

**EXPLORING THE EFFECT ON THE SELF-PERCEPTION OF YOUTH
PARTICIPATING IN A SURVIVAL SWIMMING PROGRAM**

by

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TABLE OF CONTENTS

LIST OF TABLES	iv
ABSTRACT	v
GLOSSARY	vi
CHAPTER 1: INTRODUCTION	1
Swim to Survive Program	2
Purpose of the Study	5
Research Questions and Hypotheses	6
Significance of the Study	6
Rationale for the Study	8
Study Limitations	10
CHAPTER 2: LITERATURE REVIEW	12
Family Leisure and Participation	13
Intrinsic Motivation and Cognitive Evaluation Theory	16
Measures of Intrinsic Motivation	20
Competence Motivation Theory	21
Measures of Perceived Competence	23
Support for Competence Motivation Theory	25
Summary	29
CHAPTER 3: METHODOLOGY	30
Study Participants	30
Research Protocol	31
Data Analysis	33

Ethical Issues	34
CHAPTER 4: RESULTS	36
Sample	36
Research Questions	38
Scholastic Competence	39
Social Acceptance	40
Athletic Competence	41
Physical Appearance	42
Behavioral Conduct	44
Global Self-Worth	45
Summary	46
CHAPTER 5: DISCUSSION	48
Instrument	49
Motivation	51
Sample Size	53
Sample Variations and Analysis	54
Recommendations for Practitioners	54
Recommendations for Researchers	55
Future Research Opportunities	57
Conclusion	58
BIBLIOGRAPHY	60
APPENDIX A Sample Question from SPPC	67
APPENDIX B Consent Form	68

LIST OF TABLES

Table 1: Summary of P-Values for All Domains	38
Table 2: Results for Scholastic Competence	39
Table 3: Results for Social Acceptance	40
Table 4: Results for Athletic Competence	42
Table 5: Results for Physical Appearance	43
Table 6: Results for Behavioral Conduct	44
Table 7: Results for Global Self-Worth	45

ABSTRACT

Participation in physical activity throughout the lifespan is critical to good health and well-being. The literature indicates a link between perceived athletic competence and participation in activity. This pilot study investigated the link between participation in a survival swimming program and self-perception in six domains in twenty youth participants. The Self-Perception Profile for Children (Harter, 1985) was used to determine whether or not the participants had any changes in their self-perception after taking part in the program. The results showed no significant difference between the two trials. Discussion noted sample size and acquisition as difficulties. Future research possibilities are suggested in the area of perceived choice in activity, perceived competence with regards to success or failure in the program, and different aspects of motivation to participate.

GLOSSARY

Children – the age of the children that took part in this study were between nine and ten years old. There are many references to children and groups throughout the document, but any that refer to the participants of this particular study are between these ages.

CHAPTER 1: INTRODUCTION

Participation in physical activity is important for all people throughout their lives. However, many individuals throughout North America and throughout the world do not achieve the appropriate amount of daily physical activity to lead healthy lives, therefore providing themselves with better health. People who are able to enjoy their free time in a healthy, productive way will be less likely to place a large burden on the health care system, and instead will be able to maintain balance and healthy behaviors in their own lives (Mannell & Kleiber, 1997). Motivation is a key component in an individual's choice to participate in physical activity, as an unmotivated individual may choose sedentary activities to fulfill their leisure needs, which can have a negative impact on their physical health.

Competence has been found to be a significant motivating factor for individuals to participate in physically and non-physically-based leisure activities (Harter, 1978). If an individual feels that they are good at a given activity, they will be more likely to participate in that activity again, and on a consistent basis. If a program or activity is able to increase the athletic competence of an individual, and make them feel that they are good at that activity, it increases the possibility that they will adopt that activity into their lives, and reap the physical and emotional benefits that the activity may offer.

The Lifesaving Society of Canada has developed a survival swimming standard called the "Swim to Survive" Standard (Lifesaving Society of Canada, 2000). Based on this standard, they have developed the Swim to Survive program, which is aimed at providing three hours of swimming and safety instruction to youth throughout Canada. It is difficult to assess in Canada whether the program achieves any drowning prevention

goals in Canada, as there are usually fewer than 600 deaths by drowning in Canada per year (International Life Saving Federation, 2007), and it is impossible to measure whether the program is having an effect on these numbers. However, it is possible to assess if the program is having other effects on participants. This was a pilot study to assess what effects the Swim to Survive program has on participants from the standpoint of perceived competence.

Swim to Survive Program

The Swim to Survive standard was released by the Lifesaving Society of Canada in 2000 (Lifesaving Society of Canada, 2000). The standard is based on several observations made by the Lifesaving Society. They indicate that swimming is the second-most popular recreational activity among children ages 5-12 in Canada after cycling; according to Ifedi (2008) it is the third-most practiced sport in Canada behind soccer and ice hockey (p. 34). According to statistics Canada, there were 267 drowning victims in Canada in 2005 that were not related to motor vehicle accidents (Statistics Canada, 2010). The Swim to Survive standard responds to these observations by addressing three skills (Lifesaving Society of Canada, 2006). The first skill is rolling into deep water. This is to simulate an unexpected fall into deep water. The second skill is to tread water for one minute. The third skill is to swim fifty meters to safety. The second and third skills are in response to the assumption that most individuals who enter deep water unexpectedly will be close to a point of safety. The program was created to help children learn these three skills. There are a variety of ways that the program can be delivered, but it tends to be taught in three sessions, approximately forty-five minutes to one hour each. The standard can also be done as a swim test.

The target group for the Swim to Survive program is typically grade three students. The society does not specify exactly how they came to this grade level, but it is believed that they chose to aim the program at this grade level for a number of reasons. One reason is that grade three students do not have the same body image issues that tend to develop as children get older. Secondly, this age group is young enough that they are able to learn skills that will be useful later in life. This age group is also old enough that they can listen to instructions, and are less of a safety risk in a pool when compared to a younger age group. Having said that, the program is not exclusively for this age group; participants can be older or younger, depending on the specific needs of a particular group.

The instructors of the Swim to Survive program must have certification either as a Lifesaving Society Swim for Life instructor, Lifesaving Instructor, or National Lifeguard plus another instructor certification, such as the Red Cross Water Safety Instructor certification. The Lifesaving Society includes education for instructors in the Swim to Survive program in all of their leadership programs, so anyone who has taken one of these programs will have at least some knowledge of the program. In a typical Swim to Survive program, the group of participants is divided into smaller groups based on swimming ability. A typical class will have a variety of abilities, ranging from participants who are not comfortable putting their faces in the water to others who can swim multiple laps of a twenty-five meter pool, and everything in between. The instructors teach swimming skills to the participants based on the swimming ability of the group that they have, which allows all participants, regardless of ability, the opportunity to take something away from the program. The instructors will use a variety of different

teaching approaches, including stroke drills, games, free time, flotation devices, and specific skill development to work on aspects of the three Swim to Survive program skills.

Upon completion of the program, the participants are issued a certificate which provides the student with feedback on their outcome. There are three possible outcomes for a participant in the program. These outcomes are: completed the Swim to Survive Standard, completed the Swim to Survive Standard in a lifejacket, or attempted the Swim to Survive Standard. In order to complete the standard, the three skills must be completed in sequence.

The Swim to Survive Program is available across Canada, and the eventual goal of the program is for it to be available to every grade three student in the country. The main target market for the program is grade three students through schools. From a participation standpoint, the program has been quite successful in Ontario, where a school grant program is in place to help alleviate the costs of transportation, pool space, and instructor costs (Lifesaving Society Ontario, 2009). Other provinces, such as Nova Scotia, have received funding to assist schools and recreation facilities in running the program (Lifesaving Society Nova Scotia Branch, 2009). There is no charge to the students for participation in the program. Through these grant programs, the majority of the pool and transportation costs can be made up. The schools are asked to contribute what they can to the program; in many cases the school provides the transportation while the grant covers the other costs. The Nova Scotia branch's future goal is that the program becomes part of the curriculum in grade three, and would be funded as part of the school board's mandate, perhaps with government assistance as well.

It is difficult to ascertain whether or not the program meets the goal of drowning prevention. This aspect of the program makes it attractive for parents and teachers, but it is difficult to measure. There are so many factors that cannot be controlled in drowning incidents. The program does teach participants about safety and the necessary skills to save themselves if they fall unexpectedly into water, but cannot possibly help people in all aquatic situations. A more realistic goal would be to determine what other benefits the participants gain from participating in the program. Based on the literature, an increase in perceived athletic competence at a given activity increases the chances of an individual choosing that activity in the future, so it is a legitimate inquiry to determine whether or not a given program is having an effect on the perceived athletic competence of a participant.

Purpose of the Study

The purpose of this study is to determine if the Swim to Survive program has an effect on the perceived athletic competence of the participants. The study will examine youth participants. The main goal of the program is to prevent drowning incidents in Canada. The program normally consists of three classes, approximately forty-five minutes to one hour each. Given the short instructional time of this program, it is important to find out if the classes are enough to have any benefits to the participants.

Swimming is one of the most popular recreational activities for children, listed as the third most practiced sport by children aged five to fourteen in Canada (Ifedi, 2008). Given the opportunity to participate in a swimming program, what effect can this have on the participants? Will the program affect the individual participant's motivation to pursue swimming as an activity? Given their age, they may not even have a choice, but if the

program makes them feel as though they are better swimmers, then it is more likely they will choose it as an activity in the future. Potential benefits of this program need to be determined, outside of the drowning prevention initiatives.

