Can school lessons devised using psychological theories and therapeutic approaches positively impact on the mental health and emotional intelligence of young people affected by war including ex-child soldiers in Northern Uganda?

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ABSTRACT

The aim of this investigation was to identify if school lessons, which were designed to incorporate psychological theories and therapeutic approaches, could improve the mental health and/or emotional intelligence of the students being taught the lessons (N=76). The lessons (the intervention program) were designed by the researcher and taught by local teachers at 11 secondary schools to year 7 and year 8 pupils in an area of Northern Uganda where a civil war had taken place during the previous 22 years between a rebel group and government forces. The study comprised the intervention group who were taught the lessons over 2 years and a control group living in the same area that were not taught the lessons. Both groups were given a Mental Health (MH) and Emotional Intelligence (EI) questionnaire designed by the researcher at the beginning of the intervention period and at the end. Volunteers from the intervention group also took part in a semi structured interview. Teachers who taught the program were also given a questionnaire to elicit their views on the benefits and workability of the program.

The findings indicated a significant effect of the intervention on most aspects of MH and EI in the intervention group compared with the control group. The effects of the intervention did not vary significantly between genders. Teachers' questionnaires indicated an overall positive effect on teacher student relationships, behavior and general benefits to students. The elements of the program such as the teaching approach, methods of learning, content and effect on relationships between students were not examined but form part of a discussion into the potential future direction /further research for programs with similar aims.

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Chapter 1: INTRODUCTION

1.0 The purpose and motivation for the research

The purpose of this research is to ascertain if school lessons devised using psychological theories and therapeutic approaches positively impact on the mental health (MH) and emotional intelligence (EI) of young people affected by war including ex-child soldiers in Northern Uganda. The hypothesis is that the intervention will result in a significant impact in their MH and EI compared with a control group.

Answering this question has potential benefits for the field of Educational Psychology within the UK and internationally. In the UK, Educational Psychologists are often asked for advice and to apply their understanding and knowledge of what interventions can be useful to improve the MH and EI of children in schools. For example, in the UK there is Department for Education Guidance *'Mental health and behaviour in schools' departmental advice for school staff'* (2015) which states that;

> Schools offer important opportunities to prevent mental health problems by promoting resilience. Providing pupils with inner resources that they can draw on as a buffer when negative or stressful things happen which helps them to thrive even in the face of significant challenges. (p. 19)

In addition, the advice indicates that '*Schools have the flexibility to create their own PSHE curriculum and many use this to focus on developing children's resilience, confidence and ability to learn'* (p. 20). There are therefore opportunities for an Educational Psychologist to advise on, devise, or support a class based lesson approach to improving MH and EI. This has recently become more important to address due to an increase in children arriving in the UK from overseas who have been living in war zones or areas of unrest who may be experiencing ill effects on their mental health as a result of disruption and trauma in their lives. The British Refugee Council (2015) report that in 2014, 1,945 separated (unaccompanied) children claimed asylum in the UK, seeking safety from countries where the state has caused them harm or has been unable to protect them. An additional 6519 were with family members. In 2017 the numbers are expected to increase.

Unfortunately, it is normally the case that in areas of the world where there has been major disruption through conflict, children, teachers and parents are likely to need help, advice and understanding to assist in dealing with the effects of trauma. Resources to support MH and EI are likely to be unavailable or those available not able to meet the increased demand due to the conflict. So, in the likely absence of direct 1:1 assessment and intervention for a child experiencing poor MH and EI, the motivation for the research was to answer a question as to whether a class lesson form of input was deliverable and useful in addressing the needs of affected children.

1.1 Brief recent history of events in Northern Uganda

Northern Uganda was affected by armed conflict between 1985 and 2008. This has now ceased within Uganda as the rebel group called the Lord's Resistance Army (LRA), who were in conflict with Ugandan government forces, have left the country and are now a much-diminished force operating in the neighbouring countries of the Democratic Republic of Congo, South Sudan and the Central African Republic. After 23 years of conflict in the region, many young people of school age and preschool age were negatively affected resulting in the a very high level of loss; including homes, food supply, educational opportunities, friends and family. A significant proportion of the child population in the region were abducted by the LRA and either used as workers, soldiers, were killed or escaped. It is not known how many people were killed, mutilated or injured by the LRA, but at least 20,000 children were abducted, and more than 1.9 million people forced to leave their homes (Human Rights watch 2012). Many of the children who were not abducted witnessed the effects of violence in their communities. The fear of abduction led to so-called 'night commuters' – children who fled from outlying villages to the safety of towns every evening, often doing so on the instructions of their parents. The number of night commuters –reached a high of 52,000 in June 2004 (Society for Threatened Peoples International 2005). Surveys of the impact on the population and more specifically children and youth, indicate the degree, nature and extent of the impact of the conflict some of which is documented in the literature review section of this thesis.

1.2 Aims and objectives

The research aim was to find out whether an intervention delivered in school classrooms could improve the mental health and emotional literacy of children living in this post conflict region.

The question of this thesis is important to ask as it could provide an alternative option intervention to support the mental health and emotional intelligence of children and youth affected by conflict. It could also potentially provide a low-cost alternative to conventional therapies.

1.3 How the work was progressed

In order to answer this question, the researcher devised and wrote a 50-lesson program which was named KOBS (Knowledge Of Behaviour and Self). A Kob is a familiar term in Uganda as it is the name of the most common antelope found in the country, a picture of which is on the Ugandan national coat of arms. The name was used as a tool to prompt familiarity as it was felt this might help to positively influence teachers to feel at ease with the program. When writing the KOBS program, the intention was to design it so it could be delivered by teachers who would not need a large amount of specialist training or resources other than a copy of the program with no additional on-costs to the school.

The KOBS program has lessons which have been created and inspired by an eclectic mix of psychological theories, therapeutic approaches and research. The results of this study will therefore also explore the question of whether these can be applied successfully to create whole class lessons. An additional motivation for this research is that if successful, this type of program could also potentially be delivered in other contexts either where young people are suffering through the adversity of war or have in the past.

The challenges of creating the program, training teachers, getting the program running in 11 schools and working in a post conflict zone in a very poor and underdeveloped region of Africa were substantial. As will be explained in the literature review below, the notion of what potentially could have a positive impact and therefore strongly influence lesson content has emerged from research, some of it carried out in the field of improving mental health and emotional intelligence in conflict and post conflict situations.

CHAPTER 2: LITERATURE REVIEW

2.0 Chapter overview

As this research's main focus is on improving MH and EI, the literature review begins by providing differing perspectives on what MH and EI are and attempts to draw them together into an overview which can be used as a guide for the purpose of discussion within this document. MH and EI are broad and complex areas to study so the scope for review was contained by focusing on the aspects most likely to be pertinent to the disrupted development of children. A rationale for developing better MH and EI and the link between the two is discussed.

Evidence is then presented indicating the impact and ongoing effects of trauma on child development. This includes the impact pre and post-natal stress can have on a child which is relevant as it highlights the potentially negative impact of being in a conflict environment from a very early age.

Because the intervention is taking place in a post conflict area, evidence is presented on the effects of war on children and more specifically the particular geographical area where this research focus was in Northern Uganda. This literature explains how and why young people in this context are likely to be experiencing negative psychological effects due to the conflict which provides a rationale for the need for an intervention which could potentially benefit them. In addition, there is evidence from research as to what could be useful in helping children and youth improve their resilience, mental health and EI, potentially relieving some of the adverse effects of war.

Included are the local views and beliefs of what constitutes mental health from the general population and youth population's perspective. A term or terms which reflects the understanding, abilities and skills normally associated with EI has not been formalised in the local context, however, the notion of knowing and understanding oneself and others is recognised as being a desirable and important quality.

The effectiveness of a variety of school based programmes is reviewed which have as part of their aim the intention of improving MH and EI. Based on the literature review, the rationale for an intervention and what it could contain emerges through the evidence presented in this chapter

and is summarised in the conclusion to the chapter. The psychology involved in the development of the KOBS program is discussed at length in Chapter 3 which provides detailed information about the intervention in general. The methodology used to answer the research questions that emerged from the literature review follows in Chapter 4.

2.01 Sources of information

Theories associated with mental health and emotional intelligence are presented in the literature review. An attempt was made to focus on literature from educational, therapeutic and social contexts which provides evidence of benefit for affected children. Electronic search engines utilised included PsychInfo, Scopus, Web of Science and Science Direct. Search terms entered were numerous but generally reflected the title, war, mental health, or emotional intelligence interventions. Because the generation of the question of this thesis came about as a result of discussions and information gathering on the ground in Northern Uganda, there are a few references to information and impressions gathered locally which were pertinent as they were inherent to the rationale for instigating this research so were included. A wide range of international journals are also included in the literature review from psychology, health, sociology and psychiatry. An attempt to use recent research was made.

2.1 What is Emotional Intelligence and Mental Health?

The question of this thesis is concerned with establishing if a class based program of lessons can impact on Mental Health and Emotional Intelligence, therefore it was important to establish what these terms mean. This is due to similar but varying views and theoretical perspectives. The first part of this literature review will present a number of positions on the meaning of EI and MH. MH and EI are terms with a potentially broad interpretation of meaning and an inherent lack of specificity. This review will focus on the most commonly referred to definitions and theoretical perspectives. In addition, the researcher looked for references which have commonalities between them which do not deviate from the most commonly held understanding of what EI and MH are. These have then been drawn together to utilise the most popular or common elements with cross cultural perspectives taken into account.

2.11 What is meant by 'Emotional Intelligence'?

The term 'Emotional Intelligence' became popular following the release of Goleman's (1996) book, ''*Emotional Intelligence: why it can matter more than IQ''*. Recent thinking on the use and meaning of EI is influenced by several theories. A number of leading authors in the area have theoretically contrasting different models of EI, however, the following three emerge as most referred to in the literature on the subject of EI and combine the elements of what other theories of emotional intelligence consider as the constituents of EI.

- Ability EI model. (Mayer and Salovey's 1997)
- Trait EI model. (Petrides, Furnham & Mavroveli, 2007)
- Mixed models of EI. (Goleman 1996)

2.111 Ability Model

Mayer and Salovey's (1997) four-factor model of emotional intelligence propose the following elements comprise the Ability Model of EI;

1. Perceiving emotions – recognising an emotion from visual and or auditory clues including one's own.
2. Using emotions – the manipulation of one's emotional affect to regulate thinking and behaviour in order to best fit the intended activity or interaction.
3. Understanding emotions – to comprehend the triggers behind emotional language and resultant behaviour and to appreciate differences in individual's presentations of emotional language.
4. Managing emotions – the ability to control and regulate emotions in ourselves and have an impact on others also. Therefore, the emotionally intelligent person can harness positive and negative emotions and use them to achieve desired goals.

2.112 Trait model

Petrides, Furnham & Mavroveli (2007) consider that there are differences that exist between the trait and ability models which makes them conceptually dissimilar. Trait

EI being a collection of self- perceptions of one's emotional abilities associated with the individual's personality. For example;

1. Adaptability: flexible and willing to adapt to new conditions.
2. Emotional expression: capable of communicating a feeling to others.
3. Trait empathy: capable of taking someone else's perspective.

2.113 Mixed models

Goleman's (1996) model considers that EI consists of the following elements:

- Self- regulation – being able to control and use emotions at the right time or adapt to and control impulses to changing circumstances.
- Social skills – the skills which one uses in interaction with other people to include managing relationships to move people in the desired direction.
- Self- awareness – knowing what your emotions are telling you and whether they reflect one's values and goals and if they are a result of a personal strength or vulnerability, also the recognition of the impact of these on other people.
- Motivation – having a drive for the purpose of achieving for oneself or others.
- Empathy – being aware and having consideration of other's thoughts and feelings which will impact on one's decisions.

Goleman proposes that we are not born with emotional competencies but have to learn them, that they can be worked on and improved to achieve better performance. He indicates that humans are innately emotionally intelligent from which emotional competencies arise depending on learning and experience.

In considering these models, the common aspects which all three appear to refer to is the recognition of one's own and other's emotions, the ability to understand them to a degree and use them beneficially. The differences exist in the concept of EI as an ability which presumably can be recognised by others or a self- assessing function of one's own personality.

When referring to EI in this study the 3 definitions above will be used (2.11) as a whole as they are not viewed as contrasting but contributing to what is the most common and accepted view of what EI is. This is consistent with Emmerling & Goleman's (2003) view who suggest that while several theories associated with the emotional intelligence paradigm currently exist, a closer reading of the writing about the major theories will reveal a significant divergence in the specific language they use to label their theories and constructs. These definitions of emotional intelligence involve thought and emotional ability. This is consistent with a common understanding in neuroscience that cognition and emotions are interwoven in mental life (through thick connections between the emotional centres and the neocortex) rather than discretely independent, especially in complex decision-making, self-awareness, affective self-regulation, motivation, empathy, and interpersonal functioning (Davidson, Jackson and Kalin 2000). Emotions first filter incoming information to restrict the range of possibilities to be evaluated and secondly, focus our attention on particular aspects of the information that should be considered when decisions are being made (McPhail, 2004).

It is reasonable to argue then that EI is an innate capacity with some inherent emotional needs and ability to communicate these present at birth (e.g. a baby's emotional response to hunger as a signal to their carer that they need attention). EI is then nurtured, taught and learned by the individual as he/she develops.

2.12 What is meant by Mental Health?

Cultural perspectives, subjective views and theories generated by professionals in the field contribute to the popularist view of how mental health is viewed and defined. In this respect, what constitutes the notion of mental health are arguably social constructions based on societal norms. Social constructionists envisage symptoms of mental unwellness as cultural definitions rather than as properties of individuals (Horwitz, 2002). From this viewpoint it is argued that the existence of mental illness depends on the particular culture in which a definition is being attempted. For that reason, later in this chapter the views of Ugandan youth are presented of what they consider constitutes mental health.

Manwell, Barbic & Roberts (2015) carried out an online survey of 50 people from eight different countries who had some expertise in the field of mental health. Their aim was to identify the extent to which the participants' thought that 4 current definitions of mental health provided to them were agreeable to their understanding of what mental health meant. 46% of respondents rated the Public Health Agency of Canada (PHAC, 2006) definition as the most preferred;

> Mental health is the capacity of each and all of us to feel, think, and act in ways that enhance our ability to enjoy life and deal with the challenges we face. It is a positive sense of emotional and spiritual well-being that respects the importance of culture, equity, social justice, interconnections and personal dignity. (p. 2)

The definitions of mental health are distinctive from those for mental disorder. They identify that mental health is a prerequisite to normal daily functioning. This distinction is worth highlighting to teachers, children and parents when proposing a program to improve or support mental health in schools as it is important to point out that the content children will be 'taught' is not due to mental ill health. Other definitions exist which are worth considering but are essentially referring to the same constructs.

Weare (2000) describes mental health as;

> A socially constructed and socially defined concept; different societies, groups, cultures, institutions and professions have very different ways of conceptualising its nature and causes, determining what is mentally healthy, and deciding what interventions, if any, are appropriate (p.12)

There appears to be some agreement that emotional well-being can be determined by how a person self- reports on the absence or presence of positive emotions about life, although one could argue the exceptions are people who are suffering a mental health illness who may be less able to judge this themselves. The state of one's mental health is quite often indicated from a person's responses to a scale measuring the presence or absence of positive affect, for example,

if individuals are in good spirits or not, and perceived satisfaction with life which is a self-assessing process. For example, The Birleson Depression Scale (Birleson, Hudson, Buchannan & Wolff 1987) and The Strengths and Difficulties Questionnaire (SDQ) (Goodman 2007) are self-report inventory behavioural screening questionnaire for children and adolescents.

Ryff and Keyes (1995) indicate six dimensions of psychological well-being: self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery, autonomy. Headey et al's (1993, p. 82) description of MH appears to be a good 'compromise' as it encompasses a collection of themes which are common to most descriptions and preferred definitions of MH as follows; ''*a subjective sense of well-being -an individuals' perceptions and evaluations of their own lives in terms of their affective states and their psychological and social functioning''.*

2.2 How does emotional intelligence relate to mental health?

The relationship between mental health and emotional intelligence has been the subject of some interest. A study by River et al. (2013) indicated that behaviours which can negatively affect student's health are related to skills such as the ability to interpret and manage emotions which may act as a protective factor against risk taking behaviours. Their study compared the effect of emotional intelligence and self-esteem to risk-taking behaviours and showed that EI, but not self-esteem, was significantly related to risky behaviours involving drugs, alcohol, sexual activity and other activities which may lead to criminal activity. Impulse control, which is arguably related to EI, may be implicated in reducing these risks.

Salovey (2000) identified that mental health problems can often be caused by an individual's difficulty in managing their emotional states. For this reason, the intelligent use of emotions is very important when dealing with and adapting to the impact of events and thoughts on the emotional state. In effect, the regulation of emotional affect can be used to reduce potential negative impact on mental health.

Ciarrochi et al's. (2000) study indicated that EI has significant implications for the prevention of depressive and anxious states. In their research sample, EI abilities helped people to deal

effectively with unpleasant emotions, thereby increasing mental and physical health. Adolescents who are good at perceiving, understanding, and managing others' emotions tend to have more supportive and satisfied relationships with family and peers. Similarly, Ruiz-Aranda et al's. (2012) study show that adolescents with high EI scores present fewer episodes of anxiety and depression, fewer school problems and few externalising problems concluding that EI helps protect against serious psychological problems among adolescents.

As adults and children differ in how they apply their ability to deal with and use emotions, EI theories suggest that healthy and informed cognitive processes can result in adaptive emotional responses which can more likely provide a rational and positive outcome. This is expanded on by Schutte et al. (2007). They consider that EI has a positive effect on mental health by allowing people to reduce the intensity and frequency of negative moods caused by adverse everyday life events and protect people from stress and maintain a positive mood. Their research also indicated that ''*emotional intelligence measured as a trait was more strongly associated with mental health than emotional intelligence measured as an ability''*. (p. 1). Based on existing theory and research, it appears that EI and MH are closely entwined and often proportional to one another.

2.3 What are the effects on MH and EI of early and ongoing trauma?

Evidence of the impact of early and ongoing trauma on MH and EI emerges from a number of studies, for example, Pechtel & Pizzagalli (2011) investigated the effects of Early Life Stress (ELS) on later behaviour and neurobiology. Early adversity was found to be associated with deficits in a range of cognitive functions including memory and executive functions, in addition the ability to develop social cognition and emotional regulation.

Childhood trauma symptoms often have serious developmental and psychological consequences including a negative influence on social functioning, quality of life and academic performance (e.g., Fairbank and Fairbank 2009; McNally 1996). Roth, Lubin, Funk & Sweatt (2009) indicated in their study that early experiences post birth which are adverse in nature are also thought to affect future reactivity to stress, perhaps by altering the developing neural circuits controlling the neuroendocrine responses.

There are a number of studies which report associations between physical and/or sexual abuse history and mothers' interactive behaviour with their children. Saile, Ertl, Neuner & Catani's (2014) results indicate that the strongest predictors of aggressive parenting behaviours toward the child were the guardians' own experiences of childhood maltreatment, followed by female guardians' victimization experiences in their intimate relationships and male guardians' post-traumatic stress disorder symptoms. It is reasonable to argue that if this intergenerational behaviour cycle is not addressed then ongoing violence is likely to be perpetuated. This adds weight to an argument for educational and or therapeutic input for youth affected by trauma as a preventative approach to reducing or stopping ongoing violence and or emotional abuse towards their future families.

The Commission to Inquire into Child Abuse (2009) released the findings from a longitudinal study of child maltreatment in residential institutions throughout Ireland. By interviewing a worldwide sample of hundreds of surviving former child residents, the Commission determined that physical and emotional abuse and neglect were highly prevalent in residential institutions from the 1930's onward, with sexual abuse particularly prevalent in boys' facilities. Specific health and mental health problems were examined in a subgroup of this sample of adults. All reported experiencing one or more major adjustment problems, including mental health problems (74.1%), unemployment (51.8%), and substance use (38.1%). Other problems included frequent physical health problems (29.6%), frequent hospitalization for physical health problems (28.3%), difficulties controlling anger in intimate relationships (25.9%), nonviolent crime (22.3%), and homelessness (21.1%). Some reported problems with self-harm (17.8%), anger control with children (13.4%), incarcerations for nonviolent crime (13.4%), hospitalisations for mental illness (13%), violent crime (10.1%), and incarcerations for violent crime (7.3%).

2.31 Males and females responses to trauma

There is some evidence that indicates males and females responses to traumatic events differ. Tolin and Foa (2006) researched trauma-exposed populations in a number of countries and demonstrated that although men tend to experience higher rates of exposure to traumatic events, women have a two-fold higher risk of being diagnosed with Post Traumatic Stress Disorder (PTSD).

Post Traumatic Growth (PTG) has been proposed as a form of coping to offset the negative impact of exposure to trauma, or as the positive immediate result of the struggle with challenging life circumstances. This is defined as either an attitude or cognition or a set of positive behaviours (Pat-Horenczyk 2007). In a study by Jin, Xu & Liu (2014) of gender responses to a major earthquake in China, among females there was a U-shaped relationship between PTSD and PTG—that is, subjects with high PTSD presented with either high or low PTG, while subjects with low PTSD presented with moderate levels of PTG. In contrast, among males, subjects with higher levels of PTSD presented with higher levels of PTG. Based on the above information it would be useful to build in some analysis of gender responses when considering the research design and analysis of data in this study.

2.4 How does war fit into the trauma paradigm?

One of the inevitable consequences of war/armed conflict is the effect on the local population of children and youth. Mollica (2006) indicates that some survivors of war suffer serious mental illness but the vast majority experience low-grade but long-lasting mental health problems. Much of the research into the mental health of children affected by war has been carried out on displaced refugee populations. There are a number of studies which indicate that experiences of war which includes violence, killing, torture and the loss of family, friends and homes adds a significant risk of psychological distress and the development of mental disorders (Rousseau, 1995). Hodes (2000) estimates that up to 40% of young refugees from conflict areas may have psychiatric disorders, mainly post-traumatic stress disorder, depression and other anxiety-related difficulties. Some factors are known to increase levels of PTSD symptoms, including greater exposure to more personally threatening events (Macksoud & Aber, 1996) and severity of the exposure, for example, the number of events and proximity (Thabet & Vostanis, 1999). It is likely that the variables affecting those exposed to conflict explains the differences in reported symptoms associated with post-traumatic stress.

A thorough literature search failed to reveal any specific evidence of the impact of war and conflict on EI, and very little of stress on EI. However, if stress and anxiety is brought on by conflict then EI will be affected as EI is linked to thought and thought is related to mental health. There is a strong likelihood there will be a long term negative impact of a trauma on stress and

anxiety, so an assumption could be made that EI will be negatively impacted if not permanently, then intermittently, depending on rising and falling of affective responses to obtrusive thoughts associated with the trauma. Evidence for this is limited, as research has focussed on the protective abilities of EI on MH. There is, however, a study by Thompson (2007) on stress and leadership failure which indicated that when a leader's stress level is sufficiently elevated, his/her ability to fully and effectively use cognitive ability and emotional intelligence in tandem to make timely and effective decisions is significantly impaired.

2.41 The Ugandan conflict: the impact on the child and youth population

Northern Uganda was affected by armed conflict between 1985 and 2008. In order to justify a need for developing and researching an intervention to improve MH and EI it is important to develop an understanding of the population the intervention is targeted at. Reports from studies such as Okello, Onen & Musisi (2007) indicated that two thirds of the young people in northern Uganda showed behavioural and emotional problems of clinical significance. Similarly, in a study by McMullan et al. (2012), a measure was taken of the prevalence of psychological distress in war-affected adolescents after the end of the conflict. Four years after the end of the war, 57% of the students were still found to have clinically significant levels of post-traumatic stress symptoms. There was a strong correlation between post-traumatic stress symptoms and internalising symptoms indicating that war-affected adolescents may continue to suffer from significant psychological stress in the years following the cessation of conflict. Several exposure 'events' to violence increased the likelihood of lasting psychological distress.

The psychological impact of war is not limited to adults and older children. Living in a war zone during pregnancy and a baby spending their first months in that environment appears to impact negatively on the child. This is important when planning interventions in post war situations as the impact is not just confined to children who were aware of the disruption going on. So, any post war intervention would also need to involve children who were very young when the conflict ceased. These studies have implications for the child population currently living in Northern Uganda who now, approximately 9 years after the end of the conflict proper, will still be impacted by early life stresses.

The scale of the impact of the conflict on the young people in this region in terms of percentages of the general population of youth was also highlighted in The Survey of War Affected Youth in Northern Uganda (SWAY, Annan, Blattman & Horton 2006). They carried out two surveys one in 2006 on 750 male youth and the second in 2008 on 618 female youths. (Table 1 below).

Table 1. The impact of conflict on the youth population in Northern Uganda (Annan Blattman & Horton 2006).

Violence experienced	Never abducted		Ever abducted	
	MALES	FEMALES	MALES	FEMALES
Witnessed beatings or torture of other people	**58%**	36%	**89%**	83%
Witnessed a killing	**37%**	**27%**	**78%**	**64%**
Someone shot bullets at you or your home	**41%**	**14%**	**52%**	**23%**
Witnessed a battle or attack	**33%**		**76%**	
A parent was murdered or died violently	**29%**	**24%**	**32%**	**17%**
You were forced to have sex	**0.1%**	**0.2%**	**3%**	**26.3%**
Witnessed setting of houses on fire with people in them	**24%**	**21%**	**55%**	**42%**
Received a severe beating to the body	**22%**	**11%**	**60%**	**45%**
Someone attacked you with a panga or another weapon	**2%**	**5%**	**26%**	**23%**
Forced to abuse the bodies of dead persons	**0%**	**2%**	**23%**	**25%**
Forced to kill a civilian (not a family member or friend)	**0%**	**3%**	**18%**	**21%**
Forced to kill a family member or friend	**0%**	**0.2%**	**8%**	**5%**
(These measures were adapted from the Harvard Trauma Questionnaire)				

For the purposes of their study, males between the ages of 14 and 30 were interviewed- the age range of the traditional Acholi definition of youth. Definitions of youth vary from country to country and according to UNESCO (2017) can range from 14-35 depending on the country. As indicated by this survey, patterns of violence experienced by those questioned were very high with a variety of exposures being reported. This is relevant in the potential proposal of school based programs as it indicates that the percentage of young people in educational settings who have been directly affected is likely to be high.

2.5 What does research show about factors that relieve adverse effects of trauma and war?

As part of the Annan study they asked the youths what were the social functions they considered to be helpful and made them feel positive. The following were those most reported.

- Caring about one's peers
- Sharing feelings and ideas with friends
- Enjoying talking and being with others
- Enjoying doing things in the community
- Being helpful to elders and children
- Sharing with others
- Other youths associating with them
- Self confidence
- Having confidence in being responsible for others and about the future

(Annan, 2006; Annan, 2008)

Further evidence that being made aware of the benefits of engaging in prosocial behaviours and being given opportunities to engage in them is beneficial is provided by Haroz et al. (2013) who investigated the relationship between prosocial behaviour, perceived social support and improvement in depression and anxiety symptoms over 6 months among 102 Acholi adolescents age 14–17 years who were survivors of war and displacement in Northern Uganda. The study

indicated that those youth who were socially adept experienced higher levels of improvement in their levels of anxiety. This was also the case for symptom of depression. Their results indicate that prosocial behaviour is associated with higher levels of resilience. The prosocial behaviours indicated were: listening to others, playing with others, sharing food with others, welcoming others, cooperating with others, respecting others, having one good friend, thinking that others liked them. Development and encouragement of all these skills, abilities and behaviours were all built into the KOBS lessons.

The impact of, and recovery from adversity is seemingly dependent upon a number of factors some of which have been identified. There is likely to be additional individual differences unique to each person which also play a part in the presence of risk and protective factors (also often referred to as resilience). One of the main factors, according to research in this area, is social support. This is recognised as helping to increase resilience, preventing mental health difficulties from developing following any traumatic or stressful event (Brewin, Andrews, & Valentine, 2000). Contrastingly, low levels of social support are associated with psychiatric disorders (Gorst-Unsworth & Goldenberg, 1998). It is not surprising that the impact of conflict by destabilising social situations for individuals has far reaching consequences. A study by Farhood et al. (1993) indicated that the disintegration of social networks was a greater predictor of adolescent depression than the actual war related events themselves.

A review by Betancort et al. (2013) examined a number of research papers concerned with the effect on the mental health of children involved with armed groups and indicated the importance for further research to assess the impact of interventions which could be used across settings for child soldiers and other war-affected youth.

2.6 Mental health indicators locally described in the Acholi culture

When considering an intervention to improve MH, it is important to become aware of the local views, opinions and common understanding of what constitutes mental health. Betancourt et al. (2009) developed The Acholi Psychosocial Assessment Instrument (APAI) to determine this. They questioned locals to ascertain locally described depression and anxiety symptoms and social behaviour. The result was a 60-item assessment measuring five local mental health

indicators and locally defined pro-social behaviours (TwoTam, Kumu, and Par and Malwor) and behavioural descriptors (Kwo Maraco & Gin Lugero).

The objective of a study by Okello, Abbo, Muhwesi, Akello, & Ovuga (2014) was to develop a better understanding of young people's knowledge and beliefs about mental illness and mental health in Northern Uganda. The process explored young people's definitions of mental health and mental illness through focus group discussions.

Participants were asked to respond in a general discussion to the following two questions:

1. When you hear the phrase 'mental health,' what sorts of things come to mind for you?
2. When you hear the phrase 'mental illness' what sorts of things come to mind?

To some participants, it was clearer that mental health was related to thoughts, emotions and behaviour of individuals. They were able to recognise that the way an individual thinks, feels and acts is reflected in his/her mental state: the following were examples of the participants responses

- We judge one's mental health according to the things that one says; how one feels and the things that one does.
- If the person behaves normally, for example, he will greet you when he comes across you.
- This is when an individual is doing the right thing all the time and has a normal working brain.
- The person is behaving well all the time . . . the normal condition of the mind . . . the way it is supposed to be.
- It is when the mind has no diseases or illness. (Okello 2014. p 72-76)

The researchers concluded that generally, young people thought that 'mental health' means being of a sound and functional mind indicating that one is emotionally well, and able to meet societal expectations. To young people in the study, mental health was recognised as fundamental to concepts of health. According to the respondents, good mental health did not only involve the absence of mental illness, but could also be seen as a resource for reaching one's full potential. These concepts and notions of mental health largely conformed to those held by the general society in which the respondents lived.

The examples shown above provide an insight into how mental health is viewed by the youth in Northern Uganda. The comments indicate a recognition that there is something wrong that is deviant from the norm and as such affects the functioning of the 'sufferer' and potentially people around them. One could argue that by indicating a problem exists there is likely to be a motivation or interest in knowing how to solve it. The comments communicate a sense that the individuals have identified an illness which perhaps like a physical issue, is a dysfunctional state and requires some change or treatment to rectify the problem.

2.7 Educational interventions which promote the improvement of MH and EI

In order to identify if a taught lesson by lesson program could potentially positively impact on MH and EI, it is useful to review examples of existing school based interventions and approaches and their impact.

2.71 Social and Emotional Aspects of Learning

In the UK, the Department for Education and Skills (2004) developed a program called Social and Emotional Aspects of Learning (SEAL) which was developed to promote learning associated with Emotional Intelligence. The skills were under the five domains proposed in Goleman's (1996) model of EI.

Humphrey et al. (2008) noted a positive impact in the small group work elements of SEAL, with a positive impact of some interventions but not all. Downey and Williams (2010) findings for their evaluation of the family SEAL element of the programme were positive; also, teachers and parents reported increases in children's emotional well-being over the implementation period and up to the study done shortly afterwards.

2.72 Penn Resiliency Program

The Penn Resiliency Program (PRP) is a program developed by a team of psychologists with the aim of preventing adolescent depression. Its methods involve increasing personal resilience, optimistic thinking styles, social problem-solving skills and being able to cope with potential adversity through alternative thinking approaches.

Thirteen randomised controlled trials have found PRP to be effective in helping buffer children against anxiety and depression and some studies have found an impact on behaviour. E.g. Gillam et al. (2007). One goal of the PRP is for students to use their learning in a variety of social contexts. The PRP teaches cognitive behavioural approaches as well as problem solving skills in social contexts. The main component central to the programme is Ellis' (1975) Activating-Belief-Consequences model. This proposes that what a person believes about events will impact on emotions and subsequent behaviour. Participants are shown how to identify and challenge negative beliefs, to look for and engage with actual evidence to make more beneficial or accurate evaluations of the situation. These skills and abilities promoted by PRP have also been incorporated into the KOBS lessons.

2.73 Learned Optimism

Seligmann (1998) proposed 'learned optimism' as an idea that cognitive attributional style can be taught which will have an impact on mental health. He points out that the benefits of an optimistic outlook are many: that optimists are higher achievers and have better overall health. Optimists recover faster and are able to act again sooner due to the way they explain the failure to themselves. When something bad happens to an optimist, they expect that the bad thing will be short lived and only affects a partial area of their life. Pessimists tend to have the opposite view. The KOBS programmes aim is to use a variety of approaches which have been designed to create a more optimistic pattern of thinking. The opportunity to utilise the information and knowledge taught in the classroom is encouraged to be practiced and generalised outside the classroom.

There is some evidence that positive emotional states – so positive EI and MH can improve academic attainment generally. A number of researchers have concluded that teaching and learning in schools have strong social, emotional, and academic components (e.g. Zins, Weissberg, Wang, & Walberg, 2004). The consensus is that children's learning is often not a solitary process, that much learning is done in partnership with teachers, peers and with the support of their families. It appears evident based on research to date that emotional states impact on 'learning readiness' therefore either supporting or working against academic engagement and achievement.

2.8 The role of education and school based MH and EI interventions with war affected populations

Most educational psychologists will agree that sometimes events and circumstances in schools can negatively affect children causing stress, anger, isolation and poor MH. In Northern Uganda, being able to attend school often comes with a sense of privilege as the students know that many children's families cannot afford to send their children to school. This may be why it appeared that the vast majority of students felt very positively about school and took it quite seriously. Additionally, most schools had to close and relocate to temporary sites for many years due to poor security particularly in rural areas, so many children felt fortunate to be back in school and wanted to do well.

As indicated earlier, the use of programmes to improve mental health and emotional intelligence in schools can result in positive outcomes for children and young people. There is, however, a dearth of class based interventions which have been designed and used in war affected areas, where resources and training are very limited, which do not require specialist input, can be used by teachers already teaching in those schools and whose efficacy has been researched.

One program which has been used is by Ager et al. (2011) who implemented a programme of activities termed Psychosocial Structured Activities (PSSA) in 21 primary schools in Uganda which had been affected by war. It involved structured activities involving drama, movement, music and art with additional components addressing parental support and community involvement. Results showed a significant increase in child well-being observed over a 12-month period. Unlike KOBS, the PSSA program is not a classroom lesson based approach and involved activities for much younger children in the primary phase of education. It also involved extensive residential training for the delivers of the program which KOBS does not require.

2.9 How might existing knowledge about what is helpful to trauma affected children and youth be used to make a suitable intervention to improve MH and EI.

The creation of a menu of learning/experiences based on existing knowledge of what could be helpful was used as a guide to creating the content of the lessons. This is explained further in Chapter 3. The idea of creating an intervention using a lesson by lesson approach, much like a curriculum delivery approach used in traditional school taught subjects, seemed to be likely to be the most effective and efficient way of 'exposing' the potentially therapeutic effects of this leaning to as wide an audience as possible in that environment. It also meant that it could potentially fit in to an existing established structure (as a new school curriculum) therefore needing low start-up costs and minimal resources. The organisation of this knowledge into coherent lessons was a critical element and needed careful and thorough planning, writing, piloting and delivery to potentially be as beneficial to the recipient as possible.

2.91 Considerations regarding the development of a programme in a climate that may have some limitations on facilities, structure, resources and teaching approaches.

