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ANIMAL-ASSISTED THERAPY AND OLDER ADULTS:
DEVELOPMENT OF A SCREENING TOOL

Scholarly Project for the Degree of M. S. N.
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MICHELLE L. DALTON

1999

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**ANIMAL-ASSISTED THERAPY AND OLDER ADULTS:
DEVELOPMENT OF A SCREENING TOOL**

By

Michelle L. Dalton

A SCHOLARLY PROJECT

**Submitted to
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ABSTRACT

ANIMAL-ASSISTED THERAPY AND OLDER ADULTS: DEVELOPMENT OF A SCREENING TOOL

By

Michelle L. Dalton

Cost-effective health promotion and illness reduction interventions are needed more than ever as the United States population ages and life spans lengthen. The animal-assisted therapy (AAT) screening tool was developed to identify potential candidates for participation in community based AAT programs.

DEDICATION

*In memory of my mother, who instilled in me
a love for animals*

ACKNOWLEDGMENTS

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TABLE OF CONTENTS

	Page
LIST OF TABLES	vi
LIST OF FIGURES	vii
INTRODUCTION	1
Companion Animal Literature	2
AAT Literature	2
PROJECT FOCUS	3
CONCEPTUAL FRAMEWORK	4
APPLICATION TO THE PROJECT	8
Individual Characteristics and Experiences	8
Behavior-Specific Cognitions & Affect	10
Behavioral Outcome	11
LITERATURE REVIEW	11
Psychological	11
Physiological	14
Sociocultural	19
Literature Summary	24
PROJECT DEVELOPMENT	25
DISCUSSION	31
LIST OF REFERENCES	35
APPENDIX	39

LIST OF TABLES

	Page
TABLE 1: Animal-Assisted Therapy: Questionnaire	27
TABLE 2: Animal-Assisted Therapy: Follow-up	29

LIST OF FIGURES

	Page
FIGURE 1: Pender's Revised Health Promotion Model (RHPM)	5
FIGURE 2: Adaptation of Pender's RHPM	9

INTRODUCTION

The older adult population is the fastest-growing segment of the United States population (Barkauskas, Stoltenberg-Allen, Baumann, & Darling-Fisher, 1998). As the number of older adults rises, illness reduction and health promotion concerns associated with increasing age are becoming more important. As the U.S. population ages and life spans lengthen, cost-effective health promotion and illness reduction interventions are needed more than ever. Animal-assisted therapy (AAT) is drawing increased attention within the health care community as one means to promote health and reduce illness.

Failing physical or mental health, loss of family and friends, and withdrawal from social activities are common issues that can negatively impact the health status of older adults (Barkauskas et al., 1998). Barkauskas et al. (1998) acknowledges that the boundaries of late adulthood and old age are difficult to define. While one adult may appear old at 40, another may appear young at 65 (Barkauskas et al., 1998). Evidence is accumulating that interaction with pets can contribute to health in later life (Boldt & Dellmann-Jenkins, 1992), helping to offset the adverse effects of these psychosocial changes. Older adults in particular may benefit from AAT during a time of adjustment to retirement, loss of family or friends, and change in economic status (Brickel, 1986).

Companion Animal Literature

Historically, the benefits of pets on human health were demonstrated in the 1980's. Between 1983 and 1989, multiple studies were published in which relationships between human health and the presence of companion animals in households were addressed (Garrity, Stallones, Marx, & Johnson, 1989; Ory & Goldberg, 1983; Jenkins, 1986). In response to increased public interest, and the growing amount of research literature, the National Institutes of Health (NIH) conducted a technology screening workshop on the health benefits of pets (NIH, 1988). The conference group summary reported there was persuasive evidence to conclude pets are likely to be medically beneficial to older adults' cardiovascular and social health (NIH, 1988). Companion animals may not be the cure-all for problems associated with later life, but their positive influences to some older adults' health status should not be dismissed (Boldt & Dellmann-Jenkins, 1992).

AAT Literature

Support for the health benefits of AAT has been demonstrated in the 1990's (Lapp, 1991; Siegel, 1990; Jessen, Cardiello, & Baun, 1996). Socialization with others has been found to improve among those who socialize with pets (Lapp, 1991). Ownership of pets has been found to be associated with significantly reduced use of physician services (Siegel, 1990), and Jessen et al. (1996) reported a

significant decrease in depressive symptoms as self-reported by older adults with companion birds.

Based upon these research data, AAT may be utilized effectively as health promotion and/or illness reduction strategies in community dwelling older adults. Advanced Practice Nurses (APNs) in primary care are in the setting in which they are most likely to see many of the older adult patients in whom the positive outcomes of AAT have been demonstrated. Consequently, APNs have the potential to play key roles in supporting AAT as health promotion and illness reduction strategies in older adults.

PROJECT FOCUS

The purpose of this project is to develop a screening tool to be used by APNs in identifying potential candidates for participation in community based AAT programs. The screening tool will be used to address health promotion needs in primary care visits by older adults, as a means to determine their appropriateness for participation in AAT. Individuals in this population frequently display characteristics which can be positively influenced by participation in AAT, including: social isolation, decreased self-esteem, decreased physical and/or mental health, perceived lack of control over health, and loss of family or friends (Jessen et al., 1996; Kongable, Buckwalter, & Stolley, 1989; Muschel, 1984; Siegel, 1990). Older adults deemed appropriate for participation in AAT will be referred to a community based AAT program.

CONCEPTUAL FRAMEWORK

An adaptation of Pender's (1996) Revised Health Promotion Model (RHPM) forms the basic conceptual framework of the project. Pender's RHPM (Figure 1) includes concepts relevant to health behavior and outcomes of self-care education. The RHPM focuses on the participation of the patient in implementing health promoting behaviors and in changing the environmental context for health behaviors (Pender, 1996).

The ability to be proficient and capable of a particular behavior has been shown in prior research to motivate individuals to participate in that behavior (Pender, 1996). The perception of being in control of one's health and the desire to be in control can increase health promoting behaviors (Pender, 1996). Greater health promoting behaviors have been found to be associated with perceived internal control of health than with the perception that health is controlled by chance or luck (Pender, Walker, Sechrist, & Frank-Stromborg, 1990).

