Strengthening the PIP Network: Exploring the Motivation behind Online Communication and Knowledge Sharing

by

Yin Maung

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Abstract

Using Groupsite as a platform, Interior Health Authority is implementing a web-based community of practice to foster stronger working relationships within the British Columbia Suicide Prevention Network. The goal is to allow service providers to remain connected to the Suicide Prevention Intervention & Postvention (PIP) network by providing regular communications about resources, projects and activities in other communities. An online questionnaire was administered to study the demographics of these service providers, their communication styles in relation to their work, their attitudes towards Groupsite and knowledge sharing in general. This research explores the target group's motivation for knowledge sharing in general and online; it also attempts to identify possible obstacles.

Introduction

Using Groupsite as a platform, Interior Health Authority is implementing a web-based community of practice to foster stronger working relationships within the British Columbia Suicide Prevention Network. The goal is to allow service providers to remain connected to the Suicide Prevention Intervention & Postvention (PIP) network by providing regular communications about resources, projects and activities in other communities. An online questionnaire was administered to study the demographics of these service providers, their communication styles in relation to their work, their attitudes towards Groupsite and knowledge sharing in general. This research explores the target group's motivation for knowledge sharing in general and online; it also attempts to identify possible obstacles.

Background of Suicide PIP Network

The British Columbia Suicide Prevention Network works on the Integrated Health Promotion principle; it is a system of agencies and service providers in the community that work together to address suicide-related issues in Prevention, Intervention and Postvention (PIP). The term 'Integrated Health Promotion' refers to "agencies and organizations from a wide range of sectors and communities in a catchment working in a collaborative manner using a mix of health promotion interventions and capacity building strategies to address health and wellbeing issues" (Slatter, 2003, p. 10).

The BC Suicide PIP document, released in September 2009, provides a manual for addressing suicide prevention, intervention and postvention efforts and activities. The PIP framework is the conceptual structure detailing with what needs to be done, and providing evidence for this; it includes information on targeted and impacted audiences, key partnerships, suggested systems-level and program-level activities, development opportunities, signs of success and examples of programs. The BC Suicide PIP planning template provides an action-oriented tool that "integrates stakeholder generated priorities and provide clear descriptions for achieving objectives" and "delivers guidance for programs from development through implementation, improvement and evaluation in these specific priority areas" (Damstrom-Albach, Hummel, Joshi, & Ross 2009, p. 9).

After the framework was completed in September 2009, there was no funding to support promotion and dissemination – there was a risk that the manual would sit on a shelf. Interior Health Authority's[1] Injury Prevention Group ran pilot workshops to ensure that communities were aware of the existence of PIP as a potentially useful tool and foster stronger working relationships between Interior Health and other key stakeholders. Through their interactions and sharing of information, workshop participants gained a greater understanding of gaps in services and supports in their communities, and about who should be involved in community planning and development around suicide PIP.

[1] Interior Health Authority is one of five geographically-based health authorities in 2001 by the Government of British Columbia. It is responsible for ensuring publicly funded health services are provided to the people of the Southern Interior.

Evaluation of the feedback from this workshop revealed that the participants needed communication, sustainability and accountability in the form of employer support, community development tools, and communities of practice. The group felt that a central coordinator and a web-based connection with facilitators were very important to enable members of the network to revisit goals and progress. In Turco's evaluation (2009, p. 5), there were suggestions for continued online communication and support in the form of "webpage" or "wiki page".

According to the *BC Suicide PIP – Report on Pilot Workshops in the Interior Health Region* (Turco, 2009), there was a demand for more time for facilitators to engage in PIP processes to share more best practices, increase relationship building, and exchange information and knowledge. Regarding communication to expand and sustain communities of practice around suicide PIP, it was identified that networking by phone or email is difficult to maintain; people benefited from meeting the others face to face; and that there was a need for an online communication tool.

The following factors were identified as useful means in supporting the adoption and sustainability of the Suicide PIP processes and tools in the community (Turco, 2009):

- Networking and resource contact
- Conduit of info to connect interest with resources

- Continued provision of inspiration, support and resources to those who want to use the PIP
- Information sharing/presenting to help participants understand the PIP
- Relationship building
- Strengthening and increasing community capacity
- Idea sharing
- Enthusiasm
- Being prepared
- Support for the different communities

A web-based community of practice was developed as one of the ways to allow service providers to remain connected to the Suicide PIP network after the workshop by providing regular communications about resources, projects and activities in other communities and other additional support. An online group called "Strengthening the PIP Network" on Groupsite (a collaborative software) was introduced as the platform to develop this online community and achieve its goals.

Background of Groupware and Groupsite

Groupware, also known as collaborative software, is designed to facilitate the group work; it can be used to communicate, cooperate, coordinate, solve problems, compete, or negotiate (UsabilityFirst.com, 2011). Groupware functionalities include document sharing, group editing, group calendar, instant messaging, and web

conferencing, etc. The purpose of collaborative software is to change the way information is shared to enable more effective team collaboration.

Groupsite.com is a platform that allows the creation of social websites called Groupsites. Groupsites are collaboration communities that enable groups to communicate, share and network by combining the selected features of online groups and listservs, collaboration software, and social networks (Groupsite.com, 2010). The main features of a Groupsite include integrated discussions, calendar, forum, blog, file storage, photo gallery, sub-groups. A network's members have the option to list personal objectives and to declare any key connections or relationships they have with particular individuals.

The users of the PIP Groupsite include individual service providers, agencies and organizations from a wide range of sectors and communities working in a collaborative manner using a mix of health promotion interventions and capacity building strategies to address priority health and wellbeing issues. Collaboration amongst these dispersed groups of members is usually problematic. To best utilize the knowledge and skills held within a decentralized network of service providers spread out across communities, it is important to implement technologies that will allow communication across geographical boundaries and traditional organizational silos.

The Research Problem

Groupsite has not been a successful medium in carrying on the momentum of the workshop success; anticipated levels of online social participation and collaboration have not been met. Participation and activity on the site was low and the online facilitator is facing a challenge in increasing membership and getting existing members to engage in this medium. Since it's inception in May 4, 2010, site activity has been low, with total of 56 members, 66 pending invitations and five declinations of the invitation. Activity by existing members is also low; there has been no calendar or resource posting by current members; the total number of comments by all members is only two[2].

The site moderator sends weekly updates and other regular postings of calendar reminders, discussion topics and helpful resource links to spur interest; however, online activity remains low and Groupsite does not appear to be the hub of interactivity for service providers to connect and network. Email appears to be the primary communication channel for connecting individuals to the suicide PIP network.

From the results of the workshop evaluation, the lack of participation on Groupsite does not appear to be due to the lack of desire of the group to connect and network; it is possible that the problem may lie in the implementation of Groupsite. Currently, it appears to be failing to meet the needs of this group; it has not become the vehicle to support the relationships of members and facilitate the flow of information

[2] These numbers are from a site report in February 2011.

within this group. Groupsite members continue to email information such as links, pictures, files, and events to the site moderator who then posts it on the Groupsite. Some of the posted articles, in fact, do generate conversation in the form of group email discussions, despite the Groupsite moderator's encouragement to post to the discussion forum to open it up to all members. An orientation via teleconference to train members on the site functionality received no responses.

Objectives of the Study

The research investigates current barriers and personal motivational factors for knowledge sharing. The study does not go into User Experience Design analysis and investigate the interface design of Groupsite for usability. Instead, this research casts a wider net of exploration; it will study what the PIP network members' needs and preferences are for communicating with each other effectively, and gauge their level of interest in maintaining the online community of practice. Studying the PIP network members' communication styles and their motivation for knowledge sharing may help to identify the non-technical obstacles that are preventing the PIP network members from being active participants in the Groupsite.

This research may reveal several directions for further study; it may result in recommendations on how to utilize the Groupsite to recruit more members and encourage existing members to become more active. On the other hand, it is also possible that the

research will reveal barriers that are too significant to overcome and that an online community is not an effective way of communication for the PIP network.

