of structured and regular exercise programs, especially those which include socialization. Due to limited resources, lack of space, and/or funds and personnel however, it is not always possible to offer as many structured physical leisure programs as would be desirable.

Little is known about the actual physical leisure activities currently available to nursing home residents. Your facility has been randomly chosen from a list of all nursing homes in Wisconsin to participate in a survey to specifically determine the physical leisure activities that are available to your residents. Assuming you are willing to participate in this project, would you please forward this letter and the enclosed questionnaire to your activities director or staff member you feel is most qualified to answer questions concerning the physical leisure activities at your facility.

If possible we would also appreciate a copy of your mission statement which should be mailed along with the completed questionnaire in the enclosed, self-addressed stamped envelope, or if you prefer, you may FAX it to (608) 785-8686.

All information provided will be held strictly confidential and no individual institution or resident will be identifiable since only group data will be incorporated in the final report. Since your facility was randomly selected it is extremely important that it be represented. We apologize for sending you this questionnaire during this busy holiday season and we ask that the questionnaire and mission statement be returned to us by January 15, 1996. With your help the results of this survey could provide valuable information to assist you and others in your complex task of improving the quality of life of the elderly who reside in care facilities such as yours. Upon completion of the survey a summary of the results will be sent to you.

Thank you in advance for your time and cooperation.

Sincerely,

Nancy Kay Butts, Ph.D.

Lisa McKenna

Enclosure

TIGHTLY REUNITED

La Crosse, Wisconsin 54601
An Affirmative Action/Equal Opportunity Employer

APPENDIX C
SECOND MAILING
COVER LETTER



UNIVERSITY OF WISCONSIN-LA CROSSE⁶³

HUMAN PERFORMANCE LABORATORY

Nancy Kay Butts, Director

(608) 785-8685 (lab)
(608) 785-8177 (Office)

FAX (608) 785-8686
e-mail BUTTS@UWLAX.EDU

February 2, 1996

Dear

Earlier in this month you should have received a questionnaire regarding actual physical leisure activities currently available to nursing home residents. As indicated in the initial letter your facility was randomly selected from a list of all nursing homes throughout Wisconsin. To maintain the integrity of this study, it is extremely important to receive your input. We realize that this questionnaire was sent during the busy holiday season, but now that the month has progressed, we ask again for your time and cooperation in completing the enclosed questionnaire. Assuming you are willing to participate in this project, would you please forward this letter and the enclosed questionnaire to your activities director or staff member you feel is most qualified to answer questions concerning the physical leisure activities at your facility?

If possible we would also appreciate a copy of your mission statement which should be mailed along with the completed questionnaire in the enclosed, self-addressed stamped envelope, or if you prefer, you may FAX it to (608) 785-8686. We ask that the questionnaire and mission statement be returned to us by February 16, 1996.

As previously indicated all information provided will be held strictly confidential and no individual institution or resident will be identifiable since only group data will be incorporated in the final report. Since your facility was randomly selected it is extremely important that it be represented. With your help the results of this survey could provide valuable information to assist you and others in your complex task of improving the quality of life of the elderly who reside in care facilities such as yours. Upon completion of the survey a summary of the results will be sent to you.

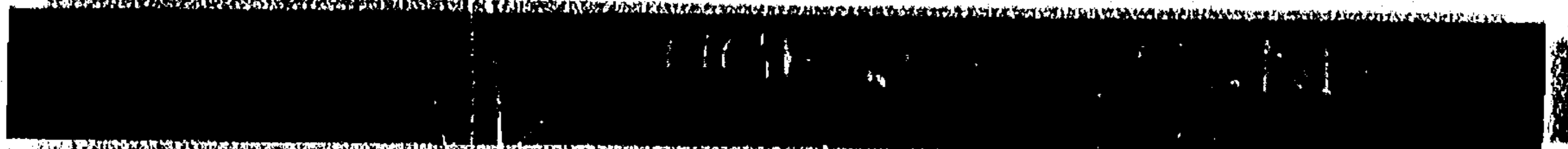
Thank you in advance for your time and cooperation.

Sincerely,

Nancy Kay Butts, Ph.D.

Lisa McKenna

Enclosure



APPENDIX D
THIRD MAILING
COVER LETTER



UNIVERSITY OF WISCONSIN-LA CROSSE⁶⁵

HUMAN PERFORMANCE LABORATORY

Nancy Kay Butts, Director

(608) 785-8685 (lab)
(608) 785-8177 (Office)

FAX (608) 785-8686
e-mail BUTTS@UWLAX.EDU

March 20, 1996

Dear

Earlier this week you were contacted by phone concerning a study being done to determine the physical leisure activities currently available to nursing home residents. Your facility was randomly selected from a list of all nursing homes throughout Wisconsin. To maintain the integrity of this study, it is extremely important to receive your input. We ask for your time and cooperation in completing the enclosed questionnaire.

If possible we would also appreciate a copy of your mission statement which should be mailed along with the completed questionnaire in the enclosed, self-addressed stamped envelope, or if you prefer, you may FAX it to (608) 785-8686. If possible please return the questionnaire and mission statement by April 1, 1996.