Research Questions and Hypotheses

The main research question for this study is: “does a survival swimming program for youth have an effect on the participants, outside of survival swimming training?” This question encompasses the overall line of study.

There are six sub-questions that were asked, to help answer the overall question. These questions are as follows: “Does the program have an effect on the perceived scholastic competence of the participants?” “Does the program have an effect on the perceived social acceptance of the participants?” “Does the program have an effect on the perceived athletic competence of the participants?” “Does the program have an effect on the perceived physical appearance of the participants?” “Does the program have an effect on the perceived behavioral conduct of the participants?” “Does the program have an effect on the global self-worth of the participants?”

For participants who have not participated in a formal swimming program in the past, it was believed that the participants would have a positive increase in their perceived athletic competence. For those who have previously participated in a formal swimming program, it was believed that this program would have no effect on their perceived athletic competence.

Significance of the Study

This study had the potential to show an increase in perceived competence for the participants; in particular perceived athletic competence. The participants who have taken

part in swimming in the past and those who had not previously participated both have the potential to feel better about their ability in the water as result of this program. This would be an additional benefit to the program, aside from the drowning prevention aspects. If the participants feel that they are better at swimming then they were before, it will increase the likelihood that they would choose swimming as an activity in the future. This would make the program potentially interesting to other organizations, particularly in the sports and recreation area. If the program increases the likelihood that individuals will participate in swimming, it would be worth exploring for these other organizations.

Another potential outcome is that the program does not have any effect on the perceived competence of the participants. This could be for a number of reasons. Firstly, it may be because the program is not sufficiently long enough to effect change. Secondly, it could be due to errors in research, sample, or data collection. Finally, the program might not have a positive effect on participants at all, and may not be transferable to other stakeholders.

Another possible outcome is that the participants of the program report a negative change in their perceived competence as result of their experience in the program. This would likely indicate that the program is too difficult to complete, or that the program was not a good overall experience for the participants. It could be possible that isolated incidents in the given class caused this reaction. If this is the case, perhaps the program will need a review to see if it is meeting the needs of the participants.

Bull (2009) has suggested activities that require a larger number of participants do not have a great deal of variability in the time spent on that activity. A good example of this would be team sports, where the coordination of a larger group of individuals is

needed. A sport such as swimming can be done alone, and therefore the amount of time spent on it might vary from person to person, week to week. It is possible that the Swim to Survive program will create a positive experience for the participants, leading them to choose swimming more often as a leisure activity on future years.

Nova Scotia is well known for the fact that it is surrounded almost entirely by ocean. This, along with the many lakes that allow and encourage public swimming, points to the need for children to learn about water safety and how to swim. The Swim to Survive program gives children, at the very least, an introduction to this knowledge and skills. This cannot be disputed. However, it would increase the scope of the program if it is found that the participants are gaining other benefits from the program. These benefits could be wide-ranging, from encouragement of participation in leisure activities to family and social benefits. This study will show whether or not the participants feel like they are better swimmers than they were before they took part in this program, and if so, it would increase their likelihood to participate in swimming in the future, and thus participate in a physically active activity.

Rationale for the Study

Children need the opportunity to participate in physical activity and leisure. Several studies have also shown that physical activity habits that begin at an earlier age tend to follow children into later stages in their lives (Kristensen et al., 2008; McMurray, Harrell, Bangdiwala, & Hu, 2003). According to these studies, it is important to provide children with the opportunity to participate in physical activity at a young age, in order to develop good habits as they grow older. Providing the opportunity is one thing; fostering

lifelong participation in any leisure activity is often affected by many people in an individual's life, along with their own perceptions.

Intrinsic motivation is an important aspect of sport and leisure participation. Several studies have shown that intrinsic motivation often leads to participation in physical activity and leisure (Hein, Muur & Koka, 2004; Goudas, Dermitzaki, & Bagiatis, 2001). One important example of intrinsic motivation is the concept of competence as motivation. Harter (1978) proposed a competence motivation theory, which states that individuals are motivated to be competent in a variety of domains. Perceived competence is the perception that one has mastery over a given task (Harter, 1985). If an individual feels that they are good at something, they can be said to have perceived competence in their ability to perform that task. Perceived physical, or athletic, competence is an individual's feeling of competence from an athletic standpoint.

Studies have shown that if an individual has perceived competence at a given activity, they will be more likely to be attracted to that activity (Weiss, 2000; Klint & Weiss, 1987), and participate in physical activity (Paxson, Estabrooks & Dzewaltowski, 2004; Trew, Scully, Kremer, & Ogle, 1999). Several other studies also found a relationship between perceived physical competence and social acceptance (Weiss & Duncan, 1992; Guyot, Fairchild & Hill, 1981). In these cases, student's interpersonal relationships and self-concept were related to their perceived physical or athletic competence. Before assessing perceived competence, it is important to learn about the meanings that the experience has for the participants. Not everyone will be competent at a given activity, perceived or otherwise; this does not discount the importance of the experience for the individual.

Since the Swim to Survive program is typically aimed at grade three students, it is reasonable to assess the program's effect, or lack thereof, on the participants. The program may have emotional, physical and mental effects on these children. It is also important to learn, specifically, if there are any effects on the perceived ability to swim by the participants, as previous research has shown that if the participants feel they are good at swimming, they will be more likely to choose it as an activity going forward. By choosing an activity that is physically active, such as swimming, participants will potentially lead healthier lives.

Study Limitations

The first limitation of this study is that it used a convenience sample. Given the timeline and budget for this study, it was necessary to use this type of sample. There are many issues with using a convenience sample with respect to the validity of results. Firstly, a convenience sample has the potential to be homogeneous. It is possible that the participants will come from similar backgrounds, and will not have the same differentiation that a random sample would provide. A convenience sample is not representative of the population. Therefore, it is difficult to make generalizations about the population based on this type of sample.

A second limitation is that the participants were only from Nova Scotia. This will limit the transferability of the results throughout Canada, as children from Nova Scotia will not have the same background and experience as those throughout Canada, and vice versa. In the future, a similar study with results from across the country would give a better indication of the entire Canadian perspective on the program.

A third limitation is that there was no telling what kind of swimming background the participants in the program would have. In order to determine differences between those who have participated in swimming programs in the past and those who have not, it was necessary to have a variety of responses. While the Lifesaving Society estimates that approximately 50% of participants in the program have not previously taken swimming lessons (Lifesaving Society Ontario, 2013), it was not possible to guarantee that a given group would not be skewed one way or the other.

CHAPTER 2: LITERATURE REVIEW

It is difficult to prove a relationship between an individual learning basic swimming and survival skills and preventing that individual from drowning. In Canada, for example, approximately four-hundred and fifty people drowned in 2003 (International Life Saving Federation, 2007, p. 24), but the majority of these people did not necessarily intend to enter the water, and many would have drowned regardless of their swimming ability. It is undeniable that an individual that can swim would have a much better chance of survival than an individual who cannot, but it is difficult to prove that a given program can have a positive effect on the population as a whole. If the program is teaching an individual to be able to survive in the water, the benefit is obvious, but it does not eliminate the problem.

Since a person who can swim will be less likely to drown than someone who cannot, the next question becomes whether or not the program has any other benefits to the general public? Do individuals gain any other expertise or ability through the program? Do they benefit in any other way? Since swimming is a popular physical activity in Canada and throughout the world (Ifedi, 2008), it is possible that the program has benefits for the physical health of participating children. It is also possible that children will benefit from the relationships that are forged through participation.

One of the problems for physical activity is a lack of motivation by individuals. People have a problem adhering to exercise programs and other such means of physical activity. Can the Swim to Survive program have an effect on the motivation of grade three students to participate in swimming? To answer this question, there must first be an analysis and understanding of motivation. What motivates individuals to participate? Who or what affects their motivation? The following review of literature will examine

the role that peers, family and the individual have in shaping children's motivation to participate in activities, both in the short and long term. This will provide some context to move forward with examining the experiences of children participating in the Swim to Survive program.

Family Leisure and Participation

Given the choice of many leisure activities and physical education programs, what would lead a parent to choose the Swim to Survive program for their children? Many parents have different reasons for their children participating in leisure than the child themselves would have. These differences can affect the level of enjoyment that the child receives from a given activity, and thus, have a major impact on their experience.

Parents have a great deal of control over their children. Aside from the obvious parent-child relationship, parents can influence the leisure choices of their children. Green and Chalip (1997) studied pairs of parents and children who were involved in youth soccer. The study measured parent's and children's satisfaction with the program, their enduring involvement, perceived skill and expectations, and parental commitment. The study found that the results of the parent's survey had both direct and indirect effects on the perceived skill, program satisfaction, and enduring involvement of their children. Wold and Anderssen (1992) studied school children in ten European countries, and found that children whose parents, siblings and friends participated in sport were more likely to also participate in sporting activities. They found a stronger relationship between the participation of peers as opposed to family participation. Since the Swim to Survive program will be initiated through a school setting, it makes sense for children to participate, as they will be doing so with their peers. However, the participation of the

entire family also increased the likelihood that the child would choose to participate in sport, so the family should also be involved when possible. Swimming is an activity that families can do together both before and after the program.