The online survey uses Survey Monkey and it is administered to an email distribution list consisting of members that attended the PIP workshops in September 2009. This survey includes both open-ended and closed-ended questions that explore the participant's demographics, communication styles, motivations for knowledge sharing and barriers in their work.

In this research, we examine the culture of the PIP network and the natural flow of information and interaction between its members; subsequent research may figure out how the technology can assist these members in their interactions. It is essential to find out the motivating factors behind why PIP network members share knowledge before implementing a tool that will be conducive to helping them interact with each other. Hendriks (1999) acknowledges that while Information and Communication Technologies (ICT) can be effective in lowering barriers involved in knowledge sharing and may facilitate the access to information bases storing data that are relevant beyond the individual level, it should be introduced with the purpose of improving processes involved in sharing knowledge versus taking over directing these processes. It is not realistic to expect to see the benefits of the new ICT after it has been introduced without an understanding the culture of the organization that creates and shares the knowledge. Examining how the participants naturally communicate with each other and what their attitudes towards using different forms of technology will provide an insight into whether

there is potential for Groupsite to become the platform for their networking and knowledge sharing.

Nonaka (1994) suggests that “the theory of organization has long been dominated by a paradigm that conceptualizes the organization as a system that 'processes' information or 'solves' problems with the assumption that the task at hand is how efficiently it can deal with information” (p. 14). This paradigm views information processing as a problem-solving activity which centers on what is given to the organization—without due consideration of what is created by it. This appears to have been the approach with the implementation of Groupsite to the Suicide Prevention Network; Groupsite was introduced without prior investigation of the network’s knowledge sharing culture. Although the Groupsite was intended to utilize the benefits of social networking and web 2.0, its current use is limited as a repository for distribution of information and data.

We need to view knowledge sharing through a different lens. Groupsite should be utilized not only as a repository of information, but rather as a rich medium where stories are shared and implicit knowledge can be transferred through online socialization. Postings of documents and other resources redistributes knowledge that has been already codified and made explicit; there is a significant amount of organization knowledge in the implicit form that will not be captured in this format. Interaction through discussions and collaboration is required for implicit knowledge sharing.

From Turco's observation of member interactions through email discussions, in-person workshops, community planning events, and working groups in the BC Suicide PIP – Report on Pilot Workshops in the Interior Health Region (2009), it appears that there is interest in sharing knowledge within the community. The objective of the research is to help Interior Health understand the PIP Network's knowledge sharing culture and help determine whether Groupsite can be an environment that is conducive to knowledge sharing.

Literature Review

In this paper, we take a sociocultural perspective in framing the research problem. The sociocultural tradition conceptualizes communication as a symbolic process that produces and reproduces shared sociocultural patterns (Carey, 1989). Using this perspective, we will study the Interior BC Suicide Prevention Network as a group that constructs knowledge for one another, "collaboratively creating a small culture of shared artifacts with shared meanings" (Wikipedia, n.d.). We are considering the Groupsite platform as a possible space for PIP network members to share a culture of similar experiences and create new knowledge together. We will view knowledge as a "fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information" (Davenport & Prusak, 1998, p. 5). We begin by discussing what we mean by knowledge sharing and then explore concepts related to the motivational factors that drive knowledge sharing.

The sociocultural approach does not regard knowledge exchanged in organizations as an entity separate of the individuals or the group, to be extracted and then shared, but rather as something that is embedded within the individuals and the network. Craig (2007) states that "… data and information in documents… are not autonomous; they exist only in the shared practices of actual communities; their meaning emerges in social interaction. Individuals are seen as a product of their social environments; and groups develop particular norms, rituals, and worldviews" (p. 85). Davenport and Prusak (1998) also recognize that in organizations, knowledge often becomes embedded not only in documents and repositories but also in organizational routines, processes, practices, and norms. It is important to recognize that the attitudes and culture of the members within the PIP network are crucial components when framing the research study.

The official goal of implementing Groupsite is to "facilitate regional information and resource sharing, networking, and coordination around suicide PIP activities by using a networking tool that combines useful features of traditional websites, blogs, collaboration software and social networks" (Turco, 2009, p. 5). Although the objective was to utilize the benefits of social networking and web 2.0, Groupsite has not surpassed being an ordinary repository for information and data. This mistake commonly happens because "much of the energy in knowledge management has been spent on treating knowledge as an "it," an entity separate from the people who create and use it" (Davenport & Prusak, 1997, p. 146). This collaborative software is used not to its full

potential, but only as a space that allows members to post documents with knowledge embedded in them (such as memos, reports, presentations, articles, etc.) and store them in a repository where they can be later retrieved. Groupsite appears to have been brought in from a systems approach and implemented as a network service with the purpose of improving knowledge access and distribution.

In the introduction (p. 11), we recognized that organizations have traditionally been viewed as systems that process information or solve problems and the default goal is to improve the efficiency of how these functions are accomplished (Nonaka, 1994). Groupsite was implemented from this particular angle – that is, to deal with the sharing of information and resources amongst the members in the Interior BC Suicide Prevention Network to solve a problem. Nonaka (1994) suggests that this paradigm views information processing as a problem-solving activity which centers on what is given to the organization, instead of what or who the organization is made up of; this paradigm also suggests that the solution lies in the 'input-process-output' sequence of hierarchical information processing. The weakness with this view is that, like most organizations, the Suicide Prevention Network does not have a well-defined "problem" to solve. This approach also views organizations as passive and static, which is especially not the case in the Interior BC Suicide Prevention Network, an emerging and growing community of service providers that vary enormously in background and expertise.

Instead of predetermining what the "problem" at hand to solve is, an alternate first step is to understand how the knowledge sharing in the organization happens. In other

words, instead of looking for a "problem" or the blockage with knowledge sharing in the "input-process-output" model, we will study how the knowledge is shared and learn more about the contributors of the knowledge in the organization as components of group knowledge.

Knowledge Sharing

According to Wegner's criteria (2006), the Suicide PIP network can be considered a community of practice – a "group of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (para. 2). The Suicide PIP network is a community where members interact and engage with one another around a shared domain to share a repertoire of resources. While ideas are created in the minds of individuals, it is the interaction between these individuals that plays a critical role in developing ideas; Nonaka (1994) uses the term "communities of interaction" to describe the contribution to the amplification and development of new knowledge.

Communities of practice create new knowledge by sharing resources that comprise of stories, helpful tools, experiences, stories, ways of handling typical problems, etc. Collaborative groupware, such as Groupsite, can overcome spatial and temporal barriers and provide that space for members of the network to interact as a community and build a common ground of experiences and beliefs. An understanding of how organizations create knowledge is important; we will look at the basic constructs of

Nonaka's organization knowledge creation theory; he draws a distinction between tacit and explicit knowledge and "embraces a continual dialogue between explicit and tacit knowledge which drives the creation of new ideas and concepts" (1994, p. 15).

Knowledge is often classified into two groups – "tacit" and "explicit". "Explicit" refers to codified knowledge that is transferable in formal systematic language. "Tacit" knowledge, on the other hand, is hard to formalize and communicate; it is "deeply rooted in action, commitment and involvement in a comprehensive cognizance of the human mind and body" (Nonaka, 1994, p. 16). In contrast, Stenmark's perspective does not consider tacit knowledge as a *different kind of knowledge* than explicit knowledge, but rather as a "backdrop for the explicit knowledge" (2002, p. 15). This tacit knowledge refers to the culture, the genre, the communal understanding of terms, like water for fish.

Successful ICT needs to create a space for this backdrop of tacit knowledge that supports knowledge creation, instead of being a foreign space for documents to live out of context. Informal conversations held by members of the community help each other share and "develop a set of cases and stories that can become a shared inventory for their practice" (Lave & Wegner, 1998, para. 6); these "informal conversations" contain pieces of tacit knowledge and shared attitudes that form the backdrop and make up the communal pool of knowledge. Group knowledge is knowledge that exists outside of what an individual can hold and occurs only in a group dynamic; attitudes and cultures affect this common knowledge sharing.

