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Online Communities for Information Sharing and Mutual Support for Health Professionals

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ONLINE COMMUNITIES FOR INFORMATION SHARING AND MUTUAL SUPPORT FOR HEALTH PROFESSIONALS

by

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ABSTRACT

This study was conducted to explore the use of online communities for information sharing and mutual support by health professionals, in this case, oncology social workers (OSW). The characteristic traits of individuals using online listservs and reasons for use is largely under researched. The main objective of this research is to explore the nature of social exchange and use of a professional online community that occurs on the Social Work Oncology Network (SWON) listserv and the characteristics of those OSWs using the listserv. Using a researcher developed survey, associations between characteristics of listserv users and reasons for use were explored. Data included 197 survey responses from current oncology social workers that are members of the Association of Oncology Social Workers (AOSW) that use the SWON listserv. The survey was designed to allow for exploration of processes, outcomes, characteristics of SWON users and the primary reasons of engaging in a professional listserv guided by social learning theory and community of practice. Associations between certification as an OSW and how others manage frustrations at work, primary employment setting and seeking information on what roles other OSWs take on in the workplace were found. OSW characteristics were found to have an association with information seeking regarding what roles other OSWs take on in their workplace. The implications of the results of this research validate the value and importance of oncology social workers having access to the SWON listserv when working with oncology patients to meet psychosocial needs and to help support one another. The oncology field will continue to progress, as will the complexity of needs of cancer patients. The SWON listserv serves as a great example of how to communicate with others within the same profession for real-time information and knowledge sharing and a source of mutual support.

Key Words: Social work oncology network; community of practice, oncology social work

For my smart and beautiful girls, Madelyn and Arabella

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LIST OF ACRONYMS/ABBREVIATIONS

AOSW – Association of Oncology Social Work

CoP – Community of Practice

OSW – Oncology Social Worker

SET – Social Exchange Theory

SWON – Social Work Oncology Network

CHAPTER 1: INTRODUCTION

Social Work Oncology Network Listserv

The Social Work Oncology Network (SWON) is a listserv hosted by the Association of Oncology Social Work (AOSW) and is made available to practicing oncology social workers (OSW) for information sharing and mutual support. The SWON listserv is a very active online professional resource, with multiple postings daily. OSWs are using the listserv as a new approach to problem solving, knowledge sharing, provision of mutual assistance, professional development and support to further assist oncology patients facing cancer-related burdens throughout the US. There has been very little research to date on the perceived benefits of use of a professional listserv in relation to user characteristics and problem solving, a source of support or relationship building. This research focused on social media exchange among oncology social workers and will have implications for communication through a social media outlet in other health professions and membership organizations for further professional development opportunities. The analysis here describes the characteristics of the oncology social workers and the ways that they utilize their listserv discourse to share information with other members across the country and mutually grapple with approaches to resolve those challenges posed by cancer patients in their work settings.

The rate of cancer diagnoses and the discovery of new technologies to treat cancer continue to increase in the United States (American Cancer Society, 2017; Viegas, Laderia, Costa-Veiga, Perelman, & Gajski, 2017). These simultaneous developments have contributed to an escalating complexity associated with cancer patient needs related to treatment or other psychosocial needs and extended lifespans for cancer patients (MacReady, 2011). To better serve cancer patients facing psychosocial and other difficulties during and after treatment, OSWs

throughout the United States utilize the SWON listserv to problem solve and to communicate about available resources for cancer patients they work with. Literature suggests that the social work profession struggles with confusion about what roles and tasks a social worker is responsible for as well as how to demonstrate effectiveness. Having a sense of mutual support in the work setting is associated with numerous benefits such as reduced burnout, reduced feelings of professional isolation, and reduced stress (Lloyd, King & Chenoweth, 2002). OSWs are typically employed in hospitals and outpatient cancer centers; however, they may also work in hospice or palliative care settings (Association of Oncology Social Work, 2018). OSWs utilize the SWON listserv to reach out to their colleagues across the U.S. for ideas to better coordinate care, close knowledge gaps, support one another and find resources for cancer patients.

Theoretical Frameworks

This study uses two theories to guide the exploration of the characteristics associated with SWON listserv use. This research is descriptive in nature to determine how OSWs work with one another over the listserv to solve complex issues and the perceived benefits of use of the SWON listserv by OSWs in solving problems typically faced by cancer patients. To better understand knowledge sharing behaviors related to meeting patient needs in an online community, social exchange theory (SET) and community of practice that has a foundation in social learning theory were used as the guiding frameworks. SET is used to explain and predict knowledge sharing behaviors in online communities using the cost-benefit approach with specific criteria (Blau, 1964; Gharib, Philpott & Duan, 2014; Liang, Liu, & Wu, 2008; Ridings, Gefen & Arinze, 2006; Wu, Lin & Lin, 2006). Community of practice is used to describe the OSWs perceived benefits across the three main domains of a community of practice; the

presence of an appropriate knowledge base for competent contribution, relationship formation, and to build an accessible knowledge base (Gray, 2004).

Aims of the Study

The main objective of this research is to explore the nature of social exchange and use of a professional online community that occurs on the OSW SWON listserv and the characteristics of those OSWs using the listserv. Understanding OSW characteristics in relation to how they use the SWON listserv is a starting point for future research and to inform policy on the use and benefits of an online professional listserv. This study explored the characteristics of online listserv users in the oncology social work setting and the association between OSW characteristics and reasons for listserv use.

The specific aim of this study is to:

Determine how OSWs work with one another over the listserv to solve complex issues, provide mutual support to one another and the perceived benefits of use of the SWON listserv by OSWs in solving problems typically faced by cancer patients.

Characteristic variables include primary employment setting, current work setting, current work situation, years of experience in a professional social work setting, years of experience in an oncology social work setting, certification as an oncology social worker, attendance at local or state oncology meetings and attendance of national oncology settings. Variables for describing OSW attitudes about the value of the listserv and reasons for use include resources, professional development, mutual support, increased knowledge base, and valued rewards.

Research Design

Method

This study was intended to be descriptive in nature and utilized a cross-sectional, survey research design. This was determined to be an appropriate research design based on the data collection process. The data was collected from one sample of the OSW population and the information was only obtained from the sample once via survey.

Sample

The sampling frame for this study was all AOSW members *(N*=1,193). All AOSW members have access to the SWON listserv, however, it is not known how many AOSW members use the SWON listserv. A researcher developed survey was distributed to all AOSW members. All survey responses used within this study are AOSW members that responded that they use the SWON listserv.

Analysis

This study utilized descriptive statistics and Chi Square analysis to investigate the characteristics of OSWs with regards to how and why they use the SWON listserv. The research is descriptive in nature and survey responses were used to gain a better understanding of how the SWON listserv is used and valued among the OSW community. Measures of association were used to explore associations between OSW characteristics and reasons for using the listserv and attitudes about the value of the listserv.

CHAPTER 2. REVIEW OF THE LITERATURE

Cancer Prevalence

Cancer is a growing public health problem not only in the United States, but across the globe (Viegas, et al., 2017). It is estimated that in the year 2017, about 1.7 million Americans were diagnosed with cancer and just over 600,000 deaths (1,650 people daily) occurred as a result of cancer (American Cancer Society, 2017). In the United States, approximately 1.6 million people are diagnosed with cancer annually and the cost of cancer care accounts for approximately 5% of the overall national health care expenditures (Tangka et al., 2013). Although there has been about a 26% decrease in death rates caused by cancer since the peak around 1991, cancer remains ranked at number two (21%) as the leading cause of death in the United States exceeded only by heart disease (48%) (American Cancer Society, 2017). Both the prevalence and cost of cancer have increased congruently. In the year 2014, over 14 million people were diagnosed with a form of invasive cancer in the United States, with the prevalence rate likely to increase to 18+ million by the year 2020 (Diegues, Ferro & Pyenson, 2017; Howlader, et al., 2016; Mariotto, Yabroff, Shao, Feuer & Brown, 2011).

Although cancer affects all populations, disparities exist among populations today in both incidence and mortality (National Cancer Institute, 2018). Disparities in incidence and mortality exist across race/ethnicity, sex, socioeconomic status, and geographic location. Ward et al. (2004) conducted a study to highlight the cancer disparities among individuals with differing socioeconomic status. The article examined data from the top national centers that track cancer prevalence and outcomes which included the National Cancer Institutes (NCI) Surveillance, Epidemiology, and End Results (SEER) Program, National Center for Health Statistics (NCHS) and the National Health Interview Survey (NHIS) (conducted by NCHS). Results combined data

from all sites and concluded that men and women have noted disparities in mortality rates when their income is equal to or less than 20% of the poverty line when compared to the population with higher income (less than 10% below the poverty line). The data reported a 13% higher mortality for men and a 3% higher mortality rate for women. Also, women's survival rates at five-years are ten percentage points lower in this population compared to wealthier women (Ward et al., 2004). Multiple factors suggest that socioeconomic status has a major impact on cancer disparities such as partaking in high-risk behaviors such as tobacco use, and obesity resulting from poor diet and exercise. Furthermore, poor or lower access to care, low income, education, health insurance coverage and access to care is essential for early detection and treatment (National Cancer Institute, 2018; Shavers & Brown, 2002; Ward et al., 2004).

Research suggests mortality and incidence disparities exist in cancer patients of different race/ethnicity and the type of cancer diagnosis even when income, age, severity and insurance status is considered (Nelson, 2002). Shavers and Brown (2002), found that African Americans are 33% more likely to die of cancer than whites especially when diagnosed with cancer of the breast, lung, prostate, colon, esophagus and oral cavity. In addition, Asians/Pacific Islanders and Native Americans have higher mortality rates when diagnosed with cancer of the cervix, liver and stomach when compared to non-Hispanic whites. Hispanics' mortality rates are like those of whites except for cervical and stomach cancer, which have a higher mortality rate in Hispanics (National Cancer Society, 2017; Shinagawa, 2000; Shavers & Brown, 2002). The National Cancer Institute (2018), documented disparities including higher incidence in triple-negative breast cancer in African America women (a very aggressive type of breast cancer), higher rates of prostate cancer for African American men, higher rates of kidney cancer among American Indian and Alaska Natives,

higher rates of liver cancer among the Asian and Pacific Islanders and higher rates of cervical cancer in Hispanic and African American women when compared to other racial groups.

Cancer is known as a devastating disease that shows no bias towards its victims and has a great impact on the psychosocial well-being of both patients and caregivers (Dalal, 2020). Multiple barriers exist for cancer patients and caregivers that vary from financial concerns related to cost of care and lack of work, no experience with navigating the healthcare system, inadequate health insurance, and daily activities such as transportation to medical appointments (Sharpe & Scheid, 2018). Historically, social workers working in an oncology setting are the team members trained to work advocating for the patients for a variety of needs that impact health, outcomes and care. Access to care and compliance with expensive treatment are examples of barriers that are increasingly difficult in patients who experience a multitude of psychosocial issues. Oncology social workers are trained to assist patients and families adjust to the diagnosis and treatment of cancer, provide linkage and access to resources and assist with the psychosocial recovery for patients and family (Kennedy, 1996)

Oncology Social Workers: Advocates for Patient Care

Often the oncology social worker (OSW) is the only professional that addresses and assists cancer patients with meeting their cancer-related needs. Oncology social work is the combination of two separate bodies of knowledge: social work theory and practice and the science and treatment of cancer (Christ, Messner & Behar, 2015). The role of the OSW varies depending on setting; however, the underlying principle remains the same. The primary role of an oncology social worker is typically that of a psychosocial care provider. The main patient-facing social work tasks in most oncology settings are to screen, evaluate and assess overall needs of the patients, to provide counseling in relation to adjustment to illness to the patient and

family, provide individual, family and group psychotherapy and facilitate the utilization of needed health-care resources (Smith, Walsh-Burke & Crusan, 1998). The role of the social worker in an oncology setting is important to meeting the goals of any multidisciplinary oncology team. Although there are many disciplines that offer psychological support, social workers are the primary discipline offering psychological support and interventions in the oncology setting and are the only discipline trained to provide evidence-based interventions. In addition, oncology social workers are also the primary role responsible for all resource referrals, case management needs, community outreach and education, all needs related to financial issues such as insurance, personal finances, housing, transportation, legal issues, and any behavioral health needs (Zebrack, et al., 2016).

The Association of Oncology Social Work (AOSW), is the national professional organization of oncology social work and provides a description of the roles OSWs can engage in. According to AOSW, the oncology social worker will assist patients, caregivers and families through psychosocial support, connecting patients with resources needed for cancer treatment on the community, state, national and international level, as well as conduct research, provide education, advocacy and resource development. OSWs are required to be masters-prepared through a social work graduate program that is accredited by the Council on Social Work Education (Association of Oncology Social Work, 2018). In addition, OSWs are often licensed as a clinical social worker (LCSW) in their state of practice and may also become credentialed as an Oncology Social Worker-Certified (OSW-C) (Burg, Adorno & Hidalgo, 2018). The Oncology Social Work Certification requires three years of experience post master's degree in an oncology setting, current state license in good standing, be a current member of AOSW and a minimum of 20 hours per week working in oncology social work. The certification represents advanced

knowledge and skill sets as well as competence and commitment to the field. The AOSW has over 1,100 active members and provides a direct link to the SWON listserv for use and access to all archives for use by members to discuss resources, ask for direction and seek guidance/knowledge from other professionals in the field regarding the daily challenges they face (Association of Oncology Social Work, 2018; Burg, Adorno & Hidalgo, 2012).

Use of the Internet in Health Professional Communication and Online Communities

The use of the internet and social media has revolutionized ways for health professionals to have inter professional communication, the ability to knowledge share, increased workplace learning and professional development (Rolls, Hansen, Jackson, & Elliott, 2016). Online communities allow individuals with similar interests, such as health-related concerns, to interact with one another through a variety of methods such as chat rooms, email exchange, listserv postings and bulletin boards (Coulson, Buchanan & Aubeeluck, 2007). The online forum allows individuals to communicate knowledge and provide support to one another without geographical boundaries, time restrictions in terms of when to participate and formulation of posts, spatial limitations, and allows access for a more diverse group of individuals (Coulson, Buchanan & Aubeeluck, 2007; Coulson, 2005). In this technological age, knowledge has high value and businesses/organizations can promote increased knowledge sharing through technology using online forums which also serves to minimize cost while maximizing performance (Wu, Lin, & Lin, 2006). Online communities take on characteristics that are unique to an online structure. They are typically large although limited to a specific group of professionals, have a mixture of active participants, observers and lurkers all of which can benefit from the information shared and rely on voluntary interaction/sharing of knowledge, and information provided is member generated and not from the site benefactor (Groenewegen & Moser, 2014; Ridings, Gefen &

Arinze, 2006; Rolls et al., 2016). Research suggests that online communities' success is dependent upon the degree to which individual participant needs are met. Those communities that do well satisfy participant needs in terms of providing benefits to the user in terms of resource availability and access to the information provided (Butler, 2001; Ellison, Steinfield, & Lampe, 2007; Füller, Matzler, & Hoppe, 2008; Moser, Groenewegen, & Huysman, 2011; Wasko & Faraj, 2005).

Research has been conducted to explore the use and benefits of social media among health care professionals. Rolls et al. (2016) completed an integrative literature review to examine the use of online communities among health care professionals and concluded that virtual communities provide a method to eliminate barriers to knowledge flow and network. Hara and Foon Hew (2007) conducted a case study to determine the types of activity and knowledge that nurses share in online communities and determine what factors contribute to sustained use for knowledge sharing. Findings suggest that knowledge sharing, and solicitation were the two most common activities for online communities. These findings directly align with additional studies that report the use of online communities has grown in both organizations and individual professions for communication of knowledge sharing and for innovation purposes (Agterberg, van den Hooff, Huysman & Soekijad, 2010; Groenewegen & Moser, 2014; Jeppesen & Lakhani, 2010).

Preliminary Research

In a previous qualitative study conducted by Burg, Budvarson, Muzyczka, Balgo, & Loerzel, (unpublished, 2018), OSW SWON listserv positing's from the years 2016 and 2017 were evaluated with a purpose to begin to understand how the system of patient advocacy works to provide relief to patients with financial challenges. This study provided a unique view of the

processes and challenges of obtaining resources to assist with financial challenges in cancer patients. 211 OSW postings from the SWON listserv were evaluated in this study and categorized into three main themes. The three themes that emerged from the postings by order of frequency were: (1) paying direct costs of cancer treatment; (2) paying for hidden costs associated with cancer treatment; and (3) paying for non-medical expenses and needs during and after cancer treatment. The most frequent theme was for paying the direct costs of cancer treatment. This includes struggles with co-pays, deductibles, co-insurance and coverage for pre-existing conditions. The second identified theme was paying for the hidden costs of cancer treatment such as medical supplies like ostomy supplies, the inability to participate in clinical trials due to the costs associated with trial participation, transportation, lost wages, counseling, smoking cessation, physical therapy, family planning and funeral/cremation planning. The third and final theme identified was related to paying for living expenses such as bills, utilities, groceries, home repairs, and rent/mortgage. It is important to mention that this study concluded that the responses indicated that the OSWs posted on the listserv seeking assistance and knowledge from others only after they had exhausted all other known financial resources. Results from this study challenge the belief that financial assistance is readily available for out of pocket and living expenses as related to the cost of cancer treatment (Burg, et al., 2018). The evaluation of these initial postings also revealed a level of complexity that is often encountered when trying to help cancer patients with financial needs.