The idea of swimming as an activity that families can participate in together is an important concept to consider. Zabriskie and McCormick (2003) looked at family satisfaction from the point of view of both parents and children. Family leisure involvement was found to be the strongest multivariate predictor of family satisfaction from the parental perspective, but was not significant from the child perspective. This indicates that family leisure is important to parents, and steering their children towards activities that they can do together makes sense. Shaw and Dawson (2001) found that family leisure was important to parents, but that it was purposive in nature; they found it important because of the role it played in developing a strong sense of family and in developing healthy lifestyle for children. In another study, Shaw and Dawson (2003) also found that while the families that they studied had a high rate of participation in family leisure activities, the parents felt that the experiences were not enough, and that they needed more time to make the experience worthwhile. They suggest that the idealization of family leisure, while a positive concept, might be causing stress to parents who feel guilty about the time they are spending with their families. If they do not feel they are spending enough time with their families, it causes them to feel guilty about the amount of time they are spending on leisure with the family. Shannon (2006) studied a group of adolescents, and found that the messages they received from their parents focused on the functional aspects of leisure, and not so much on the enjoyment and pleasure that can be derived from it. This also points to parents having a different view than their children;

they might not think an activity has value unless there are specific outcomes, as opposed to just participating in an activity for enjoyment. This would lead directly into the reasons that parents would allow their children to participate in a survival swimming program, as there is a direct outcome (learning to survive in water) that they can see at the end of the program.

This research indicates that the reasons that children choose an activity and the reasons that parents choose an activity for their children can be quite different. While children are more likely to engage in sport and leisure activities due to peer or social reasons (Allen, 2003; Smith, 1999), parents are more likely to choose activities that they can participate in as a family (Zabriskie & McCormick, 2003) or that will develop moral values and healthy behaviors in their children (Shaw & Dawson, 2001). A better understanding of these differences can help to determine strategies for programs to maximize participation by children and buy-in from parents.

For the purposes of this study, it is important to note that not all participants will be interested in taking this program. Many of the participants will be taking the program because they are told to by their parents, or are otherwise influenced by them. Some participants will want to take part in the program because of their peer's participation. The reasons that they participate may skew final results, and it is important to consider this in context at the end of the study. Future studies could look into some of these reasons, and what effects they have on the likelihood of the participants choosing swimming as an activity as they grow up.

Intrinsic Motivation and Cognitive Evaluation Theory

Deci and Ryan (1985) defined intrinsic motivation as being based on “the innate, organismic needs for competence and self-determination (p. 32).” There is a need for individuals to feel competent at certain tasks. This need leads people to choose activities that are “neither too easy nor too difficult (p. 33)” and people will work towards meeting these challenges in a persistent manner. Some examples of intrinsic emotions are those of interest, enjoyment, and excitement. This motivation comes from within the individual, and since all people are different, an activity that motivates one person will not necessarily motivate another from an intrinsic standpoint.

Self-determination, which is an important concept related to intrinsic motivation, is described by Deci and Ryan (1985) as “the capacity to choose and to have those choices, rather than reinforcement contingencies, drives, or any other forces or pressures, be the determinants of one’s actions (p. 38). They go on to describe that when an individual is self-determining, “they make choices and have the opportunity to become more fully involved with the activity itself (p. 57).

Many studies have attempted to find relationships between intrinsic motivation and physical education. Hein, Muur and Koka (2004) looked at intrinsic motivation for students in physical education classes in Estonia. They studied three different types of intrinsic motivation in the students; to experience stimulation, to know, and to accomplish. They compared these three types to the student’s intention to be physically active. They found that students who were intrinsically motivated to experience stimulation and to accomplish intended to be more physically active than those who were intrinsically motivated to know. Goudas, Dermitzaki, and Bagiatis (2001) studied the

impact of after-school sports on intrinsic motivation to participate. They found that students participating in after-school sports exhibited a more positive motivational pattern regarding sport participation than those who did not participate in after-school sports. They also found that intrinsic motivation played a major role in the difference between the two groups.

Intrinsic motivation, which mostly involves internal motivation, can also be affected by external events as well. Deci and Ryan (1980) noted that intrinsic motivation can be influenced by outside factors, such as constraints, rewards, and communications. These outside influences could be considered forms of extrinsic motivation, but the important inference is what these things do to the individual's intrinsic motivation. These factors can affect intrinsic motivation, and lead them to be less motivated towards a given task. Deci, Schwartz, Sheinman and Ryan (1981) found a difference for students who had teachers who were control-oriented and autonomy-oriented. Teachers who were more control-oriented had students with less intrinsic motivation and who felt worse about themselves, and teachers who were autonomy-oriented had students with higher levels of intrinsic motivation and felt better about themselves. This study speaks directly to the notion that outside factors can have a direct effect on intrinsic motivation.

Cognitive Evaluation Theory, first defined by Deci (1975), is described by Deci and Ryan (1985) as describing "the effects of events that initiate or regulate behavior on motivation and motivationally relevant processes (p. 62)." These events can affect an individual's self-determination and competence, and can directly affect intrinsic motivation. The theory is presented in four propositions. The first proposition states that external events that imply an external causality over an activity will have a negative

effect on intrinsic motivation, while the implication that these events will lead to internal causality will have a positive effect on intrinsic motivation. The second proposition indicates that events which increase perceived competence will also increase intrinsic motivation, while events that decrease perceived competence will have a negative impact on intrinsic motivation. The third proposition indicates that there are three potential aspects to each external event: the informational aspect, which promotes self-determined choice and therefore will have a positive impact on intrinsic motivation; the controlling aspect, which postulates a lack of internal control over the situation and will therefore have a negative impact on intrinsic motivation; and the amotivating aspect, which indicates perceived incompetence, and therefore has a negative effect on intrinsic motivation. The fourth and final proposition presented by Deci and Ryan relates to intrapersonal events, where internally informative events increase intrinsic motivation, while internally controlling or amotivating events will decrease intrinsic motivation.

The validity of Cognitive Evaluation Theory has been challenged on a number of occasions. Cameron and Pierce (1994) concluded in a meta-analysis of different studies on intrinsic motivation that extrinsic rewards did not negatively impact intrinsic motivation. This set off a series of commentaries, where several authors claimed flaws in the analysis of the data presented by Cameron and Pierce. Kohn (1996) drew attention to missing articles and evidence in their conclusions; Lepper, Keavney and Drake (1996) dispute the article as making a “simplistic conclusion (p.6),” make the point that a meta-analysis will likely lead to multiple conclusions, and dispute the method that was used where studies were combined; and Ryan & Deci (1996) argued that the authors combined all forms of external rewards, which skewed their results. Another commentary was

prepared by Cameron and Pierce (1996) where they disputed the claims that they did not include all relevant studies in their analysis and that they used inappropriate techniques. Deci, Koestner and Ryan (1999a) performed their own meta-analysis, and found that verbal rewards had a positive effect on intrinsic motivation while tangible rewards had a negative effect. Eisenberger, Pierce and Cameron (1999) contest this by concluding that the effect that the reward has on the individual depends on the method of presentation of that reward. Deci, Koestner and Ryan (1999b) replied by contesting several methodological problems with the meta-analysis of Eisenberger, Pierce and Cameron, and concluding that Cognitive Evaluation Theory is still the most relevant theory of the effect of rewards on intrinsic motivation.

This argument in the literature shows that the theory has not been completely proven or unproven, and until this occurs it should not be used in analysis. However, this work can be used to inform the present study. Cognitive Evaluation Theory assumes that an individual who perceives that they are competent at a given activity are more likely to be intrinsically motivated to participate in that activity. Also, it assumes that when an outside force or person informs their decision, it increases intrinsic motivation, while any force or person that attempts to control their decision decreases intrinsic motivation. This can easily be linked in the present study, as parents choosing activities for their children could potentially be seen as an attempt to control the decision making process of the participating children. This, if the theory holds, would assume that without engaging the children in the decision, it would lead the children to have a decrease in intrinsic motivation to participate.

This area of research may help determine whether the program affects the participant's willingness to participate in swimming as they grow older. It is important to determine if there are any useful measures of intrinsic motivation for use in this study, or if this line of reasoning can be used to find a more specific instrument to assist in proving or disproving the hypotheses regarding competence.

Measures of Intrinsic Motivation

There are several valid measures of intrinsic motivation. The Intrinsic Leisure Motivation Scale (Weissinger & Bandalos, 1995) was designed to measure individual differences in intrinsic leisure motivation. Over a series of studies, the measure was found to be internally consistent, with Cronbach's Alpha scores falling between .872 and .913 (p. 387-389). Pelletier, Tuson and Haddad (1997) developed the Client Motivation for Therapy Scale, which attempts to find the motivation that causes individuals to seek or drop out of psychotherapy. This instrument measures intrinsic motivation, extrinsic motivation and amotivation for therapy. It was found to be internally consistent, with Cronbach's alpha scores of .70 -.92 (p. 425). The Intrinsic Motivation Inventory (Ryan, 1982) was assessed for internal consistency in a physical activity setting (McAuley, Duncan & Tammen, 1989). This scale measures the intrinsic motivation of individuals with regards to interest-enjoyment, perceived competence, effort, and pressure-tension. Cronbach's alpha scores ranged from .68-.84 for all items (p. 51).

There have been a number of measures translated from French to English. Using a French measure known as "L'Échelle de Motivation dans les sports" (Briere, Vallerand, Blais & Pelletier, 1995), The Sport Motivation Scale (Pelletier, Fortier, Vallerand, Tuson, Briere & Blais, 1995) was developed as an English translation. The scale was designed to

measure three types of intrinsic motivation, three types of extrinsic motivation, and one type of amotivation. The first part of the study involved the translation of the scale to English while also assessing the internal consistency and validity of the measure. The second part of the study was to evaluate the stability and test-retest validity of the scale. Cronbach alpha scores for internal consistency were acceptable, ranging between .63 and .80 (p. 43). Poulin (1992) constructed the Pictorial Motivation Scale, which was translated to English for study by Reid, Vallerand, Poulin and Crocker (2009). The scale was designed to be used for individuals with an intellectual disability, and measures intrinsic motivation, self-determined extrinsic motivation, non self-determined extrinsic motivation, and amotivation. The French version was found to have sufficient internal consistency, with Cronbach's alpha scores ranging from .53-.85 (p. 162). The English version was found to have Cronbach's alpha scores ranging from .64-.88 (p. 167).