The RHPM depicts the multidimensionality of individuals interacting with the environment as they pursue health (Pender, 1996). Health promoting behaviors are repetitive actions that compose an important part of a person's lifestyle. The individual acts on the environment in order to progress to improved levels of health. At the environmental level, change in the environment is implied as a goal of health promotion (King, 1994).

Pender's Revised Health Promotion Model

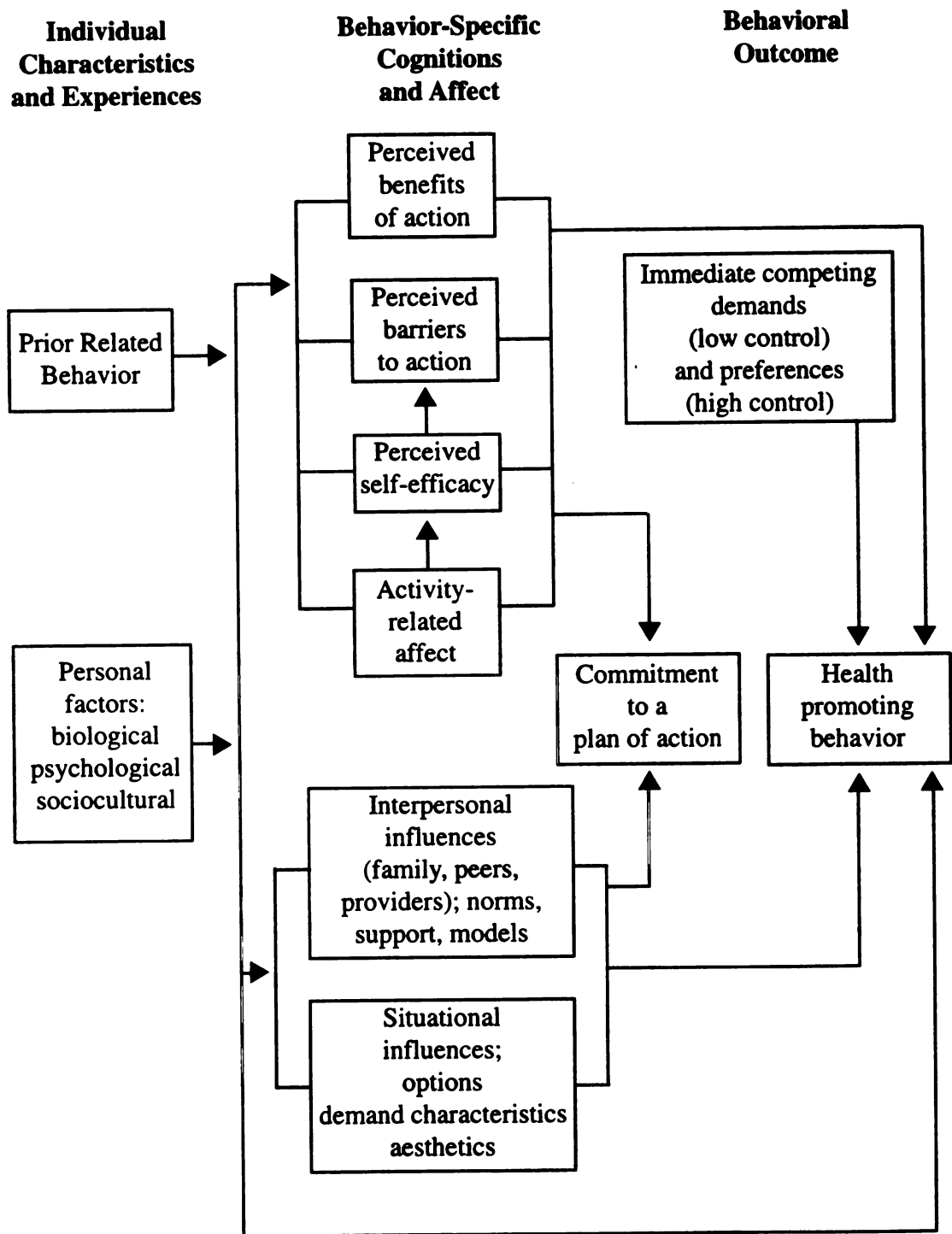


Figure 1. From Health Promotion in Nursing Practice (p. 67), by N. Pender, 1996, Stamford, CT: Appleton & Lange. Copyright 1996 by Appleton & Lange. Reprinted with permission (Appendix A).

The individual's definition of health likely influences the extent to which the individual participates in health promoting behaviors (Walker, Sechrist, & Pender, 1987). The perceived benefits of health promoting behaviors affect the level of participation in the behaviors (Walker et al., 1987). An improved feeling of well-being may motivate a person to participate in actions that improve health status.

The key concepts addressed in this project include: *health promotion, companion animal, AAT, and health outcomes of AAT.* Health promotion refers to activities performed to sustain or increase health which have the potential for long-term health benefits (Pender, 1996). As a health-care strategy, health promotion is a relatively new concept. Modern health promotion began with the Lalonde Report (Raeburn, 1992). The Lalonde Report (1974) identified environmental factors and lifestyle habits as primary determinants of one's health status.

The health promotion intervention recommendations of the Public Health Service in the Healthy People 2000 Report (1990) focus on the potential effects of personal health choices made within the environment and on the impact of consumer initiatives for self-care. The American Nurses Association (ANA) produced a Social Policy Statement indicating nursing is concerned with individual and group adaptation to existing and potential health problems, health influences of environments, and health promotion through nursing intervention (ANA, 1995). The objective of health

promotion is for each person to reach and maintain his or her optimal functioning (Belmont, Henderer, & Bennett, 1990). The overall goal of health promotion in the elderly is the prevention or rate reduction of disease progression, as well as the reduction of death or disability (Ferrini & Ferrini, 1989).