These informal conservations also allow "redundancy of information" to occur; this term refers to the existence of information more than the specific information required immediately by each individual (Nonaka, 1994); it is comparable to hearing the latest news in the hallway, or at the water cooler and seeing posters up in a physical setting. "The sharing of extra information between individuals promotes the sharing of individual tacit knowledge. Since members share overlapping information, they can sense what others are trying to articulate…Redundancy of information connects individuals and the organization through information, which converges rather than diffuses" (Nonaka, 1994, p. 14).

Tacit knowledge can be further classified into two types – "technical[3]" and "cognitive" (Nonaka, 1994). The cognitive tacit knowledge is difficult to codify, it centers on mental models in which individuals form of the world by creating and manipulating analogies in their minds. These working models include "schemata, paradigms, beliefs, and viewpoints that provide perspectives that help individuals to define their world" (Johnson-Laird, 1983, p. 60). When individuals in a group or an organization articulate these tacit perspectives, new knowledge is created. "The power of knowledge to organize, select, learn, and judge comes from values and beliefs as much as, and probably more than, from information and logic" (Davenport & Prusak, 1997, p.

[3] Technical tacit knowledge includes "concrete know-hows, crafts, and skills that apply to specific contexts" (Nonaka, 1994, p. 16); this type of tacit knowledge can be readily codified and stored as explicit knowledge.

12). Communication can be seen as the process to share tacit knowledge to create mutual understanding; and the interaction between individuals is necessary for this to occur.

ICT enables the interaction between individuals to share their perspectives and then collaboratively create new mental models, commitments and common goals as a group; this will provide the context individuals to go on and form new knowledge in their minds, which will again later be externalized and shared. "Organizational knowledge creation therefore should be understood in the terms of a process that "organizationally" amplifies the knowledge created by individuals, and crystallizes it as a part of a knowledge network of organization" (Nonaka, 1994, p. 17).

Attempts to share codified knowledge in the form of documents and algorithms, extracted from its natural environment can be ineffective; Zack (1999) points out that some tacit knowledge is difficult to articulate and its essence might be lost in the translation. Socialization, the "process of creating tacit knowledge through shared experience" (Nonaka, 1994, p. 19), must occur for the transfer of tacit to tacit knowledge. Wegner (1998) states that "Learning ... is often ...an incidental outcome that accompanies these social processes" (para. 3). There is a tendency to codify tacit knowledge into a documented form and store it for ready accessibility; while this is possible with the technical type of tacit knowledge, the cognitive tacit knowledge requires the interactivity between people to be transferred. It is challenging for this kind of socialization to occur in geographically dispersed networks, an online environment is required to support these activities. ICTs like Groupsite strive to provide this space for socialization to occur.

A pure combination[4] of explicit knowledge will lack in the personal meaning of knowledge that comes with socialization; leaving such a combination to become a "superficial interpretation of existing knowledge" (Nonaka, 1994, p. 20); explicit knowledge might not be understood without the support of its contextual background. It is difficult to successfully embody this kind of knowledge in a form that is concrete enough to facilitate further knowledge creation in a wider social context.

Without some form of shared experience, it is extremely difficult for people to share each other's thinking processes. "The mere transfer of information will often make little sense if it is abstracted from embedded emotions and nuanced contexts that are associated with shared experiences" (Nonaka, 1994, p. 19). Especially in the case of the Interior BC Suicide Prevention Network where the members come from diverse backgrounds and positions in various organizations (each organization with a different mental mode and language), they cannot effectively share their knowledge by only providing snippets of their experiences without context. "Commitment, beliefs and culture vary from organization to organization; they have their own culture, their own vocabulary, and their own (tacit) assumptions… this means that organizational members in general can share knowledge more easily among themselves than with people outside the organization" (Stenmark, 2001, p. 8). In communities of practice where people

[4] Combination here refers to the conversion of explicit to explicit knowledge, which reconfigures existing information through sorting, adding, re-categorizing, and re-conceptualizing of explicit knowledge can lead to new knowledge (Nonaka, 1994).

typically know each other and work together occasionally, they are able to rise above the boundaries of the organization. It becomes "an environment with enough coherence to allow perspective making emerges and by sharing war stories, i.e. narratives that to an outsider might seem commonplace and banal, these members exchange knowledge tacitly understood only within the community" (Stenmark, 2001, p. 9).

We need to view knowledge sharing through a new lens, not the traditional approach that treats it as a repository of information, but rather a rich medium where stories and shared and implicit knowledge are transferred through online socialization. Interaction through discussions and collaboration is required for implicit knowledge sharing. The only kind of knowledge that is shared through postings of documents will be the knowledge that is explicit and already translated. "Knowledge encompasses far more than factual knowledge. It includes the entire range of norms and values, opinions and attitudes, intuition and emotions, experience and skills, and expectations and ambitions that constitute our identity and personality, and that guide and define our individual and group behaviour" (Owen, 1999, p. 6).

Motivation to Share Knowledge

Knowledge sharing provides the "link between the level of the individual knowledge workers, where knowledge resides, and the level of the organization, where knowledge attains its value" (Hendriks, 1999, p. 91). The raison d'être of groups like the Interior BC Suicide Prevention Network is to enable the sharing of knowledge that is

currently contained in different pockets throughout the community. Collaborative groupware, like Groupsite, was introduced to facilitate such exchange of knowledge.

Communication technologies are commonly introduced with the objective to empower the individual knowledge worker by providing the tools to support and boost his or her knowledge-sharing skills (Tampoe, 1996); this approach views organizational knowledge-sharing problems as inefficiencies in the 'input-process-output' information-processing model as mentioned earlier on page 13. DeLong (1996) states that the introduction of communication technologies using this approach very often does not result in significant improvements in knowledge sharing. The Strengthening the Network Groupsite for BC Suicide PIP members is an exemplary case; they have not used the new technology tools that are available to them and we are not yet aware of why. Hendriks (1999) suggests that "if individuals are not motivated to share knowledge, it is not likely that they are motivated to use tools facilitating knowledge sharing" (p. 91). Although the workshop evaluation appears to suggest that there is a demand for networking and sharing of resources, it is still crucial to ascertain whether the Suicide PIP members are motivated to share their knowledge with others.

Many organizations resort to introducing incentives to increase participation in these technologies. An increase in membership and participation on a collaborative groupware, spurred by external incentives such as prizes and points, does not equate an increase in knowledge sharing. "Introducing incentives for using the technologies is inadequate; it confuses means and goals" (Hendriks, 1999, p. 91). The more fundamental

question that should be addressed is how ICT affects the motivation for knowledge sharing.

Hendriks (1999) proposes that knowledge is not a commodity that can be passed around freely; it is tied to a knowing subject and cannot be shared. "To share one's knowledge, an act of reconstruction is needed, a relation between at least two parties, one that possesses knowledge and the other that acquires knowledge is presumed" (p. 92). The transfer of knowledge requires the socialization process as discussed in the previous section of the literature review on page 18.

For an exchange of tacit knowledge to happen, it needs to be first externalized and then internalized. Barriers exist that may distort these internalization and externalization processes. These barriers may include barriers of space and time or more fundamental issues, such as barriers of social distance, culture and language, and differences in mental or conceptual frames (Vriens, 1998). Ruggles (1997) discerns these barriers into three types: temporal distance, physical distance and social distance. ICT is usually effective in lowering temporal and physical barriers because of its ability to allow synchronous communication over space. This is especially useful in the case of the suicide prevention service providers network that are spread out in communities throughout the Interior B.C. Groupsite can facilitate sharing of explicit knowledge, in the form of documented algorithms, protocols, manuals, procedures, and other information to help members understand the Suicide PIP framework. This central depository of resources can increase accessibility and decrease the effort and time spent in retrieval of information.

Overcoming social barriers, however, prove to be the more difficult problem. The term "social distance" here includes barriers related to different 'conceptual frames' on the part of knowledge owners and knowledge re-constructors. These social barriers can exist because the BC Suicide PIP members come from various professions and organizations and are each approaching the network with different mental frameworks. ICT can create an environment where individuals are free to interact with one another to reveal the implicit – such as mental models, commitments and perspectives. Only with this mutual understanding, can there be a possibility for the social distance to be overcome.

