

Teachers' Perspectives on Student Pain:

A Mixed Methods Study

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by

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Abstract

The purpose of this study was to describe teachers' experiences working with students in pain. In this study, pain was defined as a student's experience of a physical hurt. Teachers' perspectives of student pain in schools are important to study because pain is a common experience for children. Pain can decrease children's school functioning and increase school absenteeism. The literature in the area of child pain in the school setting is limited; the current study aims to expand on the literature. Gaining teacher perspectives will create an understanding of the current situation and will reveal teachers' needs and concerns surrounding student pain. Understanding teachers' experiences will also help inform future research, such as the development of school-based pain programs and pain management inclusion in teacher training.

Most children will experience some type of pain in school; therefore, it is beneficial for: (a) students to learn effective coping skills, (b) teachers to be knowledgeable about how to respond to pain, and (c) teachers and students to gain pain related information (e.g., what to expect in a hospital, the importance of pain as a warning sign). Pain can negatively impact school functioning and managing medical situations in adulthood. Therefore, teaching pain information and pain coping skills may prevent future pain issues.

The study involved two phases. The purpose of the first phase was to create a questionnaire that would elicit teachers' experiences working with students in pain. Focus groups, made up of teacher participants, were used to create questionnaire items and to assess questionnaire content. During phase two the questionnaires were mailed out to 19 schools within three different school divisions in Saskatchewan. The divisions were

located across central Saskatchewan. Of the 275 questionnaires mailed out, 121 were returned (44% response rate).

The data showed that teachers work with students who experience pain from a number of different causes, the most common being colds and flus, headaches, temporary injuries, and abdominal pain. Most teachers stated that they know when a student is in pain because the student tells them, but half of the teachers also mentioned that they can see when a student is in pain. When responding to acute and chronic pain teachers take a number of different actions. When a student is experiencing acute pain the most common action teachers reported was to take steps (e.g., first aid) or use objects (e.g., ice pack) to treat the pain. In the case of chronic pain, the most reported response was to contact/communicate with parents. Teachers also provided a number of tips to effectively manage students' pain at school, for example, allowing the student to rest, diverting the student's attention, and providing support to the student. Finally, teachers described how pain impacts students at school. A number of consequences of pain were listed, with difficulty concentrating being the most prevalent. The limitations and implications for future research and practice are discussed in relation to these findings.

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Dedication

I dedicate this research to all of the teachers who participated in my study and to students who are negatively effected by pain. I hope through continued research we can work together to decrease the impact of pain for all children.

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CHAPTER 1: Introduction

1.1 Introduction

Teachers' perspectives on student pain are important to study because there is limited information on child pain issues in the school setting (Chan, Piira, & Betts, 2005; Logan, Coakley, Scharff, 2006). Collecting information from teachers is critical to many areas of pediatric research (Brown, 1999). In this study, teachers' views on student pain are sought to help improve awareness about teachers' experiences with student pain in the school setting. Gathering knowledge from teachers is an essential first step in developing an appropriate plan aimed at increasing schools' and students' competence at managing pain in school (Logan & Curran, 2005).

Most children will experience some type of pain in school; therefore, it is advantageous for teachers to be aware of effective ways to respond to children's pain. Everyday pain experiences provide an opportunity for children to develop skills to cope with pain (Kuttner, 1996; Zeltzer & Blackett Schlank, 2005). It is beneficial for children to learn effective pain coping skills because pain can negatively impact school functioning. For example, for some children, pain can lead to school absenteeism, poor academic performance, and difficulties coping with school stressors (Allen, Mathews, & Shriver, 1999; Logan & Curran, 2005). Adelman (1996) stated that schools need to support children so that obstacles, such as health problems, do not interfere with children's academic attainment. Accordingly, schools are a fitting place to provide activities designed to help children cope with pain.

Medically significant pain is also a concern in schools. Medically significant pain is defined as pain that requires medical attention, has medium to high pain intensity, is

frequently associated with illness or injury, and is not brief in duration (von Baeyer, 2007). Pain is a serious problem for one out of every five children and adolescents (Zeltzer & Blackett Schlank, 2005). However, schools are not meeting the needs of students with chronic pain and illnesses (Kaffenberger, 2006). Since many school professionals lack knowledge about chronic pain and illness, “they may respond to pain behaviors in ways that unintentionally reinforce symptoms or contradict rehabilitation goals” (Logan & Curran, 2005, p. 282). For example, providing reassurance during pain inducing situations was found to increase a child’s pain and distress (Chambers, Craig, & Bennett, 2002). Therefore, students with chronic pain and illnesses may benefit from school staff who are knowledgeable about reintegrating and supporting children with pain (American Pain Society, 2001). Furthermore, if teachers are aware of appropriate responses to a child’s pain they may act as a protective factor against impairment in the child’s school functioning (Logan, Coakley, & Scharff, 2006).

1.2 Purpose and Organization of Paper

The thesis begins by providing an outline of the study, the purpose of the study, and the background of the study (Piantanida & Garman, 1999). The study’s statement of intent and guiding questions are provided to help organize the thesis and to inform the reader about the purpose of the study. The background of the study discusses the context in which the topic was developed and the potential benefits that may evolve from the research. The second major section is the literature review, which provides an overview of the topic, explores the rationale and significance of the study, and explains how the research study was developed. In the third chapter, the research procedures are described by examining the knowledge claim and the methodology used. Included in chapter three

is a brief discussion of evaluation, research limitations, and ethical considerations. The fourth chapter presents the results of phase I and chapter five describes the results of phase II. The last chapter discusses the study's results, limitations of the study, and future implications.

1.3 Overview of the Study

The study involved gathering data on teachers' perspectives of student pain. Obtaining information from teachers was achieved through focus groups and questionnaires. The focus groups were used to create questionnaire items and to assess the questionnaire content. The questionnaire was then used to collect teachers' responses regarding child pain in the school setting. The results of the study are of interest to school personnel, school organizations, health professionals, health organizations, parents, and students, especially those who experience pain.

1.3.1 Statement of intent

The purpose of the study was to describe teachers' experiences working with students in pain.

1.3.2 Guiding Research Questions

1. What are teachers' experiences working with students in pain? For example:
 - a. How do teachers know if children are in pain?
 - b. How do teachers respond to children who are experiencing pain?
 - c. What types of pain do teachers encounter in students?
 - d. What accommodations do teachers make for children in pain?
 - e. Do teachers have concerns about working with students in pain?

Since the first phase in the study involved gathering teachers' opinions through focus groups, the questionnaire had to be flexible to reflect the teachers' reality more accurately. For example, the teachers raised concerns about policies, medication, and parent communication so these topics were included in the final questionnaire.

1.3.3 Practical Implications of Research

Potential practical implications of this study include: a) gaining an understanding of how teachers respond to students in pain; b) discovering strategies teachers use to address child pain management; c) describing the concerns teachers have about teaching students in pain; and d) understanding how pain impacts children from a teacher's perspective. The descriptive information from teachers brings awareness to child pain in schools, which could create a number of positive changes, such as adding appropriate pain information to elementary school and teacher training curriculum.

Filling out the survey may have also led to positive changes. For example, the questionnaire asked about policies and procedures in the area of child pain. If teachers were unaware of or unhappy with the policies and procedures at their school, they may have been motivated to talk with their administration about the policies and procedures.

1.4 Background

1.4.1 My Journey to the Topic of Child Pain in Schools

After completing my bachelor of education degree, I began working as a research assistant for a psychology professor who works in the area of child pain. This job opened my eyes to the number of children affected by pain and to techniques children can use to help them cope with pain. For example, I remember watching a video about how children

with cancer cope with procedural pain. The children were able to use their imagination to help them escape to another place, while their bodies were being poked and prodded.

My background in teaching led me to wonder how these children handled coming back to school. I also wondered what kind of information teachers were provided to help children experiencing pain adapt to the classroom environment. I felt that despite my teacher training, I would feel inadequately prepared to effectively help students manage their pain in the classroom. Lastly, I wondered if coping techniques could be taught in schools to help all children cope with pain.

One of the graduate students I worked with was studying grade six students' ability to cope with their immunization shots. Her research motivated me to examine the Saskatchewan Health curriculum to see if pain information was covered. Although the curriculum talks about specific diseases, it did not address the area of pain. I wanted to know what children were taught about pain or if pain was discussed at all. Since all children go through some type of pain and witness pain experienced by others, it would make sense to give them an opportunity to learn and ask questions about pain.

My interest in student pain in the school setting sat dormant until I was accepted into graduate school. Having the opportunity to conduct my own research, allowed me to answer my questions regarding student pain in school.

1.4.2 Personal experiences with pain

My curiosity about how children cope with pain in school led me to reflect on my own experiences with pain. I can not remember suffering a lot of pain as a child, but I did begin experiencing frequent headaches as a teenager. I am not sure if the headaches impacted my high school education; however, my headaches have affected my

performance in university. I have missed classes and assignment deadlines because of migraines. Furthermore, concentrating on writing a paper or studying for an exam can be a struggle when my brain is consumed by pain.

Although my pain is sporadic, my experience has shown me the difficulties caused by juggling pain and school work. I have had to be an advocate for myself by seeking accommodations when the pain has infringed on my school work. The experiences I have had dealing with pain and school work will have an effect on my research. The biases I take into my research are a belief that teachers should be aware of student pain and make adaptations and accommodations for children in pain. Furthermore, schools are identified as being an effective place for children to learn positive health outcomes (Jones, et. al, 2004). Schools could help children's health outcomes by empowering them to feel that they have some control over their pain. By teaching students pain coping skills and allowing them to generate solutions to handle their pain and school work, children will learn that they are capable of successfully managing health challenges (Jones, et. al, 2004).

1.4.3 Definition of terms

Accommodation:

- “Specialized support and services that are provided to enable students with diverse needs to achieve learning expectations. This may include technological equipment, support staff and informal supports” (Saskatchewan Special Education Review Committee, 2000, p. 145).
- “An adjustment designed to assist a student in overcoming classroom and learning problems that can be applied in a regular educational setting without the use of

special education services or funding (e.g., modifications of assignment lengths, alterations in seating patterns, and revised grading practices)” (Cunningham & Wodrich, 2006 p. 556).

- When I refer to accommodations in this paper I am referring to both definitions of accommodations.

Acute pain:

- “Acute pain follows injury to the body and generally disappears when the bodily injury heals. It is often, but not always, associated with objective physical signs of autonomic nervous system activity” (American Pain Society, 2001, ¶ 2).

Adaptations:

- “Adjustments to curriculum content, instructional practices, materials or technology, assessment strategies, and the learning environment made in accordance with the strengths, needs, and interests of the learner” (Saskatchewan Special Education Review Committee, 2000, p. 145).

Adaptive Dimension:

- “The concept of making adjustments in approved educational programs to accommodate diversity in student learning needs. It includes those practices the teacher undertakes to make curriculum, instruction, and the learning environment meaningful and appropriate for each student. Adaptations are made to help students achieve objectives of the course or program” (Saskatchewan Special Education Review Committee, 2000, p. 145).

Chronic illness:

- A persistent and long lasting medical condition that can lead to impaired cognitive and physical functioning, intensive treatments, and numerous trips to medical facilities (Brown, 2004).
- "...an illness that is permanent or lasts a long time. It may get slowly worse over time. It may lead to death, or it may finally go away. It may cause permanent changes to the body. It will certainly affect the person's quality of life" (Chronic Illness Alliance, 2005).

Chronic pain:

- Chronic pain is defined as persistent pain lasting three months or longer or pain which endures past the normal time of healing (McGrath & Finley, 1999; Perquin, Hazebroek-Kampschreur, Hunfeld, Bohnen, Suijlekom-Smit, Passchier et al., 2000).
- "... pain that is either continuous or recurrent (i.e. pain with pain-free intervals) for three months or longer" (Hunfeld, Passchier, Perquin, Hazebroek-Kampschreur, van Suijlekom-Smit, & van der Wouden, 2001, p. 201)
- Chronic pain is defined as pain occurring on at least fourteen or more days per month over three months or more (C.L. von Baeyer, personal communication, January 7, 2007).

Coping:

- "Coping refers to efforts, both cognitive and behavioral, to manage environmental and internal demands and conflicts affecting an individual that tax or exceed that person's resources" (Coyne, Aldwin, & Lazarus, 1981)

- “We define coping as conscious volitional efforts to regulate emotion, cognition, behavior, physiology, and the environment in response to stressful events or circumstances” (Compas, Connor-Smith, Saltzman, Thomsen, Wadsworth, 2001, p. 89)

Everyday pain:

- Everyday bumps and hurts (often referred to by children as ‘booboos’, ‘owies’, or ‘ouches’) are an experience common to all children and, under normal circumstances, they constitute the child’s major experience with pain. Although very few of these incidents result in any observable physical injury, they are nonetheless highly salient events in the child’s daily experience (Fearon, McGrath, & Achat, 1996, p. 55).
- Pain of brief duration, often mild intensity, no medical attention required, and no prolonged effects (C.L. von Baeyer, personal communication, January 7, 2007).

Intervention:

- A standard dictionary defines intervention as an influencing force or act that occurs in order to modify a given state of affairs. In the context of behavioral health, an intervention may be any outside process that has the effect of modifying an individual's behavior, cognition, or emotional state. For example, a person experiencing stress symptoms may find a variety of interventions effective in bringing relief. Deep breathing, vigorous exercise, talking with a therapist or counselor, taking an anti-anxiety medication, or a combination of these activities are all interventions designed to modify the symptoms and potentially the causes of stress-related discomfort (Thomson Gale, 2006).

- “the act or fact or a method of interfering with the outcome or course especially of a condition or process (as to prevent harm or improve functioning)” (Merriam-Webster, 2005).

Medically significant pain:

- Pain that requires medical attention, has medium to high pain intensity, is frequently associated with illness or injury, and is not brief in duration (C.L. von Baeyer, personal communication, January 7, 2007).

Modified course:

- “Term used to describe an academic course that has been changed at the school or school division level and is approved by the Regional Director of Education” (Saskatchewan Special Education Review Committee, 2000, p. 148).

Pain:

- “According to the widely accepted definition by the International Association for the Study of Pain (IASP) (Merskey and Bogduk, 1994), pain is an unpleasant experience and children above 5 years of age consistently describe pain as something that hurts and makes them feel bad (Gaffney and Dunne, 1986 and McGrath et al., 2000)” (Petersen, Brulin, & Bergstrom, 2006, p. 145).

Prevention:

- 1. action that stops something from happening: an action or actions taken to stop somebody from doing something or to stop something from happening (e.g., the prevention of crime)
- 2. something that acts to prevent something: an action that makes it impossible or very difficult for somebody to do something or for something to happen (e.g.,

taking aspirin as a prevention against heart attacks) (Microsoft Corporation, 2006).

- The World Health Organization identifies three successive stages covering the means to be set up to prevent pathologies, therapy and, if possible, the social reintegration of patients:
 - Primary prevention: This stage of prevention covers all activities designed to 'reduce' the instances of an illness in a population and thus to reduce, as far as possible, the risk of new cases appearing, ... as well as training all those who have a role to play with the population in question;
 - Secondary prevention: This covers activities aimed at 'reducing the prevalence of an illness in a population and thus to reduce its duration'; ...
 - Tertiary prevention: This aims 'to reduce the incidence of chronic incapacity or recurrences in a population, and thus to reduce the functional consequences of an illness' (CPLOL, 2003).

Recurrent pain:

- Pain that is severe enough to interfere with activity, occurring at least three times, over a period longer than three months (Apley, 1957, cited in von Baeyer & Walker, 1999).
- Pain that occurs on at least one and no more than 14 days per month throughout the past three months (C.L. von Baeyer, personal communication, January 7, 2007).

CHAPTER 2: Review of Relevant Literature

2.1 Defining Pain

Pain is defined as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage” (Merskey & Bogduk, 1994). Children suffer from pain, whether through injuries, illnesses, or the common cold. Pain can be divided into everyday pain (e.g., minor scrapes, bumps, and bruises), short-term pain (e.g., medical procedures and traumas), recurrent pain (e.g., growing pains and stomachaches), and disease-related and chronic pain (IASP, 2005). Pain is a subjective experience that can be affected by many factors such as biological factors, previous experiences with pain, and situational factors (Collins, Lane, & Thompson, 2001; Merskey & Bogduk, 1994). This study was concerned with all types of child pain.

Chronic pain is defined as persistent pain lasting three months or longer or pain which endures past the normal time of healing (McGrath & Finley, 1999; Perquin, Hazebroek-Kampschreur, Hunfeld, Bohnen, Suijlekom-Smit, Passchier et al., 2000). The definition of chronic pain is very broad, therefore all forms of continual pain, “such as that related to chronic disease (e.g., cancer, arthritis, sickle-cell disease), neuropathic pain (e.g., complex regional pain syndrome, phantom limb pain) and recurrent pain syndromes (e.g., migraine, recurrent abdominal pain), could be classified as causes of chronic pain in children” (Collins et al., 2001, p. 453). Many studies focus on children’s chronic illness rather than chronic pain. However, as previously mentioned, chronic pain also includes children with continual pain as a result of illness. A chronic illness is a persistent and

long lasting medical condition that can lead to impaired cognitive and physical functioning, intensive treatments, and numerous trips to medical facilities (Brown, 2004).

Extensive knowledge exists regarding adult pain; however, more research is required to understand children's pain experiences (Perquin et al., 2000; Varni, Wilcox, Hanson, & Brik, 1988). The goal of the study is to increase the knowledge of child pain by collecting school professionals' perspectives about child pain in the school setting.

2.2 Child Pain Prevalence

Most studies on the prevalence of child pain focus on a specific type of pain or illness. Consequently, limited information is available on accurate statistics on child pain and the overall number of children affected by pain. However, one Dutch study, involving a community sample of 6636 children aged 0 to 18 years, looked at the prevalence of all types of child pain. This study found that 25% of the participants reported having chronic pain, with the highest prevalence found in 12- to 14-year-old girls (Perquin et. al., 2000). Over half of the children reported experiencing some type of pain during the three months prior to the survey (Perquin et. al., 2000). The fact that pain was experienced by a large number of children supports the likelihood of pain impacting children in the school environment.

Other studies support the prevalence of pain in children and reveal some of the common types of pain that impact children's functioning. For example, Oster's (1972) study on recurrent pain in Danish children 6- to 19-years-old found prevalence rates of 15.5% for musculoskeletal pain, 20.6% for recurrent headaches, and 14.48% for recurrent abdominal pain. Eccleston and Malleon (2003) report that the most common type of chronic and recurrent pain are headaches, followed by recurrent abdominal pain and

musculoskeletal pain. Furthermore, surveys about spinal pain in children aged 8-16 years showed 1-month prevalence rates up to 39% (Steele, Dawson, & Hiller, 2006). According to Newacheck and Halfon (1998) “the most common childhood chronic illnesses are asthma, allergic disorders, digestive disorders, central nervous system disorders, and seizure disorders such as epilepsy” (Kaffenberger, 2006, p. 223). Although some of these conditions may not be considered painful, they can still cause the child discomfort and can negatively impact the child’s schooling. For example, asthma alone affects approximately two to three students in a class of 30 and accounts for 14 million lost school days each year (Wheeler, Boss, & Williams, 2004).

Many children live with pain (Perquin et. al., 2000; Oster, 1972) and chronic health problems in children have been increasing (Brown, 2004). As a result, teachers will likely encounter students who must deal with pain while at school. A subset of these students will experience negative effects on their schooling because of pain. For example, approximately 6.5% of all children under 18 years old are affected by a chronic condition that limits their participation in activities such as school (Newacheck & Halfon, 1998), and about 1% to 2% of children experience continuous disruptions in their daily functioning as a result of their chronic illness (Thompson & Gustafson, 1996).

Some children with special needs receive help in school for issues such as cognitive challenges and behavioral problems; however, some of these children may also be experiencing pain (Zeltzer & Blackett Schlank, 2005). For example, research suggests that a high percentage of children with Asperger’s syndrome and autism spectrum disorder also deal with chronic pain (Zeltzer & Blackett Schlank, 2005). I believe that some students may act out because of their pain; therefore treating the students’ pain

could lead to a positive effect on factors such as student behaviour. Injuries are another type of pain that children will experience at school. For example, over one-third of school aged children will require medical help because of an injury (Adirim & Cheng, 2003). Since there are limited studies discussing the potential causes of child pain, many types of child pain that will occur at school have not been mentioned.

2.3 Guiding Models

The model that informs this study is the biopsychosocial model. As illustrated in Figure 1, the biopsychosocial model considers several potential interacting sources of illness rather than focusing solely on physical problems (Walker & Johnson, 2004). The systems in a person's life can interact to cause pain symptoms (see Figure 1). Pain can be affected by biological factors (e.g., genes, disease, tissue damage), psychological factors (e.g., emotions, cognitions, and behavior), and environmental factors (e.g., school stress, peer relationships, and teaching style) (Walker & Johnson, 2004). Therefore, to help children with pain problems, health professionals should work with the school and family to address these multiple factors (Walker & Johnson, 2004).

The biopsychosocial model suggests that others' responses to the child's pain can impact the pain cycle. "Studies of parental response to children's pain behaviors clearly indicate that parental responses can serve a risk or protective function in children's ability to cope with pain, either by inadvertently reinforcing sick-role behavior or by encouraging adaptive functioning (Chambers, Craig, & Bennett, 2002; Walker & Zeman, 1992)" (Logan et al., 2006, p. 1). Research on pain in the school setting is limited; however, it is likely that teachers' responses also impact children's functioning (Logan, et. al., 2006). For example, a child with chronic stomach aches might experience pain

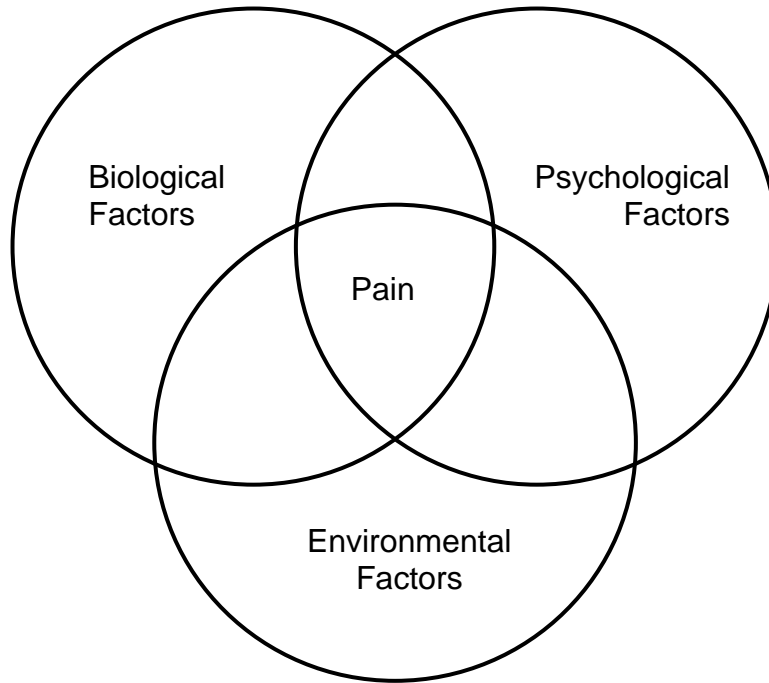


Figure 1. Adaptation of the biopsychosocial model of pain from Walker & Johnson (2004).

triggered by eating something at recess. If the teacher responds by focusing on the child's pain, this may cause the child to focus on his pain instead of the classroom activity. By focusing attention on the pain instead of schoolwork the child might become anxious about getting behind, thereby decreasing the child's pain threshold and ability to function (Walker & Johnson, 2004). However, if the teacher helps distract the child with school work, the child's attention will be focused on the task instead of the pain. This attention shift from pain to school work may increase the child's feelings of competence and decrease the child's pain.