Health promotion is concerned with well-being from the perspective of the individual (Raeburn, 1992). King (1994) defined the purpose of health promotion as increasing well-being. The World Health Organization (1986) defined health promotion as a process in which people are enabled to increase control over the determinants of health and consequently improve their health. A classic definition of health promotion is the organized application of educational, social, and environmental resources to facilitate an individual's adoption and maintenance of behaviors which enhance wellness and reduce the risk of disease (Petosa, 1986). *For the purposes of this project, Petosa's definition of health promotion will be utilized (Petosa, 1986).*

A *companion animal*, or pet, is an animal kept for pleasure or companionship. AAT programs strive to produce a prescribed effect on identified patients through interaction with animals (Delta Society, 1996). During the AAT session, patients will pet the dog and talk to the dog and its handler. The *health outcomes of animal-assisted therapy* for this project are the physiologic, psychologic, and social

improvements resulting from participation in AAT. AAT produces its effect through distraction, verbal and tactile interaction, reminiscence, and stress reduction. Numerous authors have studied the health benefits of AAT (Anderson, Reid, & Jennings, 1992; Allen, Blascovich, Tomaka, & Kelsey, 1991; Fritz, Farver, Kass, & Hart, 1995). The articles reviewed for this project address these health benefits and were selected based upon their applicability to Pender's RHPM.

APPLICATION TO THE PROJECT

The framework for AAT shown in Figure 2 is based on Pender's (1996) RHPM and this author's application of it to the screening of older adults for participation in community based AAT. Individual characteristics and experiences, behavior-specific cognition and affect, and behavioral outcomes have been adapted to those characteristics of the older adult who may be candidates for participation in AAT. The health outcomes identify potential health benefits to the older adult participating in AAT.

Individual Characteristics and Experiences

Prior related behaviors. It has been demonstrated in empirical studies that the best predictor of behavior is the frequency of the same or similar behavior in the past, and habits are thought to impact health promoting behavior as well (Pender, 1996). The patient's previous positive interactions with companion animals may predispose him or her to participate in AAT. The adapted model for this

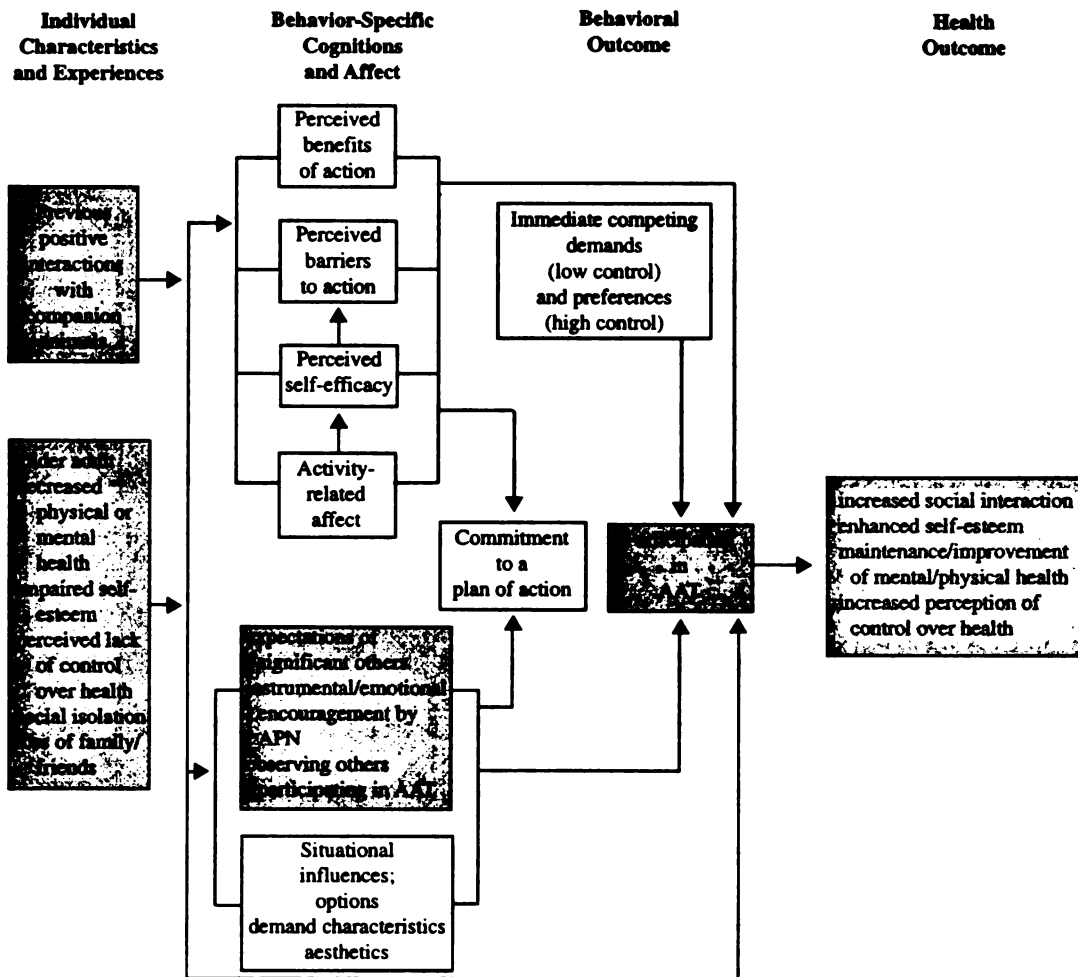


Figure 2. Adapted from Health Promotion in Nursing Practice (p. 67), by N. Pender, 1996, Stamford, CT: Appleton & Lange. Copyright 1996 by Appleton & Lange. Adaptations shaded.

project is the foundation upon which the AAT screening tool is built. Prior related behaviors and personal factors of the patient, and interpersonal influences of family, peers, and the APN affect whether the patient participates in the health promoting behavior, or AAT. Additionally, participation in AAT may result in the heightened likelihood of participation in other health promoting behaviors.

Personal factors. Personal factors included should be limited to those relevant to the target behavior (Pender, 1996). The AAT framework for this study identifies personal factors of the patient as being limited to: biological - older adults, decreased physical health; psychological - decreased mental health, impaired self-esteem, and perceived lack of control over health; and sociocultural - social isolation, and loss of family or friends during this changing life stage. These personal factors were selected based upon the frequency with which they are seen in older adults and because they have been shown to respond to AAT.

Behavior-Specific Cognitions and Affect

Interpersonal influences. The interpersonal influences of peers, family, and health care providers may impact health promoting behaviors (Pender, 1996). In the adapted model, the patient may be influenced by the expectations of significant others, or norms; instrumental and emotional encouragement by the APN, or social support; and learning through observation of others performing a certain behavior, or modeling. The expectations of the older adult's

significant others to participate in health promoting behaviors, the observation of one's peers participating in AAT, and the instrumental and emotional support of the APN may all influence the older adult to participate in AAT.

