

**An experimental study to measure the impact of a short-term disability awareness campaign on attitudes of primary school learners towards peers with physical disabilities**

دراسة تجريبية لقياس تأثير حملة توعية قصيرة الأجل بالإعاقة على اتجاهات متعلمي المدارس الابتدائية تجاه أقرانهم ذوي الإعاقات الجسدية

by

**ELAHE NASERI RAD**

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## **ABSTRACT**

The trends and practices are geared at a high intensity towards inclusive education in schools, but local research behind its effectiveness is yet unknown. Internationally, it is agreed upon that one key factor hindering inclusive education is negative peer attitudes (Lindsay & Edwards 2013). In order to achieve successful inclusion, one prerequisite that must be in place is peer education and training to increase acceptance of students with physical disabilities. A multi-method physical disability awareness campaign was created with the aim of measuring student attitudes towards peers with physical disabilities. This campaign targeted students in grades 4, 5 and 6 at a non-profit school in Dubai. The aim of this study was to measure the effectiveness of the campaign on the different components of attitude: cognitive, behavioural and affective. It was also important to assess how gender and previous exposure to physical disability affected these results.

The participants included 612 students from grades 4, 5 and 6; aged 8-11 years, all part of the intervention group. The intervention was a 2-hour session per class, held with the researcher. This session consisted of a focus group, baseline questionnaire, and the information session. A pilot study was conducted prior to implementation in one class. The Chedoke-McMaster Attitudes Towards Children with Handicaps Scale (CATCH) was utilized to assess the different components of attitude (cognitive, behavioural and affective) at baseline (T0) before intervention, post 1-week (T1), and post 5 months (T2) after intervention.

Data was analysed using SPSS with the 3 components of attitude being the main variables. Data was analysed based on mixed method model and one-way ANOVA analysis. The results indicate

that the disability awareness program 'Let's Include!' was successful in enhancing overall positive attitudes of students towards peers with physical disabilities from baseline to T2 (P-value<0.05), (difference= 2.16). While the cognitive attitude results scored the lowest at T0, it also had the highest significant change at T2 with 1.80 units more than T0. Affective and behavioural attitude responses did not display any significant change over the 5-month period.

Gender played an important role on the results, with girls consistently displaying more positive attitudes towards SWPD than boys. The final variable was that of previous exposure to physical disability. Those with previous exposure scored better at the T0, but the non-exposed group benefitted the most from the intervention by scoring the most significant change at 2.15 units more than baseline. The results of this study can help set the stepping stones for future studies on peer attitude and acceptance. It could also be used to incorporate disability awareness into a carefully designed school curriculum by targeting the areas more resistant to change, such as behavioural attitude.

## SUMMARY IN ARABIC

تتجه الاتجاهات والممارسات بكثافة عالية نحو التعليم الجامع في المدارس ، لكن الأبحاث المحلية التي تكمن وراء فعاليته غير معروفة بعد. على الصعيد الدولي ، تم الاتفاق على أن أحد العوامل الرئيسية التي تحول دون التعليم الجامع هو مواقف النظراء السلبية (ليندساي وإدواردز 2013 ؛ بوير وآخرون 2013). من أجل تحقيق الاندماج الناجح ، أحد الشروط الأساسية التي يجب تنفيذها هو تعليم الأقران وتدريبهم لزيادة قبول الطلاب ذوي الإعاقات الجسدية. تم إنشاء حملة متعددة للتوعية بالإعاقة الجسدية بهدف قياس اتجاهات الطلاب تجاه أقرانهم ذوي الإعاقات الجسدية. استهدفت هذه الحملة الطلاب في الصفوف 4 و 5 و 6 في مدرسة غير ربحية في دبي. كان الهدف من هذه الدراسة هو قياس فعالية الحملة على مختلف مكونات المواقف: المعرفية والسلوكية والعاطفية. كان من المهم أيضًا تقييم كيف أثر نوع الجنس والتعرض السابق للإعاقة البدنية على هذه النتائج.

وكان من بين المشاركين 612 طالبًا من الصفوف 4 و 5 و 6 ؛ الذين تتراوح أعمارهم بين 8-11 سنة ، كل جزء من مجموعة التدخل. كان التدخل جلسة لمدة ساعتين لكل فصل ، عقدت مع الباحث. تألفت هذه الجلسة من مجموعة بؤرية ، استبيان أساسي تجاه Chedoke-McMaster ، وجلسة معلومات. أجريت دراسة تجريبية قبل التنفيذ في فصل واحد. تم استخدام اتجاهات لتقييم المكونات المختلفة للموقف (المعرفي والسلوكي والعاطفي) في الأساس (CATCH) الأطفال الذين يعانون من عائق المقياس. بعد التدخل (T2) ، وبعد 5 أشهر (T1) قبل التدخل ، وبعد أسبوع واحد (T0).

مع 3 مكونات الموقف كونها المتغيرات الرئيسية. تم تحليل البيانات بناءً على نموذج الطريقة SPSS تم تحليل البيانات باستخدام أحادي الاتجاه. تشير النتائج إلى أن برنامج التوعية بالإعاقة هيا بنا! كان ناجحًا في تعزيز المواقف ANOVA المختلطة وتحليل الفرق = 2.16). ، (P < 0.05) قيمة T2 الإيجابية الشاملة للطلاب تجاه أقرانهم من الإعاقات الجسدية من خط الأساس إلى حيث زاد T2 1.80 ، إلا أنها حققت أعلى تغيير ملحوظ في T0 بينما سجلت نتائج المواقف المعرفية أدنى مستوى لها عند لم ردود الفعل العاطفية والسلوكية لا تظهر أي تغيير كبير على مدى فترة 5 أشهر. T0 وحدة عن

لعب النوع الاجتماعي دورًا مهمًا في النتائج ، حيث أظهرت الفتيات بشكل مستمر اتجاهات أكثر إيجابية تجاه الأولاد أكثر من T0 الأولاد. وكان المتغير الأخير هو التعرض السابق للإعاقة الجسدية. سجل الأشخاص الذين تعرضوا سابقًا لنتائج أفضل في ، لكن المجموعة غير المكشوفة استفادت أكثر من التدخل من خلال تسجيل التغيير الأكثر أهمية عند 2.15 وحدة أكثر من خط الأساس. يمكن أن تساعد نتائج هذه الدراسة في وضع حجر الأساس للدراسات المستقبلية حول موقف النظراء وقبولهم. يمكن استخدامه أيضًا لدمج الوعي بالإعاقة في المناهج الدراسية المصممة بعناية من خلال استهداف المناطق الأكثر مقاومة للتغيير ، مثل السلوكية.

## **DEDICATION**

This dissertation is dedicated to the loved ones who have touched my life in the most amazing ways. To my mother, for teaching us the importance of education regardless of age. To my father, for dedicating his entire life to ensuring our comfort and happiness. To my husband, for encouraging me along the way and being there for me patiently. Last but certainly not least, I dedicate this dissertation to my beautiful children; Taha, Noor and Omid. You are my world. Thank you for being the joys of my life and for patiently counting the words in this dissertation and the days to my deadline. You have taught me how to love, laugh and live better.

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## **LIST OF ABBREVIATIONS**

SWPD	Students with Physical Disabilities
PD	Physical disabilities
DAP's	Disability Awareness Programs
CATCH	Chedoke-McMaster Attitudes Towards Children with Handicaps
KAK	Kids Are Kids

# CHAPTER 1: INTRODUCTION

## 1.1 Statement of the Problem

Social acceptance of disability has not been without its debates and controversies. Barriers to physical disability have the potential to be eliminated. This elimination process of bad or negative attitudes requires research into its depth and scope and its impact on society. Once the effects of negative attitudes, as well the benefits of positive attitudes are uncovered in any given environment, it naturalizes the process of creating positive impressions in attitudes and perceptions. Under the influence of the UN Salamanca Convention (1994), inclusive education in the UAE was deemed as the right of every child irrespective of abilities or lack thereof (MOE 2018). Inclusive education involves allowing fair access to educational services and facilities in mainstream schools for children with disabilities to study alongside other typically developed peers. These changing regional educational trends created the need for further research to ensure efficiency and effectiveness of inclusive education.

With the ratification of UAE Federal Law 29/2006 as well as Dubai's initiative of achieving a disability friendly city by 2020; inclusive school practices became the norm and arrangements were made to accommodate these changes in education ([www.governemnt.ae](http://www.governemnt.ae)). While the benefits of inclusive education are proven for all parties involved (Pijl & Frostad 2010; Edwards et al 2003; Farrell & Ainscow 2002), other research also proves that placement doesn't guarantee acceptance (Lindsay & Edwards 2013; Ison et al 2010). Undoubtedly, the first step to achieving successful inclusive education of Students with Physical Disabilities (SWPD) remains to be the actual

placement into mainstream classrooms. To achieve effective inclusion, other factors must also be present. The Social Model of Disability states that societal views on disability are potentially more harmful and limiting than the physical disabilities (PD) (Barney 2012). The topic of peer attitudes towards SWPD is a much researched area with predominantly similar results, hinting to its importance in inclusive education. The topic of peer attitudes in acceptance of special needs is especially important to the researcher. This is due to her being an educator and mother. As a parent and educator, her aim is to improve and enhance her children and other students' acceptance of peers with physical disabilities.

While various conflicting theories surrounding inclusive education and physical disability exist, majority of the research has consistently proven one important aspect. The results from such studies reveal that awareness, education and training are crucial in transforming negative attitudes to positive ones. Hence, resulting in positive behavior, perceptions and increased acceptance of SWPD by their typically developed peers (Shokoohi-Yekta & Hendrickson 2010; Boer et al 2010); Beaulieu-Bergeron & Morin 2016; Tavares 2011).

The results from previous studies have created a need to understand how information and awareness impacts attitudes. One popular method is through disability awareness programs (DAP's) which comprise of a single or multiple methods of information delivery (Nario-Redmond et al 2017; Campos et al 2014). Disability awareness programs are used to measure short, medium and long term impacts of education on attitude change. If targeted at increasing peer knowledge through increased exposure and education, DAP's are more successful at breaking down stereotypes, and improving peer attitudes and perceptions. This process is easier done when

targeting the younger age groups. While most awareness campaigns have proven effective in one or more aspect of attitude change (Ison et al 2010), there have also been cases which resulted in negative changes (Lindsay & Edwards 2013). The media and method used has an impact on effectiveness and duration of impact on attitude change (Magnusson et al 2016). The reviewed studies concur that a multiple method approach leads to increased effectiveness of the intervention (Lindsay and Edwards 2013; Hurst et al 2012).

## **1.2 Purpose and Objectives**

In Dubai, some research has been conducted on teachers' attitudes and perceptions towards inclusive education. Most of the results reveal that these perceptions are negative mainly due to a lack of information and sufficient teacher training (Gaad & Khan 2007; Al Ghazo & Gaad 2004). Research on peer attitudes and perceptions in the area is minimal if not scarce. The importance of peer acceptance on successful inclusion has been well established among educational researchers with no room for doubt. This gap in research and the city's aim of being disability friendly soon, creates the urgent need to understand regional peer perceptions to aid in inclusion of students with physical disabilities (SWPD). The current study is a result of the gap in research and lack of knowledge over peer attitudes and perceptions towards peers with PD in Dubai schools.

This study sets out to measure the effectiveness of a multi-method physical disability awareness campaign in a primary school on the different components of attitude: cognitive, behavioral and affective. The campaign will be used to measure children's attitudes towards peers with PD to highlight the effectiveness of the intervention method used in creating positive attitudinal changes.

The short-term physical disability awareness program is aimed at primary school children in grades 4, 5 and 6 at a Dubai school. This intervention will measure students' attitudes and perceptions before the intervention Baseline (T0), after by a week (T1) and 5 months after the intervention (T2). The program consists of a 1 hour and 30-minute program preceded by a focus group and a baseline (T0) questionnaire.

A multi-method approach will be used to introduce the subject of physical disability and acceptance of SWPD in classrooms and as friends. Children will be given information, asked to watch videos on the topic as well as success stories of accomplished people living a full life with PD. Students opinion will be measured using the Chedoke-McMaster Attitudes Towards Children with Handicaps (CATCH) questionnaire (Armstrong 1986). This questionnaire is designed to measure all 3 components of attitude: the affective, behavioral and cognitive components. The data collected on attitudes and perceptions will then be measured against the variables of gender and prior exposure to disability. The campaign results will display the impact of the variables on attitude change. The results of this study can be used to incorporate physical disability awareness into school curriculums and pave the way for further research in this field.

### **1.3 Research Questions**

This study is the first of its kind in Dubai and it aims to answer three main questions with varied variables. The three main research questions are:

1. What is the impact of the DAP 'Let's Include!' on the three components of attitude (cognitive, behavioral and affective) at the three time intervals of baseline, post one-week, and post 5-months?
2. Was the disability awareness program 'Let's Include!' successful in improving children's attitudes towards people with physical disabilities?
3. How do the variables of gender and previous exposure to physical disability impact the effect of the DAP on the 3 components of attitude?

#### **1.4 Rationale for the Study**

Inclusive education may have begun with a UN Convention, but it has since evolved into international, national and state laws making inclusive education compulsory (MOE 2018). This compulsion created the need for understanding the requirements of successful inclusion to benefit and achieve success for all involved. Peer awareness to improve attitudes has been studied in much detail internationally (Lindsay & Edwards 2013). Locally, however, there exists a huge gap in studies of peer attitudes in Dubai. Hence, this study will be the first of its kind to begin bridging the gap and setting the stepping stones for future research and awareness training.

The topic researched is of great importance to the researcher due to her being an educator, parent, and an advocate of inclusive education. Her vision of accomplishing education for all and ensuring equality amongst children was the driving force behind the research. Many researchers are focusing on inclusive education for students with autism, dyslexia, intellectual disability, physical disability, etc. While not negating the importance of special needs research in inclusion, the context

of inclusion must also be researched. Hence the researcher opted to begin studying peer attitudes towards physical disability to better understand the context of inclusion. Another aim was to create positive attitude changes and measure them accordingly. These efforts are to ensure future research, educators and curriculum writers have better guidance and understanding of the acceptance in inclusive settings.

While research states that effective inclusion requires peer acceptance, majority agree that it isn't always achieved in schools (Adibsereshki & Salehpour 2012; Farrell & Ainscow 2002). Through this study, the educator sought to inform and open the minds of primary school children into being more accepting of fellow schoolmates with physical disabilities. Research consistently proves that peers with physical disabilities are more likely to be accepted than peers with intellectual disabilities (Godeau et al 2010; Alaedini 2017). Hence, acceptance of physical disability would serve as the precursor to educating students into accepting peers with intellectual disabilities. This study chose to educate and enhance attitudes towards physical disability first because it would have been an easier first step. Once the students have been educated and acceptance of physical disability is in place, then schools and curriculums can begin to focus on acceptance of intellectual disability and other special educational needs.