There is an assumption that ICT always takes away barriers for knowledge sharing. It is important to note that ICT may also ***create*** barriers for knowledge sharing by frustrating the will to share knowledge (Hendriks, 1999). "A distinction can be made between ICT aimed at supporting knowledge sharing processes versus partially taking over or directing these processes" (p. 94). Technologies like Groupsite can impede communication if not implemented properly. If the range of communication possibilities, including exceptions to the expected structure of communication, has not been anticipated, then technologically-mediated communication may end up being an obstruction to getting work done efficiently and may lead people to not use a groupware system or use it incorrectly. ICT should support improving process instead of redirecting the process. In addition, collaborative groupware is dependant on the many - a groupware system cannot succeed unless a critical mass of the target group chooses to use and adopt the system. Since motivation is what drives this knowledge sharing process, we will take a closer look at motivation theories.

In the rest of the literature review, we will study the factors that motivate (encourage) and frustrate (discourage) knowledge sharing in general and online. We will also study the barriers using Hendrik's hygiene factors (1968); an absence of the hygiene factors will be considered an obstacle.

Herzberg's (1968) two-factor theory is based on the distinction between motivation factors and hygiene factors. "Hygiene factors do not motivate behavior when they are present, but they will lead to dissatisfaction and, therefore, to a decreased motivation when absent" (p. 9). These factors are often neglected in the implementation of knowledge sharing ICT; the focus tends to be predominately on how to increase motivation of members to join and participate. Hygiene factors include company policy, supervision, work conditions, salary and relationship with peers. ICT affects hygiene factors directly by removing barriers, providing access to information, improving the process and locating knowledge carriers/seekers; these factors, when absent, may deter knowledge sharing. For example, people may be discouraged to share knowledge if the effort for finding interested parties, or the proper contact, is too great (Hendriks, 1999).

On the other hand, motivating factors when present, lead to increased motivation and when absent, they will not further job satisfaction. This does not imply they will lead to dissatisfaction, or that they will decrease motivation (Herzberg, 1968). The following six factors that may act as motivators: challenge of work, promotional opportunities, sense of achievement, recognition of job done, sense of responsibility, and the desire for

operational autonomy (Herzberg, 1968). Individuals may differ in the way in which motivators will affect them (Stott & Walker, 1995). For instance, the factors that motivate people are related to the stage in their career (Tampoe, 1996). Since particular ICT applications that influence the knowledge-sharing behaviour of individuals differ from one individual to another, we cannot assume what the motivating factors are for any group of individuals. It would be beneficial to understand what the driving motivators are for our study of the Interior BC Suicide Prevention Network Groupsite.

Literature Review Summary

This concludes the literature review portion of the paper. We began the literature review with the theoretical lens of communication theory that frames this research project. The sociocultural tradition understands that knowledge is embedded in the body (both individual and group) that creates it in the form of perspectives, commitments and experiences. Successful ICT creates an environment that enables sharing of embedded knowledge to create new organizational knowledge that is supported by a common mental model. Then, we concluded with an overview of barriers, motivational and hygiene factors that drive knowledge sharing; the research will attempt to explore Interior BC's Suicide PIP Network members' individual attitudes towards knowledge sharing, and scan for the presence of motivating and frustrating factors.

Methodology

An evaluation of the feedback from the PIP workshops showed a demand for sharing best practices, increasing relationship building, and exchanging information and knowledge. A web-based connection with facilitators was one of the suggestions to enable members of the network to revisit goals and progress and continue online communication and support (Turco, 2009). It was identified that networking by phone or email is a difficult way to maintain communication to expand and sustain communities of practice around suicide PIP; people benefited from meeting the others face to face, and that there was a need for an online communication tool.

This research study explores the group's stance on online communication and attitudes towards knowledge sharing; it attempts to gain an insight into the motivation for knowledge sharing online and offline; and identify possible obstacles to knowledge sharing online. The eventual goal is to improve the knowledge sharing process within the group; however, we will not assume that the knowledge sharing process can or will be improved with the implementation of Groupsite since we have not yet established that Groupsite is an effective or plausible way of communication within this network.

The nature of this research study is exploratory; it examines the participants' preferences for communicating with each other and gauges their level of interest in maintaining the online community of practice. The purpose of the study is to discover trends that can suggest several directions for further study. Qualitative methodology was chosen to carry out this exploratory research.

"Qualitative research uses a naturalistic approach that seeks to understand phenomena in context-specific settings" (Hoepfl, 1997, p. 47). The research problem was framed in a socio-constructivist approach; knowledge is viewed as not as a product that is separate of the body that creates it, but rather as something that is embodied in the individuals and the group that create it. We view knowledge sharing as a process that encompasses the individual attitudes and the group as a whole entity. Qualitative research "study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 1994, p. 2).

According to Denzin and Lincoln (1994), qualitative research involves "… a variety of empirical materials – case study; personal experience; introspection; life story; interview; artifacts; cultural texts and productions; observational; historical, interactional and visual texts – that describe routine and problematic moments and meanings in individuals' lives." (p. 2) I chose to use an online questionnaire that included open-ended questions to collect a variety of personal experiences and attitudes. An interview to learn about the participants' experiences and attitudes would have allowed a more in-depth exploration of the subject; however, the sample size may have been too small to reveal possible trends. Although qualitative research methods like interviews or a focus groups may provide deeper insight, interviewing only a few participants may not capture the wider array of responses from the whole group. It is important to note that while the sample size we ended up using is not statistically significant, it does allow us to deduce

from the results some possible and very general trends. "Where quantitative researchers seek causal determination, prediction, and generalization of findings, qualitative researchers seek instead illumination, understanding, and extrapolation to similar situations" (Hoepfl, 1997, p. 48).

Conducting an online survey also allowed participants anonymity and confidentiality in their responses. Since the nature of the participants' work is highly confidential, the survey questions do not involve that aspect of their work. Instead, the survey is more concerned with their communication style and motivation to share knowledge in the workplace. Anonymity is also an important factor since some of the participants all work closely with each other and relationships are an important aspect of their work; it allows participants to be more honest with their responses, without the concern that they might offend someone else and having any adverse effect in their workplace.

All the participants of the research study are part of the BC Suicide PIP Network and past attendees of the PIP workshops held in Kamloops in September 2010. These participants are from communities all over the Interior British Columbia region, particularly the Thompson-Cariboo-Shuswap area. They come from a broad range of sectors, including organizations and community groups outside the 'traditional' primary health care sector, such as local government, schools, housing, recreation clubs and commercial businesses. The demographics of the participants range in profession, age group, and phase in their career.

The suicide prevention network members who attended the 2010 workshops were invited to join the "Strengthening the PIP Network" Groupsite in October 2010; some joined while others either declined or did not respond to the invitation. For this research, all the workshop attendees (Groupsite members and non-members) were included. An online survey was administered in March 2011 to the sample population; the identities of these participants are undisclosed to the researcher.

An intermediary, Jenny Turco who is the PIP network workshop coordinator and program officer for Interior Health's Suicide Prevention program, contacted the participants with the survey. Turco has met and worked together with the participants in prior workshops and has a rapport with the group. She was able to introduce the research before administering the survey, thus giving the research context and explaining the benefits of their participation, all in attempts to increase potential response rate. The participants were emailed a letter of introduction, a letter of consent and a link to the online survey (See Appendix A).

SurveyMonkey was used as the platform to administer the electronic questionnaire. A 23-questions survey was created on Surveymonkey.com (refer to Appendix B to see the questions); this medium was chosen because of its flexibility in questionnaire design. One of the benefits was that it allowed participants to skip otherwise irrelevant questions. For example, if the participants answered "no" to ever have been on Groupsite, it would not ask them what they thought of Groupsite in

subsequent questions. Another benefit was that it reduced respondent error and has the ability of making some fields mandatory; for example, it will not allow the participant to move on until he/she has provided a response to a particular question.

