

Relationship between the Characteristics of Goat therapy and Medical Costs

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ABSTRACT

Objective: Goat therapy is widely used and recognized for the medical benefits.

Design: A clinical study.

Materials and Methods: We analyzed companion goat ownership on the physical and psychological health of subjects. At the same time, we have stationed the trained therapy goats under a specialist handler.

Results: Many of the patients had experience interacting with therapy goats and were interested in and favorable toward interacting with the stationed therapy goats.

Conclusions: Contracting lemon producing farmers allows patients regular goat contact at relatively low costs to the institution. In addition, this creates a new economic niche for a number of the lemon producing farmers.

KEY WORDS

goat therapy, elderly care house, preschool child, lemon producing farmer, medical costs

INTRODUCTION

Therapy goat ownership was reported to significantly modify the relationship between social support and the change in psychological well-being¹⁻¹²⁾. Hiroshima prefecture as a leading representative of the lemon producing regions with goats promotes to raise the commercial value of the lemon for the fresh products market and food industry¹⁻⁵⁾. The beneficial effects of the dietary lemon can be attributed not only to the vitamin C, essential oils and organic acids, but also to the antioxidant activity of their flavonoids. Therapy goats are still kept on small lemon producing farms in Hiroshima Prefecture¹⁻⁵⁾. Goats are often used in hospitals, assisted living homes, nursing homes, schools, rehabilitation centers, hospices and other areas to help improve their well-being⁴⁻¹⁸⁾. All of which are very beneficial to the patients. Most of the children who interacted with goats had experience interacting with goats and were favorable toward goats¹⁹⁻²⁴⁾. It was a great learning experience for all^{1,25-36)}. Contracting lemon producing farmers allows patients regular goat contact at relatively low costs to the institution. In addition, this creates a new economic niche for a number of the lemon producing farmers^{2,24,36-52)}.

MATERIALS AND METHODS

The subjects were elderlies hospitalized in the elderly nursing home, disabilities hospitalized in the disability services, elementary

school and high school students and preschool children with no fear of companion goats, who had consented to the survey. They can interact with the therapy goats.

With the goal of improving the Quality of Life (QOL) of them, we have stationed the trained therapy goats under a specialist handler. The farmers with therapy goats became a specialist handler. We investigated changes in the status when interacting with the therapy goats. During the interaction, they desire the interaction spend time freely with the goats. First, we conducted hearing survey with them who had desired participation in the interaction in advance.

The present study conformed to the provisions of the declaration of Helsinki in 1995 (as revised in Edinburgh in 2000)¹⁻⁵⁾.

Tokara, Alpine, Saanen, Shiba and Korean therapy goats (age under 11 year-old) were used. To determine the effect of goat therapy, all goats were stationed under specialist handler. All experimental protocols follow the Guidelines of Animal Use and Care of the National Institutes of Health.

RESULTS

High school students gave the food to therapy goats, met therapy goat's new birth and therapy goat's parenting. Elderlies hospitalized in the elderly nursing home and its stuff hugged baby therapy goat and gave the artificial milk. This baby therapy goat became very friendly to patients. The elementary school children hugged the baby therapy goat

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and got the milk from mother therapy goat and gave milk to baby therapy goat. The elementary school children and preschool children watched the video of the therapy goat's birth and learned the lectures of them with using slid of the therapy goats in every 3 months. Therapy goat owners treated their goats in animal hospitals. Some of them communicated with their therapy goats. Some of them did a formal ceremony as human at the time of a goat death and visited the grave at the special days with children and their friends.

Longest Longevity of our therapy goats were more than 11 years old. Most of our therapy goat mother born 14 children. White daughter F1 hybrid backcross with Tokara father goat (white) bore white grandson and black granddaughter BC1 hybrids just 8 months after her birth. Korean black goat bore F1 hybrid white female and male when father was 2 year and 6 month-old. Then Korean black goat bore additional 2 white F1 hybrid goats when father was 3 year-old. Then Korean black goat bore additional 2 white F1 hybrid goats when father was 3 year and 6 month-old. 7 month-old Alpine (black and white) goat bore white daughter F1 hybrid when father was 4 year-old. Any breed of therapy goat can be a therapy goat of rehabilitation.

Many of the patients had experience interacting with goats and were interested in and favorable toward interacting with the stationed goats in the short term. Interaction with goats in schools appears to have potential as a means for promoting mental health education. In care and welfare facilities for the aged, goat-assisted activity is actively encouraged to improve the elderly residents and rehabilitation users and stuffs. Some elderly residents became the ownership of therapy goats. The therapy goat increased mood effect. Elderlies hospitalized in the elderly nursing home, disabilities hospitalized in the disability services, elementary and high school students and preschool children got great experiences with the therapy goats. Therapy goat activates the appetitive system in the children and, thus, causes an arousal or excitement related to increased motivation and concentration to go the school. In addition, this creates a new economic niche for a number of the lemon producing farmers with therapy goats.