## **1.5 Structure of the Dissertation**

The current dissertation is arranged in 5 chapters. The first chapter contains the introduction, statement of the problem, purpose and objectives, research questions, and rationale. Chapter two discusses the literature reviewed, various theories studied, conceptual analysis, different DAP's,

and disability awareness in curriculum and for teachers. The chapter concludes with the importance of research on attitudes with respect to the current study. Chapter three details the methodology, research questions, instruments and approaches undertaken; as well as data collection and analysis. Chapter four displays the results of all aspects of the study while linking to the relevant literature reviewed. Chapter five provides the conclusion, key findings, limitations, future recommendations, and reflections.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Theoretical Framework**

The Universal Declaration of Human Rights was adopted in 1948 by the United Nations General Assembly (UNDHR 2015). Article 26 of the Declaration states that everyone has the right to a free and appropriate education, irrespective of gender, race, colour and religion (UNDHR 2015). While this Declaration is equitable and moral, the question remains: how effective is its implementation by governments in meeting the rights of all citizens to appropriate education? In many parts of the world, children are being excluded from formal education for many different reasons. One such reason is the different needs and abilities of students, and schools' inability to cater to them due to time or resource constraints (Gaad & Khan 2007). In an initial attempt to provide education for all, many countries set up 'special schools' to ensure that the disabled students were not left out. Hence creating two separate education systems: regular/mainstream and special education.

Traditionally, typically developed students attended mainstream schools, while students with disabilities attended 'special schools' or none at all depending on the disability and/or availability of schools. Over the past few decades, equality in the education provided to children has developed and progressed drastically. This progress comes in the form of 'inclusive education'. Inclusive education places students with disabilities in mainstream classrooms alongside typically developed peers. One early example of inclusion was in 1977 when the Italian educational ministry swapped the 'special schools' and opted for inclusive education (Cornoldi et al 1998). This success story saw the inclusion of students with disabilities in mainstream schools long before other countries

were onboard with this venture. In the past few decades, doubt has been created regarding the effectiveness of ‘special schools’ and has been the subject of much debate. These reservations and the changing trends in the educational system paved the way for more equitable endeavors in many countries.

In 1994, under the advocacy of the United Nations Salamanca Convention, many other countries took the initiative to diminish the presence of special schools for students deemed educable in mainstream schools (UNESCO 1994). It was under this umbrella that many countries began implementing inclusion in mainstream schools (National Report of Iran 2008; Gaad & Arif 2008). The U.A.E. was among the many countries to accept and implement inclusion practices with disabilities in the educational sector (MOE 2018). The U.A.E. ratified the Federal Law 29/2006 which provided legal rights for people with disabilities and further confirmed Dubai’s attention to persons with disabilities. To support the 29/2006 Law, HH Sheikh Mohammad Bin Rashid Al Maktoum issued Law No. (2) of 2014 in order to protect the rights of persons with disabilities in the emirate of Dubai (UAEMOF). Since then special provisions have been made in areas such as airports and hotels, streets and vehicles, special schools, sign language government call centers, employment programs, and special cards offering discounts at various places.

## **2.2 Conceptual Analysis**

This nation’s commitment to the inclusion movement has remained strong and steadfast, evident in the ratification of 2017 Law No. (13) which changed the name of the Higher Committee for the Protection of the Rights of Persons with Disabilities to the Higher Committee for the Protection of

the Rights of People of Determination (UAEMOF). In addition, all government service entities were ordered to appoint a person dedicated to providing services for people of determination (Gulf News July 02, 2017). These events resulted in a nation-wide move to have students with disabilities included and catered to in U.A.E. schools (Alborno & Gaad 2014). This gave rise to various researches conducted to assess the requirements for effectively including students with disabilities into schools and workplaces (Gaad & Thabet 2009). Other initiatives involved creating job opportunities for People of Determination (Alborno & Gaad 2012) as well as creating work opportunities for unemployed women as teachers' assistants to facilitate the inclusion of students of determination (Gaad 2015).

Dubai has embarked on a challenging initiative of ensuring the entire city is disability-friendly by 2020, including provisions in older buildings and public facilities (Khaleej Times 2017). However, these measures take into account the physical barriers of our society without eliminating or altering the social stigmas and attitudinal barriers. Giving heed to the theory that placement is sufficient to ensure inclusion (Campos et al 2014). The initial claim surrounding inclusive education was that it was the most effective means of defeating discriminatory attitudes and creating an inclusive society (UNESCO 1994). This statement was based on the notion that SWPD attending mainstream schools would have increased interactions and opportunities at creating friendships with typically developed peers (Boer 2012).

### **2.3 Review of related literature**

Allport's 'contact theory' and Zajonc's 'mere exposure' theory support this claim by stating that the mere inclusion of SWPD will guarantee favorable attitudes and diminish stereotyping by

increasing exposure and contact (Alves & Santos 2013; Lindsay & Edwards 2013). Various research papers have corroborated these theories, indicating significant changes in attitudes as a result of exposure (Rillotta & Nettlebeck 2007; Rosenbaum et al 1986), while others (Godeau et al 2010) claim otherwise. In previous research, attitudes were measured immediately after the exposure; while Godeau et al (2010) measured attitudes 8 months after the initial baseline data collection. The results of this study indicate that changes in attitude resulting from exposure are insignificant and short-lived, suggesting that other factors must play a role in the success of inclusion.

One major theory affecting current status of inclusive education is the Social Integration Theory which aims for equivalent participation in events by all children. This increased participation leads to feelings of belonging and complete social integration (Adibsereshki & Salehpour 2012). According to the same study, in the absence of constructive social participation and sense of belonging, negative effects will be placed on the person and society. Initially, society and its Medical Model of Disability had disadvantaged people with PD by claiming that they are incapacitated due to their impairments. With this medical model, bodily differences or malfunctions must be treated or repaired (Smeltzer 2007). This model of disability suggests that individuals with disabilities are incapable of leading successful and independent lives. It also relieves society of any responsibility to increase access opportunities to individuals with disabilities, and insinuates that disability is a personal battle not a societal concern (Barney 2012).

As a response to the crippling Medical Model of Disability, individuals with disabilities came up with the Social Model of Disability in order to eliminate barriers to social integration and promote

inclusion (Adibsereshki & Salehpour 2012). This model of disability was derived from the British disability movement (Adibsereshki & Salehpour 2012). One factor of this movement suggests that disability is not a medical impairment of the body, rather a form of social harassment of using obstacles to prevent full integration of individuals with disabilities into society. It also implies that medical intervention is not the sole solution, but must be accompanied by a change in social perspective and behavior (Adibsereshki & Salehpour 2012). Despite having been widespread for quite some time, The Social Model of Disability has not been accepted unanimously. One reason could be that different organizations have defined the word disability very differently and have not come to an agreement on this (Barney 2012). This discord has made it even more challenging to universally accept and adopt this model of disability.

The rise in popularity of the Social Model of Disability saw the need for Disability Studies as an academic field (Barney 2012). In order to better understand and develop in this field, one must reflect on previous works of Piaget and Vygotsky on the topic of development. Piaget suggested that social experimental learning was followed by development (Cassiere 2017) while Vygotsky disagreed. Lev Vygotsky theorized that children learn by their social interactions with other children and adults/educators around them (Vygotsky 1978). He also highlighted the importance of the adult/educator as the capable person in assisting or ‘scaffolding’ a child’s learning and development (Slavin 2006). This suggests that the current lack of disability awareness among youngsters could be a result of the absence of teacher modeling behavior (Cassiere 2017). In order to have positive teacher behavior to elicit modeling by the students, schools must ensure that teachers receive disability sensitivity training and are equipped to positively handle any situations that may arise.

Vygotsky also believed that disability came in two forms: the first being the physiological impairment, and the second being the social factors that inhibit an individual and create social barricades to interactions (Vygotsky 1978); (Cassiere 2017). Secondary disabilities occur when the ‘adults’ perceive inclusion to be sufficient to create positive experiences (Cassiere 2017). Thus creating an increased urgency for the importance of teacher training and awareness for teachers before attempting to alter peer attitudes (Cassiere 2017).

As established earlier, inclusion isn’t solely the presence of students with disabilities in mainstream classrooms; it also encompasses the social relations of that child as well others’ attitudes and emotions towards them. Inclusion of SWPD does not automatically guarantee peer acceptance; which is an essential requirement for successful inclusion (Farell & Ainscow 2002; Adibsereshki & Salehpour 2012). Based on the relevant research outlined below, acceptance of physically disabled students in inclusive schools is heavily reliant on the attitudes, perceptions and behaviors of typically developed peers. Thereby creating a need for further and more detailed research into the factors affecting acceptance and allowing for successful inclusion to take place.

To carry out effective and meaningful research, relevant previous works must be studied and analyzed to maximize the efficacy of the current research being conducted. Hence, the following section will list the various definitions and relevant theories from associated literature regarding disability, inclusion and acceptance; along with results of various DAPs. It will also include results from previous research on peer attitudes globally, as well as the existing methods that ensure

validity and reliability of results. Other scholarly works indicating the rationale and importance of embedding DAPs within the curriculum will also be referred to.

The first and most important definition is by the Americans with Disabilities Act (1990) suggesting a person living with a disability is one that has significant limitations in one or more of life's major activities (ADA National Network, 2018; Barney 2012). However, as worldwide practice has indicated repeatedly, acceptance of SWPD in classrooms requires more than mere placement (Zajonc 1968; Ison et al 2010). The growing attention to inclusive education globally has created the urgency of further research in favor of ensuring acceptance of students with disabilities in schools. Inclusive education is defined as the continuous process of providing education for all students without any form of discrimination, by ensuring respect for the diversity in needs, abilities, characteristics and expectations of students (Campos et al 2014).

As stated, the concept behind inclusive education began with the need to provide equal opportunity in education for all children (UNESCO 1994). However, more recently, the focus has shifted towards the social aspect of inclusion, which refers to the interaction with peers, acceptance, friendships and societal self-perception (Boer et al 2012). The reason for this is the notion that all students with varied abilities can gain from the social rewards of schooling together (Boer et al 2012) and that true inclusion cannot exist without social integration (D'Alessio 2011). Many scholarly works support this notion by proving the benefits of inclusive education for all children, regardless of abilities (Pijl & Frostad 2010; Edwards et al 2003; Farrell & Ainscow 2002). Irrespective of laws, research and effort required in implementing inclusive education, the fact remains that acceptance of disabled students by typically developed peers is not guaranteed

(Lindsay & Edwards 2013; Ison et al 2010). Based on abundant recent research, this acceptance is heavily reliant on attitudes of typically developed peers towards students with disabilities (WHO 2001).

The focus on creating positive peer attitudes in inclusive schools is now considered an undermining factor to the success of inclusion, even suggesting that negative attitudes can be as hindering as physical barriers (Stoneman 1993). Despite the amount of research conducted on the topic of attitudes and successful inclusion, no uniform definition of 'attitude' has been designated. Hogg and Vaughan (2005) defined attitudes as opinions, thoughts, emotions and behavioural tendencies regarding an event of social importance (Beckett 2013). Another broad definition is that an attitude is a person's opinion or disposition concerning a thing, person or an idea (Boer 2012). Attitudes are composed of three parts and subject to the kind of responses elicited: cognitive, affective, and behavioural (Eagly & Chaiken 1993; Triandis 1971). A person's idea or understanding of an object is considered the cognitive component of their attitude. The affective component of attitude is considered the feelings held about the object. The final component is behavioral, which refers to a person's predisposition to behave in a certain way towards an object (Boer 2012). All three parts affect inclusion of students with disabilities therefore ways to modify them must be studied.

We have established that an inclusive environment alone doesn't warrant unprompted relations (Diamond & Tu 2009; Rillotta & Nettlebeck 2007). This is not to say that inclusion alone is ineffective, but that it isn't sufficient considering the negative stigmas and stereotypes of physical disability in today's society. Recent research suggests that placement of students with disabilities

neither ensures acceptance nor proves adequate in creating positive attitudes towards SWPD (Campos et al 2014; Lindsay & McPherson 2012). Rillotta & Nettlebeck (2007) and Tavares (2011) deduced that children need to be in a structured environment with adult encouragement in order to interact with peers with disabilities. This would allow for the sufficient exposure and direct contact required to build a friendship that can alter attitudes. In an inclusive setting, negative peer attitudes and perceptions towards students with disabilities must be targeted with careful programming. A popular method of eliminating negative attitudes and stereotypes is through disability awareness programs in mainstream schools, which can increase acceptance and participation (Alves & Santos 2013). Without this, full and successful social inclusion would not take place and participation can be elusive (Favazza et al 2000; Magnusson et al 2016). Unfavorable attitudes, perceptions and behaviors towards the physically disabled stem from the lack of knowledge regarding PD that result from the social environment (Rillotta & Nettlebeck 2007; Lindsay & McPherson 2012).

For decades, researchers have studied the various factors that affect inclusion and different methods of increasing its effectiveness. Unfortunately, there doesn't seem to be a single solution to successful inclusion due to the personal nature of the factors involved. Attitudes, perceptions, behaviors, cultures, faiths, backgrounds, and exposures are among a few of the important factors that have been measured in recent research. The undisputed commonality among research remains that positive modification in attitudes and perceptions towards inclusion leads to better acceptance (Beaulieu-Bergeron & Morin 2016; Tavares 2011). This notion has created a greater demand for disability awareness programs across the globe, with an emphasis on short and long-term effects on attitudes and perceptions (Nario-Redmond et al 2017; Campos et al 2014).

While most disability awareness programs have proven effective in attitude change, the real challenge lies in their technique and implementation (Ison et al. 2010). The effectiveness of a disability awareness programs lies in many factors: method of delivery, media used, duration peer session, longevity of program, tone used, age/gender/ethnicity of targets, existing environment, examples given, etc. The choice of delivery methods would be heavily reliant on the factors mentioned. The different delivery methods could include cognitive interventions, role playing, disability simulations, immediate contact and exposure, lectures, videos, case studies, etc. (Brown 2013; Coleman et al 2015).

#### **2.4 Disability Awareness Programs**

Lindsay and Edwards (2013) reviewed forty-two different disability awareness interventions in schools and realized that among those, 34 resulted in substantial positive changes in attitudes towards those with disabilities, 8 showed greater understanding and awareness of disabilities and only 5 showed no change. The general consensus among most research papers remains that the most effective awareness programs are those that incorporate different methods to increase reach and effectiveness (Lindsay and Edwards 2013; Hurst et al 2012). Based on the literature review conducted, majority of the disability awareness campaigns were aimed at younger age groups (primary age children) (Lindsay and Edwards 2013). The rationale behind this is that it has been proven that it is easier to create an attitude change and enforce positive behavior and perceptions in younger children than older ones (Cassiere 2017). It has also been suggested that negative attitudes and stigmas increase by age (Hurst et al 2012). The results also indicate that girls mostly

displayed increased acceptance of physically disabled peers in comparison to boys (Adibsereshki et al 2010; Martinez 2007; Kim 2009).