As previously indicated all information provided will be held strictly confidential and no individual institution or resident will be identifiable since only group data will be incorporated in the final report. Since your facility was randomly selected it is extremely important that it be represented. With your help the results of this survey could provide valuable information to assist you and others in your complex task of improving the quality of life of the elderly who reside in care facilities such as yours. Upon completion of the survey a summary of the results will be sent to you.

Thank you in advance for your time and cooperation.

Sincerely,

Nancy Kay Butts, Ph.D.

Lisa McKenna

Enclosure



APPENDIX E
THANK YOU LETTER



UNIVERSITY OF WISCONSIN-LA CROSSE

67

HUMAN PERFORMANCE LABORATORY

Nancy Kay Butts, Director

(608) 785-8685 (lab)
(608) 785-8177 (Office)

FAX (608) 785-8686
e-mail BUTTS@UWLAX.EDU

December 15, 1996

Dear

Thank you very much for responding to the Physical Leisure Activity Questionnaire. You were one of the 69 facilities who gave your time and knowledge in filling out the lengthy questionnaire.

The first section in the questionnaire inquired about the physical leisure activity staff and nursing home residents. Concerning physical leisure activity staff, the average number of staff members per facility was 4.4. This is a ratio of 25 residents per one physical leisure activity staff member. Concerning residents, the average number of residents per facility was 110.5. The average number of males was 31.4 and females 68.7 for a ratio of 2.2 female residents to each male resident.

Rewards offered by nursing homes included food, money, trophies, and praise. Approximately 35% of the nursing homes surveyed replied that they offer a short term care program. Another section inquired how much space each facility had to hold physical leisure activities. About 54% of the facilities have a room which serves other purposes. The majority of responding facilities felt there was adequate space for physical leisure activity programming.

A variety of adaptations were used to help nursing home residents participate in the physical leisure activities. Approximately 45.3% utilized modified equipment (i.e., bowling ball ramps, raised garden beds, large targets, and soft light-weight balls), 35% utilized both modified equipment, and 19% used staff assistance alone.

The heart of the questionnaire asked about the activity programming, specifically those activities that required physical exertion on the part of the resident proportional to the residents' ability and fitness level. These activities are what we called physical leisure activities. The activities listed by the responding facilities were categorized and are shown in the table along with the percentage of facilities who offered these activities, the average length of the session, and the average number of sessions offered per week or month.

The walking category included walking indoors, outdoors, in a group, alone, or with a restorative aide. The category exercise activities included such activities as range of motion exercises, stretching, chair exercises, and exercises utilizing audio or video tapes. Exercise activities utilizing balls included the largest representation of nursing homes. This activity group represented any activity which included a ball in some way including these specific activities: kickball, golf, baseball, softball, and handball. These are not the only activities listed in which balls were used however. Volleyball, basketball, and bowling were included in their own categories because of the significant percentage of nursing homes who offered them. Toss activities included horseshoes, shuffleboard, darts, and foam dice. Bean bag and ring toss were again given their own categories. The category entitled simulated work includes the following activities: baking, gardening, woodworking, and folding towels. Exercise equipment were activities which included the use of hand weights, Therabands, scarves, sticks, or exercise bikes. Finally, the other category included fishing, Olympics, bowling, and dancing.

THANK YOU

Physical Leisure Activity	% of facilities who offer this activity	Length of session	Number of sessions per week
Walking groups	21.5%	27.0 (10.3)	3.7 (2.1)
Exercise activities	83.1%	26.1 (10.9)	2.7 (1.7)
Exercise activities with balls	86.2%	30.6 (14.1)	3.4 (3.0)
Volleyball	30.8%	30.1 (14.1)	1.5 (1.1)
Basketball	24.6%	40.7 (13.6)	1.8 (1.6)
Bowling	50.8%	52.0 (21.1)	1.3 (.99)
Toss activities	47.7%	38.1 (12.8)	1.9 (1.6)
Bean bag toss	44.6%	43.0 (16.1)	1.2 (.63)
Ring toss	20.0%	42.8 (14.6)	1.7 (1.5)
Parachute	29.2%	32.8 (9.8)	1.4 (.53)
Simulated work	32.3%	55.2 (25.1)	3.9 (5.0)
Exercise equipment	4.6%	30.0 (0.0)	1.8 (.96)
Other	40.0%	60.9 (27.2)	1.5 (.88)

Note: Numbers in parenthesis denote standard deviation.

We hope that you find this short summary of the highlights of the Physical Leisure Activity Questionnaire informative and helpful. It was our goal in this study to identify the various types of physical leisure activities currently being offered in nursing homes throughout Wisconsin. Thanks to your participation, our goal was obtained. We strongly encourage you to contact your colleagues for idea sharing and ways to implement new activity programming. If you have any questions or comments please feel free to call us at (608) 785-8685.

Thank you again for your cooperation and time.

Sincerely,

Nancy Kay Butts, Ph.D.

Lisa McKenna