Summary of Literature Findings

The literature surrounding oncology social work practice demonstrates that the advocacy of this professional community is key to addressing the social consequences of cancer care. The literature clearly indicates that access to resources is a major problem for cancer patients,

regardless of insurance status. Limited resources and growing costs in both cancer diagnosis and cost of cancer treatment creates great concern for the oncology community. Disproportionate outcomes of cancer care may result from failure to complete treatment and lack of access to quality cancer care. The needs of cancer patients are vast and can be very complex due to illness and psychosocial concerns. There are consistent recommendations throughout the literature for policy change for more aggressive patient advocacy related to care and improved patient outcomes.

Gaps in the Literature

After an extensive review of the literature, it is apparent there are several gaps that research should explore as related to the health care industry and the utilization of online communities. Research is needed to explore how health care professionals utilize online communities for working through challenging problems faced in their field of practice. Research to examine advantages for health care professionals' engagement in online communities can be beneficial in showing health care disciplines the value in online community use. Furthermore, there is no literature identified that explored the characteristics of professionals who find rewards from listserv participation.

CHAPTER 3: THEORETICAL FRAMEWORK

This study uses two theories to guide the exploration of the characteristics associated with SWON listserv use. This research is descriptive in nature to determine how OSWs work with one another over the listserv to solve complex issues and the perceived benefits of use of the SWON listserv by OSWs in solving problems typically faced by cancer patients. To better understand knowledge sharing behaviors related to meeting patient needs in an online community, social exchange theory (SET) and community of practice that has a foundation in social learning theory were used as the guiding frameworks. The following section discusses each framework, previous use of the frameworks and how the theories relate to the use of a professional online listserv.

Social Exchange Theory

This dissertation research examines the use of an online forum by oncology social workers as a site for collaborative sharing of resources to meet the challenges of the cancer patients they work with. Organizations across the globe have continued to explore the potential use of online communication to increase knowledge sharing, professional development and continued learning. Social exchange theory (SET) provides a portion of the theoretical foundation for this research. SET was first introduced into the social psychology literature in the 1950s and into sociology literature in the 1960s and is frequently used in research involving online community behaviors, workplace behaviors and communications (Blau, 1964; Cropanzano & Mitchell, 2005; Homans, 1958; Ridings Gefen & Arinze 2006; Thibault & Kelley, 1959). SET defines a social exchange as a relationship with a series of interactions that generates obligations with the potential to develop strong relationships when specific conditions are met (Cropanzano & Mitchell, 2005; Thibaut & Kelley, 1959; Wu, Lin & Lin, 2006). SET views online communities as a setting for participants in a group, individual or business setting

to exchange information and knowledge (Gharib, Philpott & Duan, 2014). SET uses a cost-benefit approach to predict individual behaviors stating that the higher the perceived benefit, the more prone individuals are to continue with certain behaviors (Blau, 1964). Research suggests that SET is the most commonly used theory to predict knowledge sharing behaviors in online communities using the cost-benefit approach with the following criteria; participants receive maximum benefits with minimal costs (reciprocity and reward), have an expectation that helping others will result in a future return and lastly, these benefits do not need to be tangible in nature (Blau, 1964; Gharib, Philpott & Duan, 2014; Liang, Liu, & Wu, 2008; Ridings, Gefen & Arinze, 2006; Wu, Lin & Lin, 2006).

Based on the SET, trust, communication and reciprocity serve as the motivator to produce trusting and loyal relationships (Cropanzano & Mitchell, 2005; Wu, Lin & Lin, 2006). Homans (1958) speculated that good communication among members is key in building well-functioning relationships. In turn, research has shown that good communication has a positive correlation with establishing trust (Cropanzano & Mitchell, 2005; Jarvenpaa & Leidner, 1999; Zeffane, Tipu & Ryan, 2011).

Those who participate in social exchange in an online community do so with the understanding that there may not be reciprocation, however, they still participate with the expectation of being rewarded. The reward expected is something that is important to the individual, which could be either intrinsic and intangible, such as feelings of contributing to society or respect, or extrinsic, such as a thank you or receipt of needed knowledge in the future by some member of that community (Ridings, Gefen & Arinze, 2006). It is important to note that with SET, participants are not required to follow an explicit set of rules to participate in

social exchange and participation is driven purely by social behaviors that are expected from one another (Ridings, Gefen & Arinze, 2006).

Community of Practice

Social learning theory places emphasis on importance of the interactions between individuals, the networking of individuals and professional development. One concept with a foundation in social learning theory, that views learning as a social behavior where people learn through interactions with others in real life settings is the concept 'community of practice' (Brown & Duguid 1991; Wenger, 1998; Wenger, McDermott & Snyder, 2002; Wenger & Snyder, 2000). Community of practice is a model of learning that has become progressively significant in the social sciences with a focus on creativity and flexibility as well as organizational productivity (Hughes, Jewson & Unwin, 2013). Working and learning are traditionally thought distinctly of one another. A community of practice merges working and learning environments for those with a shared discipline/craft and provides a platform for professional development to occur in daily work practices (Brown & Duguid, 1991). The Community of practice forum also allows for "how-to" knowledge sharing to occur from colleague to colleague and eliminates the need for a classroom forum designed for learning (Brown & Duguid, 1991; Gray, 2004).

Communities of practice are not intended to be used as chat rooms or clubs among friends as a means of communication. Community of practice will have a specific identity that is defined by a shared interest and becomes a space for shared practice for practitioners to address recurring problems, share resources and experiences through conversation (Wenger, 1998). Conversation in community of practice is defined by the knowledge sharing that takes place, typically formed in the question (information seeking) and answer (knowledge sharing) format.

The knowledge seeker typically posts the question, identified barrier to care, needed resource etc. in the community of practice through an online forum or listserv and awaits a response from other members (Harah & Foon Hew, 2007).

In addition to obtaining answers to questions, members of the community of practice also may gain support from one another, reassurance that actions taken are accurate, insights to others' thoughts and/or beliefs/values (Preece, 2004). Research has suggested that many forms of information sharing can occur in a community of practice. Traditionally, researchers have referred to knowledge as either tacit (knowledge held in one's head) or explicit (shared/expressed to others) (Biggam, 2001). Rather than use the tacit-explicit dichotomy, that clearly shows that knowledge is either shared through expression or remain unshared, this study will use the approach developed by Harah, (2007). Harah (2007) studied two communities of practice and developed an approach that identifies three broad types of knowledge. First, is book knowledge which is an individual's knowledge about facts, policies or procedures which were obtained from reading reliable sources. The second is practical knowledge which is in essence book knowledge applied to the practical setting. It involves combining book knowledge with real-life situations, so the correct information can be used for each particular setting. The third is cultural knowledge which is a combination of one's belief system and one's professional responsibilities (Hara, 2007). Knowledge sharing has been recognized as a key component for a nurturing learning environment within both organizations and professional communities and therefore, the broader scope of defining knowledge types will be used when exploring knowledge sharing on the SWON listserv (Brown & Duguid, 2017).

Communities of practice are voluntary methods of informal learning that have been shown to be effective tools for professional development, increased knowledge and support

across various fields such as technicians, nurses, emergency departments, lawyers and claim processors (Curran, Murphy, Abidi, Sinclair & McGrath, 2009; Gray 2004; Hara & Foon Hew, 2007). A community of practice will vary from other communities with respect to three main areas. First, a community of practice is set by a shared interest therefore, members are assumed to have a certain knowledge base as well as level of competence for contribution purposes. Second, relationships are built around a theme based on the interactions they have together. Learning is done together through these interactions by helping one another and sharing information. Third, they build a knowledge base that they can access at any time when faced with new challenges that include different experiences, stories, solutions to problems and best practices (Gray, 2004). This study seeks to describe the OSWs perceived benefits across all three domains of a community of practice.

Communities of Practice in Use

Communities of practice are used across numerous industries from the military and medical field to teaching. Examples of successful, community of practice forums currently in existence are provided to demonstrate the vastness of capabilities using a community of practice can afford across many disciplines. CompanyCommand is a community of practice for US Army company commanders (commander of a company of about 150 soldiers) of all ages and experience levels to connect with one another and share learned experiences, insights on experiences, lessons learned during their tenure, professional development and any other tools and methods that may be helpful to one another. CompanyCommander community of practice was started by two soldiers in 1995 and is considered one of the most successful in military history (Dixon, 2007; Snyder, Wenger & de Sousa Briggs, 2004). SERMO is an online community of practice that is exclusively for medical doctors. Membership requires verification

of a medical license and is free to use. The SERMO online community of practice allows doctors to come together across the globe (over 150 countries) to connect to one another, share ideas and crowdsource ideas in a safe, secure environment. SERMO has developed a specific crowdsourcing platform called SERMOsolves to allow physicians to post information about tough cases and receive input from their peers. Current members total close to 800,000 physicians (SERMO, 2019). Teaching online preparation toolkit (TOPkit), is a global community of practice for online teachers to collaborate and for faculty development. Teachers across the globe can connect with one another for new inspiration, ideas and learnings from experienced teachers, and support from one another (Teaching Online Preparation Toolkit, 2019).

Development of Research Questions and Hypothesis

The purpose of this study is to describe the characteristics of OSWs that engage in information sharing on the SWON listserv and to investigate the OSW characteristics and reasons for using the listserv and attitudes about the value of the listserv. The research questions and hypothesis generated for this study are related to the elements of SET as it is used for predicting behaviors based on a cost-benefit approach and community of practice as it relates to three main domains of assumption of an adequate knowledge base and competence level to appropriately contribute to the listserv, relationships are built based on interactions of helping one another and sharing information, and a knowledge base is built that can be accessed at any time when faced with new challenges that includes different experiences, stories, solutions to problems and best practices. Based on previous research and the theoretical guidance, four research questions were formed. The research questions and hypothesis are as follows:

Research Question 1. Does SWON listserv participation meet OSWs need for assisting cancer patients with psychosocial challenges?

The variables chosen for both the research question and hypothesis were chosen using the two theoretical frameworks as a guiding principle. There is potential to clarify the perceived value of the SWON listserv with helping OSWs meet the complex needs of cancer patients. Community of practice places value on learning and obtaining different types of knowledge as key components of a nurturing learning environment within a professional community. SET views online communities as a setting to participate in the exchange of information and knowledge.

Research Question 2. How does listserv use contribute to professional development among OSWs?

The variables for this research question are derived from the two guiding theories. According to the community of practice framework, communities of practice are voluntary methods of informal learning that have been shown to be effective tools for professional development, increased knowledge and support. SET believes social exchange provides the potential to develop strong relationships through information and knowledge sharing and communication and reciprocity serve as motivators to building trusting and loyal relationships.

Research Question 3. What rewards are valued by OSWs with SWON listserv use?

Rewards are derived from the SET guiding theoretical framework. SET uses a cost-benefit approach whereas the benefits and participants receive maximum benefits with minimal costs (reciprocity and reward) but the rewards do not have to be tangible in nature. The reward is something that is important to the individual which could be either intrinsic or extrinsic.

Research Question 4. What are the characteristics of OSWs who identify positive outcomes of SWON listserv participation?

Variables for research question four are derived from the SET framework. Positive outcomes of SWON listserv participation is measure by the perceived rewards of the OSWs that have continued use of the SWON listserv. As previously mentioned, the reward is something that is important to the individual which could be either intrinsic or extrinsic.

Guided by the theoretical frameworks informing this study, the hypothesis for this research are as follows:

$H_{1.1}$: Listserv participation is valued for discovery of resources for meeting the needs of cancer patients.

$H_{1.2}$: Listserv participation provides new ways to meet the needs of cancer patients.

$H_{2.1}$: Listserv participation is valued for increasing a sense of mutual support among OSWs.

$H_{2.2}$: Listserv participation is valued for increasing a knowledge base for use in OSW daily practice.

$H_{3.1}$: SWON listserv participation is valued by OSWs for providing intrinsic rewards (e.g., feeling good about contributing to the work of other OSWs through information sharing and providing support)

$H_{3.2}$: SWON listserv participation is valued by OSWs for providing extrinsic rewards (e.g., thank you, receipt of knowledge or confirmation that the information provided was useful)

$H_{4.1}$: Working in settings with no other OSWs on staff is positively associated with perceived benefits from listserv participation.

$H_{4.2}$: Years of practice is negatively associated with perceived benefits from listserv participation.

$H_{4.3}$: Attendance at local or national OSW meetings is positively associated with perceived benefits from listserv participation.

Research Question/Hypothesis	**Theoretical Foundation**	**Data Source Survey Questions**	**Statistic**
RQ1: Does SWON listserv participation meet OSWs need for assisting cancer patients with psychosocial challenges?	Social Exchange Theory/ Community of Practice	Survey Q: 2.2, 3.1, 3.2, 3.5, 3.11, 3.12, 4.1, 4.2, 4.3, 4.4	Descriptive
RQ2: How does listserv use contribute to professional development among OSWs?	Social Exchange Theory/ Community of Practice	Survey Q: 2.1, 2.3, 2.4, 3.3, 3.4, 3.6, 3.7, 3.8, 3.9, 3.10, 3.13, 3.14, 4.5, 4.6, 4.7	Descriptive
RQ3: What rewards are valued by OSWs with SWON listserv use?	Social Exchange Theory	Survey Q: 3.15, 3.16, 3.17, 3.18, 3.19, 3.20, 3.21 3.22	Descriptive
RQ4: What are the characteristics of OSWs who identify positive outcomes of SWON listserv participation?	Social Exchange Theory	Survey Q: 8, 9, 10, 11, 12, 13, 14, 15	Chi-Square Test of Independence

Figure 1: Research Questions, Theoretical Foundation, Data Source, Statistics

CHAPTER 4. RESEARCH METHODOLOGY

This section provides a detailed description of the methodology utilized in this study. The research design, population, sample, instrumentation, data collection and the data analysis will be detailed.

Research Design

This study investigated the characteristics of OSWs with regards to how and why they use the SWON listserv. The research is descriptive in nature and survey responses are used to gain a better understanding of how the SWON listserv is used and valued in among the OSW community. Research approval was received from the University of Central Florida IRB for research protocol as exempt research. This research was also approved through the AOSW research committee prior to distribution of the survey. This research uses a cross-sectional, survey research approach. A non-probability, convenience sample was used for the purposes of this research. The criteria to participate in this study had three components. First, participants had to be members of the AOSW. Second, they had to reside and work in the United States. Third, participants had to be over the age of 18. There were no additional criteria required to participate in the survey. There was no collection of identifying information to maintain patient confidentiality. Survey responses will be maintained for five years.

Population

The population for this study was any current member of the AOSW who reside and work in the United States. All members, regardless of use of the SWON listserv, were invited to participate in the survey. The Association of Oncology Social Work is a national association and therefore, participants could reside anywhere in the United States. Common characteristics of

survey participants include having some level of degree in social work and are current members of AOSW.

Sample

The sampling frame for this study was all AOSW members (*N*=1,193). All AOSW members can access the SWON listserv. However, the AOSW staff do not have any specific approach to estimating the volume of AOSW members who follow or engage in the listserv. Thus, although the survey was sent to all AOSW members, we cannot accurately estimate a response rate since the denominator for the response rate is not known.

A review of the literature produced three research studies previously conducted using surveys with AOSW members that will lend insight on previous response rates from this population. The first was a study regarding barriers to accessing quality care for cancer patients. The purpose of the study was to explore the perspective of OSWs via survey regarding the barriers that cancer patients face with getting quality health care. Both online and mailed surveys were used with a response rate of 62.3% (*n*=622/999) (Burg et al., 2010). The second study looked at OSW competencies and implications for education and training. The study was completed to survey OSW members of AOSW in response to the AOSW 2008 strategic plan goals. The survey explored areas of practice competency among OSWs, types of clients served and overall social work content. Researchers both mailed and emailed survey to AOSW members yielding a result of a 62.3% *(n*=622) response rate (Zebrack, Walsh, Burg, Maramaldi & Lim, 2008). Lastly, the third study was a national survey of OSWs knowledge, attitudes, behaviors and competency as related to screening for distress in cancer patients. The survey was provided via email to 1,188 AOSW members with a 41.8% response rate *(n*=467) (BrintzenhofeSzoc et al., 2015). Based on the previous research response rates from this

population, it was anticipated that an adequate number of responses would be received for this research.

