

# Research and Reflection: Animal-Assisted Therapy in Mental Health Settings

*Debra Phillips Parshall*

Although animals have been historically associated with promoting physical and mental health benefits for humans, only recently has there been support for such claims in the literature. This article is a preliminary attempt to bring together scientific studies and anecdotal reports that provide evidence of the benefits of using animals in particular counseling situations.

**H**istorical accounts of the animal-human relationship are sketchy. In general, animals have been thought to contribute to a person's well-being. Using animals as pets, companions, Seeing Eye dogs, and guard dogs is universally accepted as beneficial, but the answer to the question of whether animals contribute to a person's physical or mental health, or both, has not been well documented until recently. As of 1990, there was little scientific research published on the value of using animals as therapeutic tools. Most of the references at that time were anecdotal reports or individual case studies (Hoelscher & Garfat, 1993; Marr et al., 2000). Whether because of insufficient funding or difficulty in methodology, there was little information in professional journals to attract the attention of mental health professionals regarding the therapeutic value of animals.

Recorded use of pets as therapeutic agents dates to 1699 when John Locke advocated "giving children dogs, squirrels, birds, or any such thing as to look after as a means of encouraging them to develop tender feelings and a sense of responsibility for others" (as cited in Serpell, 2000, p. 12). In 1792, it was recorded that farm animals were present at a Quaker retreat in England for the mental health benefit of residents, and in 1867 farm animals were used again at a Bethel Community in Germany. In the United States, animals were first used therapeutically in the 1940s at an Air Force Convalescent Hospital in New York City. The use of animals at these sites was to promote the patients' well-being by allowing them to observe, take care of, and touch the animals (Baun & McCabe, 2000).

In the mid-twentieth century, Boris Levinson made a remarkable discovery. Levinson, a psychology professor at Yeshiva University in New York City, was attempting to treat a difficult, uncommunicative child. He left his dog Jingles alone with the child for only a few minutes. When he returned, the child was talking with the dog (Reichert, 1998); however, there was still no scientific study of the effects that such associations had on patients (Draper, Gerber, & Layng, 1990).

Two organizations, The Latham Foundation in California and the Delta Society in Renton, Washington, were founded to study the human-animal

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*Debra Phillips Parshall, Counseling for Wellness, Kent, Ohio. Correspondence concerning this article should be addressed to Debra Phillips Parshall, 420 West Main Street, Kent, OH 44240 (e-mail: debphil82@aol.com).*

bond. The Delta Society defines animal-assisted therapy (AAT) as "the use of trained animals in facilitating patients' progress toward therapeutic goals" (Draper et al., 1990, p. 169).

A groundbreaking study was published in 1980 (Barker & Dawson, 1998). In this study of 92 cardiac outpatients, it was found that those who were pet owners lived longer than those who did not have a pet. More recently, in 1992, an Australian study (Barker & Dawson, 1998) involving 5,741 people was conducted to determine the effects of pet ownership on cardiac health. The results showed that the pet owners had "lower blood pressure and triglyceride levels than did non-pet owners" (Barker & Dawson, 1998, p. 797). Variables such as diet, smoking, socioeconomic class, and body weight were controlled. In another study (Odendaal, 2000), it was found that when people interacted with their dogs, their systolic blood pressure and chemical plasma levels related to stress were affected positively. In fact, the dogs in the study had similar results.

It has been found that animals can have a "de-arousing effect" on humans and that they provide people with stress-reducing or stress-buffering social support (Serpell, 2000, p. 15). Social support has a positive effect on the ability to cope with the normal stressors of life; therefore, the effect of animals on humans may be not only physical in nature, but it may also promote mental well-being.

In an article titled "Love on a Leash at Robinson Memorial Hospital" (Phillips, 2001), there is a description of a program that was developed at Robinson Memorial Hospital in Ravenna, Ohio. In this program, certified dogs and trained volunteers visited patients, visitors, and staff for several hours each day. Debra Wilcox, director of Volunteer Services, and Dianne Fiocca, director of Behavioral Health Services, directed the program. Wilcox stated in the article that "the dogs help the patients feel more comfortable. . . . They tend to open up more and it helps them to relax" (Phillips, p. 6). It has been reported by staff that after the visits, the patients socialize more.