The disability awareness campaign called ‘Just Like You’ was targeted at primary school children to educate them and reduce the social stigmas attached to cerebral palsy (Lloyd et al. 2017). The campaign, which was to assess short and medium term impact, consisted of informative lectures associated with the curriculum. Informative sessions have proven to be useful because attitudes towards peers with disabilities is highly manipulated by the amount of understanding of the disability; which is a direct result of the social environment (Ison et al 2010; Adibsereshki & Salehpour 2012; Rillotta & Nettlebeck 2007). One potential pitfall of the program was that the possible impact of gender was not considered as a factor even though studies suggest that gender is associated with attitudes towards disabilities (Lindsay & Edwards 2013). Despite this, the Just Like You campaign successfully increase awareness and acknowledgment of physically disabled peers among the participants (Lloyd et al. 2017). However, not all disability awareness campaigns result in positive attitude changes in the subjects.

Awareness campaigns that incorporate increased social contact through ‘buddying’ activities or ‘direct contact’ programs have mostly proved successful give this sort of program tends to run for longer than campaigns with brief one or two session presentations (Lindsay & Edwards 2013). Various researches studied the efficacy of increased social contact on attitudes and all resulted in significant improvements in attitudes and perceptions towards physically disabled peers (Marmon et al 2007; Barrett & Randall 2004; Armstrong et al 1987). These researches are supported by Allport’s contact theory (Alves & Santos 2013) but are not limited to mere exposure. The

difference lies in the fact that the scenarios in these studies are carefully designed social activities to integrate physically disabled students into groups of typically developed peers (Lindsay & Edwards 2013). Hence proving that exposure on its own is not enough to create positive change (Zajonc 1968), but when combined with planning, deliberation and length of time, can yield positive results (Lindsay & Edwards 2013).

Similar to other disability awareness campaigns, Kids Are Kids (KAK) was designed to assess whether it can have a positive effect on attitudes towards peers with PD (Tavares 2011). What was different about this campaign was that it also measured whether the campaign had any positive effects on the social inclusion of the SWPD. The results of this study indicated an immediate positive effect on students' attitudes towards peers with disabilities, and lasting up to a month after the intervention. The sample size of children with special needs was too small to generalize the results (3 only) to a general population. In 2 situations, the student with special needs remained in the class during the presentation and was not provided any social skills training. These two groups displayed little or no positive impact in attitudes from either the student or the peers. However, it is fair to claim that the study indicates that an awareness program presented in the absence of the student with disabilities along with social skills training, may have led to maintaining the improved attitudes by the student and the classmates over time.

## **2.5 Disability Simulations**

The most debatable method is that of disability simulations which was once believed to be highly effective with long lasting impacts if administered correctly (Hurst et al 2012). Disability

simulations involve having the target perform daily activities while pretending having one or more of their bodily functions hindered and disabled. However, it is now mostly viewed as unsuccessful and counterproductive (Brown 2013; Coleman et al 2015). The reason behind this is that disability simulations are deemed to be unrealistic and misrepresentative of an actual physical disability (Lalvani & Broderick 2013). ‘Crip for a day’ campaign was a study carried out to assess the effects of disability simulations on feelings, stereotypes and attitudes when engaging with disabled individuals (Nario-Redmond et al 2017). Not only was this campaign ineffective in creating positive attitudes and feelings, it also resulted in inadvertent negative feelings amongst the target students. After the campaign students reported feeling confused, humiliated, powerless and vulnerable to being disabled themselves. While the results of this study showed a positive improvement in empathy towards the physically disabled, this did not result in positive attitude or behavioral changes. The authors concluded that simulations are highly ineffective in creating positive attitudinal changes in peers towards those with PD (Nario-Redmond et al 2017).

There are other factors which must be considered when concluding a study such as ‘Crip for a Day’. The first being the negative connotation attached to the name. This on its own can create negative feeling before participants are ever exposed to a simulation. The next being how and whether the authors set the context for the simulations by providing information regarding the disabilities and simulations. This would help to mentally and emotionally prepare participants for the experience, perhaps aiding in a more reliable feeling and response. This is especially true when providing information is one of the main strategies of creating attitude change (Alves & Santos 2013).

Hurst et al (2012) undertook a similar study involving simulations that was preceded by informative brochures, books and videos for a better understanding of disability; as well as a teacher committed for this purpose. The study was conducted in small groups of students taking turns with the simulations, and an adult volunteer to help or to discuss the challenges faced. The reasoning behind this campaign is the notion that once children are informed of the obstacles faced by peers with disabilities, they would be more inclined to display attitudes of acceptance (Hurst et al. 2012). The study concluded that, when effectively carried out and combined with other informational methods, disability simulations can be successful in creating positive attitude change amongst peers (Hurst et al 2012; Coleman et al 2015). This is supported by Barney (2012) which states that by bringing forth the idea of the Social Model of Disability, we can alter the outcome of a simulation drastically. During the simulation students need to be given appropriate guidance and direction to be able to face their own attitudes and perceptions of disability, as they see it projected onto them in a simulation (Barney 2012). The findings of Hurst's (2012) study challenges that of Nario-Redmond et al. (2017).

## **2.6 Disability Awareness in Curriculum**

Another long-standing debate is whether disability awareness should be embedded in the school curriculum, and whether such a long-term program will result in positive effects as the shorter term campaigns. The rationale behind this integration of disability awareness within school curriculums was an approach to nurture inclusive education by dispersing information on disabilities, the importance of attitudes and perceptions in the lives of those with PD, and the acceptance of SWPD

(Alves & Santos 2013). Alves & Santos (2013), reference Pacheco's (2005) argument that the curriculum is an instrumental tool for fostering experiences of learning and development.

With education carrying an important role in creating an inclusive society, disability awareness programs embedded in the curriculum serve as a pre-emptive approach to eliminating negative perceptions towards physical disability (Alves & Santos 2013). These positive changes also teach students moral and ethical values of respecting and appreciating personal differences. An awareness program embedded within the curriculum places teachers in a crucial role of promoting positive attitudes and improved behaviors towards peers with PD (Alves & Santos 2013).

## **2.7 Disability Awareness for Teachers**

Teachers are in a position of great responsibility, especially in inclusive settings. They are in charge of curriculum implementation and imparting knowledge and to all students. This responsibility and the daily interaction with students, places teachers in a very critical position to promote positive attitudes and perceptions in typically developed students towards those with disabilities (Alves & Santos 2013). Teachers will serve as the role model of ethics, knowing that their behavior will influence that of their students towards people with disabilities.

Despite such important key points, it is still very likely that teachers can graduate and obtain their teaching degrees without having any proper education or training on inclusive education (Alves & Santos 2013; Cho et al 2010). Most likely, teachers have been trained to acquire knowledge and skills but not focused on attitudes and values (Donnelly 2012). Hence, a disability awareness

embedded into the curriculum, targets the teachers first and through them, the students' attitudes and perceptions. This method works because with time, training and exposure, positive attitudes and outcomes are derived at (Godeau et al 2010; Boer et al 2013). Since there isn't a single method of teaching inclusive classrooms or students with disabilities, schools and teachers must be equipped with different and successful techniques for improved outcomes (Gaad & Almotairi 2013).

Majority of the awareness campaigns that are included in the curriculum and delivered by class teachers, school counselors or other school staff, have proven to be highly effective in creating positive attitude changes (Lindsay & Edwards 2013). Children with PD attain diminished benefits from the educational environment as well as the participation in school activities due to social or environmental barriers (Coleman et al 2015). A drawback of incorporating disability awareness into the curriculum may be the fact that many teachers claim not to have sufficient time for core subjects, and may be less inclined to venture into a new topic in favor of allowing time for those subjects (Gaad & Khan 2007; Cho et al 2010). A potential solution to this issue may be a special curriculum designed to include self-determination skills into the academic targets (Cassiere 2017). Essentially, a disability awareness program that is carefully embedded within the curriculum promises success due to its exposure, length and delivery mode (Hurst et al 2012; Tavares 2011).

## **2.8 Importance of Research on Attitudes**

As has been consistently established that in physical placement of students with disabilities in mainstream classrooms does not ensure acceptance by peers or integration by the student (Lindsay

& Edwards 2013; Rillota & Nettlebeck 2007; Adibsereshki & Salehpour 2012; Ison et al 2010). This suggests that attitude, perception and behavior modification are absolutely necessary for the social integration and successful inclusion of students with disabilities (Beaulieu-Bergeron & Morin 2016; Tavares 2011). In order to create an attitude change, three principal approaches may be undertaken. These include delivering factual information regarding disabilities; providing rewards for positive behavior towards a person with disabilities; and allowing 'buddying activities' where a peer feels positively by engaging with students with disabilities (Alves & Santos 2013).

The reason behind the emergence of disability awareness campaigns and the wealth of research surrounding them, lies in the importance of attitudes and perception of typically developed children towards peers with PD. Hence, the initial step in achieving effective inclusion is to ensure an environment which fosters acceptance and inclusion of students with disabilities through the encouragement of positive attitudes and perceptions (Magnusson et al 2016). Negative peer attitudes are one of the most hindering social barriers to full and successful inclusion (Godeau et al 2010). Social integration and inclusion of SWPD into mainstream classrooms has proven benefits for all students involved (UNESCO 1994). Mainstream students also benefit from inclusion by providing them with the opportunity to have increased acceptance, understanding and to eliminate social stigmas (Adibsereshki & Salehpour 2012). Peer acceptance is crucial amongst children because friendship is an essential requirement for acquiring social skills which are required to creating social relationships (Gifford-Smith & Brownell 2003). In order to create friendships, one must first be accepted, and these friendships set the scene for cognitive and socio-emotional development (Adibsereshki & Salehpour 2012).

The physical placement of students with disabilities in mainstream classrooms is a result of attempting to achieve equal opportunity for all. However, many other factors must be in place for successful inclusion to take place. The most important of these is attitudes and perceptions towards students with disabilities (WHO 2001). Barney (2012) argued that negative societal perceptions towards disability are more crippling than the actual physical disability. Many researchers have thoroughly investigated the topic of peer perception and attitude towards SWPD (Shokoohi-Yekta & Hendrickson 2010; Boer et al 2010; Beaulieu-Bergeron & Morin 2016). The significance of the topic is evident in the amount of research conducted on it around the world. The common result of the above-mentioned research is that awareness and training are required to positively modify adult and peer attitudes and perceptions towards children with disabilities.

## **2.9 Situating the Current Study**

Positive attitudes and perceptions help eliminate stigmas and allow for effective social integration and acceptance (Tavares 2011; Magnusson et al 2016). On the other hand, students with disabilities claim that negative attitudes and rude behaviors are the cruelest facets of school experience (Godeau et al 2010). These negative behaviors must be eliminated to ensure successful inclusion, which is an important aim amongst Dubai schools due to policy. Despite this importance, research on peer attitudes towards physical disabilities has not been researched before. This allows for a gap in the field of inclusive education and a lack of important pertinent information. This current study aims to be the first in the city to begin bridging the gap and helping set the foundation for future studies, aiming for successful inclusion of students with physical disabilities.

## CHAPTER 3: METHODOLOGY

### 3.1 Research Questions

This exploratory experimental study mixes quantitative and qualitative methods of data collection. It involves a disability awareness campaign named 'Let's Include!', and is the first of its kind in the city. The results can be incorporated in classroom education on smaller scales, or embedded into the curriculum for a longer lasting effect. The main aim of the awareness campaign in a school is to enhance and improve students' attitudes towards peers with physical disabilities. Deriving from this campaign, three main questions are targeted to be researched:

1. What is the impact of the DAP 'Let's Include!' on the three components of attitude (cognitive, behavioral and affective) at the three time intervals of baseline, post one-week, and post 5-months?
2. Was the disability awareness program 'Let's Include!' successful in improving children's attitudes towards people with physical disabilities?
3. How do the variables of gender and previous exposure to physical disability impact the effect of the DAP on the 3 components of attitude?

The main purpose of this research was to measure the effectiveness on enhancing attitudes and length of impact of an intervention program used to enhance and improve students' attitudes towards peers with PD. An additional objective was to establish how the variables of gender and previous exposure, were linked to these attitudes. This intervention program was carried out in an inclusive, non-profit school in Dubai. Consent was obtained from the school director as well as

the cooperation of the Head of Primary and his staff (Appendix E). This inclusive school was established 13 years ago and accepts students with special needs. Dubai has earned a reputation for being a melting pot of cultures and the researchers feel that the school and its multi-cultured population, can be considered as representative of the Dubai population.

### **3.2 Research Approach and Instruments**

To ensure validity and reliability of the results of this study, a mixed methods approach was undertaken. This research set out to triangulate various qualitative and quantitative methods in order to maximize consistency and usability of results. These methods consisted of one-class initial pilot study, focus groups and close-ended questionnaires. The Chedoke-McMaster Attitudes Towards Children with Handicaps (CATCH) questionnaire was used. The CATCH questionnaire is deemed as a valid and reliable means of measuring children's attitudes and is widely used to measure the same (Armstrong 1986).

Allport, as well as others more recently proposed a multidimensional model of attitude (Alves & Santos 2013; Boer 2012). According to them, attitude consists of 3 parts: the affective component, a behavioral component, and a cognitive component. The CATCH distinguishes between how children perceive, feel and behave towards about peers with disabilities. The original CATCH contains 36 items, 12 for each component of attitude (See Appendix A). Rosenbaum et al (1986), Cassiere (2017) and Godeau et al (2010) are among those that agree that the CATCH is known as the most comprehensive instrument in measuring all three components of attitude. For the above-mentioned reasons, the CATCH was utilized for the purpose of this paper.

Prior to implementation, the CATCH questionnaire was tested and revised to ensure clarity and understanding. The wording of the CATCH questionnaire was adjusted from negatively/positively worded sentences to questions. The original CATCH sentences were likely to get the children more inclined to giving affirmative answers to each statement, whether negatively or positively worded. This being due to children's nature to be obedient, as evident in Milgram experiment (McLeod, 2007). The researcher believes that a question format was the best choice of sentence structure for children to ensure their actual opinion. The original CATCH has 5-point likert scale containing strongly disagree, disagree, can't decide, agree, and strongly agree. For the purpose of this research, 3 choices were given to students as responses: Yes, No and Maybe in accordance with the Accepted Scale (Cassiere 2017). This was to simplify the choices and avoid confusing the children (Appendix B). Majority of respondents are non-native speakers of English and the researcher deemed it appropriate to ensure understanding to achieve correct responses. Similarly, the original CATCH used the word 'handicap'. For this study, 'handicap' was replaced with 'children with physical disabilities'. An additional question which was added to the CATCH was to determine whether the respondents had any friend or family member with PD. This would determine the effect of previous exposure to physical disability on responses.

Other demographic information was also requested, such as: gender, age, nationality and class name. Due to fact that the CATCH was designed in 1986 (Armstrong 1986), most researchers have adapted certain aspects of it to suit the current situations, such as terminology (Rosenbaum et al 1986); (Cassiere 2017). In addition to the CATCH as an instrument, this study consisted of a pilot study, several focus groups and a multi-media presentation.