These measures of intrinsic motivation are all valid and useful measures. For the purposes of this study, none of them will really determine what is necessary; to look at the perceived competence of the participants in the Swim to Survive program. These measures would be more useful after this initial study, when the appropriate relationship, or lack thereof, is found, and additional context is needed to determine other ways that participation can affect children in the future.

Competence Motivation Theory

One type of intrinsic motivation that comes up often in the literature is the concept of perceived competence. White (1959) first presented the idea of motivation based on competence. In his model, competence was referred to as "effectance;" as people strive for and achieve competence they are rewarded with a feeling of efficacy.

The White model disagreed with many of the prevailing theories of the time, such as exploration (Butler, 1953; Butler and Harlow, 1957), and curiosity (Berlyne, 1950) as forms of motivation. White felt that these types of behaviors were part of a greater push towards competence, rather than as individual interpretations of motivation. This model led to the study of competence as a motivation for people; where they would strive to achieve mastery of tasks.

Harter's (1978) competence motivation theory states that individuals are motivated to be competent in several domains. These domains include academics, peer relationships and sports. In order to feel competent in a given domain, the individual attempts to master a given task. If the individual is successful and perceives that they are competent at the task, it enhances their competence motivation, and in turn, increases the likelihood that the individual will participate in the activity again. Those who do not perceive themselves to be competent will be less likely to continue participation. If accurate, this theory directly relates to participation in physical activity, as those who feel that they are good at something, such as a sport or a recreational activity, are more likely to continue participating. This has significant implications for physical activity and sport participation.

This research leads to some questions for the current study. The students must be asked about their previous swimming experience, as this will affect their actual and perceived ability to swim. Those who have more experience will be less likely to receive benefits from participation in the program, as their early feelings towards swimming may already be formed. This line of reasoning is more closely related and specific to this

study; in order to continue it is important to determine if there is a useful measure of perceived athletic competence and other aspects of perceived competence.

Measures of Perceived Competence

Many measures of perceived competence have been designed by Harter. While they do not all deal directly with perceived competence by itself, they all include it in some way as an integral part of the measure. The Perceived Competence Scale for children (1979, 1982) was used to measure perceived competence in children by focusing on the child's perception of their own competence in three skill domains, as opposed to their actual competence. The three domains of competence that emerged from the study were cognitive competence (academic, etc.), social competence (peer relationships, friends, etc.) and physical competence (being good at sports, etc.). A fourth domain was added to indicate a child's general self-worth, as the three domains do not indicate what a child actually thinks about themselves, whether they are happy about the way they are, and feeling good about themselves as people. The scale was originally administered to elementary-aged school children, and included a teacher's feedback form which was used to compare how the children felt about themselves and how the teachers felt about the children.

A second measure developed by Harter is the Self-Perception Profile for Children (1985). This measure expanded the Perceived Competence Scale for Children by adding two additional subscales. These are physical appearance and behavioral conduct. The revision also made some changes to the title of the subscales, and included some changes to the specific contents of the questionnaire. Of particular interest, the domain of "physical competence" from the original scale was renamed to "athletic competence."

This was to eliminate confusion with one of the other domains, physical appearance, so that there would not be two domains with the word “physical” in them. In the new instrument, only one-third of the domains are related directly to competence. While perceived competence is still an important component of the new scale, this allows the new measure to obtain a sense of the child’s self-perception, as opposed to just their perceived competence, as was the case in the original instrument.

There have been several attempts to show that the Self-Perception Profile for Children is a valid instrument to measure self-perception in children. In the original study, Harter (1985) found Cronbach’s alpha scores between .71 and .85 for internal consistency (p. 14). Van Dongen-Melman, Koot, and Verhulst (1993) attempted to validate the scale in a sample of Dutch children. They found that the measure was reliable, reporting test-retest correlations between .66 and .83. They also found the measure to be internally consistent, reporting Cronbach’s alphas between .65 and .81 for all subscales in the instrument (p. 748-749). Muris, Meesters and Fijen (2003) used another, larger sample of Dutch school children to assess the reliability and validity of the Self-Perception Profile for Children. They found the scale to be internally consistent, with Cronbach alpha scores between .73 and .81 (p. 1797). The test-retest stability was found to be satisfactory, with correlations between .84 and .90 for all items. Granleese and Joseph (1994) looked at the test-retest stability of the scale over a three-year period, and found that there was little change over the three years in the majority of the subscales (p. 489).

Another measure of perceived competence developed by Harter and Pike (1984) is the Pictorial Scale of Perceived Competence and Social Acceptance for Young

Children. This scale was meant as an extension of the Perceived Competence Scale for Children, useful for children between the preschool and second grade ages. This scale provided a measure of four different domains for this age group: cognitive competence, physical competence, peer acceptance and maternal acceptance. This scale uses a pictorial format, which appeals to the targeted age group. The original study found the entire scale was reliable for all age groups, with coefficient alpha scores all between .85 and .89 (p. 1976).

The Perceived Competence Scale for Adolescents (Harter, 1988) measures competence in adolescents in a similar manner to the previous measures. This scale includes the domains of close friendship, romantic appeal, job competence, scholastic competence, athletic competence, peer likability, physical appearance, and behavioral conduct. Cronbach alpha scores for all items ranged between .58-.92. Thomson and Zand (2002) attempted to validate the scale in a sample of African American adolescents, and reported Cronbach alphas ranging from .46-.78 (p. 306).

The Self Perception Profile for Children (Harter, 1985) appears to be the most valid and also most accurate measure for the study of competence in children. This measure should be used in the current study. It gives an accurate depiction of the perceived athletic competence of children, and it is appropriate for the grade three students, who are usually eight or nine years old. Using a previously validated measure such as this helps the study, as it has been proven to evaluate perceived competence.

Support for Competence Motivation Theory

Perceived competence can lead to higher participation in activities. When a person feels that they are good at an activity, there can be positive benefits of their

participation, particularly if the activity is healthy and physically active. If an individual believes that they are good at something, several studies have shown that these people will be attracted to that activity. Many of the following examples show that when people feel skilled at a certain activity, they will be more likely to participate and continue participation in that activity. These examples also show support for Harter's Competence Motivation Theory.

There has been some support for the competence motivation theory. Klint and Weiss (1987) administered a questionnaire containing a motivation for gymnastics participation scale along with three of the subscales from Harter's Perceived Competence Scale for Children (1982). They found that children who were high in perceived physical competence found motivation in skill development, and children who were high in social competence found motivation in affiliation with others through participation.

There have been several studies that have linked competence at a given activity with individuals choosing to partake in that activity. Weiss (2000) suggests that once children begin to master a given activity, it increases their attraction to that activity. She used a model based on several sources to suggest possible ways to enhance participation in sport, and increasing competence is a key factor in this model. Paxson, Estabrooks and Dzewaltowski (2004) looked at the relationship between actual physical activity, perceived physical competence, and attraction to physical activity. They found that physical competence accounted for a significant variance in children's actual physical activity. Trew, Scully, Kremer, and Ogle (1999) looked at differences between male and female perceptions of physical competence, and found that male participants felt more physically competent and therefore participated in sport more often than female

participants. They also found that male and female participants who were more active also tended to report higher levels of self-worth. Losier and Vallerand (1994) studied the perceived competence of Canadian hockey players in an elite program over the course of a season, and found partial support for their hypothesis that perceived competence determines motivation. Their study showed that over time, perceived competence determines motivation but they were unable to exclude that, over time, motivation may have an influence on perceived competence. Roberts, Klieber and Duda (1981) used Harter's perceived competence scales to find that students who had higher participation in sporting activities tended to have a higher level of perceived competence.

Guyot, Fairchild and Hill (1981) studied the relationship of sport participation, physical fitness, body build, sex, and self-concept in elementary school children. They found that there was a correlation between the physical fitness and sport participation of boys, but not for girls. They also found that the correlation of sport participation and self-concept was higher for boys than girls. This showed that self-concept and physical fitness are more important factors for boys than girls. There was a correlation for girls with body build and self-concept, but no such correlation for boys. Weiss and Duncan (1992) studied physical and interpersonal competence and peer groups in a sport setting for children aged 8-13. They found that children's beliefs about their athletic competence had a strong relationship with their perceived and actual acceptance by their peer group. This suggests the importance of physical competence in the everyday lives of children, as their social groups would be partially tied to their competence, both perceived and actual, in physical activities.

Perceived competence can also be related to intrinsic motivation. Ferrer-Caja and Weiss (2000) studied perceived competence and intrinsic motivation in high school physical education students, and found that perceived competence was moderately related to intrinsic motivation. This indicated that students who felt competent in an activity were intrinsically motivated to participate in it. Positive feedback, which implies competence, and negative feedback, which implies incompetence, were both measured in terms of intrinsic motivation by Vallerand and Reid in a pair of studies (1984, 1988). They found that there were increases in intrinsic motivation with positive feedback and decreases with negative feedback. In the 1984 study, this relationship was found in male participants, while in the 1988 study, the relationship was found with both male and female participants. In both studies, the intrinsic motivation was mediated by feelings of competence. Ryan, Frederick, Lepes, Rubio and Sheldon (1997) used two studies to look at intrinsic motivation as a factor for adherence to participation, and found that competence was associated with continued participation in exercise programs.