People also exist within organismic and social systems (Engel, 1980). The systems hierarchy (see Figure 2) shows the idea that "each system is at the same time a

component of higher systems ... In the continuity of natural systems every unit is at the very same time both a whole and a part” (Engel, 1980, p. 537). The biopsychosocial model also takes into account the systems that make up a person and the systems that the person is a part of (Engel, 1980). School systems can play an important role in the health

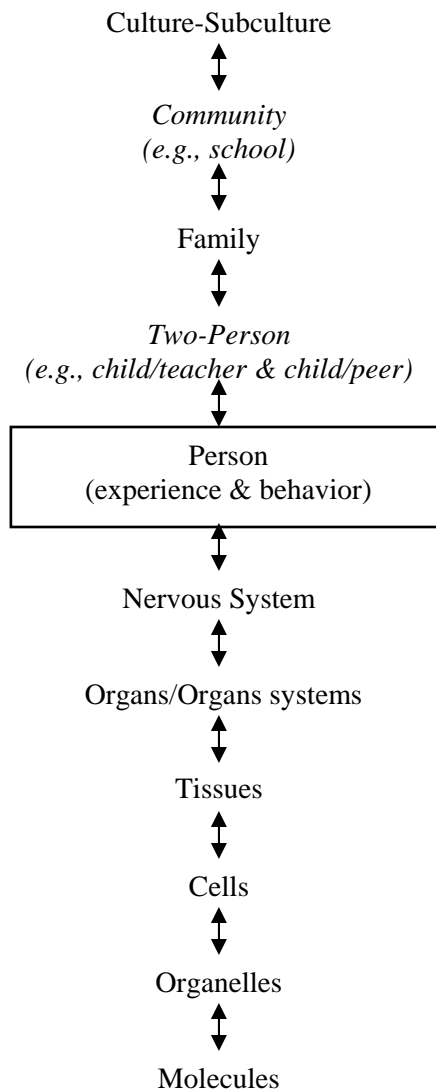


Figure 2. Adaptation of the Hierarchy of Natural Systems from Engel (1980)

of children because they offer a place for children to develop social networks. For example, strong peer relationships were found to increase resilience in adolescents with cancer (Papsadorf, 2004).

The interaction between the school and a student in pain can be seen in Figure 3, which is a model Logan (2006) adapted to examine pain and school functioning. The model shows that the school community and school relationships impact pain and that pain in turn impacts school functioning. Consequently, school professionals should have an understanding of pain and its many factors to understand and improve the school functioning of children with pain. By using the biopsychosocial model to examine pain, teachers can see that pain is not just a medical problem. Teachers are a part of children's systems and have an opportunity to make a positive difference in the functioning of children with pain.

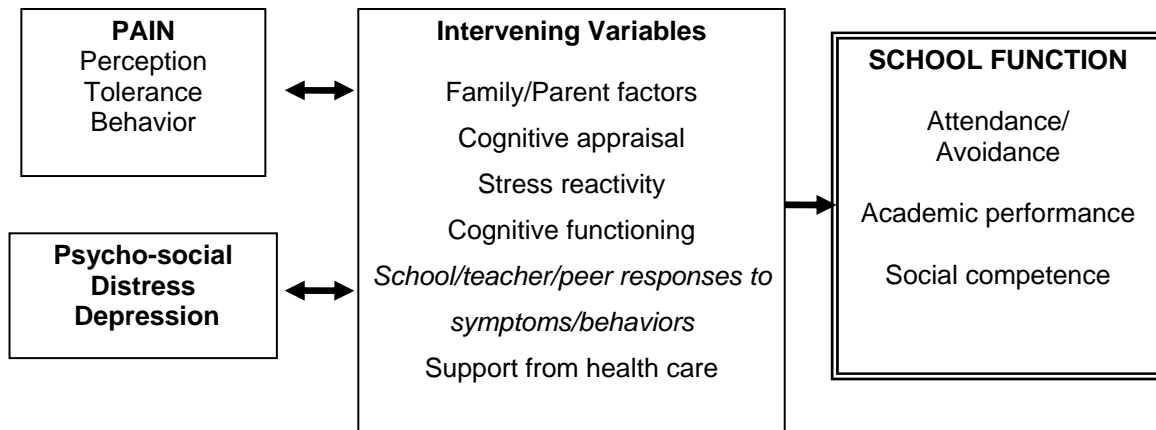


Figure 3. Adaptation of the biopsychosocial model of pain-related school functioning from Logan (2006).

2.4 Pain Coping Techniques

Research has addressed the benefits of teaching children coping skills to help them deal with pain. For example, empirical evidence suggests that relaxation techniques are effective in treating children with migraines, tension headache, and procedural pain (McGrath et al., 2003). The effectiveness of psychological headache interventions has led some researchers to consider the possibility of using the interventions in schools to reduce the development of chronic headache pain in the population (Eccleston, Morley, Williams, Yorke, & Mastroyannopoulou, 2002; Fichtel & Larsson, 2004; Larsson, Carlsson, Fichtel, & Melin, 2005; Larsson & Carlsson, 1996). Teaching children about pain coping has the potential to help children manage pain while they are young and to prevent pain problems in the future.

2.5 Student Pain in the School Setting

2.5.1 Pain and School Functioning

School functioning difficulties are a major concern for children with chronic illness and can lead to compromised psychosocial developmental (Vitulano, 2003). Furthermore, children's ability to function in school can be significantly affected by pain caused by the illness (Chan, Piira, & Betts, 2005; Logan, 2006). A study of 149 children with unexplained chronic pain found that having high pain intensity was a predictor of impairments in daily living (Konijnenberg, Uiterwaal, Kimpen, van der Hoeven, Buitelaar, de Graeff-Meeder, 2005). A recent study by Logan (2006) considered pain's impact on school functioning. Adolescents with chronic pain, along with their parents and teachers, were asked to rate how much pain affected the students' performance in school. The participants' ratings, ranging from zero "not at all" to ten "extremely", indicated that

pain had a notable effect on the adolescents' performance (Adolescent $M= 5.6$, Teacher $M= 4.4$, Parent $M = 5.8$) (Logan, 2006). Teachers need to be aware of the risks that can contribute to school impairment for children with pain (Cunningham & Wodrich, 2006). School absenteeism, social functioning and academic performance will be discussed in terms of how they are influenced by pain.

2.5.1.1 School attendance. School attendance is not a perfect measure of school functioning because it does not always explain why children are missing nor does it describe how they function when in school (Chan, Piira, & Betts, 2005). On the other hand, it is important to know that school absenteeism can be a problem for children with pain and it offers a method to compare the functioning of healthy and unhealthy children. For example, Fowler, Johnson, and Atkinson (1985) found that children with a chronic illness missed almost 3 times more school days than healthy children. A study of 749 children and adolescents with chronic pain found that 48.8% of the participants reported missing school because of their pain (Roth-Isigkeit, Thyen, Stoven, Schwarzenberger, & Schmucker, 2005). Furthermore, a pain clinic in the United States reported that at the time of intake, youth with chronic pain missed an average of 23% of all school days because of their pain (Khan, Ladwig, & Weisman, 2006). I speculate that pain may contribute to school days missed by healthy children as well.

School absenteeism is an issue because it can decrease children's academic and social development (Adams, Streisand, Zawacki, & Joseph, 2002). Nonattendance can be a bigger issue for children with pain because the longer they are out of school the more their symptoms worsen and the harder it is for them to return to school (Logan, 2006; Kaffenberger, 2006). Children's feelings of helplessness can also be affected by lengthy

school absenteeism. Increased helplessness also contributes to difficulties with school reentry and impacts the child's ability to cope with the treatment process (Kaffenberger, 2006). Children in pain may experience long absences so schools and parents should work together to decrease the child's sense of helplessness, thereby increasing a chance for successful reentry. Schools can put procedures in place to reduce the chance of increased helplessness that a child with continual absences might face. For example, schools could arrange for the absent child to come to school briefly or send things home for the child so he or she still feels a sense of belonging and competency. It is imperative for schools to be aware of the absenteeism issue, especially since a lack of support and understanding from school personnel is associated with increased nonattendance in students with chronic illnesses (Madan-Swain, Katz, & LaGory, 2004).

2.5.1.2 Social functioning. Social interactions are an integral part of children's growth, development, and self-esteem (Vitulano, 2003). Many of children's social experiences occur in school. As discussed earlier, pain can decrease school attendance; therefore, children in pain may miss out on opportunities to participate in school activities and to develop supportive peer relationships (Chan, Piira, & Betts, 2005). Missing out on social interactions may increase a child's likeliness to feel inferior and to become passive (Vitulano, 2003).

A lack of peer social support can also affect the way children cope with their illness. For example, having supportive peers was one of the factors associated with adolescent cancer survivors who were more resilient (Papsdorf, 2004). Furthermore, a study of 50 children with recurrent abdominal pain (RAP) examined factors related to child-reported depressive symptoms. Results showed that having supportive classmates

and teachers was associated with fewer reported depressive symptoms (Kaminsky, Robertson, & Dewey, 2006). Lewis, Walker, and Smith (1999) also found that social functioning influenced children's disability levels. Their research on 51 female participants with irritable bowel symptoms showed that adolescent girls with high social competence reported less functional disability than females who had similar symptoms and low levels of social competence.

Students with chronic illness and pain are more likely than healthy children to have behavior problems such as depression and anxiety (Boekaerts & Röder, 1999; Härmä et al., 2002; Kaminsky, Robertson, & Dewey, 2006). The behavior problems can, in turn, increase barriers towards social competence (Chan, Piira, & Betts, 2005). Teacher and parent reports suggested that youth with chronic pain have difficulty with social functioning (Logan, 2006; Walker et al., 1998). Pain can also be a cause for increased submissive behavior and decreased social activity as shown by a study comparing children with chronic illnesses to healthy norms (Meijer, Sinnema, Bijstra, Mellenbergh, & Wolters, 2000). The authors suggested that action should be taken to help the social development of children with chronic illness who are passive and/or are restricted in their activities (Meijer et al., 2000). These studies suggested that peer support and opportunities for social experiences are mediated by pain and illness. Schools should take steps towards providing a positive school environment to help children with pain succeed socially (Vitulano, 2003).

2.5.1.3 Academic performance. Children with chronic illnesses may be at an increased risk for experiencing academic problems (Cunningham & Wodrich, 2006; Madan-Swain, Katz, LaGory, 2004; Sexson & Madan-Swain, 1993). A study of 11,699

participants, 4 to 17 years of age, found that children with chronic conditions were more likely to receive special education services and to repeat grades, even when controlling for sociodemographic variables (Gortmaker, Walker, Weitzman, & Sobel, 1990).

Academic difficulties are associated with pediatric chronic illnesses; however, some of the problems are a result of a specific disease (Brown & Madan-Swain, 1993). For example, literature suggests that children with sickle cell disease, an inherited disease involving premature destruction of red blood cells (Department of Health and Senior Services, 2007), may have learning impairments because of abnormal neuropsychological functioning (Armstrong & Thompson, 1996). On the other hand children with diabetes mellitus, “a disease of the pancreas in which the production of insulin is decreased” (Kidney Foundation of Canada, 2007, ¶ 2), may experience concentration difficulties because of blood sugar levels (Brown & Madan-Swain, 1993). It is important to understand the factors leading to the child’s academic impairment so that school professionals can create educational plans aimed at maximizing children’s potential (Armstrong & Thompson, 1996).

Pain may contribute to academic difficulties for children with chronic illnesses. For example, the parents of children with RAP reported lower levels of academic achievement compared to parent ratings of healthy children (Chan, Piira, & Betts, 2005). Pain can also cause sleep disturbances (Chalkiadis, 2001), which in turn may lead to impairments in attention and performance (Dahl, 1999). The association between pain and school absenteeism is also evidence that pain impacts academic performance, since nonattendance can affect school performance (Chalkiadis, 2001). It is vital to understand the consequences of pain and illness in the school setting so that their negative effects can

be minimized. Helping children with pain succeed in school is crucial because poor academic outcomes can diminish self-esteem (Vitulano, 2003) and lead to negative consequences in adulthood (Sturge, Garralda, Boissin, Dore, & Woo, 1997).

2.5.2 School reintegration

For many children, pain is a barrier to school reintegration (Khan, Ladwig, & Weisman, 2006). In order to help children and their families feel comfortable about allowing the child back into the classroom, it is helpful for the school to consider how the child's pain will be managed (Walker & Johnson, 2004). For example, if the child is having a pain episode at school, the child should be allowed to rest in a designated place rather than being sent home (Walker & Johnson, 2004). More knowledge needs to be collected to bring light to the current situation regarding child pain in school. The proposed study will allow teachers to describe what happens when children are in pain, what they perceive to be helpful for children in pain, and what concerns they would like to have answered.

Children who have missed school because of illness or injury should reenter school as quickly as possible because returning to their regular activities promotes "optimal adjustment, rehabilitation, and psychosocial well-being" (Madan-Swain, Katz, & LaGory, 2004, p. 637). School reintegration is critical to children's development; therefore, schools must be prepared to assist children who have an illness or serious injury. However, schools may struggle to support the reentry of the child because they lack the necessary knowledge, resources, and expertise (Kaffenberger, 2006). Consequently, it is beneficial if families, health care providers, and school personnel

work together to enhance the student's reintegration process (Sexson & Madan-Swain, 1993; Madan-Swain, Katz, LaGory, 2004).

The attitudes and readiness of school professionals are vital to successful school reentry (Khan, Ladwig, & Weisman, 2006; Sexson & Madan-Swain, 1993). Sexson and Madan-Swain (1993) suggest that teachers may have difficulties assisting students with chronic pain or illness because they lack knowledge and experience, they feel overwhelmed, and they are unsure of appropriate expectations and limitations. Children with chronic pain may benefit from school staff who are knowledgeable about reintegrating and supporting children with pain (American Pain Society, 2001). Consequently, information on child pain and illness could be taught during professional development and/or teacher training.

2.5.3 School personnel and student pain

Teachers feel ill-prepared to assist children with medical concerns (Baskin, Saylor, Furey, Finch, & Carek, 1983; Sexson & Madan-Swain, 1993; Logan & Curran, 2005). If teachers are not knowledgeable about a child's symptoms, then they may push the student too hard or not challenge the child enough (Sexson & Madan-Swain, 1993). Teachers may also be concerned that the child with an illness will require too much attention and the needs of the rest of the class will be sacrificed (Stevens, Kaye, Kenwood, & Mann, 1988).

In some instances teachers may be unaware of their students' health problem (Fowler, Johnson, & Atkinson, 1985; Koontz, Short, Kalinyak, & Noll, 2004; Wodrich, 2005). This was the case in a study of children with sickle cell anemia. The teachers and peers noted that the student was different; however, they were uninformed of the child's

disease so they were left to make wrong assumptions about the student. Some teachers “erroneously attributed the fatigue and chronic absences to low motivation, a chaotic family, drug problems, or human immunodeficiency virus” (Koontz, Short, Kalinyak, & Noll, 2004, p. 8). The results of this study and the recommendations from other studies suggests that schools should be aware of and receive information about the student’s illness so they can take steps to debunk myths about the illness, meet the student’s educational needs, and protect the child from social stigma and isolation (Drotar, Palermo, & Barry, 2004; Khan, et. al., 2006; Koontz, et. al., 2004; Logan & Curran, 2005; Sexson & Madan-Swain, 1993; Wodrich, 2005; Baskin, et. al., 1983). Furthermore, teachers should be given information about the educational consequences of the student’s health problem (Wodrich, 2005) and have the opportunity to discuss their own feelings and concerns with health care professionals (Baskin et al., 1983).

2.5.3.1 Teachers’ perceptions of student pain. Research on teachers’ perspectives of child pain is in its infancy; therefore, the proposed study will help enhance knowledge of this topic. Only a few known published studies have looked specifically at teachers’ opinions and knowledge regarding child pain or illness.

A study by Logan and Curran (2005) used focus groups to ask school personnel about their experiences with adolescent chronic pain. The results from the study suggested that school personnel feel ill-prepared to work effectively with students suffering from chronic pain and that they require more information and communication from the healthcare community. Although the results are not generalizable to all school personnel, the study supports the idea that teachers require more education and support to

adequately assist students with chronic pain. The proposed study will extend the question to all types of student pain, including chronic pain, illness, and injury.

Another study used a vignette about a student with limb pain to examine factors that might influence teachers' perceptions and responses to students with chronic pain (Logan, Coakley, & Scharff, 2006). The factors investigated by the vignettes were presence or absence of organic evidence for pain, cooperative versus confrontational parents, and presence or absence of communication from a medical team. Documented medical evidence supporting the pain was the most influential factor affecting teachers' responses to pain. Parental attitude was also found to affect teachers' responses. Communication from the medical team influenced teachers' decisions about relief from student responsibilities but did not affect other reactions. The researchers believe that more investigation is required on the effects of communication from health care professionals because the vignette may not have appropriately addressed this factor. The study indicates that various factors influence teacher's responses to students with pain. Knowing what factors help teachers understand and respond to student pain effectively could help increase the school functioning of students with pain (Logan, Coakley, & Scharff, 2006). The proposed study will ask teachers open ended questions about how they know if students are in pain and how they respond to pain. Through these questions the researcher may be able to discover factors that influence teachers' responses to student pain.

One study focusing on teachers' understanding of pediatric chronic pain employed a survey to find out what causes teachers attributed to chronic pain (Logan, 2006). The authors did not discuss how the survey was created or if it had been used

previously so I cannot comment on its development or validity. Of the 260 teachers that responded, 13.1% were unsure, 20% attributed physical causes, 28.8% endorsed psychological causes, and 38.1% acknowledged psychological and physical causes for pain (Logan, 2006). According to studies looking at parental responses to their children's pain, it was found that parental responses can positively and negatively impact their child's ability to cope with pain (Chambers, Craig, & Bennet, 2002). Based on this research Logan, Coakley and Scharff (2006) propose that how teachers respond to student pain may affect the students' ability to cope with pain in school. In their study, almost two thirds of the teachers did not identify the joint role of physical and psychological causes (Logan, Coakley, & Scharff, 2006). If teachers are not aware that both physical and psychological causes influence the students' pain, then they may be responding inappropriately and misunderstanding the students' needs and behaviors. These results strengthen the case that teachers need to be educated about student pain. Teachers' judgments of, and reactions to, pain symptoms and behaviors could influence students' academic performance, and may indirectly affect other areas of the child's functioning (Logan, Coakley, & Scharff, 2006).

Two studies by Wodrich (2005; Cunningham & Wodrich, 2005) used hypothetical situations to examine how teachers' attributions and accommodations changed as a result of the type of information being provided. The first study was concerned with teachers' ability to recognize health factors as the root cause of the student's classroom issues (Wodrich, 2005). The researcher created a survey that was distributed to continuing and pre-service teachers (Wodrich, 2005). The teachers were provided with a hypothetical situation of a student as well as personal information on the student that either provided

no diagnosis, diagnosis only, or diagnosis plus a description of likely classroom manifestations. The researchers asked the participants to rank 12 possible causes for the student's classroom problems. The list of possible causes was developed based on the first author's experience as a behavioural consultant with teachers and teacher input from an informal focus group. Only 2.6% of teachers in the no disease information group rated health factors as the most probable reason for the student's problems compared to 16.6% in the diagnosis only group and 50% in the diagnosis plus classroom difficulties group (Wodrich, 2005).

The percentage of teachers responding inaccurately may be inflated because the study used a hypothetical case instead of an actual student and the sample consisted of many inexperienced teachers. However, the results still showed that providing teachers with increased information about the child's health led to more accurate ratings. Accordingly, teachers should be given the student's diagnosis and list of classroom manifestations. This information would likely help teachers avoid misattributions for classroom problems, which may inadvertently lead to incorrect and counterproductive interventions (Wodrich, 2005).

The second study by Wodrich investigated the effects that varying levels of health information had on teachers' ability to generate disease-specific accommodations (Cunningham & Wodrich, 2006). Teachers were provided with either no disease information, basic disease information, or disease information combined with classroom implications. The results showed that the teachers who were not provided with disease information offered the fewest accommodations that matched the common classroom difficulties exhibited by a child with diabetes.

This study also supports the benefits of providing teachers with students' health information because teachers that were provided with health information offered the most appropriate accommodations. Ninety-two percent of the study participants agreed that information on assisting children with diabetes in the classroom would be useful (Cunningham & Wodrich, 2006). Although the information proved to be helpful, there is room for improvement. Teachers should also be provided with resources, such as the assistance of other health professionals, to help them create accommodations for children with chronic illnesses. Many experts suggest that properly trained school psychologists may be the best resource to assist teachers in their efforts to meet the needs of students with health problems (Allen, Matthews, & Shriver, 1999; Cunningham & Wodrich, 2006; Power, et. al., 1999; Power & Parrish, 1995; Wodrich & Landau, 1999; McMahon & Harper, 1990).

2.5.3.2 *The role of school psychologists.* Currently there is a lack of collaboration between health care and schools (Drotar, Palermo, & Barry, 2004). School psychologists and pediatric psychologists are being called on to reduce the gap by extending their knowledge (Drotar, Palermo, & Barry, 2004). School psychologists are trained to consider students' cognitive and emotional skills and make appropriate adaptations to promote school success (Brown, 2004). However, school psychologists often do not receive training to assess and accommodate children with medical problems (Power & Parrish, 1995).

Students with chronic health problems will require the schools' help at some point during their academic careers (Madan-Swain, Fredrick, & Wallander, 1999) and school psychologists may be called upon to design plans that take into account the multiple

systems affecting children's development and to create links between the systems to help support student success (Power, Shapiro, & DuPaul, 2003). Consequently, school psychologists would benefit from knowledge in health care systems, childhood health problems, and how to help children with health problems adapt to the school setting (Brown, 2004; Power & Parrish, 1995). Furthermore, "school psychologists should be aware that there is an increased risk for emotional distress as a byproduct of recurrent pain, and it may lead to social withdrawal, impaired school performance, and decreased ability to cope with demands in the classroom" (Allen, Matthews, & Shriver, 1999, p. 267). If school psychologists become informed on how to help students with pain and illness, teachers and students will benefit from the school psychologists' support and recommendations. The questionnaire in this study will ask teachers about what personnel, including school psychologists, social workers, nurses, educational consultants, and health care providers outside the school system, are currently being used as a resource to help support students with health problems.

2.5.3.3 Teacher training. "Teachers are encouraged to integrate health content into their classes regardless of specialty area, assist students who experience health problems, and provide early identification and intervention when a student experiences a health problem" (Myers-Clack & Christopher, 2001, p. 462). However, university teacher training often lacks health education for teachers (Myers-Clack & Christopher, 2001). In fact at the University of Saskatchewan, health is not available as a specialty teaching area and there are no education health curriculum classes (University of Saskatchewan, 2006). The successful implementation of health curricula is dependent on the amount and quality of training teachers receive in health instruction (Han & Weiss, 2005; Seabert, Pigg,

Weiler, Behar-Horenstein, Miller, & Varnes, 2002). Therefore, teachers with little or no health training are likely to be less effective at implementing health curricula, may feel unprepared to respond to students with health concerns (Myers-Clack & Christopher, 2001), and may misattribute students' health problems to other factors (Wodrich, 2005). Since many education programs lack adequate health information (Myers-Clack & Christopher, 2001), graduating teachers are likely to enter schools ill-prepared to assist students in pain.