### **3.3 Data Collection and Analysis**

The population sample for T0, T1 and T2 were as follows: 612 students included grade 4 (201 students), 5 (291 students) and 6 (120 students) aged 8 to 11. This population was taken from one inclusive non-profit school in Dubai. The classes were as follows: Grade 4: 4C, 4D, 4P, 4O, Grade 5: 5B, 5C, 5D, 5P, 5O, Grade 6: 6B, 6C, 6D, 6P, and 6O. The pilot study was conducted with one grade 6 class, allowing the oldest students (10-11 year olds) in the population to provide feedback on the questionnaire design and implementation of the intervention program. For this study to be valid and consistent, the researcher tried to eliminate any risk of unclear instructions and misinterpretation. Some of these may have been caused due to the age factor and/or the non-native language skills of many of the students. Hence, a pilot study was conducted in the same steps as the actual presentation and the children were asked to provide feedback at the end. Some of the students in the pilot study class were not fully aware of what physical disability is, therefore it had to be explained clearly to the students. In the next sessions, the term was included into the focus group preceding the presentation, before administering baseline questionnaires. Due to the fact that no significant changes were made to the intervention program, the results from the pilot study were deemed valid to include into the data. Lloyd (2017) and Ison et al (2010) conducted pilot studies before implementing the intervention to ensure full understanding; yielding valid and consistent results.

For this study, the focus groups will be analyzed and used to attain qualitative information to provide an in-depth understanding of the views and perceptions amongst the students. Hurst et al (2012) decided that a positive impact of an intervention program is heavily reliant on the education and information presented to the subjects. This implies that in addition to a multi-method

presentation, an initial focus group creates clearer appreciation of the topic at hand. Beaulieu-Bergeron & Morin (2016) argued that the flexible and detailed nature of focus groups, allowed for further exploratory causes of attitudes.

The rationale behind the age group is that the older students have the cognitive aptitudes needed to critically view method and material as well as provide constructive feedback (Heyman 2008). Students younger than 8 years of age have not been included in the population sample to eliminate the risk of emotional and skewed responses as the DAP content was geared for the cognitive ability of 8 to 11 years olds (Nario-Redmond et al 2017). Previous research also suggest that primary school is a sensitive and impressionable time for children (Hurst et al 2012). Hence, this research has chosen to implement this program in primary school in hopes of maximized effectiveness and positive outcomes. Based on the above-mentioned research, early primary classes were avoided.

Outcomes were measured at baseline (before intervention [T0]), shortly after the intervention by a 7 days [T1]), and 5 months after the intervention [T2]). The responses from T1 will measure short term impact of the intervention program, while the 5-month questionnaire will measure medium-term impact of the disability awareness campaign as well as the strength of the factor analysis (Rosenbaum et al 1986). Lloyd (2017) chose 3 months as medium term to assess effectiveness of the intervention program. For this study however, medium term was deemed anywhere between 3 to 5 months; and 9 months (the entire academic year) being the long term (Godeau et al 2010). All students who were present on the day of the intervention program were eligible to participate for the baseline T0. Focus groups were conducted from all of the classes, but only one from each year group was used for the purpose of analyzing (Appendix C). The rationale

behind the focus groups is a means to eliminate potential pitfalls of the study by familiarizing students with the concepts at hand (Coleman et al 2015).

### **3.4 Procedure**

The present study and its components were administered at one non-profit school in Dubai with a multitude of nationalities and languages. Three year groups were selected from the primary school level: Year 4, 5 and 6. In October 2018, each class was given a brief explanation as to the meaning of physical disability prior to being given the baseline questionnaires (T0). Instructions and each question were read to the class by the researcher to minimize the chances of unanswered questions, and students were asked to follow the pace of the class. Focus groups were conducted only after the baseline questionnaire. In the focus groups students were asked questions such as ‘What are your feelings when going to school?’ ‘What is a physical disability?’, ‘Can people with PD lead successful lives?’ Once the focus groups were completed and voice recorded, next came the PowerPoint presentation by the researcher.

The intervention campaign was titled ‘Let’s Include!’ and consisted of a multi component approach including, videos, discussions, case studies and examples as well as some limited role playing. Research has indicted the positive outcomes of each approach, but there isn’t one specific intervention method that seems to be more effective than the rest (Lindsay & Edwards 2013). On the other hand, most research has proven that a multi-component approach is more effective than a single intervention method in shaping children’s attitudes (Favazza et al 2000). The first slide of the PowerPoint presentation contained the word ‘Disability’ with the DIS visibly crossed out by

an X, leaving the word Ability. The presenter discussed with the children how they are all different in various ways and that this difference is acceptable and expected. Next, the children were told that despite of the differences, we all have the same needs of being welcomed, needed and appreciated. Different types of disabilities were discussed and the children watched various videos regarding the topic at hand (Appendix D). The next segment of the presentation dealt with how to behave in the presence of a person with disabilities and not to act awkward. Finally, children watched videos of 4 individuals with severe disabilities living successful lives. The entire process required 1:30 minutes per class.

A week after the presentation, the T1 questionnaires were handed out to the children and results gathered. This set of questionnaires was handed out by the class teachers and it was not possible for the researcher to be present again. The next set of questionnaires T2, were administered by class teachers 5-months after the initial baseline, in March 2019. The 5-month gap in time from T0 to T2 allows for a true measure of the intervention impact on the children's attitudes. The time interval measures the medium-term effects of the intervention on students' attitudes. No further explanation was provided to the children responding to T1 and T2.

### **3.5 Ethical Considerations**

The researcher is well aware of the ethical considerations of conducting research that involves school aged children. Appropriate written consent forms were obtained from the school director (Appendix E). The possibility of publishing has been discussed with the school director and approval has been received. Despite this, no names have been mentioned. All questionnaires have

been answered to anonymously and the school name has been omitted for the purpose of this study to ensure all ethical considerations are taken into account. All responses have remained anonymous and confidentiality is strictly adhered to. Students were instructed not to write their names on questionnaires. It was also explained to the respondents that their answers would remain strictly confidential and that even the researcher would not know what their answers were. This was to ensure honesty in replies. All class presentations were conducted by the researcher who was not familiar to the students, hence eliminating any possibilities of bias. During presentations, class teachers were present in the classroom to ensure that the more sensitive or shy children weren't negatively affected by being in the presence of a stranger, and remain within their comfort zones.

### **3.6 Trustworthiness and Reliability of Data**

Trustworthiness of data is only as good as the tools and instruments used to gather it (Boswell & Cannon 2017). If the instrument used is unreliable, the collected data cannot be trusted or relied upon. The validity of a study relies on the instrument measuring what it has set out to measure (Boswell & Cannon 2017). Reliability and validity of data collected in a study go hand in hand in ensuring that the data collected is correct and can be utilized. If either one of these is missing from a study, it can lead to making uninformed decisions and inaccurate information. The CATCH questionnaire has been deemed as a valid and reliable measure of children's attitudes towards peers with physical disabilities (Armstrong 1986). The CATCH takes into consideration the three components of attitude: behavioral, affective and cognitive. This questionnaire is divided into 3 parts, with 12 questions per component. In addition to the number of studies that have consistently proven the CATCH to be valid and reliable (Rosenbaum et al 1986; Cassiere 2017; Godeau et al

2010; Armstrong 1986), it was also put to the test in a pilot study. It was also revised to ensure the wording is congruent with the current times. As an example the word ‘handicap’ was replaced with ‘physical disability’. This adaptation of the original CATCH has been performed by other researchers as well due to the out-datedness of the wording found in the original CATCH (Rosenbaum et al 1986; Cassiere 2017; Godeau et al 2010).

For the sake of the study’s validity and reliability, the researcher undertook a mixed methods approach. A triangulation method utilizing various qualitative and quantitative methods were utilized to maximize the trustworthiness of the results. In addition to the CATCH questionnaire used, focus groups were also conducted and analyzed to better understand student understanding and feelings surrounding the topic. The study also undertook a pilot study involving the questionnaire, the presentation as well as the focus group. The pilot study was used to set the scene for the DAP by creating the mood. The misconceptions held by students towards the definitions of physical disability were also picked up during the focus groups and addressed in the DAP to ensure clearer understanding. This would aid in providing result validity (Leung & Savithiri 2009). Both these measures add to the reliability of the results by providing both qualitative and quantitative perspectives. In order to avoid any bias on the part of the researcher, all questionnaires were filled in anonymously, allowing the children the privacy of providing honest answers. In addition, the researcher was not familiar with the students, hence eliminating any pre-existing bias.

## **CHAPTER 4: FINDINGS**

### **4.1 Overview**

The first stage of this study consists of a disability awareness program designed to impact peer attitudes towards students with physical disabilities. The next stage of this study involves the assessment of the program impact on the different components of attitude. This study aimed at answering two main questions. The first was to understand the effects of the DAP on the 3 components of student attitudes (cognitive, behavioral and affective) at different time intervals within the study. The second section was to understand how gender and previous exposure to physical disability affect the impact of the DAP on the components of attitude. This was achieved using a multi-method approach. A combination of qualitative and quantitative methods was used to collect data and ensure validity and reliability. The study contained an initial pilot study to ensure effectiveness of DAP, instrument, presentation and material. Prior to each presentation carried out in class, a focus group was also conducted for qualitative data to support the questionnaires. The results of the 3 methods are detailed below.

### **4.2 Analysis of Pilot Study**

One year 6 group was selected for the pilot study program. The intention of this pilot program was to ensure that all aspects of the intervention program are age appropriate and effective in achieving the targets set out. This aspect of the study aids in increasing the effectiveness of this campaign and pre-testing the instrument design (Alborno & Gaad 2014). No changes were required to be

made to the CATCH questionnaire used as the instrument. The positive result of the pilot study was that it became evident early on in the session that the term ‘physical disability’ was not fully understood by some students. Hence, to ensure accurate results, the researcher added this slight modification to the focus groups. All the next intervention sessions included a detailed description of the phrase ‘physical disability’ and what it entailed. During the presentation session, students were allowed to provide their feedback and opinion regarding the topic discussed. Since no major changes were made to the pilot study, it was deemed valid to use as part of the data collected.

### **4.3 Analysis of Qualitative Data (focus group)**

In an attempt to increase validity and reliability of the data collected, as well as support the results with in-depth findings, 7 focus groups were conducted prior to the intervention session. In the interest of time and for reasons of redundancy, only 3 of the 7 focus groups was documented and used for this study. The 3 focus groups selected represent the grade levels, 4, 5 and 6. The focus group provided a forum to allow the children to warm up to the presenter, engage in a conversation and have their voice heard. It also probed into topics of feelings, needs and desires of children and gave the children the opportunity to empathize with others less fortunate. The duration was approximately 10 to 15 minutes depending on the level of engagement of the children. The focus groups began with a prompt question by the presenter, and the following discussion was voice recorded and documented in Appendix C. If discussion was sidetracked, the next prompt question would help bring it back on target. The participants mostly agreed that feeling welcomed and belonged were important and the reasons why a student may not feel that way were almost always discrimination and lack of peer support.

While the actual campaign presentation is important, this focus group created the backdrop for the intervention program. This was done by having the students acknowledge the importance of peer support and attitudes to ensure a sense of belonging and happiness. Common misconception regarding PD was that it was linked to intellectual disability and or diseases such as cancer. By having many children engage in the conversation, this helped correct some of the misconceptions held by a few. The year 6 students were very aware of the definitions of physical disability as well as the feelings of belonging and its importance. This was mainly due to the fact they had watched a movie on the exact topic earlier in the year as part of the curriculum. This helped create a very conscientious group with a willingness to have a positive attitude towards everyone.

It is recommended that the number of focus groups required to achieve data saturation is between 3 and 12 (Burrows & Kendall 1997). For this study, 7 were conducted with only 3 documented for this study. The reason for this is that the study isn't solely reliant on the focus groups for data collection, and the data collected between the 7 groups was mostly redundant and overlapping (Beaulieu-Bergeron & Morin 2016). Focus groups are best done in smaller group sizes to ensure greater understanding and participation. However, that was not an option as the researcher was ethically unable to exclude some children and create a divide amongst classes.

#### **4.4 Disability Awareness Campaign: Let's Include!**

This was an interactive and engaging 45-minute presentation conducted by the researcher after the focus group and baseline questionnaire. The presentation covered topics such as how students are all different in many ways and alike in terms of needs of feeling welcomed and included. Students were allowed to engage in conversation and provide their feedback. In many classes the picture of a child on a wheelchair elicited feelings of pity and sadness for the child. Some respondents also verbalized that they would befriend a person with a disability because 'they felt sorry for him' or that they wanted to 'do the right thing'. The presentation introduced the different kinds of disabilities and respondents were asked if people living with these can be successful. Negative answers were more common than random positive ones. Discrimination was defined and discussed. It was unanimously agreed that it is detrimental and can potentially ruin a student's life. School scenarios were presented to the children and they had to discuss ways that SWPD could be involved in the different school activities. After a little discussion, students were able to identify skills and learn to work around disabilities by placing students with physical disabilities in the best suited position.

The next phase of the presentation covered the behavioral aspect of what one could do when meeting or interacting a person with a physical disability. These behavioral tips were accompanied with fun but educational videos to engage the audience and increase their understanding. Some role playing was also conducted with students volunteering. The students seemed to enjoy this part as they had the chance to laugh while participating. Famous people with disabilities were discussed and the children displayed a shock over some of the disabilities encountered, i.e. Beethoven being

hearing impaired was the biggest shock for them. The last slide included a short emotional video on making sure SWPD were included in daily school activities. Overall verbal feedback after presentations was that the videos and the fact that the presentation wasn't adult led only was entertaining for them and they felt they have learnt a lot.

#### **4.5 CATCH Questionnaire Analysis**

Data analysis was performed using SPSS version 22 software. The main variables studied were the affective, behavioral and cognitive components of attitude towards peers with PD. These components were measured in three intervals: baseline (T0), short-term (T1- one-week post) and medium term (T2- after 5 months) in one group. This group has received a brief intervention program lasting 1 hour and 30 minutes after the administration of T0. The demographic variables affecting the attitude components were gender and previous exposure to physical disability, which may affect student attitudes towards physical disability. The CATCH questionnaire was worded positively, therefore a higher the response in units, indicates a more positive and favorable impact on attitude towards SWPD. The main data analyses were based on the mixed model method and one-way ANOVA analysis. The Chi-square and paired t-tests were also used for testing demographic variables. The  $\alpha$ -level for establishing statistical significance was considered 0.05.

		Fourth grade (N=201)	Fifth grade (N=291)	Sixth grade (N=120)
Gender	Boy	99 (49.3)	152 (52.2)	42 (35.0)
	Girl	102 (50.7)	139 (47.8)	78 (65.0)
Pervious exposure	No	125 (62.2)	173 (59.5)	74 (61.7)
	Yes	76 (37.8)	118 (40.5)	46 (38.3)
Age	Mean $\pm$ SD	8.53 $\pm$ 0.56	9.39 $\pm$ 0.53	10.35 $\pm$ 0.51

**Table 1 : Demographic Characteristics of respondents per grade**

A sample size of 612 primary school students was studied in grades 4, 5 and 6. Table 1 shows demographic variables that are reported for each class. The mean and related standard deviations are reported for quantitative variable (i.e. age) and affect the results of the DAP, and frequency (percentages) are described for qualitative variables (i.e. gender and previous exposure). In the fourth, fifth and sixth grade 99%, 52.2% and 35% of students were boys respectively. In grade 4, 37.8% of students know someone with a physical disability, and grade 5, 6 had similar results. The mean age of the students in the fourth, fifth and sixth classes were 8.53, 9.39 and 10.35 respectively. The children have not been segregated based on age for data analysis because the entire group is considered one age bracket of 8 – 11. Therefore, no differentiation is made between the age groups for this study.