The survey was administered to 224 BC Suicide PIP Network members, and they were given 30 days from the date of administration to respond to the survey. After this date, the survey was closed to the participants and the results are accessible only by the researcher. The raw data collected on SurveyMonkey is anonymous, confidential, and coded; SurveyMonkey allowed collection of responses anonymously by disabling the storage of email addresses and IP address collection for all collection methods.

Limitations

The response rate to the survey was 13.8 percent; 31 people responded. Out of the 31 respondents, nine were not members of the "Strengthening the PIP Network" Groupsite. It is also important to note that the sample population does not include members of the suicide prevention network who did not attend the 2010 workshop. Another coverage limitation is that only those with access to computers is included in the sample; although, it can be argued that those who do not communicate online with each other do not fit the inclusion criteria. The sample size that was given the survey is only a portion of the entire population of Interior British Columbia Suicide Prevention Network members and it is not stratified to represent the different demographics of the actual population proportionately. The results from the survey is not intended to draw any

statistically significant relationships between variables of the population, nor is it meant to draw any generalizations about the sample and apply it to the entire population. Instead, the research takes an exploratory approach and the survey acts like an investigative probe. The present understanding of the group's attitude and beliefs towards knowledge sharing and using ICT is incomplete; we did not have a well-defined research problem. We started out with a very broad question – "How to increase participation on the Strengthening the PIP Network Groupsite to share resources and knowledge"; this was then given a different direction and redefined through the literature review.

An Exploratory Approach

The literature review takes a sociocultural lens to frame this broad question; it gives the research problem direction and we start viewing the problem as an organizational knowledge sharing/creation issue and the motivation/obstacles of knowledge sharing as the driving variables behind the use of ICT for this purpose. Hence, at this stage, we have narrowed the research problem down with the sociocultural scope. In the analysis stage, we will use Herzberg's (1968) two-factor theory to examine the motivational and frustrating factors of knowledge sharing within the sample group.

The survey will take an exploratory stance and include open-ended and closed-ended questions. We will be looking for the factors that motivate (encourage) and frustrate (discourage) knowledge sharing on Groupsite. We will study the barriers using Hendrik's hygiene factors; an absence of the hygiene factors will be considered an

obstacle. The questions are open-ended to allow for any possible attitudes in the group to surface; the aim is to get a wide range of opinions that can be explored deeper with subsequent qualitative research. In summary, the purpose of the survey is to get a sense of the characteristics of our sample group and learn about the variety of different or common attitudes from the group. We watch for themes to emerge; keeping en eye out for responses that may contradict any preconceived assumptions.

The survey consists of four sections. Section 1 establishes the participant's profile; this includes the geographical location, occupation; career stage and age group of the participant. Section 2 explores the participant's communication style and preference of using any particular technology for communication. Section 3 investigates whether the participant is a Groupsite member and explores his/her experience on and attitudes towards Groupsite. Finally, Section 4 looks at the participant's motivation, obstacles and current methods for information sharing.

Data analysis takes place after the data collection process; on-going reflection upon the emerging themes is performed throughout the analysis process. The data from the survey is exported from SurveyMonkey into an excel spreadsheet and then analyzed using a pivot table in Microsoft Excel. All the responses from each question are organized into columns; an additional column is inserted when assignment of codes is necessary.

An inductive method of thematic analysis is used; the background of the suicide prevention network in the introduction of this paper serves a backdrop for the analysis process, especially if it can help to explain an emerging theme. After thematic analysis on the data is completed (i.e. some themes have been found), then content analysis - a more mechanical method of coding data by content will be used to analyze the data a second time. During analysis, I systematically work through each open-ended survey assigning codes to specific characteristics within the text to form themes or categories; these trends can set a direction for future subsequent research.

Findings

The results of the survey identify the motivational factors that drive participation in knowledge sharing activities and non-technical obstacles that may be preventing the BC Suicide PIP Network members from participating on Groupsite. As discussed previously (p. 13), sharing knowledge goes beyond the ability and accessibility of the technology for posting and retrieving documents. It is the goal for Groupsite to become an environment where PIP network members can have conversations and share perspectives; increased interactivity on Groupsite would indicate that group knowledge sharing and creation is occurring.

The purpose of this survey is to discover trends in respondents' opinions with the future intent of building on these discoveries by investigating these emerging themes in more depth; and/or testing hypothesized relationships between variables with a larger

sample of the population. My intention is to explore the complex set of factors surrounding the problem of motivation of our target group sharing knowledge using Groupsite and "present the varied perspectives or meanings that participants hold" (Singleton & Straits, 2010, p. 41).

This research study will attempt to reveal a few directions that I can take to learn more about the knowledge sharing capacity in the network. Eventually, the structure of the online PIP network should be studied to identify and engage the potential leaders that can motivate others to become more active in Groupsite and revive the momentum of the September 2009 PIP workshop.

Section 1 - Demographics

Section 1 of the survey establishes the participant's profile; this includes the geographical location, occupation; career stage and age group of the participant.

The geographical location of the participants includes different communities in interior of British Columbia, with a majority in Kamloops and smaller communities in the Thompson-Cariboo-Shuswap region. This reflects the fact that the workshop was held in Kamloops and many survey participants were from that area.

The *number of years in suicide prevention work* question attempts to gauge what phase the respondents were in their careers. It appeared that that most participants were

not new in the field of suicide prevention work. The answers ranged from range from 2 to 40 years; and the following categories were created:

1. Less than 5 years – 5 participants
2. Between 5 and 10 – 7 participants
3. Between 10 and 25 – 13 participants
4. Above 25 years – 13 participants

The range of professional backgrounds of the participants reflected the variety of service providers in the suicide prevention network. The responses were sorted into the following categories in Table 1. Results show that the different backgrounds of the participants were quite evenly dispersed in the sample.

Table 1

Question: What Type of Work Do You Do?

Category	Includes	Number
Public Health Nurse	Public Health Nurse	3
Mental Health	Child & youth mental health, mental wellness program coordinator	2
Community	Community support worker, women's shelter worker, program manager, social	5

	worker, community development, capacity building, health promotion	
Religious	Associate pastor - Evangelical Free Church	1
Family	Family counselor, GBLT youth services/ family support, family support worker	3
Special Needs	Special needs consultant, support for people living with acquired brain injury	2
Crisis	Acute care, crisis line	2

Section 2 – Communication Style

Section 2 explores the participant's communication style and preference of using particular technologies for communication.

The actual usage of face-to-face communication, phone and email were found to be around at the same level (see Table 2). It is important to note that face-to-face communication is not always an option as a means of communication, although it was mostly preferred. It was found that video-conferencing and live-meetings were very

rarely use and online discussion was the least popular method to communicate; it was "never" used by eight participants (this mode received the highest number of "never" responses.)

Table 2

Question: How do you correspond with others during the day for work related issues?

Category	Face to face	Phone	Email	Video-conferencing	Live Meeting	Online Discussion	Other
Always	10	9	9	0	1	1	2
Sometimes	19	22	20	11	22	2	5
Rarely	2	0	0	6	F	8	4
Never	0	0	1	10	2	13	5
No Answer	0	0	1	4	1	17	15

Table 3 shows what the participants preferred to use for communication, as opposed to what they actually use. Although participants expressed that they prefer face-to-face communication to phone or email, the results from this table show that they used face-to-face, phone and email with similar frequency. Another finding is that all the participants picked more than one mode of communication as their preferred method, suggesting that it is really what the task is at hand that determines what method they prefer. There were no discernable relationships between the demographical factors such as age group, phase of career and type of profession and the mode of communication preferred/used.

Table 3

Question: Which of the above ways do you prefer to communicate with others for work related matters the most?