External factors can also have an effect on the perceived physical competence of children. Black and Weiss (1992) studied competitive age group swimmers, aged 10-18, and found that the quality and quantity of feedback provided by coaches had a significant effect on the perceived competence of several of the sex and age groups involved in the study. Coaches who were perceived to give more frequent information after desirable performances, and who gave encouragement plus information following undesirable performances were associated with athletes that had higher levels of enjoyment, perceived competence, and success. Smith (1999) looked at physical activity motivation, perceptions of peer relationships, physical self-worth, and affective responses towards

physical activity and sport. He found that children felt better about them self physically, liked physical activity, and were more physically active when they had a close friend also involved in sport activities. This suggests the power that the peer group can have over the physical activity of an individual.

Summary

Motivation is a problem for participation in physical activity. Finding ways to motivate people to participate is important for the health and well-being of individuals. Finding the appropriate ways and activities to be motivated towards is the real challenge; no matter how driven an individual is, they must be participating in an activity that they like, and have access to that activity. In order to determine if a program will be successful, it is important to analyze the benefits. If the program has sufficient benefits, it can be further analyzed for more objective things, such as competence motivation.

According to the literature, perceived competence seems to be one avenue towards participation in given activities. If people feel that they are good at a given activity they will be more likely to partake in that activity. Since perceived competence and participation are linked, it becomes important to find out if a given program increases the physical competence of people. In order to get to this point, it is important to determine whether a given activity or program is worthwhile, in that there are benefits to the participants. If the program has an effect on the perceived athletic competence of the participants, then it is useful in encouraging swimming as a lifelong physical activity.

CHAPTER 3: METHODOLOGY

The Swim to Survive program is aimed at preventing drowning in Canada through basic survival swimming training for grade three students (Lifesaving Society Ontario, 2013). To discover the success or failure of this program is problematic, as there are such few drowning fatalities in the country (International Life Saving Federation, 2007), and linking drowning or lack thereof to a specific swimming program would be problematic, at best. Despite this, the value of the program is difficult to question, as these basic skills learned in the program would clearly be helpful if an individual were to fall into water unexpectedly.

Since it is nearly impossible to make a connection between this program and drowning prevention, a natural question would be if there are other benefits to the program? What impact does the program have on the leisure choices of the participant? Does the program affect the participant's desire to choose a given activity in the future? Does the program have an effect on the participant's perceived ability to swim?

This study attempted to determine if the Swim to Survive program has an effect on the perceived competence of the participants. It used a valid instrument to measure perceived competence before and after the program, to determine if change has occurred. The study design will be discussed in detail in this section.

Study Participants

The participants in the study were participants in community groups throughout Nova Scotia. All participants were in grade three or grade four. The Swim to Survive Program typically targets grade three students; grade four students were included to help increase participation. The goal was to have approximately thirty participants. There was

no fee charged to the participants; the program fees were donated through the Lifesaving Society's fundraising efforts.

Potential groups were determined through the Lifesaving Society. Leaders at these groups were contacted to get permission to seek participation from the students. Leaders who had a group taking part in the program were approached about having their group take part in the study. For those who agreed, the entire group was given the opportunity to participate. Those who participated in the program were given the opportunity to participate in the study.

Research Protocol

The first step in this study was to identify groups who were interested in participating. Firstly, attempts were made to gain access to the school system. Several school boards in Nova Scotia were contacted. In each case, the appropriate policy for outside research was followed. In some cases, a specific request for research form was required to be filled out, which focused on the methodology of the study, and the time required to complete the study. All attempts to gain access to the various school boards were denied.

Without access to the school system, the next step was to look at various community groups that might be interested in taking part in both the program and the study. A number of groups agreed to participate in the program, and participants for the study were drawn from these groups. The groups that agreed to participate were all after school programs that provided access to a variety of activities. Leaders of these groups were solicited in the same manner as the school board, typically through email. All of the students in each selected group had the opportunity to participate in the study. The goal

was to have approximately thirty participants complete the study. Due to time and budget considerations, groups were solicited from the Halifax Regional Municipality, to reduce travel.

This study contained two surveys. Each survey took approximately thirty to forty-five minutes to complete. The first survey was given to the participants before they took part in the program. The survey contained the Self-Perception Profile for Children. In addition, the survey was used to determine whether or not the participant had swimming experience before they took part in the program. This was to split the participants into two groups; those who have participated in previous swimming classes and those who have not. The principal investigator delivered a copy of the survey to each participant. They were then read the instructions, and were able to read along. There was one practice question, which the principal investigator led the participants through. Then, the participants completed the survey, led by the principal investigator, who read each question out as the participants completed the survey. Each question in the Self-Perception Profile for Children has four options. First, the participant must choose between two statements that describe what a child is like. They must choose one statement or the other, whichever they think is most like them. After making that choice, they must choose whether that statement is really true for them, or sort of true for them. The participant then checks the appropriate box. Please see appendix A for a sample question.

Once the surveys were complete, the participants were then able to participate in the program. Participants who did not partake in the study were also able to participate in the program. The principal investigator organized the program at a local swimming pool,

and held a program orientation with each instructor of the program. The instructors were not aware of the nature of the study, and did not know that the participants were taking part in any surveys either before or after the program. The only contact the participants had with the principal investigator occurred during the two surveys. Each answer was scored, as per the scoring system of the Self-Perception Profile for Children (Harter, 1985). The scores for each question were entered into the SPSS file. Through the scoring system, a value for each domain of the Self-Perception Profile for Children was determined.

The second survey was given to the participants upon completion of the program. This survey also contained the Self-Perception Profile for Children (SPPC). The results of the SPPC were compared to the results from the previous survey. The second survey followed the exact same protocol as the first survey, once again being led by the principal investigator. The participants were given the exact same instructions for the second survey, and were lead through the survey in the same way. The results were recorded in the SPSS file, and scores were be tabulated for each domain.

Data Analysis

Scores for each item of the Self-Perception Profile for Children were entered into the SPSS v. 17.0 database. This allowed the computation of scores from each domain of competence. In addition, the participant's previous participation history in swimming, determined from the first survey, was added to allow the participants to be divided into the two necessary groups.

The scale yields a score for each of the six domains. There are six questions for each domain. Each possible answer on the scale yields a score between one and four. The

scores for each domain were added up and divided by six, in order to come up with the final score for that domain. These scores were then used in the t-tests to determine if there were significant differences before and after the program.

Since the sample size is relatively small, a nonparametric test was used. With a larger sample size, the paired t-test would be appropriate. A nonparametric option that is comparable to this test is the Wilcoxin Signed Rank Test (Wilcoxin, 1945). This test is used to find differences between two samples when a normal distribution cannot be assumed. This was used to compare the first trial (before the program) results to the second trial (after the program) results. With a small sample size it is more appropriate and accurate to use a nonparametric test. In future studies, with a larger and random sample, the paired t-test should be used. The data analysis plan will be supported by this number.

Ethical Issues

All research projects have issues of ethics. Before initiation of this project, ethics approval was obtained from Dalhousie University. All participants were required to complete an informed consent form, which outlined the risks and benefits of study participation. Due to the age of the participants, parental consent was obtained through this process, with oral assent given by the participants before they began the survey. This study contained a relatively low risk to the participants. Part of the consent process informed the participants that they do not need to answer every question if they did not feel comfortable doing so, but full responses were encouraged.

The questions in the survey asked the participants about their self-perception, which could potentially be sensitive. For example, the participants are asked questions

about whether they have a lot of friends or not. At this age, discussion of this, and other things of this nature, could be stressful, and could cause negative feelings to emerge.

There was no possibility of anyone learning which participant gave which answers. It was possible for the participants to know which of their fellow group members participated in the study, but they were not able to learn their specific responses.

The Lifesaving Society requires the results of the Swim to Survive classes to be forwarded to their office. This did not have anything to do with those who participated in this study. The instructors of the program did not know that the students were doing the survey after the classes. The Lifesaving Society does collect the names of participants along with their results from the majority of their programs, but that information is kept internally, and is not disseminated to the public. The lead researcher did not need this information for the purposes of the study. The survey was not linked up with any individual participant's name by either the Lifesaving Society or the lead researcher.

Approval was sought from the appropriate school boards and group directors. Approval was not given by any school board in Nova Scotia, which is why the participants were solicited through community groups. The appropriate chain of command was followed to gain access to the participants. Each group has a different structure, but the process that was followed with school groups was exactly the same as it was with community groups.

CHAPTER 4: RESULTS

This study attempted to discern whether the Swim to Survive Program benefitted participants in other ways, aside from the obvious survival swimming skills introduced to them. The methods used to help ascertain this involved the participants completing two surveys, one before and one after participating in the program. These surveys both included the Self-Perception Profile for Children (Harter, 1985) in a before and after trial. The survey also determined whether or not the participants had previously taken formal swimming classes in the past, in order to see if the effects of the program were different for those who had never participated before.

The results of this pilot study follow. Through these results, preliminary support for the future directions of the program can be considered. Due to the nature of the experiment, as a pilot study, the goal is to learn whether this should be reproduced on a larger scale, and if additional or different questions need to be asked. In addition to this, the study will also highlight or identify any issues with acquiring data on this subject.

Sample

Respondents were recruited through a number of youth groups in the Halifax Regional Municipality in Nova Scotia, Canada. Participants were required to be in grade three or four, age was not assessed. Grade fours were included to help increase participation. There were twelve participants in grade three and eight participants in grade four. The participants did not identify which grade they were in on the individual surveys, so it was not possible to look at split results. In all, twenty respondents completed both surveys. All respondents completed every question on both surveys. The two surveys were completed three weeks apart; the first survey was completed the day

before their first swimming class and the second survey was completed the day after their third swimming class.

