

The Role of Occupational Therapy in Rural Healthcare: A Case Study on Farmers with Disabilities

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Abstract: The impact of disability on farmers' personal affairs and work capacity has consequences not only on farmers, but also on their families, farm operations, and communities. Living in a rural area can play a role in recovery after disease or injury in that beneficial therapy services may not be available due to barriers such as meeting the needs of a widespread population, lack of physician referral, and travel time. To gain the perspective of the impact of disability on farmers' lives, face-to-face interviews were conducted with two farmers in rural Nebraska. Through these discussions five similar themes emerged which include: adaptations, safety, family assistance, therapy services, and specialty services.

Key Words: Rural Health, Occupational Therapy, Farming Injury

Introduction

Farmers with disabilities are a unique population in that their quality of life and financial resources are dependent on their ability to return to work. A farmer's ability to return to farming is not only important for his or her family, but also for the economic production of the state in which he or she lives. Often, farmers with disabilities might find their medical needs may be overlooked not only by the medical field, but also by their community.

A challenge facing healthcare delivery today is understanding how services may be provided by occupational therapists and what needs can and should be identified within a rural setting. Occupational therapists can become involved in the return to work of these farmers by maximizing function and minimizing the impact of the disability. By inquiring about the life of a farmer with disabilities, the awareness of need for occupational therapy in a nontraditional rural setting may motivate other occupational therapists to provide service to this population.

This study sought to find if farmers with disabilities return to farming after work related accidents and if occupational therapy intervention would be of benefit to adapting their farm, farm equipment, and method of carrying out their daily activities.

Literature Review

National Statistics

Fiedler and Associates (1998:13-22) noted that agriculture, as an industry is very dangerous. Agriculture has one of the highest fatality rates in the United States.

Agricultural related accidents account for approximately 20.7 to 24 deaths per 100,000 workers as compared to approximately four deaths per 100,000 workers in other United States industries. Margentino and Malinowski (2002) provided safety statistics which indicate that farm-related injuries happen most frequently between the hours of 10 a.m. and noon, and 3 p.m. and 5 p.m. These times appear to be periods when fatigue is most likely to occur, contributing to decreased concentration and greater risk of injury.

Nebraska Statistics

Fiedler and Associates (1998:13-22) state that in Nebraska, within a ten-year period from 1987 to 1997, 245 total farm-related deaths were reported. Of this group of fatalities, 124 occurred in the age group of 55 years and older. The leading cause of death in these accidents occurred while working with tractors. Work with other types of farm machinery (combines, power take off (PTO) shaft, etc.) is the second leading cause of fatal injury in farmers. Farmers that are 55 years and older often experience age related changes that increase their chance of suffering a work-related injury. Vision changes such as a decrease in dark adaptation, color sensitivity and the size of the visual field are all factors that affect a person's ability to work safely. Hearing and slowing of afferent sensory impulses that delay motor response are also of great concern.

Possible Barriers to Receiving Service in a Rural Area

As evidenced by the above research, farm-related accidents and subsequently farmers with disabilities are a growing population in rural communities. Occupational therapy is one of the many services that are not met in a rural community. One of the biggest trials is how to meet the needs of such a widespread population. Rural communities are composed of small, spaced apart towns and wide-ranging farms. Larsen and Foley (1992:30-39) found that both occupational therapists and consumers meet barriers when it comes to transportation both to and from the clinic or home. Kent, Chandler and Barnes (2000:481-491) reported that most research about meeting rehabilitative needs has been done in urban areas where it has been found that accessibility to service and public transportation are not major issues. This type of research cannot be generalized to the needs of rural areas.

Another issue contributing to the lack of occupational therapy services for farmers with disabilities may be the perceived extent of injury. The individuals with greater disability usually require and have access to more organized services. It is possible that these individuals, along with the elderly, are more visible to service providers and have a better recognition of need. These potential clients therefore begin to rely on themselves and family members to solve day-to-day problems that they encounter because of their disability.

It may also be that physicians practicing in rural areas do not have the knowledge or resources to learn about occupational therapy and its services. Rural health care is primarily through general practitioners, and Kent, Chandler and Barnes (2000:481-491) found that these professionals did not have the time, training, or knowledge of how to refer their patients with disabilities to services such as occupational therapy.

For that reason, there are many areas of service with which occupational therapists can be associated in rural areas. However, meeting the needs of farmers with disabilities is an existing problem for the occupational therapy profession. An individual therapist may not see the appeal in spending more time traveling between fewer clients than they would have if working in an urban area. Solomon, Salvatori and Berry (2001:278-285) noted that recruitment and retention of therapists in rural communities also poses challenges. Therapists with families may look at the availability of spousal work. Therapists may also be influenced by the lack of management support available in a rural workplace, which Bent (1999:203-212) found to be a factor in a high turnover rate of staff. Kohler and Mayberry (1993:731-737) suggested that the lack of availability of continuing education and other support systems such as other therapists or access to current literature may also have an impact on the retention and/or recruitment of therapists in rural areas. Wills and Case-Smith (1996:370-379) found that many therapists in rural communities are required to take on the role of being a generalist in the field of occupational therapy. There is no way of determining which client or diagnosis requires assistance. Because of the extreme need for therapists in these regions, therapists may begin to feel overwhelmed in that they have to do it all. Realization that this goal is not possible by one or a few allows therapists to reduce stress levels and focus on a realistic mechanism to meet the demands of practice.

