

Rural Health: A Longitudinal Study of Anxiety and Cancer Support

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Abstract

Cancer diagnoses and survivorship are greater than ever and growing. Diagnoses and treatments cause stress and fatigue, which disrupts daily activities and reduces quality of life. Social and emotional support are foundational to cancer care. Researchers aimed to investigate whether bringing a variety of cancer support and professional services to a rural community would reduce cancer patients', survivors', and their family members' anxiety coping with cancer diagnoses and treatments. A longitudinal survey design using the Generalized Anxiety Disorder-7 instrument and phenomenological methods were used for data collection. Descriptive data revealed generally low anxiety among participants, an inverse association between age and anxiety, and a direct association between familial and work responsibilities and anxiety.

Keywords: rural health, support group, cancer survivors, cancer patients

The American Cancer Society (ACS, 2014, p. 1) revealed over 14.5 million cancer survivors in 2014; the number is projected to increase to 19 million in 2024. A five-year survival rate among cancer patients is 68% (ACS, 2013, p. 2). According to the press release in 2017 from the Centers for Disease Control and Prevention (CDC), 19,000 cancer deaths in rural areas were preventable (p. 1). Over a decade, researchers called for cancer care as a public health priority, especially in rural areas (Mowls, Brame, Martinez, & Beebe, 2016; National Institutes of Health, 2016). According to the CDC (2017, p. 1), 46 million individuals reside in rural areas and cancer death rates in rural areas are higher and increasing compared to urban areas. Rural cancer survivors live with increased risks of cancer mortality and poor health outcomes after diagnoses (Weaver, Palmer, Lu, Case, & Geiger, 2013). Researchers emphasized the importance of evaluating ethnic factors, facilitating behavioral interventions, and prioritizing resources for reducing risk factors among minorities and survivors in rural areas (Deng, Liang, LaGuardia, & Sun, 2016; Weaver et al., 2013).

Factors Affecting Survivorship

A five-year survival rate among cancer patients is 68% (ACS, 2013, p. 2). Researchers noted factors affecting survivorship including cancer staging, treatment, supporting environment, health behaviors, unemployment due to health issues, and obesity (Deng et al., 2016; Mowls et al., 2016). ACS guidelines (n.d.) suggested that cancer preventions include avoiding tobacco use and limiting alcohol consumption. Unhealthy behaviors of binge drinking and heavy drinking among survivors were 8.3% and 5.1% respectively, which is significantly lower compared to individuals without cancer history (Mowls et al., 2016, p. 695). It is possible that cancer survivors are mindful to avoid drinking and smoking behaviors for reducing chances of cancer reoccurrence. ACS guidelines further suggested eating a minimum of five servings of assorted fruits and vegetables per day and adopting moderate physical activities at least 30-minutes five days per week. Researchers discovered that one-third of cancer survivors tend to have physical inactivity within one-month period and 66.2% of cancer survivors experience obesity, which is higher than individuals without a cancer diagnosis (Mowls et al., 2016, p. 695). Approximately 47% among predominantly Hispanic female cancer patients are identified with low-income or financial stress (Ell et al., 2008, p. 623). It is challenging and stressful for low-income minority cancer patients and survivors to fight cancer.

According to Müller et al. (2017, p. 628), 30% of cancer patients undergo severe fatigue and only few of them may recover from fatigue within 18 months after post-diagnosis. Experiencing fatigue seems to be a distressing symptom for all stages of most cancer patients. According to researchers, most survivors experience constant feelings of fatigue and long-term fatigue for several years, which disrupts their accomplishing personal goals and results in substantial loss of quality of life (Donovan, McGinty, & Jacobsen, 2013; Müller et al.). Feelings of fatigue are major factors keeping cancer patients from overcoming treatments and survivors from maintaining a sense of wellbeing.

Social and Emotional Support

Social and emotional support serve as the foundation of cancer care (Institute of Medicine, 2008). Researchers noted that cancer support groups, relaxation techniques, and a variety of supporting activities would increase survivors' healthy self-concepts and decrease

anxiety (Abbasi et al., 2018; O'Callaghan et al., 2018). Individuals receiving tangible resources and emotional support tend to experience less anxiety or depression when confronting destructive life incidents and tend to increase their resiliency (Deng et al.). In the last four decades, many researchers noted a need to support mental health in rural areas because minimal services were provided through competent professionals with terminal practice degrees such as a PhD. or MD (Cristancho, Peters, & Garces, 2016; Hollingsworth & Hendrix, 1977).