The Self-Perception Profile for Children (Harter, 1985) was the instrument used in the survey. This questionnaire yields scores on a 1.0-4.0 likert scale. The thirty-six questions contained in the instrument yield scores for the following six domains: scholastic competence, social acceptance, athletic competence, physical appearance, behavioral conduct and global self-worth. All of these scores are designed to demonstrate the participant's self-perception of these domains. One additional question was asked, which determined whether or not the individual had participated in previous structured swimming classes. The instrument yields a different score for each participant for each domain. The higher the score, the greater that individual's self-perception is in that given domain.

Results for the surveys were input into SPSS v 17.0. With the small sample size, a non-parametric measure was needed to analyze the data. The Wilcoxin Signed Rank test was selected, as it is a non-parametric test comparable to the paired t-test, which would be appropriate with a larger sample (Wilcoxin, 1945). This test is used when a normal distribution cannot be assumed. The results are broken down by each domain of the Self-Perception Profile for Children (Harter, 1985), and by the participant's previous participation in formal swimming classes. This was intended to determine whether or not the effects of the program were stronger for those who were participating in formal swimming classes for the first time. Results for each of the six domains follow.

Research Questions

The main research question for this study was “does a survival swimming program for youth have an effect on the participants, outside of survival swimming training?” The six sub-questions asked to inform the overall question were: “Does the program have an effect on the perceived scholastic competence of the participants?” “Does the program have an effect on the perceived social acceptance of the participants?” “Does the program have an effect on the perceived athletic competence of the participants?” “Does the program have an effect on the perceived physical appearance of the participants?” “Does the program have an effect on the perceived behavioral conduct of the participants?” “Does the program have an effect on the global self-worth of the participants?”

Answers to the six sub-questions follow, which are then used to make a determination on the overall question. The main research question is a difficult question to answer without the information provided by the sub-questions, and even with this knowledge, the answer may be somewhat subjective. P-values for each domain are described in the following table.

Table 1: Summary of P-Values for All Domains		Significant if p-value <.05	
Domain	P-Value: All Responses	P-Value: Previous Swimming Experience	P-Value: No previous Swimming Experience
Scholastic Competence	0.94	0.49	0.18
Social Acceptance	0.59	0.28	0.41
Athletic Competence	0.66	0.89	0.16
Physical Appearance	0.86	0.85	0.16
Behavioral Conduct	0.41	0.48	1.00
Global Self-Worth	0.32	0.22	0.56

Scholastic Competence

To answer the research question “does the Swim to Survive Program have an effect on the perceived scholastic competence of the participants,” relevant results were computed from the Self Perception Profile for Children (Harter, 1985). Results were computed for all participants; those with previous experience in a formal swimming program, and ones with no previous experience in a formal swimming program.

Table 2: Results for Scholastic Competence

All Participants					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
20	3.08	0.47	3.08	0.48	0.94
Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
16	3.10	0.46	3.15	0.43	0.49
No Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
4	2.96	0.57	2.83	0.65	0.18

For all participants, there was no difference in the mean for trial 1 and trial 2, and little difference in the standard deviation. The p-value indicates that the relationship between the two trials was not significant.

For participants who had previously participated in a formal swimming program, there was little difference in the mean and standard deviation between the two trials. The p-value indicates that the relationship between the two trials was not significant; however it was closer to significant than in the analysis of all participants.

For participants who had not previously participated in a formal swimming program, there was a slight change in the mean from the first to the second trial, with a

decrease in the mean for the second trial. The p-value indicates that the relationship between the two trials was not significant. Of the three analyses, this was the closest to significant. According to these results, the Swim to Survive Program did not have an effect on the perceived scholastic competence of the participants.

Social Acceptance

To answer the research question “does the Swim to Survive Program have an effect on the perceived social acceptance of the participants,” relevant results were computed from the Self Perception Profile for Children (Harter, 1985). Results were computed for all participants, participants with previous experience in a formal swimming program, and participants with no previous experience in a formal swimming program.

Table 3: Results for Social Acceptance

All Participants					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
20	2.93	0.43	2.96	0.34	0.59
Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
16	2.90	0.46	2.95	0.37	0.28
No Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
4	3.08	0.22	3.00	0.24	0.41

For all participants, there was little difference in the mean for the first and second trials, and a small decrease in the standard deviation. The p-value indicates that the relationship between the two trials was not significant, and was not close to significant.

For participants who had previously participated in a formal swimming program, there was little difference in the mean and a small decrease in the standard deviation from the first to the second trial. The p-value indicates that the relationship between the two trials was not significant; however it was much closer to significant than in the analysis of all participants.

For participants who had not previously participated in a formal swimming program, there was a slight change in the mean from the first to the second trial, with a decrease in the mean for the second trial. The p-value indicates that the relationship between the two trials was not significant, and was not close to significant. According to these results, the Swim to Survive Program did not have an effect on the perceived social acceptance of the participants.

Athletic Competence

To answer the research question “does the Swim to Survive Program have an effect on the perceived athletic competence of the participants,” relevant results were computed from the Self Perception Profile for Children (Harter, 1985). Results were computed for all participants, participants with previous experience in a formal swimming program, and participants with no previous experience in a formal swimming program.

Table 4: Results for Athletic competence

All Participants					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
20	2.98	0.54	2.95	0.62	0.66
Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
16	2.99	0.56	2.98	0.64	0.89
No Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
4	2.92	0.55	2.83	0.62	0.16

For all respondents, there was little difference between the mean and a slight increase in the standard deviation from trial one to trial two. The p-value indicates that there was no significant difference between the two trials.

For participants who had previously participated in a formal swimming program, there was little difference between the mean and standard deviation from trial one to trial two. The p-value indicates there was no significant difference between the two trials.

For participants who had not previously participated in a formal swimming program, there was a slight decrease in the mean and a slight increase in the standard deviation between trial one and two. The p-value indicates that there was no significant difference between the two trials, but the p-value was much closer to significant in this case. According to these results, the Swim to Survive Program did not have an effect on the perceived athletic competence of the participants.

Physical Appearance

To answer the research question “does the Swim to Survive Program have an effect on the perceived physical appearance of the participants,” relevant results were

computed from the Self Perception Profile for Children (Harter, 1985). Results were computed for all participants, participants with previous experience in a formal swimming program, and participants with no previous experience in a formal swimming program.

Table 5: Results for Physical Appearance

All Participants					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
20	3.06	0.47	3.05	0.31	0.86
Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
16	3.07	0.44	3.08	0.33	0.85
No Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
4	3.00	0.24	2.92	0.22	0.16

For all participants, there was little difference in the mean and a slight decrease in the standard deviation between trial one and two. The p-value indicates that there was no significant difference between the two trials.

For participants who had previously participated in a formal swimming program, there was little difference in the mean and a slight decrease in the standard deviation between trial one and two. The p-value indicates that there was no significant difference between the two trials.

For participants who had not previously participated in a formal swimming program, there was a slight decrease in the mean and little difference in the standard deviation between trial one and two. The p-value indicates that there was no significant difference between the two trials; however the p-value was much closer to significant in

this case. According to these results, the Swim to Survive Program did not have an effect on the perceived physical appearance of the participants.

Behavioral Conduct

To answer the research question “does the Swim to Survive Program have an effect on the perceived behavioral conduct of the participants,” relevant results were computed from the Self Perception Profile for Children (Harter, 1985). Results were computed for all participants, participants with previous experience in a formal swimming program, and participants with no previous experience in a formal swimming program.

Table 6: Results for Behavioral Conduct

All Participants					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
20	3.20	0.51	3.14	0.51	0.41
Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
16	3.22	0.39	3.16	0.47	0.48
No Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
4	3.13	0.96	3.08	0.74	1.00

For all participants, there was a slight decrease in the mean and no change in the standard deviation between trial one and two. The p-value indicates that there was no significant difference between the two trials.

For participants who had previously participated in a formal swimming program, there was a slight decrease in the mean and a slight increase in the standard deviation

between trial one and two. The p-value indicates that there was no significant difference between the two trials.

For participants who had not previously participated in a formal swimming program, there was a slight decrease in the mean and standard deviation between trial one and two. The p-value indicates that there was no significant difference between the two trials. According to these results, the Swim to Survive Program did not have an effect on the perceived behavioral conduct of the participants.

Global Self-Worth

To answer the research question “does the Swim to Survive Program have an effect on the perceived global self-worth of the participants,” relevant results were computed from the Self Perception Profile for Children (Harter, 1985). Results were computed for all participants, participants with previous experience in a formal swimming program, and participants with no previous experience in a formal swimming program.

Table 7: Results for Global Self-Worth

All Participants					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
20	2.89	0.55	2.84	0.51	0.32
Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
16	2.94	0.57	2.86	0.54	0.22
No Previous Swimming Experience					
Total Respondents	Trial 1 Mean	Trial 1 Standard Deviation	Trial 2 Mean	Trial 2 Standard Deviation	P Value
4	2.71	0.44	2.75	0.44	0.56

For all participants, there was a slight decrease in the mean and standard deviation between trial one and two. The p-value indicates that there was no significant difference between the two trials.

For participants who had previously participated in a formal swimming program, there was a slight decrease in the mean and standard deviation between trial one and two. The p-value indicates that there was no significant difference between the two trials.

For participants who had not previously participated in a formal swimming program, there was a slight increase in the mean and no change in the standard deviation between trial one and two. The p-value indicates that there was no significant difference between the two trials. According to these results, the Swim to Survive Program did not have an effect on the perceived global self-worth of the participants.