Preferred mode of communication	Number of responses
In person	13
Email	15
Phone	7
Live meeting	1
Discussion Forum	1
Others (live communicator)	1

An open-ended question probed the participants with "why" they preferred particular modes of communication. The answers were tagged with the categories in Table 4; each response typically revealed more than one reason and was tagged with more than one category. The most frequent response was the ability to receive and give non-verbal communication, such as body language; the respondents were also concerned with the ability to reduce miscommunication. Relationship building and making the communication "personal" were also other popular themes that emerged. One participant identified privacy as an advantage of having face-to-face communication since the conversation cannot be recorded and forwarded without his/her knowledge or consent. There were also other practical reasons such as accessibility, quickness, ability to control pace and manage time, ability to trace and document; these factors were usually associated with email as the preferred channel. This data in Table 4 has been categorized

during analysis for the purpose of finding trends; refer to Appendix C to see the actual quotes from the participants.

Table 4

Question: Why do you prefer to communicate this way the most?

Response	Number
Non-verbal	13
Personal	5
Reduce miscommunication	8
Accessible	5
Quick	4
Control pace/manage time	3
Relationship building	4
Ability to discuss	1
Traceable	1
Privacy	1

To summarize Section 2 of the survey, the participants found it important to have personal communication with other members in the network to build relationships; the non-verbal aspect of face-to-face communication was preferred as it was able to reduce misunderstandings or miscommunication. Email was also a preferred medium because it helped participants control the pace of the correspondence. Results of the survey showed that the participants favoured face-to-face communication and email almost equally while face-to-face, email and phone were all used in the workplace almost equally. None of the demographic variables (community, age group, occupation, years in the field) was found to be a determinant in regards to what mode of communication was preferred. I examined

for this using the pivot table in the spreadsheet; the table was filtered systematically for each response of each question in Section 2 (communication mode preference section), the corresponding demographic variables were examined for trends. For example, the response "always" for face-to-face communication usage was used to filter the data in the tables; the resulting data was examined to see if there was any similarities in this group in regards to age group, occupation, etc. It is important to note, however, that this does not definitively conclude that demographics have no impact on the style of communication preferred. The results suggest, instead, that the demographics was not *found* to be a strong determinant in usage and preferred style of communication in this group of participants in this survey.

Section 3 – Groupsite

Section 3 investigates whether the participant is a Groupsite member and explores his/her experience on and attitudes towards Groupsite. The general attitude towards Groupsite was explored to investigate if there was resistance to adoption or a willingness to try the technology exists. Usability of Groupsite features in particular were not the focus of the study. We are not focused on the particular traits of Groupsite, but rather, the attitudes towards ICT in general.

Nine of out the 31 participants were not members of Groupsite, these non-members claimed that they either do not remember being invited to join or do not know what Groupsite is. Majority of the members (11) visited Groupsite less than once a week

and five visited[5] Groupsite less than once a month. Of all the members who did join Groupsite, two of them have not visited the site since they initially joined. On other end, four participants visited Groupsite once or more than once a week. The email notification is the prompt for most participants to visit Groupsite; Table 5 also shows that interesting posts and the need to find information prompts them to visit the site. This suggests that there is a need to increase awareness of what Groupsite is; re-send invitations to join Groupsite and sending more frequent updates of Groupsite can be ways to promote usage.

Table 5

Question: When do you visit the Suicide PIP Groupsite?

Response	Number
When an interesting topic is posted	11
When in need of information	7
To find someone	3

Out of all the participants who have visited Groupsite, only one claimed that he/she did not find the site to be useful. The two top reasons picked for visiting Groupsite were "searching for specific information" and "browsing around"; each received an equal number of responses. Other reasons such as "to have a conversation" and "to meet someone" were less popular choices; visiting Groupsite as a way "to keep up to date" was

[5] A visit happens when someone visits your site. It consists of one or more page views/ hits. One visitor can make multiple visits to your site.

only chosen by one participant. Two participants stated that the lack of available time was a factor that limited their use of Groupsite. Of the participants that preferred group email discussions to forum discussions, they claimed that the main reason was because email "can reach everyone" (See Table 6). These results add confirmation to the proposed problem that Groupsite is not a successful medium of communication for BC Suicide PIP members.

Table 6

Question: Why do you choose to use email instead of discussing on the Suicide PIP Groupsite?

Response	Number
Email is faster and easier	1
I can reach everyone I need to on email; not everyone is on Groupsite	2
I did not even consider Groupsite as a place to discuss	0
Email is more private	1

Since group forums are not the preferred method of communication (as seen in Section 2), the discussion forum feature on Groupsite will not gain momentum its own. Participants do not believe that Groupsite has the reach, nor do they see Groupsite as a place where they can find other contacts and make connections. The participants have expressed a need for communication to be personal and the ability to build relationships. If they believe that they can connect with others and have authentic conversations on

Groupsite; it is possible that they may accept Groupsite to become another medium like email or telephone.

Participants visit the site just to browse around for non-specific information and listen to other conversations; this could imply that there is value in creating a place where they can go to have a feel for what is going on in the network – in other words, to be attuned to redundant knowledge as discussed in the literature review on page 17. Redundancy of information refers to "the existence of information more than the specific information required immediately by each individual … (this kind of knowledge) connects individuals and the organization through information " (Nonaka, 1994, p. 28). It allows for the sharing of the more abstract forms of knowledge, such as mental models and values, which provides the context for most information and gives it meaning.

Section 4 – Motivation and Obstacles for Knowledge Sharing

The participants' attitude towards knowledge sharing is explored in the final section. Most participants responded that they sometimes or always shared information outside their organization; only three responded that they rarely did this. Personal contacts and face-to-face at workshops were the most popular ways to get information; followed by websites (see Table 7).

Table 7

Question: How do you get resources/information from others outside of your organization to assist you with your work?

Source	Number of responses
Website	11
Personal contacts	21
Workshops	21
Others (included books, social networks)	2

When asked what the one challenge at work in getting information that the participants needed was; the most frequent answer was the *lack of time.* Table 8 displays the other limiting factors, such as the quantity (information overload) and quality of information (outdated information, credibility of information, etc.)

Table 8

Question: What is one challenge at work in getting information that you need?

Category	Number of responses
Time	8
Too much information	4
Outdated information	2
Interoperability	1
Inconsistency of information	1
Canadian sources	1
Assurance of credibility of information	3

Phone tag	1
Cost	1

Time appears to be a significant obstacle. Using Groupsite as a new medium to communicate appears to the participants as an extra task to undertake, instead of a new and more effective way to do what they are already doing to accomplish current tasks. To be motivated to adopt the new channel of communication, network members would have to recognize the benefits of meeting online, such as the time they would save in travelling and scheduling.

Generally, the participants appear to be open in their attitude towards embracing Groupsite but unaware of the benefits, which they need to be educated on. Rather than changing the way they prefer to communicate, it would be more effective to change the medium of communication without changing the process. In other words, ensuring that the personal aspects of face-to-face communication is enabled, as well as the capability to manage their own pace of communication.

In terms of sharing information online, four participants expressed that they were not comfortable with it, and one stated “not yet”. Out of the four that were not comfortable with using sharing information online, two did not see potential in Groupsite to develop into a venue for meaningful discussions in the future. Amongst all those who did see the potential in Groupsite, one did not believe that it would replace face-to-face or phone. The number of participants who were resistant in their attitudes to adopting

Groupsite as a channel is small; there is opportunity here for further quantitative research in the form of a quick and short online survey to test this hypothesis.

Conclusion of Findings

The following trends were uncovered in the analysis of the findings:

- The participants found the non-verbal aspect to be an important factor in their workplace communication.
- The participants found relationship building to be an important part of their workplace communication.
- The participants found the lack of time to be a constraint in their workplace; they prefer email communication because it allows them to manage their time more efficiently.
- The participants are generally open to sharing their information with one another – they currently depend on face-to-face communication to share resources; they also use websites to search for information.
- The obstacles of online information sharing include uncertainty of the credibility, currency and relevancy of the resources.
- The participants were generally open to using Groupsite as a new channel to help them share knowledge although they are not currently actively using it.

The research found that participants desired workplace communication to be personal; they recognized that relationship building is an important ingredient in the nature of their work. The non-verbal aspect of face-to-face communication was also an important variable; some participants believed this was necessary to reduce misunderstandings that can otherwise occur when body language is absent. On the other hand, email was also preferred because it allowed the participants control the pace of the correspondence and manage the time better in the workplace.