When planning an intervention there are a number of considerations and local conditions which need to be factored in at the planning stage. In the case of Northern Uganda, knowledge of the local conditions and resource limitations are important particularly the willingness/ability of a school to participate in a MH/EI intervention. In addition, in order to increase the chance of success in the long term, when planning an intervention, the application of any results or recommendations needs to be considered in the light of local circumstances including environmental, cultural and financial. Shucksmith, Summerbell, Jones & Whittaker (2007) refer to the need to address the issue of affordability: they point out that quite often studies are large and multi-component and longitudinal which provide valuable information although they doubt the long-term availability of resources to implement them within the normal educational budgets schools have available. Greenberg, Domotrovich, Graczyk & Zins (2005) argue that when schools implement research supported programs, the level of assistance and expertise is often not as available as it was in the research phase of funded research trials. One reason that it is important to research the impact of the proposed program is because it would be low cost and be relatively straightforward to organise and incorporate into the schools in the area. Franklin et al.

(2012) carried out a review over a ten-year period of teacher involvement in school mental health interventions indicating that teachers were often the main deliverers in partnership with school mental health professionals which suggests class based lessons to improve MH and EI could be delivered successfully in Northern Uganda with the right kind of planning and intervention. Wolmer & Loar (2003) have identified several Non-Government Organisations that have implemented the practice of 'training of teachers' in basic skills of psychosocial interventions and alleviation of distress. They indicate that where there is an acute shortage of mental health professions this can be helpful and provides an opportunity to reach the wider community as teachers will live near remote schools, also suggesting the training process can help reduce ambivalence and resistance to foreign assistance.

A study by O'Callaghan et al (2013) assessed the efficacy of trauma-focused cognitive behavioural therapy TF-CBT delivered by nonclinical facilitators in reducing posttraumatic stress, depression and anxiety and conduct problems and increasing prosocial behaviour in a group of war-affected, sexually exploited girls. Compared to the controls the TF-CBT group experienced significantly greater reductions in trauma symptoms. In addition, the TF-CBT group showed a highly significant improvement in symptoms of depression and anxiety, conduct problems, and prosocial behaviour. The main research question in the study is whether a culturally modified TF-CBT intervention delivered by nonclinical facilitators could be effective. This was important due to a lack of qualified mental health workers in this resource-poor area much like the area of northern Uganda of concern in this study. What is promising from this study was the success of the program as well as that it was deliverable by staff with limited training. The intervention facilitators were social workers employed to provide psychosocial support for girls enrolled in vocational training classes. Facilitators received a manualised intervention to study before each session and were given the opportunity to raise any questions or suggest any cultural adaptations required before delivering the session.

It is the intention of this research (similar to that of the O'Callaghan study above who used non-clinically trained social workers to deliver trauma focussed Cognitive Behaviour Therapy) to see if non-clinically trained teachers can successfully deliver a program to improve MH and EI bearing in mind the 'basic' training, support and resources which would be available to them.

There is evidence indicated in this literature review that school based interventions can prove successful in improving mental health and emotional intelligence. Structured activities involving drama, movement, music and art with additional components addressing parental support and community involvement are documented as being effective. However, there was no research uncovered which looks specifically at an in-class lesson based approach based on applied psychology delivered by teachers in a post war environment, where resources and training are very limited, which does not require specialist input and can be used by teachers already teaching in those schools. In addition to academic activities, Wolmer & Loar (2003) suggest schools can provide opportunities for supportive relationships with teachers which are important predictors of the psychological well-being of traumatized children. This suggests an intervention program design should encourage teachers and students to engage in supportive helpful dialogue that can be applied outside the classroom and in the community.

The physical resources available in schools which the program was intended to be delivered had to be taken into account as did the volume of children in a typical class. The ordinary pedagogic situation was that the children sat in rows at desks in a room with a blackboard and nothing else. The average size of the class was 60 pupils. The children had exercise books to write in. All of these circumstances had to be taken into account when planning the lessons and how they were to be delivered.

The following chapter provides further rationale for the content, structure and delivery of the intervention. The content of the lessons took into account evidence from this literature review regarding what is likely to be beneficial in improving MH and EI for the population in question. The lessons themselves were developed as bespoke activities for the population in the study, one hypothesis of the researcher is that much as children begin to apply their learning outside school of what they are taught in 'normal curricula subjects', they will also learn from and apply that which is taught in the KOBS lessons resulting in improved mental health and emotional intelligence.

2.92 Chapter Conclusion

The literature reviewed in this chapter proves a justification for researching the question of this thesis for a number of reasons. There is now substantial common ground among theorists and practitioners internationally of what constitutes mental health and emotional intelligence. As indicated by a number of theorists, MH and EI do not exist as separate entities. For example, Salovey (2000) identified that mental health problems can often be caused by an individual's difficulty in managing his/her emotional states. The rationale for an intervention which includes both EI and MH is also evidenced by Ciarrochi et al (2000).

School is a major source of intellectual and psychosocial development. The role of education in post war recovery is a crucial requirement to help affected societies progress towards post war recovery. Researchers typically identify that the restoration of education helps to bring normalisation, stability and continuity of the social role of the student. Also indicated is the need for an environment which feels physically and emotionally safe that can incorporate mental health interventions following a conflict period.

Within the context of Northern Uganda, the concepts of mental health are recognised in the local Acholi population as important and influential to youths and adults. In the past two decades there has been an increased interest in proactive measures to develop positive mental health as a preventative intervention. Positive psychology is a branch of psychology which developed from this endeavour. Seligman & Csikszentmihalyi (1998) explain its purpose as follows: ''*we believe that a psychology of positive human functioning will arise, which achieves a scientific understanding and effective interventions to build thriving in individuals, families, and communities''* (p.13)

The field of psychology and more specifically Educational Psychology has amassed a substantial array of theoretically driven processes, interventions and models many of which have been designed or formulated in helping to understand what humans normally benefit from in creating positive states of mental health and emotional intelligence. The literature review and research information gathered 'on the ground' led the researcher to conclude that an aim of developing a program to create learning opportunities which have been devised with some of these incorporated into the structure and content of the lessons could be a useful resource in bringing about improved MH and EI to the young people in this part of Uganda.

Following the literature review and consideration of research evidence to date, the main research question developed was as follows;

Q. Can school lessons devised using psychological theories and therapeutic approaches positively impact on the mental health (MH) and emotional intelligence (EI) of young people affected by war including ex-child soldiers in Northern Uganda? -The hypothesis here is that there will be a significant impact in the MH and EI as indicated by the KEQ compared with the control group. (in effect a one-sided hypothesis)

In addition, there are several secondary or associated questions asked as part of the research, the first two have a hypothesis based on research evidence indicating this is the likely direction of the impact of the intervention;

Q. Will the impact of the intervention affect particular factors associated with MH and or EI more or less than others? The null hypothesis here is that there will be no significant differences as MH and EI are linked and to a degree may be are proportional to one another.
Q. Are there differences in the effectiveness of the intervention based on participants' gender? The null hypothesis is that will be no differences in posttraumatic stress type symptoms as a result of an intervention
Q. Can teachers with no formal experience or training in MH and EI successfully deliver the programmes and feel comfortable to do so with minimal training?
Q. Can a large number of students benefit from a relatively low-cost intervention as many post war environments in the developing world have limited finances?
Q. Can schools act as providers of psychological support in the absence of other services?

Chapter 3. The development of the KOBS program

3.0. Rationale for the development of KOBS

The KOBS program is a set of 50 lessons which were designed to improve the MH and EI of the young people taught the lessons. The KOBS program used to answer the research question of this thesis was designed as a low cost intervention in order to fit the financial limitations of the institutions for which it was designed. It was important in this study to design an intervention which once up and running required no additional cost in materials or resources, just the use of a blackboard and chalk which are available in all schools in the region. This decision was influenced by the researchers observations (below) from direct contact with the 11 secondary schools in the study over several years which were taken into account when writing the KOBS programme.

- Resources are extremely limited
- Approximate ratio of 1 teacher to 70 students in each class
- Chalk and talk approach used
- Little opportunity for group work/discussions
- Textbook led-little or no differentiation
- Academically orientated
- Very hierarchical- children very much expected to be subservient
- Teachers and head teachers seemingly receptive to new ideas /training
- Professional development for teachers regarded as important

3.1 Phases and stages of development

The phases and stages of the KOBS development are given below in a chronological order over several years. This provides an overview with more detailed explanations appearing elsewhere in the thesis.

The process followed had 4 phases, each phase contains several stages. Phase 1-3 are discussed in this chapter. Phase 4 is discussed in Chapter 4.

Phase 1: The identification of a need to undertake the development of the KOBS program - comprising stage 1 & stage 2.

Phase 2: The development of the KOBS curriculum comprising of stages 3, 4, 5 & 6

Phase 3: The roll out of the KOBS curriculum comprising of stages 7, 8,

Phase 4: The research of the impact of KOBS

3.11 Phase 1: Identification of a 'need'-an overview of the researcher's position.

Stage 1

In 2006 the researcher visited the north of Uganda to research what teachers and youth workers were reporting as psychological and psycho- educational difficulties local children and youth were exhibiting and reporting which were associated with poor mental health and emotional intelligence. Existing published studies which document the effects of conflict on young people's mental health and emotional development were also reviewed.

Stage 2

The researcher reviewed literature regarding what type of experiences and learning could potentially be positively influential in improving MH and EI. The type of content which could be beneficial is evidenced in the above literature review.

3.12 Phase 2: The development of the KOBS curriculum

Stage 3

With the above information and knowledge, lesson plans were written by the researcher which were designed to incorporate psychological approaches, theories, therapies and research evidence which could be useful in improving MH and EI as well as evidence collected from Stage 2.

Stage 4

The lessons were piloted by the researcher in volunteer schools in Uganda over a two year period. The responsiveness of students and school staff to the lessons was noted and lessons adjusted as necessary to create final versions. When the researcher had written approximately 12 lessons, he visited 2 schools who had agreed to have class groups contribute to the pilot by allowing the to teach the practice lessons in collaboration with a class teacher. Following each lesson there was a plenary session to evaluate the lessons involving the students being invited to comment on;

1. Activity content
2. Timings of activities
3. Level of understanding e.g. too simple or too hard/complex to understand
4. Their view of the lesson objectives being met or not

In addition, the researcher invited the class teacher to comment on the lesson in a 1:1 session with the researcher at a later point using the same evaluation criteria. As a result, lessons were modified where necessary. Having regard to Kolb's (1984) model of experiential learning was beneficial in the production and conceptualisation and content of KOBS. In the model, Kolb posits that learning from experience can be visualized as a cycle composed of four stages, moving from experience through reflection and conceptualizing to action and returning to experience.

Stage 5

The researcher repeated the process until all 50 lessons were devised and trialled at least once in a classroom of students in the two pilot schools in Northern Uganda.

Stage 6

The program of lessons was presented in a document form and named **K**nowledge **O**f **B**ehaviour and **S**elf or 'KOBS' (See Appendix 1 and 2 for examples of lesson plans).

3.13 Phase 3: KOBS roll out

Stage 7

A training event was provided for teachers from school's interested in teaching the KOBS program. Volunteer members of staff from 11 schools were invited to attend a two day training event on KOBS and how to deliver it. This took place in July 2009.

Stage 8

The KOBS program was first rolled out in 11 schools in Feb 2010. February is the beginning of the new academic year in Uganda. Each school put one KOBS lesson per week on the timetable for Senior 1 students. Teachers in each school were provided with between two to four KOBS curriculum documents depending on the size of school. The schools were visited by the researcher and/or a member of the partner NGO at least twice during the academic year. This was to answer questions, listen to any concerns and provide guidance as necessary. In Feb 2011 the schools continued teaching the curriculum to the students who were now in Senior 2. They also began teaching the year 1 content to the new Senior 1 intake. The intention was to embed the KOBS program into the schools during these two years. Schools verbally reported a positive reaction from students, teaching staff and management.

3.2 Conceptualisation and content development of the KOBS programme

The conceptualisation and content development of KOBS was based on activities, advice, teaching strategies and knowledge which is found in psychological research, theories and therapies used to improve MH and EI as indicated in the literature review. The literature review also provides a rationale for working towards improving the factors which increase resilience, reduce the negative effects on mental health and positively impact on EI. The evidence for 'what helps' young people is also indicated – how that is translated into a lesson is explained below.

In order to create the lessons the researcher needed to;

1. Identify what 'factors' constitutes MH and EI with particular reference to children and youth
2. Consider if, and then how, some of these factors could be communicated into a taught lesson format.
3. Create lesson plans for a classroom in a format that could be delivered by a teacher bearing in mind the restriction and limitations of the classroom environment in terms of resources, time availability and level of training need to deliver the lessons effectively.

3.3 Using psychological theory and therapies to develop the lesson plans

The science of psychology has provided a large volume of evidence based research which indicates that non pharmacological interventions which can be loosely placed under the heading of 'therapeutic approaches' can be useful in improving mental health and enhancing emotional intelligence. The use of research information, theoretical models and therapeutic approaches in the formulation and development of interventions to support the development of better mental health and improvement in EI is preferable to non scientific unproven approaches. The following are some examples of psychology which are relevant to supporting the development of EI and MH. Some examples of how these were influential in the researchers thinking and applied in some of the lesson structures and/or content have been provided below.

3.31 Cognitive behavioural approaches

These approaches fundamental strategy is the modification, through discussions, of beliefs in dysfunctional automatic thoughts, assumptions and beliefs with the guidance of a practitioner using an approach of 'collaborative empiricism'- a strategy of viewing the client as a scientist who is able to make objective interpretations. This approach encourages the client to look for verification, rather than assuming that is 'the way things are'. Beck, Rush, Shaw & Emery (1979). The process of a client and therapist working in unison and collaborating together evolved from Kelly's idea of both working as "personal scientists" (Kelly, 1955). Sonderegger, Rombouts, Ocen & McKeever (2011) carried out a study to measure the impact of a cognitive behaviour therapy (CBT) based intervention called the EMPOWER programme which was designed to improve mental health in trauma survivors which targeted war-affected adults in the north of Uganda. This study focused on adults that had been internally displaced by the conflict living in camps within the region. Results indicated positive benefits showing CBT to be a potentially useful application for war-affected populations.

A criticism of a cognitive behavioural approach is that it assumes that negative cognitions permeate internal conversations about self-evaluation, attributions, expectancies, inferences and recall. It is therefore advisable for the individual to appraise any negative or distressful experiences with a third party, which is encouged as part of the KOBS lessons. For example, a negative prediction could be the result of high probability of the event occurring rather than erranous thinking, so is justified. Dispite this potential difficulty, CBT approaches are a useful way of thinking about an issue with an objective, analytical stance which the researcher felt would be a useful skill for young people to develop with each other in order to increase the possiblity of successful and realistic outcomes in their thinking. The KOBS lessons incorporate activities, which like the approach used in cognitive behaviour therapy, encourage the person to evaluate /appraise their thoughts based on evidence available. The idea being that engaging in this process helps identify negative automatic thoughts and dysfunctional appraisals. The students are assisted by the teacher through a process of 'discovery' to understanding the meaning and nature of automatic thoughts and interpretations.

Several KOBS lessons use approaches such as questioning the evidence for an existing thought, examining other evidence or alternative explanations and developing strategies for avoiding biased thinking. Unlike a traditional therapeutic 1: 1 relationship with a trained therapist, KOBS lessons introduce and guide the students via the teacher through activities which aim to introduce more helpful thinking, emotions and behaviours.

3.32 Social exchange theory. Homans (1958)

Social behavior is an exchange of goods, material goods but also non-material ones, such as the symbols of approval or prestige (Homans, 1958, p . 606) Social exchange theory proposes that over a period of interaction between individuals a tendency towards wanting to assist and support each other emerges in individuals. This is called 'the norm of reciprocity' (Blau, 1983). A criticism of this theory is the assumption that much of human behaviour or social interaction is an exchange of activity, particularly of rewards and costs as the underlying motivation and that such relations will be mutually advantageous. A principal socio-psychological or behavioural-motivational assumption of exchange theory is that human behaviour is a function of reward and punishment, pleasure and pain, cost and benefit, gain and loss. However, this behaviourist approach appears to lack acknowledgement of other reasons why people may behave towards one another in a particular way, for example, altruistic behaviour in which people have a tendency to act on concerns for others' welfare as well as their own.

The researcher of KOBS utilises the principles of social exchange theory in its lessons as the researchers view is that this theory accounts for much of the motivation of why people think and behave in a particlar way, an understanding of which can be harnessed by individuals in a mutually advantagous way. The 50 KOBS lessons were designed to require regular social interaction through conversation, using cognitive processes such as problem solving, comparing views, ideas, experiences and constructs. The intention is that the exchange of information, collaboration and team approach will lead to task completion as well as benefits in terms of understanding and learning from each other.

3.33 The Human Givens approach. (Griffin & Tyrell 2003)

The approach, suggests that '*human givens encompass our emotional needs and the innate resources we have for helping us meet these needs'*. (Griffin & Tyrell, 2003, p. 362) The approach proposes that humans instinctively recognise what they need and come with an array of inner resources that assist us in meeting our needs. This is dependent on utilising them in an effective ways in a healthy environment. Research by Andrews, Twigg, Minami & Johnson (2011) showed that the Human Givens therapy approach is an effective treatment for working with people presenting with a variety of problems, particularly anxiety and depression. Maslow (1971) originally introduced the idea of a hierarchy of needs and that unless basic needs are met people can't engage with questions of meaning and spirituality – what he calls self- actualisation.

The main needs identified within the Human Givens approach are as follows:

Emotional needs include:

- Security — safe territory and an environment which allows us to develop fully
- Attention (to give and receive it) — a form of nutrition
- Sense of autonomy and control — having volition to make responsible choices
- Emotional intimacy — to know that at least one other person accepts us totally for whom we are.
- Feeling part of a wider community
- Privacy — opportunity to reflect and consolidate experience
- Sense of status within social groupings
- Sense of competence and achievement
- Meaning and purpose — which come from being stretched in what we do and think.

There is an assumption made in this approach that humans have instinctive understanding of their needs and human resources available to meet these needs. For a small minority of individuals this is likely to not be the case if they lack, for example, a conscious rational mind, or an ability to build rapport, empathise and connect with others- which may be the reason the person is experiencing difficulties and seeking out help. However, the priciples of Human Givens form a list of needs which are likely to be common to the vast majority of humans so inclusion in KOBS is justified.

Within the KOBS lessons students are encouraged to understand their needs and utilise their resources to meet unfulfilled needs as they see them. For example, one activity asks students to identify what they have achieved in their lives, and what aspects of their lives do they have control over. They are then encouraged to use their resources to increase/improve on these and other needs as necessary. (KOBS 32 & 33. Appendix 1). By identifying what is present and to what degree, this can act as an inner resource for improving MH and EI. By identifying what is lacking or missing the individual can potentially take steps to rectify this. The lessons provide guidance on how this could be achieved.

3.34 Solution focused brief therapy (SFBT) DeShazer (1985).

De Shazer emphasised the importance of building solutions rather than solving problems, that the origin of the problem did not always needed to be known. SFBT considers the individual client as the expert in finding solutions based on his/her specialist knowledge of the situation within which the solution may exist.

A criticism of solution focused approach is that it may create a situation where the individual misses an opportunity to examine the reasons the problem occurred and leaves him/her vulnerable to a recurrence of the problem situation in the future. Being solution orientated may leave little scope for reflection and examination of the factors which led to the problem occurring which may be a valuable learning opportunity lost.

In all the KOBS lessons the student is asked to bring his/her own collective experiences into finding a solution as well as working individually, acting as a 'solution detective' (Sharry, Madden & Darmody 2001). The KOBS lessons do not encourage avoidance of the problem so students are able to take a 'big picture' perspective although are steered towards not dwelling on what caused the 'problem' but look to find solutions. The KOBS lessons all have an outcome reflected in the lesson title, many of which are phrased to reflect a goal that students will achieve collectively but with room for individualised choices inherent in the goal formulation. Several KOBS lessons present problem scenarios in story/short vignettes (See Appendix 6. KOBS lesson 31 &36). The objective is to reflect on how previous or proposed actions and situations have led to a problem becoming lessened or eliminated. Scaling is used in several KOBS lessons to present students with

a visual of where they are now and what qualities/strengths situations are present that prevent this from being lower- in effect reframing a negative into a positive and a platform for further progress.

Within several of the KOBS lessons students are asked to identify what or if any changes are desired and what the consequences of these changes may be. If desirous, they are then encouraged, often as 'homework,' to experiment with the change and reflect on its impact with a view to creating a motivational readiness to attempt a sustainable change.

3.35 Self-determination theory (SDT). Deci and Ryan (2000)

SDT focuses on the degree to which an individual's behaviour is self-motivated and self-determined. Deci and Ryan propose that people engage in an activity with either controlled or autonomous motivation as the driver. With autonomous motivation, choice is felt by the individual without a sense of another person or persons strongly influencing the decision to engage. Contrastingly, when individuals experience controlled motivation, there is a feeling of obligation promoted by an external force, such as a manager at work or forces in society in general. Quite often when a person feels they have some choice and independence in their endeavours, their persistence and motivation improve.

Self-determination theory can explain the increased tendency to become absorbed and engrossed if a deadline is not set by another person but by the individual him/herself (Burgess, Enzle, & Schmaltz, 2004). Self-determination is related to the concept of psychological empowerment. According to Thomas and Velthouse (1990), psychological empowerment relates to what extent a person feels he/she can decide on a choice of actions, believe these actions have meaning, and feels capable as well as responsible.

Within self-determination theory there comprises five principles or mini theories (Deci & Ryan 2000) which were influential in the development of some of the KOBS lessons.

1. Cognitive Evaluation Theory implies that people are quite often intrinsically motivated to complete a task as it has some appealing feature which may be challenging or important to them. The KOBS homework's are voluntary opportunities to engage in an activity /observational exercise, which rely on the intrinsic motivation based on the desire to assess the effect of applying what was taught in the previous lesson in real life situations.

2. Basic Psychological Needs Theory separately identifies three fundamental needs that individuals strive to fulfil: autonomy, relatedness, and competence. When these needs are fulfilled, individuals feel and experience improvements in wellbeing and a sense of satisfaction.
3. Causality Orientations Theory indicates individual differences in people affect their motivation. Some, for example, are more autonomy orientated by which they endeavour to engage in tasks that are inherently enjoyable, challenging, and more closely fit with their own values. Other people, in contrast, demonstrate a control orientation whereby they do tasks to gain rewards or recognition, such as money or approval. The theory also recognises some individuals who may not experience either of these motivations to a significant degree, negatively impacting on persistence and effort. The KOBS program does not result in a test or exam for students as such; however, schools are encouraged to acknowledge the participation of students through an internally awarded recognition. This can take the form of a number of rewards such as t-shirts, recognition in assembly, a paper certificate. Schools were asked to ascertain what motivated students and whether a control orientation or causality orientation is motivating the students and to respond accordingly.
4. Goal Contents Theory distinguishes between goals that are likely to be extrinsically motivating from goals that tend to have an intrinsic motivation. For example, goals such as wealth development, personal appearance and popularity tend to coincide with an extrinsic motivation but could impede the fulfilment of fundamental needs. Consequently, wellbeing may decline. Community, personal growth and close relationships based goals satisfy fundamental needs, increase intrinsic motivation and are more likely to promote wellbeing than other goals (Kasser & Ryan, 1996). Due to the cultural and fiscal limitations of the group and the school setting itself, the promotion of achievable goals as being worthwhile and within the grasp of all students is encouraged and comprises most lessons. The title of each KOBS lesson is clearly stated at the beginning of each session in the form of an outcome. These are all stated as the goals which the student will achieve at the end of the lesson if they engage with it -hence improving the likelihood of having the motivation to engage.

The following are 4 examples of lesson titles;

- **To know** the reasons why people make friends and how this can happen.
- **To understand** that people can have different feelings about the same situation.
- **To be able** to discuss the causes of violence and understand how to create peaceful solutions to problems.
- **To develop the skill** of having some control over worries and to be able to offer advice to someone with a worry.

5. Relationships Motivation Theory (RMT) is concerned with explaining the motivation for the development and maintenance of close personal relationships such as best friends as well as belonging to groups. The KOBS programs first 5 lessons are designed to build friendships and connections within the class and hence relatedness between the students in the group. This foundation is then used as a platform for successful group working for mutual benefit and further relationship building.

A minor criticism or weakness of this theory could be that there isn't always a fairly clear distinction of where the motivation arises which can blur the distinctive elements within the theory. For example, to suggest we, or 'an observer' can identify when our autonomy is at work without there being a control or influence which had acted on the apparent autonomous decision could be erroneous.

3.36 Cultural Schema Theory, Nishida, (1999)

Cultural schema theory is the knowledge one uses when entering a familiar situation in ones own culture. As schemas are developed through one's own interactions and experiences they will bear similarities to the cultural norms in the locality but be unique to individuals as they are created from personal experiences. Those shared by individuals are created from various types of common experiences (Garro, 2000). Cultural Schema Theory proposes the reported patterns of situations or common talk about commonalities between people create the schema stored in our memory. Cultural schemas do not differ from other schemas; except that they are shared by certain cultural groups rather than individuals (Garro, 2000).

A potential problem for cultural schema theory is that there is little understanding of the factors that determine the formation of a schema. The frequency of occurrence and typicality of a

configuration of information make it more memorable (e.g., Goldin 1978), but how do we know whether a schema for a particular concept or situation exists? According to Cultural Schema Theory, humans have a schema for familiar scenarios, i.e. children going to an assembly at school, or friends gathering at a dinner party. However, is not clear from this theory if schema develop more or less strongly from say, reading about a wedding or going to one or how stong they are.

Dispite the above critisms, the theory presents a rational and coherant explanation for the role of an individuals knowledge of local culture when engaging in that culture. The activities within the KOBS program utilise local cultural norms and situations which the students are likely to have encountered before. The intention being to take into account the effects cultural schema may have on the intended benefits of the activities to the students. The development of KOBS as a program of lessons for schools with familiar references to accepted local practice was important in that learning based in a familiar context reduces barriers to change that unfamilar contructs might present.

3.4 The lessons structure

The central question in this thesis is whether a lesson based approach using lessons content inspired/created from extracting key psycho-therapeutic elements from existing theories or therapies can translate into positive gains in MH and EI. This following section is aimed at highlighting the content of some of the lessons, the rationale for them and the make -up of the KOBS program.

The structures of the lessons (See Appendix 1 & 2 for typical lesson plans) were developed to be the same length as a single lesson taught in the secondary schools. Each lesson had the following structure.The intended outcome of the lesson was stated at the beginning of each lesson.

1. Activity 1 with timings
2. Activity 2 with timings (there were more the 2 activities for some lessons)
3. Review.
4. Homework

The program contained 45 lesson plans and 5 additional revision lessons. They were designed to last approximately 45 minutes each which is the normal length of a single lesson in Ugandan secondary schools. It was designed to be taught over a two year period starting in Senior 1 (equivalent to year 7 in the UK). It was expected that the teachers delivering the KOBS program will have attended a minimum of 1 training day before they started teaching. Further supervision and monitoring was also provided.

The KOBS lessons used group discussions and problem solving approaches which aimed to help students become better communicators, encouraging confident communication and broadening vocabulary to achieve this. Developing curiosity about people and becoming good problem solvers was also encouraged

3.5 The Taught Themes

The following content contains references to literature justifying the need for the themes inclusion in the program, fuller references to which can be found in the literature review chapter.

Theme .1 Self Esteem and Friendship Building

The rationale for including friendship building as one of the KOBS themes is due to a number of reasons, for example, Goleman's (1996) model of EI considers that an element of EI consists of social skills which one uses in interaction with other people to include managing relationships.

Theme 2. Thinking, feeling and behaviour

Understanding the link between thoughts feelings and behaviour is central to cognitive behavioural approaches, a well researched process of helping people to improve their MH. E.g. Beck, Rush, Shaw & Emery (1979). Kelly (1955). This theme's aim is to teach students that all feelings and behaviour (actions) are as a result of a thought. Often we are not fully aware of what we are thinking that causes a feeling which may be acted upon at that time or some time later.

Theme 3. Conflict avoidance and conflict resolution

The impact of conflict on people often leads to a negative effect on their MH and EI. Helping the students understand how conflict can evolve and how it could potentially be avoided or resolved could lead the young people to develop a better sense of control over their environment. Mayer and Salovey's (1997) indicated that managing one's own and other emotions as being an important component of EI also having tolerance towards others (Seligman & Csikszentmihalyi 1998). Security, a safe territory and an environment which allows us to develop fully are impacts on

emotional needs. (Griffin J, Tyrell I, 2003). This theme had particular significance due to the recent history of conflict in Northern Uganda.

Theme 4. Motivation and goal setting

Discussion about motivation highlights the purpose of goal seeking, achievement and rewards to humans. These can impact on MH and EI as sense of empowerment can also potentially be achieved.This theme's aim was to focus students' minds on why we spend time on activities and what the potential benefits are. It encouraged students to engage in positive activities and gain the confidence and energy to be active in pursuing their goals.

Theme 5. Understanding ourselves and others.

This theme focuses largely on the development of EI. E.g. Mayer and Salovey's (1997). EI is also implicated in the development and maintenance of positive MH. Schutte et al. (2007) consider that EI has a positive effect on mental health by allowing people to reduce the intensity and frequency of negative moods caused by adverse everyday life events and to protect people from stress and maintain a positive mood. The students are made aware that human values are formed as a result of cultural, familial, religious, political, economic and environmental factors which shape our thinking (social constructivism). An aim of this theme was to explore what our and other people's values are and the impact they have on our lives. In addition, the theme explores individual differences between people as a result of variations in personality, views and beliefs.

Theme 6. Dealing with Bullying

This theme emerged out of a need for the students to further develop an understanding of others' behaviour as well as their own but with specific reference to bullying, prejudice and discrimination: the notion being that a better understanding of these would lead to more tolerance, less conflict, more friendships, better working practice and feelings of safety. E.g. Haroz et al. (2013). Annan (2006).

Theme 7. Dealing with worry and stress.

This theme focused on self-help strategies which are useful when a student is experiencing worry and stress. Having some ability to deal with adversity is often associated with resilience which is a protective state associated with EI which can potentially reduce the impact of negative events on MH. E.g. Ruiz-Aranda et al's. (2012) study indicating that EI helps protect against serious psychological problems among adolescents. The lessons in the theme also utilise approaches from Cognitive Behaviour Therapy and Learned Optimism (Seligmann 1998). Students are taught that that without ways to help ourselves, negative emotions can overwhelm and disrupt our thoughts.

Chapter 4 METHOD

4.0 Chapter overview

This chapter contains two main sections as follows;

1. An overview of the research process broken down into 6 stages.
2. Research design. This contains sections about the research methods used to answer the questions of this thesis including the researcher's epistemological and ontological stance related to the rationale for the choice of design and methods used in the research. It contains information about the participants, ethical considerations and an overview of the methods used involving;
    - i. Questionnaire development content and analysis
    - ii Interview development, content and analysis
    - iii Teacher questionnaire development and analysis
    - iv Statistical methods used to examine raw data

4.1 Overview of research process

The following stages cover the actual research process. A more comprehensive description of these stages and a rationale for the choice of research methods is provided in the research design section below.

Stage 1

In late 2011 a questionnaire was developed by the researcher to evaluate the KOBS program called the KOBS Evaluation Questionnaire (KEQ) as a pre and post test measure of the students MH and EI. (Appendix 3a)

Stage 2

The KEQ was administered to control and intervention groups in Jan 2012 at the beginning of the academic year for a new intake of Senior 1 students. This was administered by the researcher with the support of a teacher in each classroom to ensure clarity and good communication between researcher and student participants.

Stage 3

The KOBS program continued to be delivered by the KOBS trained teacher participants over a 22 month period between Feb 2012 and Dec 2013. The researcher and a field worker from the NGO supporting the KOBS program made two visits to each school during this period. This was to check on progress being made with the curriculum and to address any issues.

Stage 4

The KEQ was given to the same students in the intervention group and control group in January 2014. A significant proportion of the students were not at the schools on the day of the visit to do the KEQ. This was due to them being absent through illness, or having left the school in the previous 2 years.

Stage 5

24 volunteer students were interviewed in groups of 4 to ascertain their views on the KOBS program. The students sat together but were asked to respond individually rather than as a group (The semi-structured interview questions are in Appendix 4)

Stage 6

The 31 teachers who had taught the KOBS program were asked to fill in a short questionnaire in Jan 2014.

4.2 Research Design

4.21 Introduction

This section provides details on the design chosen to undertake the research and the rationale for doing so. Information about the participants in the intervention and control groups is also provided. Ethical considerations are discussed including measures taken to comply with local and UK ethical guidelines for research in the context of this study (Appendix 26). A questionnaire was designed for this study which was called the KOBS Evaluation Questionnaire (KEQ). This section of the chapter explains the rationale for its development and process for

establishing reliability and validity of the KEQ. The interview of the intervention group and the content of the interview, the reason for inclusion of specific questions and the procedures for questioning are discussed. Thematic analysis is used to extract meaning from content of the recorded interviews. This process is explained as well as the development and administration of the teacher questionnaire.

4.22 Epistemological and ontological considerations

The choice of any research method needs careful consideration, the consideration has to involve the epistemological and ontological position of the researcher as psychological research needs to be clear as to the kind of data to be collected, how it is collected and what it means. (Willig, 2013 p. 4)

Epistemology is the philosophical nature of what can be known and how we can know it. So the purpose of the research and what information the researcher is looking for is critical here. Epistemology is important as whatever assumption one makes about what can be known will affect what one tries to find out and how this is presented. Ontology is the term used to describe what an individual's position is regarding what is reality- i.e. what can be said to exist or be? or 'what is there to know' For example, if a person considers that knowledge are facts and facts which can be discovered, then this would be considered a realist or objectivist stance from an ontological perspective (Willig, 2013. p 13). Alternatively, if one considers 'what is there to know' encompasses more than facts but involves personally constructed views and thoughts then this would be largely described as a social constructivist or relativist perspective (Blaikie, 2007).

The danger of making assumptions about how and what we can know is ever present, so an epistemological stance has to be considered in relation to the research and its limitations. The research epistemology guides what you can say about your data, and informs how you theorise meaning (Braun and Clarke 2006).

An alternative and contrasting perspective on what can be known and what is there to know is provided by a positivist philosophical stance and hence a psychological research paradigm which implies the purpose of research is to produce knowledge which is objective and free from

personal views/interferences. (Blaikie, 2007). The criticism of positivism is that we tend to be selective in our interpretation of information based on our own personal constructivist interpretative framework so real objectivity is not possible. Chalmers (1999) presents a strong case in his book for the claim that scientific knowledge can neither be conclusively proved nor disproved based on an analysis of the nature of observation and logical reasoning. The context and nature of the information presented in scientific research would therefore be the key to allowing an accurate interpretation by the reader or listener of the information presented and what the meaning of the information is.

Empiricism, from which positivism derived, appears to seek to minimise any individualistic interpretation preferring indisputable fact that can be agreed by all and that purports knowledge comes only or primarily from sensory experience. A criticism of empiricism is that ‘‘*our sense perception is selective, and people can be trained to observe the same phenomena in different ways’’* (Willig 2008, p 3). A further issue is that useful and informative research opportunities could be missed particularly from a humanistic perspective by setting out empiricist influenced research designs.