It seems that animals do have some positive effect on the physical and mental well-being of people. Is it possible that we, as counselors, can intentionally use them as a tool for helping some of our clients? If so, which clients with which diagnoses? Which animals with what training?

### Implications for Clinical Practice and Standards of Care

The literature about AAT is growing rapidly. In the following sections of this article, I provide summations of several studies that looked at the use of a variety of animals with a variety of clients.

Mallon (1994) conducted an interesting qualitative study using farm animals as therapeutic aids with 80 children in a residential setting 60 miles north of New York City. The children ranged in age from 7 to 16 years; were racially mixed and mostly urban; and were being treated for significant behavioral, emotional, and academic difficulties. Mallon found that the children tended to use farm animals as one would a nonjudgmental, confidential therapist. Many of the children would visit the animals and speak freely, often reporting an increased feeling of well-being after the visit. The children stated that they re-

ceived physical comfort from hugging the animals. The therapists reported that visiting the animals with the children sometimes acted as a "catalytic agent in bringing the therapist and the child together" (Mallon, 1994, p. 470).

A study (Folse, Minder, Aycocck, & Santana, 1994) of adult college students with depression showed that AAT had positive results. Forty-four (34 female and 10 male) students with a median age of 21 years were involved in group therapy sessions. One half of the 44 students were in a control group. The remaining 22 students were divided into two groups—directive and nondirective—of 11 students each. The leader of the nondirective group used an outgoing and energetic 7-month-old collie. There was no formal structure in this group. The leader of the directive group used a quiet and gentle 2-year-old female collie. All the participants met once a week for 7 weeks for 45-minute sessions. Using the Beck Depression Inventory as the measure of depression, the students in the AAT nondirective group showed significant improvement in their moods when compared with both the directive group using AAT and the control group not using AAT.

A study of two emotionally disturbed boys (11 and 12 years of age) with whom AAT was used weekly for 11 to 14 sessions was conducted at Colorado State University (Kogan, Granger, Fitchett, Helmer, & Young, 1999). The first 10 to 20 minutes of each session were spent building a rapport with the dog. During this time, the boy discussed both positive and negative events of the week with the animal handler. Each boy then spent the remaining part of the hour on training the dog in preparation for a demonstration to his class. At the end of the study, both boys demonstrated more confidence, greater ability to pay attention in class, less hyperactivity, an increase in social skills, and less oppositional behavior than they had before the sessions. These qualities were measured by the use of the ADD-H Comprehensive Teacher Rating Scale and by subjective reports from their teachers. In addition, further evaluations were made through multirater coding of videotapes that had been made during three of the sessions and postintervention interviews with the boys and their families.

A recent study (Marr et al., 2000) was conducted to determine if using AAT is beneficial in groups of psychiatric inpatients. Sixty-nine dual-diagnosed (i.e., having a diagnosis of a mental illness in addition to a history of drug or alcohol abuse) men and women met for 1 hour, Monday through Friday, for 4 weeks. The mean age was 41.5 years. Half of the patients were in a control group, the others had animals visit the class each day. The patients were not required to interact with the animals (dogs, rabbits, ferrets, and guinea pigs) during the session; however, only 1 woman elected not to interact directly with them. The members of the group were permitted to observe, hold, interact, or play with the animals if the group was not disturbed. Results were evaluated daily on the Social Behavior Scale, and at the end of the 4 weeks, the results were significant. When compared with the control group, the patients with whom AAT was being used were found to "socialize more with other patients and were seen to be smiling and clearly demonstrating pleasure in their activities" (Marr, 2000, p. 45).

In an Australian prison, eight women were involved in a study (Walsh & Mertin, 1994) to determine if their participation in a dog training program would prove beneficial to inmates. The women (mean age 25.8 years) trained the dogs to be companions to individuals who were older and disabled. The program lasted 6 months. According to the Coopersmith Self-Esteem Inventory and the Institute for Personality and Ability Testing Depression Scale, which were administered prior to the beginning of the program and again at its completion, it was determined that the women showed a decrease in depression and an increase in their self-esteem after working with the dogs. In addition to these positive quantitative results, it was reported by other inmates that the participants were calmer and seemed happier.