Behavioral Outcome

Health promoting behavior. Health promoting behavior is the action outcome in the RHPM (Pender 1996). In this project, the behavioral outcome for the older adult is participation in AAT. Participation in AAT may result in participation in other health promoting behaviors.

LITERATURE REVIEW

Psychological

Companion animal literature. In a study of Alzheimer's disease patients, caregivers reported fewer behaviors indicative of aggression and agitation in those patients who interacted with a pet than in those who did not (Fritz, Farver, Kass, & Hart, 1995). The quasi-experimental design consisted of 64 subjects, 25 males and 38 females age 53-92, with a mean age of 74.6. All subjects had been diagnosed with "possible" or "probable" Alzheimer's, were still living at home, and had been evaluated at least once in the previous year (Fritz et al., 1995). Thirty-four (53%) of the subjects were reported to have contact with a pet at the time of the most recent evaluation. Caregivers completed questionnaires in which they reported fewer episodes of verbal aggression and anxiety among patients exposed to pets than in those not exposed to pets. It is not known if fewer

episodes of verbal aggression and anxiety would be maintained over time and progression of the disease. Sample characteristics that may have positively influenced study outcomes include the fact that caregivers reported the patient behaviors. The study authors questioned whether the caregivers could have been comforted by the presence of the pet, resulting in a decreased perception of the patients' behaviors (Fritz et al., 1995). Study results imply regular contact with pets may reduce some of the non-cognitive symptoms commonly seen in Alzheimer's patients (Fritz et al., 1995). Older adults referred to community based AAT may experience similar benefits.

AAT literature. Three classic articles examined the psychological aspects of participation in AAT (Muschel, 1984; Jessen, Cardiello, & Baun, 1996; Baun, Bergstrom, Langston, & Thomas, 1984). Muschel (1984) conducted a study to determine benefits of animal visits with nursing home residents. In this quasi-experimental study of terminally ill cancer patients in a nursing home, AAT was associated with the increased comfort and adaptation of most of the study participants. Participants were selected based on their stated interest as well as physical and mental ability to participate. Of 20 participants selected, 15 completed the program, which consisted of ten weekly 90-minute sessions. Participants were used as their own controls. Sample characteristics that may have positively influenced the outcomes of AAT include: terminal illness, nursing home

residents, stated interest, and the physical and mental ability to participate in the study. Measures included a questionnaire developed to measure anxiety or despair the participants were experiencing, as well as personality features; Five Thematic Apperception Test cards; pictures of people with animals, which were shown to the participants; and observation of participant behavior. When change scores were analyzed, it was found that 12 of the 15 participants voiced decreased fears, despair, and loneliness (Muschel, 1984). A majority of the participants had been diagnosed with cancer for several years and had made little progress through the stages of grief. Muschel concluded the patients' present ability to move more easily through Kubler-Ross's stages supported the efficacy of AAT. In the present project, community dwelling older adults referred to AAT may benefit similarly.

In the second seminal quasi-experimental study, 40 older adults in a skilled rehabilitation unit randomly assigned to experimental and control groups were questioned to assess the effects of birds on their depression, loneliness, and morale (Jessen, Cardiello, & Baun, 1996). Self-reported measures of these variables were assessed on admission using the Philadelphia Geriatric Center Morale Scale, the Geriatric Depression Scale and the Revised UCLA Loneliness Scale then compared with those obtained 10 days later. A statistically significant difference was found between groups for scores on depression, with lower

depression in the group with a caged bird, $p=.01$. It was noted, however, the presence of a bird was not associated with improvement on measures of loneliness or morale. Sample characteristics which may have positively influenced AAT outcomes include: older adults, skilled rehab unit, ability of the participants to read, write and speak, stated willingness to have a bird in their rooms, and a score of 24 or greater on the Mini-Mental State Exam. Additionally, the study did not address whether the companionship of a bird is associated with positive benefits for individuals residing in settings other than skilled rehabilitation units. Jessen et al. (1996) concluded the negative effects of change of residence on older adults may be lowered by the presence of a companion bird. Similar outcomes could be realized in community dwelling older adults participating in AAT.

Physiological

Companion animal literature. Petting a dog with which a companion bond has been established has an effect on the physiologic response of blood pressure (Baun, Bergstrom, Langston, & Thomas, 1984). The quasi-experimental design of the landmark study consisted of 24 subjects, 5 men and 19 women age 24-74, with a mean age of 46.7 (SD=12.5). They had not been previously diagnosed with hypertension nor were they on medications known to affect blood pressure, heart rate or respiration. All subjects had lived with a dog for at least six months and perceived oneself to be at least moderately attached to the dog. A control group was not

utilized. Systolic and diastolic blood pressures were measured when subjects petted a dog with which a companion bond existed, when petting an unknown dog, and when reading. There were statistically significant differences between the three protocols for both systolic and diastolic blood pressures (Baun et al., 1984). The greatest decreases in blood pressures were associated with subjects who petted a dog with which they shared a companion bond. Study periods were limited to nine-minute intervals. It is not known whether the trend to decrease blood pressures would continue if study periods were lengthened, or whether the length of the trend would be impacted by the length of the study. Sample characteristics which may have positively influenced the study outcomes include: participants had a dog with which they had established some degree of bonding, and participants had lived with the dog for at least six months and rated themselves as at least moderately attached to the dog. Study results imply positive blood pressure responses when petting a dog with which a companion bond has been formed (Baun et al., 1984). Similar positive outcomes could be realized in those older adults referred to community based AAT programs.

Anderson, Reid, and Jennings (1992) reported significantly decreased systolic blood pressure and triglyceride levels in pet owners compared to non-pet owners. Men and women aged 20-60 were self-referred to a free health screening clinic. Blood pressure, plasma

cholesterol, and triglycerides were compared in pet owners (n=784) and non-owners (n=4957). Systolic blood pressure was lower in men of all ages who were pet owners. No overall significant difference was noted in systolic blood pressures of female pet owners and non-pet owners, but in female pet owners over age 40, systolic blood pressures were significantly lower than in those under age 40. Male pet owners' plasma cholesterol and triglyceride levels were significantly lower than were those in non-owners. No significant difference was found in plasma cholesterol levels of female pet and non-pet owners. However, plasma triglyceride levels were lower overall in pet owners, and lower still in female owners over age 40. One sample characteristic, which could have positively influenced AAT outcomes, includes the fact that 13.6% of the participants owned one or more pets. The study concluded that decreased levels of accepted risk factors for cardiovascular disease were exhibited in pet owners and were not related to socioeconomic status, smoking, diet, or body mass index (Anderson et al., 1992). Participation in community based AAT may result in similar outcomes.