An alternative perspective on the nature of knowledge is rationalism. Rationalists argue that certain truths exist, and that intellect can directly grasp these truths and assert that certain rational principles exist in logic, mathematics, ethics, and metaphysics that are fundamentally true and denying them causes one to fall into contradiction. Empiricists and rationalists hold somewhat contrasting views to each other. (Blaikie 2007)

4.23 Rationale for the choice of design and methods in this study

It is the researcher’s view that a person’s interpretation of ‘what is knowledge’ is related to the context of how it was derived. Therefore, the source is critical to the interpretation. Knowledge comes in different forms and categories and from different sources and interpreted at the level of the individual. Braun and Clarke (2006) indicate ‘*’we do not think there is one ideal theoretical framework for conducting qualitative research, or indeed one ideal method. What is important is that the theoretical framework and methods match what the researcher wants to know, and that they acknowledge these decisions, and recognise them as decisions’’* (p. 84) This is compatible

with the researchers' view that the questions asked and answers sought by this research lend themselves to developing a research position and design which utilises approaches from a social constructivist, rationalist perspective and also by employing empirical approaches using a mixed methods approach. These should provide information to answer the research questions more comprehensively than if only one approach was used. A further rationale for this decision is that the central question of this research is whether an intervention in school can produce an impact on MH and EI. So how can we know this? MH and EI as indicated in the literature review are measurable to an extent by a questionnaire and to a large degree by personal reflection/accounts and individual's thoughts, feelings and behavior. If one assumes this to be the case, then the research would benefit from a design which should produce some data which is measurable from a reliable and valid questionnaire as well as information which is communicated by the participant who has received the intervention. This led the researcher to employ a quasi-experimental, mixed methods format involving qualitative and quantitative approaches using questionnaires and interviews. A quasi-experimental design lacks fully randomised assignment of participants. A non-equivalent groups design was used for the analysis of the questionnaire which involves a pretest and a posttest. This is most often used in intact groups that are thought of as similar. For example, in schools where two comparable classes are chosen from similar schools, however it's unlikely that the two groups will be as similar as they would if they were assigned through a random lottery. This is in response to Reichard and Mark (2001) who recommend researchers try to make the bias due to selection differences as small as is able by making the nonequivalent groups as similar as possible.

It is the 's position that it would be beneficial to utilise a quantitative approach which has been developed for assessing MH and EI as attaching some numbers to continuums of scales of describing the state of MH and EI will have more of an impact for some people interested in the research results. The political and cultural context of education which bases assessment and judgment of success largely on quantitative assessment cannot be ignored when devising an assessment if the outcomes of the research are intended to be applied in a school context if results indicate the program has sufficient efficacy. Using a quantitative research method would therefore fit a 'numbers based model' of assessing change following an educational intervention. The use of instructional strategies that have a strong empirical foundation supporting their effectiveness is proposed as an important factor in improving the educational outcomes of

students in both general and special education and is called for in educational legislation in the United States. (Kutash et al. 2009). Sammons et al. (2005) in discussing school effectiveness, justify using mixed methods in situations where ‘‘*complex and pluralistic social contexts demand analysis that is informed by multiple and diverse perspectives’’* (p. 221), thus results are more likely to stand up to questioning and scrutiny if they have emerged from a mixed methods approach.

The researcher considers that the essence of how a person thinks and feels about their state of MH and EI is a product of a humanistic, socially constructed perspective. This led to the decision to use a semi structured interview involving student participants to elicit participants own language and reasoning to express their thought in a way which could be analysed through seeking themes from the discourse which helps answer the questions of this research. A social constructionist approach positions the researcher as having a key active role in co constructing meaning from data through his/her interactions with participants and the accounts that they provide (Mackenzie & Knipe, 2006). The teachers' questionnaire asks them what they think about the intervention also how they think the students' responses were to the intervention. This fits a social constructionist approach as three of the questions put the participant teachers in the role of interpretivist, asking what they think the student participants thinks about the intervention.

4.231 Use of Thematic Analysis

As Thematic Analysis is a type of qualitative analysis and fitted the constructivist position of the researcher in respect of this part of the data, it was used to analyse classifications and present themes (patterns) in the data. Boyatis (1998) indicates that Thematic Analysis can illustrate the data in great detail and deals with diverse subjects via interpretations.

A decision needed to be made by the researcher about how to analyse data and at what level the analysis takes place in order to identify themes; at a semantic (explicit level), or at a latent (interpretative) level (Boyatzis, 1998). A thematic analysis involves adopting one of these two approaches. When using a semantic approach themes are identified by looking at the explicit or surface meanings of the data, so the researchers does not deduce anything deeper or beyond what the participants says. In this study codes developed for themes were linked to data for later

analysis, which included comparing the relative frequencies of themes or topics within a data set. The taping of interviews and analysis of them by being able to listen several times to a response allowed themes to be identified and frequencies noted.

4.232 Use of interviews

Participants were interviewed individually but were in a group. When asked to volunteer to be an interviewee, a number of them said they would feel more comfortable having their classmates with them in the interview. Several stressed that the interview was something they had not done before and if they were nervous they might not give the information they would be able to give if they were relaxed. As a result, questions were asked 'round robin' style. In essence they were individual interviews but with 4 participants at one time around a table, so the same question was asked to each participant in turn. This is different to focus group interviews in that there was no organised discussion which is a central feature of focus groups. It was therefore important to impress upon the participants the need to communicate their own views. Section 4.422 below details what measures were taken to minimise untrustworthy responses.

4.24 Participants

The participants in this research consist of the intervention group of students, a control group of students and the teachers who taught the program to the participant students. A group of student participants who had a semi structured interview were from the intervention group.

4.241 Intervention group

The participants (students) were on roll in the intervention and control schools but were not placed there for any specific reason; therefore 'cluster randomisation' was in effect by default. Whether they were an intervention school or control school depended on whether the KOBS program was being taught or not in the school at that time. The intervention group providing data at the pre and post phase were 56% male and 44% female. A total of 120 participants filled out the KEQ at the pre-intervention stage and 76 at the end of the intervention stage (Table 2). For the purpose of analysis, data from the controls and participants who were not present at the post phase was not used- they were eliminated from the study. Therefore, only the data from the

numbers highlighted below in Table 2 were used. The average age of pupils starting at the beginning of the 21 month KOBS program was 13 years and 10 months.

Twenty four of the participant pupils who finished KOBS were interviewed after they had completed the KOBS program. They were from 6 participating schools and were asked questions separately one at a time. There were 12 males and 12 females. They had all volunteered from the students finishing KOBS and were picked out randomly from the all the students who had volunteered for the interview.

4.242 Control group

Controls were on roll at schools which were not being taught the KOBS curriculum. They were at the beginning of their 'Senior 1' school year when first given the KEQ (80 individuals) and had just finished 'Senior 2' when given the KEQ for the second time (63 individuals). Controls could not be selected from schools using the KOBS program as this would increase the chance of contamination across individuals, for example, one individual's changing behaviors may influence another individual to change also. Controls were from schools in the same geographical area. The controls providing pre and post questionnaire data comprised of 54% males and 46% females. The average age of the control group was 13 and 11 months when first given the KEQ at the beginning of Senior 1.

Table 2. Participant and control group numbers

	Males	Females	Totals
Participants starting KOBS	63	57	120
Participants finishing KOBS	41	35	**76**
Control group at beginning	39	41	80
Control group at end	31	32	**63**

4.243 Further information about controls and intervention group

All the students were in Senior 1 in the first year and moved on to Senior 2 at secondary school in the second year. This is the equivalent of year 7 and 8 in the UK. Approximately ninety five percent of the students were from the Acholi population. The Acholi are an ethnic group from Northern Uganda, an area commonly referred to in the region as Acholiland. Approximately 60% of the students were boarders living at the schools during term time.

The age range of students starting year 1 was between 12 and 17 years of age. The age range varies considerably due to missed schooling as a result of either a lack of school fees, being 'kept down' due to a failure to pass exams in their primary phase of education or as a result of being out of school due to the circumstances of the conflict.

Eighteen schools were involved. Eleven intervention group schools and 7 control group schools. Fifteen of the schools were mixed gender. Three were single sex schools – two female only and one male only. All of the schools were secondary schools which serves the post primary phase of education in Uganda (Senior 1 to Senior 6).

Field (2009) recommends that in any research design it is important to keep unsystematic variations to a minimum to get a more sensitive measure of the experimental manipulation. The process of randomisation is used to achieve this goal. Although not a matched design experiment, a degree of matching by age, gender, geographical proximity, culture, previous experiences, and academic ability was used. According to school records, all of the students in the study, both controls and intervention group, had lived for several years in the conflict zone either in an internally displaced people's camp (IDP camps) or in a local town or village. The schools' counselors of all IG and CG schools estimated that between 10 and 15 % of all students had been abducted at some point in the last 10 years and likely to have taken part in some form of combat/violence. The rest will have been heavily influenced by the conflict.

4.244 Teachers of the intervention (the KOBS curriculum)

Thirty one teachers filled in a short questionnaire about their experiences and thoughts about the KOBS curriculum they had been teaching. The researcher sent out questionnaires to all of the 34 teachers who had taught the curriculum and 31 were returned. The teachers were all Ugandans living in the local community. They had all qualified teacher status obtained from the Ugandan Department for Education. They all spoke fluent English and also the local Luo language.

4.3 Ethical considerations

Ethical approval for this research was obtained through Cardiff University. In planning and preparation, consideration was given to the Code of Ethics and Conduct, British Psychological Society (BPS, 2009 chapter IV). The actions taken to comply with BPS and above standards are detailed in Table 3 below. In addition, the researcher was careful not to ask the interviewees about their experiences in the conflict period- this had been made clear to them via consent forms but nevertheless this was a sensitive area which was not in the scope of this study. Consequently, they were asked to respond only to questions about the impact the KOBS program had on them. The research was carried out in Northern Uganda. This meant that local practices needed to be taken into account as well as those stipulated by the BPS. This involved a meeting and discussion between the researcher and the faculty head of education and humanities at Gulu University about procedures the researcher was intending to undertake and the local expectations for research. These were agreed and verified accordingly. (Appendix 26). His view was that the children participating in the research were being asked to respond to questions about a previously establish program of activities. In that sense, they were not being asked to undertake an intervention as such from that point. His view was that my involvement at that time was in the carrying out of an evaluation of the impact of an existing agreed program currently in schools which had been sanctioned by the Ugandan Ministry of Education (Appendix 6), therefore local permission from schools and parents and consent from participant's parents and schools as indicated would satisfy any ethical considerations.

Table 3: Actions undertaken to comply with BPS ethical research standards

	Standard	Actions
1.2	Standard of Privacy and Confidentiality	Documents anonymised; permission from participants obtained prior to questionnaire and audio recording of interviews; audio recording deleted following transcription (within maximum 3 months); transcriptions anonymised and identifiable only by code retained securely and separately to transcriptions by interviewer.
1.3	Standard of Informed Consent	The KOBS curriculum has already been introduced as part of the schools guidance and counseling program for students. It therefore did not need the consent of the students to participate in the lessons. The consent of the head teachers in KOBS and control schools was sought to conduct this research in the schools. (Appendix 7, 8, 8a) This research required the consent of the participants. (Appendix 9 and 10). As most of the participants were under 16 years of age a signed consent form was signed by a parent/guardian. (Appendix 11, 12, 12a). These were given to students to take home for signing and returned to the school. Before they were asked to fill in the questionnaire or participate in the semi structured interview they were be given a consent form which each participant was asked to sign if they wished to take part. After filling in the questionnaire or taking part in the interview the students were given the opportunity to ask questions and discuss their thoughts and feeling about the process. This was done in collaboration with the school counselor who assisted in the administration of the questionnaire. The school counselor continued to be available to the students to discuss any issues/questions at a later point. KOBS students and control students were provided with debriefing information after both the questionnaires (Appendix 13,14,15 and 16). Students were

		provided with debriefing information following the semi structured interview. (Appendix 17). Head teachers were provided with debriefing information at the end of the study (Appendix 18 and 19). Teachers were provided debriefing (who did the questionnaire). (Appendix 20). Parents were provided with debriefing at the end of the study. (Appendix 21 and 22). The researcher was satisfied that from those whom consent was requested, ample opportunity was given to understand the nature, purpose, and anticipated consequences of their participation. Any questions were able to be directed to named individuals on the consent forms.
1.4	Standard of Self-Determination	i) Participants were informed of the right to withdraw from the study at any point without giving reason (ii); participants were informed that their data would be destroyed upon request at any point prior to anonymisation (iii); participants were informed that they may decline to respond to any line of questioning without any recourse (Appendix 9 and 10); participants and controls were also invited to withdraw their questionnaire or recorded interview even after completion.
3.3	Standard of Protection of Research Participants	The researcher was prepared to exercise particular caution when responding to requests for advice from research participants concerning psychological or other issues and offer to make a referral for assistance if the inquiry appears to involve issues sufficiently serious to warrant professional services (for example any thoughts of self-harm). This was offered from school counselors with their prior agreement. (Appendix 25). In addition, specific questions about personal experiences in the questionnaire and semi structured interview were avoided. However, if the student were to reference an incident or a problem they were having, they would have been anonymised. If requested, they

		would have been referred to the school counselor for further discussion.
3.4	Standard of Debriefing of Research Participants	Participants, head teachers, teachers and parents were all provided with debriefing forms at the end of the study. Separate debriefing forms were provided for those interviewed. Outcomes discussed will be carefully worded to avoid any misconceptions. Debriefing will identify any unforeseen harm, discomfort or misconceptions occurring as a result of the interview and assistance arranged if required.

4.4 An overview of the measures used

A mixed methods quasi experimental approach was used in this study. This comprised of:

1. The KEQ administered for the intervention group and control group;
2. Interviews involving 24 of the intervention group; thematic analysis using coding as a method of theme extraction;
3. A teacher questionnaire with a Likert scale to extract information.

4.41 Questionnaire development

The KOBS Evaluation Questionnaire (KEQ) was developed by the researcher for use as a pre and post intervention measurement instrument with questions which asked the participants and controls about their emotional intelligence and mental health. The KEQ was designed as a 'one off' for use in this study only, so did not need to be standardised but was piloted. The questions needed to reflect questions found in established questionnaires that assess MH and EI. The questionnaire required language familiar to the students, which was not conceptually complex or contextually and culturally unfamiliar. In the pilot phase, all questions were read by two teachers working for the NGO who partnered the 11 schools. The teachers were asked to review the wording of the questions and recommend changes if necessary, ensuring the meaning of the question was kept the same. Each question was then adjusted to be accessible for children of that age group. Betancourt et al. (2009) indicted that the use of Western mental health assessments, based on the Diagnostic and Statistical Manual for mental disorders diagnostic criteria, are likely to be unsuitable tools to use in other cultures- that their reliability and validity is likely to be

questionable. Hollifield et al. (2002) also refer to methodological challenges associated with using standard Western diagnostic instruments in populations that differ significantly from the places they were developed. These were valid additional reasons for developing a bespoke questionnaire for the purposes of evaluating the impact of the KOBS program and answering the research question.

4.411. A comparison between the KEQ and the above questionnaires

The reliability and validity of a measure is an important consideration in cross-cultural MH and EI research. Validity refers to the degree to which the questionnaire measures what it purports to. In this study, for example, when asked a question about happiness, is it valid to assume it is linked to the construct of mental health? Reliability refers to the degree to which measures used are likely to result in reproducible results. In order to create a valid questionnaire, the questions asked in KEQ were based on those contained within the following established validated questionnaires for Emotional Intelligence and Mental Health. Exact wording was not replicated from all the questionnaires to the KEQ due to cultural differences and westernised language potentially being unfamiliar to the intervention and control groups.

1. The Acholi Psychosocial Assessment Instrument (APAI). The Acholi Psychosocial Assessment Instrument (Betancourt et al. 2009) was used as a guide in the development of the KEQ questions measuring MH. The APAI was developed for the local population in Northern Uganda but does not cover all the aspects in MH and EI which the KOBS program was concerned with, hence the need for the development of the KEQ.

2. The Emotional Literacy student checklist (Appendix 24). This instrument was developed by adapting Goleman's (1996) mixed modal classification of the knowledge skills and competencies that contribute to emotional literacy.

3. The Spence Children's Anxiety Scale**.** (Spence 1994) This includes items to assess 6 of the DSM V and ICD 10 categories that assess anxiety disorders.

4. The Birleson Depression Scale. This scale has been used in a number of studies of children surviving disasters and those who have been exposed to warfare. It was

developed as a clinical instrument to be completed by children and adolescents to assess the degree of depressive feelings (Birleson et al. 1987).

5. Children's Impact of Events Scale adapted by Yule from Horowitz et al's. (1979) original version for adults to a shortened version suitable for children. This was designed to measure Post Traumatic Stress Disorder.

6. Bar-On Emotional Quotient Inventory- Youth Version. (Bar-On 2000) for adolescents between 7 and 18 years. Several studies have been conducted on this scale to verify its validity and reliability in other environments. It includes four validity indices giving scores for the following components: interpersonal skills, stress management, adaptability, general mood scale & intrapersonal skills.

Table 5 below shows the KEQ and indicates after each question where the same or very similar question is found in one of the above validated and reliably tested original 'source' questionnaires and checklists which were used as models to develop the KEQ. The questions in the KEQ are not identical but are intended to cover the same construct as the question indicated in the source questionnaire. The table shows all the questions in the KEQ in column 1. In column 2 there is an abbreviation of one or more of the above established questionnaires which has a question asking about the same construct but not necessarily using the exact wording.

Some of the questions in the KEQ do not have a close match in one of the above established questionnaires. These questions were crossed referenced (using a code letter) to one or more of the main theories explanations of what EI or MH are as indicated in the literature review in order to ask the respondent about a construct of EI or MH. (Table 5)

Table 4. Codes for cross referencing established questionnaires with question in the KEQ

KEY
APAI = The Acholi Prosocial Assessment Instrument. (Betancourt et al. 2009)
ELSC = The Emotional Literacy Student Checklist. (Faupel 2003)
SCAS = The Spence Children's Anxiety Scale (Spence 1994)

BDS = The Birleson Depression Scale (Birleson et al. 1987).
CIES = The Children's Impact of Events Scale (Horowitz et al. 1979)
EQi = The Bar-on Emotional Quotient Inventory Youth Version. (Bar-On 2009)

Table 5. Main theories of MH and EI with codes for cross referencing.

	Emotional Intelligence	**Code**
KEY	**From the 'Trait Model'**	
	The capacity to love and accept love.	A
	The ability to speak about emotions and what causes them	B
	Emphatic intuition capacity	C
	Apologizing for the damage caused by emotional mistakes.	D
	From the 'Ability Model'	
	Perceiving emotions	E
	Using emotions	F
	Understanding emotions	G
	Managing emotions	H
	From the 'Mixed Model'	
	Self-regulation/Self awareness	I
	Social Skills	J
	Empathy	K
	Motivation	L
	Mental Health	**Code**
KEY	The literature review provides a selection of the most widely accepted definitions of what constitutes mental health. Broadly speaking there is a theme which is common to all the descriptions which constitutes **a subjective sense of well-being -*an individuals' perceptions and evaluations of their own lives in terms of their affective states and their psychological and social functioning*.** (Heady, Kelley, and Wearing 1993). Keyes (2005) introduces an operationalisation of mental health as a syndrome of symptoms of **positive feelings and positive functioning in life.** In addition, subjective well-being includes measures of **the presence and absence of positive functioning in life.** Ryff and Keys (1995) propose six dimensions of psychological well-being**: self-acceptance, positive relations with others, personal growth, purpose in life, environmental mastery, autonomy.**	MH

Table 6. The KEQ showing the source of similar questions from other MH &EI questionnaires.

Column 1	**Column 2**
1. Do you feel that other people like you?	SCAS-11. (MH)
3. Are you a person who likes meeting new people or making new friends?	APAI -21,24,41,30. (MH)
4. Do you know how to relax and enjoy yourself?	EQi -1 (EI)
5. Do you feel happy in your life?	APIA -8. (MHZ) SACS -31. (MHZ) BSD-17. (MHZ)
6. Do you feel scared to try new things in case something bad happens?	APAI-23, 35. (MH) SCAS-1, 4, 16, 22. (MH)
7. Do you worry about what other people think of you?	APAI- 23, 4. (MH) SCAS-9, 29. (MH)
8. Do you keep your problems a secret?	EQi-7 (EI)
9. Do you feel unhappy about yourself as a person?	APAI -7. (MH) SCAS -38. (MH)
10. Do you feel that your life is without hope?	APAI- 46. (MH) BDS-10. (MH)
11. Do you feel that other boys/girls have better friendships than you?	ELSC-10. (EI)
12. Do you feel you have some good qualities as a person?	BDS -11. (MH)
13. Do you know what you can to do if you are feeling very sad?	ELSC-8. (EI)
14. If you are worried about something do you know what to do to help you?	EQi -38 (EI)
15. Do you know what you can do to help you if you are feeling very angry?	EQi-6 (EI)
16. Do you know how to avoid fights or arguments from starting?	ELSC-6, 16, 21. (EI)
17. If someone is treating you badly or saying bad things about you, do you know what to do to make the situation better?	ELSC -13. (EI)
18. Do you know what strengths a person needs to help them if they have a difficult time in their lives?	CAJON (EI)
19. Do you know what others value in a friend?	C.J.K (EI)
20. Do you know why people behave differently to one another?	J. (EI)
21. Do you know why some people are bullies	C. I. (EI)
22. Do you know what to do if you are bullied?	C. I. (EI)

23. Do you know what you can do to help you if you are feeling bored?	I.J. (EI)
24. Do you know how to help someone who is worried?	ELSC -16. (EI)
25. Do you ever feel pleased and proud of yourself?	APAI -7. (MH)
26. Do you have many interests and skills?	APAI- 7, 40. (MH)
27. Do you know what situations can cause conflict/fighting?	ELSC- 6. (EI)
28. Do you know what people can do or say to help prevent conflict /fighting?	ELSC 16, 21. (EI)
29. Do you know what to do to prevent unhappiness?	ELSC -8. (EI)
30. Do you know what helps you become a better learner?	ELSC -12, 17. (EI)
31. Do you know what successes you have had in your life?	BDS-11. (MH)
32. Do you like to help people with their problems?	ELSC-16, 21. (EI)
33. Do you know why people sometimes treat others unfairly?	E.G.K (EI)
34. Do you know what situations can be unsafe for you?	J. (EI)
35. Do you often find it difficult to get to sleep or frequently have disturbed sleep?	APAI -18. (MH) BDS -2. (MH)
36. Do you often feel tired during the day so that it gets in the way of you're listening and learning in school?	APAI - 55,6,27. (MH) BDS -7. (MH)
37. Do you have panic attacks (a lot of fear, heart pounding, breathing fast, and stomach churning)?	APAI -50, 15, 52. (MH) SCAS -34, 32, 21, 13. (MH)
38. Do you feel like things will never get better for you?	BDS -10. (MH)
39. Do you like yourself?	SCAS-38. (MH)
40. Do you like your life?	APAI- 8. (MH) BDS-10. (MH)
41. Do you have images or memories of past upsetting events which you can't stop thinking about?	CIES -1, 2, 6, 8. (MH)
42. Do you have powerful memories of past upsetting events which make you feel unwell, scared or angry?	CIES -3, 6. (MH)
43. Do you feel sad most days?	APAI -53. (MH) BDS -17. (MH)
44. Do you feel worried/scared for long periods of time?	APA -1, 4. ((MH)

Table 7 below provides an overview of which questions are asking about a construct associated with Emotional Intelligence and which ones are for Mental Health. As indicated in column 2 of Table 6 above.

Table 7: KEQ question numbers associated with MH and EI

KEQ question items for Mental Health	1,3,5,6,7,9,10,12,25,26,31,35,36,37,38,39,40,41,42, 43,44,
KEQ Questions items for Emotional Literacy	2,4,8,11,13,14,15,16,17,18,19,20,21,22,23,24 27,28,29,30,32,33,34

4.412 Reliability analysis of the KEQ

Piloting of the KEQ for reliability using a sample of the population comparable to that used in the actual study was not considered appropriate for the following reasons;

1. The researcher did not feel it was ethical to use the local child population to establish the questionnaires reliability. Based on local knowledge, the children may have felt aggrieved that they were not getting the KOBS program for themselves after being asked to fill in questionnaires just to test the reliability of it.
2. The questions in the KEQ may have evoked some concerning memories; issues which the researcher was not able to address as he was not 'on the ground' for any length of time and could not guarantee there would be a backup support for these children if needed.
3. The questionnaire was intended as a one –off for this study only. The researcher was prepared to delete or ignore those questions which were showing poor correlations within subsets or the actual subset if there were no ground for their inclusion in the analysis and interpretation of the data.

The researcher carried out a correlation matrix between questions to investigate if there exists a good correlation coefficients within subsets of questions which would suggest that those questions could be measuring aspects of the same underlying dimension- known as factors. In order to do this Cronbach's alpha factor analysis was used. This was done for all the questions combined. Table 10 gives a summary of all the analysis carried out providing Alpha scores. The

questions were clustered beforehand into subsets when the KEQ was designed (Table 9), the factor analysis carried here was in order to quantitatively validate these as being constructively similar as an additional measure to the steps taken to validate it qualitatively by matching them to established questionnaire questions. In order to provide a benchmark of what constitutes a reliable correlation, George and Mallery (2003) recommended the following in Table 8 as a guide.

Table 8: George and Mallery (2003) guide to the degree of reliability.

> .9 – Excellent
> .8 – Good
> .7 – Acceptable
> .6 – Questionable
> .5 – Poor
< .5 – Unacceptable

Table 9: Questions factorised using Cronbach's Alpha in to thematic categories

Subsets of questions	Construct associated with EI and/or MH
Q5,9,10,38,39,43,44	Ask about happiness
Q12,25,26,31	Ask about self esteem
Q13,14,15,17,23,24	Ask about dealing with negative emotions
Q16,27,28	Ask about how to avoid conflict
Q20,21,22,33	Ask about understanding of why people behave differently to each other
Q35,37,41,42	Ask about anxiety and post-traumatic stress type symptoms
Q 1,3,7,11,19,32	Ask about friendships- quality of- confidence in, satisfaction of.

Q2,4,6,8,18,29,30,34,36,40	Various associated with different aspects of MH and EI.

Table 10: Factor analysis of questions in the KEQ for purpose of assessing internal consistency reliability.

(Cronbach's Alpha scores in red fell below an acceptable reliability level)

DATA SET	Cronbach's Alpha	Number of items
All IG pre data	.842	44
All IG post data	.786	44
All CG pre data	.850	44
All CG post data	.844	44
IG pre - Happiness	.890	7
IG post - Happiness	.786	7
CG pre - Happiness	.912	7
CG post -Happiness	.858	7
IG pre - Negative emotions	.792	6
IG post- Negative emotions	.734	6
CG pre- Negative emotions	.822	6
CG post- Negative emotions	.810	6
IG pre- Avoiding Conflict	.887	3
IG post- Avoiding Conflict	.816	3
CG pre- Avoiding Conflict	.756	3
CG post- Avoiding Conflict	.739	3
IG pre- Understanding people's behaviour	.502	4
IG post- Understanding people's behaviour	.285	4
CG pre- Understanding people's behaviour	.381	4
CG post- Understanding people's behaviour	.325	4
IG pre- Self esteem	.915	4
IG post- Self esteem	.860	4
CG pre- Self esteem	.835	4
CG post- Self esteem	.842	4
IG pre- Anxiety and stress	.869	4
IG post- Anxiety and stress	.829	4
CG pre- Anxiety and stress	.868	4
CG post- Anxiety and stress	.810	4
IG pre- Quality of friendships	.906	6

IG post- Quality of friendships	.836	6
CG pre- Quality of friendships	.844	6
CG post- Quality of friendships	.777	6
IG pre- Various	.456	10
IG post- Various	.351	10
CG pre- Various	.570	10
CG post- Various	.573	10

The factor analysis of the KEQ to assess internal consistency reliability yields sufficient correlations within identified subsets and as a whole to assume its reliability. Combined inter-rater reliability and test-retest reliability were also good for all subsets except for the 'understanding people's behavior' subset and the 'various subset' (which was expected as it wasn't identified as having common questions (or variables). This subset comprised a mix of questions which were written to reflect a variety of constructs associated with MH and EI but were not definable under any further subsets- a strong correlation was therefore not expected.

4.413 Limitations

The data entered was factored into subsets by developing questions based on existing validated questionnaires through a comparing and matching process and then putting them into subsets based on what information they were seeking to extract from the participant. There is, however, a possibility that an overall single factor exists – that is, that this data is pointing to a homogeneous construct combining MH and EI. Research does indicate that the two are closely related so extracting a distinction through sets of question responses might be more complex than a quantitative mathematical analysis is able to undertake successfully. However, a factor analysis using eigenvalues as an attempt at factor extraction was employed.

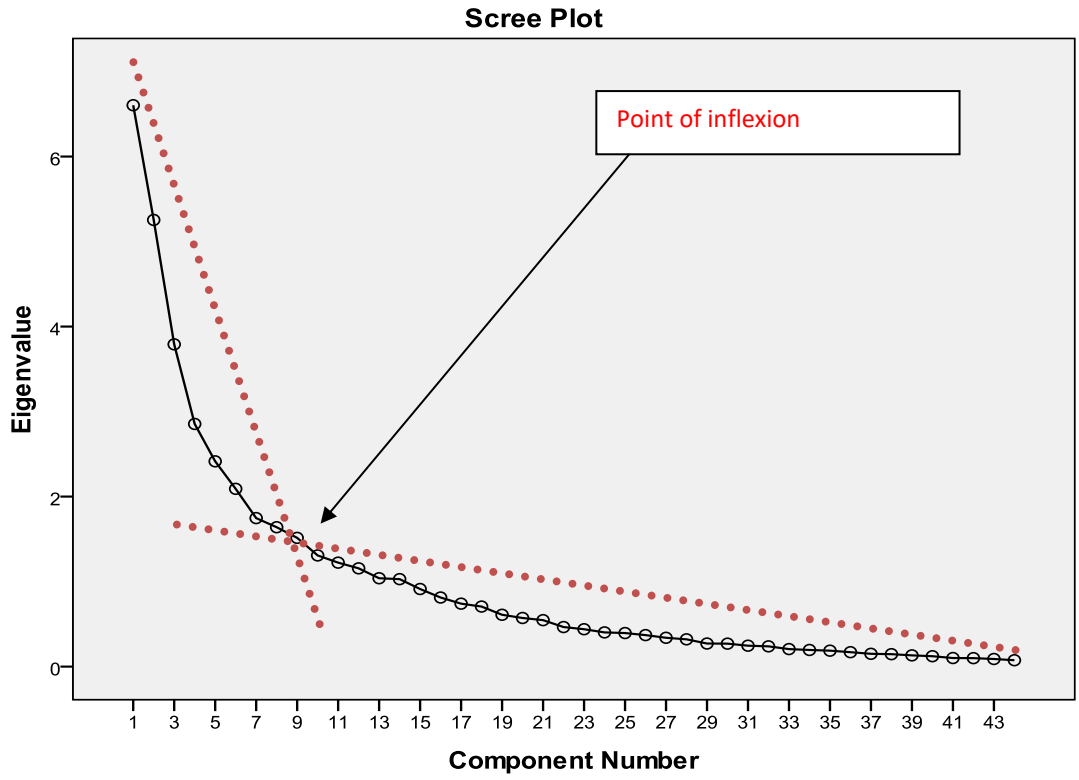
The exploratory factor analysis method used to examine the data was principal component analysis. Bryman and Cramer (2005) recommend that when carrying out principal component factor analysis two main criteria should be used to determine how many factors should be retained:

1) The Kaiser criterion to select those factors that have an eigenvalue ≥1.

2) A Scree Plot to depict the descending variances that account for the factors extracted in graph form. The factors that lie before the point at which eigenvalues begin to drop are being retained.

Analysis using factor rotation to improve interpretation indicates 14 components with an eigenvalue above 1.0. Field (2009) indicates that principal component analysis and principal factor analysis result in similar solutions the results of which should be restricted to the sample collected, which is the case here, without gathering additional samples. There is an argument that eigenvalues overestimate the number of factors so comparing the two will provide a reasonable idea of underlying factors for the purpose of this study. Figure 1 below shows where the point of inflexion indicates approximately 10 factors.

Figure 1: Factor rotation indicates 14 components with an eigenvalue above 1.0



Based on the analysis of the KEQ and the process of constructing the KEQ using commonly accepted questions which aim to explore the constructs associated with MH and EI, there appears satisfactory evidence of a measure which is fit for the purpose of this study.

As the overall correlation using all questions was good, the data from all questions was used in the ANOVAs and T-test carried out to analyse the impact of the KOBS program which is provided in the results section 1.

4.42 Interview Development and content

The interview questions (Appendix 4) were chosen to elicit the views and impressions of a random selection of the intervention group. Randomisation of participants was achieved by allocating numbers to those willing to participate and drawing numbers by hand to select the individuals to be interviewed.

A semi structured interviewing method was used as it provided the researcher with an opportunity to listen to the participants talk about any impact the KOBS program had on them. The intention was to use a relatively small number of open–ended questions. Restating interviewee's responses and incorporating them into later questions throughout the interview is recommended by Willig (2013) and was a strategy used in these interviews. This demonstrated that the researcher was listening and allowed him to check that his understanding of the participants comments were correct. A further strategy recommended by Willig and used here, is to use a 'naive' approach which encouraged the interviewee to state the obvious giving voice to possible implicit assumptions. Appendix 5 is the semi structured interview schedule with guidance notes and prompts for the researcher.

Spradley (1979) formulated 4 different types of question: descriptive, structural, contrasting and evaluative. Due to the nature of the intervention, the use of evaluative questions was most commonly used asking about the interviewees feeling towards experiencing something. The questions themselves were worded to gain an impression of the positive and negative aspects of the program and any impressions it had made on the participants. Direct questions about its effect on their MH and EI were avoided. If participants did bring up a theme such as friendships, then this was explored further to elicit any additional information which they may have liked to communicate.

4.421 Interview Procedure

Interviews were held at 6 of the intervention group schools and the participants were interviewed in groups of 4. A total of 24 volunteer participants were interviewed. Participants were interviewed individually but were in a group. As a result, questions were asked 'round robin' style and not as a focus group. A question was posed by the researcher and each participant was invited to offer a response if they wanted to. At the end of asking the 4 students the question and giving them an opportunity to respond, they were asked again if they had anything else to add.

It was repeated on two occasions that they were not being judged on what they said or the amount of comments they made. They did not have to answer or could say 'Pass' and think about it and if any thoughts did come they could raise their hand to speak at a later point if they wished. Each interview was recorded using a dictaphone. An interpreter was present to convert from English to Luo if the child wanted to speak in Luo or wanted the question repeated in Luo. This was only requested on 3 occasions. (Appendix 27; field work assistance). The order of questioning switched for each question, so each person had an equal turn at answering 1^{st} 2^{nd} 3^{rd} or 4^{th}.

4.422 Reducing the potential for untrustworthiness

There are potential risks associated with a study which involves a qualitative interview due to threats to the trustworthiness of responses during the interview. Below are the four potential areas of bias that are most commonly highlighted with the 's actions indicated designed to counter the 'risk'. This was pertinent in this interview process as the interviewees were sitting together in a group of 4 but answering individually. This meant that one person's answer could influence another person's answer. The researcher identified 3 main reasons why a person might agree or repeat or expand on a theme of an answer of another person.

a) He/she actually agreed (trustworthy).
b) He/she didn't agree but he/she wanted to show 'unity' with another or not disappoint the examiner (untrustworthy)
c) He/she had no real sense of agreement or disagreement but wanted to respond in order to appear knowledgeable and/or interested. (untrustworthy)

To minimize the likelihood for these and other potential sources of unreliable responses, the examiner utilised the following strategies:

1. “Misperceptions on the part of the interviewer of what the respondent is saying.” (Cohen et al., 2000. p. 150) To minimise risk of this type of bias, the researcher sought to clarify and confirm the meaning of interviewee’s statements and ask for clarification with the aid of the translator where needed. Silverman (1993) refers to this as ‘respondent validation’.

2. Cohen et al., (2000.) indicate a tendency for the interviewer to seek answers that support his/her preconceived notions as a potential risk. In this research the likelihood of this occurring was reduced by probing effectively. Bernard (1995) suggests probing is important to successful interviewing to encourage the interviewee to give more and good quality information. This was achieved by allowing the interviewee to respond to his/her own though rather than those of the interviewer by keeping the conversation focused and giving the interviewee plenty of freedom to respond in a non-judgmental environment. Letting them say what he/she think is important.

3. “Misconceptions on the part of the respondent of what is being asked.” (Cohen et al. 2000.) Prior to the interviews the participants were told the purpose of the interviews and clarified they understood the question using simple language and Luo translation also.

4. “if the interviewer fails to create and maintain good rapport” (Oppenheim, 1992. p. 89) To minimise risk in this area, the researcher introduced himself to the students prior to the interviews and began each interview with a general chat to build rapport.