In a study to determine the effects of therapeutic recreation versus AAT, Barker and Dawson (1998) found that in 230 hospitalized psychiatric patients there were some noteworthy differences. The group members who had psychotic disorders and participated in AAT showed nearly twice the reduction in anxiety levels compared with the patients with psychotic disorders who participated in therapeutic recreation. The measuring device was the State-Trait Anxiety Inventory. Both recreation and AAT had similar benefits on the anxiety levels of the patients with mood disorders.

Not all studies show the benefit of AAT as clearly as the ones previously mentioned. Zisselman, Rovner, Shmueli, and Ferrie (1996) conducted a study of 58 geriatric patients who were hospitalized with a variety of age-related mental disabilities. After participating in a daily program of either AAT or exercise for 1 week, it was found that there was little or no improvement in their scores on the Multidimensional Observation Scale for Elderly Subjects (MOSES). The MOSES measures self-care functioning, disoriented behavior, depressed or anxious mood, and withdrawn behavior. However, the authors found that both exercise and AAT did improve the Irritable Behavior (one of the five subscales of the MOSES) scores of women with dementia.

Reichert (1994, 1998) wrote in two articles of her experiences in treating sexually abused girls, ages 9–13, using AAT. She described using her German shepherd, Buster, to facilitate the girls in a support group setting “to disclose the abuse and encourage their expression of feelings” (1998, p. 177). Reichert reported that the children sometimes projected their feelings onto the dog instead of using “I” statements. In her therapy groups, Reichert (1994) told fictitious stories concerning situations in which Buster had been involved. She then asked the girls for feedback about how they thought Buster felt. Reichert (1994) reported that this storytelling technique prompted some of the girls to disclose their own stories of abuse.

The preceding examples lack the benefit of having been scientifically conducted. They are more accurately described as case studies. These case studies do suggest that animals can be used for clients’ benefit in some cases. The possibilities are broad, the variables many. Although the amount of research is increasing, it is evident that more needs to be done in the way of outcome measurements before AAT can be considered a standard of care. At present,

AAT is an alternative that might be used by the counselor. A counselor seriously considering using an animal as an aid to counseling should first do some study about past successful use with the specific client population and for the specific goal.

## Specific Treatment Interventions

The literature supports using animals for the benefit of the client in certain situations. For children with emotional, behavioral, and academic difficulties, farm animals can provide a sense of well-being and comfort. Farm animals are also reported to enhance the therapeutic alliance between therapist and child (Mallon, 1994).

For emotionally disturbed boys, training dogs has been shown to decrease hyperactivity, increase socialization, and decrease oppositional behavior (Kogan et al., 1999). Women prison inmates have also shown improvements in their depressed moods when training dogs (Walsh & Mertin, 1994).

Sexually abused girls have been found to disclose their own feelings and experiences when a dog was present in their support group (Reichert, 1998). College-age (i.e., 18 to 23 years old) students with depression have also benefited from the presence of a dog in a group setting, as evidenced by a reduction in depressive symptoms (Folse et al., 1994).

Inpatients with more severe symptoms of mental illness show a limited benefit with the use of AAT. Marr et al. (2000) wrote that there was a significant increase in socialization behaviors after contact with dogs, rabbits, ferrets, and guinea pigs; however, in another study of psychiatric inpatients, Barker and Dawson (1998) found that recreation worked equally well in reducing the anxiety of patients with mood disorders. If the patients had symptoms of a psychotic disorder, AAT was superior to recreation.

Ten years ago my grandfather was in a nursing home. He was physically unable to take care of himself, and yet mentally he was high functioning. After several years in the home, he developed a dysthymic disorder (i.e., "a chronically depressed mood that occurs for most of the day, more days than not for at least two years"; American Psychiatric Association, 1994, p. 345). The nurse in charge adopted a 5-year old, well-behaved Airedale terrier from the local animal shelter. The change in my grandfather was immediate. His appetite improved, he began sleeping 7 hours at night, his energy level increased, and his level of concentration improved noticeably. He could again beat me in a game of checkers! The charge nurse shared with me her observation that many other residents were experiencing similar improvements in their mental health.