DISCUSSION

Therapy goats offer companionship and unconditional love which can serve as a lifeline for those with little else to live for, such as patients fighting terminal illnesses, or patient feeling hopeless^{1-5,46}. One hospital, the Laguna Honda Hospital and Rehabilitation Center in San Francisco, even houses their therapy goats full-time in a farm setting so the therapy goats can work with patients long-term¹⁻⁵. It can also increase opportunities of socialization and exercise. Just watching therapy goats browse contently is a sight that paints a thousand words. The therapy goats indicated an important problem of humanity and well-being in therapeutic process^{1,2,24,25,28,44}. The husbandry practices, and, thus, depend on the level of care of the owner with regard the health and keeping conditions of the therapy goat will make better welfare. Those few moments that patients take from the daily busy schedule to just sit and play around therapy goats make a big difference. When patients see the beauty and greatness of the universe, and the awe-inspiring laws that govern it, patients reconcile to the fact that patients are part of nature and have infringement of natural laws¹⁻⁵. The whole combination of country life and annals just went so beautifully together that patients just resonate with it. Goat therapy is a real thing. For patients undergoing rehabilitative therapy, especially those associated with some sort of stigma such as alcohol or drug addiction, therapy goats offer non-judgmental affection and attention. One former alcoholic who hit "rock bottom" started working with therapy goats. This unconditional acceptance and support is the key factor for goat-assisted therapy. Therapy goats offer opportunities to communicate non-verbally, a chance many affected patients seize wholeheartedly-and which, happily, often lead to increased verbal communication.

Hiroshima prefecture as a leading representative of the lemon producing regions with goats promotes to raise the commercial value of the lemon for the fresh products market and food industry¹⁻⁵. The beneficial effects of the dietary lemon can be attributed not only to the vitamin C, essential oils and organic acids, but also to the antioxidant activity of their flavonoids. Recently, several studies highlighted lemon as an important health promoting fruit rich in phenolic compounds^{5,12,21,23}.

Therapy goats are still kept on small lemon producing farms¹⁻⁵. The epigenetic changes occurring in Post-Traumatic Stress Disorder (PTSD) and their contribution towards understanding the etiology, prevention and treatment of PTSD. Children had a day at the farm to leave all their troubles behind and to just experience the joy of goat therapy. The therapy goats have healed from PTSD of various abuses or neglect. Patients

resumed their regular visitation and particularly the therapy goat fawns triggered great interest and empathy. Patients interact with the therapy goats spontaneously stroking, brushing, feeding therapy goats with herbs from outside the enclosure. Therapy goats are a popular feature in many elementary school. Therapy goats can be very effective for formal instruction in science and other subjects and for teaching humane attitudes and values, and can interest and motivate children with learning problems and other difficulties. Goat therapy is officially trending on college campuses nationwide¹⁻⁵. Dozens of universities have hosted goat therapy events, promising students a chance to unwind with the therapy goats to help cope with the stresses of college life^{9,16}. Contracting lemon producing farmers allows patients regular goat contact at relatively low costs to the institution. In addition, this creates a new economic niche for a number of the lemon producing farmers. If patient give a therapy goat a name, it will learn to recognize that name and though it may not always come up to greet patient, it will turn it's head and look at patient. Therapy goats try to catch our eyes when they need help. Therapy goats can communicate and interact with their human handlers. The therapy goats gaze toward the forward-facing person.

By pairing chromosomes of similar genomes, the chance for these recessive alleles to pair and become homozygous greatly increases, leading to offspring with autosomal recessive disorders^{10,11}. Although offspring of biologically related goats are subject to the possible effects of inbreeding, such as congenital birth defects, the chances of such disorders are increased. Introgression has been reported to cause the movement of a gene of an interspecific hybrid with one of its parents. Purposeful introgression is a long-term process⁹. Since it may take many hybrid generations before the backcrossing occurs⁹. Systematic inbreeding and maintenance of inbred strains is of great importance for biomedical research. The inbreeding guarantees a consistent and uniform goat model for experimental purposes and enables genetic studies. The use of inbred strains is also important for genetic studies to distinguish genetic from environmental effects.

Intense backcrossing is a pre-biotechnology breeding programme that can be used to create a near clone. By repeatedly backcrossing father to his daughter (F1) we can create an almost identical genetic twin of father. An intensive form of backcrossing where father is backcrossed to his daughter (F1), granddaughter (BC1) and so on, in order to maximize the percentage of father's genes in the offspring. 87.5% of great-granddaughter (BC2)'s genes would come from father^{13,25,39-43}. Inbreeding exposes recessive alleles through increasing homozygosity. Many of the traits that affect profitability in crosses of modern dairy breeds have not been studied in designed experiments.

Epigenetics is a potential interventional target in finding the pathogenesis, treatment and biomarkers for Alzheimer's Disease. Older patients, regardless of gender, health, wealth, or education, showed the survival advantage of goat therapy. The benefits of therapy goat include a longer life¹². Therapy goat not only introduces some interesting ideas and characters, it also gives more years with therapy goat^{21,25,35,36}. Apart from that, there is a very strong tone in the message being sent how to coexist peacefully with therapy goats.

We have to show compassion towards all living creatures. Therapy goats may be mute but we as a society have to speak on their behalf. No pain or agony should be caused to the therapy goats. Cruelty to therapy goats causes psychological pain to them. Arrival of technology and its increasing utilization has also raised concern and controversies in ethical areas. Therapy goats breathe like us and have emotions. The therapy goats have a handful of feeding spots where they are provided with food. On walks, seeing two particularly friendly therapy goats — often makes our day. Therapy goat culling programmes are not sustainable nor acceptable from a welfare perspective. Feeding of therapy goats has been considered as a good deed.

A world without therapy goats would be a very bleak one, and like all relationships, it's one we need to work on. Goat therapy is way to bind closely the normal interrelationship and thus facilitate the achievement of functional harmony and pathophysiological experiences. It's a tale of coexistence and survival. We investigated whether introgressive hybridization of Tokara goats can result in behavior changes and pathologic changes¹¹. Nevertheless, just about any breed of goat can be a therapy goat¹². Several previous studies have demonstrated that therapy goats play an important role in the regulation of disease pathogenesis⁵⁻⁸. To determine goat therapy and explore the pathological mechanism, we suggest that further investigations are needed.

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