The Support and Purpose of the Research

With the support from the Office of Research and Graduate Studies at Texas A&M University Kingsville, the researchers were able to connect diverse licensed specialists and professionals with a doctoral degree to provide professional services free of charge to cancer patients and their family members. This research was conducted with a purpose of providing professional support to cancer patients, survivors, and their family members for reducing their anxiety and stress. Researchers aimed to investigate whether bringing a variety of cancer support and professional services to a rural community would reduce the anxiety of cancer patients', survivors', and their family members' ability to cope with cancer diagnoses and treatments.

Research Design

A longitudinal research survey design and phenomenological methods were used for the research. A longitudinal survey design allows researchers to collect data of the same participants over time (Creswell, 2013). Researchers can acquire participants' views and experiences through focus group interviews and survey research (Creswell, 2013). Longitudinal design can be used for researchers to understand social relationships as well as health processes over time (Smyth, Juth, Ma, & Sliwinski, 2017). According to Moustakas (1994), a phenomenological research method allows researchers to investigate participants' lived experiences. Creswell (2013) noted that a phenomenological research method requires researchers to bracket personal bias when investigating participants' lived experiences. A combination of longitudinal research design and phenomenological methods allows researchers to investigate impacts of research phenomena and better comprehend participants' perspectives of their phenomena and lived experiences (Sened, Lazarus, Gleason, Rafaeli, & Fleeson, 2018; Smyth et al., 2017).

The researchers conducted a 10-month study with cancer patients, survivors, and their family members. The 10-month interventions were provided by a variety of professionals with a doctoral degree and licensed specialists to support participants coping with anxiety. The interventions included healthy meal planners with recipes, fighting cancer songs, music therapy, education about physical and lymphedema therapy, education of current oncology, sandtray therapy, member sharing, group support, and encouragements. Through the monthly 90-minute holistic cancer support group, participants were able to attain knowledge and strategies to live healthily, deal with cancer treatments and side effects, share their concerns with professionals, address their stress and anxiety, explore ways of coping with stress and anxious feelings, and encourage each other to have a better quality of life.

Participants

Cancer support group members were recruited through flyers at a rural community in a southern state. Five individuals attended the holistic cancer support group. Three female individuals participated in both the holistic cancer support group and the research. One participant’s age was between 50 and 59, one was between 60 and 69, and one was between 70 and 79. One participant reported experiencing fatigue caused by chemo therapy. She expressed that she could only use her limited energy for daily routines and decided to drop out of the research in the third month of the research study.

Instruments

The instrument used to investigate participant’s anxiety throughout the 10-month research was the General Anxiety Disorder-7 (GAD-7) scale. GAD-7 is a validated self-report measurement that includes seven 5-level Likert scale items to assess anxiety. GAD-7 measures patients’ anxiety or worry that results in symptoms such as muscle tension, somatic symptoms, and irritability that would interfere daily functions and appropriate decision-making (Alharthy, Alrajeh, Almutairi, Alhajri, 2017; Kertz, Bigda, & Bjorgvinsson, 2013; Zhong et al., 2015). GAD-7 is reliable for internal consistency (Cronbach's alpha = .89), and its sensitivity is good at between 73% and 83% according to the Youden index (Zhong et al.). The data of GAD-7 were collected in the 3rd, 6th, and 9th months of the 10-month-long interventions.

Results and Discussions

GAD-7 item scores were compared between the three time periods. Total scores could range from 0 to 35. A total score of 5 refers to the cut-off score for *mild* anxiety. Figures 1 and 2 illustrate GAD-7 item scores over times one, two, and three for two of three participants who remained in the 10-month cancer support group and research study.



Figure 1. Participant #1 GAD-7 item scores at 3, 6, and 9 months of interventions.

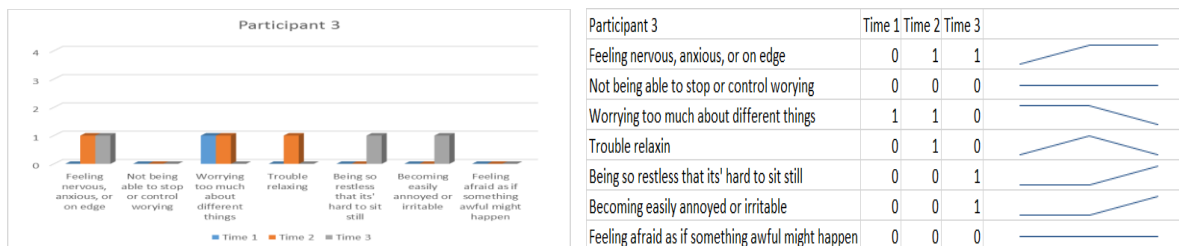


Figure 2. Participant #3 GAD-7 item scores at 3, 6, and 9 months of interventions.