2.5.5 School-based Pain Interventions and Preventions

Schools have been identified as a suitable place to offer children health interventions and preventions (Power & Blom-Hoffman, 2004; Jones, Stratton, Reilly, & Unnithan, 2004). Pediatric populations benefit from school-based interventions because the school offers many opportunities to carry out health interventions and prevention (Brown, 2004; Power & Blom-Hoffman, 2004). For example, school-based interventions can offer naturalistic observations, multidisciplinary teams, and the ability to intervene and assess interventions in the child's natural environment. Opportunities for pain prevention in the school include the ability to have an impact on a large number of children and families, the inclusion of health messages into the curriculum, and numerous opportunities to practice and get feedback on new skills (Power & Blom-Hoffman, 2004).

2.5.5.1 Illness specific interventions. Some schools have acknowledged student pain by implementing school-based pain interventions. A study on adolescents in Norway found that relaxation training provided by school nurses was effective in treating adolescents with headaches (Larsson, Carlsson, Fichtel, & Melin, 2005): the number and intensity of headaches decreased with the use of relaxation treatment and medication.

Another study evaluated a comprehensive, school-based asthma management program and found it improved asthma control, and reduced student and caregiver absenteeism (Tinkelman & Schwartz, 2004). Lurie, Straug, Goodman, and Bauer (1998) agreed that asthma intervention programs show positive effects; however, the authors also mentioned that the programs can cause children to be pulled out of class, stay after school, or be identified as a special group. As a result of their concern, the authors conducted a study that had the health departments and teachers joining together to incorporate asthma education into the traditional classroom curriculum (Lurie et al., 1998). For example, students tested their peak flow rates for 10 days and then used the data to create graphs and solve math problems (Lurie et al., 1998). The successful incorporation of an asthma intervention into the school curriculum is encouraging because including pain coping into the curriculum is one of the outcomes proposed for this study.

2.5.4.2 School-based pain prevention. One reason to advocate for school-based pain prevention is because pain in childhood significantly predicts avoidance of medical situations and negative health care attitudes later in life (Pate, Blount, Cohen, & Smith, 1996). Consequently, minimizing child pain may lead to less fear and avoidance of medical situations and may decrease disability and suffering in adulthood (IASP, 2005). One way to help children reduce their pain is to teach them coping skills. For example, in one study, adults who were effective at coping with pain as children suffered fewer negative consequences of childhood pain (Pate, Blount, Cohen, & Smith, 1996). Ross and Ross (1988) agreed that children who lack effective coping skills may be at risk for future difficulties.

I propose that implementing pain information and pain interventions into schools may reduce students' future pain. Research has shown that children with chronic pain, such as abdominal pain and headaches, are at an increased risk of chronic pain problems in adulthood (Lewis, Walker, Smith, 1999; Fearon & Hotopf, 2001; McGrath, 1999). Schools can help to decrease future impairment by helping children cope with their symptoms while staying active in social and academic aspects of school (Walker & Johnson, 2004). For example the student, family, and school can design a plan to allow the child to stay in school during pain episodes (Walker & Johnson, 2004). Furthermore, McMahon and Harper (1990) suggested that school psychologists can help interrupt the pain cycle by conducting pain assessments and by implementing interventions for recurrent abdominal pain.

Pain prevention can also be targeted to certain types of pain that are prevalent in the population. For example, spinal pain is common in children and adolescents and spinal pain in adolescents predicts adulthood spinal pain. As a result, several authors are advocating for "spinal health interventions in the school setting" (Steele, Dawson, & Hiller, 2006, p. 226). The authors indicated that higher quality studies are needed on spinal pain interventions but are encouraged by the indication that school-based spinal health interventions can increase spinal health knowledge and decrease spinal pain prevalence (Steele, Dawson, & Hiller, 2006).

2.6 Contributions of Three Key Guiding Studies

Very few studies have looked into teacher's perspectives on student pain. I wanted to gain more information on teachers' perspectives on student pain by creating a new research design that is informed by previous studies. To help guide the research

study, I considered three key studies. Each study and how it contributed to my research project is outlined below.

2.6.1 The Effect of Sharing Health Information on Teachers' Production of Classroom Accommodations (Cunningham & Wodrich, 2006)

The purpose of the study by Cunningham and Wodrich (2006) was to examine the effects of providing teachers with varying levels of information about Type 1 diabetes mellitus. The study revealed that teachers provided more appropriate accommodations when given disease information. Following is a discussion on how Cunningham and Wodrich's research design impacted my study.

As addressed by the researchers themselves, the first limitation was that teachers were responding to hypothetical situations. Instead of questioning teachers about how they accommodate a hypothetical student experiencing school-problems related to diabetes my study looked at what teachers did when responding to students in pain. I gathered information about teachers' actual responses to real life events.

The second limitation of the Cunningham and Wodrich (2006) study is that it only addresses teachers' responses to one type of illness. To gain a more thorough understanding of teachers' experiences when working with students in pain, I wanted to know how teachers respond to all types of pain that they see in their classroom. In the current study, teachers were asked to report what types of pain they have encountered in their students and describe how they respond to acute and chronic pain.

Cunningham and Wodrich (2006) suggested that school psychologists could play an important role in helping to coordinate collaboration among professionals working with children in pain. The study asked teachers to select who they get additional health

information from, by providing a list of people that teachers may seek out. From the list, the school nurses and the student's parents were the most likely to be approached for additional information. School psychologists were the least likely sought out people. My research project asked how teachers respond to pain, which offered teachers an open ended response to mention who they currently correspond with when working with students in pain. The questionnaire also provided a spot for teachers to list what additional resources they could use to help students manage their pain. The open ended question format gave me an understanding of who teachers call upon and under what circumstances. The limitation is that the teachers were not prompted to describe who they work with, but the advantage is that teachers could elaborate on how they work with others and provide an idea of how often other input is sought out by teachers. I will compare who teachers seek help from between my study and the results shown by Cunningham and Wodrich.

Demographically speaking, the Cunningham and Wodrich (2006) study has limitations. First of all, this study and the other two key studies were conducted in the United States. My study will add a Canadian perspective to the literature. The study only included elementary teachers, whereas my study will be open to all elementary, middle school, and high school teachers. The other limitation was that the participants only came from four schools in one district. My study plans sought input from teachers from more than one district.

One aspect of the Cunningham and Wodrich's (2006) design that I do not agree with is how the researchers used a proportion of disease-specific accommodations to look at the teachers' ability to accommodate a student with T1DM. There are a couple of

problems with creating a proportion of accommodations. Firstly, the study did not report what accommodations teachers suggested, which is information that could have created a picture of what currently happens in the classroom. To decide whether the accommodations were appropriate, the researchers required that the accommodations fit their established criteria. However, without having a rationale for why the accommodation was suggested it is hard to know whether it is appropriate or not because the teacher may have had a reason that the researchers did not consider. It looked like the researchers tried to be fair, but the conversion of open ended data into a number, misses out on describing some interesting information. The researchers also calculated the proportion of disease specific accommodations. This proportion calculation also hinders interpretation of appropriate teacher accommodations. For example, some teachers may have tried to come up with as many accommodations as possible rather than the most effective and this action would have reflected on them poorly. Instead the researchers could have rated the accommodations rather than calculating a proportion. They could have created a rubric and given points accordingly, or used proportions, but also provided qualitative data on accommodations given.

Despite some of the criticisms of the study, there were many positive aspects I incorporated into my study. The researchers asked the participants if they had personal experience with T1DM. I feel personal experiences of pain is a worthy consideration and included a question on the survey about personal experiences with pain. The study found that 92% of participants wanted further information about the implications of T1DM in the classroom and that 74% felt insufficiently trained in diabetes. I also asked teachers if

they felt adequately prepared to teach students in pain and if they would like further information on teaching students with pain.

2.6.2 Teachers' Perceptions of and Responses to Adolescents with Chronic Pain Syndromes (Logan, Coakley, and Scharff, 2006)

The objective of Logan, Coakley, and Scharff's research (2006) was to look at factors that affect teachers' perceptions and responses to adolescents with chronic pain. My research is also looking at how teachers respond to chronic pain. Both studies are concerned with understanding how teachers currently respond to pain in order to help develop appropriate interventions to improve school functioning for children with pain (Logan, Coakley, & Scharff, 2006). Below is a description of the limitations of the hypothetical situation, the response choices, and the sample. Positive aspects of the study and how they have been implemented into my study will also be discussed.

Logan, Coakley, and Scharff (2006) used hypothetical situations to see what factors influenced the teachers' perceptions of and responses to chronic pain conditions not linked to specific medical illness. The hypothetical pain situation involved a girl with pain in her hand. I think that the situation may have produced more results if the hypothetical description was clearer and more in-depth. For example, communication with healthcare professionals had little impact on teachers' perceptions and responses to the student's pain, but the description of healthcare involvement was brief and not well understood. My study allowed teachers to consider their own experiences when talking about responding to pain, which avoids the problems of not relating to or misunderstanding a hypothetical situation.

The study looked at teachers' responses to the hypothetical student's chronic pain, but the teachers had to choose from response options rather than coming up with their own. Logan, Coakley, and Scharff (2006) used the number of responses endorsed to indicate the extent of relief the respondent would grant. Only considering the number of responses endorsed was a problematic method because not all of the options could have been seen as beneficial for the student. For example, one of the options was to let the student go home, but maybe some teachers would think that sending her home all the time could have negative effects. Another example of a response was to send the student to the nurse, but if she was already seeking help from a pain management team, teachers may not have felt that the school nurse was required. Overall, the variable they created for extent of relief may not have been a fair way to measure how much relief teachers would provide because it only looked at numbers of responses rather than the quality of responses. Furthermore, some teachers may have offered methods of relief that the survey did not include.

Another limitation relating to lack of response choice was the question that asked teachers what extent of accommodations they would provide the student. Teachers chose a specific level of accommodations that they would provide to the student (e.g., no accommodations; moderate accommodations). The problem with this method is that teachers may have thought that accommodations from more than one level would be useful for the student. The examples of accommodations also seemed very limited and did not necessarily fit well with the student's pain problem. For example, the student had hand pain, but nowhere did it suggest that she get a scribe or a recorder, which are accommodations that are well suited to the situation. Even if a teacher would have

considered accommodations beyond those listed, they may not have known which level they would fit under. For example, would a scribe fit under moderate accommodations or major accommodations? The question also did not allow teachers to share what accommodations they thought would be appropriate.

The problems caused by restricting teachers to choose from the researchers' options inspired me to gather open ended data. I did not want teachers to be limited by pre-determined responses, which are influenced by the researchers experience and point of view. The idea for this project was to understand teachers' experiences and to do that fully, the teachers were allowed to describe situations in their own words.

The study by Logan, Coakley, and Scharff (2006) is specifically interested in adolescents so they only included middle and high school classroom teachers. The 263 permanent regular classroom teachers were recruited from six schools in the Boston area. Study personnel presented the project at school staff meetings and solicited participants. Although this led to successful teacher recruitment, the spread out nature of the schools in Saskatchewan and the small staff sizes do not make this recruitment method a viable option. The plan instead was to contact school principals and then mail out questionnaires. Also participants in my study are teachers from K – 12 rather than just middle and high school teachers.

Logan, Coakley, and Scharff (2006) are interested in developing interventions to improve school functioning among adolescents with chronic pain, particularly chronic pain without specific medical etiology. One of the future implications of my study is also to look at developing interventions to help students who experience pain. Logan,

Coakley and Scharff's (2006) article supports the need to study teachers' perceptions, but also the possibility of incorporating interventions in the school setting.

The study questionnaire included a section asking teachers what accommodations they thought their administrator would support. The researcher felt that understanding about how the teachers are supported at a school level was valuable information. As a result, the current study asked teachers about their school's policies and procedures related to working with students in pain.

Another type of question I wanted to incorporate into my study was teachers' experiences with pain in students. Logan, Coakley, and Scharff (2006) asked how many students with chronic pain they encountered. Since the current research project is concerned with all pain, I asked about what types of student pain teachers encounter rather than how many students they see with chronic pain. The information on what types of pain teachers observe will provide an indication of what types of pain happen most frequently in the classroom.

Logan, Coakley, and Scharff (2006) assessed relationships between demographic variables and the dependent variables they were studying. They found that female teachers perceived significantly greater pain related impairment compared to male teachers, while male teachers granted more relief to the students in the classroom compared to female teachers. I appreciated the extra information comparing demographic variables with teacher responses can provide and will look at demographics compared to responses in this study.

2.6.3 Adolescent chronic pain problems in the school setting: Exploring the experiences and beliefs of selected school personnel through focus group methodology (Logan & Curran, 2005)

Of the three key studies, Logan and Curran's study is most aligned with my study. The purpose of Logan and Curran's (2005) study was "to systematically analyze school personnel's understanding of adolescent chronic pain problem and to learn how health care and school systems can collaborate more effectively to address these problems" (p. 281). The aim of my study and Logan and Curran's study were to gain school personnel's perspectives on student pain. Consequently, Logan and Curran's study can be reviewed to help guide and inform my study.

Logan and Curran (2005) looked specifically at obstacles facing adolescents with chronic pain, how school personnel respond to pain problems, and how school and healthcare can work together more effectively. My study has a more general approach in an effort to gain a broader understanding of teachers' experiences working with students in pain.

Logan and Curran (2005) stated that before developing appropriate interventions to increase school personnel's competence to manage chronic pain we need to know how school personnel are currently responding to pain. I agree with the need to understand the current situation before developing interventions, which is why I am also looking at teachers' perspectives of pain in the school setting. Logan and Curran's study focused on situations where pain is the central feature (just chronic pain, not including things like cancer). My study will add to Logan and Curran's findings by expanding to all pain types in students from K – 12.

Focus groups were used in Logan and Curran's study because of the aims of the study and the current lack of research in the topic. With groundwork on teachers perspectives already conducted, the current study plans on gathering information from a larger sample. Focus groups were used in my study to help create a questionnaire to send out to teachers. Logan and Curran had 38 school personnel, which included guidance /mental health staff, administrators, classroom teachers, special education teachers, and school nurses. In comparison, my study gathered data from over 100 teachers from elementary to high school. Finally, only school personnel who had worked with adolescents with chronic pain were recruited in Logan and Curran's study. Conversely, my study will allow any K – 12 teachers to respond to the survey.

The article mentions that this is a preliminary step in eliciting educators' perspectives on pain in the school context. Logan and Curran did not gather as much information on ways that pain is currently responded to as they had intended. The researchers felt that whenever the topic was brought up, the participants started talking about the barriers and frustrations. My research took steps to provide further knowledge by sending out questionnaires asking teachers to describe how they respond to pain. Without a focus group audience to commiserate with, hopefully the participants will stay on topic and provide honest answers about how they currently respond to students in pain.

CHAPTER 3: Methodology

Three questions proposed by Creswell (2003) will be used to organize the discussion about the research design.

1. What knowledge claims are being made by the researcher (including a theoretical perspective)?
2. What strategies of inquiry will inform the procedures?
3. What methods of data collection and analysis will be used? (p.5)

3.1 Knowledge Claim

In order to provide the research design with a common framework, a knowledge claim needs to be chosen. Having a theoretical perspective guides the study and informs the type of methodology that will be employed. “Each theoretical perspective embodies a certain way of understanding *what is* (ontology) as well as a certain way of understanding *what it means to know* (epistemology)” (Crotty, 1998, p. 10). The theoretical perspective guiding the proposed research is constructivism.

The goal of research based on a social constructivism perspective is to gather the participants’ views of the situation being studied (Creswell, 2003). Therefore, constructivist studies usually include open ended questions that allow participants to construct their own meaning. Although not all of the questions in the study will be open ended, participants will have an opportunity to speak and write freely about their perspectives on specific areas of child pain.

Constructivist perspectives also call on researchers to recognize how their own background affects the meanings the researchers have constructed regarding their research topic (Creswell, 2003). Another important perspective that comes out of

constructivism is that the researchers “inductively develop a theory or pattern of meaning” (Creswell, 2003, p. 9). The researcher has her own interpretation of child pain in schools; however, the goal is to discover the meaning that teachers give to the child pain topic.

3.2 Strategies of Inquiry

3.2.1 Mixed Methods

A mixed methods approach was used to conduct this study. A mixed methods approach is a type of “research design in which qualitative and quantitative approaches are used in type of questions, research methods, data collection and analysis procedures, and/or inferences” (Tashakkori & Teddlie, 2003, p. 711). A mixed methods design, incorporating both qualitative and quantitative research methods, was chosen to enhance the representation of data and to extend sample size.

Focus groups were used to obtain an initial analysis of teachers’ views on student pain and to develop a questionnaire. The questionnaire was used to obtain teachers’ perceptions of child pain using both constructed and selected response formats. Although open ended questions were included, limitations were imposed on the teachers’ responses that would not be present in a purely qualitative inquiry. For example, rather than just allowing the questionnaire participants to describe child pain, many questions addressed specific topics, such as strategies teachers use to help students in pain. The study concentrated on the qualitative data, data analysis and data representation; consequently a concurrent nested strategy was chosen (See Figure 4).

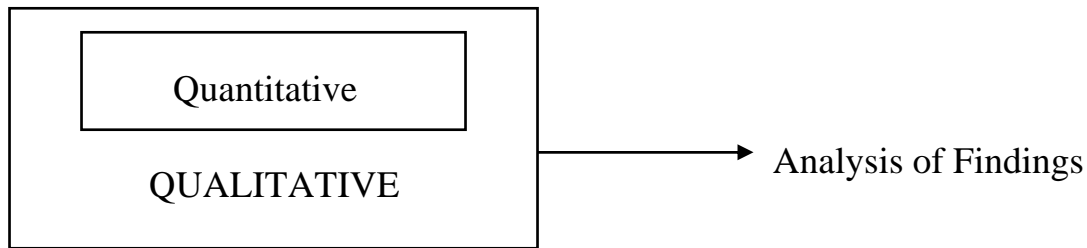


Figure 4. Adaptation of a concurrent nested strategy from Creswell, 2003.

To add to the description of teachers' views on student pain, I also compared teachers' views and counted the frequency of the emerging themes. For example, the data was investigated to see if different themes and frequencies surfaced between experienced teachers and non-experienced teachers or between elementary and high school teachers. Including teacher variables and counts of observations can add meaning to qualitative descriptions (Onwuegbuzie & Teddlie, 2003). I wanted to find out if sub-groups of teachers had different experiences so that I could give a more accurate portrayal of how all teachers experience student pain. Furthermore, doing mixed methods allows the qualitative responses to be compared with the quantitative answers. For example, a question asking teachers to rate their concerns about student pain was compared with the themes that came out of the open-ended questions on student pain.

3.2.2 Qualitative Research

Merriam (2002) describes qualitative research as follows:

As Patton explains, qualitative research is an effort to understand situations in their uniqueness as part of a particular context and the interactions there. This understanding is an end in itself, so that it is not attempting to predict what may happen in the future necessarily, but to understand the nature of that setting – what it means for participants to be in that setting, what their lives are like, what's

going on for them, what their meanings are, what the world looks like in that particular setting.... The analysis strives for depth of understanding. (p. 5)

Qualitative research suits this study because the study is concerned with understanding teachers' experiences with student pain. Many of the guiding questions call for the results to be descriptive; the goal was to bring understanding to student pain issues by describing teachers' experiences.

3.2.3 Basic Qualitative Research

Qualitative research has an array of methodology to choose from. The type of methodology that is most suited to this study is basic qualitative research. Merriam (2002) describes basic qualitative research as focusing on how participants make meaning, acknowledging that meaning is mediated through the researcher, using an inductive approach, and providing descriptive results. My study seeks to meet all four of the characteristics Merriam (2002) proposed.

3.3 Phase I: Survey Development

The goal of the first phase of the research was to collaborate with teachers to create a questionnaire that considers the teachers' perspectives and meets the study's guiding questions. My study's guiding question was, "What are teachers' experiences working with students in pain?" To answer the study's guiding question, the main question that directed the focus groups was:

How can I find out about teachers' experiences with student pain?

3.3.1 Data Collection: Phase I

3.3.1.1 Focus group information and rationale. Focus groups are one of the methods that I used to develop the teacher questionnaire. According to Morse and Richards (2002, p. 95):

focus groups consist of individuals brought together by the researcher to focus specifically on one, usually narrow, topic. Often researchers use focus groups to gain understanding of the research domain relatively quickly. They may also employ focus groups to scope a project early in its design; such groups can provide researchers with information about a topic's dimensions or people's attitudes on an issue.

In this study I used focus groups to generate ideas, create questions, evaluate questions, test a questionnaire, and to seek information on phase II of the study. Focus groups are useful because the interaction between focus group members often produces a creative energy that can lead to insights and information, which are not as likely to occur outside of a group (Krueger & Casey, 2000; Nassar-McMillan & Borders, 2002). This energy was particularly valuable while generating ideas and critiquing questionnaire items. Another advantage of focus groups is that a large amount of data can be collected in a short time (Krueger, 1994). Therefore, using focus groups enabled me to meet all of my objectives.

Some of the disadvantages of conducting focus groups are that the data can be messy, the small number of participants limits generalizability, and participants' comments may be biased by a dominant participant (Krueger & Casey, 2000; Marczak & Sewell, n.d.). In order to help organize and record the data I had a guide to keep the focus

group on topic, a volunteer to take notes, participants took notes when necessary, and the discussions were recorded.

The focus groups were used to help develop and refine questionnaire items, which is an effective method for creating questionnaires (Nassar-McMillan and Borders, 2002). Using focus groups for item development is especially useful when there is little literature about the area to be studied (Nassar-McMillan & Borders, 2002). There is a paucity of studies asking teachers about their perception of child pain. Consequently, at the beginning of this study there was minimal information available to assist in the development of a questionnaire. Talking with teachers allowed for the creation of items that may not have been considered. Gaining input from others also decreases the potential for selection bias to occur. Teachers' contributions were vital in adapting the questions so that they were appropriate to the school context and the teachers' terminology. Nassar-McMillan and Borders (2002) found that focus groups offer an opportunity to pre-test questionnaires and that volunteers' input on the wording of items was important in making the questionnaire applicable to the volunteers' environment and language.

Prior to conducting the focus groups a draft of the interview guide was written. The guide included the interview outline, the questions that were asked, and a draft of the questionnaire. The interview guide was reviewed by my supervisors and their suggestions were incorporated into the final copies of the interview guides (see Appendix F and G).

3.3.1.2 Focus group one participants. Once approval was granted from the University of Saskatchewan ethics board, teachers were invited to participate in a focus group. The study used homogeneous case sampling, which “seeks to pick elements from a particular subgroup to study in-depth... the goal is usually to gather opinions from

people who are demographically, educationally, or professionally similar” (Kemper, Stringfield, & Teddlie, 2003, p. 282). This type of sampling was appropriate because the questionnaire was intended for teachers and required insights that can only be obtained by gathering teachers’ perspectives. In addition, recruiting experts was beneficial for reviewing questionnaire items (DeVillis, 2003). Employing experts allowed me to see if the questions were relevant to what was being measured, were clear and concise, and were thorough in their coverage of the topic being measured (DeVillis, 2003).

The first focus group was made up of three teachers, all taking graduate classes in the College of Education at the University of Saskatchewan. There were two female teachers and one male teacher. Two of the teachers taught in an urban area, one teaching elementary students and the other teaching middle year students. The third teacher taught high school in a rural area. The teachers’ areas of specialization were special education, administration, and industrial arts.