Measurement of Study Variables

The survey instrument, entitled SWON Listserv Survey was used to collect data regarding characteristics of OSWs and reasons for using the SWON listserv. The survey questions were developed based on the prominent themes of social exchange theory and community of practice. The survey questions are designed to allow for exploration of processes and outcomes as related to community of practice and social exchange theory, when engaging in a professional listserv.

Survey questions were developed to explore how and if using the SWON listserv postings have benefited OSW's in professional development, if identified needs can be met, and rewards received and provided are valued. See Appendix A for the full SWON survey. Derived from a community of practice and social exchange perspective, there are a total of fifteen items that assess the dependent variable of professional development (survey items; 2.1, 2.3, 2.4, 3.3, 3.4, 3.6, 3.7, 3.8, 3.9, 3.10, 3.13, 3.14, 4.5, 4.6, 4.7) , ten items that assess the dependent variable if identified needs are met (survey items; 2.2, 3.1, 3.2, 3.5, 3.11, 3.12, 4.1, 4.2, 4.3, 4.4) and six items that assess the dependent variable if rewards are valued by OSWs (survey items; 3.15, 3.16, 3.17, 3.20, 3.21, 3.22) using the SWON listserv. Survey questions include Likert scale items, multiple choice items and open-ended items.

Design Validity

Primary concerns when using a researcher developed survey is internal validity. Internal validity is the degree to which valid conclusions can be drawn about the effects of the independent variables on the dependent variables. To minimize issues related to validity, prior to

survey distribution to all AOSW members, the researcher developed survey was distributed to three actively employed oncology social workers for validation of the measurement tool. The researcher contacted three oncology social workers via email requesting voluntary assistance with the validation of the researcher developed survey tool. All three social workers agreed to take the survey and provide feedback. The survey was sent via email attachment and instructions were provided to the three social workers requesting the measure be reviewed for face and content validity, assess the ease of understanding of the questions, the logical flow, content relevance and to provide any feedback on existing survey items or additional items that they felt should be included and were not. Each volunteer completed the survey and provided feedback for the survey. All feedback was considered for the final version of the SWON survey.

Dependent Variables

There are three dependent variables used in this study, meeting professional development needs, identified resource needs are met and OSW perceived rewards from SWON listserv use. Professional development needs met through SWON listserv use is operationalized as maintaining and increasing knowledge needed in the social work profession using a community of practice, the contribution to the community, perceived mutual assistance and an increased knowledge base. Meeting the identified needs through SWON listserv use includes increasing resources, finding new ways to meet needs, and providing mutual support. Perceived rewards obtained through SWON listserv use can be both extrinsic such as receiving a thank you, receipt of knowledge or confirmation that the information that was provided was useful or intrinsic such as feeling that the information and support contributed to the SWON listserv has been helpful to other SWON members.

Independent Variables

Independent variables measuring OSW characteristics were measured against the dependent variables to assess for associations. The independent variables are the OSW characteristics defined as, the frequency of checking the SWON listserv, the frequency of posting on the SWON listserv, the frequency of responding or commenting on the SWON listserv, current work setting, primary employment, current work situation, years of practice in professional social work, years of practice in oncology social work, oncology certification and attendance at local, state or national oncology social work meetings. All independent variable data is provided directly from the survey results.

Data Collection

After obtaining UCF IRB approval, a research protocol application form was submitted to the AOSW research committee for research approval. This researcher was notified on December 9, 2019 that the application submitted was approved by the AOSW research committee and was instructed to contact the AOSW communications chair for further assistance regarding survey distribution. This researcher emailed the AOSW communications chair a survey link to the SWON Listserv Survey in Qualtrics, along with a short introduction that included UCF IRB approval and AOSW research committee approval. In addition, participants were informed of approximate duration to participate in the survey, a confidentiality and voluntary participation statement, and a thank-you for participating. The AOSW communications chair sent the survey link and introduction via email to the SWON co-moderator for SWON posting. On February 5, 2020, the SWON co-moderator posted the provided introduction and link to the SWON survey directly on the SWON listserv (Appendix D), and requested the survey be distributed via email to all AOSW members (*N*=1,193). AOSW requires all branded emails to

all members be pre-planned, therefore, the email to all AOSW members was scheduled and was sent on February 7, 2020. AOSW allotted only one reminder via email during the time the survey was available for completion.

The SWON listserv survey remained open to potential participants for a period of six weeks once disseminated. Initial email invitations were sent to all potential participants followed by one reminder during week three to encourage participation. Participation was voluntary and AOSW members were permitted to opt out of completing the survey at any time. The survey was initially distributed on February 5, 2020, a reminder was sent on February 27, 2020 and the survey was closed on March 15, 2020.

Data Analysis

Following the conclusion of the SWON listserv survey, the data was exported into an Excel spreadsheet. Descriptive statistics were generated using IBM SPSS Statistics version 25.0 for Windows. Figure 1 shows the data sources used to answer the research questions, the theoretical foundation(s) guiding the questions, the data source with specific survey item numbers used to answer the research questions and the statistical calculations used to describe the frequencies of the data and to determine associations between the variables. Descriptive statistics were used to produce frequencies on all variables.

The design of this study is cross-sectional, descriptive research. Research question one is meant to explore using descriptive analysis if participating on the SWON listserv meet the OSWs need for assisting cancer patients with psychosocial challenges. The first hypothesis for research question one is that listserv participation is valued for discovery of resources for meeting the needs of cancer patients. Descriptive statistics were used to report OSWs perceptions of using the SWON listserv to meet patient needs. The second hypothesis for research question one was

that listserv participation provides new ways to meet the needs of cancer patients. Descriptive statistics were used to report OSWs perceptions about listserv participation providing new ways to meet the needs of cancer patients. Measures of association were used to explore associations between OSW characteristics and reasons for using the listserv and attitudes about the value of the listserv.

Research question two is meant to explore through descriptive analysis how listserv use contributes to professional development among OSWs. The first hypothesis for research question two is that listserv participation is valued for increasing a sense of mutual support. Descriptive statistics were used to report what is valued by OSWs who use the SWON listserv. The second hypothesis for research question two is listserv participation is valued for increasing a knowledge base for use in OSW daily practice. Descriptive statistics were used to report if listserv use is valued by OSWs who use the SWON listserv for increasing a knowledge base. Measures of association were used to explore associations between OSW characteristics and reasons for using the listserv and attitudes about the value of the listserv.

Research question three is meant to explore using descriptive analysis what rewards are valued by OSWs with SWON listserv use. The first hypothesis for research question three is SWON listserv participation is valued by OSWs for providing intrinsic rewards. Descriptive statistics were used to report if OSWs who use the listserv value intrinsic rewards. The second hypothesis for research question three is SWON listserv participation is valued by OSWs for providing extrinsic rewards. Descriptive statistics were used to report if OSWs who use the listserv value extrinsic rewards.

Research question four is meant to explore OSW characteristics and positive outcomes of SWON listserv participation. The first hypothesis for research question four is working in

settings with no other OSWs on staff is positively associated with perceived benefits from listserv participation. An individual Chi Square test of independence was run to test the relationship among work situation and perceived benefits from listserv participation. The second hypothesis is years of practice is negatively associated with perceived benefits from SWON listserv participation. An individual Chi Square test of independence was run to test the relationship between years of practice and perceived benefits. The third hypothesis for research question four is attendance at local or national OSW meetings is positively associated with perceived benefits from listserv use. An individual Chi Square test of independence was run to test the relationship between OSW meeting attendance and perceived benefits.

Survey Responses

A total of 217 responses were recorded in Qualtrics. The data was exported from Qualtrics to Microsoft Excel for data analysis. A total of 198 (91%) survey respondents indicated that they did use the SWON listserv and a total of 19 (9%) indicated that they do not use the SWON listserv. The data was then cleaned, resulting in removing 19 responses that did not use the SWON listserv and these responses were not included in further analysis. In addition, a total of 25 responses were removed due to incomplete responses; nine participants answered "yes" to using the SWON listserv but did not complete any additional survey questions, 14 participants answered "yes" to using the SWON listserv and answered survey question number two but answered no other survey questions and two participants answered "yes" to using the SWON listserv and provided a partial answer to survey question number two but answered no other survey questions. The total sample size of 173 complete survey responses were included in the final data analysis (N=173). There was a total of 44 survey responses excluded from the analysis (see Table 1).

Table 1. Total Response Rate

Do you ever use the SWON listserv? *n* (%)	
Yes	198 (91%)
No	19 (9%)
Incomplete	25 (11%)
Total *N*	173

Survey questions 11 and 12 asked the respondent to free text how many years of experience in professional social work practice and how many years of experience in an oncology setting, respectively. Since respondents were asked to free text years of experience, it was required to categorize total responses into categorical variables. Both survey questions were categorized as less than or equal to five years, six to ten years, 11-15 years, 16-20 years, and greater than or equal to 21 years of experience.

Coded themes and theme specifiers were into a database and analyzed using IBM SPSS Statistics version 25.0 for Windows (IBM Corporation, 2012) to produce summary statistics of the distribution of themes. Descriptive statistics were used to produce frequencies on all variables. All identified themes will be detailed in this analysis.

CHAPTER 5. RESULTS

The following chapter reports the results of the study. Descriptive statistics were used to provide the frequency distribution of all study variables. Measures of association were used to explore associations between OSW characteristics and reasons for using the listserv and attitudes about the value of the listserv.

Characteristics of SWON Participants

Descriptive statistics were produced to show the frequency distributions of the characteristics of OSWs that participated in the SWON listserv survey (Table 2). Results show that the AOSW member respondents' who use the SWON listserv are more likely to work in an oncology outpatient setting (*n*=131, 76%) rather than an oncology inpatient setting (*n*=10, 6%) or other setting (*n*=28, 16%). Two (1%) survey participants did not answer this survey question. The "other" setting responses provided included participants that worked in both outpatient and inpatient oncology settings *(n*=2), administrative positions *(n*=2), higher education *(n*=1), community *(n*=1), cancer support wellness center *(n*=1) and not for profit oncology social work settings *(n*=3). The largest number of survey participants worked in a hospital or outpatient treatment setting *(n*=97, 56%), a setting associated with an academic health science center as the second largest setting *(n*=44, 25%) and lastly, a setting other than what was listed *(n*=32, 18%). Other work settings included community support setting *(n*=8), not for profit agency *(n*=7), academic *(n*=3), private practice *(n*=2), Veteran's Administration (VA) hospital *(n*=1), large hospital system *(n*=1), independent network of oncology clinics *(n*=1), and informational phone line *(n*=1). Current work situation was evaluated through exploring if participants worked with other oncology social workers *(n*=97, 56%) versus being the only oncology social worker in their workplace *(n*=63, 36%) as displayed in Table 2.

In addition to participant characteristics related to work settings, years of experience, certifications in oncology social work and meeting attendance were also explored. Results show that survey participants' years of experience in a professional social work setting is highest in the greater than or equal to 21 years *(n*=78 ,45%). The group with the fewest participants is the less than or equal to five years *(n*=18,10%) with the middle categories similar in compassion; six to ten years *(n*=23,13%), 11-15 years *(n*=23,13%) and 16-20 years *(n*=24, 14%). Years of experience in an oncology social work setting results indicated the highest group was less than or equal to five years *(n*=57, 33%), followed by six to ten years *(n*=31, 18%), 11-15 years (*n*=28, 16%), greater than or equal to 21 years (*n*=27, 16%) and lastly, 16-20 years (*n*=22, 13%). Results show that there was a slightly higher number of certified OSW's (*n*=98, 57%) than those who participated and are not certified as an OSW (*n*=73, 42%). These results align with the results of years of experience in an oncology setting because most participants have worked in an oncology setting for less than or equal to five years (*n*=57, 33%). The requirements to obtain an Oncology Social Work Certification include a minimum of three years of experience post master's degree in an oncology setting, current state license in good standing, be a current member of AOSW and a minimum of 20 hours per week working in oncology social work (Burg, Adorno & Hidalgo, 2018).

Results show little difference between participants who attend local or state oncology meetings (*n*=89, 51%) and those that do not attend (*n*=82 ,42%). However, there was a large difference between survey participates that attend national oncology meetings (*n*=121, 70%) compared to those who do not attend (*n*=50, 29%) (Table 2).

Table 2. Characteristics of Survey Participants Among AOSW SWON Listserv users

	Total Respondents (*N*= 173)
Primary Employment Setting; *n* (%)	
Oncology inpatient	10 (6%)
Oncology outpatient	131 (76%)
Other	28 (16%)
Missing	3 (2%)
Current Work Setting; *n* (%)	
Community hospital or outpatient treatment setting	97 (56%)
Setting associated with an academic health science center	44 (25%)
Other	32 (18%)
Missing	4 (2%)
Current Work Situation; *n* (%)	
I work with other oncology social workers at my workplace	97 (56%)
I am the only oncology social worker at my workplace	63 (36%)
Other	13 (8%)
Missing	5 (3%)
Years of experience-professional social work setting; *n* (%)	
$\leq$ 5 years	18 (10%)
6-10 years	23 (13%)
11-15 years	23 (13%)
16-20 years	24 (14%)
$\geq$ 21 years	78 (45%)
Missing	7 (4%)
Years of experience-oncology social work setting; *n* (%)	
$\leq$ 5 years	57 (33%)
6-10 years	31 (18%)
11-15 years	28 (16%)
16-20 years	22 (13%)
$\geq$ 21 years	27 (16%)
Missing	8 (5%)
Certified OSW; *n* (%)	
Yes	98 (57%)
No	73 (42%)
Missing	2 (1%)
Attend local or state Oncology Meetings; *n* (%)	
Yes	89 (51%)
No	82 (47%)
Missing	2 (1%)
Attend National Oncology Meetings; *n* (%)	
Yes	121 (70%)
No	50 (29%)
Missing	2 (1%)

Reasons for Using the SWON Listserv

To gain a better understanding of why AOSW members use the SWON listserv, participants were asked to use a ranking order of one through five, with one being the highest, reasons for using the SWON listserv. Results show that participants that chose option one ranked the variables in the following order; sharing of information on resources (*n*=54, 31%) followed by professional advice (*n*=36, 21%), other reasons (*n*=29, 17%), ways to improve my practice (*n*=13, 8%) and mutual support (*n*=7, 4%). Professional advice was ranked the highest for ranked order option two (*n*=43, 25%), mutual support received the highest ranking in number three (*n*=53, 31%) which is the middle of the ranking order (see Table 3).

Table 3. Primary Reasons for using the SWON Listserv Ranked 1-5 (1=highest; 5= lowest)

	Total Respondents (*N*=173)
Professional advice; *n* (%)	
1	36 (21%)
2	43 (25%)
3	27 (16%)
4	21 (12%)
5	15 (9%)
Missing	31 (18%)
Sharing information on resources; *n* (%)	
1	54 (31%)
2	28 (16%)
3	19 (11%)
4	17 (10%)
5	28 (16%)
Missing	27 (16%)
Mutual support; *n* (%)	
1	7 (4%)
2	32 (18%)
3	53 (31%)
4	50 (29%)
5	3 (2%)
Missing	28 (16%)
Ways to improve my practice; *n* (%)	
1	13 (8%)
2	30 (17%)
3	48 (28%)
4	49 (28%)
5	19 (11%)
Missing	14 (8%)
Other; *n* (%)	
1	29 (17%)
2	5 (3%)
3	2 (1%)
4	7 (4%)
5	72 (42%)
Missing	58 (34%)

Types of Information Typically Sought

Following exploration of primary reasons survey participants use the SWON listserv, this research wanted to identify types of information typically sought on the SWON listserv. This survey question provided opportunity to check all answers that apply as to not exclude any options provided. In addition, this question also included an option to choose “other” with a free

text option if chosen. As shown in Table 4, not surprisingly, the "other" option has the highest number of responses (*n*=126, 73%). This was expected due to the option to free text opinions for information sought on the SWON listserv that were not captured in the choices provided. The second highest option chosen was what roles other OSW's take on in their workplace (*n*=116, 67%) indicating the SWON listserv is used to learn about the responsibilities of others across settings. Roles of other OSW's was followed by ways to assist patients' caregivers (*n*=86, 50%), how other OSW's manage interprofessional relationships on the job (*n*=81, 47%), how to get patients the treatments and/or medications they can't afford (*n*=79, 46%), how other OSW's manage their frustrations at work (*n*=73, 46%), health care insurance options for patients (*n*=57, 33%), and ways to help patients with their travel to treatment (*n*=46, 27%) (see Table 4).