5. The respondents were told that this was not a test; no credit was given for right answers. Their responses were not going to be recorded against their names. The examiner would prefer no response rather than one which is copied from someone else and not ‘a representation of what they really felt.

4.423 Using Thematic Analysis

Themes essentially can be identified in one of two ways in thematic analysis: in an inductive 'bottom up' way, or in a theoretical or deductive or 'top down' way (e.g., Boyatzis, 1998; Hayes, 1997). In an inductive approach, the themes emerging might not be obviously related to the questions asked of the participants. Ideally, they would not be a product of the researcher's original interest in the topic. Inductive analysis is therefore a process of coding the data without trying to fit it into a pre-existing coding frame, so is data rather than researcher driven.

A 'theoretical' deductive thematic analysis is more likely to involve the researcher pulling out themes based on his/her research objectives so is analyst-driven. This is the process used in this study. This form of thematic analysis tends to provide data which is more specific and less comprehensive.

4.4231 Stages undertaken

In this research two stages were involved. The two stages involved two 'waves' of analysis. The first involved looking for themes, the second to look again at the 'data statements' to see if they could be regarded as evidence of a positive impact of MH, EI or Both.

Stage 1. Firstly, all the statements were put into 9 broad themes or 'subject categories' (See Chaper 5. Figure 21). This stage was not essential for the eventual coding process of 'EI, MH or N' or to answer the research questions but was useful for the researcher in being able to see what broad themes the participants were focussing on based on their comments as a prelude to the eventual coding process.

Stage 1 covers Braun and Clarke's (2006) phases 1-5 of thematic analysis which in summary are as follows;

Phase 1- Familiarisation with data 'immersing yourself in the data to the extent that you are familiar with the depth and breadth of the content'.

Phase 2: The production of initial codes from the data. Codes identify a feature of the data (semantic content or latent) that appear interesting to the analyst, and refer to "the most basic

segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon" (Boyatzis, 1998, p. 63).

Phase 3: 'Searching for themes' this re-focuses the analysis at the broader level of themes rather than codes, involves sorting the different codes into potential themes, and collating all the relevant coded data extracts within the identified themes. Essentially considering how different codes may combine to form an overarching theme.

Phase 4: Reviewing themes after devising a set of candidate themes. At the end of this phase, one should have a fairly good idea of what the different themes are, how they fit together, and the overall story they tell about the data.

Phase 5: Defining and naming themes. At this point, one then defines and further refines the themes. By ''define and refine" Braun and Clarke mean identifying the ''essence'' of what each theme is about (as well as the themes overall), and determining what aspect of the data each theme captures.

Stage 2.

Stage 2 involved a second wave of analysis essentially repeating Braun and Clarkes phase 3-4 with the definitions of EI and MH guiding the coding process. So each individual 'data statement' was examined again but this time not to produce a theme but to decide if it provided evidence of an impact on MH, EI, Both (B) or Neither. So, did each statement fit a theme that already exists within theories of what constitutes EI and MH? All the individual responses within the 9 subject categories (241 in all) were coded. (See Chapter 5. Table 43)

4.424 Identification of statement themes for coding against constructs associated with MH and EI

In order to elicit responses required in answering the central question of this research, the looked again at the constructs associated with EI and MH. In order to elicit themes which are likely to be associated with EI and MH, the participants were asked questions in an interview which encouraged a response of at least several words. For example, the first group of questions asked about whether the students like or dislike doing the KOBS lessons. They were then asked to explain their response, giving examples where possible. This was intended as a 'warm up 'to

the second group of question that were based on eliciting how, if at all, the KOBS lessons have affected the way the participants think and respond. It was this second group of questions which was analysed for content associated with the constructs associated with MH and EI. Several other questions were then presented.

4.43 The teacher questionnaire

The researcher considered it important to provide a program of lessons that the people delivering it understood, were able to deliver effectively, considered to be a worthwhile important piece of learning and were able to learn how to use it relatively easily without extensive training.

Thirty one teachers filled in a questionnaire (Appendix 23) which asked 6 questions about the KOBS program and their opinion of the impact it has had on the students in their school. The teachers had all taught between 80% -100% of the KOBS program in the previous 2 years. The questionnaire was given once at the end of the intervention period. The teachers were asked to fill in the questionnaire as they had all had experience of teaching the KOBS program. 18 teachers had taught all the lessons, the remainder had taught at least three quarters of the lessons. The teachers were originally asked to volunteer to teach the KOBS program. Eight of the teachers had training in counselling and mentoring but the rest had no previous training and were normally teachers of maths, science, ICT, English, humanities and agriculture.

The researcher was interested to know what the teacher's views were about the impact of the lessons they were teaching and their impression of the benefits or not of the KOBS program. The teachers were asked at the end of the program via a closed question questionnaire to respond using a scale of 1-10 with accompanying descriptors. A question about the students' attitude toward the teacher was included as well as their behaviour and impact on their ability to develop better friendships.

The questions asked were as follows.

1. How did you find teaching KOBS?
2. Do you think the students enjoyed being taught KOBS?
3. Do you think the students respected you more/developed a more positive attitude towards you as a result of you teaching them the KOBS lessons?
4. Do you think the students gained a lot from the lessons?

5. Do you think it has had a positive impact on those students' behaviour?
6. Do you think it has helped the students form better friendships with each other?

Although the above questions appear 'directing' the scale provided for each question with written 'descriptors' gave the participant an opportunity to indicate a negative or positive response -so 'how much' of a NO or a YES to each question (see section 5.41). For example, for Question 2, the teachers could respond on the scale from 0-1 with 0 = no not at all. 5= sometimes enjoyed it.10= always enjoyed it. The intention being that if, for example, the teacher wanted to indicate that the students mostly did not enjoy it but with some exceptions they might give it a 3 or 4 on the scale

Following the collection of all data from the participant questionnaires (KEQ), the teacher questionnaires and the participant interviews as indicated above, an analysis of what the data was showing in relation to the thesis question was undertaken.

4.5 Methods of statistical analysis

Data for part one of the results from the KEQ was inputted into the Statistical Package for Social Sciences (SPSS) computer program. A one-way repeated measures analysis of variance (ANOVA) was conducted to evaluate the null hypothesis that there is no significant change of scores from the overall data between genders over time, between intervention and control groups over time and between group, gender and time of testing. It was also used to test scores for each 7 subset (factors) of data within the overall data. For example, data for level of happiness and data for level of self-esteem. ANOVAs tell us whether three or more means are the same, so it tests the null hypothesis that all group means are equal. Repeated measures were used to look at the within subject variances between genders and within genders.

A paired T-test was used to test the scores on the scale (all scale items) before and after the intervention strategy for the IG, males and females. A T-test was used at this stage as there was only one variable being used to indicate the significance of the changes in the means before and after the intervention.

A paired t-test – also referred to as a dependant means t-test or matched pairs is used when there are two experimental conditions and the same participants took part in both conditions of the

experiment, (Field 2009. p. 325) so is used to compare two population means where you have two samples in which observations in one sample can be paired with observations in the other sample; in this case the control group and intervention group. It tests whether the mean difference in the pairs is different from 0.

The analysis of the teacher questionnaire responses was done by reviewing the responses on the scale of 0 to 10. Each question's aim was to provide part of a collective insight into answering the research question indicated above. Descriptive statistical analysis of the results were then formulated and are provided below each graph in the results section.

Chapter 5 RESULTS

5.0 Chapter overview

A summary of the results is presented here. Raw data from the questionnaires for control and intervention groups and teachers is available from the researcher.

The results are in 3 parts:

- Part 1 are the results from the questionnaire (KEQ) showing intervention and control group data.
- Part 2 are the results from the post intervention group interviews.
- Part 3 are the results from the teacher responses to questions regarding their teaching experiences and perceived impact of the KOBS lessons on the students.

5.1 Results Part 1 (from the KEQ)

In order to analyse the impact of the KOBS program between genders and intervention and control groups over time, a one-way repeated measured ANOVA was conducted to evaluate the null hypothesis that there is no significant change of scores from the overall data between genders over time, between intervention and controls (groups) over time and between group, gender and time of testing. The researcher was also interested in looking at the data for the subsets of questions (factors) as well as the data as a whole (Section A). This is because of the question as to whether the interventions impact affected particular factors associated with MH and or EI more or less than others. This has implications for the possibility of future research and the application of the findings. A paired T-test was used to test the scores on the scale (all scale items) before and after the intervention for the IG, males and females. A T-test was used at this stage as there was only one variable being used to indicate the significance of the changes in the means before and after the intervention.

Full descriptive explanations are provided in the following Section A but less so in the other sections to avoid repetition.

In summary the results indicated the following

- Overall the intervention has a statistically significant impact on the intervention groups MH and EI
- There were no difference between genders in terms of magnitude of impact apart from effects associated with post-traumatic stress type symptoms
- There was no significant effect of the intervention on the IG compared with the CG in the theme of 'conflict avoidance'. This was the only theme where a significant difference in the data between IG and CG did not occur.
- The impact on levels of MH and EI measured by the questionnaire were not significantly different to each another.

The results below are in sections as follows:

Table 11: Table of results data in each chapter section

Section A	Full Combined Data
Section B	Data for Level of Happiness
Section C	Data for Self Esteem
Section D	Data for Dealing with negative emotions
Section E	Data for Dealing with conflict/conflict avoidance
Section F	Data for Understanding others behaviour
Section G	Data for Post-traumatic stress type symptoms
Section H	Data for Friendships
Section I	Data comparing mental health and emotional literacy in the intervention group

Explanation of Null Hypothesis

Group and Time of Testing

Ho = There is no significant change of scores by group (either CG or IG) over time.

Gender and Time of Testing

Ho = There is no significant change of scores by gender (all participants) over time.

Group, Gender and Time of Testing

Ho = There is no significant change in scores by group and gender combined over time.

5.11. Section A: Full combined data from Intervention Group and Control Group

Section A provides various analyses of the data from all the answers to the questions in both the pre-and post-questionnaires.

5.111. Within and between subject factors-time, gender group

Table 12: Numbers of participants for gender and group at pre-and post-intervention time points.

Within-Subjects Factors

Measure: MEASURE_1

Time	Dependent Variable
1	Score_Pre
2	Score_Post

Between-Subjects Factors

		Value Label	N
Gender	1.00	male	73
	2.00	female	66
Group	1.00	control	64
	2.00	intervention	75

Table 13 below shows the mean and standard deviations of the two dependent variables (male and female) groups. Means and standard deviation for each independent variable (IG and CG) split by the dependent variable are also given.

Table 13. Mean and standard deviations of the two dependent variables

Descriptive Statistics

	Gender	Group	Mean	Std. Deviation	N
Pre intervention score	male	control	147.0625	16.86175	32
		intervention	139.9756	23.70073	41
		Total	143.0822	21.14287	73
	female	control	143.2188	25.08918	32
		intervention	141.7353	16.46173	34
		Total	142.4545	20.93667	66
	Total	control	145.1406	21.29302	64
		intervention	140.7733	20.62180	75
		Total	142.7842	20.97126	139
Post intervention score	male	control	152.7188	16.26045	32
		intervention	163.1707	15.44976	41
		Total	158.5890	16.54441	73
	female	control	146.6875	20.55431	32
		intervention	163.1471	13.81728	34
		Total	155.1667	19.16052	66
	Total	control	149.7031	18.63405	64
		intervention	163.1600	14.63432	75
		Total	156.9640	17.85140	139

(Note: The above table from the Statistical Package for Social Sciences (SPSS) uses the word **Total** which refers to the mean of **All** the quantities above it, so the mean of the control and intervention group means)

Regarding the significance level, (*p value)*, though all distributions have the same results, sometimes discrepancies can exist. Pillai's Trace and Wilk's Lambda is usually used depending on the violation in the assumption of the homogeneity of variance or the equality of variance in each population. This is determined in the Lavene's test. If violated, results might not be reliable, which depends on the inequality of variances and whether or not the sample sizes are equal. In addition, the test shows the distance of each value of the scores from the group score mean.

Table 14: Levene's Test of equality of Variances for full combined data

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Pre intervention score	2.431	3	135	.068
Post intervention score	1.678	3	135	.175

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

Based on the Lavene's table above, results show that the Sig. value of 0.068 and 0.175> 0.05, for each dependent variable, which means the homogeneity of variances are not violated. When there is no violation of homogeneity of variances, Wilk's Lambda is used, but if there was a violation in the homogeneity of variances, then Pillai's Trace is used. Roy's Largest Root test is the strongest, but delivers greatest risk to deviation in covariance matrices so it is not usually recommended but is indicated below. The "Partial Eta Squared" with a symbol of η^2 column shows the effect size of each variable. Basically, effect size is a value which allows you to see how much your independent variable (IV) has affected the dependent variable (DV) in an experimental study. In other words, it looks at how much variance in your DV was a result of the IV. The effect is measured using the rule of thumb given by Cohen (1988) on one-way Manova, 0.01=small, 0.06=medium, 0.14=large. For example, gender with a η^2 value of 0.007 means it has a small effect size; as shown in the table has no statistical significance. The group variable has a value of 0.36 means it has a large effect. It also means that 36% of the change can be accounted for by the IV. The observed power column test is the probability that the test correctly rejects the null hypothesis (H_0) when the alternative hypothesis (H_1) is true. So, a high score indicates a greater probability that the alternative hypothesis is true.

The F ratio is used in multivariate analysis of variance when looking at the amount of explained to unexplained variance. The F ratio can be thought of as a measure of how different the means are relative to the variability within each sample. The larger this value, the greater the likelihood that the differences between the means are due to something other than chance alone, namely real effects. If the difference between the means is due only to chance, then the expected value of the F ratio would be 1.00. The greater the size of the effects, the larger the obtained F-ratio is likely to become. The F value is preceded by the degrees of freedom. The degrees of freedom are the number of observations that are free to vary. There are two degrees of freedom numbers to report; the between groups then within groups separated by a comma. The F ratio and the significance level are then reported.

Multivariate tests in Table 15 below indicate the actual statistical results. The sig. column indicates whether there is or there isn't a significant difference between the dependent and independent variables.

Table 15: Multivariate tests statistical results for full combined data

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Time	Pillai's Trace	.563	173.895[b]	1.000	135.000	.000	.563	173.895	1.000
	Wilks' Lambda	.437	173.895[b]	1.000	135.000	.000	.563	173.895	1.000
	Hotelling's Trace	1.288	173.895[b]	1.000	135.000	.000	.563	173.895	1.000
	Roy's Largest Root	1.288	173.895[b]	1.000	135.000	.000	.563	173.895	1.000
Time * Gender	Pillai's Trace	.007	.950[b]	1.000	135.000	.332	.007	.950	.162
	Wilks' Lambda	.993	.950[b]	1.000	135.000	.332	.007	.950	.162
	Hotelling's Trace	.007	.950[b]	1.000	135.000	.332	.007	.950	.162
	Roy's Largest Root	.007	.950[b]	1.000	135.000	.332	.007	.950	.162
Time * Group	Pillai's Trace	.360	75.829[b]	1.000	135.000	.000	.360	75.829	1.000
	Wilks' Lambda	.640	75.829[b]	1.000	135.000	.000	.360	75.829	1.000
	Hotelling's Trace	.562	75.829[b]	1.000	135.000	.000	.360	75.829	1.000
	Roy's Largest Root	.562	75.829[b]	1.000	135.000	.000	.360	75.829	1.000
Time * Gender * Group	Pillai's Trace	.000	.010[b]	1.000	135.000	.921	.000	.010	.051
	Wilks' Lambda	1.000	.010[b]	1.000	135.000	.921	.000	.010	.051
	Hotelling's Trace	.000	.010[b]	1.000	135.000	.921	.000	.010	.051
	Roy's Largest Root	.000	.010[b]	1.000	135.000	.921	.000	.010	.051

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

b. Exact statistic

c. Computed using alpha = .05

Table analysis

Gender and Time of Testing

A one-way repeated measured ANOVA was conducted to evaluate the null hypothesis that there is no significant change of scores between genders over time (N=139). The results of the ANOVA show no significant difference, Wilks' Lambda = 0.332, F (1,135) = 0.950, *p>0.05*, η^2 = 0.007. Thus, there is significant evidence to **accept** the null hypothesis. There is no statistical significant difference in the scores by gender of the participants over time. *p=0.332 > 0.05,*

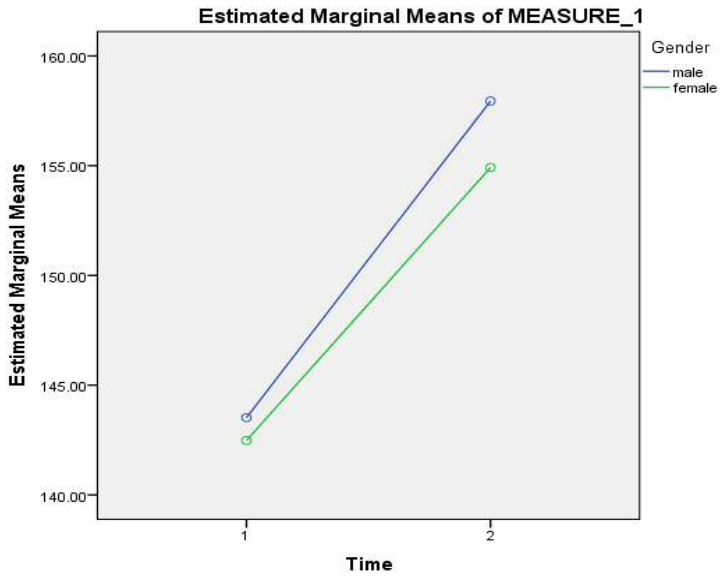
Group and Time of Testing

A one-way repeated measured ANOVA was conducted to evaluate the null hypothesis that there is no significant change of scores on both groups over time (N=139). The results of the ANOVA show a significant difference, Wilks' Lambda = 0.000, F (1,135) = 75.829, *p<0.05*, η^2 = 0.360. Thus, there is significant evidence to **reject** the null hypothesis. There is a statistical significant difference in the scores between the Control and Intervention group over time. *p=0.000 < 0.05,*

Group, Gender and Time of Testing

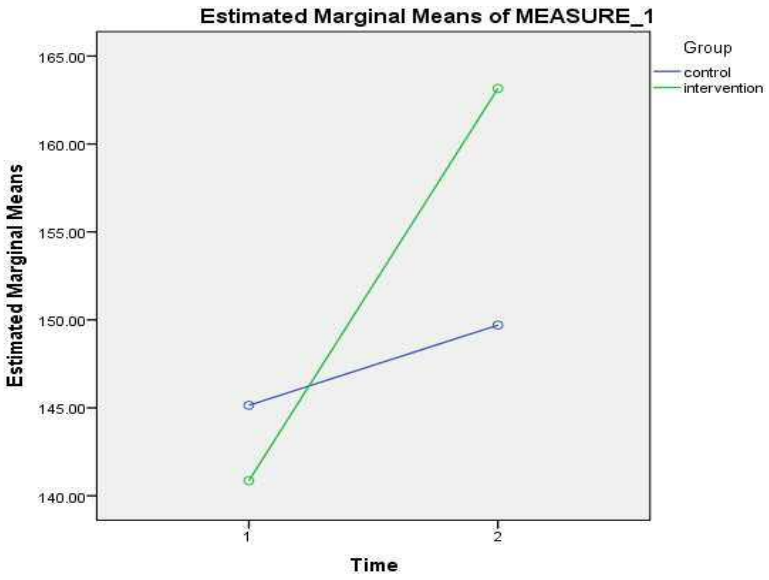
The results of the ANOVA show there is no statistical significant difference between the gender and group of participants combined over time. Wilks' Lambda = 0.921, F (1,135) = 0.01, $p<0.05$, η^2 = 0.000. p=0.921 > 0.05

Figure 2: Profile Plot of Gender over Time of Testing (Combined IG and CG).



The graph shows the means based upon the time of testing and the gender of participants. X-axis shows the time of testing in which pre-intervention time was labeled as "1", and the post intervention time labeled as "2" -although there was no intervention for the males and females in the controls whose data are included as this particular analysis is just concerned with gender over time. The blue line represents male and green line represents female. The graph shows that there is no interaction between genders as the line plots are more or less parallel with each other. It tells us that the mean score of males (represented by blue line) from both groups is higher than the female group before and after the intervention tests. It also indicates that there is an effect on the male and female scores with regards to time, as the mean score of male and female on the pre-intervention rose on the post intervention evaluation. Results on the above tables shows that there is no significant effect between genders and time of testing as the graph shows there is only a small difference between male and females. Male and female participants started equally on pre-intervention and ended fairly equal at post intervention.

Figure 3: Profile Plot of IG and CG over time of testing



The graph shows the means based upon the time of testing and the group of participants. X-axis shows the time of testing in which pre-intervention time was labeled as "1", and the post intervention time labeled as "2". The green line represents the intervention group and blue line represents the control group. The graph shows that there is an interaction between groups, indicated by the line plots crossing over each other. It tells us that the mean score of the control group (male and female combined) is higher than the intervention group before the intervention tests but not statistically significantly so. After the KOBS program the intervention group's mean rose significantly more than the control group which also increased. It also indicates there is an effect on the group scores with regards to time, as the mean score of the intervention group and control group on the pre-intervention rose on the post intervention evaluation.

Skewness and Kurtosis of all data

This statistical test gives a picture of how the data is distributed. Skewness signifies if data is heavily weighted towards the right or left, the high end of the scale or low end of the scale. Kurtosis measure how flat or how peak the distribution is. An assumption of normality to regarding the

distribution of data is satisfied when Skewness and Kurtosis have statistical values between -1.0 and +1.0.

Table 16: Skewness and Kurtosis statistical information for full combined data.

Statistics

		Pre intervention score	Post intervention score
N	Valid	139	139
	Missing	6	6
Skewness		.449	.038
Std. Error of Skewness		.206	.206
Kurtosis		.618	.105
Std. Error of Kurtosis		.408	.408

Pre-Intervention Skew = +1.0 > 0.449 > -1.0 Post Intervention Skew = +1.0 > 0.038 > -1.0

Pre-Intervention Kurtosis = +1.0 > 0.618 > -1.0 Post Intervention Kurtosis = +1.0 > 0.105 > -1.0

This test indicated that the data collected is normally distributed

5.112: Males and Females

According to some studies the impact of trauma and the recovery rate following intervention can vary between genders (Blain et al. 2010). Therefore, an analysis of differences in improvement between males and females following intervention was appropriate. Gender differences in response to intervention is also one of the research questions of this thesis.

Null Hypothesis = There is no difference in overall improvement between male and females in the means following intervention for the intervention group only.

Table 17: Repeated Measures of ANOVA for full combined data

Between-Subjects Factors

		Value Label	N
Gender	1.00	male	41
	2.00	female	34

Descriptive Statistics

	Gender	Mean	Std. Deviation	N
Pre intervention score	male	139.9756	23.70073	41
	female	141.7353	16.46173	34
	Total	140.7733	20.62180	75
Post intervention score	male	163.1707	15.44976	41
	female	163.1471	13.81728	34
	Total	163.1600	14.63432	75

(Note: The above table from SPSS uses the word **Total** which means **All)**

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Pre intervention score	3.822	1	73	.054
Post intervention score	1.230	1	73	.271

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender
Within Subjects Design: Time

No violation, Wilk's Lambda applies.

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Time	Pillai's Trace	.701	171.298[b]	1.000	73.000	.000	.701	171.298	1.000
	Wilks' Lambda	.299	171.298[b]	1.000	73.000	.000	.701	171.298	1.000
	Hotelling's Trace	2.347	171.298[b]	1.000	73.000	.000	.701	171.298	1.000
	Roy's Largest Root	2.347	171.298[b]	1.000	73.000	.000	.701	171.298	1.000
Time * Gender	Pillai's Trace	.004	.274[b]	1.000	73.000	.602	.004	.274	.081
	Wilks' Lambda	.996	.274[b]	1.000	73.000	.602	.004	.274	.081
	Hotelling's Trace	.004	.274[b]	1.000	73.000	.602	.004	.274	.081
	Roy's Largest Root	.004	.274[b]	1.000	73.000	.602	.004	.274	.081

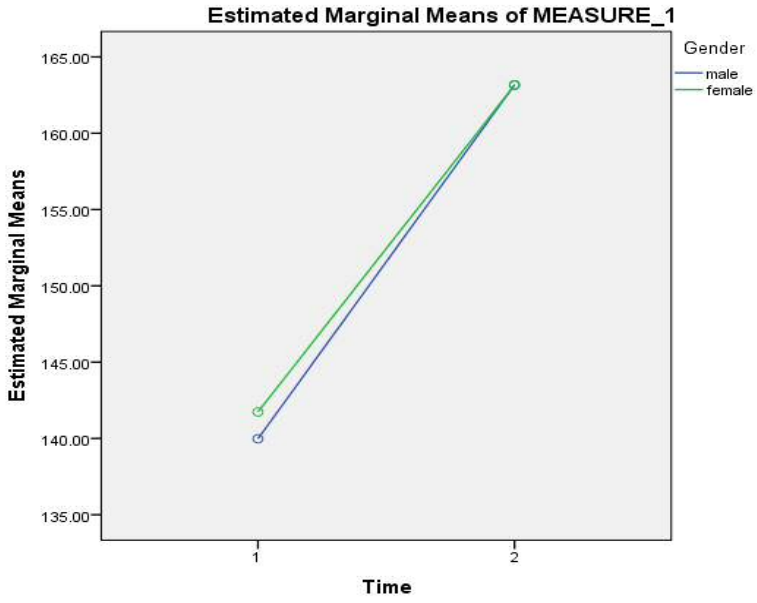
a. Design: Intercept + Gender
Within Subjects Design: Time

b. Exact statistic

c. Computed using alpha = .05

The p-value = 0.602 > 0.05 = accept the null hypothesis. There is no difference in overall improvement between male and females in the means following intervention. There is no significant difference between male and female as they performed similarly. With a very low effect size (Partial Eta squared). The percentage by chance that you could reject the null hypothesis is low at 8.1% as indicated in the Observed power column.

Figure 4: Profile Plot of IG male and female over time



The graph illustrates that both male and female in the intervention group started equally during the pre-intervention and both scores increased. It indicates that time there's no significant effect between genders following intervention. In addition to this, the graph tells us that there is a significant effect on the scores between time 1 and 2 for the IG.

5.113: T- Test for intervention group

T-test

T -Tests are reported with the degrees of freedom are in parentheses. This is followed by the *t* statistic (rounded to two decimal places) and the significance level.

A paired T-test was used to test the scores on the scale (all scale items) before and after the intervention strategy for the IG, males and females. A T-test was used at this stage as there was only one variable being used to indicate the significance of the changes in the means before and after the intervention.

There was a significant difference in the scores pre and post intervention. Pre-Scores (M= 140.855) and post scores (M= 163.156) conditions; *t (127): p = .007 <.05* indicating post intervention scores higher than pre-intervention scores.

Table 18: T-Test group statistics for full combined data

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Pre intervention score	male	41	139.9756	23.70073	3.70143
	female	34	141.7353	16.46173	2.82316
Post intervention score	male	41	163.1707	15.44976	2.41285
	female	34	163.1471	13.81728	2.36964

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Pre intervention score	Equal variances assumed	3.822	.054	-.366	73	.716	-1.75968	4.81153	-11.34904	7.82967
	Equal variances not assumed			-.378	70.966	.707	-1.75968	4.65520	-11.04196	7.52259
Post intervention score	Equal variances assumed	1.230	.271	.007	73	.994	.02367	3.41764	-6.78767	6.83501
	Equal variances not assumed			.007	72.556	.994	.02367	3.38187	-6.71708	6.76442

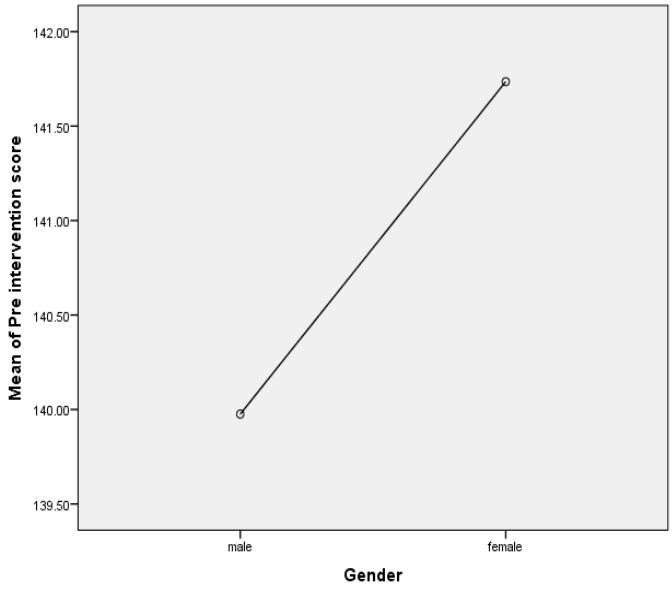
There is no violation of homogeneity of variances through Lavene's Score, so it is assumed that we have equal variances.

In pre-intervention row the p-value = 0.716 > 0.05, in pre-intervention there is no significant difference between male's and female's means in the intervention group.

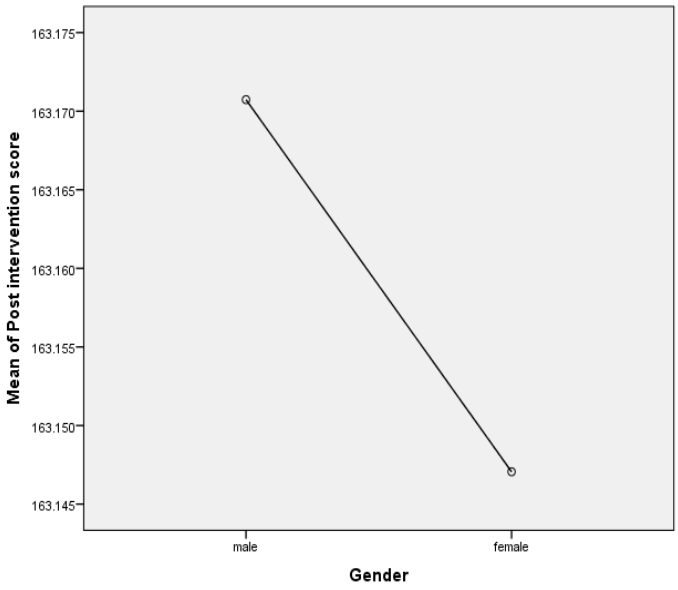
The post intervention row with a p-value of 0.994 > 0.05 shows no significant difference as well in terms of mean score between genders.

Figure 5: Profile Plots of Pre-intervention and Post Intervention mean scores for gender.

Pre-Intervention



Post Intervention



Pre-and Post-Intervention plots shows no significant mean differences between males and females. (Although the scale used in the graphs appears that there is)

5.12. Section B: Data for Level of happiness: Intervention Group and Control Group

This section is just looking at the data gathered from the 7 questions which were designed to measure the participant's level of happiness at pre-intervention and post intervention stages. This was carried out because one of the research questions is whether the interventions impact affected particular factors associated with MH and or EI more or less than others.

Table 19: Descriptive statistics for level of happiness data

Means and standard deviation of male and female participants in both groups.

Descriptive Statistics

	Gender	Group	Mean	Std. Deviation	N
Pre intervention score	male	control	20.6563	8.20939	32
		intervention	19.4634	6.84871	41
		Total	19.9863	7.44516	73
	female	control	19.3438	6.70873	32
		intervention	19.5588	5.54426	34
		Total	19.4545	6.08954	66
	Total	control	20.0000	7.46633	64
		intervention	19.5067	6.25013	75
		Total	19.7338	6.81598	139
Post intervention score	male	control	21.8750	6.43955	32
		intervention	23.4878	5.30152	41
		Total	22.7808	5.84106	73
	female	control	20.8750	5.36867	32
		intervention	25.4206	6.92180	34
		Total	23.2167	6.58108	66
	Total	control	21.3750	5.90265	64
		intervention	24.3640	6.12345	75
		Total	22.9878	6.18452	139

(Note: The above table from SPSS uses the word **Total** which means **All)**

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Pre intervention score	4.173	3	135	.007
Post intervention score	3.551	3	135	.016

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

Pre-Both Sig. value = 0.007 < 0.05 ➔ There is a violation in the homogeneity of variance.

Post Both Sig. value = 0.016 < 0.05 ➔ There is a violation in the homogeneity of variance.

Since there is a violation in the homogeneity of variance, Pillai's Trace in the Multivariate Test will be used.

Table 20: Multivariate tests statistical results for level of happiness data

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Time	Pillai's Trace	.266	48.810[b]	1.000	135.000	.000	.266	48.810	1.000
	Wilks' Lambda	.734	48.810[b]	1.000	135.000	.000	.266	48.810	1.000
	Hotelling's Trace	.362	48.810[b]	1.000	135.000	.000	.266	48.810	1.000
	Roy's Largest Root	.362	48.810[b]	1.000	135.000	.000	.266	48.810	1.000
Time * Gender	Pillai's Trace	.010	1.413[b]	1.000	135.000	.237	.010	1.413	.219
	Wilks' Lambda	.990	1.413[b]	1.000	135.000	.237	.010	1.413	.219
	Hotelling's Trace	.010	1.413[b]	1.000	135.000	.237	.010	1.413	.219
	Roy's Largest Root	.010	1.413[b]	1.000	135.000	.237	.010	1.413	.219
Time * Group	Pillai's Trace	.103	15.567[b]	1.000	135.000	.000	.103	15.567	.975
	Wilks' Lambda	.897	15.567[b]	1.000	135.000	.000	.103	15.567	.975
	Hotelling's Trace	.115	15.567[b]	1.000	135.000	.000	.103	15.567	.975
	Roy's Largest Root	.115	15.567[b]	1.000	135.000	.000	.103	15.567	.975
Time * Gender * Group	Pillai's Trace	.005	.711[b]	1.000	135.000	.401	.005	.711	.133
	Wilks' Lambda	.995	.711[b]	1.000	135.000	.401	.005	.711	.133
	Hotelling's Trace	.005	.711[b]	1.000	135.000	.401	.005	.711	.133
	Roy's Largest Root	.005	.711[b]	1.000	135.000	.401	.005	.711	.133

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

b. Exact statistic

c. Computed using alpha = .05

Table analysis

Group and Time of Testing

There is a statistical significant difference in the scores between each group, control and Intervention group with regards to level of happiness over time. **Pillai's Trace**= 0.000, F (1,135) = 15.567, $p<0.05$, η^2 = 0.103. This means that the intervention appears to have had an effect of the participants' level of happiness which is not the case for the control group.

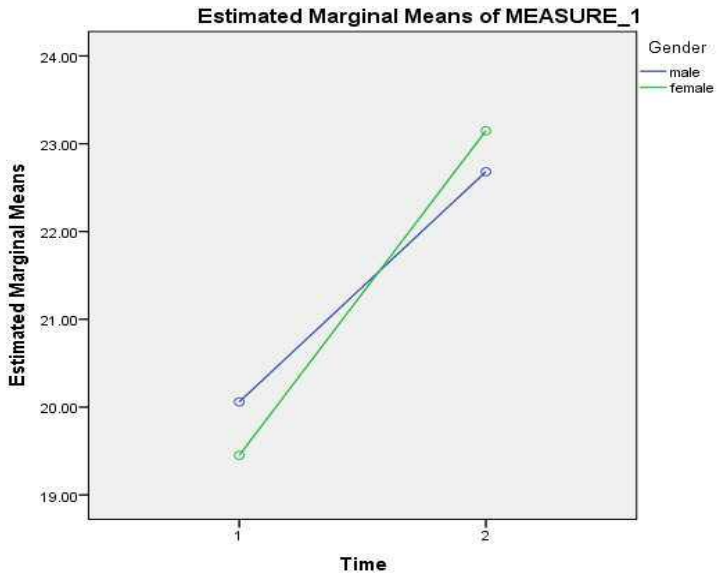
Gender and Time of Testing

There is no statistical significant difference in the scores by gender of the participants with regards to the level of happiness over time. **Pillai's Trace**= 0.237, F (1,135) = 0.010, $p<0.05$, η^2 = 0.266. $p=0.237 > 0.05$. This means that there is no difference between gender's level of happiness following the intervention period for IG and CG combined results for each gender.