3.3.1.3 Focus group one procedure. The focus group was held in a small room around a conference table. Each participant signed a consent form and read the information form before beginning the focus group. The participants were also made aware of the video taping and digital voice recording. To build a warm and friendly atmosphere I focused on issues that brought the participants together (e.g., discussing the challenges of university classes) and avoided conversation about the research topic (Krueger & Casey, 2000). The participants were also provided with baking and beverages because it is suggested that food promotes group discussion (Krueger & Casey, 2000). I was in charge of leading the group and keeping notes on key points. I followed the moderator’s guide (see Appendix F), which I created with input from the Research Group

on Pain in Childhood. There was a moderator assistant present who wrote down participants' comments and kept track of technical devices (Krueger & Casey, 2000).

The purpose of the discussion was to get the participants' assistance in creating questions that would elicit teachers' experiences with student pain. The key discussion topics for the focus group were: an open discussion on their experience with student pain, generation of questions they would ask their colleagues to learn about teachers' experiences with student pain, and feedback on the proposed data collection method. Focus group data was collected by recording the session, taking notes of the discussion, and collecting the ratings on the questionnaire.

3.3.1.4 Focus group two participants. The second focus group was made up of three teachers, represented by two females and one male. One of the teachers was an elementary teacher from Asia, who also had a background in conducting telephone surveys. The male teacher was from the Maritimes and had teaching experience in Saskatchewan and other parts of Canada. His most recent teaching experiences had been in special education. The third teacher was an experienced Saskatchewan teacher.

3.3.1.5 Focus group two procedure. The location and basic procedure for focus group two were the same as in focus group one; however, focus group two had a different purpose. The main purpose of the second focus group was to evaluate the draft of the questionnaire. The group's activities involved discussing their experiences with student pain, brainstorming questions that they thought would be effective in gathering information about teachers' experiences with students in pain, and evaluating a draft of the questionnaire.

The questionnaire was evaluated individually and as a group. Initially, participants were given a copy of the questionnaire and an evaluation form and then asked to evaluate the questionnaire on their own. The evaluation form was concerned with question relevance, clarity, and notes on improvement. Following the individual evaluation, each question and the overall impressions of the questionnaire was discussed as a group. The group discussion allowed participants to share any comments they had on the survey, including ideas for format changes.

3.3.1.6 Questionnaire piloting participants. Two male and five female teachers were recruited to pilot the questionnaire. The pilot participants represented each age range on the questionnaire. The years of teaching experience between the eight teachers ranged from 5 to 30 years with an average of 16 years of teaching experience. The teachers were a mixture of elementary, middle years, and high school teachers and together had taught every subject except music. Two of the teachers were special education teachers, one was in administration, and the other five were classroom teachers. Of the classroom teachers, one teacher also worked as a program coordinator and another specialized in literacy and research. The pilot participants were a diverse sample of teachers, which offered the researcher a range of perspectives.

3.3.1.7 Questionnaire piloting procedure. The teachers were recruited through research team members and through emails to education graduate students at the University of Saskatchewan. Each teacher was sent out an information form, a survey feedback form, a pilot survey, and a postage paid envelope. The participants were instructed to read the information form and the survey feedback form first. The participants were asked to record how long it took them to complete the survey, to rate

each question on relevancy and clarity, and to provide any additional comments. All focus group and pilot participants were entered into a draw for a \$75 Sears gift certificate. Once the teachers completed the survey and feedback form, they returned the forms by mail. I also provided my contact information in case the participants had any questions.

3.3.2 Data Analysis: Phase I

The major source of data was the transcripts of the focus group sessions. I used a tape-based analysis, which involved listening to the recording of the focus group and cutting it down so that only relevant information was included in the transcript (Krueger & Casey, 2000). For example, times when the focus group went off topic were not included in the transcript. The other data used for analysis included the researcher's notes, the assistant moderator's notes and the participants' comments and ratings. The data was categorized based on the phases of the focus group. The data categories are open-ended data, item generation data, item data, and teachers' feedback on phase II of the research.

3.3.2.1 Open-ended data. First the data gathered from the open ended questions was considered (e.g., As a teacher, what is your experience working with students in pain? From your experience as a teacher do you think there are issues related to student pain that need to be addressed?). The purpose of the data analysis at this stage was to understand teachers' experiences and issues related to student pain in school. This stage involved coding the data, which required breaking the participants' discussion into segments and then categorizing those segments (Schwandt, 2001). The categories that emerged helped to create new questionnaire items that address the participants' major issues around student pain. Open-ended data was only gathered for the first focus group.

3.3.2.2 Item generation data. Item generation was the purpose of the first focus group. Although the participants were allowed to generate their own items, they were also asked to create items that related to the purpose of the study. The goal was to create a bank of items that were relevant to teachers' experiences, yet still fulfilled the intent of the study. Teachers were asked to: a) generate specific items that aligned with the study's guiding questions, b) create checklists for current items and c) discover new topics that could lead to additional guiding questions.

The participant generated items were sorted using a method like that described by Krueger and Casey (2000). Items were examined to see how well they fit under each guiding question. The items that did not fit under the guiding question were separated and re-categorized. The checklist items that the teachers generated were added to the appropriate questionnaire item and their relevancy was evaluated by the second focus group.

3.3.2.3 Item data. The second focus group participants were asked to rate questionnaire items. The purpose of the item data was to evaluate items so that they could be eliminated or adapted. The participants used a 5-point Likert type scale to rate items on relevance and clarity. For example, the participants were asked, "How well does this question reflect your experiences as a teacher?" with response options ranging from 0 (does not fit) to 4 (excellent fit). The relevance of item was important because the researcher wanted to make sure that the items reflected teachers' experiences. Clarity was also important because if the items did not make sense or used inappropriate language, the items were likely to be misunderstood by respondents.

The focus group participants were given time to read, rate, and comment on each item on the questionnaire. The participants were also invited to discuss each item, while the moderator assistant made notes on the discussion. The goal of the item discussion was to allow focus group participants to explain what they liked and disliked about each item and to gain their perspective about what each item asked. Although the participants had room to write comments about each question, the discussion was used to further enhance the feedback and to allow participants to feed off of one another. After the item discussion, the participants were given an opportunity to change their ratings and to provide further written comments for each item (e.g., the participant could revise the item to increase its clarity).

The ratings provided by each participant were entered into Microsoft Excel to calculate the range, median, and average for each item. The exact criteria required for an item to be retained were established once the ratings were calculated (Hellsten & Rogers, 2009). The relevance ratings were used to decide if an item should be kept and the clarity ratings informed whether an item should be revised. For example, if the item had a low rating on clarity, but a high overall rating on relevance, then the item was kept and modified according to the participants' discussion and comments. Nassar-McMillian and Borders (2002) appreciated the way the qualitative and quantitative data worked together to inform item selection.

3.3.2.4 Teachers' feedback on phase II. The data available for analysis was the transcript and the moderator assistant's notes of what participants said about the proposed methods for collecting phase II data. The data was gathered to help the researcher become aware of: a) the challenges teachers see in carrying out phase II; b) the alternative

methods teachers feel are viable; and c) any strengths teachers see in the proposed method. I considered the feedback on phase II when planning the next stages of my research.

3.4 Phase II: Survey on Teachers' Perspectives of Student Pain

The second phase of the research project was designed to meet the guiding research question by gathering teachers' views. The main purpose of the questionnaire was to gather descriptive data to explain teachers' perspectives of student pain. Including quantitative data adds to the descriptions and is helpful when planning interventions. For example, if only new teachers feel they require information on child pain, the information could be provided during teacher training; however if experienced teachers also desired child pain information then pamphlets or professional development workshops could also be offered.

3.4.1 Data Collection: Phase II

3.4.1.1 Questionnaire. Once approval was obtained from the University Ethics board and four Saskatchewan school boards, questionnaires were sent out to teachers to collect their perspectives on student pain. Questionnaires were the chosen method because they allow many teachers to be questioned and because teachers can provide both quantitative and qualitative data. The paper and pencil type questionnaire combined open- and closed- ended items. The incentive offered to participants was entry into a draw for a hundred dollar gift certificate.

The questionnaire's main purpose was to gather teachers' views on specific topics of child pain. Much of the data analysis was done using a qualitative method that was congruent with the resulting data; however some statistical analysis was also conducted.

A limitation worth noting is that the questionnaire was not a previously validated instrument. Furthermore, the teachers may have provided a socially desirable response rather than relying on their true feelings (Nellis, 2006). To limit socially desirable responses the researcher used the consent form accompanying the questionnaire to assure participants that their information would be kept confidential.

3.4.2 Data Analysis: Phase II

3.4.2.1 Type of data. Since open and closed questions were used, the questionnaire resulted in quantitative and qualitative data. The quantitative data was used to gather descriptive data. The descriptive data includes teachers': a) personal experience of pain; b) subject and/or specialty area; c) age; d) sex; e) age; and f) grade taught. The open ended responses were categorized and quoted to enhance the discussion on teachers' views of student pain.

3.4.2.5 Descriptive statistics. The purpose of the descriptive statistics was to help sketch a picture of teachers' understandings of student pain. Frequencies were calculated for all demographic variables. Since participation in the study was voluntary, it was important to examine the descriptive statistics in order to accurately describe the participants. For example, the percentage of male and female teachers, age range, and the mean years of teaching experience were calculated.

Descriptive statistics were also used to illustrate the similarities and differences in the way teachers and subgroups of teachers responded to questions on student pain. Another important use of descriptive statistics was to make comparisons using measures of central tendency. For example, looking at the mean number of types of pain that

teachers encounter according to the grade level they teach. As these examples illustrate, the analysis of descriptive statistics could help to make the data meaningful and practical.

3.4.2.6 Coding. The type of coding used to examine the data was topic coding. Topic coding involves creating categories and reflecting on where the data belongs (Morrow, 2005). The researcher can also look at patterns that come out of the codes and code to finer categories.

Morrow (2005) suggested that topic coding can be done by using index cards or folders for each topic. Using a computer was also suggested by Morrow because it allows for coding to flow more easily and can prevent the fracturing of data that can occur with manual coding.

3.5 Evaluating the Research

Although a constructivism knowledge claim is being used, a constructivist approach for establishing trustworthiness will not be used because the criteria for constructivism have not been well established and require further assessment (Morrow, 2005). Furthermore, I have limited experience and require structure to help guide the evaluation of my research. The constructivist approach is not developed enough to provide the structure I need. Consequently, I am following the criteria for trustworthiness in postpositive qualitative research as outlined by Morrow (2005).

3.5.1 Credibility (internal validity)

Credibility involves ensuring rigor in the research process (Morrow, 2005). I employed techniques that ensure that the research is thorough. Some of the techniques that I used to establish credibility were rich descriptions, peer reviewers, and member checks. For example, to create the questionnaire I used focus groups to gain teachers'

feedback and then e-mailed the focus group participants to make sure the questionnaire accurately reflected the discussion.

3.5.2 *Transferability* (external validity or generalizability)

Transferability “is achieved when the researcher provides sufficient information about the self (the researcher as instrument) and the research context, processes, participants, and researcher – participant relationships to enable the reader to decide how the findings may transfer” (Morrow, 2005, p. 252). To address transferability I included a section in the thesis describing my experiences and biases on the subject.

3.5.3 *Dependability* (reliability)

Dependability requires that a study be repeatable and consistent. To ensure dependability Morrow (2005) suggested using an audit trail, which is a “detailed chronology of research activities and processes; influences on the data collection and analysis; emerging themes, categories or models; and analytic memos” (p. 252). An audit trail was used in this study and the information was also reviewed by the researcher’s supervisors.

The audit trail consisted of notes on the research process, emerging categories, and the researcher’s thoughts. Most of the note taking was done within the Excel spreadsheets. For example, I made notes under each category to help define the category and to improve my sorting. If I found two categories difficult to differentiate, I would either combine them or create clear definitions to help sort responses between the two categories. I also highlighted responses while I was coding. For example, if I was not feeling confident on how I coded a response I would highlight it and come back to it later (often I would seek a second opinion). I also kept notes on my thoughts and research in a

notebook and in word documents. The notebook also contained summaries of literature I used to help me decide on how I would analyze my data.

3.5.4 Confirmability (objectivity)

Confirmability takes into account that the researcher is not objective. This means that the researcher needs to be vigilant in representing the data, rather than conveying her own beliefs. The audit trail helped me to confirm the results because the method of achieving the results was documented throughout the research process.

3.6 Ethical Considerations

The proposed study does not present many unusual ethical dilemmas. To ensure the protection of the participants during the focus group some considerations had to be made. Before beginning the focus group discussion, the participants were informed of the purpose of the study and what their involvement entailed. Participants were also asked to sign an informed consent form. The focus group participants were also asked not to identify a child or colleague, and to respect the confidentiality of other group members. They were also provided with the opportunity to withdraw at any time.

When writing up the results of the study, the identity of the teachers and children were protected and kept confidential. Finally, the results will be made available to the participants, via a study summary on the web and an online copy of my thesis.

CHAPTER 4: Phase I Results

Chapter four describes the data analysis and results from phase I of my research. The data from the focus groups and questionnaire piloting are presented, as well as how that data contributed to the final questionnaire.

4.1 Focus Group One

4.1.1 Focus Group One Data Analysis

I gathered open-ended data, item generation data, and feedback on phase II of the research. The data came from the video tape and digital voice recording from the session. Data was also collected in the form of researcher notes, moderator notes, and the flip chart of generated questions.

I transcribed the digital recording and coded the open-ended data from the transcript into the themes that came out of the discussion. I also searched through the transcript to gather all of the questions the teachers generated. Although most questions were listed on the flip chart, some questions came out of the discussions that happened throughout the focus group. The themes and questions were then categorized under my guiding questions to see if the guiding questions would address the teachers' areas of concern and to create a bank of questions to be used for the questionnaire. Any responses that did not fit under the guiding question were put in another category to consider for inclusion in the questionnaire.

At the end of the discussion the participants were asked about their opinions on the proposed methodology for phase II. The teachers' suggestions were recorded and considered during phase II planning.

4.1.2 Focus Group One Results

A list of sixteen questions was generated by the focus group participants. Nine of the responses fit under the guiding question, “What are teachers’ experiences working with students in pain.” The themes that came out of the discussion were also helpful in creating and editing other questionnaire items. From the sixteen questions that were generated, five of the questions were modified and used in the questionnaire (see Table 4.1).

Table 4.1

Questions Generated from Focus Group One that were Modified & Included in the Final Questionnaire

Participant Generated Question	Final Questionnaire Item
Are you aware of students in pain?	Checklist: Check which types of pain you have recognized or been made aware of in your students.
When do you know that a child is in pain?	Open-ended question: How do you know when a student is experiencing pain?
Are you aware of policies for administering pain medication in your school? If so what are they?	Rating Question: My school has effective policies and procedures on administering pain medication (e.g., acetaminophen/Tylenol).
What information do teachers need to help them teach students with pain?	Rating and open-ended question: I have the resources and support I need to effectively teach students who are experiencing pain. If you feel you need more resources and/or support, please list them below:
When a child is in pain, do you have a mechanism to communicate with parents?	Rating Question: My school has effective policies and procedures on communicating with parents when their child is experiencing pain.

The teachers brought up concerns regarding policies, medication, and parent communication. These concerns were included in the final questionnaire by having teachers rate these issues. I also obtained feedback on the questionnaire checklists. For example, the participants were asked to list the types of student pain they had encountered to ensure that the checklist on student pain was complete and relevant. In order to examine the content validity of the questionnaire, the resulting questionnaire was emailed out to all focus group participants to seek their feedback. No comments were made that required changes to the questionnaire.

I then used the participants' feedback on phase II when preparing for questionnaire distribution. For example, teachers stated the best months to send out questionnaires, the maximum length for questionnaires, what types of questionnaires they preferred, and the need to be well organized when sending out research to administrators.

The focus group also helped reinforce the need to study teachers' perspectives of student pain. All of the focus group participants felt that student pain is an important topic to research and became engaged in the topic. Following is a selection from the transcript that shows the teachers' support of the research:

Female one: I think being aware as a teacher that a child is in pain. I think that
might be a bigger issue than we often realize

Male: and what to do with it. Like who do you talk to.

Female two: I am very encouraged that this is being addressed. ...The students'
physical comfort is key.

4.2 Focus Group Two

4.2.1 Focus Group Two Data Analysis

The goal of focus group two was to gather teacher input on the questionnaire items and format. By gathering questionnaire feedback from the participants the questionnaire was improved based on teacher input. Both the moderator assistant and I made notes on the participants' comments and recorded them on the questionnaire draft. The participants also filled out a questionnaire evaluation form and returned it to the researcher (see Appendix H). The notes and evaluation forms were examined and combined into a document that summarized the feedback for each question and for overall questionnaire changes.

The participants also brainstormed further items that would elicit teachers' experiences with student pain. These items were recorded for further consideration.

4.2.2 Focus Group Two Results

I used the questionnaire feedback to modify the questionnaire. The feedback the teachers provided on the questionnaire was valuable in improving the questionnaire. Questions were made more clear and relevant. For example, one question was changed from "Pain information (e.g., how to cope with pain) should be included in the curriculum" to "The provincial health curriculum should teach students about pain and how to cope with pain." Participants felt that it was not clear whether the question was referring to university curriculum for teachers or provincial curriculum for K-12 students.

Demographic questions were also discussed to see how they matched teachers' experiences. The following is an example of a change that was made as a result of this discussion. The question asked what grade level teachers taught most often and offered

elementary, middle years and high school as the three options to choose. Participants found that the age range did not fit their experience. As an alternative the participants suggested listing each grade and asking the teachers to circle all that apply. The suggestion was considered and put into use for the final questionnaire.

The feedback also led to some helpful format changes. Format changes that were made as a result of the focus group included: (a) moving demographic information to the end of the questionnaire; (b) reducing the number of open ended questions (eight open-ended questions to five); (c) restructuring the questionnaire by categorizing the questions and adding headings; and (d) making the definitions easier to understand, putting them in point form and providing examples for chronic and acute pain.

The focus group participants also created a list of questions to ask teachers about their experiences with student pain. However, after consultation with my thesis committee, we decided that the new items were not needed at this stage and did not add anything new. Overall, the questionnaire received favourable reviews from the focus group participants.

4.3 Questionnaire Piloting

4.3.1 Questionnaire Piloting Data Analysis

Qualitative notes were created from the notes pilot participants made on the questionnaire and evaluation form. The qualitative notes fell into four areas: (1) formatting, (2) general comments, (3) understanding of specific questions, and (4) wording. Participants rated each question on clarity and relevance using a five point scale ranging from “0” to “5” (strongly disagree, moderately disagree, neither agree or disagree, moderately agree, strongly agree). The participants rating for each question

were entered into a spreadsheet and the average, mode, and median for each question were calculated. Participants also recorded how long it took them to complete the questionnaire. The average time was calculated to offer an accurate time on the final questionnaire.

4.3.2 Questionnaire Piloting Results

Seven pilot participants provided ratings on question clarity and relevance. The clarity for the questions was rated highly, with an average of 3.5 and a mode of 4. All questions had a mode of 3 or above, which indicated that most participants found the questions to be clear and relevant. The items were also rated above 3 for relevance, with an average of 3.0 and a mode of 4. Although all items were rated highly enough to be kept in the questionnaire, the piloting did offer some helpful feedback.

As a result of the pilot, a number of changes were made to the questionnaire. The order of questions was modified for clarification (e.g., a question about teaching training before the question about teaching experience). Question five was not producing the type of answers I expected so it was reworded to, “In your experience, how does pain impact students at school?” I wanted to understand how pain impacts children from a teacher’s perspective, but the initial question wording was not addressing this adequately. Based on a participant’s comments, the questions about school guidelines were changed to school policies and procedures because that was more aligned to the teacher’s professional vocabulary. The question about personal pain experiences was also changed from allowing one checklist to including one for personal and one for someone you are close to. The average time it took for pilot participants to complete the survey was 14 minutes. As a result I was able to inform potential participants that the survey would take

about 15 minutes to complete. Generally, the results from the questionnaire piloting were positive. Three of the seven participants commented that the questionnaire was clear, concise, and well-written.

4.4 Phase I Summary

The purpose of phase one was to create a questionnaire that answered the guiding research question and to gather teachers' feedback on the questionnaire. Focus group one participants created a list of questions aimed at eliciting teachers' experiences working with students in pain. The generated items from focus group one helped to contribute to the final copy of the questionnaire. Focus group two provided an evaluation of the questionnaire. A number of modifications were made to questionnaire wording and format as a result of the feedback from focus group two participants. Finally, the questionnaire piloting responses helped to improve the clarity of questionnaire items. The participants also indicated the time it took them to complete the questionnaire, which allowed me to calculate the average time to complete the questionnaire and inform potential questionnaire participants. Overall, phase one was successful in creating a questionnaire that teachers felt would glean information on teachers' experiences of student pain.

CHAPTER 5: Phase II Results

Chapter five describes the questionnaire distribution, the questionnaire participants, and the qualitative and quantitative data analysis. The results for each question are then presented. The chapter ends with a comparison between acute and chronic responses and a list of the accommodations mentioned by participants.

5.1 Questionnaire Distribution

School directors from four Saskatchewan schools gave me permission to contact the schools in their division. Initially two school divisions were contacted by fax with a follow-up email to the principal. The first recruitment attempt resulted in 123 questionnaires being mailed out and 65 being returned. Six of the schools that participated were located in small cities and eight were in rural communities. In an effort to obtain 100 completed questionnaires, I contacted a third school division. I phoned each of the principals in this school division because I did not have their email addresses. During the second recruitment drive, 152 questionnaires were mailed out to 11 schools and 56 completed questionnaires were returned. From the schools that were contacted, 19 (28.8% of schools contacted) agreed to participate and 14 schools returned completed questionnaires. The result was a 56.3% response rate from the 14 participating schools.

5.2 Questionnaire Participants

The demographic statistics for the participants are reported in Table 5.1. Of the 121 participants, 95 (78.5%) participants were female and 26 (21.5%) participants were male. The participating teachers represented all age ranges, as shown in Table 5.1. All grade levels were represented by participants, but elementary teachers made up over

Table 5.1

Frequencies and Percentages for Participant Characteristics

Characteristics	<i>N</i>	Percentage
Age		
20 – 29	18	14.9
30 – 39	34	28.1
40 – 49	36	29.8
50 and older	33	27.3
Grade Level Taught		
Elementary (Grade K-6)	72	59.5
Middle Years (Grade 7-9)	13	10.7
High School (Grade 10-12)	5	4.1
Other (Combination of grade levels)	27	22.2
Degree Pain Affects Participant		
To a Great Extent	16	13.2
Somewhat	49	40.5
Very Little	47	38.8
Not at All	9	7.4
Degree Pain Affects Someone Close to Participant		
To a Great Extent	32	26.4
Somewhat	59	48.8
Very Little	27	22.3
Not at All	3	2.5

half of the sample and there were very few teachers that only taught high school. Classroom teachers were the most frequent participants at 81%, followed by administrators at 10.7%, special education teachers at 8.3% and other teacher roles at 7.4%. Participants reported other teacher roles as including: music teacher, librarian, language support teacher, student services coordinator, coach, and specialist/itinerant teacher. The participants represented teachers from various teaching levels. The average number of years of teaching experience was 15.95, with the minimum being 1 year and the maximum being 36 years of experience.

Teachers were also asked to report the degree of pain experienced by them or by someone close to them. Fifty-four percent of teachers reported that pain affected them somewhat or to a great extent, while only 7.4% of teachers reported having no pain. When asked how much pain affected people close to them, 75.2% of the participants reported the degree of pain to be somewhat or to a great extent. These results show that very few participating teachers (7.4%) and people close to them (2.5%) are not affected by pain.