In an interview that I conducted with a grief counselor who had been in private practice for 8 years, she reported on her experience of using Rudy, her "therapy dog," with certain clients. Rudy was a 7-month-old Maltese. The counselor stated that Rudy acted as a "bridge" to connect her to the client. "People will talk to him when they can't seem to say the words directly to me," she stated. Citing an example, she told of one male client who had lost his wife several months before. The man held Rudy, looked

at his face and said, "Nobody knows how bad this really hurts; but you understand, don't you Rudy?" The counselor also reported that when clients were expressing painful emotions, Rudy seemed to act as a diversion. She stated that many clients would look away from her and look at Rudy when disclosing was difficult.

She stated that many people experiencing grief were extremely lonely, especially with families being geographically separated. They missed the feeling of touching another living being. Providing the grieving client with a warm, cuddly, friendly body had been beneficial to most of her clients. She reported that many thanked her for the opportunity to hold him during their session. She stated that Rudy usually brought a smile to everyone and "many of my clients really need a smile."

In another interview, an activity coordinator, with 17 years of experience, shared her experience of having a Labrador retriever reside at the assisted living center for older persons where she was employed. She reported that the dog, Lucky, was a retired Seeing Eye dog and consequently well behaved. Lucky was in service at the home for 6 years before he died in 2001. Lucky was chosen because of his gentleness and large size. She stated that a Labrador retriever is the perfect size for a resident who uses a wheelchair to pet and observe.

She said that the dog lived at the home for the purpose of "relieving the monotony of the environment." She stated that many of the residents were "lonely and show depressive symptoms." The dog was "wonderful in giving the residents something to talk about and relieving their boredom." When the dog entered the lounge area, the residents who rarely had much to say became more talkative to the staff and to the other residents. She reported that the dog also gave many of the residents a "sense of responsibility." Some assumed the job of letting him outdoors and seeing that his food and water dishes were full. She said it was a "wonderful experience for the residents and they are anticipating a new dog coming soon."

A clinical psychologist who had been in private practice for 22 years said in my interview with her that she used her 8-year-old golden retriever, Barlow, in many of her visits to hospice clients in home care. She stated that "Barlow provides comfort, acceptance, and decreased isolation" for most of her clients. In addition, Barlow accompanied the psychologist to her grief support group for children. She said that in this setting, "Barlow initially helps the children interact informally and later is a warm body to hug."

## Treatment Planning Considerations

Hoelscher and Garfat (1993) wrote, "the therapist must have the knowledge to assess the needs of the clients in relation to the therapeutic animal contact, to utilize the appropriate animal and/or activity and to evaluate the results of contact" (p. 87). Treatment planning begins with determining goals. After establishing goals with the client, the use of any animal to realize a goal should

be carefully planned. It is necessary to ascertain information about previous pet ownership and attitudes toward certain animals. The temperaments of the animal and the client must also be matched with the goals.

The issue of aggression is of concern to some therapists. Children and adults who have not been treated kindly tend to be less gentle with animals (Mallon, 1994). The therapist must be able to intervene quickly both to prevent animal abuse and the potential that the animal, in defending itself out of fear, will harm the client. The counselor must be flexible. If the animal and client are not interacting beneficially, the counselor will need to take appropriate steps such as removing the animal. An alternate plan should be in place to separate the client and animal if this becomes necessary.

The aforementioned grief counselor reported that although most of her clients welcomed her therapy dog, there have been exceptions. A grieving woman, who had been diagnosed as having borderline personality disorder (i.e., "a pervasive pattern of instability of interpersonal relationships"; American Psychiatric Association, 1994, p. 650), stated that she resented the divided attention she received when Rudy was in the room. The counselor, appropriately, did not include Rudy in the sessions with this client.

The issue of separating from the animal should be considered in the treatment plan. The activity coordinator reported that when Lucky died, many of the residents went through a grieving process. The staff had the foresight to have a memorial service as a way for the residents and staff to "say goodbye." Because they have pictures of Lucky and speak of him often, his "memory still gives comfort to the residents."

As stated earlier, the goals for the client need to be considered foremost in the treatment plan. Using any animal as part of that plan needs to be done with appropriate care by studying the research on outcomes and keeping the safety of the client and animal in mind.

## Relevant Cultural Considerations

The psychologist who was interviewed stated that her "therapy dog's benefits span age, culture, geography, and socioeconomic status." With few exceptions, this seems to be the prevailing attitude of the research articles that I read and the professionals whom I interviewed. There are some exceptions.