Summary

These results showed that there were no significant relationships between the two trials in any case throughout the experiment. While this was the case, there were several p-values that were nearly significant. Of note, athletic competence and physical appearance for participants with no previous formal swimming experience both yielded p-values of 0.16. While not significant, a greater sample size in a subsequent attempt at this experiment might show significant results.

The results show that the participant's self-perception in each domain was generally high. All means were higher than 2.5, which is the middle of the scale, many were higher than 3.0. This particular group of children seemed to have a high self-perception, and there was little difference affected on them by the application of the

program. Based on the results, the program did not have an effect on the participants outside of survival swimming training.

CHAPTER 5: DISCUSSION

This study attempted to determine whether or not there were changes in the self-perception of the participants in the Swim to Survive program. The research questions focused on whether or not six domains of self-perception changed after participating in this activity. With this line of questioning, and with the results of the study, it is important to look past the results and find ways to make future aspects of the study better; to improve the ability to learn about self-perception in children, and the capability of physical activity to affect this.

The obvious answer to all of these research questions, on the surface, is that the program did not have a significant effect on the participants with regards to their perception of their scholastic competence, social acceptance, athletic competence, physical appearance, behavioral conduct and global self-worth. The results, and the methods in which they were obtained, do leave room for some discussion, to determine the next course of action and the appropriate path for this line of research. This discussion should focus on how to obtain an appropriate sample, whether the instrument used was appropriate, and what additional demographic information would be useful to study. In addition to these procedural considerations, it is also important to explore other ways that young people are motivated to participate in physical activity and recreation. While this program's goal is to prevent drowning, it is important to consider other goals, including lifelong participation in recreation and physical activity. If this program can lead to further participation in recreational activity, then it becomes much more important in several contexts.

Instrument

The instrument chosen for this study was the Self-Perception Profile for Children (Harter, 1985). Based on the literature, this was an appropriate measure for this line of study. In practice, it seemed to be appropriate. The participants were able to understand the questions and answer them with few problems. This was not surprising; the instrument was tested and had held up as discussed in the literature review.

In addition to the instrument, it is possible in future studies to look for differences in different demographic aspects of the sample. This study asked whether or not the participants had previously participated in formal swimming lessons. Additional questions with a larger sample could include sex, age, and socio-economic background. This would provide greater depth to the study, and could show different results for the different groups. This would have been impractical in a pilot study such as this, but could be included in a larger-scale study that could yield different results based on sex, age, and other factors.

Harter has produced a number of different measures of self-perception. The Self-Perception Profile for Children (Harter, 1985) was chosen for this study because it was useful for the age group in question. It is possible that two of Harter's other scales could be used to compare other age groups to the measure used in this study. This would allow a larger number of participants, and would potentially yield different results based on age.

The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter, 1984) is used to measure preschool, kindergartner, first and second-grade children. This instrument looks at four domains; cognitive competence, physical

competence, peer acceptance, and maternal acceptance. Of these, physical competence and peer acceptance could be compared with athletic competence and social acceptance, respectively.

The Perceived Competence Scale for Adolescents (Harter, 1988) is used to measure competence in adolescents. This instrument looks at eight domains; close friendship, romantic appeal, job competence, scholastic competence, athletic competence, peer likability, physical appearance, and behavioral conduct. Of these, scholastic competence, athletic competence, peer likability, physical appearance, and behavioral conduct could be compared with scholastic competence, athletic competence, social acceptance, physical appearance and behavioral conduct from the Self-Perception Profile for Children used in this study.

Since these measures all came from the same author looking at the same line of study, and since a number of the domains seem compatible and similar, it makes sense that they could be compared. While the Swim to Survive program is aimed at grade three participants, it can be taken part in by children who are younger or older, so it may be valuable to look at these comparisons. It would be difficult to make any definitive conclusions based on the comparison on these measures, but it leads to further inquiry and discussion on the topic of self-perception for children of all ages. There is little question that these instruments build on each other, and are based on the same principles. This helps with the comparison of the domains, and could potentially lead to new knowledge in this line of study.

Motivation

Motivation to participate in leisure and physical activity is an important aspect of this line of study. If the results of this study are indeed correct, and this particular program does not have an effect on the participant's self-perception, and as such, their likelihood of increased participation in physical activity, then it becomes important to learn more about what motivates youth to participate. Looking into the motivational aspects of this, in addition to perceived athletic competence, two themes emerge in the literature that merit future study: family involvement and perceived choice in leisure opportunities.

Much of the study on family involvement has focused on adolescents. The literature review highlighted a number of studies that linked physical activity and leisure choices in early life to those later in life, so looking at new literature involving adolescent age groups is appropriate. Leisure involvement was affected by leisure motivation, and it was recommended that adolescents learn to be involved with leisure activities and receive support from their families (Chen, Li & Chen, 2013). Parents were found to play significant roles in leisure motivation for adolescents (McDavid, Cox & Amorose, 2012). The attitude and perceived behavioral control were significant predictors for adolescent intent to participate in family leisure (Taylor et al., 2012). Involvement by the father in family leisure was a strong predictor in family functioning (Buswell et al., 2012). Family leisure satisfaction was correlated with satisfaction for family life in general for the parent, youth and family level (Agate et al., 2009). This literature highlights the importance of family involvement in leisure.

Future research on a particular program, such as Swim to Survive, might include some research in the area of the family, and how they are able to motivate or de-motivate participation. Also, the leisure choices of the family as a whole may have an impact on the leisure choices of the individual later in life. There has been little research in this area, but one study did find that mothers have the potential to affect the future leisure choices of their daughters (McBride, 2012). Perhaps it would be appropriate to consider a longitudinal study on leisure participation through the life cycle based on the choices of the family early in life, and how that might impact the leisure choices of the individual later in life.

In order to affect change in the long-term health of individuals, it is important to allow the participants some choice into what activities they participate in. Gross et al. (2010) found that school-based leisure programs should be expanded, but due to the changes that occur as a child gets older, they should be engaged in the process of choosing the activities offered by schools. Choice was found to be an important aspect in physical education (Smith, Green & Thurston, 2009), and young women found it dissatisfying when they perceived that the choices in physical education were more geared towards a small number of more traditional sports (Flintoff & Scraton, 2001; MacPhail, Kirk & Eley, 2003). All of these affect the motivation of youth to participate in leisure activities, and will affect the likelihood of these individuals continuing to pursue leisure and physical activity throughout their lives.

Another area of research that appears to be significant and has gaps is the notion of perceived choice. If potential participants in leisure do not feel that they have a choice in what they pursue, it seems that they will be less likely to continue their participation in

leisure and physical activity. With the Swim to Survive program, it might be beneficial to look at the experiences of the participants, and whether or not they were forced to participate by someone else, such as their parents, or whether they chose the activity on their own. This could potentially lead to knowledge around how to encourage participation, and what level of choice the participant needs to have in order to continue pursuing the given activity.

Sample Size

In addition to these results, it is important to recognize the context with which they were collected. Much discussion should focus on the collection of an appropriate sample, and getting buy-in from groups, such as schools, that could most benefit from the information that this study could potentially yield. With appropriate participation from a representative sample, the results could be much different, and lead to further discussion and discovery about this program and its potential benefits.

The sample for this study was collected from community groups that were willing to participate in the program. Finding participants was difficult. Firstly, user groups needed to be found that would participate in the program. This is typically problematic as the focus of the program is on grade three students through the school system. Secondly, potential participants were sought from these user groups. With the need to approach different user groups and the difficulty in scheduling programs for these groups, this led to a smaller sample than originally intended for the study.

Another problem with the sample used in this study was the similarities of the participants. With a typical grade three class, one might find participants from different backgrounds, socio-economic status, and other factors that might give the sample some

differentiation. A user group such as those used in this study will likely yield participants of similar backgrounds. This does not give the sample the same differentiation, and makes the study less useful than it would have been with greater difference in the experiences and the backgrounds of the participants.

Sample Variations and Analysis

Since this study was intended to be a pilot study, the sample did not have much room for variation. Future attempts at this study with a larger sample could look at several different variables. This would give further breadth and depth to the study, and allow for different conclusions to come forward. In particular, it would be interesting to look at differences in sex, additional age groups, and from different areas of Nova Scotia. With a small sample it diminishes the use and transferability of the results, but with a much larger sample it becomes easier and more appropriate to analyze these factors.

It would have been particularly interesting if there had been more participants that had not previously participated in a swimming program. It is possible that these participants are more likely to be unaware of their swimming ability. As such, it stands to reason that they might be more likely to be affected by the program. This study only had four participants who had not previously participated in a formal swimming program. If future studies contained more participants with little swimming experience, it might show more of a change in perceptions of competence.

Recommendations for Practitioners

Firstly, practitioners need to make sure that physical activity programs are a part of the curriculum throughout school. This will give potential participants access to opportunities, which is clearly needed based on the literature.

Participants also need to be given a variety of options for participation. This might include some education on the benefits of potential choices. It is recommended that practitioners look at ways to engage the participants that will be benefitting from programs in schools or the community at large, and ensure that they are receiving the opportunities that they want. This is certainly a challenge, particularly in smaller communities, but to some extent the participants must have a choice, or at least a perceived choice, in what they are participating in.

Students are less likely to be physically active later in their school lives than they are in elementary school (Thompson & Wadsworth, 2012). This is important for practitioners to consider, as programs like Swim to Survive can possibly promote physical activity, and can become a part of the curriculum in schools. This could lead to future participation in swimming. By providing opportunities throughout the school system and linking with other groups in the community, it will likely improve the chances of students continuing to lead healthier lifestyles both in school, and for the rest of their lives.