5.3 Questionnaire Data Analysis

5.3.1 Qualitative Data Analysis

I began the examination of the open-ended questions by printing out all of the responses, cutting them up so that each response was on a separate piece of paper, and then physically categorizing each slip of paper into folders. The categories came out of the data as I read each response. Responses were coded into multiple categories. For example, a response such as “ice/call home” was coded into “objects to reduce or treat pain” and “contact parents”. Because of the possibility of multiple coding, I found this

method to be cumbersome and difficult to recode responses when new categories were created. Consequently, I used the computer to code the remaining qualitative data and also used the computer to recode the initial data that had originally been coded by hand. The second coding also allowed me to more clearly define the categories and to double check the consistency of the coding.

During the coding process, I pasted all open-ended responses into Microsoft Excel. The responses were then coded into categories that came out of the data. Each response was coded as a “1” if it belonged in the category and a “0” if it did not fit into the category. When new categories were created I would look through all previous responses to see if they fit into the new category. In some cases, categories were sub-categorized to elicit more specific data to improve the description of teachers’ experiences.

Morrow (2005) suggested that before coding the researcher needs to ask, “Why am I doing this?” (p. 122). When the coding became overwhelming it was helpful to remind myself of the purpose. Keeping the why question and the guiding question in mind helped me to move forward conceptually rather than continuously engaging in unproductive coding (Morrow, 2005).

5.3.2 Quantitative Data Analysis

Quantitative data consisting of participant demographics and rating questions was entered into SPSS. Descriptive statistics were calculated for all of the participant demographics and rating questions (e.g. frequencies, means, range, and percentages). Next I explored the data to see if there were any correlations between participant characteristics and the rating questions. No correlations were found that helped to

describe teachers experiences working with pain. I also entered some of the coded data from the open-ended questions into SPSS to see if there were correlations between teacher demographics and the coded categories. The qualitative responses were not found to correlate with any of the teacher demographics.

5.3.3 Data Screening

The qualitative data was entered into Microsoft Excel and the quantitative data was entered into SPSS. Any open ended questions that lacked responses were categorized into the n/a category. In the quantitative data, any questions that lacked responses were listed as missing data. Since descriptive statistics were used for this project, the missing data had little effect on the results. Furthermore, there were very few missing responses. Out of all the rating questions only 1.1% of the questions were not answered.

The participants fully completed the demographics questions. The only exceptions were four participants who did not record the grade levels that they taught and one participant who left out years of teaching experience. The participants that did not provide grade levels taught were either administrators or special education teachers so they may have felt this question did not relate to them. One questionnaire was not included because it was incomplete. None of the short answer questions were answered and the demographic information was incomplete.

Missing data was checked by ensuring each response was coded under each category. For example, each response was coded as a 1 or a 0. If any responses were not assigned a number, I went back and appropriately coded the response. I also calculated response totals to check for accuracy.

5.4 Results for Each Question

5.4.1 Question One

The purpose of the first question was to see what types and frequency of pain teachers have recognized or have been made aware of in their students. Flu and colds were the most commonly reported with 98% of participants experiencing teaching students with colds or flu. Headaches were also observed by most teachers (93%), followed by temporary injuries (85%), abdominal pain (74%), and joint and muscle pain (61%). Only 40% of teachers reported working with a student affected by pain from diseases and 19% reported working with a student with a permanent injury. Teachers were also provided an opportunity to include types of pain they have seen in their students, but were not included in the checklist. Twelve percent of teachers listed other types of pain which included: serious injuries (severe cuts, broken bones, concussions), itchiness due to skin problems, cerebral palsy, allergies, teeth, phantom pain, cochlear implant, special needs children, sport injuries, and a rare disorder.

5.4.2 Question Two

Teachers were asked to describe how they know when a student is experiencing pain. The teachers' responses fell into two main categories. Teachers were either informed of the pain or they observed the pain. According to the participants, the most common way for teachers to know when a student is in pain is for the student to tell them or complain about the pain (86% of responses). Other people that informed teachers about the students' pain included parents, other students, and teachers (14.1% of responses). Teachers also reported observing the pain. The teachers noticed physical symptoms most often (55.4% of responses), but also reported changes in the students

behaviour (28.9% of responses). Six percent of the responses mentioned observing or noticing that the student was in pain, but did not refer to what they observed. Examples of teachers' descriptions of how they know when a student is in pain are shown in Table 5.2.

5.4.3 Question Three

Question three asked teachers what actions they usually take when a student is experiencing pain. The question was divided into two parts. Teachers were first asked how they respond to acute pain and then how they respond to chronic pain.

5.4.3.1 Question 3 a). Teachers described a number of different actions they take when a student is experiencing acute pain. The types of actions taken, examples of each action, and frequencies of each action can be found in Table 5.3. The most common responses were those describing steps or objects used to reduce or treat pain (69.4%). To provide more information on steps and objects used, I examined the sub-categories of these responses. Forty-six percent of participants listed objects to help students. Examples of objects reported include ice/cold packs, water, Band-Aid, popsicle, and freezie. The most common actions for teachers to take were to administer first aid, to treat the pain or specific injury, and to assess/observe pain.

5.4.3.2 Question 3 b). The teachers provided a variety of actions they use to help students who experience chronic pain. The most frequent action taken was to communicate with or involve parents, which was mentioned twice as often as the next most common response. Other frequent actions were to support or suggest ways to manage pain and to create a plan and/or follow parents' instructions. All of the response categories, examples, and frequencies are shown in Table 5.4.

Table 5.2

Examples and Frequencies of Categories Describing How Teachers Know When a Student is Experiencing Pain

	Teacher is Informed of Pain				Teacher Observes Pain	
	Student Verbalizes	Parents	Others Tell	Students' Behaviour	Students' Physical Symptoms	Other
Response Examples	They tell me; They complain about the pain	Parents inform me	Other students or teachers tells me	Quiet, lack of energy, withdrawn, not usual self, (e.g., change in activity level, mood, personality)	Pale, cries, changes in regular movement (e.g. holding sore spot, limping), body language, facial expression (e.g. grimacing)	Visual cues; You notice
Total Responses	104	11	6	35	67	9
% of Teachers	86.0	9.1	5.0	28.9	55.4	7.4

Table 5.3

Categories of Actions Taken by Teachers When Working with Students with Acute Pain, including Frequencies and Examples

Categories	Examples	Responses	%
Steps &/or Objects to Treat or Reduce or Pain	I try to follow first aid protocol. Ice, elevation, rest, etc. If it is a tummy ache, nausea, etc I send them for a drink &/or bathroom break and watch them for awhile	84	69
Contact Parents	Contact the parents as deemed necessary	67	55
Involve Principal, Office, & or Policies	Refer them to the office Check the medical protocol file at our school	26	22
Change activity or expectation	They can sit out of physical activity Leave class and go to a quiet room to sleep	22	18
Involve Medical Professionals	Send to doctor if needed If serious, phone parents/ambulance	21	17
Depends	It varies depending on the severity. Actions include dealing with it myself to referring it to the office/trained staff right up to recommending medical attention.	19	16
Emotional Support	Positive attitude (you'll manage - try your best); show empathy; be compassionate	18	15
Consult Colleague	Call for a teacher with more first aid background Call first responder on staff	15	12
Talk to Student	Talk to them - find out cause, type of injury; I talk to them privately and see if there is anything we can do to help and then do it.	13	11
Distraction; Coping; Continue School Work	Ask the student a question that causes him/her to think of something else; I usually tell them we'll phone at recess/lunch. If they don't complain after that, I usually tell them they'll be OK until after school.	9	7
Medication	Phone home to get pain killer medicine Teachers are unable to administer pain medications	6	5
? or NA	NA	3	2.5

Table 5.4

Categories of Actions Taken by Teachers When Working with Students with Chronic Pain

Categories	Response Examples	Total	%
Communication with Parent, Mention of Parent	I keep in contact with parents and remember their (the student's) condition when planning activities	82	67.8
Supporting / Suggesting Ways to Manage Pain	Ice packs, rest (head down put work aside); positive attitude (you'll manage - try your best); show empathy; be compassionate.	41	33.9
Create a Plan &/or Follow Parents Instructions	Phone parent & discuss plan of action when recurrent pain occurs	23	19.0
Use of Medication	Administer medicine if we have followed our policy for permission and have it on hand	19	15.7
Involve Medical Professionals	Have them see a doctor with their parents	18	14.9
NA	I have not taught a student with chronic pain	18	14.9
Talk to Student	I talk to them privately and see if there is anything we can do to help and then do it. I will ask if they need to phone home or if they can wait and see if they get better	17	14.0
Refer to Policy &/or Involve other Staff	If severe phone parent/ take to office; talk to other teachers	17	14.0
Record Pain Occurrence	Make note of when and how often it occurs and alert parents	5	4.1

5.4.4 Question Four

Teachers were asked to provide tips on helping students successfully manage their pain at school. Teachers responses tended to fit into four main categories. Table 5.5 lists each category and provides examples and percentages for each category.

5.4.4.1 Objects or things. Approximately 35% of the responses mentioned objects or things to help manage students' pain. The answers were then further sorted to find out what types of objects and things were being used. The most common objects suggested by teachers were ice/ hot packs (17 responses), a place for student to rest (13 responses), and a drink (10 responses). Other objects mentioned include food, band-aids, medication, a blanket, and a positive learning environment.

5.4.4.2 Student behaviour. Teachers suggested a number of behaviours that students can take to help manage their pain (see Table 5.6). The tips mentioned most often were for students to rest (27 responses), to divert their attention away from the pain (21), to discuss and/or evaluate their pain (16) and to drink or eat (10). The Divert Attention category includes any responses mentioning that the student needs to distract or divert attention from the pain. Some of the other categories are methods to divert attention, but were incorporated into their own category because they were mentioned specifically (e.g., participating in an activity is diverting attention away from pain, but it was also mentioned specifically by teachers).

Table 5.5

Categories of Tips Teachers Provided to Manage Student Pain at School

Category	Response Examples	%
Objects that are helpful in managing pain	We provide ice packs, bandages, sympathy, distract them, provide a freezie to the younger ones	36
Student behaviours to help manage pain	Try to have them focus on something other than the pain; "hydrotherapy" - go to washroom and wash face, have a drink of water	53
Teacher behaviours to help manage pain	Create a positive, happy learning environment so that they want to participate & not focus on their pain. Provide comfort & understanding & a place to rest. Try not to dwell on or dramatize the situation	49
No answer or not applicable	Na	16

Table 5.6

Student Behaviour Teachers Suggested to Help Students Manage their Pain

Rest

Deep or focused breathing

Divert attention from pain/ forget about it

Take a drink or eat

Take a break from work/activities

Discuss with parents

Rub/ massage

Got to bathroom

Wait and see

Discuss and/or evaluate your pain

Plan/be prepared for pain episodes

Consult a doctor

Make yourself comfortable

Take medication

Participate in an activity

Work or sit with a peer

5.4.4.3 Teacher behaviours. Teachers listed suggestions for actions they can take to help students with pain (see Table 5.7 for examples). The most common behaviours teachers suggested were to offer support (21 responses), to distract students from pain (19), to communicate with and listen to students (15 responses), and to provide things to help ease pain (13).

5.4.5 Question Five

Question five asked teachers how pain impacts students (see Table 5.8). Over half of the teachers found that pain affected students' ability to concentrate. Related to the observation of concentration difficulties, thirty percent of teachers also said that pain impacts students' completion of school work and involvement in school tasks and activities. The next most commonly reported impact was change in students' behaviour. For example, teachers said that students tend to become quiet and withdrawn.

In addition to commenting on how pain impacts students at school, some teachers responses also included comments on the degree of impact and the factors affecting impact. The observations on the factors and the degree of pain are shown in Table 5.9.

5.4.6 Rating Questions

In addition to the open ended question on the survey, the survey also included 13 rating questions. Table 5.10 outlines the rating percentage for each question. Over half of the teachers agreed that the provincial health curriculum should include information on pain and how to cope with pain. According to the participating teachers, less than 20% currently provide students with information on pain and pain coping. When asked if teachers felt that students were effective at coping with pain approximately 40% thought they were and another 40% thought that students were not effective at coping with pain.

Just over half of the teachers reported feeling confident in helping students effectively manage pain at school.

Participating teachers were asked questions related to how they learned to work with students experiencing pain. Over 80% of teachers felt that their teacher training did not prepare them to work with students in pain and 69% of the teachers felt that teacher training should include information on how to work with students experiencing pain. Approximately half of the teachers felt that their teaching experiences prepared them to teach students experiencing pain.

The rating questions also asked about the policies, procedures and supports at each teacher's school. Approximately 75% of teachers thought that their school had effective policies and procedures for administering medication and communicating with parents. Fifty-seven percent of teachers felt they had effective policies and procedures on responding to students in pain. Furthermore, 67% of teachers report having a designated place for students to go when experiencing pain. In the area of supports and resources, 30% of teachers reported having enough supports and resources to help students who are experiencing pain and 26% felt they did not have enough supports and resources. The question also provided a space for teachers to list any resources or supports that they needed in addition to what they already had. The following resources and supports were recorded: (a) a properly maintained 1st Aid kit with all bandages; (b) annual pd [professional development]: first aid/CPR; injuries; (c) we have the resources/supports at this time, but we don't have any [students] with chronic pain to a great extent (e.g., cancer); (d) good parent support; (e) more health care support; (f) ways to deal with chronic and recurrent pain; and (g) how to help students deal with it.

Table 5.7

Categories of Teacher Behaviour Teachers Suggest when Working with Students in Pain

Category	Response Examples	Total	%
Offer support (e.g., understanding, encouragement)	be empathetic; dwell on the positive; be compassionate	21	36
Distract student from pain	divert attention to other things	19	32
Communicate with student / listen	A sympathetic ear and an ice pack are usually enough to enable the student to cope. It seems that it is important for them to be able to tell you about it	15	25
Give object to help ease pain (e.g., ice, quiet space)	Keep ice or ice packs handy at school. I keep a supply of Band-Aids in my desk (this helps with 4-6 year olds).	13	22
Remove cause of pain and/ or make student comfortable	Remove student from an irritating situation - i.e. headache - allow them to lie down in a dark quiet place	10	17
Acknowledge / evaluate pain	Acknowledge their pain, where does it hurt, how bad scale 1-10, can you make it for 1/2 hour, ice pack, re-evaluate in 1/2 hour, can you make it another 1/2 hour, change position, location, cool cloth. Be a caring individual. Acknowledge their pain & evaluate best you can.	8	14
Contact parents	Be in constant communication with parents	7	12
Take actions to plan and prevent	Help them to discover options - what they can do to help themselves - what causes the pain to worsen or get better. Have a plan in place with parents - finding out from them what may help	5	8
Help them deal with / overcome pain	Do not send student home, try to help them overcome the pain because they will have the same discomfort at home as they will at school	4	7
Excuse from work	excuse him/her from work	2	3
Involve/ discuss with staff	discussions with school staff so everyone is informed and can work together	1	2

Table 5.8

Teachers' Views on How Pain Impacts Students at School

Ways Pain Impacts Students	Response Examples	Total	%
Difficulty focusing/concentrating/attending /distracting/learning	Takes their focus off learning - very difficult to concentrate when in pain.	68	56
Impacts completion of /involvement in school tasks	Failure to participate in activities & to do class work	36	30
Behaviour change	Students experience withdrawal - they do not usually want to participate. I find learning is not at its full potential. Other things are going on in child's mind.	24	20
Lower (Academic) Performance	Unable to do their best work.	15	12
Miss school / instruction	They are unable to concentrate and learn/focus on their classes. Chronic pain leads to lower attendance levels and students struggle to keep up in classes	14	12
Emotional reactions	Causes students to be irritable, unhappy, & not able to think clearly or perform to optimal performance	10	8
Use as an excuse	Some of them whine as an excuse to get out of school work	7	6
Hurting/discomfort/ dwell on pain/debilitating/physical reaction to pain/ injury	For some, they become quite consumed by the pain and they cannot overlook it and concentrate on their studies. In that instance, their academic progress is being hindered by it.	7	6
n/a, ?, nil	na	6	5
Disrupts fun/enjoyment/being a kid / quality of life / development	Effects their school work/quality of life (kids should not be in pain)	5	4
Want to go home / contact caregiver / parental influence	It makes them feel lousy and they want to go home.	5	4
Negatively affects socialization	If the pain is severe, it can impact a students ability to concentrate on their school work or their ability to socialize and make friends	3	2
Need to discuss it/attention	Some students will dwell on their pain and then get no work done until they have an opportunity to discuss their pain	3	2
Affects other students	distracts other students - concern	3	2

Table 5.9

Teachers' Comments on the Degree and Factors Related to Student Pain

	Total	%
Degree of impact		
Significantly	8	6.6
Not usually/ very little	13	10.7
Factors affecting impact		
Varies depending on student	12	9.9
Coping reduces impact of pain	3	2.5
Severity or type of pain	16	13.2

Note. Only some teachers commented on the degree of student pain or the factors related to student pain

5.5 Comparison of Chronic and Acute Responses

Question three had teachers describe their actions towards acute and chronic pain. Teachers' responses were compared to see if a difference was shown between teachers' actions when working with a student experiencing chronic versus acute pain. There were many categories that overlapped between the acute and chronic pain, but there were also some notable differences. For example, the most common response to chronic pain was to communicate with parents. Although communicating with parents was also common for acute pain, it was mentioned 13% more in the chronic pain responses and the responses around communication were different.

Table 5.11 looks at how teachers communicate with parents according to what type of pain the child is in. The teachers tended to be more detailed and talk about ongoing communication when responding to chronic pain compared to acute pain. Other categories that had different response rates were the use of medication and n/a, which were both reported 10% more for chronic pain than acute pain. As would be expected, there were some categories unique to each pain type. For example, creating a plan and/or following parents instructions and recording pain occurrence were found in chronic pain responses, but not in acute responses. In contrast, the acute responses focused more on objects or steps to treat the pain right away (e.g., offer first aid).

In summary, these responses demonstrate that teachers respond to pain in many ways. When comparing participants' acute and chronic responses, it was found that 8% were exactly the same, 20% were similar, and 72% were different. Some similar responses to acute and chronic pain included actions such as communicating with parents and involving the principal/office or medical professionals. However, the majority of

Table 5.10

The Percentage of Teachers' Responses for each Rating Question

Question	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	N/A
The provincial health curriculum should teach students about pain and how to cope with pain.	2	12	26	52	3	4
Most students are effective at coping with pain.	1	36	22	38	3	1
My teacher training prepared me to teach students who are experiencing pain.	34	47	17	2	1	0
Teacher training should include information on how to work with students who are experiencing pain.	5	11	16	66	3	0
My teaching experiences have prepared me to teach students who are experiencing pain.	8	19	21	41	8	0
My school has effective policies and procedures on administering pain medication (e.g., acetaminophen /Tylenol).	1	9	12	57	19	1
My school has effective policies and procedures on responding to students when they are experiencing pain.	0	12	29	45	12	2
My school has effective policies and procedures on communicating with parents when their child is experiencing pain.	0	5	20	57	17	1
When students are experiencing pain, there is a designated place in the school they can go to if needed.	3	19	10	49	18	2
I provide my students with information about pain and how to cope with pain.	10	33	30	18	1	7
I would like to learn more about how to work with students who are experiencing pain.	4	15	36	38	2	3
I am confident in my ability to help students successfully manage pain at school.	1	17	28	45	8	1
I have the resources and support I need to effectively teach students who are experiencing pain.	7	19	36	26	4	3

responses show different patterns of actions to acute pain versus chronic pain. In Table 5.12, each row compares one participant's acute and chronic responses. Looking at the same teachers responses to the two types of pain shows that there are some differences in the actions teachers take when faced with chronic versus acute pain. For example, the objects and steps to manage pain differed for each pain type. It is suggested that future research look into what actions are the most effective for teachers to use when a student is in pain. To find out what actions are most appropriate more studies need to seek the perspectives of teachers, healthcare professionals and students, as well as analyzing the consequences of various actions.

5.6 Accommodations

I looked specifically at teachers' experiences with providing accommodations to students in pain in order to compare their responses with previous literature on teachers' accommodations for students in pain. Responses to questionnaire items three and four were analyzed to look for examples of accommodations teachers provide to students in pain. Table 5.13 lists examples of accommodations participants mentioned in their responses. The accommodation definitions and accommodation examples from related research were considered when deciding which responses were examples of accommodations. How these accommodations relate to other literature is provided in the discussion section.

Table 5.11

Comparison between Chronic and Acute Pain Parent Communication Responses

Chronic Pain Parent Communication	Acute Pain Parent Communication
<ul style="list-style-type: none"> ▪ Talk to parents: note how often pain occurs and what was happening before and after ▪ I communicated with the parents to try and have an understanding of what could be done to keep her comfortable and then tried my best to keep her comfortable and happy at school ▪ Contact parents to find out what should be done ▪ Talk to parents so they can discuss with Dr ▪ Contact the parents to see if it is happening at home ▪ Phone parent & discuss plan of action when recurrent pain occurs ▪ Phone parent to check on circumstances; administer drug if parent consent to it ▪ I keep in contact with parents and remember their condition when planning activities ▪ I discuss with parents to see if any medical treatment is necessary 	<ul style="list-style-type: none"> ▪ Contact parents to inform them of the problem that the child is experiencing ▪ Call parents if needed ▪ Refer to the parent ▪ Call home and discuss situation with parent ▪ Phone parent ▪ Contact home ▪ Call their parents to advise them of the child's injury.

Table 5.12

Comparison of the same teacher's responses to chronic versus acute pain

Chronic	Acute
Talk to the students about why they might be experiencing headaches; suggest ways to manage their headaches if the student is an adult; contact parents if the student is younger	Assess the injury; contact the administration; send student down to the office to receive medical attention
Some students receive medication with parents' permission. Some lay down. If possible, students with severe pain go home. Some attend irregularly and have individualized programming	If our first aid "specialist" is available, the student is helped by him, especially for sprains, breaks. Cuts are cleaned and covered. Serious cuts go for stitches. The ambulance have come for serious pain - dislocation at the hip
Ask them if they've talked to a doctor about it; respect if they need to rest for a time; if necessary, call home	Make them as comfortable as possible; get them to rest- if it's a sprained ankle, sit down & rest the foot; Get ice if necessary
Time on their own in a silent area, where I check up on them regularly. If it gets to bad they go home	Everything is solved with an ice pack at our school unless it is serious. Once our students get an ice pack everything is fine.
Phone home; try to be understanding	Phone home; ice pack; suck it up
Contact the parent; have the student do what they can and then have the student sit out; stretching or pain management	Ask the student a question that causes him/her to think of something else; ice; tell them to get a drink; refer to the parent
Adaptations in what I expect them to do, both physically and academically	Ice pack, feet up; call their parents to take them to the doctor
Phone home. If there is no answer they either sit out in a quiet place or go back to class. Children try to help out the child by being quiet	Ice on it; sit in the office & call family

Note. Each row of the table represents one teacher's responses

Table 5.13

Examples of teacher responses related to accommodations

- Provide alternate location; talk to parent re- cause/treatment; make accommodations for pain relief (e.g. icing)
- Adapt activities that are uncomfortable for them; child will go home or go to another room in the school to rest
- Let them take breaks
- Talk to other teachers; discuss what plan of action should occur
- Strategies for dealing with the child are discussed in a meeting with the parents and they are contacted if we are uncertain of what to do with the student. Using "secret passwords" for students who have bladder or other bathroom related diseases so other students don't see/hear them asking to go the washroom too often
- Lighten load and/or expectations

5.7 Summary of Phase II Results

Teachers were asked open-ended and rating questions to glean their experiences working with students in pain. According to participants, the most common types of pain they encountered were flus and colds, headaches, temporary injuries, and abdominal pain. When a student is experiencing pain, most teachers (86%) said that students let them know that they are in pain or complain about the pain. Over half of the teachers said that they can see when a student is in pain. For example, noticing the students cry, grimace, withdraw, or hold the sore area.