Group, Gender and Time of Testing

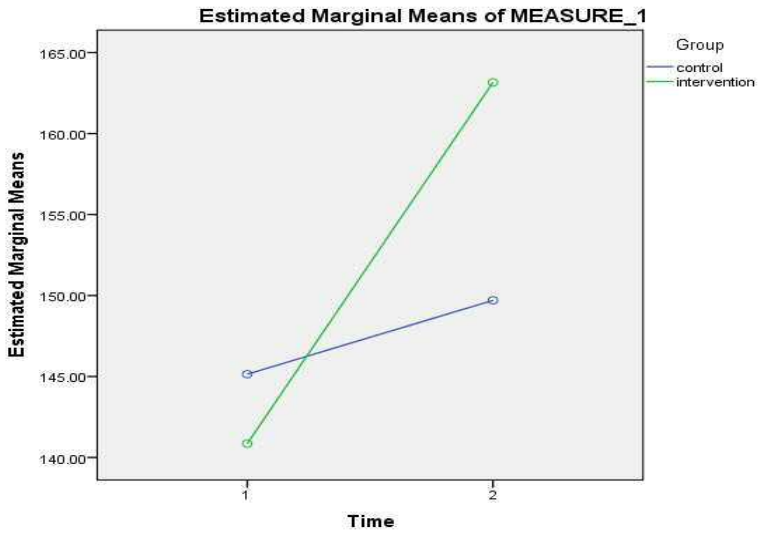
There is no statistical significant difference between the gender and group of participants combined with regards to happiness over time. **Pillai's Trace**= 0.921, F (1,135) = 0.711, $p<0.05$, $\eta^2 = 0.005$. $p=0.921 > 0.05$. This means that there is no difference between gender's level of happiness following the intervention period for the IG or the CG.

Figure 6: Profile Plot for Level of Happiness: Gender over Time of Testing for combined IG and CG



There is an interaction between male and female participants. Female's mean score is lower on pre-intervention than the male mean score. Male and female mean scores increased at post intervention; however male mean score on post intervention was lower than female mean score. Due to the fairly small differences in their means and as shown on the tables above, gender has no significant effect on the scores overtime with regards to level of happiness.

Figure 7: Profile Plot for Level of Happiness: IG and CG over time



There is an interaction between the intervention group and control group. The control groups mean score is lower on pre-intervention than the intervention group's mean score, but not significantly. Over time, both groups' scores increased at the post intervention point, however, the control group's mean score on post intervention increase was significantly lower than the increase in the intervention group mean score. The large difference between means shows a statistically significant effect of the intervention on the scores with regards to Level of Happiness.

Table 21: Skewness and Kurtosis statistical information for level of happiness data.

Statistics

		Pre intervention score	Post intervention score
N	Valid	139	139
	Missing	6	6
Skewness		.330	.021
Std. Error of Skewness		.206	.206
Kurtosis		-1.021	-1.015
Std. Error of Kurtosis		.408	.408

Pre-Both Skew = +1.0 > 0.330 > -1.0 Post Both Skew = +1.0 > 0.021 > -1.0

Pre-Both Kurtosis = +1.0 > -1.021 < -1.0 Post Both Kurtosis = +1.0 > -1.015 < -1.0

- ***Not normally distributed***

5.13. Section C: Data for Self-esteem; Intervention Group and Control Group

This section is just looking at the data gathered from the 4 questions which were designed to measure the participant's level of self-esteem at pre-intervention and post intervention stages. This was carried out because one of the research questions is whether the interventions impact affected particular factors associated with MH and or EI more or less than others.

Table 22. Descriptive statistics for self-esteem data

Means and standard deviation of male and female participants in both groups

Descriptive Statistics

	Gender	Group	Mean	Std. Deviation	N
Pre intervention score	male	control	15.5937	3.50906	32
		intervention	13.6829	5.04202	41
		Total	14.5205	4.50959	73
	female	control	14.0625	4.57156	32
		intervention	15.2647	4.62083	34
		Total	14.6818	4.60154	66
	Total	control	14.8281	4.11561	64
		intervention	14.4000	4.88793	75
		Total	14.5971	4.53764	139
Post intervention score	male	control	14.9688	3.26748	32
		intervention	15.1707	3.47061	41
		Total	15.0822	3.36135	73
	female	control	14.0000	4.42865	32
		intervention	16.6176	3.29384	34
		Total	15.3485	4.07428	66
	Total	control	14.4844	3.89135	64
		intervention	15.8267	3.44601	75
		Total	15.2086	3.70561	139

(Note: The above table from SPSS uses the word **Total** which means **All**)

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Pre intervention score	4.369	3	135	.006
Post intervention score	3.443	3	135	.019

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

Pre-Int. Both Sig. value = 0.006 < 0.05 ➔ There is a violation in the homogeneity of variance.

Post Int. Both Sig. value = 0.019 < 0.05 ➔ There is a violation in the homogeneity of variance.

Since there is a violation in the homogeneity of variance, Pillai's Trace in the Multivariate Test was used.

Table 23: Multivariate tests statistical results for self-esteem data

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Time	Pillai's Trace	.069	10.015[b]	1.000	135.000	.002	.069	10.015	.881
	Wilks' Lambda	.931	10.015[b]	1.000	135.000	.002	.069	10.015	.881
	Hotelling's Trace	.074	10.015[b]	1.000	135.000	.002	.069	10.015	.881
	Roy's Largest Root	.074	10.015[b]	1.000	135.000	.002	.069	10.015	.881
Time * Gender	Pillai's Trace	.003	.395[b]	1.000	135.000	.531	.003	.395	.096
	Wilks' Lambda	.997	.395[b]	1.000	135.000	.531	.003	.395	.096
	Hotelling's Trace	.003	.395[b]	1.000	135.000	.531	.003	.395	.096
	Roy's Largest Root	.003	.395[b]	1.000	135.000	.531	.003	.395	.096
Time * Group	Pillai's Trace	.166	26.889[b]	1.000	135.000	.000	.166	26.889	.999
	Wilks' Lambda	.834	26.889[b]	1.000	135.000	.000	.166	26.889	.999
	Hotelling's Trace	.199	26.889[b]	1.000	135.000	.000	.166	26.889	.999
	Roy's Largest Root	.199	26.889[b]	1.000	135.000	.000	.166	26.889	.999
Time * Gender * Group	Pillai's Trace	.008	1.050[b]	1.000	135.000	.307	.008	1.050	.174
	Wilks' Lambda	.992	1.050[b]	1.000	135.000	.307	.008	1.050	.174
	Hotelling's Trace	.008	1.050[b]	1.000	135.000	.307	.008	1.050	.174
	Roy's Largest Root	.008	1.050[b]	1.000	135.000	.307	.008	1.050	.174

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

b. Exact statistic

c. Computed using alpha = .05

Table analysis

Group and Time of Testing

There is a statistically significant difference in the scores between each group, control and intervention group with regards to self-esteem over time. **Pillai's Trace**= 0.000, F (1,135) = 26.889, $p<0.05$, $\eta^2 = 0.069$. $p=0.000 < 0.05$. This means that the intervention appears to have had an effect of the IG level of self-esteem which is not the case for the CG.

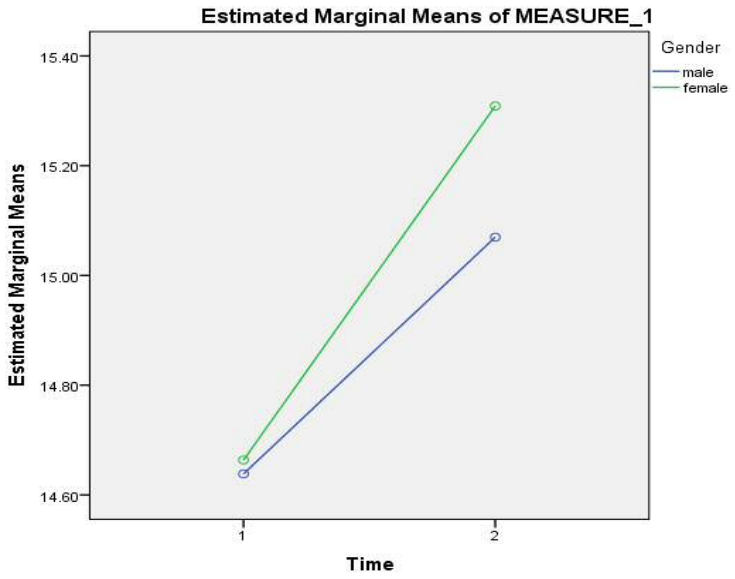
Gender and Time of Testing

There is no statistically significant difference in the scores by gender of the participants with regards to the self-esteem over time. **Pillai's Trace**= 0.531, F (1,135) = 0.394, $p<0.05$, $\eta^2 = 0.003$. $p=0.531 > 0.05$. This means that there is no difference between gender's level of self-esteem following the intervention period for IG and CG combined results for each gender.

Group, Gender and Time of Testing

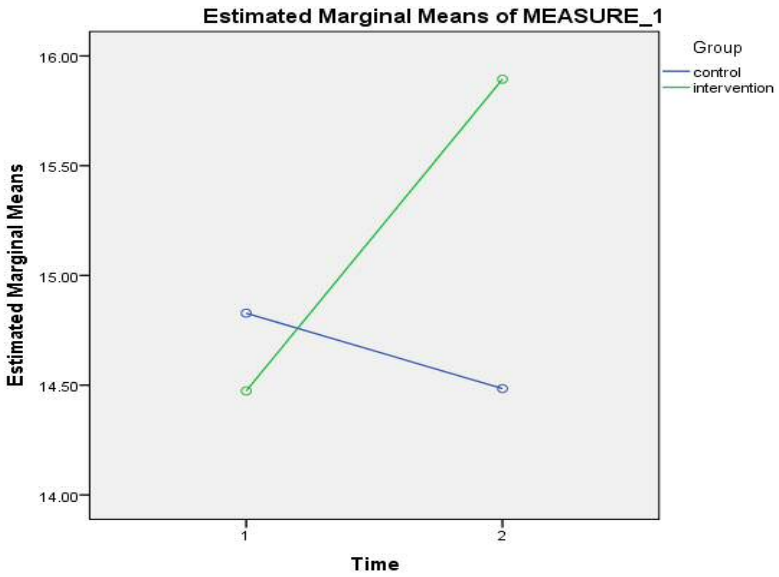
There is no statistical significant difference between the gender and group of participants combined with regards to self-esteem over time. **Pillai's Trace**= 0.307, F (1,135) = 1.050, $p<0.05$, η^2 = 0.069. p=0.307 > 0.05. This means that there is no difference between gender's level of self-esteem following the intervention period for the IG or the CG.

Figure 8: Profile Plot for Gender over Time of Testing for combined IG and CG for self esteem



There is no interaction between male and female participants. Female mean scores are lower on pre-intervention and post intervention than the male mean score but not significantly. Over time, male and female mean scores increased on post intervention. Due to the fairly small differences in their means, gender has no significant effect on the scores overtime with regards to self-esteem.

Figure 9: Profile Plot of Intervention and control group over time for self esteem



There is an interaction between the intervention group and control group. The control group's mean score is higher on pre-intervention than the intervention groups mean score but not significantly. Over time, the intervention group's mean score increased at post intervention, whilst the control group's mean score on post intervention decreased. The large difference between post intervention means shows a statistically significant effect of the intervention on the scores with regards to self-esteem.

Table 24: Skewness and Kurtosis statistical information for self-esteem data

Statistics

		Pre intervention score	Post intervention score
N	Valid	139	139
	Missing	6	6
Skewness		-.590	-.525
Std. Error of Skewness		.206	.206
Kurtosis		-.969	-.720
Std. Error of Kurtosis		.408	.408

Pre-Both Skew = +1.0 > -0.590 > -1.0

Post Both Skew = +1.0 > -0.525 > -1.0

Pre-Both Kurtosis = +1.0 > -0.969 > -1.0

Post Both Kurtosis = +1.0 > -0.720 > -1.0

- ***Normally distributed***

5.14. Section D: Dealing with negative emotions. Intervention Group and Control Group

This section is just looking at the data gathered from the 6 questions which were designed to measure the participant's level of ability to deal with negative emotions at pre-intervention and post intervention stages. This was carried out because one of the research questions is whether the interventions impact affected particular factors associated with MH and or EI more or less than others.

Table 25: Descriptive statistics for dealing with negative emotions data

Means and standard deviations of male and female participants in both groups.

Descriptive Statistics

	Gender	Group	Mean	Std. Deviation	N
Pre intervention score	male	control	22.0000	5.51830	32
		intervention	20.7073	6.20582	41
		Total	21.2740	5.90964	73
	female	control	20.3438	6.19890	32
		intervention	21.2647	4.72459	34
		Total	20.8182	5.46572	66
	Total	control	21.1719	5.88124	64
		intervention	20.9600	5.55425	75
		Total	21.0576	5.68722	139
Post intervention score	male	control	22.2813	5.20691	32
		intervention	23.5854	4.33576	41
		Total	23.0137	4.74779	73
	female	control	20.3750	5.59810	32
		intervention	23.7353	3.54460	34
		Total	22.1061	4.91819	66
	Total	control	21.3281	5.44833	64
		intervention	23.6533	3.97116	75
		Total	22.5827	4.83331	139

(Note: The above table from SPSS uses the word **Total** which is the mean of **All** the 2 numbers above it, so the mean of the total of the control and intervention means)

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Pre intervention score	1.536	3	135	.208
Post intervention score	2.671	3	135	.050

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

Pre-Both Sig. value = 0.208 > 0.05 ➔ There is no violation in the homogeneity of variance.

Post Both Sig. value = 0.050 ≥ 0.05 ➔ There is no violation in the homogeneity of variance.

Table 26: Multivariate tests statistical results for dealing with negative emotions data

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Time	Pillai's Trace	.173	28.176[b]	1.000	135.000	.000	.173	28.176	1.000
	Wilks' Lambda	.827	28.176[b]	1.000	135.000	.000	.173	28.176	1.000
	Hotelling's Trace	.209	28.176[b]	1.000	135.000	.000	.173	28.176	1.000
	Roy's Largest Root	.209	28.176[b]	1.000	135.000	.000	.173	28.176	1.000
Time * Gender	Pillai's Trace	.003	.380[b]	1.000	135.000	.539	.003	.380	.094
	Wilks' Lambda	.997	.380[b]	1.000	135.000	.539	.003	.380	.094
	Hotelling's Trace	.003	.380[b]	1.000	135.000	.539	.003	.380	.094
	Roy's Largest Root	.003	.380[b]	1.000	135.000	.539	.003	.380	.094
Time * Group	Pillai's Trace	.142	22.298[b]	1.000	135.000	.000	.142	22.298	.997
	Wilks' Lambda	.858	22.298[b]	1.000	135.000	.000	.142	22.298	.997
	Hotelling's Trace	.165	22.298[b]	1.000	135.000	.000	.142	22.298	.997
	Roy's Largest Root	.165	22.298[b]	1.000	135.000	.000	.142	22.298	.997
Time * Gender * Group	Pillai's Trace	.000	.022[b]	1.000	135.000	.883	.000	.022	.052
	Wilks' Lambda	1.000	.022[b]	1.000	135.000	.883	.000	.022	.052
	Hotelling's Trace	.000	.022[b]	1.000	135.000	.883	.000	.022	.052
	Roy's Largest Root	.000	.022[b]	1.000	135.000	.883	.000	.022	.052

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

b. Exact statistic

c. Computed using alpha = .05

Table analysis

Group and Time of Testing

There is a statistically significant difference in the scores between the Control and Intervention group with regards to how they deal with negative emotions over time. Wilk's Lambda= 0.000, F (1,135) = 22.298, *p<0.05*, η^2 = 0.142. *p=0.000 < 0.05.* This means that intervention appears to have had a positive effect on the IG's ability to deal with negative emotions following the intervention period.

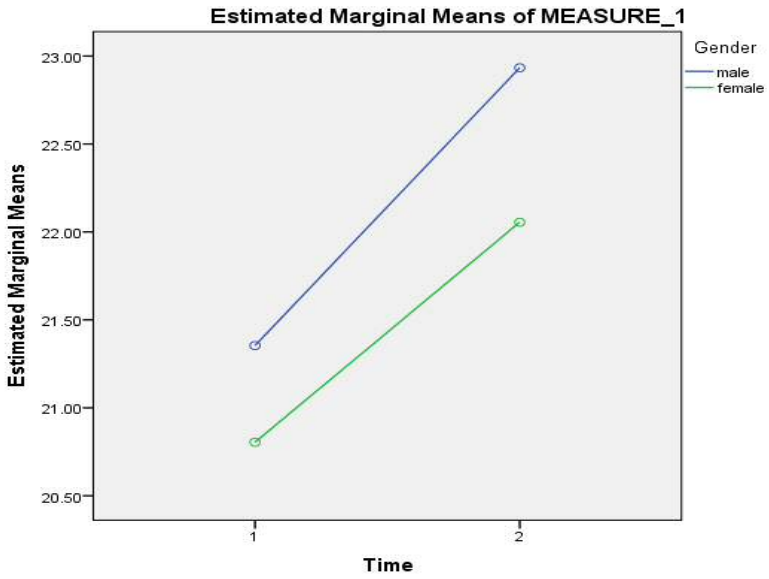
Gender and Time of Testing

There is no statistical significant difference in the scores by gender of the participants with regards to how they deal with negative emotions over time. Wilk's Lambda= 0.539, F (1,135) = 0.380, *p<0.05*, η^2 = 0.003. p=*0.539 > 0.05.* This means that there is no difference between gender's ability to deal with negative emotions following the intervention period for the combined IG or the CG.

Group, Gender and Time of Testing

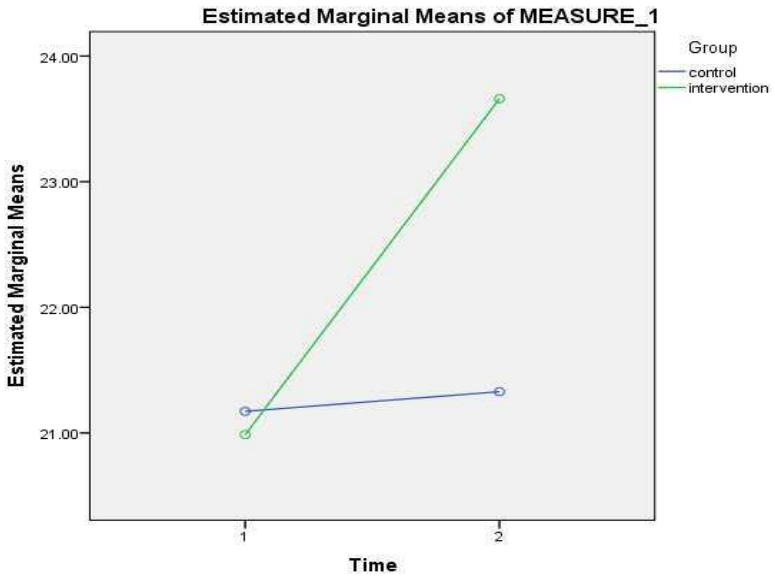
There is no statistically significant difference between the gender and group of participants combined with regards to how they deal with negative emotions over time. Wilk's Lambda= 0.883, F (1,135) = 0.022, $p<0.05$, η^2 = 0.000. $p=0.883 > 0.05$. This means that there is no difference between genders ability to deal with negative emotions following the intervention period for the IG or the CG.

Figure 10: Profile Plot of Gender for IG and CG (dealing with negative emotions)



There is no interaction between male and female participants. The Female mean score is lower on pre-intervention and post intervention than the male mean score but not significantly. Over time, male and female mean scores increased at post intervention. Due to the fairly small differences in their means, gender has no significant effect on the scores over time.

Figure 11 Profile Plots of Groups against Time of Testing (dealing with negative emotions)



There is an interaction between the intervention group and control group. The Control group's mean score is higher on pre-intervention than the intervention group's mean score but not significantly. Over time, intervention group mean score increased significantly on post intervention, while the control group's mean score is similar at the two-time points. The large difference between means shows a statistically significant effect of the intervention on the scores with regards to dealing with negative emotions.

Table 27: Skewness and Kurtosis statistical information for dealing with negative emotions

Statistics

		Pre intervention score	Post intervention score
N	Valid	139	139
	Missing	6	6
Skewness		-.448	-.780
Std. Error of Skewness		.206	.206
Kurtosis		-.736	-.018
Std. Error of Kurtosis		.408	.408

Pre-Both Skew = +1.0 > -0.448 > -1.0

Post Both Skew = +1.0 > -0.780 > -1.0

Pre-Both Kurtosis = +1.0 > -0.736 > -1.0

Post Both Kurtosis = +1.0 > -0.018 > -1.0

- **Normally distributed**

5.15. Section E: Data for dealing with conflict, Intervention Group and Control Group

This section is looking at the data gathered from the 3 questions which were designed to measure the participant's level of ability to deal with conflict at pre-intervention and post intervention stages. This was carried out because one of the research questions asks whether the interventions impact affected particular factors associated with MH and or EI more or less than others.

Table 28: Descriptive statistics for dealing with conflict data

Means and standard deviations of male and female participants in both groups.

Descriptive Statistics

	Gender	Group	Mean	Std. Deviation	N
Pre intervention score	male	control	10.2187	3.48021	32
		intervention	10.1707	3.61872	41
		Total	10.1918	3.53419	73
	female	control	10.5625	3.72383	32
		intervention	10.6471	3.35643	34
		Total	10.6061	3.51208	66
	Total	control	10.3906	3.57956	64
		intervention	10.3867	3.48702	75
		Total	10.3885	3.51706	139
Post intervention score	male	control	10.6250	2.97028	32
		intervention	11.3415	2.76233	41
		Total	11.0274	2.85760	73
	female	control	10.7188	3.19510	32
		intervention	11.1765	2.67956	34
		Total	10.9545	2.92697	66
	Total	control	10.6719	3.06053	64
		intervention	11.2667	2.70801	75
		Total	10.9928	2.88046	139

(Note: The above table uses the word **Total** when the word **All** would probably be less ambiguous)

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Pre intervention score	.567	3	135	.638
Post intervention score	1.008	3	135	.391

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

Pre-Both Sig. value = 0.638 > 0.05 ➔ There is no violation in the homogeneity of variance.

Post Both Sig. value = 0.391 ≥ 0.05 ➔ There is no violation in the homogeneity of variance.

Table 29: Multivariate tests statistical results for dealing with conflict data

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Time	Pillai's Trace	.086	12.747[b]	1.000	135.000	.000	.086	12.747	.943
	Wilks' Lambda	.914	12.747[b]	1.000	135.000	.000	.086	12.747	.943
	Hotelling's Trace	.094	12.747[b]	1.000	135.000	.000	.086	12.747	.943
	Roy's Largest Root	.094	12.747[b]	1.000	135.000	.000	.086	12.747	.943
Time * Gender	Pillai's Trace	.014	1.978[b]	1.000	135.000	.162	.014	1.978	.287
	Wilks' Lambda	.986	1.978[b]	1.000	135.000	.162	.014	1.978	.287
	Hotelling's Trace	.015	1.978[b]	1.000	135.000	.162	.014	1.978	.287
	Roy's Largest Root	.015	1.978[b]	1.000	135.000	.162	.014	1.978	.287
Time * Group	Pillai's Trace	.023	3.222[b]	1.000	135.000	.075	.023	3.222	.430
	Wilks' Lambda	.977	3.222[b]	1.000	135.000	.075	.023	3.222	.430
	Hotelling's Trace	.024	3.222[b]	1.000	135.000	.075	.023	3.222	.430
	Roy's Largest Root	.024	3.222[b]	1.000	135.000	.075	.023	3.222	.430
Time * Gender * Group	Pillai's Trace	.003	.381[b]	1.000	135.000	.538	.003	.381	.094
	Wilks' Lambda	.997	.381[b]	1.000	135.000	.538	.003	.381	.094
	Hotelling's Trace	.003	.381[b]	1.000	135.000	.538	.003	.381	.094
	Roy's Largest Root	.003	.381[b]	1.000	135.000	.538	.003	.381	.094

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

b. Exact statistic

c. Computed using alpha = .05

Table analysis

Group and Time of Testing

There is no statistical significant difference in the scores between control and Intervention group with regards to how they avoid conflict over time. Wilk's Lambda= 0.075, F (1,135) = 3.222, $p<0.05$, $\eta^2 = 0.023$. $p=0.075 > 0.05$

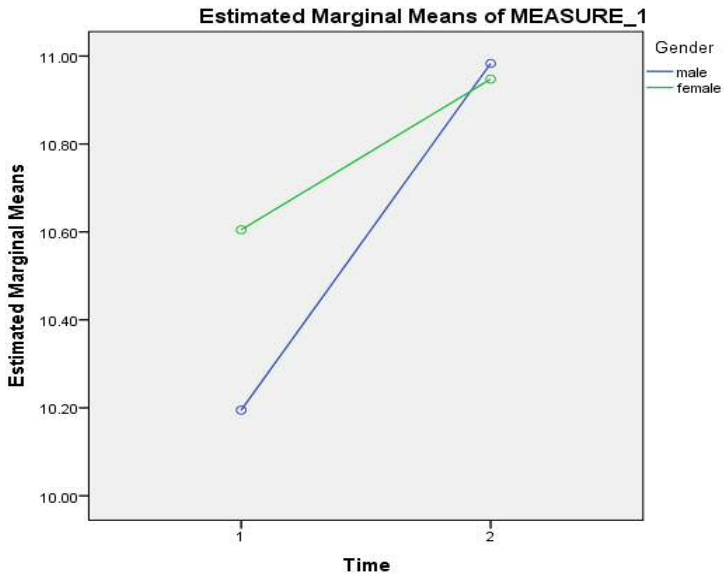
Gender and Time of Testing

There is no statistical significant difference in the scores by gender of the participants with regards to how they avoid fights and conflicts over time. Wilk's Lambda= 0.162, F (1,135) = 1.978, $p<0.05$, $\eta^2 = 0.014$. $p=0.162 > 0.05$

Group, Gender and Time of Testing

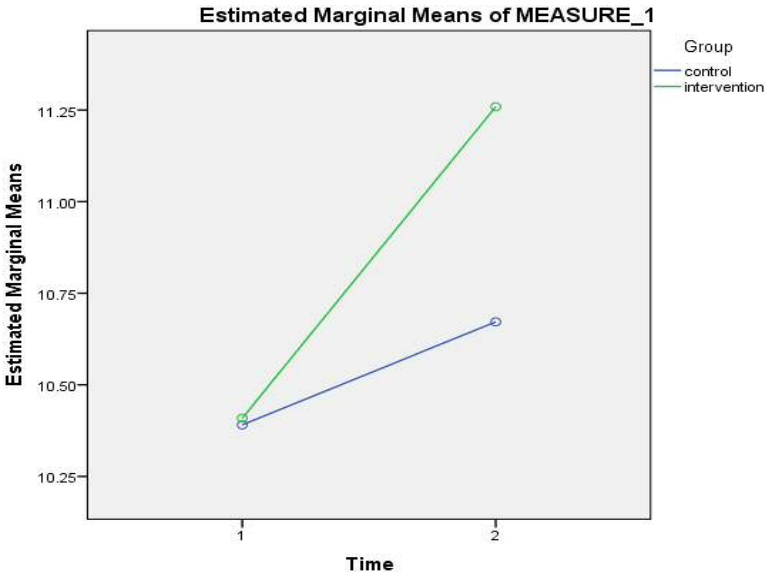
There is no statistical significant difference between the genders and group of participants combined with regards to how they avoid conflicts over time. Wilk's Lambda= 0.538, F (1,135) = 0.381, $p<0.05$, $\eta^2 = 0.003$. $p=0.538 > 0.05$

Figure 12: Profile Plot of Gender at time of testing for IG and CG (conflict avoidance data)



There is an interaction between male and female participants. Female mean score is higher on pre-intervention than male mean score but not significantly. Over time, male and female mean scores increased. Due to the fairly small differences in the means gender has no significant effect on the scores overtime with regards to avoiding conflict.

Figure 13. Profile plot of CG and IG over time (conflict avoidance data)



There is no interaction between intervention group and control group. Over time the intervention group's mean score increased at post intervention, whilst the control group's mean score at two-time points also increased. The tables above indicate that 2 groups of subject scores are not different to a statistically significant degree over time with regards to conflict avoidance.

Table 30: Skewness and Kurtosis statistical information for dealing with conflict data

Statistics

		Pre intervention score	Post intervention score
N	Valid	139	139
	Missing	6	6
Skewness		-.384	-.572
Std. Error of Skewness		.206	.206
Kurtosis		-1.082	-.624
Std. Error of Kurtosis		.408	.408

Pre-Both Skew = +1.0 > -0.382 > -1.0

Post Both Skew = +1.0 > -0.572 > -1.0

Pre-Both Kurtosis = +1.0 > -1.082 < -1.0

Post Both Kurtosis = +1.0 > -0.624 > -1.0

- ***Not normally distributed***

5.16. Section F: Data for Understanding other people's behavior IG and CG.

This section is looking at the data gathered from the 4 questions which were designed to measure the participant's understanding of why people behave differently to each other at pre-intervention and post intervention stages. This was carried out because one of the research questions asked whether the interventions impact affected particular factors associated with MH and or EI more or less than others.

Table 31: Descriptive statistics for understanding other people's behaviour data

Means and standard deviation of male and female participants in both groups.

Descriptive Statistics

	Gender	Group	Mean	Std. Deviation	N
Pre intervention score	male	control	12.5937	2.96059	32
		intervention	12.2683	3.41339	41
		Total	12.4110	3.20519	73
	female	control	12.5000	3.52868	32
		intervention	11.5000	3.66184	34
		Total	11.9848	3.60552	66
	Total	control	12.5469	3.23144	64
		intervention	11.9200	3.52505	75
		Total	12.2086	3.39538	139
Post intervention score	male	control	12.9688	2.49495	32
		intervention	14.4390	2.42949	41
		Total	13.7945	2.54929	73
	female	control	12.7188	3.25511	32
		intervention	14.5882	2.70933	34
		Total	13.6818	3.10909	66
	Total	control	12.8438	2.87970	64
		intervention	14.5067	2.54353	75
		Total	13.7410	2.81903	139

(Note: The above table uses the word **Total** when the word **All** would probably be less ambiguous)

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Pre intervention score	1.515	3	135	.213
Post intervention score	1.366	3	135	.256

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

Pre-Both Sig. value = 0.213 > 0.05 ➔ There is no violation in the homogeneity of variance.

Post Both Sig. value = 0.256 ≥ 0.05 ➔ There is no violation in the homogeneity of variance.

Table 32: Multivariate statistical results for understanding other people's behaviour data

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Time	Pillai's Trace	.344	70.812[b]	1.000	135.000	.000	.344	70.812	1.000
	Wilks' Lambda	.656	70.812[b]	1.000	135.000	.000	.344	70.812	1.000
	Hotelling's Trace	.525	70.812[b]	1.000	135.000	.000	.344	70.812	1.000
	Roy's Largest Root	.525	70.812[b]	1.000	135.000	.000	.344	70.812	1.000
Time * Gender	Pillai's Trace	.009	1.198[b]	1.000	135.000	.276	.009	1.198	.192
	Wilks' Lambda	.991	1.198[b]	1.000	135.000	.276	.009	1.198	.192
	Hotelling's Trace	.009	1.198[b]	1.000	135.000	.276	.009	1.198	.192
	Roy's Largest Root	.009	1.198[b]	1.000	135.000	.276	.009	1.198	.192
Time * Group	Pillai's Trace	.250	44.992[b]	1.000	135.000	.000	.250	44.992	1.000
	Wilks' Lambda	.750	44.992[b]	1.000	135.000	.000	.250	44.992	1.000
	Hotelling's Trace	.333	44.992[b]	1.000	135.000	.000	.250	44.992	1.000
	Roy's Largest Root	.333	44.992[b]	1.000	135.000	.000	.250	44.992	1.000
Time * Gender * Group	Pillai's Trace	.017	2.383[b]	1.000	135.000	.125	.017	2.383	.335
	Wilks' Lambda	.983	2.383[b]	1.000	135.000	.125	.017	2.383	.335
	Hotelling's Trace	.018	2.383[b]	1.000	135.000	.125	.017	2.383	.335
	Roy's Largest Root	.018	2.383[b]	1.000	135.000	.125	.017	2.383	.335

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

b. Exact statistic

c. Computed using alpha = .05

Table analysis

Group and Time of Testing

There is a statistical significant difference in the scores between the Control and Intervention group. Wilk's Lambda= 0.000, F (1,135) = 44.992, $p<0.05$, η^2 = 0.250. $p=0.000 < 0.05$

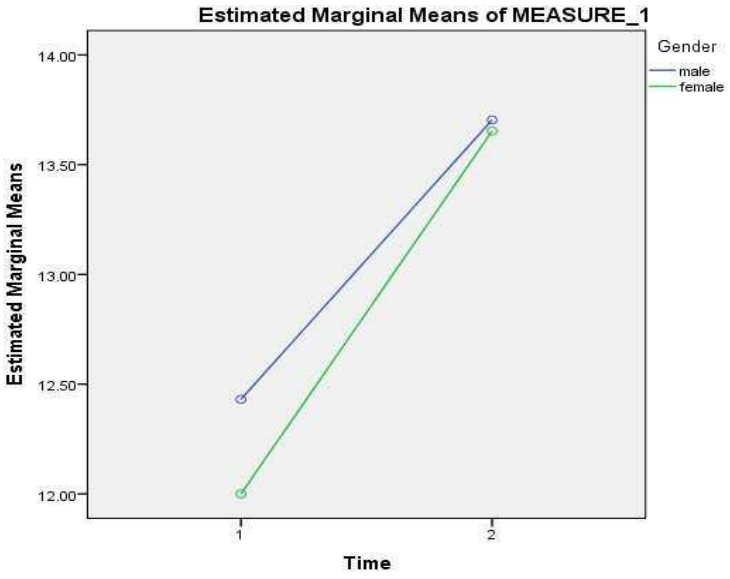
Gender and Time of Testing

There is no statistical significant difference in the scores by gender of the participants with regards to their knowledge about understanding other people's behavior over time. Wilk's Lambda= 0.276, F (1,135) = 1.198, $p<0.05$, η^2 = 0.009. $p=0.276 > 0.05$

Group, Gender and Time of Testing

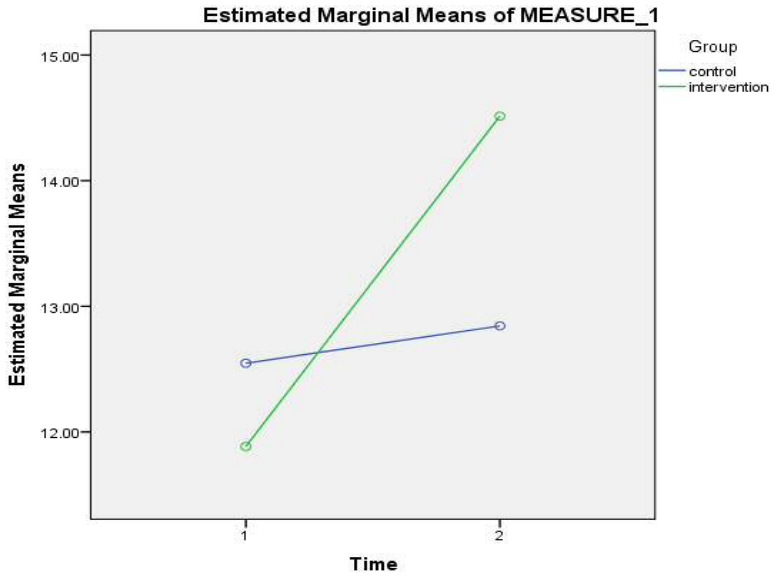
There is no statistical significant difference between the gender and group of participants combined with regards to understanding other people's behavior over time. Wilk's Lambda= 0.125, F (1,135) = 2.383, $p<0.05$, η^2 = 0.017. $p=0.125 > 0.05$,

Figure 14: Profile Plot of Gender against Time of Testing in both groups (understanding other people's behavior)



Male mean score is higher on pre-intervention than female mean score. Over time, male and female mean scores increased at post intervention fairly equally. Due to the quite small difference in the increase in means, gender has no significant effect on the scores overtime with regards to understanding other people's behavior.