There was a total of 126 participants that chose "other" as the answer choice, however, only 57 participants provided free text responses for the "other" option on the survey question for types of information typically sought on the SWON listserv. The responses were evaluated for themes resulting in seven prominent themes emerging. Key words such as resources, standards and clinical were used to identify the seven themes identified. The seven themes include seeking information on the SWON listserv for; resources (*n*=20) including seeking resources specifically related to financial concerns (*n*=5), clinical information (*n*=8), seeking advice from other OSW's (*n*=8), the Commission on Cancer (CoC) standards (*n*=6), information on webinars and retreats (*n*=5), assessment tools (*n*=4), work advice (*n*=3), varies (*n*=2) and to not feel isolated (*n*=1).

Table 4. Information Respondents Seek on the SWON Listserv

	Total Respondents (*N*= 173)
Types of information typically sought on SWON listserv; *n* (%)	
How to get patients the treatments/medication they can't afford	79 (46%)
Ways to help patients with their travel to treatment	46 (27%)
Health care insurance options for patients	57 (33%)
Ways to assist patients' caregivers	86 (50%)
How other OSWs manage interprofessional relations on the job	81 (47%)
What roles other OSWs take on in their workplace	116 (67%)
How other OSWs manage their frustrations in their work	73 (42%)
Other	126 (72%)

Frequency of Use of Listserv

To gain a better understanding of how often participants use the SWON listserv, survey questions asked about frequency of checking, posting and replying on the SWON listserv. Results show that the highest frequency for checking the SWON listserv is every time a new SWON posting comes into my inbox (*n*=71, 41%) followed by once daily (*n*= 52, 30%). These results indicate that most survey participants check SWON on at least a daily basis. Results in the remaining options show less frequent use from a smaller number of participants; several times per week (*n*=21, 12%), about once per week (*n*=13, 8%), very infrequently (*n*=6, 4%), a few times per month (*n*=4, 2%), other (*n*=3, 2%), and only when I post a question (*n*=1, 1%).

Next, to better understand how and frequency of use for posting on the listserv, participants were asked how often they post a question or comment on the SWON listserv. Interestingly, the highest frequency for survey participants was the answer option of “very infrequently” (*n*= 124, 72%) and no participants post a comment or question daily (*n*=0, 0%). Not only was very infrequently the answer choice with the highest frequency, the other responses are much lower in frequency in comparison. Results show the second highest is a few times per

month (*n*=24, 14%), followed by other (*n*=14, 8%), about once per week (*n*=6, 4%), several times per week (*n*=2, 1%) and daily (*n*=0, 0%).

Lastly, the frequency of responding to a question or comment on the SWON listserv was explored. Participant results show the answer choice of very infrequently had the highest frequency (*n*=108, 62%). Results show participants respond very infrequently to comments or a question despite half of the participants reporting they enjoy receiving a response from their SWON listserv posts (see Table 8). The second highest frequency chosen was a few times per month (*n*= 43, 25%), followed by other (*n*=9, 5%), about once per week (*n*=5, 3%), and both several times per week (*n*=2, (1%) and daily (*n*=2, 1%) were last (see Table 5).

Table 5. Frequency of Checking, Posting and Responding to a Question or Post on SWON

	Total Respondents (*N*= 173)
Frequency of checking SWON; *n* (%)	
Only when I post a question	1 (1%)
Every time a new SWON posting comes into my inbox	71 (41%)
Once daily	52 (30%)
Several times per week	21 (12%)
About once per week	13 (8%)
A few times per month	4 (2%)
Very infrequently	6 (4%)
Other	3 (2%)
Frequency of posting a question or comment on SWON; *n* (%)	
Daily	0 (0%)
Several times per week	2 (1%)
About once per week	6 (4%)
A few times per month	24 (14%)
Very infrequently	124 (72%)
Other	14 (8%)
Frequency of responding to a question or comment on SWON; *n* (%)	
Daily	2 (1%)
Several times per week	2 (1%)
About once per week	5 (3%)
A few times per month	43 (25%)
Very infrequently	108 (62%)
Other	9 (5%)

Analysis of Research Questions

Does SWON listserv participation meet OSWs need for assisting cancer patients with psychosocial challenges?

In order to answer research question one, survey items targeted to capture opinions of participants to meet the needs of patients were identified. See Table 6 for a detailed list of survey items. Descriptive statistics were produced to understand the frequency distribution of the total responses. Survey question two asked respondents to rank from highest to lowest the primary

reason for using the SWON listserv. Results indicate that most respondents ranked the primary reason for using SWON with a ranking score of a one or a two (*n*=82, 47%) for sharing of information on resources.

Survey question number three asked respondents to choose the best response using a five-point Likert scale that included the following options: strongly disagree, disagree, neutral, agree and strongly agree. Specific questions (3.1, 3.2, 3.5, 3.11, 3.12) within the Likert scale section were identified to assist with measuring if SWON listserv participation meets the needs of OSWs for assisting cancer patients with psychosocial challenges. These items include; content on SWON is relevant for my work, where the highest frequency was for strongly agree (*n*=94, 54%) followed by agree *(n*=28, 16%). This result allows this research to conclude that 93% (*n*=122) of survey participants think the SWON listserv is relevant for their work. Other Likert survey items identified to assist with answering research question one were written in the negative form; postings on the SWON listserv are often inaccurate having the highest frequency in disagree (*n*=92, 53%) followed by strongly disagree (*n*=48, 28%), the information shared on the listserv is relevant only for oncology social workers with the highest frequency of disagree (*n*=87, 50%) and neutral (*n*=43, 25%), I have difficulty finding ways to support cancer patients has the highest frequency in disagree (*n*=98, 57%) and strongly disagree (*n*=44, 25%), and listserv content seldom provides new ideas for how I can help cancer patients with the highest frequencies of disagree (*n*=75, 43%) and strongly disagree (*n*=42, 24%). All the survey questions written in the negative format indicate that participation in the SWON listserv does meet the needs of the OSWs to assist cancer patients with psychosocial challenges.

A subset of the total respondent sample for survey item 4 were used to identify types of information typically sought on the listserv (4.1, 4.2, 4.3, 4.4). Respondent answers indicate that

ways to assist patients' caregivers was the most sought after type of information (*n*=86, 50%), followed by how to get patients the treatments and medication they are not able to afford (*n*=79, 46%), health care insurance options for patients (*n*=57, 33%) and ways to help patients with their travel to treatment (*n*=46, 27%).

Table 6. Does the Listserv Provide Information Needed to Meet Patient Needs?

	Total Respondents (*N*= 173)
Primary Reasons for using SWON-Rank 1-5-Sharing information on resources; *n* (%)	
1 (highest)	54 (31%)
2	28 (16%)
3	19 (11%)
4	17 (10%)
5 (lowest)	28 (16%)
Missing	27 (16%)
Content on SWON is relevant for my work; *n* (%)	
Strongly Agree	94 (54%)
Agree	67 (39%)
Neutral	7 (4%)
Disagree	2 (1%)
Strongly Disagree	3 (2%)
Missing	0 (0%)
Postings on the SWON listserv are often inaccurate; *n* (%)	
Strongly Agree	2 (1%)
Agree	5 (3%)
Neutral	26 (15%)
Disagree	92 (53%)
Strongly Disagree	48 (28%)
Missing	0 (0%)
The Information shared on the listserv is relevant only for oncology social workers; *n* (%)	
Strongly Agree	10 (6%)
Agree	23 (13%)
Neutral	43 (25%)
Disagree	87 (50%)
Strongly Disagree	10 (6%)
Missing	0 (0%)
I often have difficulty finding ways to support cancer patients; *n* (%)	
Strongly Agree	3 (2%)
Agree	12 (7%)

	Total Respondents (*N*= 173)
I often have difficulty finding ways to support cancer patients; *n* (%)	
Neutral	16 (9%)
Disagree	91% (*n*=
Strongly Disagree	44 (25%)
Missing	0 (0%)
Listserv content seldom provides new ideas for how I can help cancer patients; *n* (%)	
Strongly Agree	10 (6%)
Agree	28 (16%)
Neutral	18 (10%)
Disagree	75 (43%)
Strongly Disagree	42 (24%)
Missing	0 (0%)
Types of information typically sought on SWON listserv; *n* (%)	
How to get patients the treatments/medication they can't afford	79 (46%)
Ways to help patients with their travel to treatment	46 (27%)
Health care insurance options for patients	57 (33%)
Ways to assist patients' caregivers	86 (50%)

*"Types of information typically sought" data are a subset of the total respondent sample.

How does listserv use contribute to professional development among OSWs?

In order to answer research question two, survey items targeted to capture opinions of participants regarding how listserv use contributes to professional development were identified. See Table 7 for a detailed list of survey items. Descriptive statistics were produced to understand the frequency distribution of the total responses. Survey question 2 asked respondents to rank from highest to lowest the primary reason for using the SWON listserv. Survey items 2.1, 2.3, and 2.4 were identified to answer research question two. Survey item 2.1 primary reason for using SWON answer choice is for professional advice was ranked highest with a ranking score of a one and two (*n*=79, 46%). Survey item 2.3 primary reason for using SWON answer choice is for mutual support was ranked highest with a ranking score of a three and four and was the highest ranked answer selection overall (*n*=103, 60%). Survey item 2.4 primary reason for using

SWON answer choice is for ways to improve my practice was ranked with a ranking score of a three and four *(n*=97, 56%).

Survey question number three asked respondents to choose the best response using a five-point Likert scale that included the following options: strongly disagree, disagree, neutral, agree and strongly agree. Specific questions (3.3, 3.4, 3.6, 3.7, 3.8, 3.9, 3.10, 3.13, 3.14) within the Likert scale section were identified to assist with measuring how listserv use contributes to the professional development among OSWs. These items include; I utilize knowledge gained from the listserv in my work with patients has the highest frequency in agree *(n*=94, 54%) and strongly agree *(n*=61, 35%), knowledge that I have gained in the SWON listserv has helped other colleagues I work with, where the highest frequency was for agree *(n*=85, 49%) followed by strongly agree *(n*=55, 31%), I have established relationships with other OSWs through my use of the SWON listserv, where the highest frequency was for disagree *(n*=54, 319%) followed by neutral *(n*=36, 21%) and agree *(n*=36, 21%), participating on the SWON listserv helps to reduce my feelings of professional isolation with the highest frequencies in agree *(n*=76, 44%), strongly agree *(n*=56, 32%) and neutral *(n*=27, 16%), mutual support between OSWs is a valuable aspect of the SWON listserv with the highest frequencies in agree *(n*=85, 49%), strongly agree *(n*=73, 42%), and neutral *(n*=27, 16%), participating on SWON listserv has helped me develop an identity in the OSW community with the highest frequencies in neutral *(n*=56, 32%), agree *(n*=42, 24%) and strongly agree *(n*=28, 16%), I use the SWON listserv as a source of advice when facing professional challenges at my workplace with the highest frequencies in agree *(n*=65, 38%), neutral *(n*=44, 25%), and strongly agree *(n*=33, 19%), content in the SWON listserv gives me good information on evidence-based practice with the highest frequencies in agree *(n*=98, 57%), neutral *(n*=34, 20%) and strongly agree *(n*=33, 19%), and content in the

SWON listserv helps me to improve my performance in my work with the highest frequencies in agree *(n*=95, 55%), strongly agree *(n*=36, 21%) and neutral *(n*=32, 19%).

A subset of the total respondent sample for survey item 4 were used to identify types of information typically sought on the listserv (4.5, 4.6, 4.7). Respondent answers in this subset indicate that the highest frequency was for the option of what roles other OSWs take on in their workplace *(n*=116, 67%), followed by how other OSWs manage interprofessional relations on the job *(n*=81, 47%), and how other OSWs manage their frustrations in their work *(n*=73, 42%).

Table 7. Does Listserv Use Contribute to Professional Development?

	Total Respondents *(N*= 173)
Primary Reasons for using SWON-Rank 1-5-Professional Advice; *n* (%)	
1 (highest)	36 (21%)
2	43 (25%)
3	27 (16%)
4	21 (12%)
5 (lowest)	15 (9%)
Missing	31 (18%)
Primary Reasons for using SWON-Rank 1-5- Ways to improve my practice; *n* (%)	
1 (highest)	13 (8%)
2	30 (17%)
3	48 (28%)
4	49 (28%)
5 (lowest)	19 (11%)
Missing	14 (8%)
Primary Reasons for using SWON-Rank 1-5-Mutual Support; *n* (%)	
1 (highest)	7 (4%)
2	32 (18%)
3	53 (31%)
4	50 (29%)
5 (lowest)	3 (2%)
Missing	28 (16%)
I utilize knowledge gained from the listserv in my work with patients; *n* (%)	
Strongly Agree	61 (35%)
Agree	94 (54%)
Neutral	12 (7%)

	Total Respondents (*N*= 173)
I utilize knowledge gained from the listserv in my work with patients; *n* (%)	
Disagree	5 (3%)
Strongly Disagree	1 (1%)
Missing	0 (0%)
Knowledge gained has helped other colleagues I work with; *n* (%)	
Strongly Agree	55 (31%)
Agree	85 (49%)
Neutral	29 (17%)
Disagree	3 (2%)
Strongly Disagree	2 (1%)
Missing	0 (0%)
I have established relationships with other OSWs through my use of SWON listserv; *n* (%)	
Strongly Agree	24 (14%)
Agree	36 (21%)
Neutral	43 (25%)
Disagree	54 (31%)
Strongly Disagree	16 (9%)
Missing	0 (0%)
Participating on SWON listserv helps reduce my feelings of professional isolation; *n* (%)	
Strongly Agree	56 (32%)
Agree	76 (44%)
Neutral	27 (16%)
Disagree	10 (6%)
Strongly Disagree	4 (2%)
Missing	0 (0%)
Mutual support between OSWs is a valuable aspect of the SWON listserv; *n* (%)	
Strongly Agree	73 (42%)
Agree	85 (49%)
Neutral	10 (6%)
Disagree	5 (3%)
Strongly Disagree	0 (0%)
Missing	0 (0%)
Participating on SWON listserv has helped me develop an identity in the OSW community; *n* (%)	
Strongly Agree	28 (16%)
Agree	42 (24%)
Neutral	56 (32%)
Disagree	35 (20%)
Strongly Disagree	11 (6%)
Missing	1 (1%)
I use SWON listserv as a source of advice when facing professional challenges at work; *n* (%)	
Strongly Agree	33 (19%)
Agree	65 (38%)

	Total Respondents (*N*= 173)
I use SWON listserv as a source of advice when facing professional challenges at work; *n* (%)	
Neutral	44 (25%)
Disagree	26 (15%)
Strongly Disagree	5 (3%)
Missing	0 (0%)
Content in SWON listserv gives me good information on evidence-based practice; *n* (%)	
Strongly Agree	33 (19%)
Agree	98 (57%)
Neutral	34 (20%)
Disagree	7 (4%)
Strongly Disagree	0 (0%)
Missing	1 (1%)
Content of SWON listserv helps me improve my work performance; *n* (%)	
Strongly Agree	36 (21%)
Agree	95 (55%)
Neutral	32 (19%)
Disagree	9 (5%)
Strongly Disagree	0 (0%)
Missing	1 (1%)
Types of information typically sought on SWON listserv; *n* (%)	
How other OSWs manage interprofessional relations on the job	81 (47%)
What roles other OSWs take on in their workplace	116 (67%)
How other OSWs manage their frustrations in their work	73 (42%)

*"Types of information typically sought" data are a subset of the total respondent sample.

What rewards are valued by OSWs with SWON listserv use?

In order to answer research question three, survey items targeted to capture opinions of participants regarding how listserv use contributes to professional development were identified. See Table 8 for a detailed list of survey items. Descriptive statistics were produced to understand the frequency distribution of the total responses. Survey question two asked respondents to rank from highest to lowest the primary reason for using the SWON listserv.

Survey question number three asked respondents to choose the best response using a five-point Likert scale that included the following options: strongly disagree, disagree, neutral, agree and strongly agree. Specific questions (3.15, 3.16, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22) within the

Likert scale section were identified to assist with measuring what rewards are valued by OSWs with SWON listserv use. The selected items include; I feel information and support I contribute to the SWON listserv has been helpful to other SWON members with the highest frequencies in agree *(n*=73, 42%), neutral *(n*=64, 37%) and strongly agree *(n*=28, 16%), I enjoy acknowledgement of my postings on the SWON listserv such as a thank you, receipt of knowledge, or confirmation that the information that was provided was useful with the highest frequencies in neutral *(n*=71, 41%), agree *(n*=60, 35%) and strongly agree *(n*=26, 15%), I have provided other OSWs in the SWON listserv acknowledgement and content such as a thank you, receipt of knowledge, or confirmation that the information received was useful with the highest frequencies in agree *(n*=75, 43%), neutral *(n*=34, 20%) and strongly agree *(n*=27, 16%), I trust the SWON community to respond appropriately to sensitive topics on the listserv with the highest frequencies in agree *(n*=97, 55%), neutral *(n*=34, 20%) and strongly agree *(n*=27, 16%), I cannot always trust the opinions of the SWON listserv community on questions posted about how to respond to professional dilemmas with the highest frequencies in disagree *(n*=93, 54%), strongly disagree *(n*=41, 24%) and neutral *(n*=30, 17%), I get frustrated when I do not get responses to my postings on the listserv with the highest frequencies in neutral *(n*=80, 46%), disagree *(n*=53, 31%) and strongly disagree *(n*=22, 13%), many times questions posted on SWON listserv result in no useful answers with the highest frequency in disagree *(n*=92, 53%) and strongly disagree *(n*=35, 20%) and having access to the SWON listserv helps reduce the stress I experience in my job with the highest frequencies in agree *(n*=83, 48%), neutral *(n*=45, 26%) and strongly agree *(n*=24, 14%).