When students are experiencing acute pain the most common action is to take steps or use objects to reduce or treat the students' pain (69%). Contacting parents was

the next most common response. The most common action for teachers to take when working with a student with chronic pain is to communicate with parents (68%).

Although there were some actions that stood out from the rest, overall teachers described a number of actions they take when encountering a student experiencing pain. Some of the actions taken to address acute and chronic pain were similar. However, differences emerged between the two pain types in regards to specific categories mentioned and the frequency of the categories.

Teachers offered a number of tips on how to help students manage their pain at school. The tips fell into the following three categories: (a) objects that are helpful in managing pain, (b) student behaviours to help manage pain, and (c) teacher behaviours to help manage pain. Some of the most common tips were for students to rest, to divert the students' attention away from the pain, and to offer support.

Participants were asked how pain impacts students at school. The most common responses were: (a) pain creates concentration difficulties, (b) pain impairs completion of school work and involvement in school activities, and (c) pain changes the students' behavior. According to the teachers' responses, pain impacts students in a number of ways. Only five percent of teachers did not describe a way that pain affects students.

Over half of the participants supported including pain information and how to cope with pain in the provincial health curriculum. Very few teachers reported that they currently provide students with information on pain and coping and only 40% of teachers felt that their students are effective at coping with pain. The majority of teachers reported that their teacher training did not prepare them to work with students in pain, but felt that it should. However, over half of teachers said that their teaching experiences prepared

them to work with students experiencing pain and felt confident in helping students effectively manage pain at school. The majority of teachers reported that their school has effective policies and procedures related to working with students in pain. Although a quarter of the teachers felt that they needed more supports and resources to adequately help students who are experiencing pain.

In summary, teachers provided a variety of responses about working with students in pain. The information gathered from the questionnaires helps illustrate teachers' experiences in the area of: (a) types of pain teachers encounter, (b) how teachers know when students are in pain, (c) actions teachers take when a student is experiencing acute or chronic pain, (d) tips on how to help students effectively manage their pain at school, and (e) the impacts of pain on students. The rating questions also give an indication of teachers' opinions and experiences around what teachers have learned and currently know about how to teach students with pain as well as policies and procedures related to student pain. Overall, the questionnaire gathered a number of responses from teachers, which offered an expansive view of teachers' experiences working with students in pain.

CHAPTER 6: Discussion

6.1 Discussion of Findings

The goal of this study is to describe teachers' experiences working with students in pain. To understand teachers' experiences of pain the discussion will cover the types of pain teachers reported, how teachers know when a student is in pain, how teachers respond to students in pain and how pain impacts students. Next the rating questions will be discussed in terms of other research on teacher training and teachers' perspectives of pain. Finally, the results will be considered in light of research on who supports teachers and on accommodating students in pain.

6.1.1 Discussion of Open-Ended Responses

Of the 121 teachers surveyed, all had recognized or been made aware of at least one type of pain in their students. Although these results can not speak to the prevalence of pain, they do reveal that every teacher noticed at least one type of pain in their students, with five being the average number of pain types checked. Flus and colds, headaches, temporary injuries, abdominal pain, and joint and muscle pain were all commonly reported. The types of pain reported were analyzed in relation to teacher demographics, but no correlations were found. Overall the teachers' answers support the notion that teachers work with students in pain in the school setting. Included in the types of pain teachers see in their classrooms are chronic and recurrent pain types such as headaches (93%), abdominal pain (74%), joint and muscle pain (61%), and diseases (40%).

A study by Logan and Curran (2005) also reported the types of pain teachers see in their students. Logan and Curran asked teachers who participated in their focus group

to fill out a demographic form, which included questions about what types of pain teachers have encountered once or more. Not all of the categories are the same as in this study, but the comparable categories are shown in Table 6.1. The teachers' in Logan and Curran's study reported fewer types of pain than the current study. Some of the differences could be attributed to size; Logan and Curran had reports from 30 participants (19 were teachers or administrators) and the present study had 121 participants. The other difference is that in Logan and Curran's study the participants were purposefully recruited because they had worked with students with pain problems. Logan and Curran's study was concerned with teachers who had worked with students with chronic pain problems, so they may have only reported the pain type if they had worked with students with that type of chronic pain. In contrast, the current study did not require that the pain type be chronic pain for teachers to check it. To report the pain type the only requirement was for the teacher to have worked with any student who experienced that type of pain.

The most common way for teachers to know when a student is experiencing pain is for students to tell their teacher. Teachers can also tell when a student is in pain by observing physical and behavioral changes in the student. Common observable signs teachers reported were crying, lack of energy, and being quiet. Since teachers are told about and notice pain, they are in a position to react to the child's pain. The teachers' reaction to the pain could either serve as a protective or risk-promoting factor (Logan & Curran, 2005; Logan, Coakley, & Scharff, 2006). If teachers know the optimal way to react to students in pain, they may reduce pain's impact on the student and help the student deal appropriately with pain (Logan, Coakley, & Scharff, 2006).

Table 6.1

Comparison of the Percentage of Teachers Reporting Encountering Each Pain Type During their Career

Logan and Curran's Study (2005)		Current Study	
Pain Type	%	Pain Type	%
Headache	63	Headache	93
Abdominal Pain	33	Abdominal Pain	74
Joint Pain	30	Joint and Muscle Pain	61
Body Aches/ Musculoskeletal Pain	30		

The participants in the present study did not seem to have any problems knowing when a student is in pain. However, some authors have stated that sometimes teachers are unaware of students' health issues (Fowler, Johnson, & Atkinson, 1985; Koontz, Short, Kalinyak, & Noll, 2004; Wodrich, 2005). In the current study it is difficult to know if teachers always know when students are in pain. It would be helpful to know from students how, when or if they communicate their pain or health problems to teachers.

Teachers were asked what actions they take when a student is experiencing pain. Logan, Coakley, and Scharff found "that responses to pain in the classroom vary widely" (2006, p. 8). The responses from teachers in the current study also showed that teachers respond to pain in a variety of ways. When a student experiences an acute pain episode teachers' take a number of different actions; teachers' responses were sorted into twelve different categories to try and represent the range of answers that teachers provided. The

most common actions for teachers to take when a student had acute pain were to treat the pain and to contact parents. Nine categories emerged on how to treat chronic pain, with communication with parents being the most common response.

Teachers provided tips on how to help students effectively manage their pain at school. The teachers responses fit into four main themes: Objects to help ease pain, teacher behaviors, student behaviors, and no answer. The themes the teachers came up with can be compared to themes that came out of a study by Franck, Sheikh, and Oulton (2008). Franck et al (2008) gathered children's views of what things help them when they hurt. A comparison between children's and teachers' suggestions is found in Table 6.2. There were many suggestions that overlapped between the two studies, such as sleep or rest, distraction, and comfort from others. However, differences between the suggestions can also be found. Many of the differences are related to the school setting versus the hospital setting (e.g. entertainment or actions of healthcare professionals). To provide a better comparison between the teachers' and children's responses, a study like Franck et al (2008) could be carried out in the school setting.

Pain can impact students in a number of ways. For example, abdominal pain in children was found to negatively affect quality of life and to be associated with psychological co-morbidities, school absenteeism, and lost work days for parents (Saps, Seshadri, Sztainberg, Schaffer, Marshall, & Lorenzp, 2008). In the current study, teachers provided their perspective on how pain impacts students at school. Thirteen different themes emerged from the teachers descriptions on the consequences of pain. The categories will be discussed in relation to the literature on academic performance, absenteeism, and social functioning.

Table 6.2

Comparing selected teachers' tips on ways to help children deal with pain to children's views on what helps relieve pain

Teachers' Suggestions	Children's Views (Franck et al., 2008, p. 436)
Teacher behavior	What others do to help when I am hurt
Offer support	Parents hug or cuddle
Distract student from pain	Parents do other things (e.g., give presents)
Communicate/listen	Hospital staff (e.g., doctors make me laugh, nurses talk to me)
Give objects to ease pain	
Student behavior	What I do that helps when I hurt
Rest	Rest or sleep
Divert attention from pain	Visual distraction
Discuss or evaluate pain	Cognitive distraction
Take a drink or eat	Physical actions
Objects to help ease pain	Things that help when I hurt
Ice/hot packs	Medicine
Place to rest	Plaster/bandages
Drink/food	Entertainment
Medication	Food or drink
Band-aids	Nature

When asked to rate how much pain affected school performance, teachers, parents, and adolescents all rated that pain had somewhat of an effect (Logan, 2006). In this study teachers were not asked the degree to which pain impacts students, but some reported the degree within their response. Seven percent of teachers reported that children were significantly impacted by pain, while eleven percent said pain had little impact on students. Teachers also mentioned factors that can affect how much pain impacts a student. Teachers found that the degree to which pain impacted students varied by

student, by use of coping skills, and by severity or type of pain. For example one teacher said, “their academic performance usually scores low if it is a chronic pain that is not manageable. If the pain is controlled, then the pain impact on students will be negligible.”

Studies have shown that children with chronic illnesses can have impairments in academic functioning (Cunningham & Wodrich, 2006; Madan-Swain, Katz, LaGory, 2004; Sexson & Madan-Swain, 1993). Some of these impairments may be a result of pain. In a study involving 220 parents of adolescents with chronic pain, 44.3% of the parents reported that their children’s grades had dropped since the onset of pain (Logan, Simons, Stein, Chastain, 2008). Teachers in the current study mentioned consequences of pain that could hinder students’ academic functioning. The most common impairment teachers mentioned was difficulty concentrating and learning (56%), which affects the quality of work and the ability to learn and complete work. Completion of students’ work and involvement in school tasks were specifically mentioned by 30% of teachers. Twelve percent of teachers in this study found that students’ academic performance goes down when they are in pain and that students miss school. As one teacher commented, “chronic pain leads to lower attendance levels and students struggle to keep up in classes.”

A number of articles report that pain affects students’ attendance (Fowler, Johnson, and Atkinson, 1985; Khan, Ladwig, & Weisman, 2006; Logan et al, 2008; Roth-Isigkeit et al, 2005; Saps, Seshadri, Sztainberg, Schaffer, Marshall, & Lorenzp, 2008; Wodrich & Cunningham, 2008). For example, in a study involving 237 school-age children, students with higher complaints of abdominal pain were more likely to miss school (Saps et al, 2008). According to the current study, teachers also found that pain

effects absenteeism. Twelve percent of the teachers in this study reported that students miss school because of pain.

Social functioning was mentioned in the literature as one of the areas that can be adversely affected when a student experiences chronic pain (Chan, Piira, & Betts, 2005; Logan, 2006; Meijer et al., 2000; Vitulano, 2003; Walker et al., 1998). Teachers in the current study mentioned that socialization can be negatively affected; however, it was only reported by three participants. Other factors related to socialization are teachers' comments on behavior change ("students experience withdrawal") and emotional reactions ("causes students to be irritable, unhappy"). Twenty eight percent of the teachers' responses mentioned behavior change or emotional reactions.

Teachers were asked to describe how pain impacts students in the school setting. However, there were only three lines of space for teachers to write in their response, so this may have limited the number of factors teachers reported on. Many teachers wrote one or two ways students are impacted by pain, but if they had been asked specifically if various factors affect students (e.g., absenteeism, social functioning, and academic performance) then some of these factors may have been reported more frequently. There may be other factors effected by pain that teachers forgot to mention or did not have room to mention. In the future, teachers could be given a list of factors and rate how much each factor effects students who are in pain at school.

Teachers described many ways that pain impacts students at school. Knowing how pain impacts students can help to create appropriate interventions and pain management strategies (Logan, Coakley, & Scharff, 2006). Understanding how pain

impacts students allows teachers and others involved in pain management planning to address all of the issues students may face when dealing with pain.

6.1.2 Discussion of Rating Responses

Teachers rated thirteen questions on the topic of child pain in schools. The results will be discussed in relation to literature on teacher training and teacher competence in working with students in pain.

Teacher training often lacks information on health education (Myers-Clack & Christopher, 2001) and the Education program at the University of Saskatchewan is no exception (University of Saskatchewan, 2006). The teachers' responses in this study support the notion that there is a lack of health information provided to teachers in training. Teachers were asked specifically about whether teacher training prepared them to teach students who are experiencing pain. Eighty one percent of teachers reported that their teacher training did not prepare them to work with students with pain. When asked if teacher training should include information on how to work with students who are experiencing pain 69% of teachers agreed, which shows that there is an interest to increase knowledge in this area.

Although most teachers felt they did not learn to work with students in pain during training, forty nine percent of teachers reported that their teaching experience has prepared them to work with students in pain. More than 50% of teachers also rated that they were confident in their ability to help students successfully manage pain at school, compared to 18% who reported not feeling confident. This is somewhat in contrast to Sexson and Madan-Swain (1993) who suggested that teachers may have problems assisting students with chronic pain because they feel overwhelmed and lack knowledge

about pain and appropriate student expectations (Sexson and Madan-Swain, 1993). Logan and Curran (2005) also found that school personnel felt ill-prepared to work effectively with students suffering from chronic pain and that they required more information. Since the results were from a rating question, it is hard to know what made the teachers feel confident or how the other fifty percent of teachers felt about working with students with pain. Even though many teachers felt confident, the participants showed some interest in learning more about pain. Forty percent of teachers rated that they want to learn more about how to work with students who are experiencing pain. However, this percentage is low compared to Cunningham and Wodrich's study, where "ninety-two percent of the study participants agreed that information on assisting children with diabetes in the classroom would be useful" (2006, p. 561).

The results of this study suggest that it would be helpful to provide information during teacher training so that teachers do not start their careers unprepared to work with students in pain. The American Pain Society (2001) reported that children with chronic pain may benefit from school personnel who know how to support children with pain. Providing training would ensure that teachers are aware of pain problems and are learning appropriate ways to support students in pain. Although almost half of the teachers reported being confident in managing students' pain at school, some may be inadvertently responding in ineffective or counterproductive ways (Logan, Coakley, & Scharff, 2006) and may be misinterpreting health problems to other causes (Wodrich, 2005). For example, in an article by Wodrich and Cunningham (2008) a teacher had referred a student with type 1 diabetes mellitus to a school psychologist because she was concerned that he had a learning disability or attention deficit hyperactive disorder. In

reality it was the student's changes in glucose levels that caused his changes in attention and academic performance.

Research has shown that pain in childhood can cause negative effects later in life and that effective coping skills can reduce the negative consequences of childhood pain (Pate, Blount, Cohen, & Smith, 1996; Ross and Ross, 1988). Teaching children coping skills can help children to manage and reduce their pain. Of the participants in this study, 19% of teachers reported currently providing students with information about pain and how to cope with pain. Because of the benefits of coping skills, the researcher proposes that including pain coping in the health curriculum is one way of improving childhood pain experiences in school. Furthermore, schools have been suggested as a viable option to offer health interventions and preventions to children (Jones, Stratton, Reilly, & Unnithan, 2004; Power & Blom-Hoffman, 2004). In this study, 55% of teachers agreed that the provincial health curriculum should include information about pain and how to cope with pain, compared to 14% of teachers who disagreed. It is encouraging to know that most teachers would not be adverse to teaching coping skills to children and over half support teaching coping skills within the provincial health curriculum.

6.1.3 People Teachers Seek Support From

The teachers' responses to question three and four were examined to see who teachers seek support from when working with students in pain. The sources of support teachers listed can be seen in Table 6.3. Parents were by far the source teachers seek the most, with 79% of teachers reporting talking to the parents. Healthcare personnel and school personnel were also consulted by some teachers. The results from the study are compared to teachers' reports of who they would seek additional information from when

trying to accommodate a student with Type 1 diabetes mellitus (T1DM) (Table 6.3). Although Cunningham and Wodrich's (2006) study focused on T1DM, it still provides information on who teachers value when working with students with a health concern. Both groups of teachers endorsed parents as being one of the most important sources. Cunningham and Wodrich's study had school nurses as the most sought out source, but they were not listed at all in the current study. The absence may be because school nurses are not common in Saskatchewan schools.

Some of the literature suggests that school psychologists should be the professional to bridge the gap between the school and healthcare communities (Drotar, Palermo, & Barry, 2004; Wodrich & Cunningham, 2008). "As health service providers, school psychologists understand both the educational process and the ways in which childhood illnesses can impact it" (Wodrich & Cunningham, 2008, p. 52). In the current study only one teacher reported that they would communicate with an educational psychologist. This supports the notion that school psychologists are not currently widely recognized as the source for teachers to seek support from when working with students with illnesses (Wodrich & Cunningham, 2008).

6.1.4 Accommodations

Two previous studies have looked at teachers' accommodations in relation to student pain. The first study (Cunningham & Wodrich, 2006), asked teachers to generate classroom accommodations to support a hypothetical student experiencing problems at school due to diabetes. The study was concerned with the proportion of disease appropriate accommodations that teachers provided. The study found that providing disease information helped teachers generate more appropriate accommodations, but not

Table 6.3

Comparing Sources Teachers Reported in the Current Study with Sources Teachers Reported in Cunningham & Wodrich's Study (2006)

People Teachers Seek Support From (Current Study)	% of Teachers Reporting
Parent	79
Healthcare Personnel/Facility	20
Doctor	12
Hospital/clinic	2.5
Medical Personnel	3.3
Ambulance	2.5
School Personnel	31
Office	12
Principal/Administrator	3.3
Other school personnel	4.1
First aid trained staff	10
Educational Psychologist	0.8
Source Teachers Would Seek Information From (Cunningham & Wodrich, 2006)	% of Teachers
School Nurse	93
Student's Parent	90
Student	60
Experienced Fellow Teacher	58
Student's Physician	53
Special Education Director/Teacher	43
School Counselor	34
School Psychologist	32

as many as the researchers would have hoped for. Unfortunately, the researchers did not report the accommodations teachers generated nor did they discuss which accommodations were appropriate. Consequently, the accommodations provided by teachers cannot be compared across studies.

The purpose of the current study was not to judge the appropriateness of the accommodations, but to find out what accommodations are being provided. Only a few specific accommodations were listed (see Table 5.13 for a list of responses that include accommodations). The specific accommodations listed were related to providing an alternate location, sending the child home, allowing the child to rest/take breaks, or decreasing expectations. The lack of accommodations reported is likely because the teachers were not asked specifically to describe accommodations they provide for students in pain. Participants were asked about their actions in response to pain, which may have prompted responses that deal with immediate actions. It was hoped that accommodations would be provided under tips to manage pain, but most answers did not speak directly to accommodations. A number of responses indicated having discussions with parents or others to create a plan, which would likely involve creating accommodations. There also may have been limited specific accommodations because teachers were not asked to respond to a specific student or situation.

Logan, Coakley and Scharff carried out a study that looked into the extent of accommodations teachers would provide to a student with hypothetical limb pain.

Teachers chose between one of the following choices:

- (a) no accommodations; she should be expected to maintain the standard course load and schedule;
- (b) minor accommodations, e.g., short extensions granted for

completion of work, excused from a few small assignments; (c) moderate accommodations, e.g., longer extensions, significant reduction of course expectations, and/or modified grading system, some adjustment to the number of hours per week in the classroom; (d) major accommodations, e.g., she should be permitted to drop classes and should be given extensive special services, extensive reduction in the number of hours per week in the classroom; (e) full homebound instruction recommended (Logan, Coakley, and Scharff, 2006, p. 5).

Considering the options provided by Logan, Coakley, and Scharff (2006), most of the accommodations listed by the teacher in the current study would fit into minor accommodations. For example, allowing a student to go to a quiet room while in pain is a minor accommodation and the most frequent accommodation recommended.

Since the start of the current study, two additional studies have been published that address classroom accommodations for students with pain or illness. The study by Wodrich and Cunningham (2008) provided examples of possible classroom accommodations for students with a specific illness. For example, if a student with diabetes experiences poor concentration the teacher could allow the child to work in varied formats or move the child to another environment with fewer distractions. Since teachers listed poor concentration as the most common impact of pain, having accommodations addressing concentration issues would be helpful. The authors also listed web and print resources for school personnel to use when working with students with specific illnesses. These types of studies will be very helpful in informing schools what they can do to appropriately help children with illnesses.

The purpose of the other study that spoke about accommodations was to look at how adolescents with chronic pain are impaired in the school setting. The researchers asked school personnel what accommodations they provided for students in response to their pain problems. The results showed that 67.4% of adolescents with chronic pain in the study were provided with one or more accommodations because of their pain. “The most commonly implemented accommodations included sending the student to the nurse (reported for 61.9% of the sample), sending the student home when in pain (49.7%), and granting extensions on assignments (41.1%)” (Logan, Simons, Stein, & Chastain, 2008, p. 412). Other accommodations reported by school personnel included: allowed to rest at desk, reduced workload, extensions on assignment deadlines, out of school tutoring, in-school help with work, and full time homebound instruction. Some of the accommodations mentioned, such as sending the student home and allowed to rest at desk, were also mentioned in the current study.

The study by Logan et al (2008) was one of the few studies to report the types of accommodations school personnel provide to students experiencing pain. Although the study reported the accommodations offered, it did not look into the effectiveness of the accommodations. The adolescents with the most severe pain were provided with more accommodations, but it is not known if the accommodations were in response to the pain complaints or whether the presence of the accommodations helped to maintain the pain problems. In future studies it would be helpful for researchers to look at the effectiveness of various accommodations. Experts from the school and health communities could collaborate to create resources to help school personnel support students with pain in the school setting.

6.2 Contributions to literature

Currently there is a lack of information on teachers' views of student pain in the school setting (Chan, Piira, & Betts, 2005; Logan, Coakley, Scharff, 2006). The present study will add to the literature by providing more information on teachers' experiences working with student pain. Specifically the study provides numerous descriptions of actions teachers have actually taken in response to student pain, rather than looking at hypothetical situations like some of the studies in this area (Cunningham & Wodrich, 2006; Logan, Coakley, Scharff, 2006; Wodrich, 2005). The study also adds to the description of teachers' experiences by asking teachers how they observe pain impacting students at school. By gathering teachers' experiences, researchers can use the knowledge to plan appropriate interventions to help students and teachers manage pain in school (Logan & Curran, 2005).

Other studies that have looked into teachers' perspectives of student pain focus on specific areas of pain, such as T1DM or chronic pain. This is the first study to look at all types of pain that teachers encounter. It is important to consider all types of pain because programs need to be created that help all students who experience pain, rather than just targeting certain groups of students. It would also be helpful for teachers to know how to respond to pain in the many forms that it is exhibited in the classroom setting. The present study adds to the literature by providing information on the frequency of different types of pain that teachers encounter.

Finally, the current study provides more information on teachers training experiences in regards to pain information. Past research found that teacher training does not adequately address health information (Myers-Clack & Christopher, 2001). The

current study asked specifically if teachers received training in how to work with students in pain. Most of the participating teachers reported that they did not learn how to work with students experiencing pain during their teacher training.

6.3 Implications of the Current Study

The present study offers a great deal of information that could lead to changes in a variety of areas related to child pain. Table 6.4 lists areas of potential change that can be considered as a result of the information gathered from this study. The researcher also proposes teaching coping skills in schools and a number of areas for future research.