Figure 15: Profile Plot of IG and CG over time (understanding other people's behaviors)



There is an interaction between the intervention group and the control group. Over time, the intervention group's mean score increased significantly at post intervention, whilst the control

group's mean score is fairly equal at the two-time points. There is no statistically significant effect on the scores of both groups overtime with regards to understanding other people's behavior.

Table 33: Skewness and Kurtosis statistics for understanding other peoples' behaviour data

Statistics

		Pre intervention score	Post intervention score
N	Valid	139	139
	Missing	6	6
Skewness		.014	-.188
Std. Error of Skewness		.206	.206
Kurtosis		-.603	-.196
Std. Error of Kurtosis		.408	.408

Pre-Both Skew = +1.0 > 0.014 > -1.0

Post Both Skew = +1.0 > -0.188 > -1.0

Pre-Both Kurtosis = +1.0 > -0.603 > -1.0

Post Both Kurtosis = +1.0 > -0.196 > -1.0

- **Normally distributed**

5.17. Section G: Data for Post-traumatic stress type symptoms IG and CG

This section is looking at the data gathered from the 4 questions which were designed to measure the participant's post-traumatic stress type symptoms at pre-intervention and post intervention stages. This was carried out because one of the research questions asked whether the interventions impact affected particular factors associated with MH and or EI more or less than others.

Table 34: Descriptive statistics for post-traumatic stress type symptoms data

Means and standard deviation of male and female participants in both groups.

Descriptive Statistics

	Gender	Group	Mean	Std. Deviation	N
Pre intervention score	male	control	14.0937	4.07478	32
		intervention	11.0732	4.43503	41
		Total	12.3973	4.51153	73
	female	control	11.8750	4.17172	32
		intervention	10.5882	4.28611	34
		Total	11.2121	4.24813	66
	Total	control	12.9844	4.24074	64
		intervention	10.8533	4.34553	75
		Total	11.8345	4.41276	139
Post intervention score	male	control	14.5000	3.50115	32
		intervention	14.8537	2.98798	41
		Total	14.6986	3.20453	73
	female	control	12.1875	3.48673	32
		intervention	12.4118	3.56003	34
		Total	12.3030	3.49932	66
	Total	control	13.3438	3.65678	64
		intervention	13.7467	3.46056	75
		Total	13.5612	3.54498	139

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Pre intervention score	.106	3	135	.956
Post intervention score	.269	3	135	.848

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

Pre-Both Sig. value = 0.956 > 0.05 ➔ There is no violation in the homogeneity of variance.

Post Both Sig. value = 0.848 ≥ 0.05 ➔ There is no violation in the homogeneity of variance.

Table 35: Multivariate statistical results for post-traumatic stress type symptoms data

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Time	Pillai's Trace	.264	48.512[b]	1.000	135.000	.000	.264	48.512	1.000
	Wilks' Lambda	.736	48.512[b]	1.000	135.000	.000	.264	48.512	1.000
	Hotelling's Trace	.359	48.512[b]	1.000	135.000	.000	.264	48.512	1.000
	Roy's Largest Root	.359	48.512[b]	1.000	135.000	.000	.264	48.512	1.000
Time * Gender	Pillai's Trace	.036	5.103[b]	1.000	135.000	.025	.036	5.103	.611
	Wilks' Lambda	.964	5.103[b]	1.000	135.000	.025	.036	5.103	.611
	Hotelling's Trace	.038	5.103[b]	1.000	135.000	.025	.036	5.103	.611
	Roy's Largest Root	.038	5.103[b]	1.000	135.000	.025	.036	5.103	.611
Time * Group	Pillai's Trace	.177	28.961[b]	1.000	135.000	.000	.177	28.961	1.000
	Wilks' Lambda	.823	28.961[b]	1.000	135.000	.000	.177	28.961	1.000
	Hotelling's Trace	.215	28.961[b]	1.000	135.000	.000	.177	28.961	1.000
	Roy's Largest Root	.215	28.961[b]	1.000	135.000	.000	.177	28.961	1.000
Time * Gender * Group	Pillai's Trace	.030	4.213[b]	1.000	135.000	.042	.030	4.213	.531
	Wilks' Lambda	.970	4.213[b]	1.000	135.000	.042	.030	4.213	.531
	Hotelling's Trace	.031	4.213[b]	1.000	135.000	.042	.030	4.213	.531
	Roy's Largest Root	.031	4.213[b]	1.000	135.000	.042	.030	4.213	.531

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

b. Exact statistic

c. Computed using alpha = .05

Table analysis

Group and Time of Testing

There is a statistically significant difference in the scores between the Control and Intervention group with regards to post traumatic stress type symptoms over time. Wilk's Lambda= 0.000, F (1,135) = 28.961, $p<0.05$, $\eta^2 = 0.177$. $p=0.000 < 0.05$

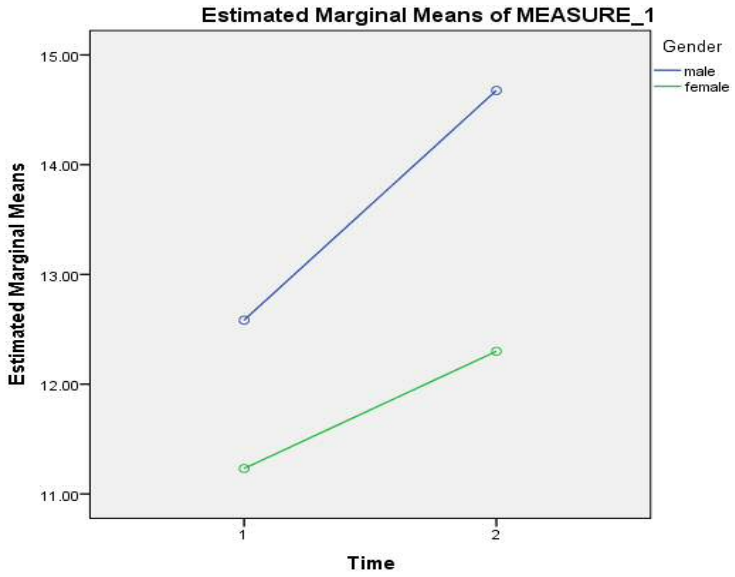
Gender and Time of Testing

There is a statistically significant difference in the scores by gender of the participants with regards to post-traumatic stress type symptoms over time. Wilk's Lambda= 0.025, F (1,135) = 5.103, $p<0.05$, $\eta^2 = 0.036$. $p=0.025 < 0.05$

Group, Gender and Time of Testing

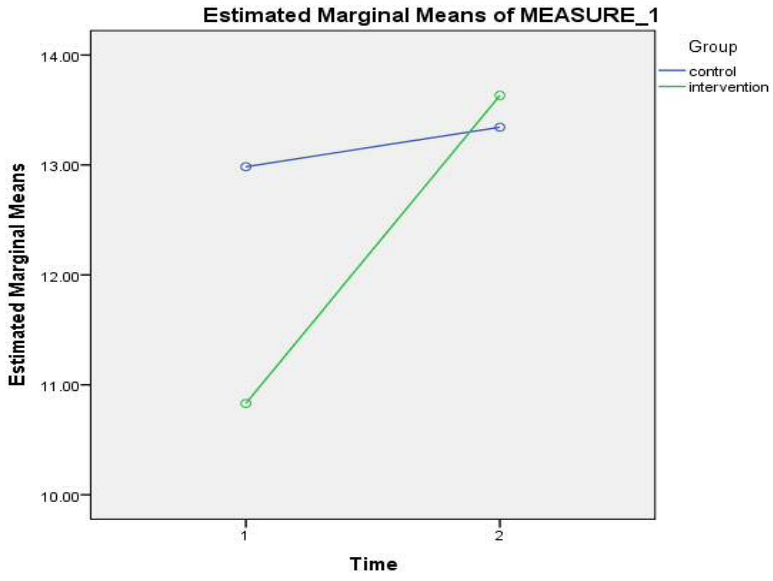
There is statistically significant difference between the gender and group of participants combined with regards to post-traumatic stress type symptoms over time. Wilk's Lambda= 0.000, F (1,135) = 4.213, $p<0.05$, $\eta^2 = 0.030$. $p=0.042 < 0.05$

Figure 16: Profile Plot of Genders at times of testing in combined IG and CG (post-traumatic stress type symptoms)



There is no interaction between male and female participants. Male mean score is higher on pre-intervention than the female mean score. Over time, male and female means increased. However, there is a statistically significant difference in the increase in means which suggests female's recovery from post-traumatic stress type symptoms is slower than males over time.

Figure 17: Profile plot of IG and CG over time (post-traumatic stress type symptoms)



There is an interaction between the intervention group and the control group. Over time the intervention group's mean score increased significantly at post intervention, whilst the control

group's mean score on post intervention is fairly equal at two-time points. There is a statistically significant effect of the intervention on the scores of in IG overtime with regards to post-traumatic stress type symptoms.

Table 36: Skewness and Kurtosis information for post-traumatic stress type symptoms data

Statistics

		Pre intervention score	Post intervention score
N	Valid	139	139
	Missing	6	6
Skewness		.188	-.066
Std. Error of Skewness		.206	.206
Kurtosis		-1.066	-.952
Std. Error of Kurtosis		.408	.408

Pre-Both Skew = +1.0 > 0.188> -1.0 Post Both Skew = +1.0 > -0.066 > -1.0

Pre-Both Kurtosis = +1.0 > -1.066 < -1.0 Post Both Kurtosis = +1.0 > -0.952 > -1.0

- ***Not normally distributed***

5.18. Section H: Data for Friendships Intervention Group and Control Group

This section is looking at the data gathered from the 6 questions which were designed to measure the participant's self-assessment of their satisfaction with the quality of their friendships at pre-intervention and post intervention stages. This was carried out because one of the research questions asked whether the intervention's impact affected particular factors associated with MH and or EI more or less than others.

Table 37: Descriptive statistics for friendships data

Means and standard deviation of male and female participants in both groups.

Descriptive Statistics

	Gender	Group	Mean	Std. Deviation	N
Pre intervention score	male	control	19.4375	4.88538	32
		intervention	19.6585	7.40138	41
		Total	19.5616	6.38137	73
	female	control	20.2187	7.14249	32
		intervention	21.2059	5.29596	34
		Total	20.7273	6.23031	66
	Total	control	19.8281	6.08291	64
		intervention	20.3600	6.53605	75
		Total	20.1151	6.31433	139
Post intervention score	male	control	21.3750	4.10939	32
		intervention	22.4878	4.90980	41
		Total	22.0000	4.57954	73
	female	control	20.7500	5.14938	32
		intervention	24.0000	3.71728	34
		Total	22.4242	4.72656	66
	Total	control	21.0625	4.63210	64
		intervention	23.1733	4.44599	75
		Total	22.2014	4.63787	139

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Pre intervention score	7.103	3	135	.000
Post intervention score	3.605	3	135	.015

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

Pre-Both Sig. value = $0.000 < 0.05$ ➔ There is a violation in the homogeneity of variance.

Post Both Sig. value = $0.015 \geq 0.05$ ➔ There is a violation in the homogeneity of variance.

Table 38: Multivariate statistical results for friendships data

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Time	Pillai's Trace	.224	38.996[b]	1.000	135.000	.000	.224	38.996	1.000
	Wilks' Lambda	.776	38.996[b]	1.000	135.000	.000	.224	38.996	1.000
	Hotelling's Trace	.289	38.996[b]	1.000	135.000	.000	.224	38.996	1.000
	Roy's Largest Root	.289	38.996[b]	1.000	135.000	.000	.224	38.996	1.000
Time * Gender	Pillai's Trace	.009	1.237[b]	1.000	135.000	.268	.009	1.237	.197
	Wilks' Lambda	.991	1.237[b]	1.000	135.000	.268	.009	1.237	.197
	Hotelling's Trace	.009	1.237[b]	1.000	135.000	.268	.009	1.237	.197
	Roy's Largest Root	.009	1.237[b]	1.000	135.000	.268	.009	1.237	.197
Time * Group	Pillai's Trace	.042	5.926[b]	1.000	135.000	.016	.042	5.926	.676
	Wilks' Lambda	.958	5.926[b]	1.000	135.000	.016	.042	5.926	.676
	Hotelling's Trace	.044	5.926[b]	1.000	135.000	.016	.042	5.926	.676
	Roy's Largest Root	.044	5.926[b]	1.000	135.000	.016	.042	5.926	.676
Time * Gender * Group	Pillai's Trace	.008	1.120[b]	1.000	135.000	.292	.008	1.120	.183
	Wilks' Lambda	.992	1.120[b]	1.000	135.000	.292	.008	1.120	.183
	Hotelling's Trace	.008	1.120[b]	1.000	135.000	.292	.008	1.120	.183
	Roy's Largest Root	.008	1.120[b]	1.000	135.000	.292	.008	1.120	.183

a. Design: Intercept + Gender + Group + Gender * Group
Within Subjects Design: Time

b. Exact statistic

c. Computed using alpha = .05

Table analysis

Group and Time of Testing

There is a statistically significant difference in the scores between each group, control and intervention group concerning friendships. Wilk's Lambda= 0.016, F (1,135) = 5.926, $p<0.05$, η^2 = 0.042. p=$0.016 < 0.05$

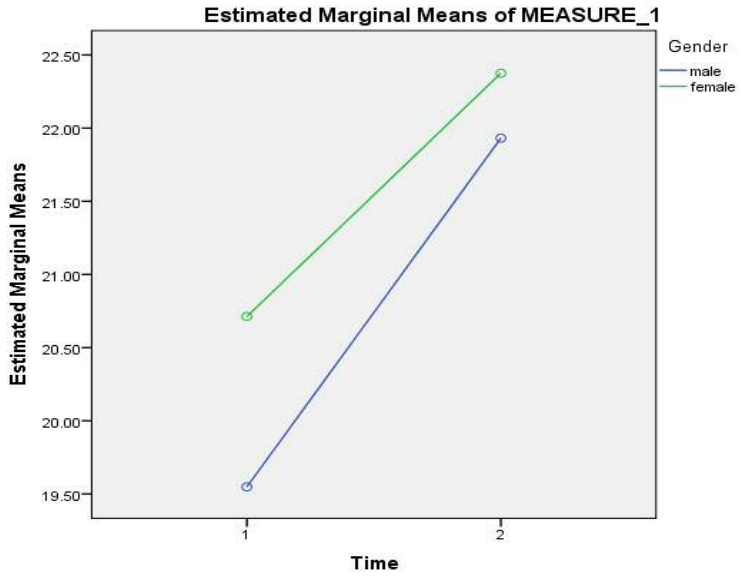
Gender and Time of Testing

There is no statistical significant difference in the scores by gender of the participants with regards to friendships. Pillai's Trace = 0.268, F (1,135) = 1,237, $p<0.05$, η^2 = 0.009. $p=0.268 < 0.05$

Group, Gender and Time of Testing

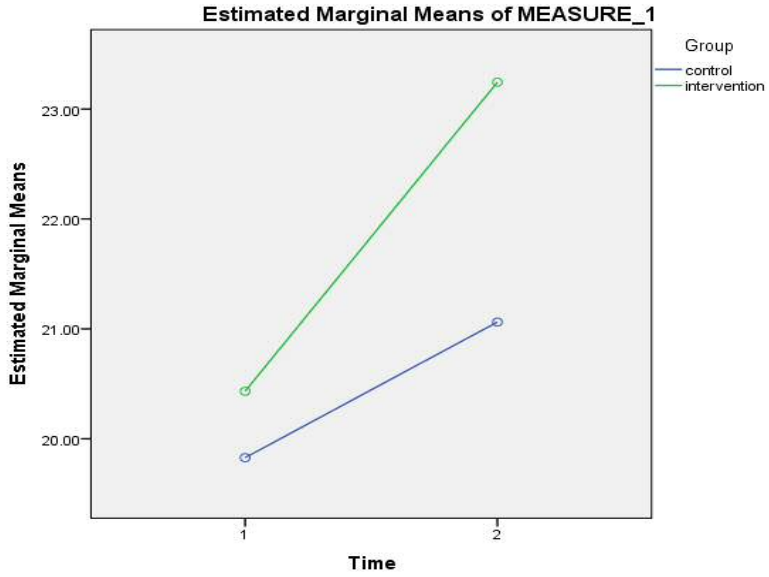
There is no statistically significant difference between genders and group of participants combined with regards to friendships. Pillai'sTrace = 0.292, F (1,135) = 1.120, $p<0.05$, η^2 = 0.008. $p=0.292 < 0.05$,

Figure18: Profile Plot of Gender scores at times of testing IG and CG (friendship data)



There is no interaction between male and female participants. Male's mean score is higher on pre-intervention than female's mean score. Over time, male and female mean scores rose up on post intervention. Due to the differences in their means and as shown on the tables above, gender has no significant effect on the scores over time with regards to friendships.

Figure 19: Profile Plot of IG and CG over time (friendship data)



There is no interaction between the intervention group and control group. Over time, the intervention group's mean score increased significantly more than the control group's mean score. The tables above show statistically significant effect on the scores of both groups overtime with regards to quality, confidence and satisfaction concerning friendships.

Table 39: Skewness and Kurtosis information for friendships data

Statistics

		Pre intervention score	Post intervention score
N	Valid	139	139
	Missing	6	6
Skewness		-.106	-.325
Std. Error of Skewness		.206	.206
Kurtosis		-1.247	-.883
Std. Error of Kurtosis		.408	.408

Pre-Both Skew = +1.0 > -0.106 -1.0

Post Both Skew = +1.0 > -0.325 > -1.0

Pre-Both Kurtosis = +1.0 > -1.247 < -1.0

Post Both Kurtosis = +1.0 > -0.883 > -1.0

- ***Not normally distributed***
-

5.19. Section I: Data comparing MH and EI in the intervention group

This section is looking at the data gathered from the 21 questions which were designed to measure the participant's MH compared with the data from the 23 questions designed to ask about the participants EI at pre-intervention and post intervention stages. The main question here is whether the intervention can impact on MH and EI so an analysis looking at which, if either, are impacted more or less than the other is under question**.**

Table 40: Descriptive statistics comparison between MH and EI data for intervention group

Between-Subjects Factors

		Value Label	N
Group	1.00	Intervention	75

Descriptive Statistics

	Mean	Std. Deviation	N
Mental health pre intervention score	64.64	11.007	75
Mental health post intervention score	76.51	8.819	75
Emotional Literacy pre intervention score	76.13	12.651	75
Emotional Literacy post intervention score	86.65	8.275	75

Descriptive Statistics

	N	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Mental health pre intervention score	75	64.64	11.007	121.152	.501	.277	.899	.548
Mental health post intervention score	75	76.51	8.819	77.767	.023	.277	.561	.548
Emotional Literacy pre intervention score	75	76.13	12.651	160.036	.191	.277	-.519	.548
Emotional Literacy post intervention score	75	86.65	8.275	68.473	-.213	.277	-.506	.548
Valid N (listwise)	75							

Means and standard deviations for each factor and conditions.

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
Mental health pre intervention score	2.583	1	73	.112
Mental health post intervention score	.664	1	73	.418
Emotional Literacy pre intervention score	4.071	1	73	.047
Emotional Literacy post intervention score	.314	1	73	.577

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Group + gender + Group * gender
Within Subjects Design: Time_Mental_Health + Time_Emotional_Literacy + Time_Mental_Health * Time_Emotional_Literacy

Table 41 shows that there is a violation in the homogeneity of variance, so Pillai's trace was used. The table indicates that with regards to mental health and emotional literacy scores, over time there is a significant difference between scores, however the interaction between mental health and emotional literacy scores, $p=0.288 > 0.05$, shows that there is no significant difference in the interaction of both scores over time.

Table 41: Multivariate statistical results for MH and EI data for IG

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Time_Mental_health	Pillai's Trace	.603	112.466[b]	1.000	74.000	.000	.603	112.466	1.000
	Wilks' Lambda	.397	112.466[b]	1.000	74.000	.000	.603	112.466	1.000
	Hotelling's Trace	1.520	112.466[b]	1.000	74.000	.000	.603	112.466	1.000
	Roy's Largest Root	1.520	112.466[b]	1.000	74.000	.000	.603	112.466	1.000
Time_Emotional_literacy	Pillai's Trace	.704	175.821[b]	1.000	74.000	.000	.704	175.821	1.000
	Wilks' Lambda	.296	175.821[b]	1.000	74.000	.000	.704	175.821	1.000
	Hotelling's Trace	2.376	175.821[b]	1.000	74.000	.000	.704	175.821	1.000
	Roy's Largest Root	2.376	175.821[b]	1.000	74.000	.000	.704	175.821	1.000
Time_Mental_health * Time_Emotional_literacy	Pillai's Trace	.015	1.147[b]	1.000	74.000	.288	.015	1.147	.185
	Wilks' Lambda	.985	1.147[b]	1.000	74.000	.288	.015	1.147	.185
	Hotelling's Trace	.016	1.147[b]	1.000	74.000	.288	.015	1.147	.185
	Roy's Largest Root	.016	1.147[b]	1.000	74.000	.288	.015	1.147	.185

a. Design: Intercept
Within Subjects Design: Time_Mental_health + Time_Emotional_literacy + Time_Mental_health * Time_Emotional_literacy

b. Exact statistic

c. Computed using alpha = .05

A one-way repeated measured ANOVA was conducted to evaluate the null hypothesis that there is no significant change in KEQ mental health scores and emotional intelligence scores during pre-intervention and post intervention over time. (N=75). The results of the ANOVA show that there is a significant difference.

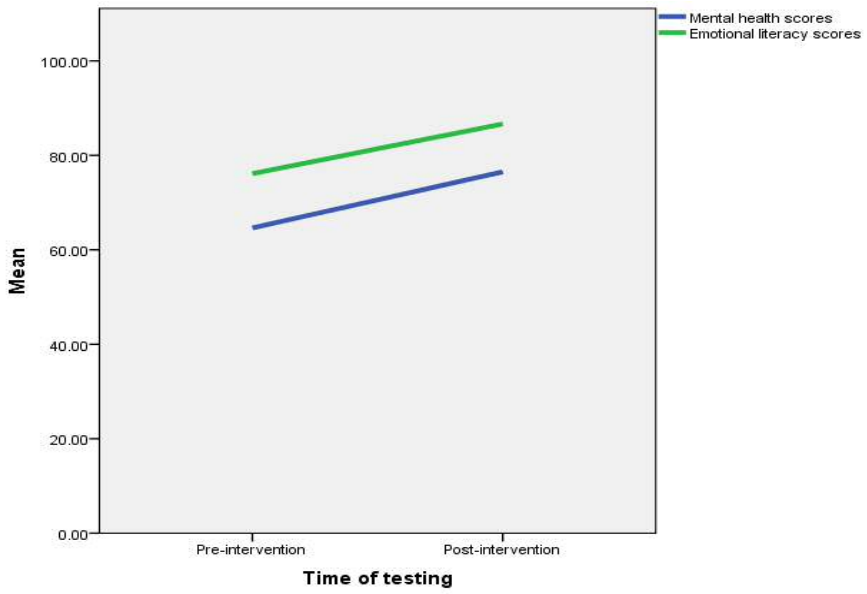
For MH; Pillai's Trace= 0.000, F (1, 74) = 112.466, $p<0.05$, η^2 = 0.603.

For EI; Pillai's trace = 0.000. F (1, 74) =175.821, p<0.05, η^2 = 0.704

Thus, there is significant evidence to reject the null hypotheses which means a significant difference is concluded to have occurred in the participants' scores.

A one-way repeated measured ANOVA was conducted to evaluate the null hypothesis that there is no significant interaction between KEQ mental health and emotional literacy scores during pre-intervention and post intervention over time. (N=75). The results of the ANOVA show that there is no significant difference, Pillai's Trace= 0.288 F (1, 74) = 1.147, $p>0.05$, η^2 = 0.015. Thus, there is significant evidence to accept the null hypothesis; the scores from the MH questions did not increase significantly more than those provided from the EI questions.

Figure 20: Mental health means scores compared with emotional literacy mean scores combined genders over time



Over time, both mean scores increased indicating that there is a significant difference in change of scores, but there is no interaction between the two means, so no group of scores MH or EI increased more than the other.

5.2 Summary of results Part 1

The following provides a table summary of the results in this section; it also proves an explanation of an additional statistic called effect size which provides an indication of how much the intervention is likely to have caused an impact on MH and EI.

5.21 Effect size

Effect size, is a value which allows you to see how much your independent variable (IV) has affected the dependent variable (DV) in an experimental study. In other words, it looks at how much variance in your DV was a result of the IV. When using effect size with ANOVA, we use η^2 (Eta squared).

Before looking at how to work out effect size, we can refer to Cohen's (1988) guidelines. According to him:

- Small ≤ 0.01
- Medium ≤ 0.059
- Large: < or > 0.138

So, if you end up with $\eta^2 = 0.36$, you can assume the effect size is very large. It also means that 36% of the change in the DV can be accounted for by the IV.

The observed power score is the probability up to (1.0) that the test correctly rejects the null hypothesis (H_0) when the alternative hypothesis (H_1) is true. So, a high score indicates a greater probability that the alternative hypothesis is true.

Table 42 below provides an overview of all the results in this section in Part 1 of the results chapter

KEY for table 42

Y=YES there is a significant difference (H0 rejected). Below the Y are two figures, the top one is the Eta squared η^2 and the bottom one the observed power. N = NO significant difference, so no effect size scores reported. Group refers to either IG or CG.

Table 42. Overview of results from section 1

	IG V CG over time	Genders over time	Gender and group over time	Gender for IG group over time	IG overtime	IG Gender over time
Full combined data	**Y .36 1.0**	**N**	**N**	**N**	**Y .701 1.0**	**N**
Levels of Happiness	**Y .103 .975**	**N**	**N**			
Level of Self Esteem	**Y .166 .999**	**N**	**N**			
Dealing with negative emotions	**Y .142 .997**	**N**	**N**			
Conflict Avoidance	**N**	**N**	**N**			
Understanding others behaviour	**Y .250 1.0**	**N**	**N**			
Post-traumatic stress type symptoms	**Y .177 1.0**	**Y .036 .611**	**Y .030 .531**			
Quality of Friendships	**Y .043 .676**	**N**	**N**			
Comparing impact between Mental Health v. Emotional					**N**	

5.3 Results Part 2

Part 2 involved a semi structured interview with 24 volunteer IG participants. The participants were asked to attend in groups of 4 but were asked to answer each question individually. The participants were interviewed with others present in a 'round robin style' as opposed to a focus group approach for reasons explained in the methods section **4.232** of this thesis.

The questions were formulated not to be deterministic but attempted to offer a neutral feel to the participants. The questions were not directly associated with the topics of the KOBS lessons or factors associated with MH or EI. Question 10 was offered to the student as a way of showing respect for and interest in their views and in recognition that their involvement and opinions were worth more than just helping the researcher to complete his research. In addition, their responses to question 10 potentially could provide some suggestions for a 'version 2' of KOBS if it appeared appropriate to develop.

The questions were as follows.

1. Did you like or dislike doing the KOBS lessons?
2. What did you like about them?
3. What did you dislike about them?
4. Have you or haven't you gained anything from doing the KOBS? If so what?
5. Are KOBS lessons different from your other lessons such as Maths, Science and English- if yes how?
6. Have you thought about the KOBS lessons and what you have studied outside lesson time?
7. Do you think KOBS has changed the way you think about things?
8. Are you aware that KOBS has changed your behaviour or the way you react to situations? If yes, any examples?
9. What do you think other people in the class have felt about doing KOBS?

10. Is there anything you would like to change about KOBS, for example extra lessons on a particular subject or something you felt was not useful and should be reduced or removed?

    Any other things you would like to say?

The methods section provides the rationale for the content of the guidance notes and prompts for the researcher when conducting the interviews which are given in full in Appendix 5.

The statements made by the participant students were initially grouped into 9 thematic categories which emerged following listening to the responses. All the individual statements were then coded by the researcher as being associated with MH and or EI or neither of these by using a thematic analysis approach. The amount and theme of statements made by each participant was also recorded to assess if the statements were representative of the views of the wider body of participants or just a few participants who were vocalising their views.

Summary of results in this section

- The responses from the participants could be initially placed in 9 thematic categories;
- The responses were then coded as either indicating a positive effect on MH and/or EI using thematic analysis. Some responses were coded as neither;
- All participants proved a minimum of 7 responses each (up to a maximum of 21 responses for one of the participants) indicating a positive effect covering aspects of both MH and EI.

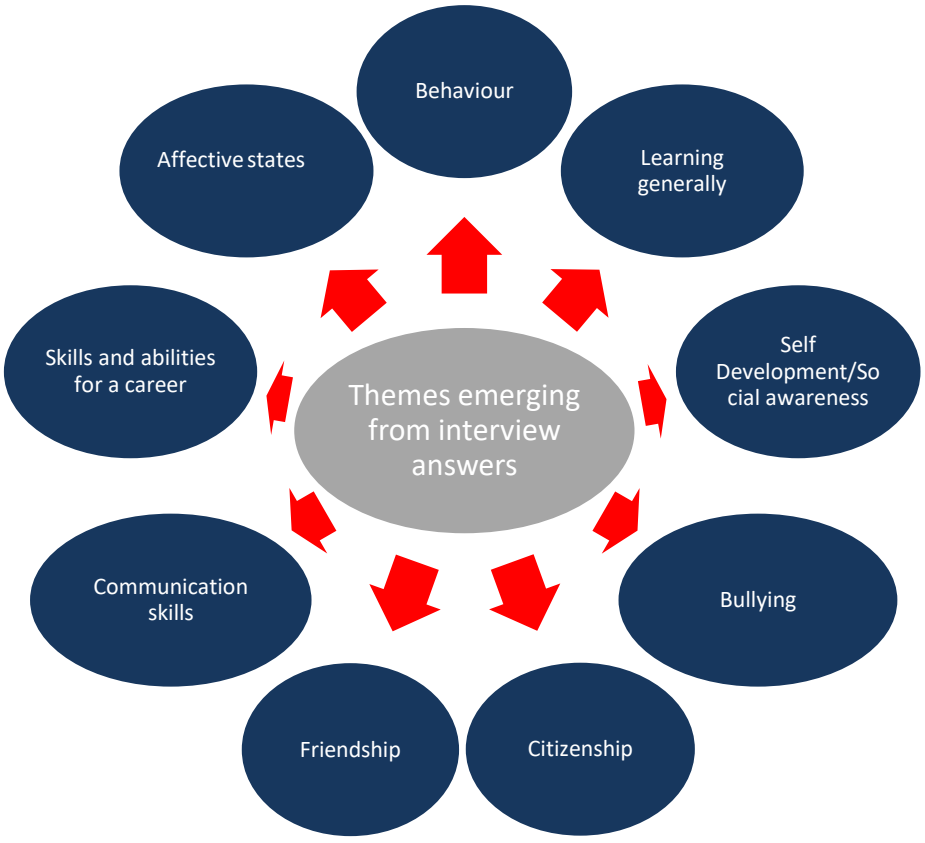
5.31 Intervention Group Interview analysis

Table 43 shows the participants' statements from the group interviews. They have been put into 9 'theme' categories. The themes which the researcher identified were not necessarily as with MH or EI but were noted because the 'theme' came up in the answers to the questions in the interview. It was the individual statements themselves at a later point that were thematically analysed to determine whether they were evidence of MH and EI.

As the main research question is asking if classroom based lessons can have a positive impact on MH and EI, the researcher needed to determine whether the statements provided evidence of a positive impact on the mental health and /or the emotional intelligence of the participants. The statements therefore needed to be cross referenced against constructs associated with MH and EI and coded as such. This in effect is a deductive coding process. The initial themes which emerged are indicated in Figure 21. Some of the statements were cross referenced to a construct associated with MH and or EI and some were not.

Putting the statements into 9 categories as a first step provided the researcher with a view of the overall conversational topics which was a useful first stage before the actual thematic analysis process.

Figure 21: Diagram of 'theme categories' elicited though analysis of participants responses during semi structured interviews.



To determine whether the statements made by the participants were associated with a positive impact on mental health and/or emotional intelligence, the author used evidence as indicated in

the literature review which constitutes the most widely accepted constructs of what mental health and emotional intelligence are which are summarised in Table 5. Chapter 3. These were used as a cross reference (to elicit a code) against the statements from the participants. (Table 44 below)

5.311 Examples of Data analysis

In this research, the responses provided by the participants are relatively short and seemingly unambiguous but still do need a little unravelling and exploring to understand as best possible what the intention of the communication was, this was done at the semantic level.

The questioning process involved the use of terms such as; how did /does that feel? What do you think? What was it like? These were intended as a way of extracting accounts or statements of experience and their effects. The statements at first glance do not appear to require a large amount of interpretation, being concrete and descriptive. The following are some examples of the statements and the author's comments on his analysis of the meaning of the statement to give the reader an opportunity to understand the level of analysis of all the statements undertaken by the researcher. The researcher used descriptions of MH and EI to see if these comments made by the participants were an expression of an improvement in MG and/or EI or neither.

1. Example statement*: It shows me how to behave*

In looking for meaning behind this statement we have 'it shows me' and 'to behave'. The implication being that the individual has recognised that 'it' (the lessons) are providing guidance or direction about how to behave. There is no indication of what constitutes the behaviour that the individual has been shown, however it is likely that the respondents had identified something positive in their analysis. Neither do they say whether or not they have developed a motivation to engage in this behaviour only that they have now been shown how, an assumption would be that by being shown 'how' they have or can replicate this in some way. Based on the above analysis the researcher was able to, with a good degree of confidence, identify this statement as an indication that the program could have a positive impact on the participant's behaviour.

2. Example statement*. I have learnt that you have to develop your self esteem*

This statement indicates that the participants realised that 'they have to' develop self-esteem. It does not say that they have developed self-esteem but that there is a realisation that self-esteem is important to them. They do not indicate what they mean by self-esteem. The KOBS program contained a number of lessons explaining the importance of recognising one's own strengths, abilities and the achievements to gain confidence and improve self-esteem. These lessons were taught under the theme of 'self-esteem development'. By indicating that one knows that self-esteem development is important there is an implication from the participants' responses that they are now more likely than at pre-intervention stage to engage in thinking or activity to improve their self-esteem.

3. Example statement. *Its helped me to know myself*

This statement implies that the participants know themselves better than they did before due to the program and this is of benefit to them. There's no indication of how well or how much the program has helped them or of what point along the road to knowing themselves they are now at.

4. Example statement. *It shows how to share problems.*

This indicates that the program provides guidance and has made it easier for the person to share their problems. It does not indicate that sharing problems is something which the individual feels is beneficial; however, there is an implication that they recognise it as being of some benefit to them

5. Example statement. *It makes me feel happy*

It makes me feel happy indicates that there's a direct positive influence on the participant's happiness emotion. How happy they feel is not indicated. The researcher has assumed that feeling happy is a desirable feeling. If the individuals are feeling happy one could also assume that they are enjoying the subject matter and it is of benefit to them in some way. A more cynical perspective might suggest it could be that there are other factors within the lessons which made the participants feel happy, for example, it was because they could mess about and have a good time with their friends during the KOBS lessons and it had nothing to do with the content.

5.32 Participants statements in categories and coded

The following Table 44 shows the statements made by participants during the interviews. The code reflects the author's analysis of the comment based on the descriptors of what constitutes EI and MH as indicated in Table 5 Chapter 3. The participant's responses (verbal statements) were initially put into 9 theme categories depending on content of the response. To do this the researcher initially listened to the sentence or phrase and then placed the response into a category which encapsulated what the statement was about in broad terms. For example, was it about friends or leaning or communication etc? After this process the researcher then used thematic analysis by looking at what each statement meant and whether it could be coded as reflecting an impact on MH or EI. If not, the response was given a code of N for 'neither MH nor EI'.