The presence of a pet moderated the autonomic responses of subjects engaged in mental arithmetic tasks in a study by Allen, Blascovich, Tomaka, and Kelsey (1991). The quasi-experimental design consisted of 45 women, age 27-55, with a mean age of 38.6. All participants were self-referred, white non-smokers who described themselves as dog lovers.

The health status of the study participants is not known. Part one of the two-part study took place with the subject alone at a psychophysiology laboratory. Pulse rates, skin conductance tests, and blood pressures were measured while subjects completed mental arithmetic and questionnaires including the Pet Attitude Scale (Templer, Salter, Dickey, & Baldwin, 1981) and a questionnaire regarding pet ownership. In part two of the study, the experiment was repeated with the subjects at home under one of three randomly assigned conditions: 1) with the subject's dog present, 2) with the subject's close human friend present, or 3) with the subject alone. Subjects were utilized as their own controls. Sample characteristics which could have positively influenced the study outcomes include: subjects were self-referred, subjects were self-described dog lovers, all were lifelong animal enthusiasts, and all had had pets in their lives since early childhood. Results indicate subjects demonstrated less physiological reactivity during stressful situations when their pet was present than when alone or with a close human friend present (Allen et al., 1991). Similar physiologic responses may be realized in older adults participating in community based AAT.

AAT literature. Harris, Rinehart, & Gustman (1993) conducted a quasi-experimental study in which it was found that an AAT program can affect the blood pressure measures of homebound elderly patients who have owned a pet in the past. Sixteen subjects completed the eight week long

program. Four weekly visits by a registered nurse (RN) were conducted as a control, followed by four weekly visits by the RN, volunteer, and therapy dog. Significant decreases in mean diastolic and systolic blood pressure and pulse rates occurred among those patients who participated in AAT. It was concluded in this study that blood pressure measures of homebound elderly patients who have owned a pet in the past can be significantly affected by AAT (Harris et al., 1993). These outcomes may be experienced in older adults participating in AAT. Sample characteristics which could have positively influenced the study outcomes include: homebound older adults, the majority of the study participants lived alone, and all had owned pets in the past.

In Wilson's (1991) quasi-experimental study of the effects of pets on the psychologic results of stress, the presence of a pet is associated with physiologic and psychologic changes in some people. The 92 subjects, self-selected college students, were aged 18-39 with a mean of 23.2 ± 4.57 . The majority of the subjects were female, Caucasian, single, and living in single-family homes or apartments. None of the subjects were hypertensive, taking medications known to affect blood pressure or heart rate, or allergic to dogs. Subjects were randomly assigned to one of six treatment orders. Three situations were tested - reading aloud, reading quietly, and interacting with a friendly, unknown dog. Measurements consisted of blood

pressure and heart rate, State and Trait Anxiety by Spielberger Self-Evaluation Questionnaires, and pet ownership characteristics and attitudes by Pet Attitude Inventory. Wilson (1991) concluded that the effects of the treatment were significant, $p < .001$, for State Anxiety, and Trait Anxiety levels remained fairly constant throughout all treatments. While interacting with or talking to a pet was found to be more stressful than reading quietly, it was less anxiety producing than reading aloud. As these findings were not consistent with previous data, Wilson (1991) determined talking aloud could be a cofounder. Sample characteristics which could have positively influenced the study outcomes included a majority of study participants who: were pet owners, had owned a pet in the past, indicated time spent with the pet was enjoyable, stated their refusal to give up the pet, or indicated the primary reason for not owning a pet was restrictive leasing. It was concluded that pets provide a source of comfort and companionship for many individuals (Wilson, 1991).

Sociocultural

Companion animal literature. A quasi-experimental study by Rogers, Hart, & Boltz (1992) reported dog owners took twice as many daily walks as non-owners and expressed significantly less dissatisfaction with their social, physical, and emotional states. Subjects were recruited through the managers of mobile home parks occupied primarily by older adults. All subjects voiced neutral or positive

attitudes about pets and were willing to help in a study about dog ownership. The sample consisted of five women and one man, aged 65-78 with a median age of 69, who resided at six separate parks. A control group of four women and two men, aged 65-78, median age 67, resided in the same parks but did not own dogs. Subjects were interviewed about their walks and usual walking routine and asked 31 questions from the Older Americans Resource Survey developed by Duke University (1978). All participants were questioned about number of walks, conversations during walks, and well-being, and a content analysis of conversations was performed. Study participants who did not own dogs gave questionnaire responses that implied decreased well-being four times as often as dog owners did. Responses among non-owners included decreased regular social interaction with relatives or friends, a greater number of recent days of illness, care taking assistance, and a decreased rating of overall general health. The scope of the study did not include the screening of pre-existing psychological factors, which may have contributed to differences between pet owners and non-pet owners. Sample characteristics that could have positively influenced the study outcomes include: older adult subjects, and a stated positive or neutral attitude toward pets. Rogers et al. (1992) concluded that elderly dog owners use their dogs as conversational companions and acquaintances, and often refer to the dog whether it is present or not. Participating in a community based AAT

program may facilitate increased socialization among older adults.

AAT literature. In an observational study, Fick (1993) reported the presence of a dog was positively associated with an increase in social interaction among residents in a nursing home. In the convenience sample, 36 male residents attended one or more therapy sessions led by a social worker with broad knowledge of the study procedures but not its purpose, in order to control for possible intervention bias. Defined social and non-social behaviors were measured by point sampling with and without a dog present. Verbal-person interactions varied significantly between conditions. When a dog was present, 10% of the behaviors displayed by participants were verbal interactions with others. During sessions without a dog present, it was five percent. The study was limited to males only; therefore, it is not known whether the results would be replicated in the usual nursing home population, which is primarily female. Sample characteristics which could have positively influenced the study outcomes include: the participants were accustomed to the presence of an animal, were "higher functioning" and able to communicate verbally (Fick, 1993). Fick (1993) concluded that group therapy goals were positively influenced by the presence of a dog. Similar outcomes would likely be experienced by older adults in community based AAT.