6.3.1 Coping Techniques

I am especially interested in future studies looking into school-based prevention programs that teach students coping skills. Research has shown that teaching coping skills to children, such as relaxation techniques, can help them manage their pain (McGrath et al., 2003). Other researchers have proposed using school-based interventions to reduce chronic headache pain problems in the population (Eccleston et al, 2002; Fichtel & Larsson, 2004; Larsson et al , 2005; Larsson & Carlsson, 1996). Furthermore, a study investigating the effectiveness of a school-based stress management program, which included coping skills training, improved the participants ability to minimize stress and to increase their adaptive coping (Hampel, Meier, Kummel, 2008).

Table 6.4

Study Outcomes that Reveal Areas of Potential Change

Areas of Potential Change	Current Study Outcomes
Curriculum	Fifty-five percent of teachers agreed that the provincial health curriculum should teach students about pain and how to cope with pain. Health curriculum developers could be informed about these results and consider adding pain information to the health curriculum. More research could also be done on the outcomes of teaching students pain and coping information.
School Policies	More than half of the teachers surveyed felt that their school has effective policies on medication, responding to pain, and communicating with parents. However, there were some teachers that felt their school's policies were not effective and some teachers could not comment either way. These results suggest that more schools need to have effective policies in place and that all staff should be informed about the policies.
Teacher Training	Eighty one percent of teachers felt that their teacher training did not prepare them to work with students in pain, compared to three percent that did. These results show that there exists a lack of training in this area and could lead teacher educators to consider adding information on pain to the curriculum. For example, information on accommodating children with pain could be taught in the Exceptional Learners Classroom Implications class (University of Saskatchewan, 2009)

A number of years ago Ross and Ross (1985) piloted a pain instruction program. The aim of the study was to see if the delivery of a pain instruction program could increase elementary students' knowledge and understanding of pain. Ross and Ross (1985) felt that children needed more information on pain because they had previously conducted interviews with 994 five to twelve year olds and found that

these children generally knew very little about pain and pain self-management. Fewer than 5% of the respondents were cognizant, for example, of either the early warning function of pain or its value as a diagnostic aid and treatment evaluator, and fewer than 22% used self initiated cognitive coping strategies when confronted with painful conditions or procedures. (p. 56)

The researchers also found that, of the 740 children asked about maladaptive pain usage, about 20% had used pain in a maladaptive way. For example, some children talked about using pain to gain attention or to avoid certain school activities. These maladaptive behaviors, if not rectified, can continue into adulthood (Ross & Ross, 1985).

Furthermore, Pate, Blount, Cohen, and Smith (1996) found that children with good coping skills have few negative effects in adulthood as a result of their childhood pain. Ross and Ross (1985) hypothesized that offering children a pain instruction program could benefit them immediately and in the long term. Some suggested benefits to receiving pain instruction include helping children to react more rationally to pain experiences and building confidence in coping with pain to help children become less fearful of painful procedures.

The pain instruction pilot program was delivered to 28 third and fourth grade children. The pain instruction program involved 20 lessons, with each lesson averaging 18 minutes. The lessons covered topics such as:

the early warning function of pain, the value of pain as a diagnostic aid and a treatment evaluator, localization of pains associated with common childhood pain experiences, pain descriptors, coping strategies such as self-distraction and thought-stopping (D. Ross, 1984), putting needle procedures into perspective, iatrogenic pains, congenital analgesia, hospitalization, maladaptive use of pain, selected pain issues such as the question of sex differences in pain tolerance, and simple on-the-spot methods a child could use to modify the immediate pain of minor injuries. (Ross & Ross, 1985, p. 59)

Ross and Ross (1985) used a pre and post test to determine if students' knowledge increased. It was found that the children performed significantly better on the post test. Qualitative information gained during the taping of the lessons showed other positive benefits. For example, students started to open up more about pain and their fears of pain. For example, one girl talked about her father's terminal illness and another child spoke about his fear of needles. Children also shared what they imagined happened in hospitals and these false and very scary views were dispelled. Overall, Ross and Ross concluded that a pain instruction program should be included in the school curriculum. They had plans to do future studies, but unfortunately there is nothing published further. I think their research provided evidence for the positive benefits of pain instruction and further studying should be carried out on delivering pain information to students.

According to the present study, some teachers see the benefits of coping skills and 19% of the teachers who responded in this study provide students with information about pain and how to cope with pain. When asked whether most students were effective at coping with pain, 37% of teachers disagreed and 41% agreed. Consequently, there are teachers working with many students who are not currently effective at coping with pain. Teaching students coping skills would give them tools to manage pain and stress, which may prevent health problems in the future or at least minimize their impact.

I am currently working as a counsellor with post-secondary students. I have seen a number of students with anxiety, depression, and pain problems. Many of these students have maladaptive coping strategies, such as rumination, self-blame, and catastrophizing (Hampel, Meier, Kummel, 2008). I have helped students by undoing some of the maladaptive coping strategies and teaching new coping skills such as relaxation training and positive self-talk. I believe that if children learn adaptive coping skills and recognize their negative coping strategies, they would be better prepared to manage future pain and psychological stressors.

6.3.2 Areas for Future Research

Currently, there is a lack of research on student pain in schools (Logan, Coakley, Scharff, 2006). The present study adds to the literature, but also suggests areas of future research. Following is a list of ideas that I feel require further research.

A few studies have looked at accommodations teachers would use to support a student with pain in the classroom (Cunningham & Wodrich, 2006; Logan, Coakley, & Scharff, 2006). Additional studies could look at what accommodations are actually being provided in classrooms and study the effectiveness of the various accommodations. A

guidebook could then be created to help school and health professionals work with students who experience pain.

Research has found that parents' responses to child pain can be protective or risk promoting (Chambers, Craig, & Bennet, 2002). Consequently, other researchers have speculated that teacher's responses to a student's pain could also cause negative or positive responses in the student (Logan, Coakley, & Scharff, 2006). A future study could look at the effectiveness of various responses to pain. Ideally, research could look into the most helpful responses to pain and disseminate that information to school personnel.

Many researchers have suggested creating school-based programs to teach students more about health interventions and preventions (Brown, 2004; Jones, Stratton, Reilly, & Unnithan, 2004; Power & Blom-Hoffman, 2004). Some studies have focused on school-based programs for specific types of pain or disease (Larsson, Carlsson, Fichtel, & Melin, 2005; Lurie, Straug, Goodman, & Bauer, 1998; Tinkelman & Schwartz, 2004) and one study looked at a general pain information program (Ross & Ross, 1985). These studies showed positive benefits for students. According to the results of Ross and Ross (1985) and the current study, many children do not learn about pain or how to cope with pain. Future studies should examine the short and long term benefits of school-based prevention programs that teach students about pain and how to cope with pain and other stressors. If these studies find that providing pain information and coping skills has positive effects for students, researchers could collaborate with departments of education to include this information into the school curriculum.

Another area I think requires further study is surveying the general student population to find out their experiences of pain at school and what they know about pain. The study could also look at what students find helpful in managing their pain and how pain impacts them. Gleaning students' perspectives could provide a picture of what is currently happening, information on how to work with students, and recognition of what students need in a pain information program.

An area I have not seen studied yet is looking into the communication between schools and the health care communities as well as looking at policies and collaboration strategies. There have been suggestions that there needs to be better collaboration, but I have not seen a study that found out how institutions collaborate, including feedback on what works well and what does not. Information on effective strategies or policies could be shared so that other institutions can try and improve their collaboration between health and education.

The information I gained from my study was viewed through my guiding question and was mediated by my own personal biases. An expert who works with students in pain could analyze the data from the current study to find important themes related to their concerns and experiences. Having a different set of eyes and a different guiding question may bring out new and useful information. For example, a pediatric nurse could look at the data for effective and ineffective actions taken by teachers according to her/his experience.

The above list is not exhaustive, but it does illustrate that there is still a lot of research to be done in the area of child pain in the school setting.

6.4 Limitations

The present study has limitations, which should be taken into consideration. First, the focus groups were used initially to help in the creation of the questionnaire. I initially proposed that 6 to 10 participants would be involved in the second focus group, however only 3 teachers participated in the second focus group (a fourth was expected, but the dates were miscommunicated). To try to remediate the lack of participants in the second focus group, the researcher recruited participants to pilot the questionnaire. Seven participants piloted the questionnaire and provided further feedback to fine tune the questionnaire before distributing it.

Fourteen schools participated in the study and out of the questionnaires sent out to those schools, 56.3% were returned. Since just over half of the teachers participated, it is possible that teachers who experience pain or are more interested in student pain were more likely to respond than other teachers. Although there were 121 participants, the data may not be an accurate reflection of all Saskatchewan teachers because of the demographics and characteristics represented. The teachers were recruited from three Saskatchewan school divisions, which were spread out east and west, but did not represent northern or southern communities. Although there were teachers representing all grades, few high school teachers participated (17.2% of the participants taught at least one high school grade).

A second limitation was my limited experience with qualitative data analysis. The study required a large amount of sorting; a total of 605 responses were sorted. My lack of experience and personal biases may have led to different sorting results than someone else may have produced. How I sorted responses was influenced by my

experiences and understanding of the concepts. For example, since I am trained as a teacher I may have been more biased towards certain content compared to a researcher who works in the healthcare setting. Notes on how categories were sorted and examples for each category were implemented to try to define the sorting and to make it understandable to others.

Third, using a questionnaire as the method to gather qualitative data creates some limitations. Because teachers have to write down their responses their responses may have been briefer than if they were allowed to verbalize their answers. The questionnaire also had limited space; therefore some teachers may have abbreviated their responses because of space constrictions. Although the teachers were informed that their responses would be kept confidential, they may have had a tendency to respond in a socially desirable way rather than reporting exactly what they think or do (Nellis, 2006).

Fourth, the questionnaire also relied on teachers' memory of how they respond to acute and chronic pain. To more accurately find out what teachers do, observations or questioning right after incidents may yield more accurate data. Lastly, the questions about working with student pain were very general. The responses varied greatly, and this is likely in part to the fact that there are many types of pain that teachers respond to. Therefore, the results cannot be generalized to specific types of pain, but rather provide a general description of what teachers tend to do when faced with student pain.

6.5 Conclusion

The present study demonstrates that teachers encounter many types of student pain, respond to pain in a number of different ways, and recognize multiple consequences of student pain. According to the participants in this study, teacher training does not

currently prepare teachers to work with students experiencing pain. Finally, future research is required to understand effective responses to student pain and to examine potential prevention programs aimed at minimizing the impact of pain on students.

Teachers reported working with students in pain, with the most common pain types being flus and colds, headaches, temporary injuries, and abdominal pain. This is in line with Perquin's (2000) pain prevalence research, which reported that many children experience pain. Over half of the students surveyed experienced a painful event in the previous 3 months and 25% reported experiencing chronic pain (Perquin et. al., 2000). It also supports Oster's (1972) reports of abdominal pain and headaches being two common types of recurrent pain. Teachers reported that students usually tell them when they are experiencing pain. However, teachers also notice behavioural and physical changes that occur when students are in pain. According to teachers they are likely to know when a student is in pain, which puts teachers in a position to respond to students and support them in pain management.

When students experience acute pain teachers are most likely to take steps (e.g., first aid) or use objects (e.g., ice pack) to treat or reduce student's pain. Contacting parents was also reported by more than half of the teachers. Approximately 20% of the participants also mentioned involving the principal or office, involving medical professionals, and changing activity and/or expectations.

Teachers also described how they help students with chronic pain. There were some similarities between how teachers responded to chronic and acute pain, but almost three quarters of the responses were different. The most common action teachers take when working with students with chronic pain is to communicate with parents.

Supporting or suggesting ways to manage the pain was the next most common response.

Overall, the responses suggest that teachers tend to respond differently to acute pain versus chronic pain.

The participants provided a number of tips on how to help students manage pain. Teachers reported using objects to help ease the pain (e.g., ice packs, a quiet place to rest), teacher behaviors (e.g., be empathetic, communicate with the student), and student behaviors (e.g., focus on something else, drink or eat). Sixteen percent of participants did not provide any tips, which suggests that teachers could use more information on how to properly manage pain.

Teachers described many ways that pain impacts students at school. Difficulty concentrating and learning was the most commonly cited problem, with 56% of the teachers indicating it to be an issue. Teachers' descriptions of how pain impacts students fit with the literature's findings that pain can negatively impact academic performances (Logan, 2006), attendance (Chalkiadis, 2001), and socialization (Logan, 2006; Walker et al., 1998). To help minimize the impact of pain, teachers may require further training on how to support students experiencing pain. Participants' responses suggest that teachers do not receive training on how to help students with pain, which fits with the notion that teacher training provides limited health information (Myers-Clack & Christopher, 2001). A number of teachers agreed that teachers should receive information on how to effectively work with students in pain during teacher training (69%) or in the future (40%).

In summary, teachers work with students in pain and their responses to student pain vary widely. Teachers recognize that pain can impact students in many ways, but

only some teachers feel confident in working with students in pain and talk to students about pain and pain coping. To understand how to effectively work with students in pain and to provide appropriate accommodations, more research will need to be carried out. Helping children with pain succeed in school is crucial because pain can affect academic performance which can in turn lead to negative consequences in adulthood (Sturge, Garralda, Boissin, Dore, & Woo, 1997). Furthermore, research into school-based interventions that help students cope with pain and other stressors is recommended so that the impact of pain on all children can be reduced in childhood and beyond.

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List of Appendices

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Appendix A– Letter of Request to the School Districts



Department of Educational Psychology and Special Education

Saskatoon SK S7N 0X1

Phone: (306) 249-4505 / Fax: (306) 966-7719

E-mail: sasha.forsyth@usask.ca

Child Health Research Group
www.usask.ca/childpain/



[Insert Date]

[Insert Address]

Dear [Insert Name],

Re: Requesting your permission to send out questionnaires to teachers in your district

My name is Sasha Forsyth and I am master's student in School and Counselling Psychology at the University of Saskatchewan. The area I have chosen to study is teachers' perspectives on student pain in school. While working as a research assistant in the area of child pain I learned that there is a high prevalence of child pain (stat) and found that there is a lack of research about child pain in school. Consequently, I hope to increase knowledge about child pain issues in the school setting. My research has received support from SSHRC and Pain in Child Health, which is an initiative in health research that provides training to graduate students working in the area of pediatric pain.

The purpose of my study is: a) gain an understanding of how teachers' respond to students in pain; b) to discover useful strategies teachers' use to address child pain management; c) to describe the concerns teachers have about teaching students in pain; and d) to understand how pain impacts children from a teacher's perspective. The descriptive information from teachers could lead to positive changes in:

- *Curriculum:* Alter the health curriculum to include pain coping skills (coping skills are proven to help reduce child pain and children with effective coping skills are less likely to suffer negative consequences in adulthood as a result of childhood pain)
- *Professional Development:* Inform teachers about common types of child pain and ways teachers can help children manage their pain in the classroom
- *Communication between Schools & Healthcare:* Provide teachers with support and information so they are better able to help students with pain

I hope to have your support in e-mailing or mailing teachers a questionnaire asking about their experiences working with students in pain. The questionnaire will be developed through focus groups with teachers; therefore it will be relevant to the educational environment.

I will contact you next week to talk briefly at your convenience. I can answer any questions you may have, and discuss the possibility of distributing the questionnaires. I really appreciate your time and look forward to talking with you.

Sincerely,

Sasha Forsyth, BEd

APPLICATION FOR APPROVAL OF RESEARCH PROTOCOL

to the University of Saskatchewan

Advisory Committee on Ethics in Behavioural Science Research

1. Name of researcher(s) and/or supervisor(s) and related department(s)

Supervisors:

- Dr. Laurie Hellsten, Dept of Educational Psychology and Special Education, University of Saskatchewan
- Dr. Carl L. von Baeyer, Dept of Psychology, University of Saskatchewan

1a. Name of student(s), if a student study, and type of study (e.g., B.A., M.A., Ph.D.)

Sasha Forsyth, MEd student, Department of Educational Psychology and Special Education, University of Saskatchewan

1b. Anticipated start date of the research study (phase) and the expected completion date of the study (phase).

Phase I: January 2007 to March 2007

Phase II: March 2007 to September 2007 (a separate ethics application will be completed for phase II of the research)

2. Title of Study

Teachers' Perspectives on Student Pain

3. Abstract (100-250 words)

Research involving pain in schools is important because pain is a common experience for children. Pain can decrease children's school functioning and increase school absenteeism; therefore improvements in child pain management are necessary. To effectively manage child pain in schools, the experiences and concerns of teachers and students must be sought. Gaining student and teacher perspectives will create an understanding of the current situation and will outline concerns and needs of those involved.

The purpose of the study is to understand student pain and the dissemination of pain information through teachers' perspectives. To help fulfill this goal, the researcher will ask teachers about their experiences and their understanding of student pain. Obtaining information from teachers will be achieved through focus groups, questionnaires, and interviews. The data collected from teachers will be used to describe the issues surrounding student pain in schools. The results of the study will be of interest to school personnel and organizations, health professionals and organizations, parents, and students, especially those who experience pain.

4. Funding

Jan to Aug 2006:

- Trainee fellowship, *Pain in Child Health* - Strategic Training Initiative in Health Research, Canadian Institutes of Health Research

Sep 2006 to Aug 2007:

- Masters scholarship, Social Sciences and Humanities Research Council of Canada
- Supplementary stipend from *Pain in Child Health* - Strategic Training Initiative in Health Research, Canadian Institutes of Health Research

5. Expertise

Sasha Forsyth has an education degree. Laurie Hellsten is in measurement and evaluation and has experience developing questionnaires. Carl von Baeyer is a registered psychologist. Both of the supervisors have experience with research involving children and schools.

6. Conflict of Interest

Not applicable

7. Participants

For phase I of the research, ten to sixteen teachers will be invited to participate in the focus groups. I will use homogeneous cases sampling, which “seeks to pick elements from a particular subgroup to study in-depth... the goal is usually to gather opinions from people who are demographically, educationally, or professionally similar” (Kemper, Stringfield, & Teddlie, 2003, p. 282). This type of sampling seems appropriate because I have chosen a professionally similar group of people to talk in-depth about their experiences with student pain.

To fulfill the sampling criterion the recruitment will be done by visiting Education graduate classes. The Educational Administration graduate classes are particularly appropriate because the students must have at least 2 years of teaching experience and have favourable recommendations from three professionals (College of Education, n.d.). Another benefit of the graduate classes is that the teachers will come from a variety of schools, which will minimize discussions on a particular student and will offer perspectives from a variety of school environments.

All focus group participants will be provided with snacks and beverages to thank them for their time. Their names will also be put in a draw for two \$75 gift certificates to a book store. The draw will include all focus group and questionnaire participants (participants in phase II of the research).

7a. The researcher will visit graduate classes to recruit participants. A letter of invitation (Appendix C) will be handed out to each student in the class.

8. Consent

The first step will be to get permission from professors teaching Education graduate classes to come into their class and invite their students to be participants in a research project. The researcher will outline her research to the classes and hand out letters of invitation to each student (Appendix C). The students should not feel pressured to participate because the research and the researcher have nothing to do with their class. Those wanting to participate will also provide their email address on the letter of invitation. The researcher will email all interested participants and the focus group will take place in a university conference room, at a time that is convenient for all participants.

At the focus group each participant will be given an information and consent form (Appendix A) and a draft of the questionnaire to be evaluated (Appendix B). Before consenting to the focus group the researcher will outline the purpose of her study and what will be asked of the participants. If the teacher agrees to participate he/she will sign the consent form and give it to the researcher. Consenting to participate in the focus group will include agreeing to let the researcher make an audio recording of the discussion. The participants will be reminded that they can withdraw at any time and will be asked not to reveal the names or other identifying information about specific students or staff, during the focus group.

9. Methods/Procedures

1. The researcher will draft a questionnaire based on the guiding research questions (Appendix B). The questionnaire will then be informally reviewed by the researcher's supervisors, and the research group on pain in child health. The research group's comments will be considered and minor changes to the question may occur.
2. The researcher will meet with the focus group, consisting of 4-6 participants. The purpose of the focus group is to evaluate and further develop a questionnaire, which will be sent out to teachers. Before beginning the focus group discussion the researcher will outline the purpose of her study, remind the participants that the discussion will last approximately 90 minutes, inform the participants about what their involvement entails, and obtain signed consent. The researcher will also inform the focus group participants that they are not to identify a child or colleague, that they must respect the confidentiality of other group members, and that they can withdraw at any time. The focus group will begin with an open question and then move to more specific questions. The researcher will discuss the goal of the research project and ask for the teachers' responses in terms of their own experience and questions they think address the research topic. Next, the focus group participants will be given a draft of the questionnaire to critique. Finally, the researcher will seek out the teachers' opinions on her proposed method of data collection.
3. The researcher will use the information provided by focus group participants to create a questionnaire and make any changes to the research plan. The researcher will email the teachers the resulting questionnaire so they can provide feedback.
4. A second focus group, involving 6 – 10 participants, will be used to test the questionnaire. The focus group will follow the necessary ethical guidelines outlined in the description of the first focus group. The teachers will be asked to complete the

draft questionnaire and then the group will meet back to talk about each item of the questionnaire. Finally the group will discuss the proposed methods for phase II of the study. Again the researcher will email the modified questionnaire back to the participants to make sure it accurately reflects the focus group discussion.

10. Storage of Data

Data will be stored according to the university regulations for five years in Dr. Hellsten or Dr. von Baeyer's lab. The audio recording of the focus group will be stored on a CD in the lab.

11. Dissemination of Results

The results of this study will be discussed in the researcher's master's thesis, which will be shared with the faculty of Educational Psychology and Special Education. An electronic copy of the thesis will be provided to the Library at the University of Saskatchewan. It is expected that the results will be presented at seminars/and or conferences (e.g. Pain in Child Health training institute). The data may also be published in refereed journal articles. Furthermore, a summary of the research project will be available on line at <http://www.usask.ca/childpain/>, to make the research results available to participants and others who are interested in child pain in the school setting. No data that could identify participants will be reported.

12. Risk, Benefits, and Deception

There is no risk or deception involved in this research project. The participants will be clearly informed about the study, the purpose of their involvement, and what their participation will entail.

13. Confidentiality

No confidential or personal information will be collected, beyond age, sex, years of teaching experience, teaching area, and grade level of students taught. The write-up on participant recruitment will not indicate specific classes that were recruited from. Whenever information is provided about a specific individual (e.g. quoting a participant), participant confidentiality will be assured through the use of pseudonyms. Furthermore, teachers will be asked not to reveal the names or other information that could identify specific students or staff, during the focus group. The researcher will indicate that the discussion is to be confidential.

14. Data/Transcript Release

The consent form will state that the researcher may use direct quotes in the write-up of the research. The researcher will email the participants a copy of the transcript and ask them to reply as a means of approving the transcript. Participants will also be invited to contact the researcher if they wish to review the study write-up before it is published. The data gathered in this study is not of a private nature so participants are not likely to be worried about sharing their quotes. The participants can also be assured that the use of pseudonyms and the lack of information on the participants will help to ensure that quotes will not be directly identifiable.

15. Debriefing and feedback

The researcher is using information from the focus group to create a questionnaire. Once the questionnaire is drafted, the researcher will email it to the participants to allow the participants to provide feedback and ask questions. The researcher's contact information will be provided in case participants wish to contact the researcher in the future. The participants will also be given a web site address that they can access to see a summary of the research results. Furthermore, participants will be informed that the researcher's thesis will be available via the University Library and at the Department of Educational Psychology and Special Education, at the University of Saskatchewan.