The grief counselor reported that only one client (discussed earlier) disliked sharing her sessions with the therapy dog. She did report having observed a gender difference in her clients' interactions with Rudy. She reported noticing that women tended to hold and stroke Rudy, receiving tactile comfort. Men, on the other hand, commonly played somewhat aggressively, using Rudy as a "diversion to their pain."

The activity coordinator said that in her work with 125 residents, only approximately 6 seemed uninterested in interacting with the resident Labrador retriever. Of the individuals who were uninterested, the common denominator was that they had not had an early, positive interaction with

animals. She reported that 1 resident had a slight allergy to the animal, consequently the dog was not permitted in his personal room. The grief counselor's Maltese is reportedly hypoallergenic, therefore allergic clients were not a concern in Rudy's case.

In a study cited earlier (Mallon, 1994), the author wrote that in a residential setting for racially mixed children who exhibited significant behavioral, emotional, and academic difficulties, younger children (ages 7-10) preferred holding rabbits and preteens (ages 11-13) preferred riding horses.

## Ethical and Legal Considerations

Ethically, counselors owe it to their clients to provide the best care available. In using the relatively newly researched therapeutic approach of AAT, it may seem difficult to judge if using an animal in a mental health setting represents the best, or even a beneficial, choice. Kogan et al. (1999) wrote that it is not ethical to use only AAT and to exclude other treatments that have been proven successful. AAT is clearly beneficial in some cases, but more research needs to be done. It seems evident that at this point AAT should be used as a supplement to other proven methods.

Zisselman et al. (1996) wrote that the potential health risks of AAT were played down. In addition to the obvious issue of allergies to animals, there is the potential of an animal injuring a resident or a client by biting or knocking him or her over. AIDS patients and others who have compromised immune systems are more prone than are others to become infected with bacteria that animals may harbor. Having the dog (if that is the animal used) certified by one of the licensing agencies listed later in this article minimizes these risks.

Both the activity coordinator and the psychologist who were interviewed warn of possible harm to dogs in AAT. The psychologist told of having to remove Barlow from residency in a freestanding hospice facility because of his "being overly fatigued and overfed." The activity coordinator relayed the sad story that Lucky died prematurely, weighing 113 pounds and suffering from congestive heart failure due to having been overfed by the residents of the assisted-living facility.

Surprisingly, there was no report in the research articles or interviews of aggressive behavior on the part of either the animals used or the clients, residents, inmates, or patients. Evidently, the animals had been well screened for aggressive behavior.

In checking with the State of Ohio Counselor and Social Worker Board, I learned that there were no ethical barriers to the use of animals by a counselor. On the legal side of the issue, the activity coordinator reported that the county health department of her county did not allow Lucky to be present in the kitchen, dining hall, or laundry area. She stated that this was not a problem in that he quickly learned to respect those boundaries.

The grief counselor and the psychologist recommended having therapy dogs licensed by a credible agency such as Canine Companions for Independence, Therapy Dogs International, or Delta Society Pet Partners. These agencies license dogs 1 year of age and older based on criteria such as good



health; acceptance of strangers; appearance and grooming; ability to walk through crowded areas, including where there was medical equipment; voice commands; reactions to another dog; and reaction to distractions. A license represents a minimum standard that is observable to a hiring agency and clients and that provides liability insurance for the therapy animal.

## The Impact of AAT on My Development as a Professional Counselor and Future Clinical Practice

AAT has great appeal for me as a developing professional counselor. I have always enjoyed the company of animals and marveled at their effect on people. They seem to possess several of the characteristics that Carl Rogers (1989) described as being so important to the therapeutic relationship: unconditional positive regard and warmth. My own animals (three dogs and eight cats) have provided me with much-needed times of relaxation. Every morning I begin my day by walking the dogs in the woods. This furnishes a time of reflection and a time to focus on upcoming projects. Later, when I return from work, their warm greeting has a way of putting into focus whatever stressors I have experienced. They do love unconditionally! I have at times considered if and how this could be used for my clients' benefit.