Table 43: Statements made by participants categorised in themes and coded as evidence of MH and/or EI.

Statements made by participants	
Theme: **Behaviour**	***Examiners Code.***
It shows me how to behave. (8 similar responses)	MH + I. J (EI)
It should be introduced to other school as it helps with behaviour.	N
It shows us how to behave in the community.	*MH. + I. J(EI)*
KOBS gives knowledge of certain behaviour of students so I like to advise my other friends about KOBS.	*MH. +I. J(EI)*
It is about the behaviour, how they should be in the school and how they should work in the school.	*MH.*
It has changed my thinking also how should I behave with my friends, also it showed me that I should not do bad things when I am with my friend that can give pains to my fellow students.	*MH+I.J. K(EI)*
The lessons involve behaviour that interests me.	*N*

When we go to the dormitories some students were transformed but others – ah-others they did not.	*MH*
You know when before students were not cooperating with the teachers so when KOBS came in their behaviours started changing for the better.	*MH*
It makes me know how to be disciplined.	*I.L(EI)*
Before the introduction of KOBS, the school was not very good because the students were doing strike but after the introduction of KOBS they have completely stopped because they know that kind of quarrel is not really good.	*EI*
KOBS has helped in improving the way I behave and control myself in the community.	*MH+I.L(EI)*
It teaches us to be moral upright.	*J(EI)*
It is improving our behaviour (7 similar responses)	*MH*
It makes us know how to behave in society.	*I.J (EI)*
How to behave with somebody who has done something wrong to you and reduce conflicts.	*MH+ I.J(EI)*
How to react to people who have done something wrong.	*MH.* 31

Subset: Learning generally	
I think it is easier to learn when you are more involved and talking.	*C (EI)*
If the teacher is just writing on the board and you are copying that is boring. KOBS is not copying.	*N*
It helps understand others behaviours and KOBS should go to others schools- it does not interfere with other subjects.	*C(EI)*
Some of the students when they hear about the KOBS they want to join us.	*N*

KOBS lessons are different – you are given guidance and advice.	*N*
KOBS make us to motivate also in education generally.	*L(EI)*
KOBS should be extended up to primary levels.	*N*
KOBS helped me to feel relaxed and learn in other subjects because it made us less fear to ask and answer questions in other lessons.	*I.E.H(EI)*
I wish everybody could do KOBS it is a very interesting subject.	*N*
It helps when we go to other schools to participate it will help us work with them.	*J(EI)*
Helps me to share ideas on things that I do myself.	*MH +I. J(EI)*
Makes me open in such a way as I can ask any academic questions in other subjects.	*MH +I(EI)*
Before I was stubborn and didn't listen but after KOBS I became very disciplined and listened well.	*MH+ I(EI)*
It improves my performance in other subjects.	*MH*
It improved my academic performance.	*MH*
KOBS will improve S1 performance in the rest of the school and succeed in the future.	*MH*
It helps me to feel free and not fear learning.	*MH* 17

Subset: Self-development/social awareness	
It has given me self-control to avoid conflict.	*H.I.(EI)*
It helps to change your mind.	*N*
It has trained me to escape from some dangerous situations.	*MH*
If someone has disturbed me, if I read KOBS somehow it stops the hatred I have for that person and gives me a fresh mind.	*MH+F. I (EI)*

I would encourage others to take KOBS because is very beautiful and it help you to know yourself also to respect your friends and make friends.	*IJK(EI)*
I think I am a better person.	*MH*
They give you some information to help you how to grow and where to move on in your life.	*MH+I.L(EI)*
It has made me to know myself and stop doing wrong things.	*I.J(EI)*
I think about the things in KOBS outside as well. It makes me confident -I like being confident.	*MH*
They (KOBS students) look gentle in such a way that they can solve any problems.	*N*
Helped us to feel and be confident to gain self-esteem.	*MH+A(EI)*
For us children we had had many problems, so it is important to gain confidence to achieve what we want.	*MH*
I have learnt that you have to develop your self-esteem (5 Similar responses)	*N*
It has helped me to know myself (5 similar responses)	*I(EI)*
It shows how to have a good life.	*MH*
It helped me settle a lot. In the first I was very stubborn – I was missing lots of lessons now I have changed so much.	*MH*
I have now to set goals.	*L(EI)*
I know how to be in the future.	*MH*
It shows how to take care of myself.	*C(EI)*
It makes me to take good of others.	*K(EI)*
It has made me know myself and interact with others.	*C.A, E(EI)*
Know myself and solve friend's problem to become close to my friends.	*MH+E.A.C. K(EI)*
Helps to solve my personal problems.	*MH.*
It changed my life positively.	*MH*

Shows how to share problems (9 similar responses)	*J.K(EI)*
Helps me being more straightforward.	*MH*
I didn't know how to be with people and now I am able to share and be with people.	*MH+J (EI)*
Helps me to become a respectful person.	*N*
I now can recognise people are different in some ways but in others no.	*J(EI)*
Now I don't get angry.	*E(EI)*
It is helpful to other people to know about the KOBS.	*N*
I like because it teaches you what to do like understanding people and then the feelings of others.	*E.J(EI)*
It shows problem solving and resolutions- some people they can't solve things themselves.	*MH*
I now like to help other people solve their problems	*MH. +K(EI)*
I know now people in the world get into conflict because of misunderstandings.	*K(EI)*
It helps with conflict resolutions and solves their problems. I ask people to take my advice.	*MH+K(EI)*
I can divert some people when they are quarrelling.	*J(EI)*
It gives students a more positive attitude towards others.	*J(EI)*
It refers to things outside which can be brought into a lesson.	*N*
It helps to have a fresh mind to find the best solution.	*MH*
It makes us aware of our lives.	*I(EI)*
Shows to give others counselling.	*A.KB.C(EI)*
I am remembering the lesson outside.	*N*
We enjoy talking about it outside.	*J(EI)*
Helps how to stay safe how to make friends	*MH+J(EI)*
It will help them be better to deal with their own children and friends	*MH+J.K(EI)*
I don't not forget the KOBS lessons	*N*

If taught at Senior 1 when they are still young, they will be able to deal with their environment and how to get used to the people to live with others equally.	*MH+JK(EI)*
It gives confidence to share what we know with senior 1 children	*MH+J(EI)*
It helps to choose best plans out of different ideas	*MH.* *66*

Subset: Bullying	
There is some bullying but not as bad.	*N*
I now realised it is useless to bully.	*MH*
I understand now why people bully. (5 similar responses)	*J(EI)*
KOBS helps with stopping bullying. (18 similar responses)	*I(EI)*
KOBS has helped with bullying- since KOBS no cases of bullying has been reported, it makes me and other children happier.	*MH*
It helped me to stop bullying others.	*I(EI)*
I can now deal with bullying.	*MH*
It tells us not treat others badly	*N* *29*

Subset: Citizenship	
I have become a better citizen.	*MH*
I got also advice from KOBS; it has made me change my behaviours in school and made me understand more people in the society very well.	*MH+G.K(EI)*
We use the information outside- it teaches us cooperation between the teachers and the students.	*MH*
KOBS is very valuable it can help students lead to a better life.	*MH*

KOBS helped me become a better friend and make peace in the community. I have gained a lot.	*MH*
You will know how to live with people.	*MH*
It teaches peace and harmony.	*MH*
Understand how to live in the community. Those who are participating are really benefiting.	*MH*
If you have peace of mind you can learn better and stay in the community.	*MH*
To give advice if someone is a thief.	*J(EI)*
I now know people who are from other places are like us, I don't fear them.	*I(EI)*
Helped me with being able to advice where others are going wrong.	*K(EI)*
It is inspiring people around against the disadvantages of life around me.	*L.MH*
Helped me to solve problems among other students.	*J(EI)*
If I hear people discussing things that should not happen I can now give them advice.	*J.(EI)*
KOBS has done a lot in my life, I would like to tell senior 1 students who may not want to attend because they don't know about it.	*MH* *16*

Subset: Friendship	
Helped me choose the right friends.	*MH*
Helps to control friends' behaviour.	*N*
They teach about how to behave with friend it helped make good friends.	*MH+J(EI)*
I don't not forget the KOBS lessons.	*N*
It teaches us how to make friends. (12 similar responses)	*MH*

Outside the lesson I have used the ideas in KOBS when I am choosing a friend and to take care of the friend –to get to know what your friend likes or doesn't like so you don't do that very thing to hurt them.	*MH+G.J(EI)*
How to choose friends was the most useful.	*MH+I(EI)*
How to be with my friends.	*J.I.C(EI)*
Due to developing hospitality I have now more friends.	*MH+J(EI)*
I can now advise if friends are fighting.	*.MH+F.G. (EI)*
Advise friends if they are doing something bad.	*MH+F.G. (EI)*
Help me to discuss with siblings and neighbours' children we can share KOBS with others which help to make friends.	*M.H +J(EI)*
To play very well- games will attracts friends.	*J(EI)*
Subset: Communication skills	
KOBS helps with speaking in public (8 similar responses)	*MH+J(EI)*
It helps you to be talkative and to be confident.	*MH+J(EI)*
I remember the lessons how to react to situations how to speak to people in a bad mood and how to answer certain questions at a given moment.	*E.I*
I can now make speeches and get friendly- I am not afraid to talk.	*MH+J(EI)*
Helps us to be easy and calm with speaking.	*MH+H(EI)*
Discussing ideas with each other.	*N*
KOBS adds a lot of courage.	*MH*
To be honest and talkative.	*MH*
Communicate better- we help each other.	*MH*
I can now give advice better.	*MH+J(EI)*
I have become more eloquent there is now no fear.	*MH+J(EI)*
When KOBS was not there I had no friends but by learning how to communicate well I now have many friends.	*MH*

It shows to express our interests.	*J.(EI)MH*
I am able to discuss an 'issues' to explain myself in public and help the future generation.	*J.(EI)*
How to express myself.	*J(EI)*

Subset: Skills and abilities for a career	
KOBS helps someone to speak the truth-if you are a lawyer you must speak the truth- it helps you to be talkative to be confident.	*L.I.(EI)+MH*
KOBS would help be friendly to talk some kind words to help relieve them of their disease (this child wants to be a doctor).	*L.F.(EI)*
I want to be a Journalist –they need to know how to speak fluently in public to be able to associate well with people that's the way you earn their respect. KOBS has helped me to learn these things.	*L.I(EI)+.MH*
You should always know how to help someone in bad condition or sympathise with someone, so I know that KOBS will enter into my head as a medical person.	*K(EI)+.MH*
It gives self-esteem to pass to others as a teacher.	*MH*
To teach people how to behave as a policeman.	*J(EI)*
KOBS has helped me think and set my goal for the future (a doctor).	*MH+LI (EI)*
Helped me with career guidance.	*MH*
I want to be Finance minister – It shows how people respond well with each other.	*J.K.G(EI)*
To be able to advise people as a teacher (to stop them fighting, stealing, killing others).	*MH. +F(EI)*
To help work and solve problems with the people I am working with (wants to be a nurse).	*J(EI)*

To lead a healthy life will lead to a healthy brain (medical).	*N*
Show knowledge of how to behave (teacher).	*J(EI)*
KOBS trains not to steal so when I become an accountant I will be transparent and not corrupt in the service.	*MH+I(EI)*
It is training students on how they should be answering questions.	*MH+J(EI)*
Teach me not to fear people so as a lawyer to see I am straight with people.	*MH. I(EI)*
It helps with being assertive, being free and coping with being in new situations.	*MH. +I. J(EI)*

Subset: Affective states	
It makes me happy (11 similar responses).	*MH*
It makes me get good feeling.	*MH*
It has helped me remove the stresses which I had and how to solve the problems which I had in myself.	*MH*
Helps to reduce the worry which you have in your hearts it can help with feeling of isolation.	*MH*
It reduces fear and helps with confidence and friendship.	*MH*
It can give you peace of mind.	*MH*
I can also help people who are having problems.	*MH*
You have to trust yourself that you can do things this has made me happy.	*MH*
KOBS is the best because it makes your mind good.	*MH*
I feel relaxed and free to talk because there is no right or right answer -all answers are right.	MH
It helps me control my emotions. (8 similar responses)	*F(EI)*

KOBS will help you develop your brain.	*N*
It has helped me develop mentally.	*MH*
The KOBS teachers; they are good because they are open -you can speak with them and talk about the problems.	*N*
It has helped to create a better environment.	*N*
We respect teachers now so much because they allow us to express ourselves and our opinions.	*MH+J(EI)*
We now love our teachers because of what they taught us.	*A(EI)*
Attitude towards the teacher and behaviour in class has improved. (12 similar responses)	*MH*
We love them because they teach us how to become social	*A(EI)*
I like the KOBS teachers to help us know how to interact.	*J(EI)*
I now want to be like my teacher and I love her so much.	*A(EI)*
By being straightforward with teachers I can solve my problems.	*MH*
I developed a better attitude towards teachers when before I would run away scared and not answer questions.	*MH+J(EI)*

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Subset: Others	
The lesson is easy to follow	*N*
I gain a lot from the lessons, KOBS is valuable.	*N*
Both boys and girls enjoy the same.	*N*
I think they should continue teaching it because it is interesting.	*N*
KOBS it is sooo..... good - I like it.	*N*
A problem is the teacher is not attending.	*N*
KOBS should also be in primary- it should be countywide.	*N*
If he attends he will gain more knowledge. I want to appreciate KOBS -it should be taken to other schools.	*N*
It is easy and straightforward. I am learning new things.	*N*

Maybe some games/drama debate would help to introduce more knowledge on KOBS.	*N*
What would make KOBS better is more motivation from the teachers.	*N*
KOBS is a bit different from normal lessons because it is about things we do.	*N*
It has changed my way of living before I was having some problems.	*N*
I feel privileged to do KOBS.	*N*
People admire you.	*N*

Total=290

Table 44: Responses related to MH and EI made by each participant.

KEY

In the participant number column each letter represents a school and the number is an individual participant's. So A1, A2, A3, A4 were 4 participants from one school, and B1, B2, B3, B4 were from a different school. The number after each letter in this column is the quantity of responses in that theme. The number of MH responses and EI responses are those made by each participant across all themes.

Participant number	**Number of MH responses per participant (Total=154)**	**Number of EI responses per participant (Total =148)**	**Total**
A1	**4**	**6**	**10**
A2	**9**	**11**	**20**
A3	**7**	**4**	**11**
A4	**5**	**7**	**12**
B1	**5**	**6**	**11**

B2	**7**	**7**	**14**
B3	**3**	**5**	**8**
B4	**9**	**5**	**14**
C1	**12**	**6**	**18**
C2	**9**	**4**	**13**
C3	**5**	**3**	**8**
C4	**10**	**7**	**17**
D1	**4**	**3**	**7**
D2	**7**	**9**	**16**
D3	**5**	**4**	**9**
D4	**9**	**5**	**14**
E1	**8**	**9**	**17**
E2	**4**	**5**	**9**
E3	**7**	**9**	**16**
E4	**6**	**4**	**10**
F1	**4**	**8**	**12**
F2	**3**	**8**	**11**
F3	**9**	**12**	**21**
F4	**5**	**2**	**7**

The table shows that all the participants made a number of responses in both the MH and EI categories. The range was from 7 to 21 responses for the group as a whole. The spread indicates that all participants gave a sufficient quantity of comments to indicate the effect of the intervention was not limited to a minority of participants.

5.33 Inter -rater reliability of coding

For any research information that requires qualitative rating, it is important to establish a good level of inter-rater reliability. This ensures that the generated results meet the accepted criteria defining reliability by quantitatively defining the degree of agreement between two or more observers.

Guidelines of what constitutes favorable inter-rater agreement is highlighted by Landis and Koch (1977), who characterized values < 0 as indicating no agreement and 0–0.20 as slight, 0.21–0.40 as fair, 0.41–0.60 as moderate, 0.61–0.80 as substantial, and 0.81–1 as almost perfect agreement. Cohen's kappa coefficient is a statistic which measures inter-rater agreement for qualitative (categorical) items. It is generally thought to be a more robust measure than simple percent agreement calculation, since **κ** takes into account the agreement occurring by chance. Fleiss's (1971) guidelines characterise Cohen's Kappa (**κ)** over 0.75 as excellent, 0.40 to 0.75 as fair to good, and below 0.40 as poor.

Two methods to test the reliability of the elicited codes were used.

5.331 Method 1

The first involved using the Cohen's Kappa methods comparing the authors coding of 50% of statements (100 in total) with the coding from an Educational Psychologist colleague of the same statements. Although there were 290 statements in total, a number were the same or very similar so were put under 1 code hence the reduced number of actual codes (N=193) compared with the actual amount of statements(N=290)

All the statement codes were not compared with the volunteer coder as (i) it would have been unreasonable to ask another person to voluntarily code 193 statements which would take several hours. (ii) the higher the number of codes compared the less need for agreement is required to achieve a higher Cohen's Kappa – potentially defeating the purpose of the exercise. SPSS was used for this analysis. Coder 1 is the author Coder 2 is a volunteer Educational Psychologist.

Table 45: Cohen's Kappa statistical analysis of coder inter-rater reliability

VAR1 CODER1 * VAR2 CODER 2 Cross tabulation

Count

		Coder2				
		Both	EI	MI	Neither	Total
Coder1	Both	18	4	4	1	27
	EI	2	24	4	1	31
	MH	0	6	16	1	23
	Neither	1	6	2	10	19
Total		21	40	26	13	100

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Measure of Agreement	Kappa	.565	.063	9.695	.000
N of Valid Cases		100			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Cohen's Kappa was run to determine if there was agreement between the two coders judgement on whether the statements made by the participants reflected a positive comment indicating change in one of the following: Mental Health, Emotional Intelligence, both, or neither of these. There was moderate agreement between the two coders K=.565, p<.000

5.332 Method 2

The second method involved asking 10 Educational Psychologists who work for one Educational Psychology Service in the UK to code a random selection of the 193 student responses. The psychologists were asked to work individually and to rate 15 of the responses. This was to gain a picture of simple percentage agreement but with the agreement occurring by chance not accounted for.

Explanation of process used

In table 46 below the author (A) rated the first response as EI. This means that the statement was coded as evidence of an impact on EI. Out of the 10 psychologists coding this statement, 6 agreed with the author fully and 2 agreed partially (by saying the statement reflected both MH and EI). 2 did not agree saying the statement reflected an improvement in MH.

The magnitude of agreement (shown as a decimal) with the author's code is indicated in the last column. There are 2 figures in the last column the first one is an 'absolute agreement figure' and the second one is a 'partial agreement figure'. For example, absolute agreement is if they only indicate what the author indicated e.g. The author said MH and they said MH. Partial agreement is, for example, if the author said Both but they said only EI then there is partial agreement only as they are not indicating that it is both EI and MH. The actual responses are shown in Table 46.

Table 46: Codes for responses provided by 11 different raters showing level of coding agreement

Key: A=Author. I.A= In Agreement

responses	EP 1	EP2	EP3	EP 4	EP 5	EP 6	EP7	EP8	EP 9	EP10	A	I.A
1	B	EI	EI	EI	EI	EI	B	EI	MH	MH	EI	.6/.8
2	B	EI	EI	B	EI	N	B	EI	MH	B	B	.4/.9
3	EI	B	B	B	MH	EI	EI	EI	B	B	B	.5/1.0
4	EI	MH	MH	MH	MH	MH	N	EI	N	B	MH	.5/.6
5	B	EI	EI	B	EI	EI	MH	B	EI	B	EI	.5/.9
6	EI	EI	EI	N	EI	N	B	B	B	MH	B	.3/.8
7	EI	B	B	B	MH	EI	B	EI	EI	B	B	.5/1.0
8	B	B	B	B	EI	MH	MH	MH	MH	B	MH	.4/.8

9	B	MH	N	B	EI	MH	MH	MH	MH	MH	MH	.6/.8
10	B	EI	B	MH	EI	EI	EI	EI	B	B	B	.4/1.0
11	EI	B	B	MH	MH	EI	EI	B	EI	B	B	.4/1.0
12	B	MH	MH	MH	MH	MH	EI	EI	MH	B	MH	.6/.8
13	B	B	B	B	EI	EI	EI	MH	B	B	B	.6/1.0
14	B	EI	EI	MH	MH	EI	MH	B	MH	MH	MH	.5/.7
15	MH	EI	EI	EI	EI	N	EI	EI	EI	EI	EI	.8/.8

Mean of absolute agreement = **0.51**

Mean of partial agreement = **0.84**

5.34 Summary analysis of statement categories

The 290 statements were grouped into themes. The following table provies a overview of how many of these were associated with MH and or EI.(some were neither) So, for example, in the behaviour category it shows that there were 29 statements which reflected a impact on EI and/or MH . So out of the 290 statements extracted from the interview 245 were coded as evidence of a positive affect on either MH or EI. The number of EI compared with MH when all the codes totaled were M=154 and EI=148

Table 47: A summary of the comments/answers given by the 24 participants with reference to MH and EI

Positive effects on the following themes;	**Mental heath**	**Emotional intelligence**	**Number of positive references**
Behaviour	✓	✓	29
Learning generally	✓	✓	12
Self-development and social awareness	✓	✓	54
Bullying	✓	✓	27
Citizenship	✓	✓	16
Friendships	✓	✓	22
Communication skills	✓	✓	21
Skills and ability for a career	✓	✓	16
Affective States	✓	✓	48
Total	✓	✓	245

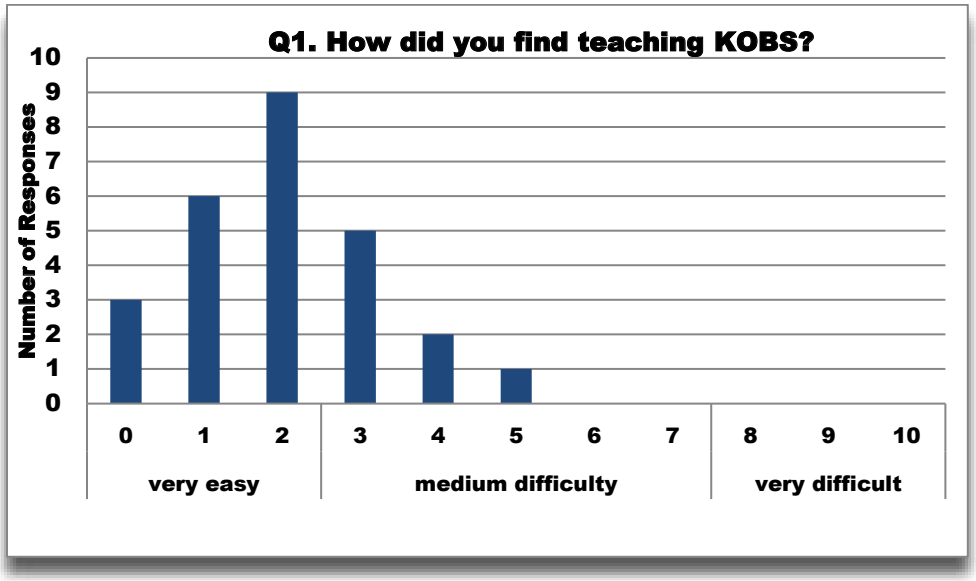
5.4 Results Part 3 from the teacher questionnaire

This section provides the results from the teacher questionnaire. The questionnaire contained questions aiming to find out what the KOBS teachers though about the program. This was an important addition to the other results being inherent to answering 2 questions of this thesis; i)Can teachers with no formal experience or training in MH and EI successfully deliver the programmes and feel comfortable to do so with minimal training? ii) Can schools act as providers of psychological support in the absence of other services?

5.41 Teacher questionnaire response analysis

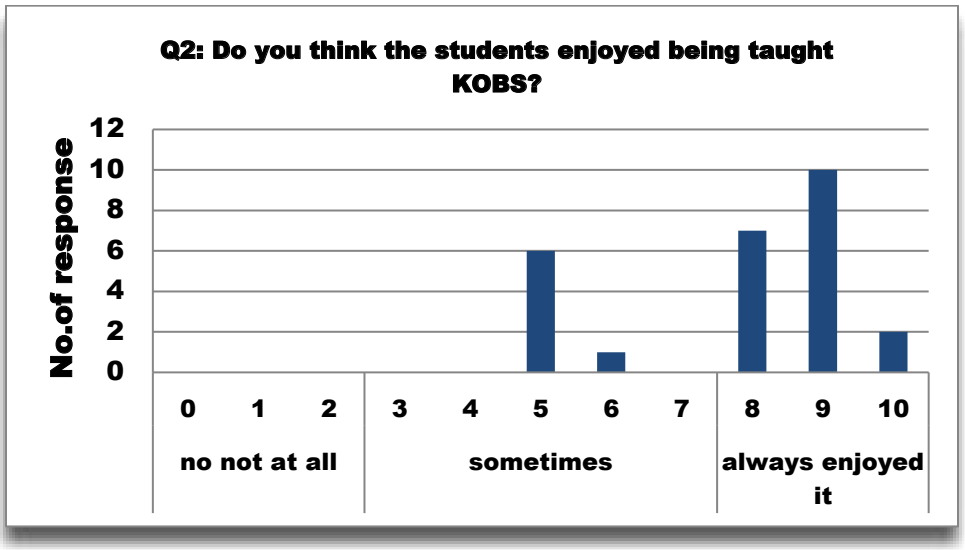
31 Teachers were asked to fill in a questionnaire (Appendix 23) which asked the teachers 6 questions about the KOBS program and their opinion of the impact it has had on the students in their school. The following 6 graphs represent their responses. A scale of 0 to 10 was used as a response measure. Each question's aim was to provided part of a collective insight into answering the research questions indicated above. Desciptive statistical analysis of the results are provided below each graph.

Figure 22:Teachers responses to question 1



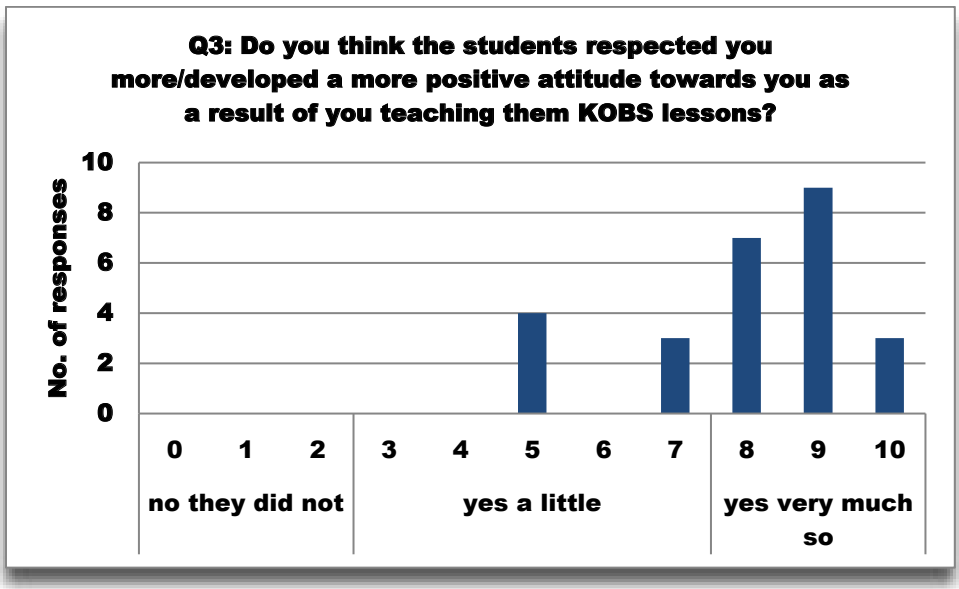
The mean score for this question was 2. 18 of the 26 (69%) teachers indicated the teaching of the program was 'very easy'. The remaining 31 % described it as of 'medium difficulty'. (Skewed towards very easy)

Figure 23: Teachers responses to question 2



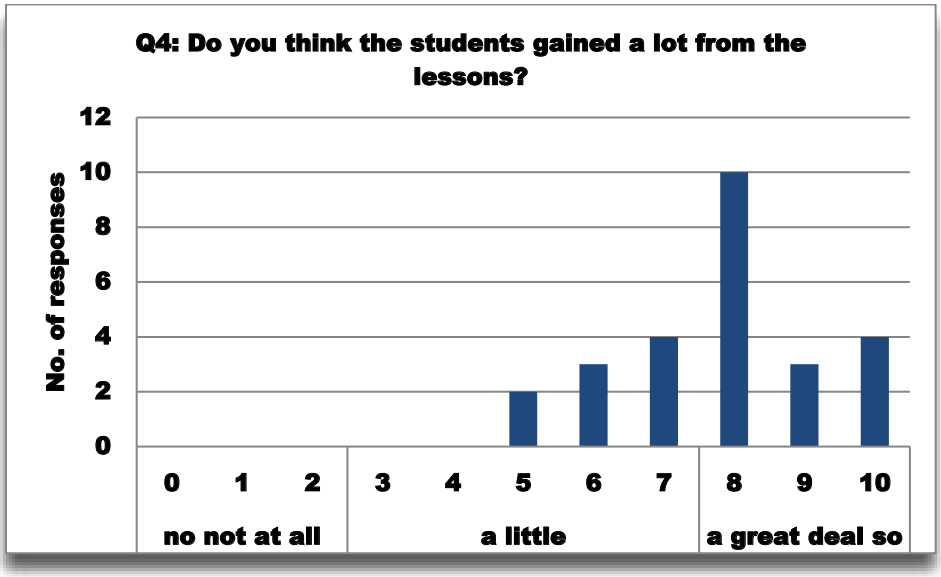
The average was value was 7.77. The majority, 19 out of 26, (73%) said that the KOBS students always enjoyed being taught the subject. 7 of the 26 (27 %) said the students sometimes enjoyed it.

Figure 24: Teachers' responses to question 3



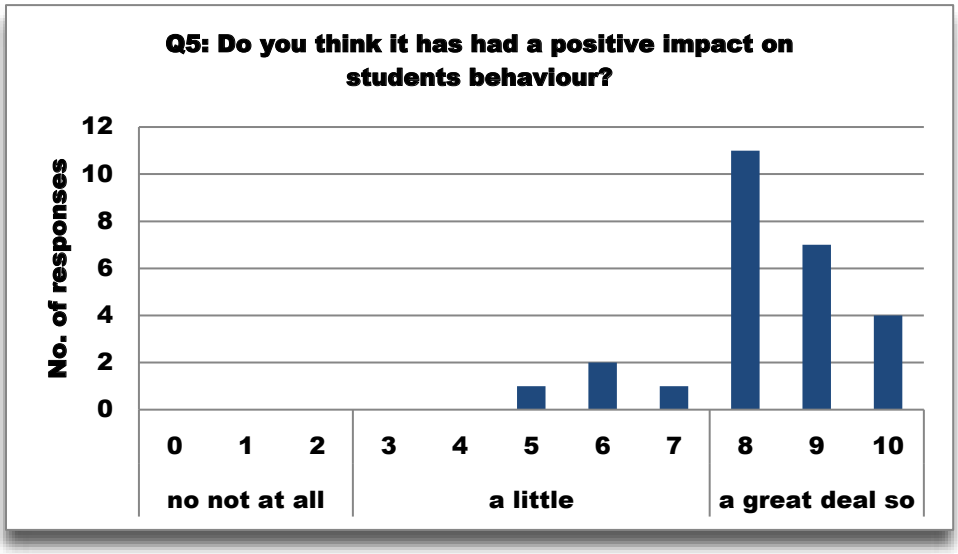
Average 7.73. All of the teachers felt that the students respected them more/developed a more positive attitude towards them as a result of them teaching the students the KOBS program. 19 of the 26 (73 %) indicating this was 'very much so'. 7 of them (17%) indicating 'a little more so'.

Figure 25: Teachers' responses to question 4



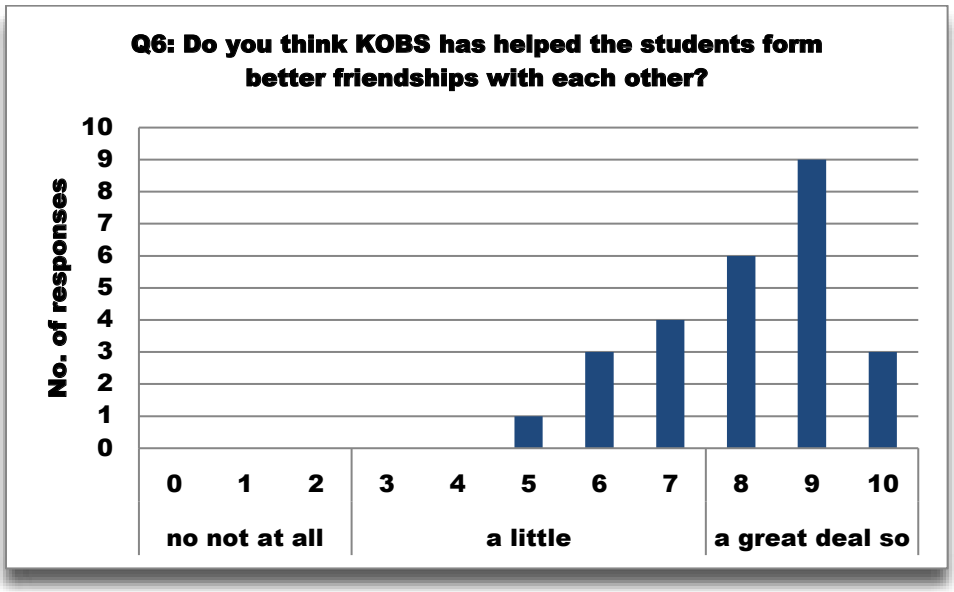
The average response was at 7.81. The majority of teachers 17 of the 26 (65%) felt that the students gained a great deal from being taught the program. 35 % felt the students gained a little.

Figure 26: Teachers' responses to question 5



The average response was 8.27. The majority, 22 of 26 teachers, (85 %) felt that the KOBS program indicated a great deal of positive effect on the students' behaviour. The remaining 4, (15%) felt it did 'a little'.

Figure 27: Teachers' responses to question 6



The average response was 8.08. 18 of the 26 teachers, 69%, felt that the program helped students form better friendships 'a great deal' the remaining 31% felt it did a little.

5.42 Summary of teacher's responses

- Results indicate a overwhelmingly positive quantity of views in response to all 6 questions.
- There were no responses by any of the teachers indicting a negative view/opinion to any of the questions asked. The majority of teachers finding the teaching of the program 'easy' which partly answers the question; Can teachers with no formal experience or training in MH and EI successfully deliver the programmes and feel comfortable to do so with minimal training?
- A favourable response to teaching the KOBS program can be interpreted as a willingness to futher engage in this type of program hence partly answering the question as to whether school can act to provide psychological support in the absence of other services.

The teacher's responses were important in this study as the question as to whether a lesson based approach could effect change, required the approach to be deliverable in a way that did not need extensive training and /or experience as this would have been a significant obstacle in the role out of a program in Northern Uganda due to additional costs and willingness of people prepared to train as KOBS teachers. It was important therefore that the approach/materials used did not deviate significantly from the traditional or familiar approach used by teachers already. Although this part of the research was fairly rudimentary, it does provide valuable information and indicators of possible further research which could be done to improve the program. For example, extended questioning about why 20% of the teachers felt the students only enjoyed the program sometimes and what 'sometimes' meant and what the issues were which led to the non enjoyment on those occasions. This could then feed into discussion about what additions/improvements to the KOBS program could be beneficial.

Chapter 6: Discussion and Conclusion

6.1 Chapter overview

This chapter contains a discussion about the findings from; i) the KEQ, ii) the semi structured interview iii) the teacher questionnaire. The findings related to previous studies referred to in the literature review chapter are discussed throughout this chapter as are the strengths and limitations of this study and its results. There is a review of the research questions and answers at the end of the chapter.

The purpose of this research was to ascertain if young people's Mental Health and Emotional Intelligence could be improved using a classroom based teaching approach. The results suggest that a school program (KOBS in this case) using lesson based activities but delivered by a cross section of 'normal subject teachers' can improve MH and EI. It can be delivered by teachers who do not need a large amount of specialist training and resources other than a copy of the program with no additional costs to the school.