16. Required Signatures

Applicant: _____ Date: _____

Supervisor: _____ Date: _____

Supervisor: _____ Date: _____

Department Head: _____ Date: _____

17. Required Contact Information

Name	Department	Phone	Fax	E-mail
Sasha Forsyth, BEd, Master's Student in School and Counselling Psychology	Department of Educational Psychology and Special Education, University of Saskatchewan	249-4505	966-7719	sasha.forsyth@usask.ca
Laurie Hellsten, PhD, Assistant Professor, Research Supervisor	Department of Educational Psychology and Special Education, University of Saskatchewan	966-7723	966-7719	laurie.hellsten@usask.ca
Carl L. von Baeyer, PhD, Professor of Psychology & Associate Member in Pediatrics, Research Co- Supervisor	Department of Psychology, University of Saskatchewan	966-6676	966-6630	carl.vonbaeyer@usask.ca
Sam Robinson, Acting Head	Department of Educational Psychology and Special Education, University of Saskatchewan	966-7577	966-7719	sam.robinson@usask.ca

Appendices:

Appendix A: Information and Consent

Appendix B: Draft of Questionnaire

Appendix C: Letter of Invitation

Appendix C – Focus Group Participation Form

Invitation to Participate in a Focus Group



Sasha Forsyth, BEd, sasha.forsyth@usask.ca
Department of Educational Psychology and Special

Child Health Research Group
www.usask.ca/childpain/



I would like to invite you to participate in a focus group discussion that will take approximately 90 minutes of your time. Involvement in the research may raise your awareness of student pain and will put a smile on the face of a struggling graduate student. ☺ You will also be provided with snacks and your name will be in a draw for a \$75 gift certificate to McNally Robinson.

Would you like to participate in a focus group that will discuss child pain in school?

Yes

No

If yes please leave your e-mail and or your phone number so that I may contact you:

Thank you for your time!

Background Information

The purpose of the study is to understand student pain and the teaching of pain information as told by teachers. The pain I am referring to is physical pain, rather than emotional. Research involving pain in schools is important to study because pain is a common experience for children. Pain can decrease children's school functioning and increase school absenteeism. Gaining teacher perspectives will create an understanding of the current situation and will reveal teachers' needs and concerns surrounding student pain. A description of teacher experiences will help inform necessary changes regarding issues of child pain in the school setting.



Appendix D –Information and Consent Form



Department of Educational Psychology and Special Education

Information and Consent Form: Teachers' Perspectives on Student Pain

Child Health Research Group
www.usask.ca/childpain/



I would like to invite you to participate in a focus group discussion that will take approximately 90 minutes of your time. Involvement in the research may raise your awareness of student pain and will put a smile on the face of a struggling graduate student. ☺

Background, purpose and procedure

The purpose of the study is to understand student pain and the teaching of pain information as told by teachers. The pain I am referring to is physical pain, rather than emotional. Teachers' perspectives of student pain in schools are important to study because pain is a common experience for children. Pain can decrease children's school functioning and increase school absenteeism. Gaining teacher perspectives will create an understanding of the current situation and will reveal teachers' needs and concerns surrounding student pain. A survey of teacher experiences will help inform necessary changes regarding issues of child pain in the school setting.

Obtaining information from teachers will be achieved through focus groups and questionnaires. Phase I of the study will involve conducting focus groups to assist in the creation and testing of a questionnaire. During phase II of the study the questionnaire created in phase I will be sent out to teachers across the province to gather their perspectives on child pain. The results of the study could be used to inform changes in areas such as school curriculum, school policy, communication between schools and healthcare, and in teacher professional development.



What your participation involves

Participation in phase I of the research will involve discussing your views on student pain with a group of other teachers. The purpose of the discussion is to provide input on a questionnaire, which will be sent out to teachers. During the discussion you will be asked to: a) think about your views on student pain; b) suggest questions you think would be relevant to teachers; c) critique questions; and d) provide your opinion on the use of questionnaires. An audio recording of the discussion will be made so that it can be transcribed and used for data analysis.

Confidentiality

The information you provide in this focus group and the information provided by others will be kept confidential. During the discussion it is asked that you do not identify students or colleagues. Please do not use their names, and be vague about where and when any events

happened so that no-one would be able to identify the people you are talking about. Your name will not appear on any materials connected with this research, except the consent form. The data will be securely stored at the university for five years. If I use your data in my research write-up, I will not include any information that would identify you.

Potential Risks

This study does not pose any known risks. As mentioned above efforts will be taken to maintain confidentiality.

Right to Withdraw

You can choose to withdraw from this study at any time. You can also contact the researcher at anytime if you would not like your quotes to be used in the write-up of the study.

Questions

You have a right to have all of your questions answered before you choose to participate and while you are participating. My contact information is on this form in case you have any questions in the future, such as wanting to review the result of the study before they are published.

Consent to Participate

Before participating in the focus group, you will be asked to sign the consent form, which outlines what your participation involves. You are welcome to contact me if you have any questions and/or if you decide that you would not like your quotes to be used in the write-up of the research. Although each participant is asked to keep the discussion confidential, the research cannot guarantee confidentiality because of the focus group setting.

This research (BEH# 06-258) has been reviewed and approved by the Behavioural Research Ethics Board of the University of Saskatchewan. You can call their office at 966-2084 if you have any questions about your rights as a research participant.

Feedback on results

I will be emailing you the transcript of the focus group, the final questionnaire, and write-up about the focus group. It is anticipated that the research will be finished by November 2007. Upon completion of the study a summary of the results will be posted at: <http://www.usask.ca/childpain/>

Alternatively you can read my thesis, which will be available in the Education Library and in the Educational Psychology and Special Education Department.

Thank you for considering participating in my study!

This form is for you to keep.

Researcher Sasha Forsyth, BEd
249-4505
sasha.forsyth@usask.ca

Supervisor Laurie Hellsten, PhD
966-7719
laurie.hellsten@usask.ca

Information and Consent Form

Teachers' Perspectives on Student Pain

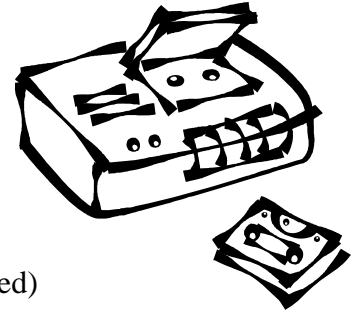
Child Health Research Group
www.usask.ca/childpain/



Consent to Participate

By signing this consent form I am agreeing to:

- participate in the discussion
- keep the focus group discussion confidential and anonymous
- have the session audio and/or video recorded
- have my quotes used in the write-up of my research following my approval of the transcript (no identifiable information will be included)
- have the revised copy of the questionnaire emailed to me so I can provide further input



I have read and understood the information provided in the information form. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I consent to participate in the study entitled Teachers' Perspectives on Student Pain. I understand that I may withdraw my consent at any time. The information form has been given to me for my records.

(Signature of Participant)

(Date)

(Signature of Researcher)

(Date)

You are welcome to withdraw from the study at any time. You can also contact the researcher in the future if you decide that you do not want your quotes to be used or if you do not want the questionnaire emailed to you. For questions about your rights as a participant please call the researcher (249-4505), the supervisor (966-7719), or the ethics board (966-2084). Also note that due to the focus group setting, confidentiality cannot be guaranteed.

Researcher Sasha Forsyth, BEd
249-4505
sasha.forsyth@usask.ca

Supervisor Laurie Hellsten, PhD
966-7719
laurie.hellsten@usask.ca

Draft of the Teacher Questionnaire

1. What grade level do you teach most often?
☐ Elementary (K – 5)
☐ Middle years (6 – 9)
☐ High School (10 – 12)
2. Including this year, how many years of teaching experience do you have? _____ years
3. What subject areas do you teach?

<input type="checkbox"/> Language Arts	<input type="checkbox"/> Health
<input type="checkbox"/> Math	<input type="checkbox"/> French
<input type="checkbox"/> Science	<input type="checkbox"/> Physical Education
<input type="checkbox"/> Social Studies	<input type="checkbox"/> Computers/Information Processing
<input type="checkbox"/> Art	<input type="checkbox"/> Music
<input type="checkbox"/> Industrial Arts	<input type="checkbox"/> Other _____
4. What type of school do you teach in?
☐ Rural ☐ Urban ☐ Other _____
5. What is your area of specialization? [*The focus group will help to create a check-list*]

6. Please outline your post-secondary education

7. Please record your sex
☐ Female ☐ Male
8. Please check your age range
☐ 20 – 29 ☐ 30 - 39 ☐ 40 - 49 ☐ 50 or older

The remainder of the questionnaire will include questions about pain. The International Association for the Study of Pain defines pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage". Many of the questions will refer to specifically to chronic pain which is defined as persistent pain lasting three months or longer or pain which endures past the normal time of healing (McGrath & Finley, 1999; Perquin, Hazebroek-Kampschreur, Hunfeld, Bohnen, Suijlekom-Smit, Passchier et al., 2000).

9. Have you or someone you are close to experienced negative life affects due to physical pain?
☐ Yes ☐ No

10. Please describe your experience working with students in pain.

a. How do you normally respond to children who are experiencing pain?

b. How do you know if a student is in pain?

c. What types of student pain have you encountered?

[*The focus group will help to create a check-list*]

d. Do you make accommodations for students who have chronic pain? If so, please describe what accommodations you make for students with chronic pain.

e. Do you have concerns about working with students who have chronic pain?

11. What resources do you think are required to adequately teach students with chronic pain?

[*The focus group will help to create a check-list*]

12. What resources do you currently use when working with students who have chronic pain?

[*The focus group will help to create a check-list*]

13. Do you provide your students with information about pain? If so, please describe.

14. Please record how much you agree with each statement.

Statement	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree
Pain information should be included in the curriculum.					
Students at all grade levels should be taught about pain.					
It is not the schools responsibility to teach students about pain.					
Teachers should be informed about how to work with students in pain.					
Teacher training should include information on children in pain.					
A professional development day on how to work with children in pain would be helpful.					
<i>Further options will be provided by the focus groups</i>					

Would any of the following ideas or questions be helpful to add to the questionnaire?

- A vignette of a student in pain, which could be used to elicit responses about how teachers would respond to a child in pain. Yes__ No __
- Would you like to have more information on ways to help children in pain? If yes, what information do you think would be most helpful? What information would you like in order to work more effectively with children who experience pain? Yes__ No __
- What current policies does your school have regarding child pain (e.g. When are children excused from class activities? When are children sent home? What does your school do when children have a chronic illness)? Yes__ No __
- What ideas do you have to help improve pain management in schools? Yes__ No __
- What coping strategies do you notice children using when they are in pain at school? Yes__ No __

Feel free to share a critical incident you experienced of a child experiencing pain at school.

The teachers participating in the focus group will rate each question as follows:

This question is relevant my experiences as a teacher				
0	1	2	3	4
strongly disagree	moderately disagree	neither agree or disagree	moderately agree	strongly agree

This question is clearly worded				
0	1	2	3	4
strongly disagree	moderately disagree	neither agree or disagree	moderately agree	strongly agree

Suggestions to improve the question:

MODERATOR'S GUIDE FOR THE FOCUS GROUP: Teachers' Perspective of Student Pain

Opening

Before we start I want to give you a big thanks for taking time out of your busy schedules. This is the first focus group I have conducted so I'm a little nervous. I'm also naturally disorganized so I apologize in advance for my rambling thoughts.

We'll start off by introducing ourselves and sharing one or two ways we like to relax. I'll start us off. My name is Sasha and to help de-stress I do yoga and play card and board games. So we'll go around to each person, starting with the person on my right.

Introduction

[Volunteer's name] is handing out a package to you that outlines today's discussion. Before we start the discussion I'll let you know the purpose and format of this group discussion. As shown on the first page of the handout, the purpose of this study is:

1. To describe teachers' experiences working with students in pain
2. To assess what teachers' needs are regarding supporting students with pain
3. To gather teachers' opinions on teaching and learning pain information

The purpose of our discussion today is to get your help in creating questions that will elicit teachers' experiences with student pain. First, we will talk about your experiences with student pain. Then we'll brainstorm questions that you think would be effective in gathering information about teachers' experiences with students in pain. Next we will critique a draft of a questionnaire. Lastly, I'll ask your feedback on the best way to collect teachers' views.

It is important that everyone gets a chance to talk so please share your thoughts and give others a chance to share their thoughts as well. Are there any questions?

Transition

- Tell us briefly about a time when pain interfered with your life.
 - I could share about the migraine I had during my honeymoon.
- Think back to a time when one of your students was in pain. What was the experience like for you and for your student?

Key Questions

Generation of questions:

- What questions would you ask your colleagues to learn about their experiences and thoughts related to student pain?

We'll be writing the questions on the [flip chart], but it takes time to record each question so please jot down your thoughts so we don't miss your good ideas.

Questionnaire Critique:

- Now we'll take time to go over the draft of the questionnaire. This is a chance to critique it rather than answer the questions. Once you are finished you can take a break until everyone else is done. The aim is to start discuss your ratings in 15 or 20 minutes.
- Okay now we'll go through each question one at a time. Our discussion will focus mostly on content. The rewriting of items will be gathered from your written critiques and a second focus group.
- Is there anything important you feel is missing from the questionnaire?

Methodology Critique:

I plan on distributing the questionnaires by emailing them to teachers in five different districts in the province. Before I email out the questionnaires, I am hoping to send out posters to each school involved to increase knowledge about the survey.

- What are your feelings towards the proposed method?
- What do you think would be the most effective method to send out the questionnaire?

Ending Questions

We're almost out of time. Is there anything we missed? Do you have anything else you would like to add to our discussion?

Thank you for taking time to help me out. I appreciate your expertise and your participation in this discussion. You've helped me to improve the questionnaire and my understanding of teachers' perspectives of student pain.

MODERATOR'S GUIDE FOR THE FOCUS GROUP: Teachers' Perspective of Student Pain

Opening

I want to thank you for taking time out of your busy schedules. We'll start off by introducing ourselves and sharing one or two ways we like to relax. I'll start us off. My name is Sasha and to help de-stress I do yoga and play card and board games. So we'll go around to each person, starting with the person on my right.

Introduction

Before we start the discussion I'll let you know the purpose of my study and of this group. The purpose my study is:

4. To describe teachers' experiences working with students in pain
 - a. To assess teachers' needs regarding supporting students with pain
 - b. To gather teachers' opinions on teaching and learning pain information

The purpose of our discussion today is:

1. to get your help in creating questions that will elicit teachers' experiences with student pain and
2. to evaluate the draft of the questionnaire.

Overview of group activities:

1. discuss your experiences with student pain. (15 minutes)
2. brainstorm questions that you think would be effective in gathering information about teachers' experiences with students in pain. (20 minutes)
3. evaluate a draft of the questionnaire.(30 minutes)

Group guidelines:

- It is important that everyone gets a chance to talk so please share your thoughts and give others a chance to share their thoughts as well.
- Please feel free to ask each other questions.
- I also want to remind you to keep student and colleague names confidential.
- Are there any questions?
-

Transition

Open discussion on student pain:

- Now think back to a time when one of your students was in pain. What was the experience like for you? What do you think the experience was like for your student?
- Do you feel that there are issues around student pain in school that need to be addressed? Could you please share some of your concerns?

Key Questions

Generation of questions:

- What questions would you ask your colleagues to increase your understanding about their experiences and thoughts related to student pain?

We'll be writing the questions on the [flip chart], but it takes time to record each question so please jot down your thoughts on the foolscap provided so we don't miss your good ideas.

Evaluation of questionnaire:

Hand out the draft of the questionnaire and the evaluation form

We'll go through each question together. We can discuss each question and I also have a form where you can evaluate each question.

Ending Questions

- We're almost out of time. Is there anything we missed? Do you have anything else you would like to add to our discussion?
- Before we end, I want to do a quick check around the room to find out what each person feels is the most important thing about child pain in school.
- Thank you for taking time to help me out. I appreciate your expertise and your participation in this discussion. You've helped me to create the questionnaire and improved my understanding of teachers' perspectives of student pain.

Appendix H – Focus Group Two Questionnaire Evaluation Form

The following ratings are for questions 8 – 12:

8. a

This question is relevant to my experiences as a teacher

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

Suggestions to improve the question:

8. b

This question is relevant to my experiences as a teacher

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

Suggestions to improve the question:

8. c

This question is relevant to my experiences as a teacher

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

Suggestions to improve the question:

8. d

This question is relevant to my experiences as a teacher

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

Suggestions to improve the question:

8. e

This question is relevant to my experiences as a teacher

Strongly disagree

Moderately disagree

Neither agree or disagree

Moderately agree

Strongly agree

This question is clearly worded

Strongly disagree

Moderately disagree

Neither agree or disagree

Moderately agree

Strongly agree

Suggestions to improve the question:

9.

This question is relevant to my experiences as a teacher

Strongly disagree

Moderately disagree

Neither agree or disagree

Moderately agree

Strongly agree

This question is clearly worded

Strongly disagree

Moderately disagree

Neither agree or disagree

Moderately agree

Strongly agree

Suggestions to improve the question:

10.

This question is relevant to my experiences as a teacher

Strongly disagree

Moderately disagree

Neither agree or disagree

Moderately agree

Strongly agree

This question is clearly worded

Strongly disagree

Moderately disagree

Neither agree or disagree

Moderately agree

Strongly agree

Suggestions to improve the question:

11.

This question is relevant to my experiences as a teacher

Strongly disagree

Moderately disagree

Neither agree or disagree

Moderately agree

Strongly agree

This question is clearly worded

Strongly disagree

Moderately disagree

Neither agree or disagree

Moderately agree

Strongly agree

Suggestions to improve the question:

12. (1)

This question is relevant to my experiences as a teacher

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

12. (2)

This question is relevant to my experiences as a teacher

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

12. (3)

This question is relevant to my experiences as a teacher

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

12. (4)

This question is relevant to my experiences as a teacher

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

12. (5)

This question is relevant to my experiences as a teacher

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

12. (6)

This question is relevant to my experiences as a teacher

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

12. (7)

This question is relevant to my experiences as a teacher

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

12. (8)

This question is relevant to my experiences as a teacher

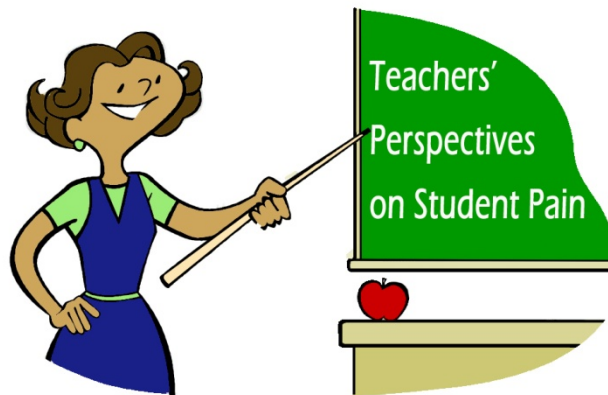
Strongly disagree	Moderately disagree	Neither agree or disagree	Moderately agree	Strongly agree
-------------------	---------------------	---------------------------	------------------	----------------

This question is clearly worded

Strongly disagree	Moderately disagree	Neither agree/disagree	Moderately agree	Strongly agree
-------------------	---------------------	------------------------	------------------	----------------

A Short Survey:

Teachers' Perspectives on Student Pain



*The purpose of this survey is to gain an understanding of teachers' experiences and opinions on child pain in the school setting. Filling out the survey will give you the chance to win a **\$100 gift certificate from Sears or Amazon**. The survey takes about 15 minutes to complete.*

Please return the completed survey to:

In this survey, pain is defined as a student's experience of a physical hurt. We are interested in two types of pain – acute and chronic.

- Acute pain is short term, like pain from accidental injuries (e.g., broken bone, scraped knee) and illness (e.g., flu).
- Chronic and recurrent pain lasts for a long time (more than 3 months) and may or may not be linked to any illness or injury (e.g., recurring stomach aches, migraine).

The investigator, Sasha Forsyth, BEd, is a graduate student in School & Counselling Psychology at the University of Saskatchewan. She is supported by a fellowship from the Social Sciences & Humanities Research Council of Canada and by *Pain in Child Health*, a Strategic Training Initiative of the Canadian Institutes of Health Research. The project is approved by the University of Saskatchewan Research Ethics Board (BEH#06-258) and supervised by Dr. Laurie Hellsten and Dr. Carl von Baeyer.

Your Experiences Working with Students in Pain

a. Check which types of pain you have recognized or been made aware of in your students.

☐ Abdominal pain

☐ Joint & muscle pain (e.g. growing pains)

☐ Headaches

☐ Temporary injuries (e.g., sprained ankle)

☐ Flus & colds

☐ Permanent injuries (e.g., spinal cord injury)

☐ Diseases (e.g., cancer, diabetes)

☐ Other: _____

b. How do you know when a student is experiencing pain?

c. What actions do you usually take when a student is experiencing pain?

a) Acute pain (e.g. sprained ankle, needle):



b) Chronic and recurrent pain (e.g. recurring headache, arthritis):

d. Please provide any tips you have on helping students successfully manage their pain at school.

e. In your experience, how does pain impact students at school?

Your Opinion on Child Pain in the School Setting



f. Please record how much you agree with each statement.

Statement	Not Applicable	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree
a) The provincial health curriculum should teach students about pain and how to cope with pain.						
b) Most students are effective at coping with pain.						
c) My teacher training prepared me to teach students who are experiencing pain.						
d) Teacher training should include information on how to work with students who are experiencing pain.						
e) My teaching experiences have prepared me to teach students who are experiencing pain.						
f) My school has effective policies and procedures on administering pain medication (e.g., acetaminophen/Tylenol).						
g) My school has effective policies and procedures on responding to students when they are experiencing pain.						
h) My school has effective policies and procedures on communicating with parents when their child is experiencing pain.						
i) When students are experiencing pain, there is a designated place in the school they can go to if needed.						
j) I provide my students with information about pain and how to cope with pain.						
k) I would like to learn more about how to work with students who are experiencing pain.						
l) I am confident in my ability to help students successfully manage pain at school.						
m) I have the resources and support I need to effectively teach students who are experiencing pain. If you feel you need more resources and/or support, please list them below:						

Your Personal Experience with Pain

g. To what degree has physical pain affected your life?

To a Great Extent ☐

Somewhat ☐

Very Little ☐

Not at All ☐

h. To what degree has physical pain affected the life of someone you are close to?

To a Great Extent ☐

Somewhat ☐

Very Little ☐

Not at All ☐

Demographic Information

1. Please circle the grades you teach most often.

K 1 2 3 4 5 6 7 8 9 10 11 12

2. How many years of teaching experience do you have? _____

3. What is your teaching role? Check all that apply.

Classroom teacher ☐

Special Education teacher ☐

Administrator ☐

Other: _____

4. What subject areas do you teach?

All ☐

Language Arts ☐

Math ☐

Science ☐

Social Studies ☐

Art ☐

Music ☐

Health ☐

French ☐

Physical Education ☐

Technology ☐

Industrial Arts ☐

Other: _____



5. Please record your sex:

Female ☐

Male ☐

6. Please record your age range

20 – 29 ☐

30 – 39 ☐

40 – 49 ☐

50 or older ☐

By completing and returning this survey, I am giving my consent to participate in the study and to allow the researcher to use the gathered data.

If you have any questions or suggestions that were not covered by this survey, please contact Sasha at sasha.forsyth@usask.ca. You may also visit www.usask.ca/childpain as a source for further information.

Thank you for your help!

To be entered in a draw for a **\$100 gift certificate from Sears or Amazon**, please leave your email or phone number. Your information will be kept confidential and will only be used to contact you if your name is drawn.

First name: _____ Phone or email: _____