Table 8. Rewards for Participating on SWON Listserv

	Total Respondents (*N*=173)
I feel information and support I contribute to the SWON listserv has been helpful to other SWON members; *n* (%)	
Strongly Agree	28 (16%)
Agree	73 (42%)
Neutral	64 (37%)
Disagree	5 (3%)
Strongly Disagree	1 (1%)
Missing	2 (2%)
I enjoy acknowledgement of my postings; *n* (%)	
Strongly Agree	26 (15%)
Agree	60 (35%)
Neutral	71 (41%)
Disagree	13 (7%)
Strongly Disagree	2 (1%)
Missing	1 (1%)
I have provided others on the SWON listserv acknowledgement; *n* (%)	
Strongly Agree	27 (16%)
Agree	75 (43%)
Neutral	34 (20%)
Disagree	28 (16%)
Strongly Disagree	8 (5%)
Missing	1 (1%)
I trust the SWON community to respond appropriately to sensitive topics; *n* (%)	
Strongly Agree	59 (34%)
Agree	97 (55%)
Neutral	12 (7%)
Disagree	5 (3%)
Strongly Disagree	0 (0%)
Missing	0 (0%)
I cannot always trust the opinions of SWON listserv community on how to respond to professional dilemmas; *n* (%)	
Strongly Agree	1 (1%)
Agree	7 (4%)
Neutral	30 (17%)
Disagree	93 (54%)
Strongly Disagree	41 (24%)
Missing	1 (1%)
I get frustrated when I do not get a response to my postings; *n* (%)	
Strongly Agree	2 (1%)
Agree	15 (9%)

	Total Respondents (*N*=173)
I get frustrated when I do not get a response to my postings; *n* (%)	
Neutral	80 (46%)
Disagree	53 (31%)
Strongly Disagree	22 (13%)
Missing	1 (1%)
Many times, questions posted on SWON listserv result in no useful answers; *n* (%)	
Strongly Agree	3 (2%)
Agree	10 (6%)
Neutral	32 (19%)
Disagree	92 (53%)
Strongly Disagree	35 (20%)
Missing	1 (1%)
Access to SWON listserv has reduced stress at my job; *n* (%)	
Strongly Agree	24 (14%)
Agree	83 (48%)
Neutral	45 (26%)
Disagree	18 (10%)
Strongly Disagree	3 (2%)
Missing	0 (0%)

Chi Square Results

Measures of association were used to explore associations between OSW characteristics and reasons for using the listserv and attitudes about the value of the listserv.

Characteristics and Reasons for using SWON

Chi Square tests for independence were used to explore the association between the characteristics of survey participants and primary reasons for using the SWON listserv. Table 9 depicts the associations that were determined to be statistically significant. Appendix E provides full details of variables and Chi Square results. A Chi Square test of independence was conducted between attending national oncology social work meetings and how other OSWs manage interprofessional relations on the job. There was a statistically significant association between attending national oncology social work meetings and how other OSWs manage

interprofessional relations on the job, χ^2 (4) = 12.24, p = .01. A Chi Square test of independence was conducted between primary employment (community hospital/outpatient treatment setting, setting associated with an academic health science center, other) and what roles other OSWs take on in their workplace. There was a statistically significant association between primary employment and what roles other OSWs take on in their workplace, χ^2 (3) = 10.07, p = .01. A Chi Square test of independence was conducted between current work setting (oncology inpatient, outpatient, other) and what roles other OSWs take on in their workplace. There was a statistically significant association between current work setting (oncology inpatient, outpatient, other) and what roles other OSWs take on in their workplace, χ^2 (3) = 19.35, p = .00. A Chi Square test of independence was conducted between work situation (works with other OSWs, only oncology social worker at my workplace) and what roles other OSWs take on in their workplace. There was a statistically significant association between work situation and what roles other OSWs take on in their workplace, χ^2 (3) = 12.85, p = .00. A Chi Square test of independence was conducted between being certified as an OSW and how other OSWs manage their frustrations at work. There was a statistically significant association between being certified as an OSW and how other OSWs manage their frustrations at work, χ^2 (2) = 6.50, p = .03. A Chi Square test of independence was conducted between work situation (works with other OSWs, only oncology social worker at my workplace) and how other OSWs manage their frustrations at work. There was a statistically significant association between work situation (works with other OSWs, only oncology social worker at my workplace) and how other OSWs manage their frustrations at work, χ^2 (3) = 7.56, p = .05. A Chi Square test of independence was conducted between attending national oncology social work meetings and how other OSWs manage frustrations on the job. There was a statistically significant association between

attending national oncology social work meetings and how other OSWs manage frustrations on the job, χ^2 (2) = 7.72, p = .02.

The Chi Square tests that were completed with the purpose to explore associations between OSW characteristics and reasons for using the listserv and attitudes about the value of the listserv allow us to make several conclusions about this population. Chi Square results allow us to conclude that OSWs that report attending national oncology social work meetings are more likely to say they use the SWON listserv information for how to manage interprofessional relationships *(n*= 66, 38%) than those that report they do not attend national oncology social work meetings *(n*=15, 8%). OSW work setting is associated with type of information typically sought on SWON listserv. OSWs that work in an outpatient setting *(n*=98, 56%), work in a community hospital or outpatient treatment setting *(n*=73, 42%) are more likely to say they use the SWON listserv information to learn what roles other OSWs take on in their workplace. OSWs who hold a certification in oncology social work *(n*=49, 28%) and OSWs that work with other oncology social workers at the workplace *(n*=65, 37%) are more likely to say they use the SWON listserv information to obtain information on how other OSWs manage their frustrations at work than those that are not certified *(n*=24, 13%) and those who work as the only OSW in the workplace *(n*=21, 13%) when seeking information on managing frustrations at work. Lastly, OSWs that attend national oncology social work meetings are more likely to say that they use the SWON listserv information to learn how other OSWs manage their frustrations *(n*=59 34%) than those that do not attend national oncology social work meetings *(n*=14, 8%). It should also be mentioned that OSWs that attend national oncology social work meetings that use the SWON listserv for information on how other OSWs manage their frustrations in their work *(n*=59, 34%) and OSWs that do not use the listserv for this purpose *(n*=62, 36%) have a very small variance.

Table 9. Association Between OSW Characteristics and Types of Information Sought on Listserv-Abbreviated

	Types of Information Sought on the SWON Listserv		
Characteristics of Respondents	Other OSWs manage relationships	Roles of other OSWs	How other OSWs manage frustrations
Certified OSW			$X^2 = 6.506$
			p = .03
Primary employment		$X^2 = 10.076$	
		p = .01	
Current work setting		$X^2 = 19.353$	
		p = .00	
Work with other OSWs		$X^2 = 12.854$	$X^2 = 7.568$
		p = .00	p = .05
Attend national meetings	$X^2 = 12.243$		$X^2 = 7.729$
	p = .01		p = .02

OSW attitudes, beliefs about SWON use and years of experience in a professional social work setting and/or an oncology social work setting

Measures of association were used to explore associations between OSW characteristics specifically to years of practice as a professional social worker and years of practice working in an oncology setting and reasons for using the listserv and attitudes about the value of the listserv. Table 10 depicts the associations that were determined to be statistically significant. Appendix F

provides full details of variables and Chi Square results. A Chi Square test of independence was conducted between I have established relationships with other OSWs through my use of the SWON listserv and years of practice in an oncology setting. There was a statistically significant association between I have established relationships with other OSWs through my use of the SWON listserv and years of practice in an oncology setting χ^2 (20) = 39.71, p = .00. A Chi Square test of independence was conducted between mutual support between OSWs is a valuable aspect of the SWON listserv and years of practice in an oncology setting. There was a statistically significant association between mutual support between OSWs is a valuable aspect of the SWON listserv and years of practice in an oncology setting, χ^2 (15) = 24.83, p = .05. A Chi Square test of independence was conducted between I use the SWON listserv as a source of advice when facing professional challenges at my workplace and years of practice in an oncology setting. There was a statistically significant association between I use the SWON listserv as a source of advice when facing professional challenges at my workplace and years of practice in an oncology setting, χ^2 (20) = 33.47, p = .03. A Chi Square test of independence was conducted between I use the SWON listserv as a source of advice when facing professional challenges at my workplace and years in of practice professional social work. There was a statistically significant association between I use the SWON listserv as a source of advice when facing professional challenges at my workplace and years of practice in professional social work, χ^2 (20) = 32.49, p = .03. A Chi Square test of independence was conducted between I have provided other OSWs in the SWON listserv acknowledgement such as a thank you, receipt of knowledge, or confirmation that the information received was useful and years of practice in an oncology setting. There was a statistically significant association between I have provided other OSWs in the SWON listserv acknowledgement and years of practice in an oncology setting, χ^2

(25) = 52.23, p = .00. A Chi Square test of independence was conducted between I have provided other OSWs in the SWON listserv acknowledgement such as a thank you, receipt of knowledge, or confirmation that the information received was useful and years of practice in professional social work. There was a statistically significant association between I have provided other OSWs in the SWON listserv acknowledgement and years of practice in professional social work, χ^2 (25) = 50.25, p = .00. A Chi Square test of independence was conducted between I get frustrated when I do not get responses to my postings on the listserv and years of practice in a professional social work setting. There was a statistically significant association between I get frustrated when I do not get responses to my postings on the listserv and years of practice in a professional social work setting, χ^2 (25) = 37.63, p = .05. A Chi Square test of independence was conducted between I find that many times questions posted by members on the SWON listserv result in no useful answers and years of practice in an oncology setting. There was a statistically significant association between I find that many times questions posted by members on the SWON listserv result in no useful answers and years of practice in an oncology setting, χ^2 (25) = 53.59, p = .00. A Chi Square test of independence was conducted between having access to the SWON listserv helps reduce the stress experience in my job and years of practice in an oncology setting. There was a statistically significant association between having access to the SWON listserv helps reduce the stress experience in my job and years of practice in an oncology setting, χ^2 (20) = 35.86, p = .01. A Chi Square test of independence was conducted between types of information sought on the SWON listserv-what roles other OSWs take on in their workplace and years of practice in an oncology setting. There was a statistically significant association between what roles other OSWs take on in their workplace and years of practice in an oncology setting, χ^2 (5) = 14.10, p = .01. A Chi Square test of independence was conducted between how often do

you usually check the SWON listserv and years of practice in an oncology setting. There was a statistically significant association between how often do you usually check the SWON listserv and years of practice in an oncology setting, χ^2 (40) = 64.19, p = .00. A Chi Square test of independence was conducted between how often do you usually check the SWON listserv and years of practice in a professional social work setting. There was a statistically significant association between how often do you usually check the SWON listserv and years of practice in a professional social work setting, χ^2 (40) = 95.54, p = .00. A Chi Square test of independence was conducted between how often do you usually post a question or comment on the SWON listserv and years of practice in an oncology setting. There was a statistically significant association between how often do you usually post a question or comment on the SWON listserv and years of practice in an oncology setting, χ^2 (25) = 92.04, p = .00. A Chi Square test of independence was conducted between how often do you usually post a question or comment on the SWON listserv and years of practice in a professional social work setting. There was a statistically significant association between how often do you usually post a question or comment on the SWON listserv and years of practice in professional social work, χ^2 (25) = 63.80, p = .00. A Chi Square test of independence was conducted between how often do you usually respond to a question or comment on the SWON listserv and years of practice in an oncology setting. There was a statistically significant association between how often do you usually respond to a question or comment on the SWON listserv and years of practice in an oncology setting, χ^2 (30) = 54.15, p = .00. A Chi Square test of independence was conducted between how often do you usually respond to a question or comment on the SWON listserv and years of practice in professional social work. There was a statistically significant association

between how often do you usually respond to a question or comment on the SWON listserv and years of practice in professional social work, χ^2 (30) = 44.36, p = .04.

Chi Square analysis on the associations between OSW attitudes, beliefs about SWON use and years of experience in a professional social work setting and/or an oncology social setting allow us to make several conclusions about this population. The Chi Square analysis suggests that years of practice in an oncology setting has a statistically significant association with ten identified survey variables. Results allow us to conclude that OSWs most likely to say they disagree *(n*=24, 14%) and strongly disagree *(n*=9, 5%) that they have established relationships with other OSWs through the use of the SWON listserv are likely to have less than or equal to five years of experience oncology setting. Conversely, OSWs who were more likely to agree *(n*=9, 5%) and strongly agree *(n*=6, 3%) to having established relationships with other OSWs using the SWON listserv working in an oncology setting likely have 21 or more years of experience. OSWs most likely to say the SWON listserv mutual support between OSWs is a valuable aspect of the SWON listserv *(n*=50, 30%) are likely to have five or less years of experience working in an oncology setting. OSWs most likely to say they use the SWON listserv as a source of advice when facing professional challenges in the workplace *(n*=33, 19%) are likely to have five or less years of experience working in an oncology setting. OSWs who are more likely to say they have provided others on the SWON listserv acknowledgement such as a thank you, receipt of knowledge, or confirmation that the information received was useful *(n*=29, 17%) are likely to have five or less years of experience working in an oncology setting. OSWs most likely to say they disagree that many times questions posted by members on the SWON listserv result in no useful answers *(n*=43, 34%) likely have five or less years of experience working in an oncology setting. OSWs who are more likely to say that having access to the

SWON listserv helps reduce stress experienced on the job *(n*=32, 18%) likely have five or less years of experience working in an oncology setting. OSWs who say they typically seek information on the SWON listserv regarding what roles other OSWs take on in the workplace *(n*=39, 22%) likely have five or less years of experience working in an oncology setting followed by OSWs that have six to ten years of experience in an oncology setting *(n*=27, 15%). OSWs are more likely to check the SWON listserv every time a new SWON posting goes to their inbox across all categories of years of experience in an oncology setting *(n*=71, 41%). OSWs who are most likely to check the SWON listserv every time a new posting goes to their inbox *(n*=24, 14%) likely have five or less years of experience in an oncology social work setting, and those least likely to check the SWON listserv every time a new posting goes to their inbox *(n*=7, 4%) likely have 16-20 years of oncology social work experience. OSWs are more likely to post a question or a comment on the SWON listserv very infrequently across all years of experience in an oncology setting *(n*=124, 71.7%). OSWs most likely to post or comment on the SWON listserv very infrequently *(n*=43, 25%) likely have five or less years of experience. Lastly, OSWs are more likely to respond to a SWON listserv posting on a very infrequent basis across all years of experience in oncology *(n*=108, 62%). OSWs most likely to post on a very infrequent basis *(n*=40, 23%) likely have five or less years of experience.

Years of Practice

The Chi Square analysis suggests that years of practice in a professional social work setting has a statistically significant association with six identified survey variables. OSWs who are most likely to agree that they use the SWON listserv as a source of advice when facing professional challenges in the workplace *(n*=45, 265) are likely to have 21 or more years of experience in a professional social work setting. OSWs who are most likely to agree that they

have provided others on the SWON listserv an acknowledgement such as a thank you, receipt of knowledge, or confirmation that the information received was useful *(n*=48, 28%) are likely to have 21 or more years of experience in a professional social work setting. OSWs who are most likely to disagree that they get frustrated when they do not get a response to their postings on the listserv *(n*=37, 21%) or remain neutral *(n*=37, 21%) are likely to have 21 or more years of experience in a professional social work setting. OSWs who are more likely to check the SWON listserv every time a new SWON posting goes to their inbox *(n*=34, 20%), and check the SWON listserv daily *(n*=24, 14%), likely have 21 or more years of experience in a professional social work setting. In terms of posting a question or comment on SWON, OSWs who post comments very infrequently *(n*=53, 30%) and a few times per month *(n*=16, 9%) are most likely to have 21 or more years of experience in a professional social work setting. Lastly, those that are more likely to respond to a question or comment on SWON on a very infrequent basis *(n*=47, 27%), and a few times per month *(n*=24, 14%) are most likely to have 21 or more years of experience in a professional social work setting.