Research Question:

1. What is the impact of the DAP ‘Let’s Include!’ on the three components of attitude (cognitive, behavioral and affective) at the three time intervals of baseline, post one-week, and post 5-months

Variable	estimate	SE	95 % CI for mean difference	P-value
intercept	45.22	0.64	(43.95, 46.49)	<0.0001
time				
5 months post test	2.16	0.92	(0.34, 3.98)	0.020
1 Week post test	1.20	0.91	(-0.58, 2.98)	0.186
Present (reference)	0	0	.	.

**Table 2: Overall attitudes of respondents towards peers with physical disabilities**

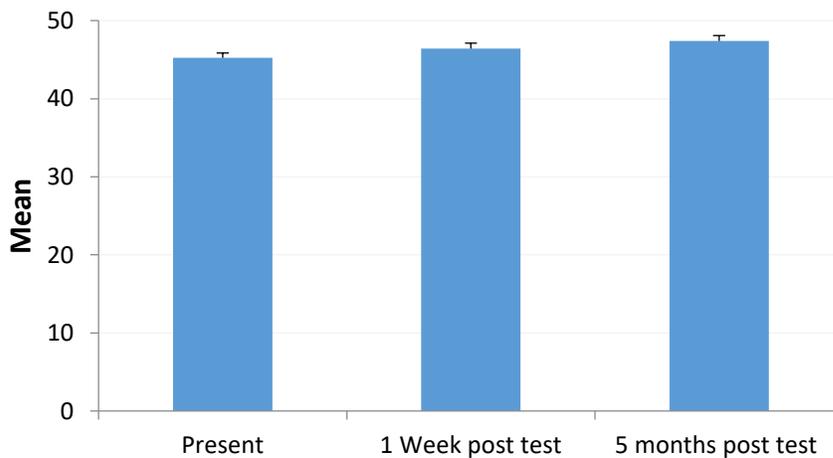
The attitude primary school students towards peers with physical disabilities from baseline (T0) to short term (T1) and medium term (T2) were analyzed using the linear mixed model. The time variable with three categories (present, 1-week post test, 5-months post test) was entered into the model. According to the results reported in table 3, the attitude of primary school student in the 5-months post test was statistically significant ( $p$ -value<0.05). In other words, the attitudes of primary school students at T2 (after 5 months) was 2.16 units more than baseline. Also, the post Hoc tests were done to find the differences between each measurement which are reported in Table 3.

		Mean difference	SE	P-value
5 months post test	1 Week post test	0.96	0.95	0.309
	Present	2.16	0.93	0.020
1 week	Present	1.20	0.91	0.186

**Table 3: Post Hoc test for pairwise comparison**

Post HOC test are based on LSD test.

The results of table 3 shows that the difference mean of positive attitude between five-months and one-week post- test was earned at 0.96 which was not statistically significant ( $p\text{-value} > 0.05$ ) but this difference for 5 months and baseline (present) was significant ( $P\text{-value} < 0.05$ ), (difference= 2.16). Finally, the mean of attitude at one-week post-test was compared with the mean of attitude at T0. This difference was 1.20 that it was not statistically significant ( $P\text{-value} > 0.05$ ).



**Chart 1: Overall attitude at the 3 time intervals**

The means and their standard deviations of positive attitude for primary school students towards peers with PD for all three times plotted in chart 1. The comparison of the bars of the graph also

show that the 5-months post-test had the maximum mean of positive attitude towards peers with PD. This chart indicates a steady increase in favorable attitudes towards SWPD by their peers. This increase in positive attitude is a clear indication that the DAP was successful in changing perceptions and attitudes to create a more desirable inclusive setting.

variable	mean±SD	95% CI	P-value
Present	45.22±0.61	(44.03, 46.41)	
5 months post test	47.40±0.66	(46.09, 48.70)	0.014

**Table 4: Attitudes of primary school students towards peers with PD at T0 and T2**

We compared attitudes at the start of study and 5 months after (Table 4). The paired t-test was used to answer the mentioned question. The results show that there was a difference between the two times (p-value<0.05).

Variable	estimate	SE	95 % CI for mean difference	P-value
intercept	13.13	0.25	(12.64, 13.62)	<0.0001
time				
Present (reference)	0	0	.	.
1 Week post test	1.26	0.35	(0.56, 1.96)	<0.0001
5 months post test	1.80	0.36	(1.09, 2.51)	<0.0001

**Table 5: Comparison of cognitive attitude responses from T0 to T1 and T2**

The cognitive component of attitude of primary school students from baseline (T0) to short term (T1) and medium term (T2) was analyzed using the linear mixed model. The time variable with three categories was entered into the model. According to the results displayed in Table 5, the cognitive component of attitude of primary school students towards SWPD in T2 was statistically significant ( $p\text{-value} < 0.05$ ). The cognitive aspect of primary school students' attitude after 1 week from the intervention was 1.26 units more than baseline. Similarly, this cognitive component was measured at T2 at 1.80 units more than at the start of study (T0). Therefore, there were differences in impact between cognitive attitudes from short term (T1- after one week) and medium term (T2- after 5 months). Also, the post Hoc tests were done to find the differences between each measurement which are reported in table 6.

variable			Mean difference	SE	P-value
Time	5 months post test	1 Week post test	0.54	0.37	0.146
		Present	1.80	0.36	<0.0001
	1 week	Present	1.26	0.35	<0.0001

**Table 6: Post Hoc test for pairwise comparison**

Post Hoc tests are based on LSD test.

The results of Table 6 show that the cognitive mean difference between T1 and T2 was 0.54, which was not statistically significant ( $p\text{-value} > 0.05$ ); but this difference from baseline to 5-months was significant ( $P\text{-value} < 0.05$ ), (difference = 1.80). Finally, the mean of cognitive component of

attitude at T1 was compared with T0. This difference was 1.26 which was statistically significant (P-value<0.05).

Variable	estimate	SE	95 % CI for mean difference	P-value
<i>intercept</i>	<i>16.62</i>	<i>0.28</i>	<i>(16.07, 17.18)</i>	<i>&lt;0.0001</i>
time				
Present (reference)	0	0	.	.
1 Week post test	-0.26	0.40	(-1.05, 0.52)	0.507
5 months post test	0.10	0.41	(-0.41, 0.90)	0.814

**Table 7: Comparison of behavioral attitude responses from baseline T0 to T1 and T2**

The behavioral attitude of primary school students from baseline (T0) to short term (T1) and medium term (T2) was analyzed using the linear mixed model. The time variable with three categories was entered into the model. According to the results reported in Table 7, the behavioral component of students' attitudes towards SWPD in all 3 time intervals was not statistically significant (P-value>0.05). Also, the post Hoc tests were done to find the differences between each measurement which are reported in Table 8.

variable			Mean difference	SE	P-value
Time	5 months post test	1 Week post test	0.36	0.42	0.387
		Present	0.10	0.41	0.814
	1 week	Present	-0.26	0.40	0.507

**Table 8: Post Hoc test for pairwise comparison**

Post HOC test are based on LSD test.

The results of table 8 show that the behavioral mean difference between T1 and T2 was at 0.36, which was not statistically significant ( $p\text{-value} > 0.05$ ). The difference between T0 and T2 was 0.10 which was also not significant ( $P\text{-value} > 0.05$ ). Finally, the mean difference between T0 and T1 was measured at -0.26, also statistically insignificant ( $P\text{-value} > 0.05$ ).

Variable	estimate	SE	95 % CI for mean difference	P-value
<i>intercept</i>	<i>15.48</i>	<i>0.25</i>	<i>(14.98, 15.98)</i>	<i>&lt;0.0001</i>
time				
5 months post test	0.26	0.37	(-0.48, 0.99)	0.492
1 Week post test	0.20	0.36	(-0.52, 0.91)	0.591
Present (reference)	0	0	.	.

**Table 9: Comparison of affective responses from baseline T0 to T1 and T2**

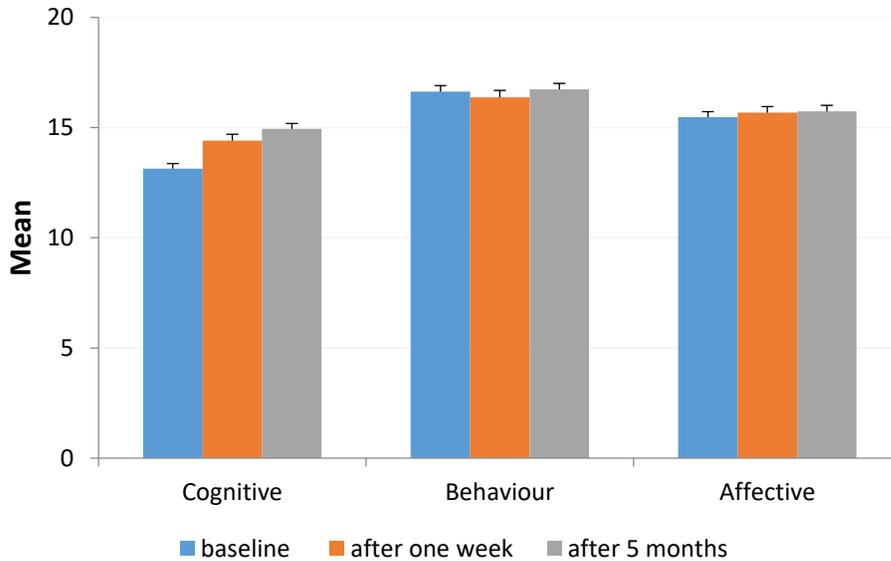
The affective responses of primary school students from baseline (T0) to (T1) and (T2) were analyzed using the linear mixed model. The time variable with three categories was entered into the model. According to the results reported in the Table 9, the affective responses of primary school students at all 3 times were statistically insignificant ( $P\text{-value}>0.05$ ). The post Hoc tests were done to find the differences between each measurement which are reported in Table 10.

variable			Mean difference	SE	P-value
Time	5 months post test	1 Week post test	0.06	0.38	0.874
		Present	0.26	0.37	0.492
	1 week	Present	0.20	0.36	0.591

**Table 10: Post Hoc test for pairwise comparison**

Post HOC test are based on LSD test.

The results of table 10 show that the affective attitude response mean difference between 5 months and 1-week post-test was 0.06, which was statistically insignificant ( $p\text{-value}>0.05$ ). The difference between 5 months and baseline was 0.26, also insignificant ( $P\text{-value}>0.05$ ). Finally, the mean difference at 1-week post-test was compared with baseline, this difference was 0.20, which is insignificant ( $P\text{-value}>0.05$ ).



**Chart 2: Comparison of cognitive, behavioral and affective responses from T0, T1 and T2**

The means and their standard errors of cognitive, behavioral and affective responses from baseline (T0) to short term (T1) and medium term (T2) of primary school students towards peers with PD, as plotted in Chart 2. The comparison of the bars in the chart shows the cognitive and affective responses from T0 to T2, which were both less than behavioral attitude responses. In addition, the mean of positive impact of affective attitude was more than the cognitive attitude response mean from T0 to T2.

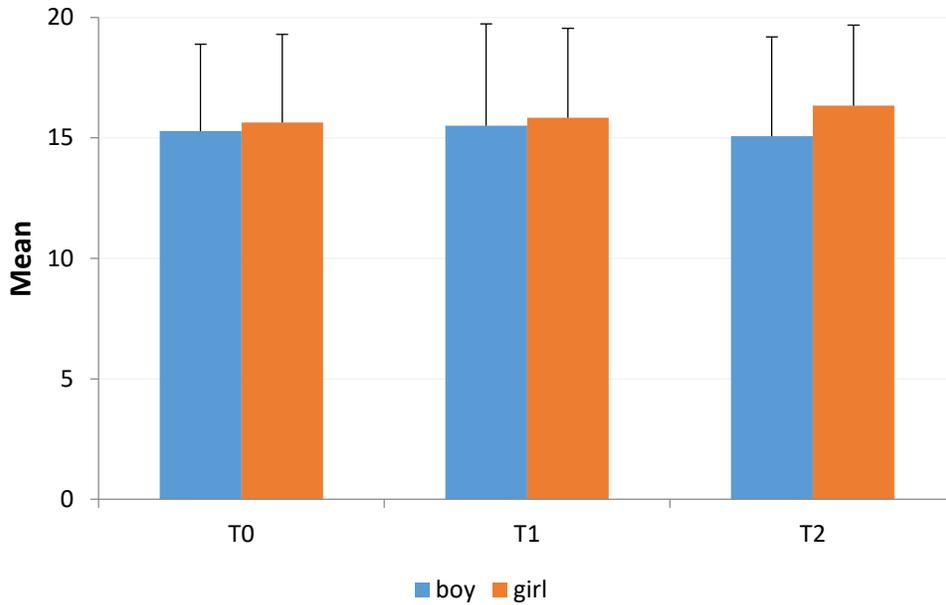
Research Question:

2. How does gender impact the effect of the DAP on the affective, behavioral and cognitive components of attitude?

Variable	estimate	SE	95 % CI for mean difference	P-value
intercept	15.76	0.29	(15.20, 16.33)	<0.0001
time				
5 months post test	0.27	0.37	(-0.46, 1.00)	0.472
1 Week post test	0.22	0.36	(-0.49, 0.94)	0.541
Present (reference)	0	0	.	.
Gender (boy)	-0.62	0.30	(-1.22, -0.02)	0.041

**Table 11: Affective attitude based on gender**

The affective responses of primary school students from T0 to T2 in the girls and boys were analyzed using the linear mixed model. The time variable with three categories and gender with two levels were entered into the model. According to the results which were reported in Table 11, gender was a significant variable for the affective responses of primary school students (p-value<0.05). In other words, the affective responses of the boys were 0.62 units less than the affective responses of girl respondents (the positive affective responses of boys was less than that of girl students).