Recommendations for Researchers

This study was intended to be a pilot study, which would potentially yield ways to make future studies more effective and appropriate. It would also determine good and bad things about the approach used, and determine the best ways to approach a future, more broad study of the subject in question. This study showed several aspects that were appropriate, and others that could be improved for future approaches to this topic.

Firstly, as described in the discussion on the sample, it is imperative that future inquiries into this subject get support from appropriate user groups. In this case, school

board approval would have gone a long way into making the sample more appropriate, and could have led to different results. It is difficult to control variables when the sample is selected from a group with unknown variables. Within a public school, the sample will have a variety of experiences, and will be more useful than a group of similar backgrounds. Since it can be difficult to gain access to the public school system, it is important to consider other groups that might be approached to partake in a similar study. This study used after school youth groups. Similar studies could approach church groups, scouting groups, or other sport groups as examples. It is important to note that the type of group used can have an effect on the overall results, so using a variety of different groups may provide more diversity of participants.

The methodology of this study, in the case of how it was carried out, seemed strong. The participants completed the instrument as a group, led by the principal investigator. The participants seemed to understand the questions, and were able to ask questions when needed. This was consistent with the literature. This approach should be taken in future adaptations of this study with this age group. It is likely that other age groups will require different approaches.

As a pilot study, it was feasible for the principal investigator to supervise and guide the full set of participants through the survey. With a larger sample, it will likely require a number of assistants to ensure that the surveys are completed properly and consistently. This will require a training aspect for these assistants, and this will need to be created and monitored to ensure consistency in the results.

Future Research Possibilities

This study showed several different directions that the research can go. All of the research questions were not answered definitively given the sample size. However, since none of them ended up with a positive response, the proper framing of future research can be informed. Given these results, it is important to look back at the literature in order to show alternate directions for future research, along the same lines as this study.

Firstly, previous research has shown that individuals with higher perceived athletic competence are more likely to participate in physical activity, which relates to the overall experience that the participants have. This did not happen in this study, so another way to look at this would be to see what types of activities that the participants choose. For example, a longitudinal study on the participants in the Swim to Survive program to see if they choose swimming as a recreational activity in the future. Or perhaps they choose other activities, and there may be reasons for that as well.

Since the participants did not show significant difference between the first and second trial in this study, another possible research area would be to see if the participant's experience was affected by their results in the program. If a participant is told that they pass the course, would that lead them to choose swimming more so than an individual who does not pass the course? Or is it merely the participation that has the effect on their perceived competence? A comparison could be made between those who successfully completed the course and those who did not, and see if those who passed have a higher level of perceived athletic competence.

Another possibility for future research is to see if the actual time in the water has an effect on the participant's experience. For example, would a participant who only

attends two classes have a different experience than one who attended all three classes? Perhaps if the program were expanded, one could compare participants who went to five classes as opposed to three. What is the likelihood that a participant who took part in five classes has a more positive experience than one who took part in three classes?

Given the lack of positive results with this study, it might be ideal to look at the perception of choice, as indicated in the literature. Did the participants choose this activity willingly? Did they feel forced to participate? How can programmers and parents empower their children to feel that they have some choice in the activities that they are participating in? With this study, questions around the feeling of choice that the participants may or may not have had with regards to participating in the program.

Another possibility would be to look into some qualitative inquiry with the participants. While this study did not have significant results, it is possible that there were reasons that were not possible to explore through a survey design. Interviewing the participants about their experience in the program, and how their self-perception may have changed throughout the program, might show some different themes that could be explored. This inquiry could also include looking into the role of the parent in the choice and participation in the program.

Conclusion

This study did not determine whether or not the participant's perceived competence was affected by the Swim to Survive program. With the position of this as a pilot study, it was able to yield valuable information on how to conduct this study in the future. With the proper modifications and an appropriate sample, this study would likely have shown different results. The study did have strengths, such as the instrument, that

will be valuable in future inquiries into the self-perception of children and youth, and will potentially yield new ways with which to motivate participation in physical activity throughout the lifespan.

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APPENDIX A

Sample Question from Self-Perception Profile for Children (Harter, 1985)

What I Am Like

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
(a)	<input type="checkbox"/>	<input type="checkbox"/>	Some kids would rather play outdoors in their spare time	BUT	Other kids would rather watch T.V.	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX B

Consent Form

Study title: **EXPLORING THE EFFECT ON THE SELF-PERCEPTION OF YOUTH PARTICIPATING IN A SURVIVAL SWIMMING PROGRAM**

Degree Program: **Master of Arts, Leisure Studies**
School of Health and Human Performance
Dalhousie University

Research Supervisor: **Dr. Laurene Rehman**
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If you have any questions, comments or concerns about the study, please contact Michael Maguire.

Introduction

Your child is invited to take part in a research study being conducted by Michael Maguire, who is a graduate student at Dalhousie University, as part of his Masters in Leisure Studies program. This research study is about the effects of the Swim to Survive program in which your child will be taking part in.

Your child's participation in this study is **voluntary** and they may **withdraw from the study at any time**. They may **refuse to answer any questions** that they are not comfortable in answering, and are able to **stop the survey at any time**.

The study is described below. This description tells you about the risks, inconvenience, or discomfort which your child might experience. Participating in the study might not benefit you or your child, but we might learn things that will benefit others. If you have any questions about the study, please contact Michael Maguire (telephone (902) 488-7184 or email mmaguire@dal.ca).

Purpose of Study

The purpose of this study is to determine what effects the Swim to Survive program has on how the participants feel about themselves. The main goal of the program is to prevent drowning in Canada, but there may be other benefits to the program that we do not know about. We want to find out if this program has any affect on what the participants think about themselves; their self-perception. The program consists of one class, lasting approximately one hour. Given the short time of this program, it is important to find out if the classes are enough to have any benefits to the participants, and whether it gives them positive or negative feelings about themselves.

Study Design

If you and your child decide to participate in this study, they will be asked to complete two written surveys. The first survey will be completed before their swimming class, and the second will be completed after their swimming class. These surveys will

ask questions about what your child is like, from their point of view. The survey will be done in a group, and the lead researcher will lead your child through each question. Once the survey is completed, the lead researcher will collect it. Only Michael Maguire and Dr. Laurene Rehman will have access to your survey answers. The surveys will be stored in a locked filing cabinet on campus at Dalhousie University for five years, and then they will be destroyed.

Who can take part?

All students in your child's club will be invited to participate. Any student who has taken part in all or part of the Swim to Survive classes offered to their club will be able to complete a survey for the study. All participants must receive permission from their parent/guardian in addition to their own permission before they can participate. Parental/guardian permission is obtained by signing this consent form. Permission from the participant will be obtained verbally on the day of the survey.

Who will be doing the research?

Michael Maguire will be doing the research, with assistance from his supervisor, Dr. Laurene Rehman at Dalhousie University.

What your child will be asked to do

Your child will be asked to complete two written surveys. This will be done during the after school program. Each survey will take approximately thirty to forty-five minutes to complete. The first survey will be given before the Swim to Survive class, and the second survey will be given after the Swim to Survive program has finished. The surveys are about what your child thinks about themselves. They will be given four choices for each question, and they will circle the choice that is most like them.

Possible risks or problems

This survey will ask your child questions about their self-perception. This could potentially lead to negative thoughts, which could potentially upset your child. If your

child becomes upset by any question, or does not want to continue, they will be given another activity by their teacher to work on while the rest of the class finishes the survey.

The participants will be told to keep their responses to themselves, and to not look at other participant's answers. The students will be told to report any instance of someone trying to see their answers to the principal investigator or their teacher.

It is also possible that your child's club leader will learn some of the responses of your child. The club leader may be involved in assisting any students who are having difficulty answering a given question, and will be instructed not to view the answer that the participant checks off, but it is possible that they will see some of them.

Payment

There will be no compensation paid for participating in this study.

Privacy

No names will be used in any reports from these surveys. The only individuals who will know that you participated will be the club leaders and Michael Maguire. At no time during this survey, aside from this consent form, will the lead researcher ask for your child's name. The name of your child's club will not be used in the report, nor will the names of any of their instructors. It would be very difficult to identify your child from the survey. The surveys will be kept in a locked cabinet on campus at Dalhousie University, and will be destroyed after five years. The consent forms will be kept separately from the data.

Questions

If you have any questions about the study, please contact Michael Maguire (telephone (902) 488-7184 or email mmaguire@dal.ca). Any concerns that you have should be dealt with in this manner before you consent to your child's participation.

Problems or concerns

If you have any difficulties with, or wish to voice concern about, any aspect of your participation in this study, you may contact Patricia Lindley, Director of Dalhousie

University's Office of Human Research Ethics Administration, for assistance at (902) 494-1462, or by email at patricia.lindley@dal.ca.

I have read what this study is about. Any questions I had about this study were answered by the Principal Investigator, either by telephone or email. I consent to my child taking part in this study. I understand that taking part in this study is COMPLETELY VOLUNTARY and that my child can stop at any time or refuse to answer any questions. My child will be required to give oral assent to the principal investigator before they complete the survey.

Full Name of Parent/Guardian (Please print):

Full Signature:

Dated:

Full name of child (participant):

Verbal assent obtained (in classroom, circle): YES NO

Please indicate if you would like a copy of the results of this research:

Yes No

If yes, please provide email address or home mailing address, including postal code on line below. Results will be emailed as a .pdf file when ready or a hard copy will be mailed if that is preferable to you.

Thank you.