Table 10. Associations Between OSW Attitudes, Behaviors and Beliefs of SWON use and Years in Practice Setting

	Years of Practice	
Attitudes and Beliefs about SWON use and Reasons for Use	Years in Oncology Setting	Years in Professional Social Work
Established relationships with other OSWs through use of SWON	$X^2 = 39.71$	$X^2 = 23.78$
	p = .00	p = .25
Mutual support between OSWs is a valuable aspect of the listserv	$X^2 = 24.83$	$X^2 = 13.58$
	p = .05	p = .55
SWON used for advice when facing professional challenges at work	$X^2 = 33.47$	$X^2 = 32.49$
	p = .03	p = .03
I have provided others on the SWON listserv acknowledgement	$X^2 = 52.23$	$X^2 = 50.25$
	p = .00	p = .00
I get frustrated when no response to my postings	$X^2 = 21.09$	$X^2 = 37.63$
	p = .68	p = .05
Questions posted on SWON listserv result in no useful answers	$X^2 = 53.59$	$X^2 = 18.97$
	p = .00	p = .79
Access to SWON listserv has reduced stress at my job	$X^2 = 35.86$	$X^2 = 19.22$
	p = .01	p = .50
What roles other OSWs take on in their workplace	$X^2 = 14.10$	$X^2 = 8.65$
	p = .01	p = .12
Frequency of checking SWON listserv	$X^2 = 64.19$	$X^2 = 95.54$
	p = .00	p = .00
Frequency of posting a question or comment on SWON	$X^2 = 92.04$	$X^2 = 63.80$
	p = .00	p = .00
Frequency of responding to a question or comment on SWON	$X^2 = 54.15$	$X^2 = 44.36$
	p = .00	p = .04

Open Ended Question Themes

Survey participants were asked to provide feedback via an open-ended question to provide anything that was not mentioned in the survey that would be important for a complete understanding of how the SWON listserv works and/or its value. A total of 57 survey participants provided feedback to the open-ended question. All answers were read searching for likeness among the answers for possible emerging themes. The answers were then separated into

groups using key words/terms that were repeated in the answers to identify themes. Key words/terms used include valuable, easy to use, archives, and email format. After grouping the 57 responses into identified groups, several themes emerged from the survey response answers. The first was the expression of the value found in use and access to the SWON listserv *(n*=21). Responses included high value in SWON listserv use for training new oncology social workers, new oncology social workers working independently and for those that have years of experience in the field. The valuable content found ranged from staying informed of standards of practice including Commission on Cancer program standards, clinical content, hearing from retired social workers, ideas from others around the country and staffing ratios at various settings. The second theme that emerged from the open-ended survey question was the need to have an easier platform to navigate the SWON listserv archives *(n*=5). Responses indicated that the archives were very difficult to navigate and do not always produce the desired results using search terms. A suggestion for improvement was provided to group the archives related to topic for easier navigation. The third theme that emerged from the open-ended survey question was the desire to have an easy "how-to" guide to gain a better understanding of how to use the SWON listserv appropriately *(n*=4). Lastly, the fourth theme that emerged in responses to the open-ended question was in relation to the format of the SWON listserv *(n*=4). The current format uses an email system to notify SWON listserv members when discussion questions and responses are posted. Survey responses indicated that some feel their email inbox can be inundated with SWON listserv related emails that make it difficult to fully read the information in a useful manner and would rather use a discussion board format.

Additional responses from survey participants provided a wide range of feedback. Two responses mentioned enjoying the webinars provided by AOSW with no additional information

provided regarding the SWON listserv. Three responses indicated there are no local/state/national oncology social work conferences in their area to attend. Additionally, two responses indicated they plan to go to a conference soon. One response indicated that use of the SWON listserv makes he/she think about things that they would not have previously considered. One suggested a separate listserv for leadership to freely discuss program changes without the risk of potentially affected staff reading the posts. And lastly, one answer stated that "I really would feel a huge void professionally if I didn't have SWON." There was a total of eight responses with a "no" as the written response indicating the survey participant had nothing further to add.

Identified themes and additional feedback is valuable information for continued success and member use of the SWON listserv. There was a high number of survey participants that stressed the value and appreciation of use of the SWON listserv. Suggestions were provided on desired improvements for the SWON listserv; however, the value of use was still present.

Results of Hypothesis Testing

$H_{1.1}$: Listserv participation is valued for discovery of resources for meeting the needs of cancer patients.

This hypothesis was supported by the data among SWON listserv survey results. Five specific survey items were identified for addressing this hypothesis (2.2, 3.1, 3.2, 3.5, 3.11). The frequency distribution for the primary reasons for participating on the SWON listserv show that sharing information on resources was ranked the highest among participants for the top reason for use *(n*=54, 31%). Furthermore, the four identified Likert scale survey items that address this hypothesis all provided results indicating that SWON listserv participation is valued for the discovery of resources for meeting the needs of cancer patients. 93% *(n*=164) of survey

participants feel the content on SWON is relevant for their work, 81% *(n*=140) disagree that the SWON listserv postings are often inaccurate, 56% *(n*=97) disagree that information on the listserv is relevant only for oncology social workers and 82% *(n*= 142) disagree that users often have difficulty finding ways to support cancer patients indicating that more than half survey participants feel participating on the SWON listserv provides resources that can be used in their work.

$H_{1.2}$: Listserv participation provides new ways to meet the needs of cancer patients.

This hypothesis was supported by the data among SWON listserv survey results. There were five specific survey items (3.12, 4.1, 4.2, 4.3, 4.4) that directly targeted this hypothesis. All survey response frequencies for the five identified survey items indicate that most participants believe that listserv participation provides new ways to meet the needs of cancer patients. 82% *(n*=117) participants disagree that the listserv content seldom provides new ideas for how to help cancer patients indicating that participants do believe the listserv provides new ways to meet the needs of cancer patients. In addition, participants were also provided an option to check all choices that apply for typical reasons seeking information on the SWON listserv. This survey item lends itself to this hypothesis because the underlying reason SWON users seek information on the SWON listserv is because they do not already possess the knowledge, therefore, all options checked provide new ways of meeting patient needs. 50% *(n*=86) checked ways to assist patients' caregivers, 46% *(n*=79) checked how to get patients the treatment/medication they can't afford, 33% *(n*=57) checked health insurance options for patients and 27% (46) checked ways to help patients with their travel to treatment.

$H_{2.1}$: Listserv participation is valued for increasing a sense of mutual support.

This hypothesis was supported by the data among SWON listserv survey results. There were seven specific survey items (2.1, 2.3, 3.6, 3.7, 3.8, 3.9, 4.7) that directly targeted this hypothesis. All survey response frequencies for the seven identified survey items indicate that most participants believe that listserv participation is valued for increasing a sense of mutual support. 4% *(n*=7) of survey participants ranks mutual support as a primary reason for using the SWON listserv, however, it should be noted that 49% *(n*=85) participants ranked mutual support as a two or a three out of five indicating that more than half of the participants do use the SWON listserv for mutual support in some capacity. Additionally, 91% *(n*=158) of participants agree that mutual support between OSWs is a valuable aspect of the SWON listserv allowing us to conclude that mutual support is a highly valued aspect of using the SWON listserv despite mutual support not being a top reason for use. 21% *(n*=36) of participants ranked the top reason for use as professional advice. 35% *(n*=62) of participants agree that they have established relationships with other OSWs using SWON listserv. 76% *(n*=132) of participants agree that participating on SWON listserv helps reduce feelings of professional isolation. 40% *(n*=70) of participants agree that participating on SWON listserv has helped develop an identity in the OSW community. Lastly, 42% *(n*=73) of participants selected how other OSWs manage their frustrations in their work for types of information sought on the SWON listserv.

H2.2: Listserv participation is valued for increasing a knowledge base for use in OSW daily practice.

This hypothesis was supported by the data among SWON listserv survey results. There were eight specific survey items (2.4, 3.3, 3.4, 3.10, 3.13, 3.14, 4.5, 4.6) that directly targeted this hypothesis. All survey response frequencies for the eight identified survey items indicate that most participants believe that listserv participation is valued for increasing a knowledge base for

use in OSW daily practice. 25% *(n*=43) of participants ranked the primary reason as ways to improve my practice with a one or a two. 89% *(n*=155) of participants agree that they utilize knowledge gained from the listserv in their work with patients. 70% *(n*=140) of participants agree that knowledge gained from the SWON listserv has helped other colleagues at work. This survey response if a good indicator that the SWON listserv is used to expand knowledge not just to those who use it but also to those that do not through teaching and information sharing outside of the listserv. 57% *(n*=98) of participants agree that they use the SWON listserv as a source of advice when facing a professional challenge at work. 76% *(n*=131) of participants agree that content in SWON listserv gives good information on evidence-based practice. 76% *(n*=131) of participants agree that content of SWON listserv helps improve work performance. Lastly, what roles other OSWs take on in the workplace was the highest frequency in types of information sought on the SWON listserv survey respondents selected *(n*=116, 67%) and 47% *(n*=36) chose how other OSWs manage interprofessional relations on the job.

$H_{3.1}$: SWON listserv participation is valued by OSWs for providing intrinsic rewards (e.g., feeling good about contributing to the work of other OSWs through information sharing and providing support)

This hypothesis was supported by the data among SWON listserv survey results. There were five specific survey items (3.15, 3.18. 3.19, 3.21, 3.22) that directly targeted this hypothesis. All survey response frequencies for the five identified survey items indicate that most participants believe that listserv participation is valued by OSWs for providing intrinsic rewards. 58% *(n*=101) agree that the information and support they contribute to the SWON listserv has been helpful to other SWON members. 89% *(n*=156) agree that they trust the SWON community to respond appropriately to sensitive topics on the listserv. 78% *(n*=134) disagree

that they cannot always trust the opinions of the SWON listserv community on questions posed about how to respond to professional dilemmas. 73% *(n*=127) disagree that many times questions posted by members on the SWON listserv result in no useful answers. 62% *(n*=107) agree that having access to the SWON listserv helps reduce the stress experienced at work.

$H_{3.2}$: SWON listserv participation is valued by OSWs for providing extrinsic rewards (e.g., thank you, receipt of knowledge or confirmation that the information provided was useful).

This hypothesis was supported by the data among SWON listserv survey results. There were three specific survey items (3.16, 3.17, 3.20) that directly targeted this hypothesis. All survey response frequencies for the three identified survey items indicate that most participants believe that listserv participation is valued by OSWs for providing extrinsic rewards. 50% *(n*=86) agree that they enjoy acknowledgement of postings on the SWON listserv such as a thank you, receipt of knowledge, or confirmation that the information that was provided was useful. 59% *(n*=102) agree that they have provided other OSWs in the SWON listserv acknowledgement. Lastly, 46% *(n*=80) remained neutral and 44% *(n*=75) disagree that they get frustrated when they do not get responses to postings on the listserv.

$H_{4.1}$: Working in settings with no other OSWs on staff is positively associated with perceived benefits from listserv participation.

Measures of association were run to determine if there is an association between working as the only staff social worker and types of information typically sought on the SWON listserv. A statistically significant association was found between work situation (works with other OSWs, only oncology social worker at my workplace) and how other OSWs manage their frustrations at work, χ^2 (3) = 7.56, p = .05, to support this hypothesis. A statistically significant

association was found between work situation (works with other OSWs, only oncology social worker at my workplace) and what roles other OSWs take on in their workplace, χ^2 (3) = 12.85, p = .00, to support this hypothesis. No other statistically significant associations were found between work situation and research study variables.

$H_{4.2}$: Years of practice is negatively associated with perceived benefits from listserv participation. Chi square

Measures of association were run to determine if there is an association between years of practice (OSW characteristics) and attitudes and beliefs about SWON use, reasons for SWON use and frequency of SWON use. There were numerous statistically significant associations found between these variables, however, results indicate the opposite of the hypothesis, therefore, we would fail to reject the null hypothesis. The analysis results indicate that the longer in practice, OSWs are significantly more likely to perceive benefits from SWON listserv use. Table 10 provides a detailed list of all statistically significant associations between years of practice and other variables listed.

- Years in oncology setting and established relationships with other OSWs using the SWON
- Years in oncology setting and mutual support between OSWs is a valuable aspect of the listserv
- Years in oncology setting and SWON is used for advice when facing professional challenges at work
- Years in a professional social work setting and SWON is used for advice when facing professional challenges at work

- Years in oncology setting and I have provided others on the SWON listserv acknowledgement
- Years in a professional social work setting and I have provided others on the SWON listserv acknowledgement
- Years in a professional social work setting and I have provided others on the SWON listserv acknowledgement
- Years in a professional social work setting and I get frustrated when no response to my postings
- Years in oncology setting and questions posted on SWON listserv result in no useful answers
- Years in oncology setting and access to SWON listserv has reduced stress at my job
- Years in oncology setting and what roles other OSWs take on in their workplace
- Years in oncology setting and frequency of checking SWON listserv
- Years in a professional social work setting and frequency of checking SWON listserv
- Years in oncology setting and frequency of posting a question or comment on SWON
- Years in a professional social work setting and frequency of posting a question or comment on SWON
- Years in oncology setting and frequency of responding to a question or comment on SWON
- Years in a professional social work setting and frequency of responding to a question or comment on SWON

$H_{4.3}$: Attendance at local or national OSW meetings is positively associated with perceived benefits from listserv participation.

Measures of association were run to determine if there is an association between attending national or local social work meetings and types of information sought on SWON listserv. There was a statistically significant association between attending national oncology social work meetings and how other OSWs manage frustrations on the job, χ^2 (2) = 7.72, p = .02. There was a statistically significant association between attending national oncology social work meetings and how other OSWs manage interprofessional relations on the job, χ^2 (4) = 12.24, p = .01. There were no additional statistically significant associations found between attendance at meetings and perceived benefits.

CHAPTER 6. DISCUSSION

Introduction to Discussion

The purpose of this research is to explore the use of online communities for information sharing and mutual support by health professionals, in this case oncology social workers. The main objectives of this research are to explore the nature of social exchange through use of a professional online community of practice that occurs on the oncology social worker listserv and to determine if there were significant relationships between OSW characteristics and primary reasons and perceived benefits for using the SWON listserv. Chi Square analysis was chosen due to the underlying value in the statistic's ability to answer questions using nominal data. Chi Square does not measure variables by category as many statistics do but instead relies on frequency data and variables measured with nominal or ordinal scales, such as presented in this research. The findings in this study have practice and policy implications in the use on professional online listservs for the purposes of information sharing and to provide mutual support.

Two hundred seventeen AOSW members submitted a response to the online researcher developed survey. The survey had questions developed based on the prominent themes of social exchange theory and community of practice. The survey questions are designed to allow for exploration of processes and outcomes as related to community of practice and social exchange theory, when engaging in a professional listserv. The survey was distributed via email to all AOSW members *(N*=1,193) and posted directly on the SWON listserv. After cleaning the data by removing those who reported they do not use SWON and those that did not fully complete the survey, there was a total of 173 survey responses included in the data analysis for this research (*N*=173).

Key Findings

Key finding of the study based on guiding theories will be discussed in the following section. Social exchange theory and community of practice guided this study through the assumption that trust, communication and reciprocity will serve as the motivator to trust the relationships formed and information received on the SWON listserv, SWON members participate with the understanding there may not be reciprocation but have an expectation of being rewarded and that there are three different types of shared knowledge that include book, practical and cultural that all have different purposes and impacts. This study utilized a sample of OSWs that participate in use of the SWON listserv to explore individual factors of characteristics of SWON listserv users, reasons for use of the SWON listserv, types of information typically sought on the SWON listserv, frequency of use, if OSW needs are met through SWON listserv use, professional development and rewards gained from SWON listserv participation. Significant associations were found across all domains. Descriptive analysis of the survey results indicate data to support hypothesis one, two and three. The findings in relation to literature and the implications are discussed below.

Characteristics. The SWON listserv user characteristics were examined as a part of the exploratory process of this study to gain a better understanding of who is participating in the SWON listserv. Frequency distributions tell us that most participants work in an outpatient oncology setting *(n*=131 (76%) compared to an inpatient or "other" type of setting *(n*=38, 22%). There was a higher frequency of OSWs that work with other OSWs in the workplace *(n*=97, 56%) than those that work as the only OSW at their workplace *(n*=63, 36%) and 57% *(n*=98) are certified as an OSW while 42% *(n*=73) are not certified. Local, state and national oncology meeting attendance was explored, and more survey participants attend national oncology

meetings *(n*=121, 70%) than local or state oncology meetings *(n*=98, 57%). The exact reason for national oncology meeting attendance ranking higher is unknown, however, there were many answers to the open-ended response that indicated there were no local or state oncology meetings held close to where the participant resides and works. Years of experience ranged from 0 to 45 years working in a professional social work setting with the highest frequency having 21 or more years of experience *(n*=78, 45%). Years of experience ranged from 0 to 42 years working in an oncology setting with the highest frequency having five or less years of experience *(n*=57, 33%).