Russell, Clark and Barney (1996:72-78) suggested that the initial reluctance by therapists to enter a rural environment may be because of the limited opportunities available to them as students to experience a rural fieldwork setting. Millsteed (1997:95-106) states that schools need to prepare students by encouraging work in these areas not only in fieldwork experience, but also for a career choice. The occupational therapy profession also has to recognize the need for education and training in rural areas. The profession needs to mandate changes within the education and preparation of therapists for practice and identify competencies and standards for rural practice.

In reviewing the literature, it was found that no published research exists that is similar to this research proposal. Therefore, it was determined that further study involving the lives of farmers with disabilities and their associations with occupational therapists during their rehabilitation phase was warranted.

Design and Method

A qualitative research design was appropriate for this study due to the lack of research done specifically regarding individuals in rural areas. Existing research includes descriptions of rural healthcare designs, rural injuries, and rural mortality rates. This study will focus on the individual's perspective of his or her life and his or her ability to work with a disability.

A case study is "an exploration of a bounded system over time through detailed, in depth data collection involving multiple sources of information rich in context." (Cresswell, 1998:12) The context of the case requires the case to be studied within the natural setting that may be physical, social, historical, or economic. The purpose of focusing on a particular set of cases is due to their perceived uniqueness of issues.

Sample

In this study, examining the influence of disabilities on farmers, a case study was chosen as the method of inquiry. This case study focused on two farmers with disabilities. Through the case study the data collected provided a detailed picture of these farmers' lives and how disability has affected their lives. Time was spent describing and understanding the context of the case and the challenges faced by disability. Through the collection of data, an occupational therapy viewpoint was used to determine the need and effectiveness of occupational therapy within this unique rural population.

The sample population of farmers with disabilities was found through contacts with the AgrAbility Project of Nebraska (2002), wherein two members of this organization agreed to participate in the case study. The AgrAbility project assists people with disabilities employed in an agricultural setting. Data Collection and Analysis Data were collected through the use of face-to-face interviews and observation. To ensure accuracy during transcription and for the development of themes, interviews were audiotape recorded. These tapes were destroyed immediately after final transcription took place to guarantee confidentiality. Together, interviews and reflective notes were analyzed for categorization of occurring themes over the course of this study.

Limitations

This study is not generalizable to a larger population, as only two farmers were interviewed. The results were also confounded due to the farmers being located in rural Nebraska. The researchers have not participated in qualitative research prior to this study.

Discussion

Background Information: Farmer #1 Jon

Jon is a self-employed livestock and crop farmer in rural Nebraska who is in charge of the day-to-day operations of his farm. He is an active participant in his community, the AgrAbility Project of Nebraska, and a grassroots lobbyist for farmers with disabilities. Jon's disability history began when he was a child. He was born with a rare disease that caused his bones to grow too fast. At 16 months old he lost two fingers on his right hand due to amputation. As he aged, the bones in his left leg grew out of proportion with the rest of his body, requiring multiple surgeries to stop the growth. As a result of this disease, Jon's right upper extremity is longer than his left. At the age of 40, Jon suffered a right hemisphere stroke, leaving the left side of his body paralyzed. Jon stated that he did not have any signs or symptoms forewarning a stroke, and that it occurred in his sleep.

Background Information: Farmer #2 Cletus

Cletus and his wife owned their own milking production until 1985. After relocating to a new farmstead, he began to provide farming services for other local farmers. In September of 2000, Cletus was harvesting seed corn for his employer. While

repairing a bearing on an elevator of the corn picker, another crewmember started the machine, throwing Cletus about 15 feet to the ground. Subsequently, he broke a vertebra and was paralyzed from the waist down.

Emerging Themes

Through analysis of the transcribed interviews, five themes emerged: adaptations, safety, family assistance, therapy services, and other services. The first theme, adaptations, emerged after learning about their types of disabilities. Both farmers had professional and homemade adaptations to their homes and farms. Professional assistance was most needed for major renovations, such as in the bathroom or kitchen. For both of the farmers, developing their own adaptive equipment for motor vehicles, farm equipment, tools, and furniture proved to be the beginning of a lifelong hobby. Cletus stressed the need for professionals in rural areas to be knowledgeable about adaptations to be done correctly the first time, as his bathroom was not adapted according to recommendations and guidelines. Jon suggested that farmers are a "unique kind," therefore professionals must be willing to collaborate with the farmer who knows the best way of achieving adaptations for tasks and equipment that they have been familiar with for years.