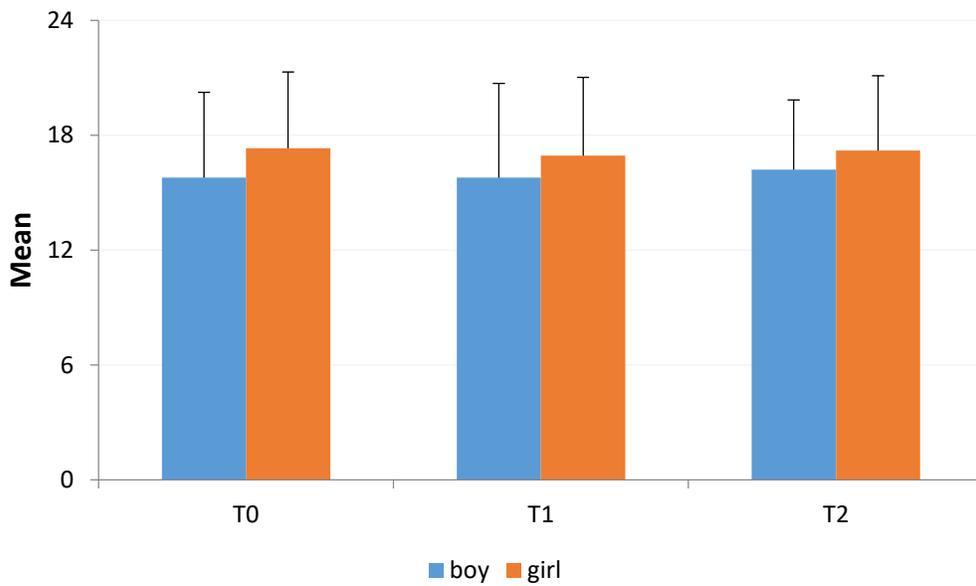
**Chart 3: Positive affective attitudinal responses based on gender**

The means and their standard Errors of affective responses from T0 to T2 for girls and boys towards peers with physical disabilities are displayed in Chart 3. The positive affective responses from T0 to T2 for the boys was less than responses from the girls.

Variable	estimate	SE	95 % CI for mean difference	P-value
intercept	17.17	0.32	(16.55, 17.08)	<0.0001
time				
5 months post test	0.13	0.41	(-0.67, 0.93)	0.747
1 Week post test	-0.20	0.40	(-0.98, 0.58)	0.620
Present (reference)	0	0	.	.
Gender (boy)	-1.24	0.34	(-1.90, -0.57)	<0.0001

**Table 12: Behavioral attitude based on gender**

The behavior of primary school students from T0 to T2 in the girls and boys was analyzed using the linear mixed model. The time variable with three categories and gender with two levels were entered into the model. According to the results reported in Table 12, gender was a significant variable for the behavioral attitude of primary school children ( $p\text{-value} < 0.05$ ). In other words, the favorable behavioral attitude of male students was 1.24 units less than that of female students.



**Chart 4: Positive behavioral attitude based on gender**

The means and their standard Errors of positive behavior from T0 to T2 for male and female students towards peers with physical disabilities plotted in Chart 4. The favorable behavior response from T0 to T2 of male students was less than the female students.

Variable	estimate	SE	95 % CI for mean difference	P-value
intercept	13.52	0.28	(12.98, 14.08)	<0.0001
time				
Present (reference)	0	0	.	.
1 Week post test	1.31	0.35	(0.61, 2.00)	<0.0001
5 months post test	1.82	0.36	(1.10, 2.53)	<0.0001
Gender (girl)	-0.86	0.30	(-1.45, -0.28)	0.004

**Table 13: Cognitive attitude based on gender**

The cognitive responses of primary school students from T0 to T2 in the female and male respondents were analyzed using the linear mixed model. All the variables involved were entered into the model. According to the results reported in Table 13, gender was a significant variable for the cognitive attitudinal responses of primary school students towards SWPD (p-value<0.05). In other words, the favorable cognitive responses of male students were 0.86 units less than that of female students. Also, the cognitive responses of primary school students after 1 week and 5 months were statistically significant in comparison to baseline results (p-value<0.05).

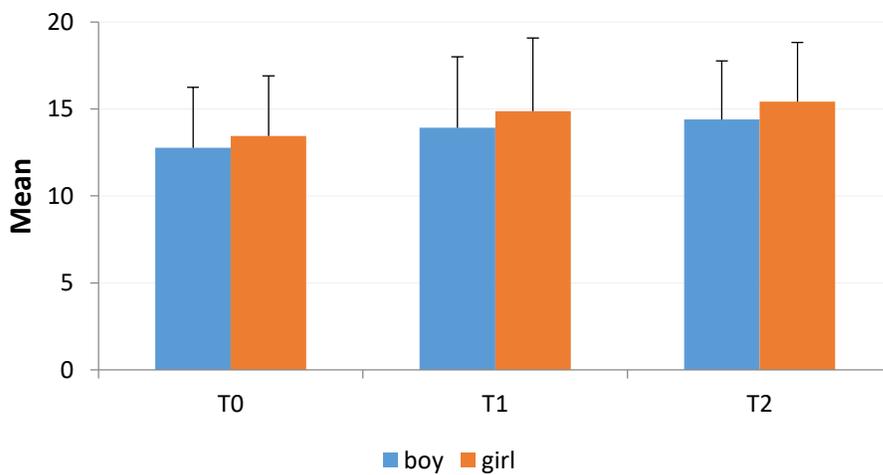
variable			Mean difference	SE	P-value
Time	5 months post test	1 Week post test	0.51	0.37	0.170
		Present	1.82	0.36	<0.0001

	1 week	Present	1.31	0.35	<0.0001
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**Table 14: Post hoc test for pairwise comparison**

Post Hoc tests are based on LSD test.

The favorable cognitive responses of primary school student after 5 months were 0.51 units more than baseline results. In addition, the favorable cognitive attitude responses of primary school students after 1 week was 1.31 units more than baseline.



**Chart 5: Positive cognitive attitudinal responses based on gender**

The means and standard errors of favorable cognitive attitude responses from T0 to T2 for female and male students towards SWPD are shown in Chart 5. The favorable cognitive responses from T0 to T2 for male students was less than that of female students.

Variable	estimate	SE	95 % CI for mean difference	P-value
intercept	46.45	0.72	(45.03, 47.87)	<0.0001

time				
5 months post test	2.23	0.92	(0.42, 4.05)	0.016
1 Week post test	1.33	0.90	(-0.44, 3.10)	0.139
Present (reference)	0	0	.	.
Gender (boy)	-2.72	0.77	(-4.23, -1.22)	<0.0001

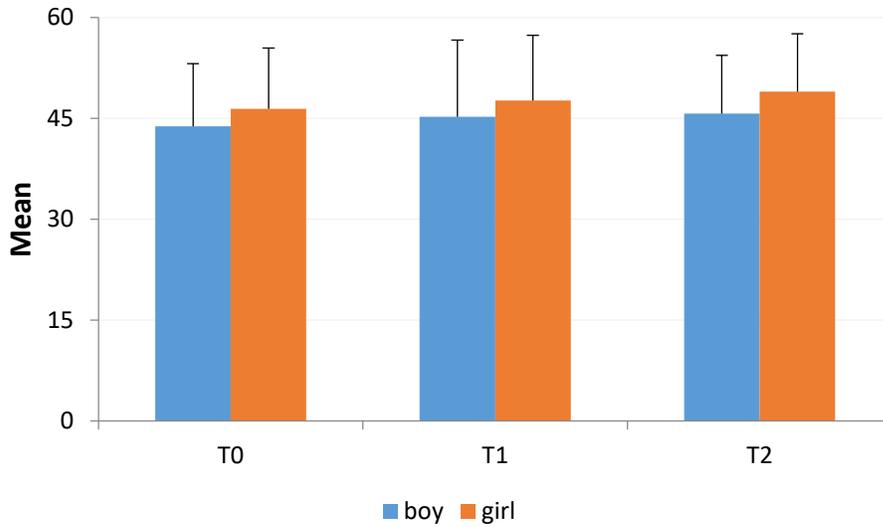
**Table 15: Positive overall attitude of both genders towards SWPD**

The attitude of primary school students from T0 to T2 in the girls and boys was analyzed using the linear mixed model. All variables and gender were entered into the model. According to the results reported in Table 15, gender was a significant variable for the positive cognitive responses of primary school students towards SWPD (p-value<0.05). In other words, favorable attitude of boys was 2.72 units less than that of the girls. Also, the attitude of primary school students 5-months after (at T2) was statistically significant in comparison to baseline results (p-value<0.05).

variable			Mean difference	SE	P-value
Time	5 months post test	1 Week post test	0.90	0.94	0.337
		Present	2.24	0.92	0.016
	1 week	Present	1.33	0.90	0.139

**Table 16: Post hoc for pairwise comparison**

The favorable attitude of primary school students after 5 months was 0.90 units more than baseline.



**Chart 6: Overall positive attitudes based on gender**

The means and their standard errors of positive attitude from T0 to T2 for girls and boys towards SWPD is plotted in Chart 6. The positive attitudes from T0 to T2 for boys was less than girls.

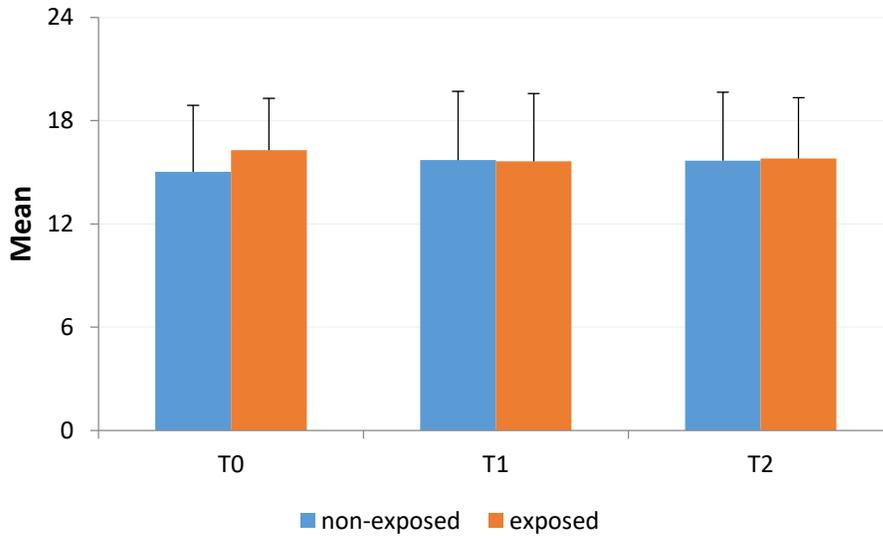
Research Question:

2. How does previous exposure to physical disability impact the effect of the DAP on the 3 components of attitude?

Variable	estimate	SE	95 % CI for mean difference	P-value
intercept	15.78	0.32	(15.14, 16.41)	<0.0001
time				
5 months post test	0.22	0.37	(-0.52, 0.96)	0.56
1 Week post test	0.18	0.36	(-0.54, 0.89)	0.629
Present (reference)	0	0	.	.
Expose	-0.46	0.31	(-1.08, 0.15)	0.141

**Table 17: Affective based on exposure**

One of the questions of the questionnaire was “Do you know anyone with a physical disability?” with two answers, “yes or no”; we renamed this question as ‘exposure’. The affective component of attitude of respondents towards SWPD from T0 to T2 for exposed and non-exposed students were analyzed using the linear mixed model. The variables of time with three categories and exposure with two categories were entered into the model. According to the results which reported in the Table 17, previous exposure did not significantly impact the affective attitude of primary school students towards peers with physical disabilities ( $p\text{-value} > 0.05$ ).



**Chart 7: Affective component of attitude based on exposure**

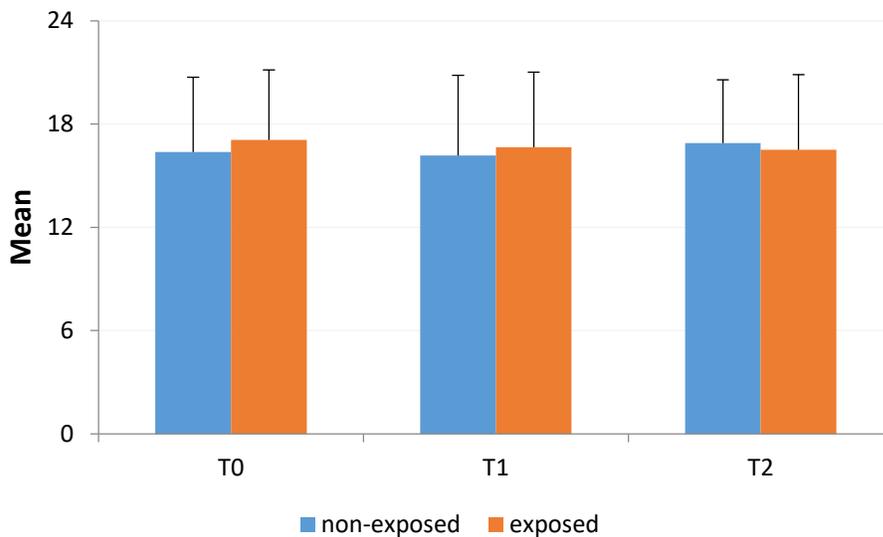
The means and their standard errors of affective attitude from T0 to T2 for exposed and non-exposed students are displayed in Chart 7. The affective attitude from T0 to T2 for non-exposed increased but for exposed students it decreased from T0 to T1. The affective attitude at T0 for non-exposed students was less than that of exposed students; but at T1 and T2 exposed and non-exposed student were similar.

Variable	estimate	SE	95 % CI for mean difference	P-value
intercept	16.81	0.36	(16.10, 17.53)	<0.0001
time				
5 months post test	0.08	0.41	(-0.73, 0.89)	0.846
1 Week post test	-0.26	0.40	(-1.05, 0.52)	0.509
Present (reference)	0	0	.	.

Expose	-0.32	0.35	(-1.01, 0.37)	0.369
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**Table 18: Behavioral attitude based on exposure**

The behavioral attitude of primary school students from T0 to T2 for exposed and non-exposed students were analyzed using the linear mixed model. The variables time with three categories and exposure with two categories were entered into the model. According to the results which are reported in Table 18, none of the variables were significant enough to impact the behavioral attitude of primary school students towards peers with physical disabilities ( $p\text{-value} > 0.05$ ).



**Chart 8: Behavioral component of attitude based on exposure**

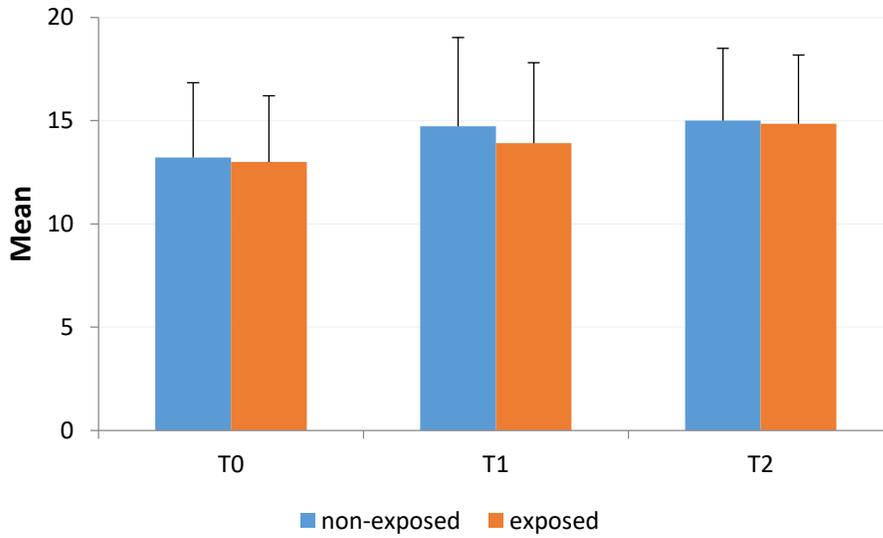
The means and their standard errors of behavioral attitude from T0 to T2 for exposed and non-exposed students is shown in Chart 8. The behavioral attitude from T0 to T2 for non-exposed students decreased from T0 to T1 and then increased from T1 to T2. For exposed students, the behavioral attitude decreased from T0 to T2. The behavioral attitude at T0 and T1 for non-exposed

was less than exposed students but at T2 behavioral attitude of non-exposed students was more than exposed students.