Meeting Patient Needs. Based on the analysis and interpretation of the results, the null hypothesis will be rejected for research question one because survey responses indicate that the SWON listserv meets the needs of OSWs for assisting cancer patients with psychosocial challenges. The findings of this research indicate that the SWON listserv does meet the needs of the OSW users when assisting cancer patients. Results show that 47% *(n*=82) of respondents ranked the primary reason for using the SWON listserv for sharing of information of resources. This is in alignment with expectations based on social exchange theory in terms of a cost benefit approach. It can be concluded that continued use of the SWON listserv would most likely not occur if the needs of users were not being met. Research has suggested that since the development of listservs and their use that knowledge access advantages and benefits of listserv participation outweigh more traditional settings such as conferences, newsletters and journals all of which may be weeks to years behind while listserv communication and knowledge sharing is immediate (Pearson, 1996). In addition, 82% *(n*=117) of survey participants disagree that the listserv content seldom provides new ideas for how to help cancer patients indicating that participants do believe the listserv provides new ways to meet the needs of cancer patients. It was anticipated that the listserv would provide new ways to meet the needs of patients based on

community of practice and the types of information sharing that occurs. Survey responses indicate that all three types of information this study anticipated were shared on the SWON listserv; book, practical and cultural. Survey items 3.1, 3.2, 3.5, 3.11, and 3.12 questioned OSWs about beliefs and attitudes of the information shared on the listserv in terms of usefulness, accuracy, and discipline specific relevance. These questions used a five-point Likert scale format from strongly disagree to strongly agree. Responses to all questions were in favor of finding the SWON listserv to be useful, accurate and relevant. In terms of relevance, responses indicate that the SWON listserv is relevant for OSWs and possibly other forms of social work as well. These responses indicate the SWON listserv has value and use will be continued and valued.

Professional Development. Frequency distributions of survey responses were run to determine the answer to research question two. This researcher hypothesized that mutual support is a valued among SWON listserv users and is valued for increasing a knowledge base guided by community of practice theory. A total of 15 survey items were identified to answer if mutual support and an increased knowledge base is valued among SWON listserv users (2.1, 2.3, 2.4, 3.3, 3.4, 3.6, 3.7, 3.8, 3.9, 3.10, 4.5, 4.6, 4.7). Survey responses to the identified items were all favorable to indicate that both mutual support and an increased knowledge base are valued among SWON users.

Measures of association were completed to determine if there are associations between OSW characteristics and professional development. A statistically significant association was found between being certified as an OSW and how other OSWs manage their frustrations at work indicating that OSWs who hold a certification in oncology social work *(n*=49, 28%) are more likely to say they use the SWON listserv information to obtain information on how other OSWs manage their frustrations at work than those that are not certified *(n*=24, 13%). In

addition, statistical significant associations were found between seeking information on the listserv about what roles other OSWs take on in their workplace and primary employment (community hospital/outpatient treatment setting, setting with an academic health science center or "other" setting), current work setting (inpatient, outpatient or other), and current work situation (works with other oncology social workers or the only oncology social worker at the workplace). Based on Chi Square statistical analysis, OSWs who work in a community hospital or outpatient treatment setting *(n*=73, 42%) and those that work in an outpatient oncology setting *(n*=98, 56%) are more likely to say they use the SWON listserv information to learn what roles other OSWs take on in their workplace. Lastly, OSWs who work as the only OSW in the workplace *(n*=21, 13%) are more likely to say they use the SWON listserv information to obtain information on how other OSWs manage their frustrations at work.

Statistical significance among OSW characteristics and use of the SWON listserv to learn how other OSWs manage frustrations at work and what roles other OSWs take on in the workplace is particularly interesting in terms of the OSW role within the oncology healthcare setting. This research has demonstrated that OSWs find value in the SWON listserv for professional development and mutual support, however, it is important to note that this may be more important for OSWs than other oncology health professionals. Listserv use for professional development and mutual support may be more important to OSWs because they tend to work fairly independently and while OSWs are the primary providers for psychosocial and resource needs among cancer patients, the exact role of an oncology social worker tends to be less defined than other oncology roles. The roles of the OSW are typically presented in broad categories such as counseling, coping with illness and patient advocates. Undefined roles lead to the OSW often defining the role and sometimes even having to defend their role as a discipline that uses

evidence-based practices when treating patients in the oncology setting (Real World Health Care, 2020). Furthermore, most healthcare provider disciplines within the oncology setting *(n*urses, physicians) are aware of certain resources available to cancer patients and sometimes attempt to fill the role of the oncology social worker, however, nurse and physician referrals to organizations to address cancer patient needs are significantly below the social workers (Wagner & Lacey, 2004). Another challenge faced by OSWs that places value on the SWON listserv use is that even though the role has evolved a great deal since inception, the services provided by an OSW still do not produce clinical income and are therefore, typically considered less valued in the health care system. This results in social work values and tasks not always being considered as cost effective interventions. In addition, in a physician dominated work environment, such as oncology and other healthcare settings, the social workers have high responsibility to meet complex needs with little power or control over the decision-making (Lloyd, King, & Chenoweth, 2003). The idea that the OSW services are less valued creates a more defensive posture within health care settings than that of the nurses or physicians. This is another reason the SWON listserv is valuable to OSWs for professional development and discussion of roles; it provides a safe space to openly discuss what others are facing and how they respond to this type of negativity.

Perceived rewards. In order to answer research question three, survey items targeted to capture opinions of participants regarding how listserv use contributes to professional development were identified. This researcher hypothesized that SWON listserv use will be valued by OSWs for both intrinsic and extrinsic rewards. Descriptive statistics were produced to understand the frequency distribution of the total responses. There was a total of eight survey items to address perceived rewards (3.15, 3.16, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22). All survey

items used a Likert scale to measure perceived rewards. Every item provided favorable answers that indicate the SWON listserv is valued by OSWs for both intrinsic and extrinsic rewards. All survey items were related to trust among the SWON members and communication. Based on the SET, trust, communication and reciprocity serve as the motivator to produce trusting and loyal relationships (Cropanzano & Mitchell, 2005; Wu, Lin & Lin, 2006). Results align with the SET beliefs and serve as a good foundation for showing value in perceived rewards for OSW SWON use, however, it should be noted that it was hypothesized that the longer in practice, OSWs would be less likely to perceive benefits of use of the SWON listserv when in fact, results indicate the exact opposite. Results indicate that the longer in practice, OSWs are significantly more likely to perceive benefits.

The OSW SWON listserv positing's from the years 2016 and 2017 from the preliminary research to this study, Burg, et al., (unpublished, 2018), provide insight into the complexity that OSWs face when trying to assist cancer patients. A review of the posting discussions shows a need for very complex resource needs for a vast amount of cancer patients. Examples include patients with children whom are unable to work with financial and housing issues, needs for transportation to medical appointments, needs for assistance with paying for expensive medications or treatments, fertility planning, obtaining supplies and death planning. The complexity of patient needs that OSWs face daily, coupled with resources ever changing in terms of availability and eligibility make the SWON listserv a valuable source for sharing ideas and approaches to meeting patient needs. OSW survey responses to the open-ended question *(n*=57) for this research indicate several themes identified among answers. The most prominent theme was the expression of the value found in use and access to the SWON listserv *(n*=21). Responses included high value in SWON listserv use for training new oncology social workers, new

oncology social workers working independently and for those that have years of experience in the field. The valuable content found ranged from staying informed of standards of practice including Commission on Cancer program standards, clinical content, hearing from retired social workers, ideas from others around the country and staffing ratios at various settings. Numerous responses *(n*=12) spoke specifically how they use the SWON listserv to learn more about the role from other OSWs.

As mentioned in Chapter 2, both patient needs and available resources, including insurance related issues, can be moving targets with new programs available and known resources changing on a regular basis (Smith, Nicolla & Zafar, 2014). The SWON listserv provides real time assistance through information sharing of other OSWs facing similar circumstances within their own practice. Access to communities of practice such as the SWON listserv can be valuable to multiple disciplines for a multitude of reasons.

Coronavirus Disease 2019 Response. This study is timely because of the current restrictions on being in the physical presence of others during this time of a worldwide pandemic. Since the World Health Organization (WHO) declared the coronavirus disease 2019 (COVID-19) outbreak a pandemic, online communities of practice have become essential across various daily functions such as school, work, and the overall management of COVID-19 disease control and monitoring. Online communities of practice have become essential tools for many activities to continue during the COVID-19 pandemic. School educators have been forced to use online communities to continue education at all levels. Teachers have not only been using the new virtual environment to continue education amongst students but also to socialize, provide support to one another and the parents of students, and to help reinforce bonds amongst the children. In addition to school level communities of practice, platforms such as Twitter have

served as a tool to help educators follow specific hashtags when seeking professional development and learning opportunities. Online communities will continue to be an asset to educator's post COVID-19 pandemic by providing alterative, electronic settings for knowledge sharing, discussion of challenges, sharing of resources and socialization purposes (American Institute for Research, 2020).

Specific communities of practice have been established across numerous organizations and professional associations to target clinical specialties to provide support for the response to COVID-19. AOSW members utilizing the SWON listserv have been sharing new resources for cancer patients related to COVID-19 as well as developing and offering online support groups for one another and members of the community (Association of Oncology Social Work, 2020). The Association of American Cancer Institutes (AACI) implemented a "slack workspace" that serves as a discussion forum for AACI members. The discussion forum allows members to openly share ideas, challenges and best practices pertaining to COVID-19. The topic of discussion can be related to numerous categories such as patient care, research, education, communication and cancer center operations (Association of American Cancer Institutes, 2020). The American Heart Association (AHA) also established an online COVID-19 discussion forum for members to discuss topics related to COVID-19. Membership is free and offers discussion forums for COVID-19 as it relates to specific diseases or for general concerns and questions. Responses include scholarly articles intended to provide educated information to people seeking answers as well as representatives from the AHA to provide direct answers and support to anyone who joins and posts. In addition to AHA representatives, all members can respond to postings. Mutual support was provided in abundance from member to member (American Heart Association, 2020). The Washington State Medical Association (WSMA) created an online

discussion forum for those with a WSMA account to discuss topics related to testing and treatment, telemedicine, caring for the caregiver and general topics for COVID-19. Members are encouraged to share links and resources, participate in open discussion and share ideas. The WSMA COVID-19 discussion forum is restricted to physicians and physician assistants in Washington state (Washington State Medical Association, 2020). The Pillar Institute has set up a question and answer forum for COVID-19 related discussion. A Pillar Institute account is required to post questions to the forum; however, non-members can view the discussion posts. A staff member is assigned to answer the questions posted on the site daily (Pillar Institute for Lifelong Learning, 2020).

Social Work Contributions and Future Directions

Social Work Practice and Policy Contributions

The results of this study are supportive to the creation and implementation of online community of practice listservs directed towards other specialties of social work such as hospice, palliative care, child welfare, substance abuse and mental health. In addition to the benefits that could be gained within the social work field, online community of practice listservs could be of value to many disciplines within the healthcare setting. The results of this study support the idea that knowledge and information sharing with others is valuable to the OSW profession particularly in terms of understanding the role and providing mutual support and adds to the literature for oncology social work providing insight to how OSWs manage meeting patient needs, providing mutual support and finding reward from using the SWON listserv. It has been suggested in the literature that the social work profession struggles with confusion about what roles and tasks a social worker is responsible for as well as how to demonstrate effectiveness (Lloyd, King & Chenoweth, 2002). Having a sense of mutual support in the work setting is

associated with numerous benefits such as reduced burnout, reduced feelings of professional isolation, and reduced stress. According to Lloyd, King & Chenoweth (2002) in a study conducted of social work literature to evaluate what factors contribute to burnout and stress among social workers, results concluded that social workers experience a high level of role ambiguity and role conflict, both of which were found to be organizational factors contributing to burnout. Conversely, the same study concluded that social support through supervision, co-workers and peers was associated with lower levels of burnout (Lloyd, King & Chenoweth, 2002). For OSWs that work alone or within a small practice, access to the SWON listserv can offer mutual support thus lowering levels of stress and burnout. In terms of practice sites and access to support, it is important to note that of all disciplines in the core of the mental health professions, social workers make up the largest proportion of the mental health professions and typically work in rural areas (Parman, 2018).

This research suggests that OSWs commonly use the SWON listserv as a tool to gain a better understanding of their roles in oncology settings. OSWs are using the SWON listserv to groupthink how to get patients what is needed when no clear or consistent pathways of care are accessible. Pathways to care are commonly insurance-driven, however, since many cancer patients are uninsured, the issue of health coverage presents policy implications. Social workers who are focused on policy making and change can use this research to influence legislation on the need for cancer insurance to be provided at the federal level through insurances such as the Affordable Care Act, Medicaid and Medicare. The inclusion of insurance for all cancer patients with continued social work support, provides a great opportunity for the creation of care pathways that social workers can use to best meet the needs of cancer patients, in turn providing clarity for clear role expectations. In addition, this research demonstrates a need for policy

change for oncology social work services to become billable services. Currently, social work services in medical settings are not typically billed. Because medical social workers are not perceived to be contributing to profit making, their contributions in the medical industry and patient care are susceptible to being under-valued and sometimes overlooked. Also, despite the benefits OSWs bring to an interdisciplinary cancer care team, not all hospitals and/or oncology settings are staffed with social workers because they bring no monetary value to the system. A policy allowing billable hours provides benefits not only to the profession but also to the organizations providing the care and patients receiving the care. The shift to billable services will allow for standardized processes to be recognized and approved for cancer patients that can improve their overall quality of life such as family planning, counseling and advocacy during treatment.

Study Limitations

The data for this study was results from a researcher developed survey, therefore, concerns of internal validity were present. The researcher attempted to control for this by having the survey tested by three oncology social workers in terms of face and content validity, ensuring survey questions were appropriate and requested feedback for survey improvements.

A second limitation is that AOSW only allowed for one reminder for AOSW members to participate in the survey. Ideally, the researcher would have provided a minimum of two reminders during weeks two and four to increase the survey response rate. Per the AOSW guidelines, only one reminder is permitted during the time frame of the open survey.

The sample of survey participants were limited to oncology social workers who are members of the AOSW. There is question as to the applicability of the findings for social workers that are working in other areas of the discipline especially as it relates to information

sharing and providing support due to OSWs often working alone or in rural areas, however, research has indicated that the entire social work profession tends to work rural areas (Parman, 2018). It is recommended that future studies explore the presence of online listserv's in other areas of social work and other disciplines to evaluate how and why they are being used.

In addition to the targeted sample, the sampling frame for this study had some limitations. The sampling frame was all AOSW members *(N*=1,193). All AOSW members can access the SWON listserv. However, the AOSW staff do not have any specific approach to estimating the volume of AOSW members who follow or engage in the listserv. Thus, although the survey was sent to all AOSW members, we cannot accurately estimate a response rate since the denominator for the response rate is not known.

Data that relies on self-reporting such as survey responses, creates a possibility of receiving dishonest answers. To help mitigate this possibility, this researcher provided a disclosure in the request to participate in the survey, that there would be no identifying information gathered, however, the possibility remains that they may still have believed that the responses would not be anonymous.

Although there were several limitations within this study, the results provided a starting point of online professional communities of practice to provide mutual support, values and information needed to improve overall job performance and satisfaction. Online communities of practice have become especially important in the response to the battle of a world-wide pandemic. It is recommended for future studies to evaluate how and why online communities of practice were used during COVID-19. Mental stability is threatened during times of isolation such as the mandated social distancing and shutting down of businesses. Another future study recommendation is to evaluate how online communities of practice were used during the

COVID-19 pandemic isolation period to cope with professional isolation and meeting the needs of patients during a time when not many resources may be available. Furthermore, research has suggested that communities of practice in healthcare are complex and operate under different models but are generally used to influence change in practices which requires behavior changes for practitioners which can be influenced by environmental factors as well (Ranmuthugala et al., 2011). Future research is recommended to assess the impact of both how communities of practice are used and the impact of improvements in healthcare performance.

APPENDIX A: SWON LISTSERV SURVEY

SWON Listserv Survey

The SWON listserv is an excellent example of the use of social media for communication in a community of health care professionals. We are conducting a study of how SWON members use the SWON listserv and what the listserv means to SWON members. This survey and research have been approved by the AOSW Research Committee and the University of Central Florida (UCF) Institutional Review Board (IRB).

The survey should take you only about 10 minutes to complete. Your participation is completely voluntary. Your answers will be downloaded into a database and will be completely anonymous. When we complete our study, we will share the survey findings with AOSW and make them available to the SWON membership.

Because we believe the SWON listserv can serve as a model for improving communication and learning within any professional practice community, your thoughtful responses are very important to providing a complete and critical understanding of how the listserv works for you and your OSW colleagues. Thanks in advance for responding thoughtfully when completing these survey questions!

If you have any questions about your participation in this survey you can email Dr. Mary Ann Burg, Professor, UCF School of Social Work at: m.burg@ucf.edu. You can also contact the University of Central Florida IRB at irb@ucf.edu, 407-823-2901 about your rights as a study participant.