Residents of a veteran's home who had a diagnosis of Alzheimer's disease were observed for effects of the presence of a pet on social behaviors (Kongable et al., 1989). Study results revealed that the presence of a dog increased the number of total social behaviors (Kongable et al., 1989). Twelve elderly residents ranging from age 66-88 comprised the sample group; 10 residents were male and 2 were female. All were diagnosed with Alzheimer's disease, required supervision or assistance with activities of daily living, and had resided at the home for at least one month. All but one had owned a pet in the past. Kongable et al. (1989) concluded that increased social behaviors were associated with a dog being present. However, when the therapy dog became a permanent resident of the unit, no further significant increases were noted. It is not known from this study whether certain individuals would benefit more from one-to-one contact with pets than from group contact. It is likely that similar outcomes would result in older adults participating in community based AAT.

Social isolation and loss of family or friends were two problems examined in a study of the benefits and liabilities of pet ownership among the homeless (Kidd & Kidd, 1994). The study reported that homeless adults demonstrated strong attachments to their pets, particularly in those adults who had owned pets as children. The quasi-experimental design consisted of 105 homeless adult subjects aged 17-25, with a mean age of 35.2. There were 54 men, 27 pet-owners and 27

non-owners; and 51 women, 25 pet owners and 26 non-owners. Health status of the subjects is unknown. Study subjects were approached at city parks, on the street, and at soup kitchens and questioned about themselves and their pets, if any. Standardized tests were not used and pet "attachment" was evaluated qualitatively through verbalizations and behaviors of the subjects (Kidd & Kidd, 1994). Sample characteristics which may have positively influenced the study outcomes include: the majority of the subjects had owned pets in childhood, all were homeless and likely to have experienced some degree of isolation and loss of family or friends, and all pet owners were extremely attached to their pets. A majority of the subjects who owned pets indicated they had no other relationships with other living beings (Kidd & Kidd, 1994). Significantly more of the homeless pet owners than non-owners had owned pets as children. The study results imply that pets fill an important social need in homeless adults, many who lack relationships with other people (Kidd & Kidd, 1994). Participation in AAT by older adults may result in similar benefits.

A quasi-experimental study by Lapp (1991) revealed neither attachment nor a long-term relationship was necessary in order to have a positive human-animal communication exchange. Educational sessions were conducted by nursing students using animals from the local humane society with older adult residents of rent-subsidized

housing several times per year at the residents' request. Students other than those who conducted the educational sessions gathered evaluation data from the residents. The data indicated that 81% of participants held or played with one or more pets present and 90% verbalized thoughts of pets they had in the past. The study did not address whether increased social behaviors continued beyond the pet therapy sessions, nor was a control group used. One sample characteristic which could have positively influenced the study outcome is the fact that all of the study subjects had requested participation in the program. Lapp (1991) concluded that residents tended to socialize more when a pet was present. These data imply that increased interaction among community dwelling older adults will likely result from referral to AAT programs.

Literature Summary

Companion-animal literature. It is known that the presence of a pet can moderate aggression and agitation (Fritz et al., 1995), positively influence the physiologic responses of blood pressure (Baun et al., 1984; Anderson et al., 1992), and result in increased social behaviors (Kidd & Kidd, 1994; Rogers et al., 1992). It is not known whether aggression and agitation or blood pressure levels would be moderated by the presence of a pet over time (Fritz et al., 1995; Baun et al., 1984; Anderson et al., 1992), or whether pre-existing psychological factors contributed to differences between pet owners and non-owners. It needs to

be determined whether the mood moderating effects of pets can be sustained over time in healthy persons and in community dwelling older adults, and whether psychological factors impact response to companion animals.

Animal-assisted therapy. It is known that participation in AAT can: increase the comfort and adaptation of terminally ill patients and depressed patients (Muschel, 1984; Jessen et al., 1996), positively influence blood pressure and other physiologic changes (Harris et al., 1993; Wilson, 1991), and increase the number of social behaviors and interactions in long-term care patients (Fick, 1993; Kongable et al., 1989). It is not known whether similar results would be realized in community dwelling older adults, and this needs to be determined. The literature reviewed for the project supports the efficacy of AAT, especially in individuals who have enjoyed a relationship with a pet in the past.

PROJECT DEVELOPMENT

Project Goal. The goal of this project is to develop a screening tool to be used by APNs in identifying potential candidates for participation in community based AAT programs. Participation in AAT includes increased social interaction, enhanced self-esteem, increased or maintained level of health, and increased perception of control over health. Literature is lacking which provides a screening tool for instituting AAT in primary care settings for use with community dwelling older adults.

Criteria and Rationale. The target population is community dwelling older adults. Research has documented positive outcomes in this population (Boldt & Dellman-Jenkins, 1992). A profile of a person who might benefit from AAT is: older adult ≥ 65 , socially isolated, decreased physical and/or mental health, impaired self-esteem, perceived decreased control over own health, and previous positive interactions with companion animals. Selection of the target population is based upon the increased focus on health promoting interventions and the growing population of older adults.

The APN will utilize the screening tool (Table 1) with older adults who express an interest in maintaining or improving his or her level of physical, emotional, or social health (#10). The patient will be eligible for participation in AAT based upon responses indicated on the questionnaire (# correspond to questions on the screening tool): prior related behaviors - previous positive interactions with companion animals (#1 & #2); and personal factors - biological: older adults, decreased physical health (#7); psychological - decreased mental health (#8), decreased self-esteem (#9) and/or perceived lack of control over health (#4); sociocultural - social isolation (#5 & #6), loss of family, friends, or pets (#3). Candidates for participation in AAT will be referred to a community based AAT program.

Table 1.

Animal-Assisted Therapy: Questionnaire

DO YOU LIKE PETS?

The purpose of this questionnaire is to identify persons who like pets, would like to improve their health, and are interested in participating in an animal-assisted therapy group. Please answer the following 10 questions by circling the number in the column under yes or no, and give it to the nurse practitioner when she sees you.