Professionally, I have been fortunate to have had the opportunity of using the grief counselor's dog, Rudy, with several clients. My practice has included counseling children with various grief issues. Usually I have met with the parents and the child for the first half of the first session. One 8-year-old boy seemed anxious as evidenced by his tears, and he stated that he did not want to be left alone with me. When asked if they would like to have Rudy join us for the rest of the session, the parents and the boy readily agreed. We were able to play with the dog together and share "dog stories." Rudy acted as a bridge in bringing the boy into a closer relationship with me. Later, Rudy joined us on occasion, but for the most part we were alone and enjoyed a good rapport. This seems attributable, in part, to using Rudy as an icebreaker.

In another case, a 6-year-old client whose father had died 5 months earlier was brought to counseling by her mother. She remained adamant that she did not wish to "talk about" her father's death. In her house-tree-person drawings, it was evident that she had suffered a traumatic event, as shown by her drawing a large dark hole in her tree trunk and in her dark shading on the windows of her house. In an attempt to develop a trusting relationship so that she might feel safe in discussing her feelings, Rudy joined us at various times. When he was present she was more expressive and animated. Using the approach practiced by Reichert (1994) with sexually abused girls, I told stories of the losses that Rudy had experienced. Together Emily (fictitious name) and I processed how Rudy might feel, and we dealt with those emotions. Emily's mother reported that after some weeks, Emily started admitting to her that she "misses her father."

Rudy provided a means of connecting to these children. No doubt there are other ways of doing so, but AAT has been beneficial in attaining the goals of counseling in these situations.

## References

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- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Barker, S. B., & Dawson, K. S. (1998). The effects of animal-assisted therapy on anxiety ratings of hospitalized psychiatric patients. *Psychiatric Services, 49*, 797-801.
- Baun, M. M., & McCabe, B. W. (2000). The role animals play in enhancing quality of life for the elderly. In A. Fine (Ed.), *Animal-assisted therapy* (pp. 237-251). San Diego, CA: Academic Press.
- Draper, R. J., Gerber, G. J., & Layng, E. M. (1990). Defining the role of pet animals in psychotherapy. *Psychiatric Journal of the University of Ottawa, 15*, 169-172.
- Folse, E. B., Minder, C. C., Aycock, M. J., & Santana, R. T. (1994). Animal-assisted therapy and depression in adult college students. *Anthrozoos, 7*, 188-194.
- Hoelscher, K., & Garfat, T. (1993). Talking to the animals. *Journal of Child and Youth Care, 8*, 87-92.
- Kogan, L. R., Granger, B. P., Fitchett, J. A., Helmer, K. A., & Young, K. J. (1999). The human team approach for children with emotional disorders: Two case studies. *Child & Youth Care Forum, 28*, 105-121.
- Mallon, G. P. (1994). Cow as co-therapist: Utilization of farm animals as therapeutic aids with children in residential treatment. *Child and Adolescent Social Work Journal, 11*, 455-474.
- Marr, C. A., French, L., Thompson, D., Drum, L., Greening, G., Mormon, J., et al. (2000). Animal-assisted therapy in psychiatric rehabilitation. *Anthrozoos, 13*, 43-47.
- Odendaal, J. S. J. (2000). Animal-assisted therapy—Magic or medicine? *Journal of Psychosomatic Research, 49*, 275-280.
- Phillips, H. L. (Ed.). (2001). Love on a leash at Robinson Memorial Hospital. *Robinson Today, 4*, 6-7.
- Reichert, E. (1994). Play and animal-assisted therapy: A group treatment model for sexually abused girls ages 9-13. *Family Therapy, 21*, 55-62.
- Reichert, E. (1998). Individual counseling for sexually abused children: A role for animals and storytelling. *Child and Adolescent Social Work Journal, 15*, 177-185.
- Rogers, C. (1989). *On becoming a person*. New York: Houghton Mifflin.
- Serpell, J. A. (2000). Animal companions and human well-being: An historical exploration of the value of human-animal relationships. In A. Fine (Ed.), *Animal-assisted therapy* (pp. 3-18). San Diego, CA: Academic Press.
- Walsh, P. G., & Mertin, P. G. (1994). The training of pets as therapy dogs in a women's prison: A pilot study. *Anthrozoos, 7*, 124-128.
- Zisselman, M. H., Rovner, B. W., Shmueli, Y., & Ferrie, P. (1996). *The Journal of Occupational Therapy, 50*, 47-51.

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