Thank you!

Meghan Budvarson, MSW, PhD Candidate, UCF Public Affairs Doctoral Program

Mary Ann Burg, PhD, LCSW Professor, UCF School of Social Work

OSW Survey

1. Do you <u>ever</u> use the SWON listserv?

   ____Yes

   ____ No If no, why have you never used it? Please explain: _____

   _____

   _____

   _____

The remainder of the survey questions apply <u>only to those who have used the SWON listserv</u>.

2. Rank from 1-5 the primary reasons you have for participating on the SWON listserv.

   ____ Professional advice

   ____ Sharing of information on resources

   ____ Mutual support

   ____ Ways to improve my practice

   ____ Other (Please specify):_____

3. Please check your best response for each of the following questions (i.e., strongly disagree; disagree; neutral; agree; strongly agree).

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Content on the SWON listserv is relevant for my work					
2. Postings on the SWON listserv are often inaccurate					
3. I utilize knowledge gained from the listserv in my work with patients					
4. Knowledge that I have gained in the SWON listserv has helped other colleagues I work with					
5. The information shared on the listserv is relevant only for oncology social workers					
6. I have established relationships with other OSWs through my use of the SWON listserv					
7. Participating on the SWON listserv helps to reduce my feelings of professional isolation					
8. Mutual support between OSWs is a valuable aspect of the SWON listserv					
9. Participating on the SWON listserv has helped me to develop an identity in the OSW community					
10. I use the SWON listserv as a source of advice when facing professional challenges at my workplace					
11. I often have difficulty finding ways to support cancer patients					
12. Content in the SWON listserv seldom provides new ideas for how I can help cancer patients					
13. Content in the SWON listserv gives me good information on evidence-based practice					
14. Content in the SWON listserv helps me to improve my performance in my work					
15. I feel that the information and support I contribute to the SWON listserv has been helpful to other SWON members					
16. I enjoy acknowledgement of my postings on the SWON listserv such as a thank you, receipt					

of knowledge, or confirmation that the information that was provided was useful					
17. I have provided other OSWs in the SWON listserv acknowledgement such as a thank you, receipt of knowledge, or confirmation that the information received was useful					
18. I trust the SWON community to respond appropriately to sensitive topics on the listserv					
19. I cannot always trust the opinions of the SWON listserv community on questions posed about how to respond to professional dilemmas					
20. I get frustrated when I do not get responses to my postings on the listserv					
21. I find that many times questions posted by members on the SWON listserv result in no useful answers					
22. Having access to the SWON listserv helps reduce the stress I experience in my job					

4. What types of information do you typically seek on the SWON listserv? (Check all that apply.)

____ How to get patients the treatments and/or medications they can't afford.

____ Ways to help patients with their travel to treatment.

____ Health care insurance options for patients.

____ Ways to assist patients' caregivers.

____ How other OSWs manage interprofessional relations on the job.

____ What roles other OSWs take on in their workplace.

____ How other OSWs manage their frustrations in their work.

____ Other (please describe): _____

_____

5. How often do you **usually check** the SWON listserv?

____ Only when I post a question

____ Every time a new SWON posting comes into my inbox

____ Once daily

____ Several times per week

____ About once per week

____ A few times per month

____ Very infrequently

____ Other (please describe): _____

6. How often do you **usually post** a question or comment on the SWON listserv?

____ Daily

____ Several times per week

____ About once per week

____ A few times per month

____ Very infrequently

____ Other (please describe): _____

7. How often do you usually **respond to a question or comment** on the SWON listserv?

____ Daily

____ Several times per week

____ About once per week

____ A few times per month

____ Very infrequently

____ Other (please describe): _____

8. What best describes the setting of your current, primary employment?

____ Social worker in an oncology setting

_____ Inpatient _____ Outpatient _____ Other (Please describe):

_____

____ Social worker in a health care setting other than oncology (Please describe):

_____

9. Is your current, primary employment in a:

____ Community hospital or outpatient treatment setting

____ Setting associated with an academic health science center

____ Other (please describe): _____

10. What best describes your current work situation?

____ I work with other oncology social workers at my workplace

____ I am the only oncology social worker at my workplace

____ Other (please describe): _____

11. How many years have you been in professional social work practice?

_____Years

12. How many years have you worked in an oncology setting?

_____ Years

13. Are you a certified oncology social worker?

____ Yes

____ No

14. Do you ever attend local or state oncology social work meetings?

____ Yes

____ No

15. Do you ever attend national oncology social work meetings?

____ Yes

____ No

16. Is there anything we haven't mentioned in this survey that you think is important for a complete understanding of how the SWON listserv works and/or its value to you?

THANK YOU FOR YOUR PARTICIPATION!

APPENDIX B: UCF IRB APPROVAL

UNIVERSITY OF CENTRAL FLORIDA

Institutional Review Board
FWA00000351
IRB00001138
Office of Research
12201 Research Parkway
Orlando, FL 32826-3246

EXEMPTION DETERMINATION

September 25, 2019

Dear Meghan Budvarson:

On 9/25/2019, the IRB determined the following submission to be human subjects research that is exempt from regulation:

Type of Review:	Initial Study, Category 2
Title:	Online Communities for Information Sharing and Mutual Support for Health Professionals
Investigator:	Meghan Budvarson
IRB ID:	STUDY00000823
Funding:	None
Grant ID:	None

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Racine Jacques, Ph.D.
Designated Reviewer

APPENDIX C: AOSW RESEARCH COMMITTEE RESEARCH PROTOCOL APPLICATION FORM

AOSW RESEARCH COMMITTEE -- RESEARCH PROTOCOL APPLICATION FORM

The AOSW Research Committee is charged with providing independent peer review of the applicability of IRB-approved protocols to the greater AOSW membership.

Feedback will be provided to the applicant(s) at their request.

1. Study Title___

   "Online Communities for Information Sharing and Mutual Support for Health Professionals"

2. Principal Investigator __Meghan Budvarson, Doctoral Student_____

   a. AOSW Member?

   ☐ Yes

   ☒ No (AOSW co-investigator: Mary Ann Burg, Dissertation Chair, AOSW member)

   b. Please attach CV of Principal Investigator

3. Institutional Review Board (IRB) approval status.

   a. Has the study been approved by an IRB?

   ☒ Yes (Date of approval) __9/25/19_____

   ☐ No (explain) _____

   b. Please attach IRB approval letter and consent form (see attached)

4. Research Abstract.

   a. Describe the purpose, aims, hypotheses and/or research questions, and methodology (e.g., study design, data analysis plan).

The overall purpose of this research is to expand our knowledge of how online communities perform for information sharing and mutual support by health professionals. In this study we focus on the Social Work Oncology Network (SWON) listserv, which is an especially active online professional information exchange vehicle. The main objectives are to explore the nature of social

exchange and use of a professional online community that occurs on the SWON listserv, and to demonstrate the processes OSWs engage via an online community to collaboratively resolve some of the challenges faced by cancer patients. In this study we will focus on the specific example of how oncology social workers use their online community to defray patients' costs of cancer care. Our specific research questions are:

RQ1: Does SWON listserv participation meet OSWs needs for assisting cancer patients with financial challenges?

RQ2: How does listserv use contribute to professional development among OSWs?

RQ3: What rewards are valued by OSWs with SWON listserv use?

RQ4: What are the characteristics of OSWs who identify positive outcomes of SWON listserv participation?

This study will employ an online Qualtric survey of all SWON members. Survey questions will include items to help describe respondents' use of SWON (e.g., how often they view SWON postings, how often they post on SWON), non-identifying demographic information (e.g., years of practice, type of organization they work in), and perceived benefits of SWON. Analysis will provide a description of SWON users and SWON use and explore predictors of perceived benefits of listserv use.

b. Please attach the study instrument(s), if applicable. (see attached)

c. How does your study advance the AOSW Strategic Plan? Refer to https://www.aosw.org/about-aosw/mission-vision-values/

The mission of AOSW is to advance excellence in the psychosocial care of persons with cancer, their families, and caregivers through networking, education, advocacy, research, and resource development. The SWON listserv is a primary vehicle for advancing the AOSW mission and for developing and sustaining a global society of oncology care. Online professional communities vary in their volume of use, how they are used, and their value to professional communities, but their use has accelerated over the last two decades, especially among the health professions. We believe that

SWON is an exemplary model of active professional information sharing, problem solving professional development and connectivity, and thus it is important to investigate it and disseminate our research findings to the social work community and other health professions.

5. Indicate how AOSW can best promote your study to your targeted population (check all that apply).

☐ Email blast to AOSW membership

☐ Email blast to Special Interest Group(s) only (e.g., Palliative Care, BMT)

☒ SWON Listserv

☐ Social media channels (e.g., Facebook)

☐ Other

_____

_____

6. How do you plan to share the results of your completed study with AOSW membership?

We will provide a summary of our findings to the AOSW Research Committee and to the SWON listserv users through a listserv posting.

APPENDIX D: LISTSERV POSTING TO SWON USERS

Hello SWON, please consider this approved posting:

Dear AOSW Members,

We are excited to have the approval of the AOSW Research Committee to invite you to participate in this survey.

The purpose of this study is to collect information from oncology social workers on how Social Work Oncology Network (SWON) members use the SWON listserv and what the listserv means to SWON members. This will further assist to inform other health disciplines of benefits of online professional communities.

This online survey should take 10 minutes at the most to complete. There is no collection of identifying information. Participation is voluntary and you can stop the survey at any time. Please follow the link provided to participate in this survey.

THANK YOU FOR YOUR PARTICIPATION!

Meghan Budvarson, LCSW, PhD Candidate

http://ucf.qualtrics.com/jfe/form/SV_6QdG3ZIN6s4PY7r

APPENDIX E: ASSOCIATION BETWEEN OSW CHARACTERISTICS AND TYPES OF INFORMATION SOUGHT ON LISTSERV

	Primary Reasons for using SWON Listserv						
Characteristics of Respondents	How to get treatment/ medication	Ways to help with travel	Health care insurance	Ways to assist patients' caregivers	Other OSWs manage relationships	Roles of other OSWs	How other OSWs manage frustrations
Certified OSW	$X^2 = 3.461$	$X^2 = 4.673$	$X^2 = 2.389$	$X^2 = 2.500$	$X^2 = 7.030$	$X^2 = 4.147$	$X^2 = 6.506$
	p = .17	p = .09	p = .66	p = .28	p = .13	p = .12	p = .03
Primary employment	$X^2 = 3.672$	$X^2 = .628$	$X^2 = 3.289$	$X^2 = 6.992$	$X^2 = 6.261$	$X^2 = 10.076$	$X^2 = 2.245$
	p = .29	p = .89	p = .77	p = .07	p = .39	p = .01	p = .52
Current work setting	$X^2 = .196$	$X^2 = 5.189$	$X^2 = .896$	$X^2 = 1.002$	$X^2 = .636$	$X^2 = 19.353$	$X^2 = 2.713$
	p = .97	p = .15	p = .98	p = .80	p = .99	p = .00	p = .43
Work with other OSWs	$X^2 = .668$	$X^2 = 1.281$	$X^2 = 1.487$	$X^2 = 7.020$	$X^2 = 11.657$	$X^2 = 12.854$	$X^2 = 7.568$
	p = .88	p = .73	p = .96	p = .07	p = .07	p = .00	p = .05
Attend local or state meetings	$X^2 = 1.702$	$X^2 = .608$	$X^2 = 1.985$	$X^2 = 2.291$	$X^2 = 7.044$	$X^2 = 4.133$	$X^2 = 4.942$
	p = .42	p = .73	p = .73	p = .31	p = .13	p = .12	p = .08
Attend national meetings	$X^2 = 4.436$	$X^2 = .572$	$X^2 = 3.524$	$X^2 = 2.003$	$X^2 = 12.243$	$X^2 = 4.268$	$X^2 = 7.729$
	p = .10	p = .75	p = .47	p = .36	p = .01	p = .118	p = .02

APPENDIX F: ASSOCIATIONS BETWEEN OSW ATTITUDES, BEHAVIORS AND BELIEFS OF SWON USE AND YEARS IN PRACTICE SETTING

	Years of Practice	
Attitudes and Beliefs about SWON use and Reasons for Use	Years in Oncology Setting	Years in Professional Social Work
Content on SWON is relevant for my work	$X^2 = 29.44$	$X^2 = 13.35$
	p = .08	p = .86
Postings on the SWON listserv are often inaccurate	$X^2 = 29.82$	$X^2 = 24.05$
	p =.07	p =.24
I utilize knowledge gained from the listserv in my work with patients	$X^2 = 19.57$	$X^2 = 15.85$
	p = .485	p = .726
Knowledge gained has helped other colleagues I work with	$X^2 = 26.36$	$X^2 = 8.85$
	p = .15	p = .98
The Information shared on the listserv is relevant only for oncology social workers	$X^2 = 28.74$	$X^2 = 15.75$
	p = .09	p = .73
I have established relationships with other OSWs through my use of SWON listserv	$X^2 = 39.71$	$X^2 = 23.78$
	p = .00	p = .25
Participating on SWON listserv helps reduce my feelings of professional isolation	$X^2 = 22.32$	$X^2 = 17.98$
	p = .32	p = .59
Mutual support between OSWs is a valuable aspect of the SWON listserv	$X^2 = 24.83$	$X^2 = 13.58$
	p = .05	p = .55
Participating on SWON listserv- helped me develop an identity in the OSW community	$X^2 = 34.86$	$X^2 = 28.86$
	p = .09	p = .27
I use SWON listserv as a source of advice when facing professional challenges at work	$X^2 = 33.47$	$X^2 = 32.49$
	p = .03	p = .03
I often have difficulty finding ways to support cancer patients	$X^2 = 23.82$	$X^2 = 21.89$
	p = .25	p = .34
Listserv content seldom provides new ideas for how I can help cancer patients	$X^2 = 25.85$	$X^2 = 20.16$
	p = .17	p = .44
Content in SWON listserv gives me good information on evidence-based practice	$X^2 = 19.93$	$X^2 = 29.31$
	p = .52	p = .08
Content of SWON listserv helps me improve my work performance	$X^2 = 20.60$	$X^2 = 14.00$
	p = .42	p = .83

	Years of Practice	
Attitudes and Beliefs about SWON use and Reasons for Use	Years in Oncology Setting	Years in Professional Social Work
I feel information/support I contributed has been helpful to other SWON members	$X^2 = 30.50$ $p = .20$	$X^2 = 31.08$ $p = .18$
I enjoy acknowledgement of my postings	$X^2 = 27.04$ $p = .35$	$X^2 = 24.18$ $p = .50$
I have provided others on the SWON listserv acknowledgement	$X^2 = 52.23$ $p = .00$	$X^2 = 50.25$ $p = .00$
I trust the SWON community to respond appropriately to sensitive topics	$X^2 = 17.55$ $p = .28$	$X^2 = 10.58$ $p = .78$
I cannot always trust the opinions of SWON community on how to respond to professional dilemmas	$X^2 = 36.51$ $p = .06$	$X^2 = 30.34$ $p = .21$
I get frustrated when no response to my postings	$X^2 = 21.09$ $p = .68$	$X^2 = 37.63$ $p = .05$
Questions posted on SWON listserv result in no useful answers	$X^2 = 53.59$ $p = .00$	$X^2 = 18.97$ $p = .79$
Access to SWON listserv has reduced stress at my job	$X^2 = 35.86$ $p = .01$	$X^2 = 19.22$ $p = .50$
How to get patients the treatments/medication they can't afford	$X^2 = 2.10$ $p = .83$	$X^2 = 8.44$ $p = .13$
Ways to help patients with their travel to treatment	$X^2 = 5.89$ $p = .31$	$X^2 = 5.78$ $p = .32$
Health care insurance options for patients	$X^2 = 5.19$ $p = .87$	$X^2 = 11.60$ $p = .31$
Ways to assist patients' caregivers	$X^2 = 8.08$ $p = .15$	$X^2 = 5.80$ $p = .32$
How other OSWs manage interprofessional relations on the job	$X^2 = 13.86$ $p = .17$	$X^2 = 8.96$ $p = .53$
What roles other OSWs take on in their workplace	$X^2 = 14.10$ $p = .01$	$X^2 = 8.65$ $p = .12$
How other OSWs manage their frustrations in their work	$X^2 = 3.52$	$X^2 = 2.76$

Attitudes and Beliefs about SWON use and Reasons for Use	Years of Practice	
	Years in Oncology Setting	Years in Professional Social Work
	p = .62	p = .73
Frequency of checking SWON listserv	$X^2 = 64.19$	$X^2 = 95.54$
	p = .00	p = .00
Frequency of posting a question or comment on SWON	$X^2 = 92.04$	$X^2 = 63.80$
	p = .00	p = .00
Frequency of responding to a question or comment on SWON	$X^2 = 54.15$	$X^2 = 44.36$
	p = .00	p = .04

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