	Yes	No	
1.	1	0	Have you ever had a pet?
2.	1	0	Did you enjoy it?
3.	1	0	Have you ever been close to family members, friends, or pets who have died?
4.	0	1	Do you feel in control of your health?
5.	1	0	Do you feel lonely?
6.	0	1	Do you see family/friends as often as you'd like?
7.	0	1	Do you feel your physical health is as good as it has been in the past?
8.	0	1	Do you feel your mental health is as good as it has been in the past?
9.	0	1	Do you feel good about yourself?
10.	1	0	Are you interested in improving your health?
			TOTAL

Validity assessment. Face validity of the AAT screening tool was accomplished through consultation with a panel of experts consisting of the scholarly project committee members, and review of the tool by classmates and older adult volunteers. Content validity was estimated from the review of the literature on AAT. Additionally, experts

in the field of AAT will be asked to verify content validity of the screening tool.

Data analysis. Scoring of the AAT screening tool will be accomplished through summation of responses. A score of ≥ 3 will be used as a criterion for referral to AAT. Each patient referred to AAT will be sent a stamped, self-addressed post card after four weeks. A telephone follow-up will be instituted if response rate is low. The patient will be asked to respond to questions based on the AAT screening tool (Table 2), and invited to make additional comments, if desired. A score of ≥ 3 will be accepted as a positive response to participation in AAT. This cut-off score could be tested in further research.

Approach and procedures. An in-service regarding the project and screening tool will be held with clinic staff prior to implementation of the tool. The purpose of the in-service is to educate and motivate staff regarding AAT in general and the screening tool in particular. It is important that all staff be aware of the project so they may answer questions from patients and significant others. Lunch will be provided at the in-service to encourage staff attendance. The agency may already have an affiliation with a larger health system for providing continuing education units (CEU), and this would be a readily negotiated route for providing CEU's to staff in attendance.

Table 2.

Animal-Assisted Therapy: Follow-Up

The purpose of this card is to evaluate your response to the animal-assisted therapy group you were referred to. Please answer the following questions by circling the number in the column under yes or no. Your comments are encouraged. Please mail the postage-paid card when completed. Thank you.

	Yes	No	
1.	1	0	Are you attending animal-assisted therapy (AAT)? If no, skip to the "Your Comments" section. We are interested in knowing more about the reason(s) people who were referred decided not to attend.
2.	1	0	Do you enjoy it?
3.	1	0	Are you less lonely since attending AAT?
4.	1	0	Do you feel better about yourself since attending AAT?
5.	1	0	Do you feel more in control of your health?
6.	1	0	Has your physical health improved since attending AAT?
7.	1	0	Has your mental health improved since attending AAT?
			TOTAL
Your comments:			

The clinic receptionist and medical assistant (MA) will be asked to assist in distributing and completing the screening tool. Based on date of birth, the screening tool will be attached to the charts of those patients age 65 and

older when the receptionist prepares the charts for the next business day. The MA will ask the patient to complete the screening tool in the examination room while waiting to be seen by the APN, and will assist the patient in completing the tool, if necessary. The patient will give the completed screening tool to the APN. The project is initially limited to a total of 15 patient referrals. The number of patients is limited to prevent the referral of more patients than the AAT group is able to accept.

Evaluation will be based upon the use of the screening tool by the APN in a primary care setting, in visits by community dwelling older adults with health promotion needs. Evaluation of the screening tool will be achieved through its review by the clinic receptionist and MA for ease of use and potential clerical complications; the office manager regarding time and cost issues; patients and significant others regarding tool design, readability, clarity, ease of use, and time issues; the physician regarding medical concerns; the pet therapist regarding the screening tool questions and referral to AAT; and nursing and other experts in the field of AAT and screening tools regarding completeness, applicability, clarity, reliability, and ease of use of the tool. Suggestions for improvement or modification will be analyzed for feasibility and possible incorporation into the final product prior to institution of the screening tool. In addition to this, the predictive validity of the tool may be assessed by follow-up comparison

of patients who attend AAT versus those who do not. Key outcomes to be compared include: social interaction, self-esteem, level of health, and perception of control over health.

Feasibility issues. Feasibility issues to be considered in implementing the screening tool include ease of use, time, and cost effectiveness. The tool is a 10-question large-print form, which can be completed in a few minutes. The format of the tool will allow the APN to quickly scan the responses to determine whether the patient is a candidate for referral to community based AAT.

The costs associated with implementing the screening tool will be limited to printing or photocopying expenses, personnel expenses related to the time spent by the receptionist and MA in distributing and completing the tool, and time spent by the APN to review the completed tool and refer candidates to AAT. An incentive system for the clinic staff will be instituted to encourage distribution and completion of the tool. Minimal personnel expenses are anticipated as the tool is designed for ease of use and takes only a few minutes to review. There are potential cost benefits related to the use of the tool. Promoting health and reducing illness of older adults may decrease overall health care costs.

DISCUSSION

The APN functions in many roles in which the screening tool may be utilized as health promotion and illness

reduction strategies. As an educator, the APN can educate patients, significant others, the public, and other health care providers about potential benefits of participation in AAT. As a facilitator, the APN can facilitate participation in AAT through referrals to community based programs. As a manager, the APN manages the patient's overall care and can monitor the patient's response to AAT. As a consultant, the APN can act as a source of information about AAT to patients, significant others, and other health care providers. As a counselor, the APN can provide instrumental and emotional encouragement to patients and significant others regarding participation in AAT. As an advocate, the APN can provide information on alternative health care options, including AAT. Finally, as an assessor, the APN can assess potential candidates for AAT.

Like a healthy diet or exercise, the use of AAT for health promotion and illness reduction can produce positive outcomes for older adults. The APN is ideally positioned in a primary care role to assess those who may benefit from AAT. Holistic screening of patients and emphasis on patient education and counseling enables APNs to develop care plans that meet the goals of health promotion and illness reduction that are consistent with patient values (Snyder & Mirr, 1995).

An important aspect of APNs is the use of clinical tools based on research evidence. Many regulatory statutes of states contain provisions that nurse practitioners

practice under written practice guidelines (Henry, 1992). The development and utilization of a screening tool for AAT meets this requirement.

APNs are concerned with helping their patients to maintain or improve their optimal physical, emotional, and/or social health. AAT may provide psychological and physiological benefits, foster self-esteem, produce a calming effect, and stimulate social interaction or reminiscence of past pet ownership (Kongable et al., 1989). Based upon the literature reviewed for this project, AAT can result in positive health outcomes for older adults.