Time, or rather, the lack of time and resources, was the most prominent theme in the survey results. It appears to be the biggest perceived obstacle in their work performance and a possible barrier in adoption of Groupsite as the new communication channel. Participants view using a new medium to communicate as an extra task to undertake, instead of a new way to do what they are already doing and accomplish current tasks more efficiently.

The study also investigated the activities participants are currently doing on the Groupsite; the top responses were “searching for specific information” and “browsing around”. Other less popular activities were “to have a conversation” and “to meet someone”. Participating on Groupsite is not seen by participants as a way to keep up to date on news in the Suicide Prevention network. The choice of activities that the participants picked shows that Groupsite is being used as a place where participants go to retrieve information, much like a database of resources or a library. Groupsite is not

being utilized as a medium to connect with others, form relationships and exchange stories.

The study revealed that participants had the following opinions of Groupsite:

- Groupsite currently lacks the reach to all members of the network
- Going through Groupsite will not provide the speed desired to get or spread information
- Participants are not familiar or comfortable with Groupsite communication features such as forums or video-conferencing
- Participants are not aware of the potential benefits
- Participants need to be trained on how to use Groupsite

The obstacles in using Groupsite as a communication channel generally had less to do with the participants' attitudes towards technology and knowledge sharing; instead, the barriers appeared to be caused by a lack of understanding on how to utilize the technology to their benefit. Most of the participants appear to be open about the possibility of Groupsite becoming a place where meaningful interaction can occur. However, judging from the responses collected, the participants do not seem to be aware of the actual potential benefits of switching to Groupsite as a medium to communicate. Participants view using a new medium to communicate as an extra task to undertake, which will require take away from the already limited amount of time that they have.

The knowledge sharing efforts on Groupsite appears to be lacking in direction. If the BC Suicide Prevention Network decides to continue pushing for Groupsite to become a new communication channel for its members, there is a need for education, training and leadership of facilitators to engage participants to adopt the technology. In order for Groupsite to be adopted, participants need to understand that centralizing all their communication and utilizing a different way of communicating that would meet their needs may eventually allow them to be more efficient at their work in the long run.

Communication is currently dispersed across the many different channels, such as phone-calls, emails, face-to-face meetings, workshops, etc. As discussed in the literature review (p. 12), "new knowledge is created by sharing resources that comprise of stories, helpful tools, experiences, stories, ways of handling typical problems, etc." (Lave & Wegner, 1998, para. 6) and having Groupsite as a central platform where these conversations can take place is integral to the work of the BC Suicide PIP members . There is a need for these members to be educated on the benefits on switching to this new communication channel; there is also a need for some of these members to receive training on how to use the technology.

Unlike the younger generations that are brought up on socially interactive new media, this online environment is still not second nature to our target group. Although the survey did not *show* any correlation between the age group and level of comfort with technology; I have pointed out that this does not negate that such a relationship exists. It is important to note that majority of the participants belong to the Baby Boomer's

generation. According to Long's "Communicating with Baby Boomers, Gen X and Gen Y" (2010) article, he finds the differences in communication styles and usage of communication technology between the various generations – while majority of the Baby Boomer generation have "embraced the internet and mobile phones" (Baby Boomers section, para. 3), they still require more traditional means to reinforce communication.

One participant expressed concern with privacy of his/her conversations and prefer that such discussions not to be shared. This issue of privacy and security of information is a serious concern, especially in the suicide prevention work; and will have to be addressed in the education and training of Groupsite users. Overall, the participants do not show resistance to adopting the new technology[6]; however, they do require a level of education and training on how to use the more interactive features.

Conclusion

The research problem is spurred from the lack of participation on the BC Suicide Prevention Network Groupsite; hence, the natural tendency would have been to attempt to answer the question "how can we get suicide prevention network members to use Groupsite?" However, this approach assumes that the suicide prevention workers *should* use Groupsite and that Groupsite *is* a suitable medium for their communication needs. So, we began by taking a few steps back and considered the contextual background in the

[6] None of the demographic variables (community, age group, occupation, years in the field) was found to be a determinant in regards to what mode of communication was preferred.

introduction; then we redefined the purpose of this study in the research problem section by posing the following questions:

- What are the communication needs of these members?
- What is the knowledge sharing culture in this group like?
- Can Groupsite be a platform for communication for this group?

While the study does not give a definitive answer to these questions; it explores with a preliminary probe into the environment and searches for certain possible venues to explore further. An online survey was chosen as the qualitative method to explore for these possible trends in the participants' communication styles, outlook on knowledge sharing, and attitude towards the Groupsite technology. Amongst the various findings that emerged in the analysis of the findings, we turn our focus to the following trends:

- The participants felt that face-to-face communication allowed them better communication in the workplace .
- The participants preferred email because it allowed them to manage their time more efficiently; and time was an important constraint in their workplace.
- The participants' preference for communication channel may depend on the task at hand; it might be valuable to investigate with future research what the tasks consist of.

- The participants had an open attitude to using Groupsite as a channel for communication.

The participants' communication is motivated by their need to build relationships; they desire the personal aspect of face-to-face communication, ability to read non-verbal cues and also the ability to manage their time more efficiently. The online meeting capability of the Groupsite can be suitable for meeting these communication needs. The online meeting features, such as live-meeting and video-conferencing abilities, can allow some of the face-to-face communication benefits while saving participants time on traveling and scheduling. It also brings all the various methods of communications together onto one central virtual location.

However, online meeting channels, such as live meeting and video-conferencing are currently only used by a few currently; they are not yet popular modes of communication amongst the participants. It would be beneficial to explore this venue with further research since the online meeting features satisfy the participants' two main motivational factors for communication. Further research may be able to ascertain whether online face-to-face is a viable method of communication to invest in and investigate the barriers that might be preventing the members from adopting this particular technology. The survey had found that participants did not perceive Groupsite to have the reach or the speed to spread and access required information; many are also not aware of the features of Groupsite.

Motivation/Hygiene Factors

Herzberg reminds us that the implementation of new communication technologies tends to focus on how to increase members' motivation to join and participate; we need pay attention to hygiene factors, such as company culture, work conditions, and relationship with peers. The ease of communication found in face-to-face scenarios can be considered as one of the hygiene factors that does "not motivate (knowledge sharing) behavior when they are present, but … lead to dissatisfaction and … a decreased motivation when absent" (Herzberg, 1987, p. 9). The absence of peer support can hinder the motivation to share; from the survey, there is a sense that of ambiguity amongst the participants in grasping how they can begin to use Groupsite. "People may be discouraged to share knowledge if the effort for finding interested parties, or the proper contact, is too great" (Hendriks, 1999, p. 9). Not receiving the training and technical support may decrease sharing of knowledge on Groupsite although its presence does not guarantee an increase. If the tool is perceived as difficult to use, it is unlikely that they will invest too much time in learning since time is also a rare commodity as shown in the findings.

Study of the hygiene factors reveal that the absence of necessary facilitators and a central mediator to educate, train and engage the Groupsite members *may* be the reason for lack of success on Groupsite. Since these hypotheses are drawn from an exploratory survey, it can be tested with further surveys or other forms of research.

Further Suggestions

The research found that there was an overall openness in attitudes towards adopting Groupsite as a new channel although very few were familiar with the technology. If the BC Suicide Prevention Network decides to proceed with implementing Groupsite as a communication channel, leadership and effort is needed to drive discussions on the Groupsite forums and encourage the use of this medium. A leader is needed to find key players in the network to join Groupsite, and these key players should participate actively on the site in order to encourage their peers to visit the site more frequently and eventually join online conversations and contribute to the knowledge pool in other ways. As the evaluation of the PIP workshops show, there was a demand for facilitators to engage in PIP processes to share more best practices, provide inspiration, support and resources to those who want to use the PIP and assistance to help participants understand the PIP. Participants have expressed that they do know who to go to for information; this needs to be addressed in the implementation of Groupsite.