Variable	estimate	SE	95 % CI for mean difference	P-value
intercept	12.87	0.32	(12.25, 13.50)	<0.0001
time				
5 months post test	1.83	0.37	(1.11, 2.55)	<0.0001
1 Week post test	1.29	0.36	(0.58, 1.99)	<0.0001
Present (reference)	0	0	.	.
Exposure	0.40	0.31	(-0.20, 1.0)	0.191

**Table 19: Cognitive attitude based on exposure**

The cognitive attitudes of primary school students from T0 to T2 in exposed and non-exposed students were analyzed using the linear mixed model. The time variable with three categories and exposure with two levels were entered into the model. According to the results which are reported in the Table 19, time was a significant variable for the cognitive of primary school students towards peers with physical disabilities based on previous exposure (p-value<0.05). The cognitive attitude of primary school students after 1 weeks and 5 months were statistically significant in compared to baseline (p-value<0.05).



**Chart 9: Cognitive component of attitude based on exposure**

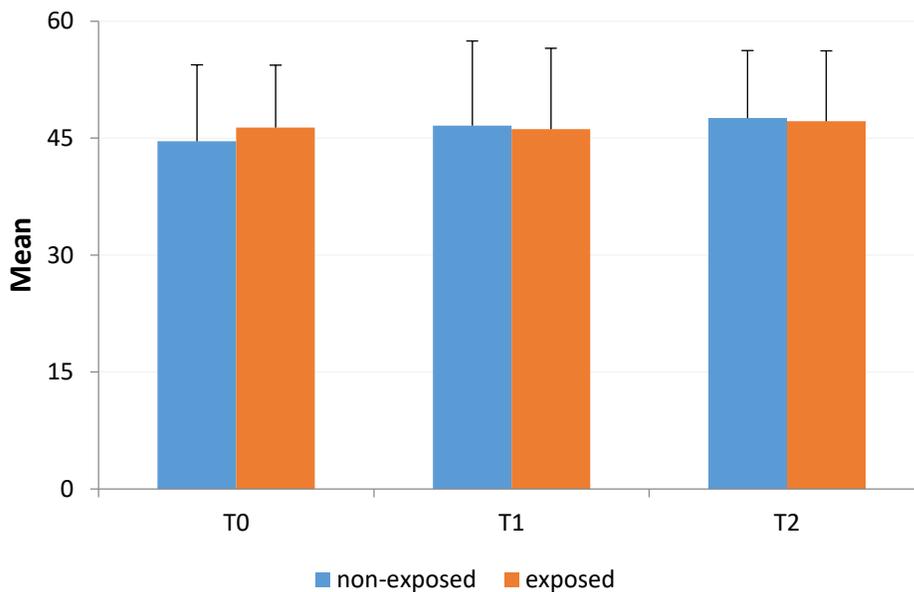
The means and their standard errors of cognitive attitude from T0 to T2 for exposed and non-exposed students are shown in Chart 9. The cognitive attitude from T0 to T2 for non-exposed students was higher than exposed students.

Variable	estimate	SE	95 % CI for mean difference	P-value
intercept	45.47	0.82	(43.85, 47.08)	<0.0001
time				
5 months post test	2.15	0.93	(0.31, 3.95)	0.022
1 Week post test	1.19	0.91	(-0.59, 2.98)	0.189
Present (reference)	0	0	.	.

Expose	-0.40	0.80	(-1.97, 1.16)	0.612
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**Table 20: Overall attitude responses based on previous exposure**

The attitudes of respondents from T0 to T2 in exposed and non-exposed students were analyzed using the linear mixed model. The time variable with three categories and exposure with two levels were entered into the model. According to the results reported in Table 20, the attitude of primary school students at T2 was 2.15 units more favorable than baseline which was significant (P-value<0.05).



**Chart 10: Overall attitudes based on previous exposure**

The means and their standard errors of attitude from T0 to T2 for exposed and non-exposed students are shown in Chart 10. The attitude from T0 to T2 for non-exposed students increased. For exposed students, the attitude at first decreased from T0 to T1 and then increased from T1 to

T2. The attitude for non-exposed students was less than the exposed students at T0. In addition, the attitude from T1 to T2 was higher for non-exposed students.

## **CHAPTER 5: DISCUSSION**

### **5.1 Overview**

While the educational system globally is leaning towards inclusion for all, research still maintains a predominance of increasing negative attitudes towards peers with physical disabilities in the classrooms (Siperstein et al 2007). Children with disabilities often feel left-out, unwanted and unwelcome in inclusive settings and amongst typically developed peers (Ison et al 2010). In recent years, disability awareness programs have been used to increase knowledge and understanding of this topic in order to improve attitudes towards physically disabled peers.

Despite the noteworthy amount of research being conducted worldwide on attitudes towards disabled peers, there is little evidence to pinpoint the most effective aspect of a disability awareness program (Lindsay & Edwards 2013). However, research consistently has proven that younger children are more impressionable for creating a positive attitude change (Lindsay & Edwards 2013) and embedding the DAP into the curriculum helps pre-empt negative attitudes towards physical disability (Alves & Santos 2013). This chapter contains seven sections: summary of the study, key findings, overall attitudes based on previous exposure, limitations, future recommendations, reflections, and concluding note.

### **5.2 Summary of the Study**

This study set out to measure the impact of a disability awareness program called ‘Let’s Include!’ on the different components of attitude of primary school children towards peers with physical

disabilities. The components of attitude are the cognitive, affective and behavioral aspects of a person's attitude towards a topic or object. Next, the results were analyzed and compared to assess what effect gender and previous exposure had on the attitude change. For the purpose of this study, the researcher designed a disability awareness program to use in a primary school with grades 4, 5 and 6. This program began with a focus group, baseline questionnaire and then the multi-media presentation. This presentation was followed by a questionnaire after a week and again after 5 months. Data was collected between the months of October 2018 and March 2019. Other studies with similar aims and the use of CATCH are (Godeau et al 2010; Rosenbaum et al 1986).

### **5.3 Key Findings**

Based on the results of the analysis, it is evident that a significant overall attitude change did not occur within a week. However, the results from baseline to post 5-months did display a significant change in attitude towards students with a physical disability (Chart 2. Table 7). This indicates that the short term awareness program 'Let's Include!' was successful in creating improved attitudes in the medium term in primary school students. A brief intervention has proven effective in immediate and medium term attitude change. In order to build up on the results, the effects of a longer term intervention program may create even more persisting attitude changes. This could result in an inclusive setting that is accepting and welcoming of students with physical disabilities. It could also potentially teach the students how to behave in the presence of peers with physical disabilities.

This study set out to measure the impact of the intervention program on each component of attitude individually. While this was a challenge given the time restrictions of the study, it was important to have the results for future campaigns. Due to a lack of understanding of physical disabilities and their impact on a person's life, at T0, respondents had the lowest results on how they think of SWPD and their ideas on the subject. This constitutes their cognitive attitude. According to the Post Hoc tests conducted, the change in cognitive attitude from T0 to T1 was not significant, but the change from T0 to T2 with a gap of 5-months was significant (Table 8 & 9). This suggests that the DAP was successful in improving students' attitude towards SWPD and maintaining a longer lasting (5-months) impact on cognitive attitudes in children aged 8 – 11 years. This could be a result of increasing children's information and understanding of physical disabilities, hence creating a positive change in cognitive attitudes, as was experienced by Godeau et al (2010).

The children's sympathetic emotions may have had an effect on their affective attitudes (feelings of empathy) causing the positive affective attitude to be slightly higher than the cognitive attitude at T0 (Salehpour & Adibsereshki 2001). These results are corroborated with the feedback received throughout the presentation from respondents as did Beaulieu-Bergeron & Morin (2016). The students mentioned how people with PD cannot be successful and that they feel pity towards them. The Post Hoc tests conducted indicate that the change in affective attitude from baseline to post 5-months was insignificant. Hence, the DAP was not successful in improving children's affective attitudes towards students with physical disabilities.

The affective attitude affects how the respondents believe they would behave towards a child with a physical disability. Therefore, if affective attitude was not improved, then neither would

behavioral attitude. For example, question number 2 in the Adapted CATCH was “Would you introduce a child with a physical disability to your friends?” and question number 7 was “Would you stick up for a child with a physical disability who was being teased?”. These probing questions allow for the student to put him/herself in the shoes of the child with the disability and to decide how they would behave given that particular situation. It could be envisioned as an idealistic approach to intended behavior, because it would be common for children to fantasize an ideal behavioral approach to a given situation (Beaulieu-Bergeron & Morin 2016). While behavioral attitude scored the highest at baseline, the scores of T1 and T2 indicate that the DAP had little or no significant impact on students’ behavioral attitude. This finding has further implications of utilizing a different approach to create a positive change in affective and behavioral attitude. A disability simulation or buddy program including real children with disabilities may have more impact on affective and behavioral attitude than theoretical training program with intangible cases (Lindsay & Edwards 2013).

The impact of the DAP on the affective component of attitude was highly impacted by the variable of gender (Table 11). Girls had the higher baseline scores and consistently displayed more positive affective attitude towards peers with physical disabilities at the different time intervals. This is supported by most research (Rosenbaum et al 1986). The behavioral and cognitive components of attitude were also significantly affected by gender as girls repeatedly scored higher than boys in all 3 time intervals.

This knowledge gained from this study could have implications on future research in the field. Research indicates that girls engage more positively than boys, who prefer non-verbal independent

play (Rosenbaum et al 1986). Both these notions could be utilized in a forced-contact situation allowing each gender group to display their respective skills set in helping peers with physical disabilities participate. This in turn could result in positive feelings of self-worth for having made a difference in someone else's life.

The impact of exposure on the affective component of attitude was evident in the baseline responses where those with previous exposure scored significantly higher. However, after exposure to the intervention program, both groups of exposed and non-exposed scored similarly with no significant changes. Perhaps this indicates that an intervention session can have the same positive impact as prior exposure in positively impacting those with no previous exposure. On the other hand, those with previous exposure had no positive change in their affective component of attitude throughout the three time intervals.

The behavioral attitude of respondents with previous exposure to PD scored higher than those without exposure at baseline T0 and T1. This is in line with the contact theory which states that facilitated opportunities of engagement amongst children with and without disabilities encourages decreases negative feelings and improves attitudes (Cassiere 2017, Lindsay & Edwards 2013). Similar to the impact on the affective component of attitude, the behavioral component of attitude among the non-exposed group increased from T0 to T2. This is partly due to the fact that affective and behavioral components usually go hand in hand, since human behavior is highly predicted by feelings.

The cognitive component of behavior was negatively affected by previous exposure in all 3 time intervals. This could be due to the fact that the non-exposed group learnt all they know about PD from a pre-programmed session geared at improving attitudes, whereas prior experience could have elicited favorable or unfavorable thoughts. The non-exposed group may have more pity for SWPD partly due to religious or cultural factors and lack of prior knowledge (Salehpour & Adibsereshki 2001). This sense of pity may be what is causing the increased positive affective response towards SWPD versus those with previous exposure may have a more logical, less emotional outlook. Another explanation is that the information session was armed with entertainment media to educate the children. This use of age appropriate media and appealing to the age group via use of social media representatives and ‘popular’ people with disabilities, may have elicited positive cognitive feelings in the non-exposed group (Hemmati et al 2010, Singhal & Rogers 2012). Whereas the exposed group would have had their pre-existing ideas on disability and will not be as easily swayed with one information session. Despite, the more positive responses of the non-exposed group, both groups displayed statistically significant cognitive attitude enhancement from T0 to T2.

#### **5.4 Overall Attitudes Based on Previous Exposure**

This finding suggests that at baseline, students with prior exposure to a person with a physical disability had more favorable attitudes towards SWPD, which was also seen in other similar studies (Beaulieu-Bergeron & Morin 2016). From T0 to T2, both groups of exposure had a steady increase in favorable attitudes, with the non-exposed group displaying the most positive outcome at each time interval. This could be due to the fact the education received was carefully planned and programmed to increase positive attitudes, whereas a previous experience may have been negative

rather than a positive one (Barney 2012). At T1 and T2 however, prior exposure to disability seemed to have an insignificant negative effect on attitudes towards disability. This finding does not negate the contact theory which suggests that exposure can create positive attitudes (Cassiere 2017). The non-exposed group displayed significant overall attitude change, indicating the DAP was successful in creating positive attitudes towards peers with physical disabilities.

## **5.5 Limitations**

Like any other study, this was not without its limitations. The first being the small sample size, and that all the respondents were from the same school/classrooms. In addition, the sample only included students in one inclusive school. It would be interesting to have inclusive and non-inclusive types of schools included in the population. The researcher had no control or any way of finding out over whether students responding to the T1 or T2 had been present during the T0 and intervention program or not. The researcher was not present at the time of administering T1 and T2. If the students had questions this may not have been addressed by the homeroom teacher, leaving the respondents confused. Time constraints also limited the scope of research. In the interest of completing the work in the assigned deadline, the scope and population size could not be increased.

## **5.6 Future Recommendations**

Despite feeling content with the current study approach and its results, it is undeniable that in retrospect, things could have been done better. First, a larger sample size spanning over 3 schools with different curricula would create the ideal student population. The choice of various schools

to include into the population could include non-inclusive schools as well. It would be interesting to know whether the exposure in the school setting has affected attitudes or not. Second, this study could include a control group as large as the experimental group in order to compare results of the awareness campaign more accurately. Another approach could be to target children at younger ages (5 to 8) as they are more impressionable and able to create longer lasting impressions; but researcher must ensure that the material is age appropriate. One way to create attitude change in the 5-8 years' age group would be a monthly buddy program with a child that has a physical disability. This buddy program must be guided and monitored carefully by teachers and assistants alike, to ensure positive gains from such a program. If not carefully planned, it could result in frustrations and negative feelings.

It would also be useful to carefully design a program that is better able to affect behavioral and affective attitudes towards SWPD, as they are the most important when actual student placement has occurred. Another item that must be included in the data collection is the frequency of contact with a person that has a physical disability (Beaulieu-Bergeron & Morin 2016). The frequency of contact with a person with physical disability can have tremendous impact on attitude enhancement. In addition, based on the factor analysis of the CATCH questionnaire, it was suggested that perhaps a 2 component model would be more appropriate. This is supported by the evidence from this study as well as Rosenbaum which suggest that affective and behavioral intent are intertwined and cannot constitute separate measures. It was proven difficult to separate behavioral intent from affective statements. Rosenbaum et al (1986) found similar result where an educational program made improvements in cognitive attitude but not in other components of attitude.