The second emerging theme from the interviews was safety. Both Jon and Cletus stressed the importance of using designed safety equipment as well as having someone nearby in case of an emergency. Cletus invested in a leather safety suit to use while welding in his shop. He purchased this after a fire nearly started from a spark that fell on his shoe. Due to his lack of sensation, he was not able to detect the warmth, but luckily his son saw the danger and quickly extinguished the spark. Jon realizes that due to his stroke, his reaction time to possible emergencies is lessened. Therefore, he appreciates that he must take his time and be more alert to his surroundings while driving.

The third theme, family assistance, demonstrates the power of family involvement during and after an injury. Both farmers highlighted the role that their families played both in the hospital and transitioning to home. Families were involved in medical discussions, therapy treatment, and community reintegration. Both the farmers and their families received services regarding emotional/mental health issues following their injuries.

The fourth theme, therapy services, emerged in discussions about acute, subacute, and rehabilitative stages of recovery. Both farmers identified therapy as a major challenge, but agreed that therapy services were necessary to function independently upon returning home. Due to workman's compensation, Cletus still receives out-patient therapy services, but must travel to the capitol city of Nebraska to receive services. Jon does not receive continuing services, but independently contacts occupational therapists regarding any hand splint issues that arise. Both farmers commented on their lack of understanding of how therapy progressed as it did. Often, the men felt as though their input and personal goals were not taken into consideration in therapy.

The fifth theme, other services, materialized following an interview question which asked what type of services the farmers would have liked to receive during their hospital stay or after their return home. Jon believes that the help one receives is only good if the person helping truly knows and understands the challenges and tasks that a

farmer faces on a day-to-day basis. He shared that vocational rehabilitation professionals visited his farm, but were not able to provide him with information on how to adapt his daily chores and farm equipment needs. On the other hand, Cletus stated a need for help with legal issues. Many issues with insurance companies have complicated his financial situation and have caused major frustration.

In accordance to these five themes, occupational therapists can have a role among farmers with disabilities by taking their services to rural areas and applying their knowledge to adapting equipment, providing safety precautions, involving families, and seeking provisional services for farmers.

Conclusion

Two occupational therapy student researchers using a qualitative methodology in the form of a case study completed this study. Questions were posed to two farmers with disabilities in rural Nebraska to gain a better understanding of how their lives are affected by injury. Throughout this study, five themes emerged that might help occupational therapy practitioners and other service providers understand the challenges faced by farmers with disabilities. These themes can provide information to professionals working in a rural area to understand the unique needs of farmers with disabilities. Keeping these themes in mind, professionals can then evaluate their services and adapt them to best suit farmers.

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References:

- AgrAbility. Available at <http://www.agrability.org>. Accessed November 11, 2002.
- Bent A. Allied health in central Australia: challenges and rewards in remote area practice. *Aust J of Physiotherapy*. 1999; 45(3): 203-212.
- Creswell JW. *Qualitative inquiry and research design: choosing among five traditions*. Thousand Oaks, CA; Sage Publications, Inc; 1998.
- Fiedler D, Von Essen S, Morgan D, Grisso R, Mueller K, Eberle C. Causes of fatalities in older farmers vs. perception of risk. *J Agromedicine*. 1998; 5(3): 13-22.
- Kent RM, Chandler BJ, Barnes MP. An epidemiological survey of the health needs of disabled people in a rural community. *Clin Rehabil*. 2000; 14(5): 481-491.

Kohler E, Mayberry W. A comparison of practice issues among occupational therapists in the rural northwest and the rocky mountain regions. *Am J Occup Ther.* 1993; 47(8): 731-737.

Larsen CO, Foley, JC.). Rural issues in rehabilitation service delivery. *Am Rehabil.* 1992; 18(1): 30-39.

Margentino MR, Malinowski K. Farm machinery and equipment Safety part I: recognizing and understanding hazards. Available at: <http://www.cdc.gov/nasd/docs/d000801-d000900/d00844.html>. Accessed September 9, 2002. .

Millsteed J. 1997 Sylvia Docket Lecture: the contribution of occupational therapy to the fabric of Australian rural and remote communities. *Aust Occup Ther J.* 1997; 44 (3): 95-106.

Russell M, Clark M, Barney T. Changes in attitudes and skills among occupational therapy students attending a rural fieldwork unit. *Aust Occup Ther J.* 1996; 43(2): 72-78.

Solomon P, Salvatori P, Berry S. Perceptions of important retention and recruitment factors by therapists in northwestern Ontario. *J Rural Health.* 2001; 17 (3): 278-285.

Wills K, Case-Smith J. Perceptions and experiences of occupational therapists in rural schools. *Am J Occup Ther.* 1996; 50 (5): 370-379.