Groupsite needs to be proposed to the BC Suicide PIP community as an online continuation of the PIP workshops. Workshop facilitators should commit to using Groupsite to continue correspondence with workshop participants and enable them to revisit goals and progress using this medium. This can provide the momentum needed for the Groupsite to grow with personal stories and group discussions. A central coordinator can provide direction and technical assistance to the facilitators; and the facilitators can in

turn provide continued provision of inspiration, support and resources to the other members.

The participants have expressed a need for communication to be personal and the ability to build relationships. The facilitators working with and encouraging the other members to participate online will allow this to happen since they are spinning off a pre-established relationship. Ideally, members will come to accept Groupsite as another medium like email or telephone. Since the facilitator has a pre-existing rapport with the other members, we can assume that there is a certain level of trust in such a relationship, which may persuade members to try the new medium.

Limitations

In terms of Herzberg's (1987) motivational factors, such as challenge of work, promotional opportunities, sense of achievement, recognition of job done, sense of responsibility, and the desire for operational autonomy, the survey was not successful in uncovering these. I had refrained from asking a survey question such as "what is your motivation for sharing knowledge" and listing Herzberg's motivational factors as options; I felt that this approach was too blatant and out of context for the respondents; it would not be an effective way to extract this information from the participants. In addition, participants may take offense to such a transparent question that seems to suggest an ulterior motive for knowledge sharing. We were, however, successful in finding the

hygiene factors in an indirect manner and were able to draw some themes from those findings.

Overall, it is important to note that the results from this survey do not represent the entire Suicide Prevention Network population; the sample size was neither large enough nor stratified for any of the findings to be statistically significant. As discussed previously, the study takes exploratory approach to learn more about the styles of communication and knowledge sharing amongst the participants and gauge whether Groupsite can be a medium for communication for this group.

Future Research

Various themes were uncovered in the findings of the research; many possible directions of future research were suggested in the Findings and Conclusion sections. Essentially, it was found that participants had an open attitude about using Groupsite although they were not familiar with the technology. They also appeared to be open to knowledge sharing in the network; and preferred face-to-face communication but this was not always an option because of the time factor. One of the suggestions made in this study was that the video-conferencing features of Groupsite might meet the communication needs of the BC Suicide PIP members. Future research can follow this path and narrow the research problem down to "will the video-conferencing and live-meeting capabilities on Groupsite meet the communication needs of the participants"

and/or “what are the obstacles that prevent the participants from utilizing the online face-to-face features on Groupsite?”

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Appendix A

Information and Consent Form

Please take a moment to take this survey about the Suicide PIP GroupSite ; it is about 20 questions long and will take approximately 10 minutes. Your participation is voluntary. Your submission is anonymous and you can withdraw from the survey at any point you wish before you submit. You are being invited to participate in this study because you attended the 2010 Suicide PIP workshop. The total number of participants invited to join the survey is 224.

As you may be aware of, the Suicide PIP GroupSite was set up in 2010, following the Suicide PIP workshops, as an online service to connect you with other service providers in the Suicide PIP Network. The GroupSite can be found at http://suicidepipinterior.groupsite.com/main/summary

Yin Maung, Interior Health web coordinator, is conducting a research to gather information about the opinions of this population regarding their communication needs and their use/non-use of GroupSite. We would like the opinions of both current members and non-members of GroupSite; all your feedback is extremely valuable.

Yin Maung is leading this research as part of her Master's project with the MACT program at the University of Alberta. Please feel free to contact her at yin.maung@interiorhealth.ca or (250) 870-4769 if you have any questions or would like

the results of the survey. You may also contact her supervisor, Kathryn Campbell at katy.campbell@ualberta.ca.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by the Faculties of Education, Extension, Augustana and Campus Saint Jean Research Ethics Board (EEASJ REB) at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Chair of the EEASJ REB c/o (780) 492-2614. Or, you may also contact the Chair of the Interior Health Research Ethics Board through the Research Office at 250- 870 4649.

Data Storage, Retention, and Disposal

By participating in the survey, you will be providing implied consent to use the data you submitted. Your views/opinions are considered to be personal information. SurveyMonkey stores information collected in the United States for an undetermined time period, and is therefore subject to U.S. law. By participating in the survey, you are consenting to having your personal information stored in the U.S. The information in the questionnaires and research analysis will be stored on a password protected computer and this information will be destroyed in 2018. The analysis of the survey results will be posted as part of the research study on the MACT website.

Please click here to fill out the survey.

http://www.surveymonkey.com/s/GroupsiteSuicidePIP

Appendix B

Online Questionnaire

1. Which city/community do you live in?

2. What is your occupation?

3. How many years have you been involved in Suicide Prevention related work?

4. What is your age group?
   - 18 – 29
   - 30 – 39
   - 40 – 49
   - 50 – 59
   - 60 – 69

5. How do you correspond with others during the day for work related issues? (Pick all that apply)
   - In person
   - Over the phone
   - Email

6. Which way do you prefer to communicate with others the most?

7. Why do you prefer to communicate this way the most?

8. Are you a member of the Suicide PIP Groupsite?
   - Yes
   - No

9. If not – why are you not a member? (Pick all that apply)
   - I don't have time to join
   - I don't see the value or any benefit in joining
   - I don't know what it is
   - I don't have time to train to use it
   - I think it may be difficult to use
   - I don't remember being invited to join

- I don't have access to a computer or internet
- Other reason

10. If you are a member, have you visited the site since you have joined?
    - Yes
    - No

11. If no to 10, why have you not visited the site?

12. If yes to 10, how often do you visit the Groupsite?
    - More than once a week
    - Once a week
    - Less than one a week
    - Less than once a month

13. If yes to 10, do you find the site useful?
    - No
    - Sometimes
    - Usually

14. When do you visit the site?
    - When I receive an email notification
    - When I need to find information – please give examples
    - When I need to find someone – please specify for what purpose

15. What do you do on the site?
    - I want to find information
    - I want to talk to someone

16. Have you participated in email discussions about Suicide PIP related issues?
    - Yes
    - No

17. If yes, why do you choose to use email instead of discussing on Groupsite?
    - Email is faster and easier
    - Everyone else is on Email
    - Didn't even consider Groupsite for a place to discuss
    - Email is more private

- Other reason

18. Do you share your resources with others outside of your organization?
    - Yes
    - No

19. If no, why?
    - I don't know where to start
    - I don't know how or where to share my resources
    - Other reason

20. How do you retrieve resources/information from others outside of your organization to assist you with your work?
    - Websites
    - Personal contacts
    - Workshops
    - Other way

21. What is one challenge at work in getting information that you need?

22. Do you believe that Groupsite can be a place to share resources and information related to Suicide Prevention topics?
    - Yes
    - No

23. Do you believe that Groupsite could someday be a place for meaningful discussions for Suicide Prevention topics?
    - Yes
    - No

If the questionnaire is completed, it is assumed that you have given consent to participate – no signature is required and there is no expectation for written consent to be provided.

Appendix C

Survey Results from Question: "Why do you prefer to communicate this way the most?"

"Can get feedback or results quickly"

"Like face to face interactive contact"

"It is face-to-face"

"Clear Communication -- able to see them in person to relay information."

"I find it is the most successful way to communicate"

"Online Discussion Forums"

"In person - it is most direct and effective - less miscommunication as can sometimes happen over email, for example."

"Puts a face to the association - makes a personal connection"

"I get a better sense of whether we are understanding each other correctly; I like the more 'personal' connection; I don't have to be concerned about whether the information I am discussing gets 'forwarded' to someone else, by mistake."

"Let's myself and others be more flexible. I like in person but it's just not practical day to day."

"It is most effective in accurately communicating with others and getting feedback information with respect to opinions, body language etc."

"Find it most effective"

"I am able to speak with people anywhere they live & it is more personal than e-mail"

"It's immediate and body language and gestures as well and with word"

"So that you can see and hear the other people"

"More effective communication and allows stronger relationship connection"

"Better communication can be achieved in person. Email helps me manage my time and I like to communicate in writing."

"I am most comfortable communicating in these ways - to me, they seem more personal.

"Easier to communicate face to face, takes more effort by email or phone"