Participant #1's total scores were between 1 and 2 for each of three times surveyed. Participant #3's total scores were between 1 and 3 for each of three times surveyed. Based on the results, participants' anxiety was within a normal range. No participants' scores reached the cut-off score indicating *mild* anxiety. Participant #1 only scored 1, at the normal level, on two of seven evaluation items. Participant #1 scored 1 on "Feeling nervous, anxious, or on edge". Her score dropped to 0 by the end of the 10-month of interventions. Participant #1 scored 1 on "Feeling afraid as if something awful might happen remained" throughout the research. Participant #1 reported that taking a daily prescription of chemo drug has been working well for several years, but she worried what would happen if the drug would not continue to function well in the future. Having years of experiences coping with cancer appeared to ease participant #1's acute stress. It appeared that anxious feelings of cancer reoccurring or progressing affected her anxiety at a normal range. It is not uncommon that cancer patients, survivors, and their family members experience the anxiety of cancer diagnosis and progression. Participant #1 described that she did not have anxiety or stress from her career, family duties, or finances because she had retired and her husband had passed away many years ago. She was able to attend several weekly activities in the local community. Having a retirement life without family duties appeared to reduce stress and allow the participant more time to focus on taking care of her health and socializing with other individuals by attending local events and activities.

Participant #3 scored 1, at the normal range, on five out of seven evaluation items. Participant #3 expressed that dealing with stress at work and feeling anxious toward parenting were the main reasons for her scores on five of seven items: "Feeling nervous, anxious, or on edge", "Worrying too much about different things", "Trouble relaxing", "Being so restless that it's hard to sit still", and "Becoming easily annoyed or irritable". Participant #3 shared that her anxious feelings were derived from feelings of stress regarding the completion of multiple tasks at work while parenting a young adult. It appeared that stress from work and family duties somewhat negatively affected participant #3's anxious feelings and wellbeing. Participant #3 described that she had been coping with stress and anxious feelings pretty well at home. She further mentioned that touching sands in the sandtray helped her feel to relax at home. It appeared that learning sandtray therapy and touching therapeutic sands were beneficial for participant #3 to cope with stress and anxious feelings.

One participant dropped out from the research due to fatigue. She reported that she could only perform a few daily routines during chemo therapy and had no energy to attend a support group. Fatigue is a common symptom that cancer patients and survivors experience for several years after diagnosis and treatment, which negatively affects cancer patients and survivors receiving support and seeking resources from the community and health professionals. The participants in this research were over 50 years old with many years of lived experiences coping with stressors. It is possible that many years of lived experiences have contributed to the participants' competency coping with stress and anxiety. It is also possible that attending a 10-month support group also reduced anxiety through emotional support, learning and other opportunities, new knowledge and skill attainment, and applications of coping strategies.

Conclusion

Receiving a variety of healthy interventions through the 10-month holistic cancer support group provided participant cancer patients, survivors, and family members with opportunities to

share their feelings, concerns, and needs. From participants' viewpoints, they were more concerned with stress than anxiety. Family duties, financial concerns, and career tasks appeared to be crucial factors influencing participants' stress, anxious feelings, and overall wellbeing. Participants with more years of lived experiences appeared to feel less stress and anxious dealing with their cancer diagnoses and more competent coping with life stressors and anxious feelings.

Implications and Future Research

The cancer support group on which this research was based provided opportunities for cancer patients, survivors, and family members to experience 10 months of holistic interventions. The participants shared a phenomenon: the more coping skills, strategies, and lived experiences they have, the less anxiety they feel dealing with cancer diagnoses, treatments, and life stressors. Helping cancer patients, survivors, and family members seek ways to reduce financial concerns, cope with career or life stressors, and deal with fatigue benefits them by reducing anxiety. Researchers are recommended to investigate how to reduce cancer patients, survivors, and their family members' stress from family duties and daily routines because these activities appear to affect their anxiety and wellbeing. Researchers and counselors are encouraged to explore with cancer patients, survivors, and their family members how lived experiences affect coping with cancer diagnoses, treatments, and changes in life styles.

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