AAT is inexpensive and produces positive changes in health status, which results in decreased costs for individuals and society as a whole. Data collectively suggest that pet ownership may decrease the demand for care for medically nonserious problems (NIH, 1988), which might have more of an impact than estimated; i.e., a small reduction in depressive symptoms may reduce costs, and improve health and functional status significantly. Significant improvements in general health were noted following adoption of a pet (Serpell, 1989). Improved physical and emotional health (Rogers et al., 1992), stress reduction (Wilson, 1991), and fewer primary care visits (Siegel, 1990) all result in decreased costs.

AAT is a health promotion and illness reduction strategy that is relevant to research, teaching, and primary care practice. Further research of AAT is needed to obtain

more information about its health promotion and illness reduction benefits and use in community dwelling older adults. Nurse educators must continue to inform students about alternative health promotion and illness reduction strategies such as AAT. In particular, primary care nursing provides many opportunities for the integration of a variety of health promotion services into patient encounters (Pender, Barauskas, Hayman, Rice, & Anderson, 1992). AAT is one such service. APNs are ideally positioned to facilitate the therapeutic use of companion animals with those older adults deemed appropriate for such an intervention.

There is strong evidence supporting the psychological, physiological, and sociocultural benefits of AAT in older adults. As the older adult population increases, the number of those who experience loneliness, isolation, and impaired health grows. A companion animal can be a source of unconditional love, approval, and comfort, and provide a sense of purpose to the older adult. As the health benefits and cost effectiveness of AAT becomes more widely recognized it is hoped that it will become a common health promotion intervention.

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APPENDIX A



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APPENDIX B

DO YOU LIKE PETS?

The purpose of this questionnaire is to identify persons who like pets, would like to improve their health, and are interested in participating in an animal-assisted therapy group. Please answer the following 10 questions by circling the number in the column under yes or no, and give it to the nurse practitioner when she sees you.

Yes No

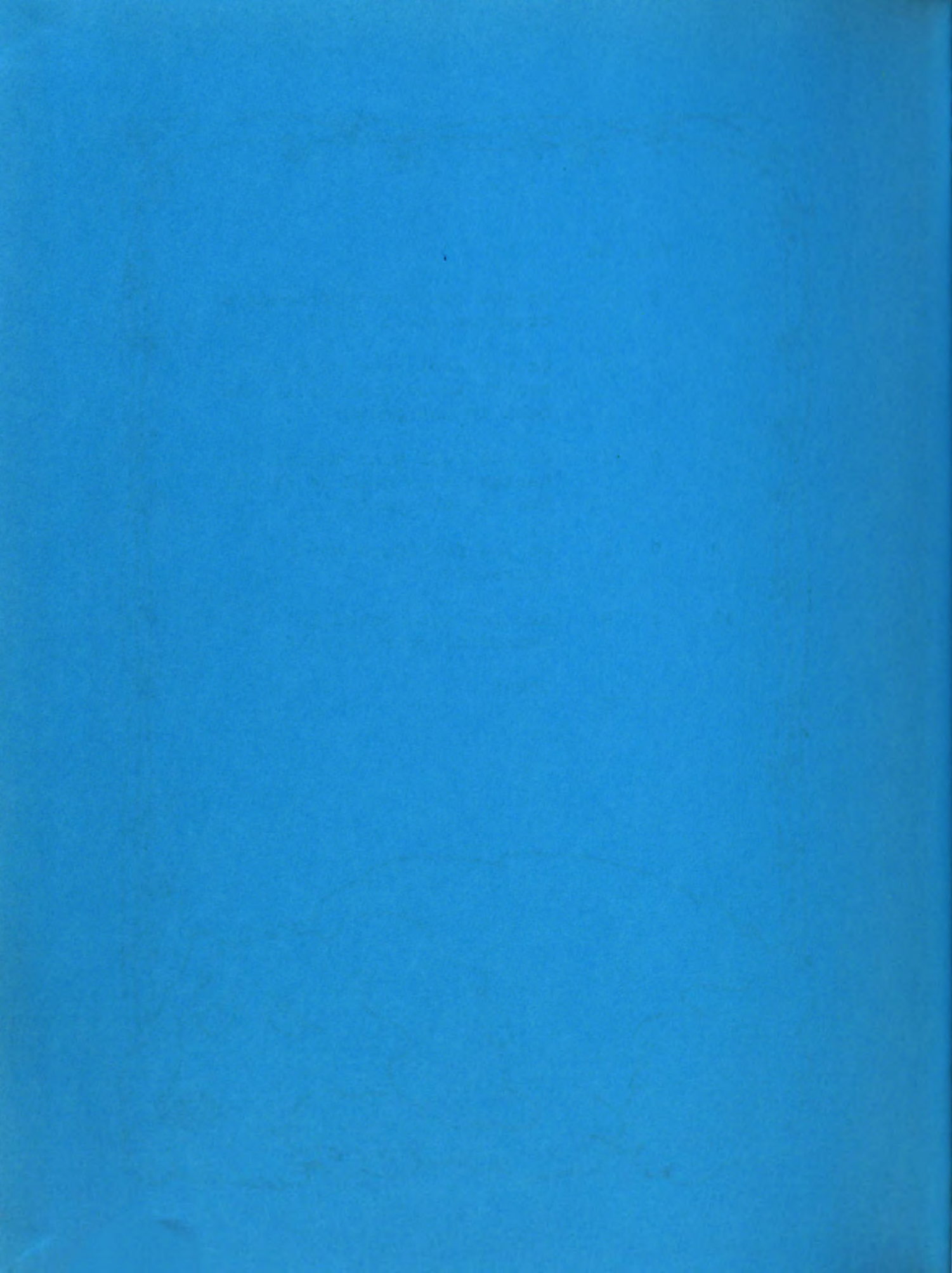
- | | | | |
|----|---|---|---|
| 1. | 1 | 0 | Have you ever had a pet? |
| 2. | 1 | 0 | Did you enjoy it? |
| 3. | 1 | 0 | Have you ever been close to family members, friends, or pets who have died? |
| 4. | 0 | 1 | Do you feel in control of your health? |
| 5. | 1 | 0 | Do you feel lonely? |



	Yes	No	
6.	0	1	Do you see family/friends as often as you'd like?
7.	0	1	Do you feel your physical health is as good as it has been in the past?
8.	0	1	Do you feel your mental health is as good as it has been in the past?
9.	0	1	Do you feel good about yourself?
10.	1	0	Are you interested in improving your health?

— — TOTAL





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