## 5.7 Reflections

This study began as a measure of the effectiveness of an awareness campaign to improve peer attitudes towards SWPD in the classroom. Upon further research into the literature to support this aim, it was discovered that attitude has 3 components with the ability to be impacted separately. Hence the decision was made to identify the impact of this awareness campaign on each component separately. The CATCH was identified as a useful tool in achieving that result. Another idea that rose during data collection was to identify whether gender or previous exposure have any effect on these results. This was made feasible halfway through data collection because both variables were on the questionnaire and answering them was compulsory. These fine-tuning techniques allowed for in-depth understanding of attitude change and its requirements.

Despite being a challenging aim, it was thoroughly interesting to see the differences each variable has and how each attitude component differs in intensity of impact. These differences can aid in designing future disability awareness campaigns by targeting specific components of attitude through a structured format. Studies on peer attitude have great implications for educators, governments and school boards for curriculum design and school planning. It is also important for teachers to understand that SWPD are at risk of being excluded or neglected by friends (Diamond & Hong 2010). Teachers must understand how simple considerations on their part can drastically help ease tensions and challenges in a classroom. Hence, they would be more inclined to make the necessary changes in an attempt to create an accepting classroom environment to be modeled by the peers.

## 5.8 Concluding Note

In the recent years, the educational trend has been fast moving towards inclusive education for all. Placement of students with physical disabilities in mainstream schools was the first step towards equality in education. One of the next and more challenging steps is to ensure positive peer attitudes and acceptance. Both of these are crucial for placement to be effective and meaningful. Hence making this study necessary as it is the first of its kind in the area. This study set out to measure the components of students' attitudes as a result of a carefully planned disability awareness program called 'Let's Include!'. It also took into consideration affecting variables such as gender and previous exposure. The study consisted of a pilot program, focus groups, questionnaires at 3 time intervals and a brief intervention session aimed at 8 – 11 year olds at a school in Dubai. The CATCH questionnaire was utilized to measure the components of attitude among a population of 612 students. Data was analyzed using mixed model method and one-way ANOVA.

The results indicate that the intervention program was successful in creating an overall attitude enhancement among the respondents. This would suggest that a whole school campaign, preferably embedded in the curriculum can create phenomenal attitude changes over the course of the academic year. With further probing, the cognitive component of attitude was the most positively affected, whereas the other two components saw little or no change. This area can have a great impact on future campaigns because further research needs to be done on the psychology of emotional and behavioral attitude change. Behavioral attitude change is what is most required in cases of inclusion, and therefore one must understand how this change can be initiated. With

this understanding, a more effective awareness campaign can be designed to create long lasting behavioral changes.

Similarly, gender was proven an important variable with girls scoring higher than boys. This indicates that for future studies, certain adjustments could create more positive changes. In future studies, each boy can be paired with a girl to increase campaign effectiveness. More information on the psychology of how boys undergo attitude change and the importance of peer pressure or role modeling must be understood. These two factors can create tremendous attitude change once these areas are tapped into correctly. Respondents with no previous exposure to physical disability also saw more improvements in their attitudes towards peers with PD. As the focus group proved, many children had misconceptions regarding PD. In order to have valid and reliable results, the first step is to understand the misconceptions and where they come from, and then to set them straight. Once this has been done, a DAP can be successful in creating behavioral and emotional attitude change in children.

While this study is of significant value because it is the first of its kind, it is also important to repeat such studies to ensure validity of results. The importance of this study can be reflected on future studies on peer attitudes in the country as well as other disability awareness campaigns. The findings of this study can shape future campaigns to ensure a highly targeted intervention approach for more accurate results based on research. It can also serve the basis for creating the disability awareness program into the curriculum from a young age with the use of books, media, posters, and other means of normalizing the topic.

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## Appendix A: Original CATCH questionnaire

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**Table 3-1**  
Revised Version of Chedoke Attitudes Toward Children with Handicaps  
Scale (CATCH-R)

CATCH-R STATEMENTS	Comp. <sup>a</sup>
1. I WOULDN'T WORRY IF A HANDICAPPED CHILD SAT NEXT TO ME IN CLASS.	A
2. I WOULD NOT INTRODUCE A HANDICAPPED CHILD TO MY FRIENDS.*	A <sup>+</sup>
3. HANDICAPPED CHILDREN CAN DO LOTS OF THINGS FOR THEMSELVES.	C
4. I WOULDN'T KNOW WHAT TO SAY TO A HANDICAPPED CHILD.*	B <sup>+</sup>
5. HANDICAPPED CHILDREN LIKE TO PLAY.*	C
6. I FEEL SORRY FOR HANDICAPPED CHILDREN.*	A <sup>+</sup>
7. I WOULD STICK UP FOR A HANDICAPPED CHILD WHO WAS BEING TEASED.*	B
8. HANDICAPPED CHILDREN WANT LOTS OF ATTENTION FROM ADULTS.*	C <sup>+</sup>
9. I WOULD INVITE A HANDICAPPED CHILD TO MY BIRTHDAY PARTY.*	B
10. I WOULD BE AFRAID OF A HANDICAPPED CHILD.	A <sup>+</sup>
11. I WOULD TALK TO A HANDICAPPED CHILD I DIDN'T KNOW.	B
12. HANDICAPPED CHILDREN DON'T LIKE TO MAKE FRIENDS.*	C <sup>+</sup>
13. I WOULD LIKE HAVING A HANDICAPPED CHILD LIVE NEXT DOOR TO ME.	A
14. HANDICAPPED CHILDREN FEEL SORRY FOR THEMSELVES.*	C <sup>+</sup>
15. I WOULD BE HAPPY TO HAVE A HANDICAPPED CHILD FOR A SPECIAL FRIEND.	A
16. I WOULD TRY TO STAY AWAY FROM A HANDICAPPED CHILD.*	B <sup>+</sup>
17. HANDICAPPED CHILDREN ARE AS HAPPY AS I AM.	C
18. I WOULD NOT LIKE A HANDICAPPED FRIEND AS MUCH AS MY OTHER FRIENDS.	A <sup>+</sup>
19. HANDICAPPED CHILDREN KNOW HOW TO BEHAVE PROPERLY.	C
20. IN CLASS I WOULDN'T SIT NEXT TO A HANDICAPPED CHILD.*	B <sup>+</sup>
21. I WOULD BE PLEASED IF A HANDICAPPED CHILD INVITED ME TO HIS HOUSE.	A
22. I TRY NOT TO LOOK AT SOMEONE WHO IS HANDICAPPED.*	B <sup>+</sup>
23. I WOULD FEEL GOOD DOING A SCHOOL PROJECT WITH A HANDICAPPED CHILD.	A
24. HANDICAPPED CHILDREN DON'T HAVE MUCH FUN.	C <sup>+</sup>
25. I WOULD INVITE A HANDICAPPED CHILD TO SLEEP OVER AT MY HOUSE.*	B
26. BEING NEAR SOMEONE WHO IS HANDICAPPED SCARES ME.*	A <sup>+</sup>
27. HANDICAPPED CHILDREN ARE INTERESTED IN LOTS OF THINGS.*	C
28. I WOULD BE EMBARRASSED IF A HANDICAPPED CHILD INVITED ME TO HIS BIRTHDAY PARTY.	A <sup>+</sup>
29. I WOULD TELL MY SECRETS TO A HANDICAPPED CHILD.*	B
30. HANDICAPPED CHILDREN ARE OFTEN SAD.	C <sup>+</sup>
31. I WOULD ENJOY BEING WITH A HANDICAPPED CHILD.*	A
32. I WOULD NOT GO TO A HANDICAPPED CHILD'S HOUSE TO PLAY.	B <sup>+</sup>
33. HANDICAPPED CHILDREN CAN MAKE NEW FRIENDS.	C
34. I FEEL UPSET WHEN I SEE A HANDICAPPED CHILD.	A <sup>+</sup>
35. I WOULD MISS RECESS TO KEEP A HANDICAPPED CHILD COMPANY.*	B
36. HANDICAPPED CHILDREN NEED LOTS OF HELP TO DO THINGS.*	C <sup>+</sup>

<sup>a</sup>Comp: The affective (A), behavioral (B) or cognitive (C) component to which the item belongs.

\* Same item as in original CATCH.

+ Recode before summing.

## Student Questionnaire

Class: \_\_\_\_\_

Age: \_\_\_\_\_

BOY  GIRL

Nationality: \_\_\_\_\_

Do you know anyone with a physical disability:  Yes  No

Listen to each question as it is read. Think about how you feel and circle the best answer. Be as honest as possible. There are no right or wrong answers.

1. Would you worry if a child with a physical disability sat next to you in class?

Yes  No  Maybe

2. Would you introduce a child with a physical disability to your friends?

Yes  No  Maybe

3. Children with a physical disability can do lots of things for themselves.

Yes  No  Maybe

4. Would you know what to say to a child with a physical disability?

Yes  No  Maybe

5. Do children with a physical disability like to play?

Yes  No  Maybe

6. Do you feel sorry for children with a physical disability?

Yes  No  Maybe

7. Would you stick up for a child with a physical disability who was being teased?

Yes  No  Maybe

8. Do children with a physical disability want lots of attention from adults?

Yes  No  Maybe

9. Would you invite a child with a physical disability to your birthday party?

Yes       No       Maybe

10. Would you be afraid of a child with a physical disability?

Yes       No       Maybe

11. Would you talk to a child with a physical disability that you don't know?

Yes       No       Maybe

12. Do children with a physical disability like to make friends?

Yes       No       Maybe

13. Would you like having a child with a physical disability live next door to you?

Yes       No       Maybe

14. Do children with a physical disability feel sorry for themselves?

Yes       No       Maybe

15. Would you be happy to have a child with a physical disability for a close friend?

Yes       No       Maybe

16. Would you try to stay away from a child with a physical disability?

Yes       No       Maybe

17. Are children with a physical disability as happy as you are?

Yes       No       Maybe

18. Would you like a friend with a physical disability as much as your other friends?

Yes       No       Maybe

19. Do children with a physical disability know how to behave properly?

Yes       No       Maybe

20. In class, would you sit next to a child with a physical disability?

Yes       No       Maybe

21. Would you be pleased if a child with a physical disability invited you to his house?

Yes       No       Maybe

22. Do you try not to look at someone who has a physical disability?

Yes       No       Maybe

23. Would you feel good doing a school project with a child with a physical disability?

Yes       No       Maybe

24. Can children with a physical disability have much fun?

Yes       No       Maybe

25. Would you invite a child with a physical disability to come over to your house?

Yes       No       Maybe

26. Does being near someone who has a physical disability scare you?

Yes       No       Maybe

27. Are children with a physical disability interested in lots of things?

Yes       No       Maybe

28. Would you be embarrassed if a child with a physical disability invited you to his/her party?

Yes       No       Maybe

29. Would you tell your secrets to a child with a physical disability?

Yes       No       Maybe

30. Are children with a physical disability often sad?

Yes       No       Maybe

31. Would you enjoy being with a child with a physical disability?

Yes       No       Maybe

32. Would you go to the house of a child with a physical disability to play?

Yes

No

Maybe

33. Can children with a physical disability make new friends?

Yes

No

Maybe

34. Do you feel upset when you see a child with a physical disability?

Yes

No

Maybe

35. Would you miss break-time to keep a child with a physical disability company?

Yes

No

Maybe

36. Do children with a physical disability need lots of help to do things?

Yes

No

Maybe

### Appendix C: Focus Group Excerpts

	<b>1.What are your feelings when going to school?</b>	<b>2.How would you WANT to feel every morning</b>	<b>3.Why would someone have negative feelings?</b>	<b>4.What is a physical disability?</b>
<b>Grade 40</b>	Happy, sad, tired, sleepy, excited, shy	Tired, sleepy, wanting to learn, forgetting something, excited to play football with friends, not interested in playtime, look forward to seeing friends	Hurt, bullied, no friends, not liked, different, can't do things, disabled, need help, look different, new to school and no friends, discriminated against	Not having limbs, needing a wheelchair, broken body parts, special needs, deaf, blind or mute, not thinking properly, paralyzed, not smart enough, not being able to do sports, not being able to walk, can't run, not being able to move, having brain problems, cancer
<b>Grade 50</b>	Tired, sleepy, wanting to learn, forgetting something, excited to play football with friends, not interested in playtime, look forward to seeing friends	Happy because my friends make me feel wanted and not alone, confident, excited to play, ready to have fun, joyful, confident, alert, ready to learn,	Not having limbs, needing a wheelchair, broken body parts, special needs, deaf, blind or mute, paralyzed, not smart enough, not being able to do sports, not being able to walk, can't run, not being able to move, no friends	No limbs, abnormal, use wheelchair, immobile, born without limbs, maybe helping people who have a disability, being unable to swim is a disability, not being able to do something while using your body parts and it can't be taken away so you'll always have it, no movement, brain issues.

	<b>1.What are your feelings when going to school?</b>	<b>2.How would you WANT to feel every morning.</b>	<b>3.Why would someone have negative feelings?</b>	<b>4.What is a physical disability?</b>
<b>Grade 6D</b>	Tired, sleepy, happy, eager to learn, happy to see friends,	Happy, comfortable, excited, excited and energetic, awake, hyper, to make friends, want to make sure no one is feeling lonely, having friends, safe, welcomed, included,	Not being included, annoyed, tired, no friends, doesn't have the same things as peers, ignored and left alone, being judged for a physical disability, discriminated against	Blind, not having limbs, mute, deaf, not walking, body deformities, using wheelchairs,

## Appendix D: Links to videos children watched during presentation

<http://safeYouTube.net/w/LpKe>

<http://safeYouTube.net/w/MpKe> 1:40 onwards

[End Awkward! Video on USB](#)

<http://safeYouTube.net/w/RpKe> up until 3 min.

<http://safeYouTube.net/w/SpKe> 1:25 – 2:10

<http://safeYouTube.net/w/TpKe> until 1 minute

<http://safeYouTube.net/w/UpKe>

## Appendix E: Letter of approval from school director

Mrs. Ruth Burke  
Whole School Director  
Deira International School  
Dubai, U.A.E.

### REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN SCHOOLS

Dear Mrs. Burke,

My name is Elahe Naseri Rad, and I am a Master's student of Education in the field of inclusion at the British University in Dubai. The research I wish to conduct for my Master's dissertation involves carrying out an experimental study to measure the impact of a short-term disability awareness campaign on attitudes of primary school learners towards peers with physical disabilities. This project will be conducted in the primary level and amongst year 4, 5 and 6 students.

I am hereby seeking your consent to allow me to carry out the disability awareness campaign at your respective school. If you require any further information, please do not hesitate to contact me on 050-3877688, [elanaserirad@gmail.com](mailto:elanaserirad@gmail.com). Thank you for your time and consideration in this matter.

Yours sincerely,



Elahe Naseri Rad  
Master of Education  
Major in Inclusive Education

Approved by:

Signature:



RUTH BURKE - SCHOOL DIRECTOR  
Please print name and title