6.2 The findings from the KEQ

The results from the KEQ indicate a significant effect of the KOBS program on all but one of the areas of interest examined. The full combined data looking at the effect on the IG compared with CG is probably the most useful overview in the context of the central question of this thesis. The post IG scores indicate a large effect of 0.36 with no gender differences in the full combined data apparent. These figures are indicative of a significant impact of the program compared with gains in MH and EI over the two-year period in the control group who did not receive the program. These results compare with other school based programs designed to have a positive impact on well-being, mental health and reducing PTSD but unlike KOBS, were not designed as classroom lessons as indicated in the literature review; for example, the interventions researched by Rolfsness & Idsoe (2011) and Ager et al (2011).

There was no evidence to indicate that a difference exists between genders overall apart from the 'post-traumatic stress type symptoms' category where the scores for females rose less significantly than those for males over time. This is consistent with evidence that gender can play

a role on the impact and recovery from post-traumatic stress. For example, Tolin and Foa (2006) researched trauma-exposed populations and demonstrated that although men tend to experience higher rates of exposure to traumatic events, women have a two-fold higher risk of being diagnosed with PTSD. This suggests women either react the same way but are not 'recovering' as well which leads to long term post-traumatic stress symptoms, or are reacting differently to stressful situations in the first instance which was indicated by Jin et al's. (2014) study that females and males respond to post traumatic stress and to treatment differently. Their findings suggest that the nature of the coping response to PTSD may differ between males and females. Among males, subjects with higher levels of PTSD presented with higher levels of Post Traumatic Growth. This partly answers a question which emerges from this research and could be a source of future study which is; 'Does a program such as KOBS have a greater impact on those most affected by conflict?' One might hypothesise, however, that there will be a point at which a broad-based program such as KOBS will not be very effective on people whose mental health is more severely affected by the traumatic experiences – that there may be a point at which only individual therapy and medication is likely to make a significantly positive impact of any value on the sufferer.

Linked to the subject of gender differences in response to traumatic events, whilst on a field visit to Northern Uganda during the study, the researcher was asked by a school governor for his opinion on what was being considered to be some sort of witchcraft or demonic possession of the female population of a rural all girls Catholic boarding school which was one of the 11 intervention group schools. The researcher was informed that initially one girl intermittently lost the strength in her legs and would collapse to the floor as a result. They then described many of the other girls developing the same symptoms to a point that the school management closed the school and sent the girls back to their homes. The researcher's opinion was (based on there being no medical reason for the event) that it was likely caused by mass hysteria – also known as conversion hysteria (Vuilleumier 2005). The researcher had been informed that a number of the girls had been complaining of being attacked whilst walking outside the school to the villages. There was also a lot of fear about HIV, rape, a newly emerged medical condition called 'nodding disease' which was affecting some of the children in the community and there was ongoing anxiety about the conflict returning. In the preceding decade several rural girls' schools had been attacked and a number of the girls abducted, most notably 139 girls from a nearby catholic girls'

college which was an ongoing cause of anxiety. The researchers view was that the combined effect of all these factors was that the girls may have been in a state of hyper vigilance potentially making them vulnerable to developing psychosomatic symptoms.

According to Bollas (2000), teenage girls are far more likely to experience this psychological state then male or other age groups. In a review of all reported mass hysteria events over a 10-year period, Boss (1997), indicated that it is widely accepted that females are more likely to be affected by epidemic hysteria than are males. This is relevant to this study in that the females' improvement in PTSD symptoms was lower than male which is consistent with other research in this area (Jin, Xu & Liu. 2014). This means that females are in a prolonged state of anxiety and more likely to be trigger a mass hysterias event as happened in one of the IG schools during the study. This raises a question of why female recovery is slower. A recommendation from a study Mahdi, Prihidi & Hashim (2014) into post traumatic growth in Iraqi student war survivors is that the differences between males and females, in terms of their development of resilience and Post Traumatic Growth should be thoroughly investigated.

A hypothesis is that females feel more vulnerable to threat than males and feel they have less 'defenses' then males. Additionally, is there a more prevalent cultural transference of fear taking place with females? If so what learning, understanding could be incorporated in a program such as KOBS or a revised edition of KOBS which could be helpful to females to counter this? Examining existing knowledge from Cultural Consensus Theory and Cultural Schema Theory could be beneficial in answering this question.

6.21 Variation in the effect between themes

When looking at each theme (factor) results from the KEQ separately, there is a range of effect measured by the KEQ based on Cohen's (1988) effect size. This ranged from 0.177 (post-traumatic stress symptoms) to 0.043 (Friendships). There was no effect size reported on the theme of conflict avoidance.

The variation in the effectiveness between the themes (factors) is consistent with other interventions aimed at improving MH and /or EI as post assessment indicators will normally

show variations in improvements in what is being measured as indicated in studies cited in the literature review chapter. For example, Humphrey et al. (2008) noted a positive impact in the small group work elements of the SEAL program of some interventions, but not all.

Seligman's (1998) idea of 'learned optimism', that cognitive attribution style can be taught which will have an impact on mental health, suggests that the better you learn the better the effect of the intervention is likely to be. This raises the question of how hard or easy it is to learn the content being taught and whether it is suitable for the intended audience. A focus of the researcher was to make the KOBS lessons easy to understand to include all learners and particularly those who have persisting high levels of stress who may find learning in school difficult generally, a program which was straightforward, easy to follow and prescriptive, stood the best chance of achieving these goals. Having regard to Kolb's (1984) model of experiential learning was beneficial in the production and conceptualisation and content of KOBS. Inherent to this model is the need to make the content relevant to the experiences of the individual in the context of where it is to be delivered, hence the need for local advice and knowledge of the local population and society.

Further reasons for variation of impact between themes, for example, in the friendship theme versus post-traumatic stress type symptoms theme, could include one or more of the following:

- There are more lessons which deal with particular issues for example, stress type symptoms in more lessons than friendship.
- Friendship issues were less of a 'problem 'in the first place so positive impact might be less noticeable.
- The schools in the control group may have also done some work with their students on friendship development during the intervention period (almost 2 years).
- There may have been some lessons which had a particularly significant effect on helping the students understand why they were having symptoms of panic ultimately reducing or leading to the reduction of panic.
- The 4 questions relating to the post-traumatic stress type symptoms ask the students about sleep, panic attacks and unpleasant physical sensations which are likely to be disturbing for the individual, so the lessons providing explanations and supportive

information about these issues may have been particularly interesting and helpful to them.

The results from the questions asking about improvement in conflict avoidance didn't indicate a statistically significant greater impact in the IG compared with the CG. This was the only theme (factor) that did not show a significant difference due to the intervention between the IG and CG. There could be a number of reasons for this, for example, as children get older they naturally become more socially responsible and wary of disputes with one another and/or the lessons did not have the desired impact due to poor design/content. In addition, the three questions in the KEQ associated with this theme below are asking about knowledge of how to avoid conflict and what situations can cause conflict.

16. Do you know how to avoid fights or arguments from starting?
27. Do you know what situations can cause conflict/fighting?
28. Do you know what people can do or say to help prevent conflict /fighting?

The questions don't ask whether the person feels they have a greater capacity to, or better able to avoid conflict, only whether they know how to or not. This may be an important questioning omission/error and another potential reason for the lack of difference and hence a limitation within this study. The lessons themselves did intend to provide children with alternative thinking strategies to help reframe potential threats into non-threats unworthy of an aggressive response. For example, a lesson on aggressive, passive aggressive, assertive and passive responses.

There were improvement's overall for the two-year period for the control group as well as the intervention group in their MH and EI, although as stated, there was a significantly greater improvement for the IG compared with the CG. There were improvements in all the factors for the CG apart from self-esteem. The level of improvement in overall EI and MH for the CG although seemingly small by comparison to the IG, does not indicate whether it was very noticeable or significant to the CG. This would have been worth following up, as if deemed sufficient, it may therefore render the need for a program such as KOBS less important.

History provides examples that after a trauma such as war, society will start to recover but do psychological wounds recover over time? Halevi, Djalovski, Vengrober & Feldman's (2016) conclusion from a longitudinal study into the metal health of children affected by repeated wartime trauma continued to suffer poor mental health into adulthood suggesting the need for early intervention. They conclude that time does not heal early onset chronic stress naturally. Ljungman et al's (2015) study showed that for parents of children who died of cancer or had developed cancer, PTSD symptoms decreased significantly for a short period but then leveled out leaving a sizable percentage of parents reporting PTSD symptoms (20% for mothers and 35% for fathers) 5 years after the diagnosis. Based on these studies the reliance on time to heal rather than an intervention would be unwise due to the likely negative impact on MH of the trauma which could be alleviated to a degree with an intervention designed to help.

6.22 The impact of the intervention on MH compared with EI

Whist comparing the effect of the intervention on the IG, an analysis of the impact on MH compared with EI was undertaken. The intention of each KEQ question was to ask about an aspect of either MH or EI. So, by looking at the data from the two sets of question answers, an analysis could be undertaken. The pre-intervention data indicated slightly higher EI scores than MH scores with rate of improvement over time almost identical, so there was no significantly different effect of the intervention on one or the other. This raises the question as to why the EI score was higher than the MH score and remained higher over time, a reason being that because they are two separate constructs a comparison is not valid. Another possible reason may be that the MH of a person, as indicated in the literature review, is vulnerable to traumatic events of the nature experienced by exposure to war, but with limited evidence that EI is impacted. For example, there are a number of studies which indicate that experiences of war which includes violence, killing or torture and the loss of family, friends and homes adds a significant risk of psychological distress and the development of mental disorders (Rousseau, 1995). Hodes (2000) estimates that up to 40% of young refugees may have psychiatric disorders, mainly post-traumatic stress disorder (PTSD), depression and other anxiety-related difficulties. Although there is ample evidence of the effect of war/conflict on MH, the specific impact on EI remains unstudied. However, there is some evidence that stress impacts on EI (Thompson 2005).

Salovey (2000) identified that mental health problems can often be caused by an individual's difficulty in managing their emotional states. For this reason, the intelligent use of emotions is very important when dealing with and adapting to the impact of events and thoughts on the emotional state. This is expanded on by Schutte et al (2007). They consider that EI has a positive effect on mental health by allowing people to reduce the intensity and frequency of negative moods caused by adverse everyday life events and by protecting people from stress through maintaining a positive mood. The results indicate a proportional rise in MH and EI with no significant differences in those gains. These results support the notion that MH and EI, although qualitatively different constructs, are closely associated as indicated in the above studies. This suggests an emphasis on the need to focus on both aspects simultaneously in an intervention to gain the most positive effects.

6.3 Findings from the semi structured interview

During the interview and following data set analysis, similarities were noticed in the participant's responses compared with the list of social functions which youth questioned in the Annan (2006 and 2008) studies reported as beneficial. This is also consistent with the Haroz et al. (2013) study who investigated the relationship between pro-social behaviour, perceived social support and improvement in depression and anxiety symptoms. That study indicated that those youth who were socially adept experienced higher levels of improvement in their levels of anxiety. This also was the case for symptom of depression. A study by Farhood et al. (1993) indicated that the disintegration of social networks was a greater predictor of adolescent depression than the actual war related events themselves. This suggests that damage to a person's emotional/psychological state may be of greater importance than one might assume and could be on a par with threats to the physical self in some instances.

Evidence for this could be drawn from reports from people who self-harm; that adolescents report the reason for self-harm is primarily an expression of intolerable psychological pain as indicated in a study by Scoliers et al. (2009).

This consistency of youth's views about what is beneficial to recovery helps to prove a template of needs/desirable circumstances which when fulfilled are likely to lead to positive MH and EI. So, in the context of a post war situation in Northern Uganda the focus on KOBS lessons aimed

at building strong social relationships and friendship networks was justified and appeared to pay off in terms of contributing towards improvement in MH and EI.

6.31 Thematic analysis and coding

All the participants made a number of responses in both the MH and EI categories. The range was from 7 to 21 responses for the volunteer group as a whole. The spread shows that all participants gave a sufficient quantity of comments to indicate the effect of the intervention was not limited to a minority of participants. One could argue that in the absence of a very thorough exploration of exactly what the participants meant by their responses, there is a lack of specificity and the analysis may not do the comments justice, that a latent thematic analysis approach would have been more appropriate to use. However, due to the large volume of responses extracted from the interviews such an approach would not have been practical.

It would be incorrect to argue that the amount of responses in each category reflects proportionally the impact the program had on the participants, however, one could hypothesise that there will be some relationship between the amount of responses and the impression the program made on the students. For example, the self-development and social awareness theme had twice as many responses as the average for the rest of the other categories. An explanation for this may be that the questions themselves and the interview questions inadvertently created an imbalance in the opportunities or triggers prompting the participants to communicate something about this category. However, despite the researcher's line of questioning there may have been a tendency to want to communicate the impact of self-development and social awareness above all else based on the large volume of responses.

The coding system used by the researcher to identify if the comments were evidence of an impact on MH, EI, both or neither was evidently a reliable process based on commonly accepted research standards. As mentioned above, the in-depth analysis of meaning of all the statements with the participants was not feasible.

6.4 Findings from the teacher questionnaire

The teacher's responses provided a useful insight into how the program and its impact were regarded by the teachers. The introduction of an intervention which does not have the interest and motivation of those delivering it would likely lead to a less than fully successful implementation and benefits to the group receiving the program. The teachers had volunteered to teach the program based on prior information provided by the researcher and a day of familiarisation/training. The teachers who came forward were likely naturally inclined to take part as they were not directed by school management. This is important as indicated by Roth et al (2007), that teachers' self-reported autonomous motivation for teaching promoted students' self-reported autonomous motivation for learning and increased teacher satisfaction.

All the teachers felt that the students respected them more/developed a more positive attitude towards them as a result of their teaching the students the KOBS program. This suggests that supportive relationships could be nurtured and developed if student to teacher attitudes are good, the benefits of which are indicated by Loar and Wolmar (2002) that supportive relationships with teachers are important predictors of the psychological well-being of traumatized children.

6.5 Additional Strengths and limitations of the research process

The approach used in the KOBS intervention differs from interventions such as Ager's (2011) PSSA approach in primary schools which involved structured activities involving drama, movement, music and art. It is therefore a new type of intervention in the field of improving MH and EI in schools in war affected areas.

The improvement in EI as a result of participating in the lessons partly supports Goleman's (1996) theory that we are not born with emotional competencies but have to learn them, that they can be worked on and improved to achieve better performance. The results also compare with trials that found programs such as the Penn Resiliency Program to be effective in helping buffer children against anxiety and depression, (Gillam et al. 2007).

6.51 The KEQ

The questions in the KEQ reflected questions found in established questionnaires that assess MH and EI. The questionnaire contained language familiar to the students, which was not conceptually complex or contextually and culturally unfamiliar. The positive impact of the KOBS program overall was evident in the data collected by the KEQ. The factor analysis of the KEQ to assess internal consistency reliability yields sufficient correlations within identified subsets and as a whole to assume its reliability. Combined inter-rater reliability and test-retest reliability were also good for all subsets except for the 'understanding peoples' behavior'.

As indicated earlier, the inclusion of all the data from the questions seemed appropriate; however due to limited instrument reliability and validity checks on wider populations, there is cause to be cautious against interpreting these results as being generalisable to other population groups. However, the main research question asks whether it is possible to improve MH and EI using this type of intervention which has been shown to be the case.

There was a set of questions (those labeled various) as well as those in the category of 'understanding others behaviour' which the researcher was not able to factorise into easily identifiable themes, so any analysis of effect would have to be on a question by question basis. However, these questions were asking about constructs associated with MH and EI and the data from these questions showed a significant effect of the intervention on the IG.

6.52 The interviews

The interviews provided information which was consistent with what other research indicates are supportive and beneficial mechanisms facilitating the development and maintenance of positive MH and EI in young people. Allowing the participants to be together in the interview appeared to help the interview process resulting in a variety of responses from the participants who appeared relaxed and willing to communicate their thoughts. The thematic coding process undertaken benefited from the Braun and Clarke (2006) method which is a rigorous approach to extracting meaning utilising advice as suggested by "*the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon"* (Boyatzis, 1998 p. 63).

This research benefitted from two phases of analysis of the data, the first to define themes such as 'behavior' and 'friendship' the second to identify if what the participant was saying could be taken as evidence of a positive impact on their MH and/ or EI. It does not state the degree of impact – which is why a mixed methods approach used in a scaled questionnaire was used as a quantitative method, so any interpretation from the interview needs to be cautious about the extent to which the comments proved evidence of magnitude of impact. However, the interviews did provide the researcher with face to face encounters, which allowed him/her to clarify and confirm the meaning of interviewees' statements and ask for clarification with the aid of the translator where needed. Silverman (1993) refers to this as 'respondent validation'. The researcher was also able to identify to a degree, the depth of conviction of the message the participants were expressing. This is not a very reliable way of examining effect as individual differences between people impact on the 'passion' behind their voice and mannerisms but nevertheless it did provide a useful insight into the thoughts and feelings of the participants about the impact of the intervention either negative, neutral or positive.

The participants who volunteered to take part in the interview may have been positive about KOBS and therefore volunteered as they liked the program. However, out of the participants asked approximately 80% of the IG in each school volunteered when asked so they then had to be chosen randomly. The researcher did not ask the volunteers why they volunteered or why the non-volunteers did not volunteer. The interview showed that the participants verbalised an effect which was related to constructs associated with MH and EI as presented in the literature review of this thesis. The amount of effect is unknown so claims of a positive effect need to be cautiously interpreted also whether these benefits last for any length of time.

6.53 The teacher questionnaire

The teachers were almost unanimously in agreement that the program was easy to teach which was evidence that it fulfilled the intention that it could be deliverable in a way that did not need extensive training and /or experience as this would have been a significant obstacle in the role out of a program in Northern Uganda due to cost. A concern expressed by Greenberg et al (2005) regarding the failure of the long-term implementation of piloted programs which are complex, expensive or need a large resource to sustain them.

The questionnaire was simple but effective in gathering data in contributing to answer the main and secondary questions of this thesis. Analysis of the questionnaire was straightforward and resulted in descriptive statistics which were consistent with the epistemological and ontological position of the researcher.

A question arises as to how much of the positive impact of the KOBS lessons was a result of the improvement in relationship between teachers and students rather than the content itself, although this could be considered a secondary effect of the intervention and thus due to it. There were several references to teachers using positive language which again could be considered evidence of overall improvement in relationships. However, the vast majority refer to content and personal and social development rather than specifically teacher/student relationships. This suggests that relationships played a role but are not a primary reason for improvements in MH and EI. This research has not gone into much detail about what the teachers' views were of the program and their role in it. The importance of a positive relationship existing between therapist and client is well documented; however, the relationship between a teacher who normally delivers a 'standard' curriculum subject suddenly delivering a 'subject' quite different aiming to improve MH and EI which has a therapeutic effect is worth researching as an area of interest in its own right. What is of interest in terms of further research in this area is;

- The optimum skills and knowledge needed by the teacher - would further training have made a greater impact even though it was designed as a 'pick up and go' instruction manual?
- What are the students' views of what is the most or least beneficial to them in creating a supportive therapeutic relationship with teachers?
- What was the motivation for these teachers to volunteer- for example, was it primarily a desire to develop their professional skills or more a desire to help the children who they knew had suffered considerably as a result of the 2 decades of conflict? Also, does one attitude or position lead to a better effect in terms of the therapeutic elements of the program?
- What was it about the content of KOBS that was beneficial from the teacher's perspective- a more in-depth analysis would be useful of their thoughts.

6.6 Further considerations to interpretation of all results

Although there is a significant difference in EI and MH scores between the IG and CG over the intervention period, it could be that the scores at pre-intervention were already positive, thus the sample are already positive in terms of outcomes, e.g. self-esteem. All we have shown is that there has been even more improvement. The test doesn't indicate for example, that the participant's MH and EI improved significantly from a state of clinical depression/anxiety to a non-clinical state.

The researcher did not know what experiences the CG had or did not have through the 2 years. So, for example, whether they were or were not experiencing some other program or experiences as a group which may have impacted on their MH or EI either positively or negatively. So again, the control of all variables which could be impacting on results of this study was not possible, so this is a question left open for that reason

The researcher's epistemological and ontological position is questionable in terms of the philosophical argument about what can be known and what is there to know. This is no different from results from any research as the readers own philosophical position regarding what can be known and what there is to know may contrast with that of the researcher and thus lead to a question about the validity of the results. The researcher therefore can only assert the implications of the results as they have been shown in the context of the research methods used. What can be said about the results of this study is that the intervention produced an effect on the IG in a number of respects that differed to the CG. This is a fact, so should satisfy a realist or objectivist stance. However, what that difference means is not a fact but open to interpretation much like the theories and commonly held beliefs of what MH and EI are.

6.7 Discussion summary:

The question as to whether school lessons devised using psychological theories and therapeutic approaches positively impact on the mental health and emotional intelligence of young people affected by war including ex-child soldiers in Northern Uganda has been answered in that the lessons positively affected MH and EI to a significant degree compared with a control group as indicated using qualitative and quantitative research methods. The study showed that the program was successfully applied in a post war situation to children affected by that conflict. The

use of CBT approaches was a significant component in the conception of ideas and activities in the KOBS lessons. This in some ways reflects Sonderegger et al (2011) findings who carried out a study to measure the impact of a cognitive behavior therapy (CBT)-based intervention.

The results of gender differences in response to the intervention showed there was no difference in effect apart from the scores from the KEQ measuring improvements in post-traumatic stress type symptoms where male scores improved significantly more than the improvement made by females.

The KOBS lessons were able to be taught by 'generic' teachers with minimal training. On a cautionary note regarding interpreting these findings, the degree of success is not known nor known whether teachers reported the teaching as being easy were providing a wholly accurate picture of what it was like to teach the lessons. There is considerable research evidence that self-reports often bias data. For example, self-reports of five of the six constructs associated with socially desirable work behavior including job performance that were examined in a study by Donaldson & Grant-Vallone (2002) were affected by an employee's propensity to give socially desirable responses. It is arguable that, saying something was easy to deliver, does not mean it was delivered well; that to do something really well should not be easy, it should involve some serious thought and effort to obtain the maximum effect.

The question as to whether a large number of students can benefit for a relatively low cost cannot be fully answered just by looking at the results. The cost of the intervention per child in this study minus any 'development costs' which is what it would cost to implement the program in the first instance was calculated. The cost per child now for a population of approximately 5,000 children in the same region would be in the region of £5 per child for the 2-year program. Is £5 excessive and unaffordable or great value? This is a subjective judgment and depends on context.

This study produced evidence that schools can act as providers of psychological support in the absence of other services. This question arose following a literature review of school based interventions for children who had experienced trauma. For example, Rolfsness & Idsoe (2011) suggested that school professionals can be successfully utilised in providing school-based

intervention. So, in places in the world where mental health services are limited or nonexistent, the role of a school in provided psychological support is more important.

It is important to note that the researcher purposefully chose a lesson format and delivery requirement for the intervention that was similar to a typically taught lesson in a Ugandan senior school. It was delivered in a standard classroom with the whole class present (on average 70 children), all children seated at their tables, one teacher, one chalk board, a 45 minute long lesson, an objective, content, plenary and homework all similar to a standard lesson. This was done to try to take into account that teachers were not trained as therapists; they were trained to deliver a curriculum in a standard way; specifically, in their own subject area. As a result, the lessons were all designed with a format of teacher talk-activity- analysis-teacher talk- activity-analysis to take into account experience and lesson format familiarity issues which if not adhered to could have jeopardised the effectiveness of the intended outcomes. The view was that the intervention would be likely to be more successful if the teachers were not taken out of their comfort zone but given different content to deliver using the skills experience that they had in a familiar lesson delivery style. In order to suggest that schools can be therapeutic deliverers of interventions, there needs to be a consideration of the potential limitations and strengths of opportunities that schools and teachers can provide young people who are in need of therapeutic input to support their development.

6.8 Conclusion

The results from this study supports a number of researchers' proposals that schools can provide a highly beneficial input into children who otherwise may have very limited or no access to psychological support or input to help them with very complex, negative and enduring psychological difficulties as a result of war related trauma. It has provided evidence to indicate that lessons taught by secondary school teachers who have a variety of other subject specialisms with minimal training working in a standard classroom in a standard 45 minute session using familiar delivery approaches can work effectively to improve MH and EI in a highly vulnerable population of young people in war affected area of the Northern Uganda. The results indicate that this type of program could also potentially be delivered in other contexts either where young people are suffering through the adversity of war or other trauma induced situations such as

natural disasters. It can be used with large groups of young people and is a financially economical way of addressing young people's MH and EI.

Making assumptions about generalising these findings has to be done with caution. The view is that an inherent strength of the programme is that it was designed for the cultural and situational context by a psychologist with many years of teaching experiences creating successful lesson plans as well as extensive experience advising schools on teaching approaches and lesson delivery methods as a psychologist. A programme intervention which seeks to have a similar effect would likely have to rigorously apply the same or similar approaches and techniques of the KOBS intervention to justify a fair replication in a different context.

6.81. Additional questions worthy of further research

There are a number of questions which arise as a result of this study which would be worthy of further research in addition to those indicated above in section 6.53

1. What are the long-term benefits, if any, to MH and EI from being taught these lessons?
2. Does the program benefit academic performance in other subjects? The hypothesis being that improved MH and EI lead to greater learning receptivity and attainment.
3. Does the data suggest there are significant differences of the impact from individual to individual? If so a research question could be; what variables affect the impact of the program from individual to individual?
4. For whom is this type of intervention most effective, for example, people with the poorest MH and EI compared with the average or people with moderately low MH and EI levels,
5. Is there a point at which school based programs are ineffective due to the severity of MH difficulties or lack of EI?
6. How does school culture and societal culture regarding the importance of MH and EI impact on an interventions effectiveness? For example, does whether a curriculum/program is or is not officially examined by a school resulting in certification, affect students interest and participation?

This intervention and research of its impact was important for a number of reasons one being that the vast majority of war affected survivors experience low grade long lasting mental health problems (Mollica 2006) so a program of this nature which does not require a treatment package

of medications and clinic based therapeutic input may be beneficial to a large section of the affected population. This has implications for schools, organisations, professional groups and governments who recognise a need for improvements in MH and EI as it provides an additional option for an intervention which had previously been untried or tested.

6.9 Implications for Educational Psychology nationally and internationally

This study has provided valuable evidence that applying psychology and more specifically educational psychology in the field to create a tool which supports a large and highly vulnerable population is possible and effective. It has shown that with careful design and planning, tools can be employed effectively by teachers with no prior experience in delivering therapeutic programs. This can be carried out in a basic classroom environment via a lesson by lesson format, requiring no additional resources other than the program itself and a chalkboard/whiteboard which are the only items which are normally guaranteed to be available in a conflict or post conflict situation in the developing world where money and resources are likely to be scarce. It shows that there should be no reason why psychologists cannot negotiate barriers in seeking to apply psychological knowledge in situations which at first seem to lack the essentials for employing a resource /program which can positively impact in MH and EI despite potentially adverse circumstances.

Within the UK, schools are currently faced with integrating groups of refugee children from war affected areas. Local Educational Psychology services would be advised to develop their knowledge of the likely impact of the traumas some of the children will have faced when addressing their psychological needs and would be advised to recommend a program such as KOBS as a first line (Tier 1) universal intervention to schools based on the findings from this study.

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KOBS 32

OBJECTIVE: To know what our human needs are and to identify the ability we have to satisfy them.

ACTIVITY 1

20 minutes

Tell the students that our immediate physical needs which are essential to our survival are as follows:

(Write these on the blackboard for students to copy)

- Air to breathe.
- Water to drink.
- Food to eat.
- Sleep.
- Exercise.
- Shelter.

Ask the student to raise their hand if they can think of anything to add to the list.

Tell the students that linked to our physical needs are our emotional needs which, if not met, can lead to mental health problems.

Write these on the board for the students to write in their books:

- Security - a safe environment which allows us to develop fully.
- Attention - from someone else (received) and opportunities to give attention.
- Control - a sense of having some control over our lives.
- Love - having some deep emotional connections to others.
- Community - feeling as if we are part of a larger group.
- Friendship - being close to someone to help support and share and enjoy experiences.
- Status - feeling that we are important and have a place in our family school /community.
- Achievement - having an awareness that we have and can continue to achieve things.
- Meaning and purpose - knowing what we are doing and why we are doing it.

ACTIVITY 2

15 minutes

Write the following questions on the board.

- Ask the students to get into pairs. They can ask each other the questions.
- They can write the questions and answers in their books.

Their answers are evidence of SUPPORTING FACORS in their life

This means that they are situations, people, opportunities, freedom to help satisfy emotional needs.

1. Who do you get attention from in your life?

   Make a list. For example, Parents, Friends.

2. What things in your life do you have some control over? Things which you can influence and change if you need to.

   For example, your school progress, what you do in your spare time.

3. Which people in your life do you have love for?
   Family, friends?
4. Do you feel part of a community?

   For example, part of the village or town, a church?

5. Do you have friendships?

6. Do you feel important to others, who are they?

   For example, friends, family, god.

7. Have you achieved things in your life?

   For example, passed exams.

8. Do you understand why you go to school and what the purpose is?

REVIEW

Say to the students: Now that you know what is important to keep you mental heath good is it possible for you to try to make positive changes?

For example:

- Can you make more effort with your friends?
- Can you help your community more?
- Can you help others in need, for example, with some advice?

HOMEWORK

When you are feeling sad, lonely or upset try to think about your supporting factors and use them to help you.

Appendix 1 continued

KOBS 33

OBJECTIVE: To identify which human social and emotional (mental) needs you have and how to make positive changes to these.

ACTIVITY 1

25 minutes

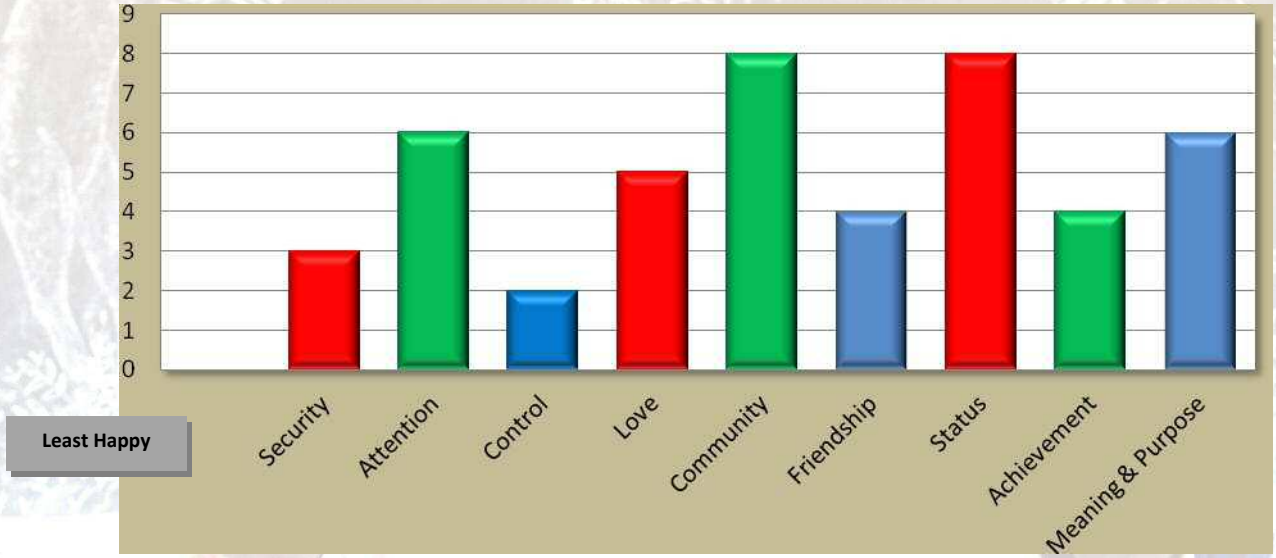
Inform the students that this lesson is a follow on lesson from last weeks on human's physical and emotional needs.

Tell the students they will draw a graph like the one below showing which **social and emotional needs** they feel the most happy with. Remind them what these needs are based on last weeks lesson.

- Draw this graph on the blackboard for the students to see. They will not copy it exactly as they must **draw their own** based on what their emotional (mental) needs are like now. So, for example, if they feel that they need more **attention** at the moment then they would give it a low rating. (1, 2 or 3?) or If they are very satisfied with the amount of attention they are getting from family and friends at the moment then they would give it a high number (5, 6 or 7?)
- Below is an example graph of how the person writing this KOBS program felt at the time he wrote this lesson.

Graph of Stevan's social and emotional status

Most Happy



Tell the students the following is a verbal description of what the graph is showing

Description of the emotional (mental) needs from the above graph for STEVAN

Stevan feels that he is in a very good community and feels very good about what position he has in his work and with his family. He gets good attention from people and has a good sense of meaning and purpose in his life. He feels quite well loved. He has an OK amount of friends and has achieved fairly well so far in his life. He doesn't feel he has much control over the future as the security is not very good but is OK.

- Now ask the students to draw their own graphs.
- Ask them to get into groups of 2 and discuss their graph with their partner. Ask them to talk about anything they can do to get higher ratings on the graph.
- Ask them to write a description like Steven's above for **their** graph.

ACTIVITY 2

15 minutes

Read out to the class what STEVAN said and did to help him improve his emotional health.

I started talking more to people who I thought would be friends and I began getting more attention from people. I read about things that interested me and thought about how good it would be to get a good education that would improve my future job chances. This helped with meaning and purpose in my life. I started showing more love and caring for my friends and family and they started doing the same for me. I looked around me more and discussed

security and hope for the future. Many people said they were feeling good about these things so I though it would be better if I stopped being so fearful because of what happened in the past . 'The past is over now' I said to myself.

REVIEW

- Say to the students –'now that you know what is important to keep your social and emotional health good is it possible for you to try to make positive changes'? discuss the following example questions with a group of 3 others in your class.

For example:

- Can you make more effort with your friends?
- Can you help your community more?
- Can you help others in need, for example, with some advice?

HOMEWORK

When you are feeling sad, lonely or upset try to think about your emotional needs which are strong and use them to help you.

KOBS 31

OBJECTIVE: To be able to discuss the causes of violence and understand how to create peaceful solutions to problems.

ACTIVITY 1

15 minutes

Tell the students that this lesson is a follow on from last week's lesson on causes and prevention of violence.

Write the following on the blackboard. Ask the students to **discuss the following questions in groups of 3 or 4** and write their answers in their books. They do not need to write down the same things as the people in their group.

1. What ways other then violence can people, counties, tribes, solve their problems?
2. What normally happens to people /groups/ armies that engage in violence?
3. Do you think that humans will ever be able to live on the planet without guns or other weapons of violence?
4. Do you think that if a person is exposed to violence through seeing it in real life, or viewing it on a film/TV screen will cause them to become more violent or less violent themselves?
5. Some people think aggression and violence are the best ways to sort out a problem. Discuss if they are right or wrong and say why.
6. Some people think talking is the only way of solving a problem. Discuss if they are right or wrong and say why.

ACTIVITY 2

20 minutes

On the next page is a flow chart. Draw it on the blackboard. It shows how a small problem resulted in a war with many dead. Talk through the events in the flow diagram with the students.

Now tell them they have to draw their own flow diagram with the same problem in the first box. Instead of the problem resulting in war the promlem results in a frienly peaceful soloution whare maybe faremes become good friends! They do not have to use the same amount of boxes used in the example. But they must give a short account of events / thoughts in each box which results in a friendly peaceful solution.

FLOW CHART OF EVENTS

Farmer 1 discovers that another farmer who lives near him (Farmer 2) is using his land to graze his cattle

He tells some of his relatives that this is bad for him as he thinks farmer 2 will want to claim some of his land

The relatives decide they will go to farmer 2's farm at night and steal a cow kill it, and share the meat as a punishment

Farmer 2 discovers what has happened and gathers all his relatives. They seek revenge by setting fire to his dwelling but they don't know that a young child is trapped inside

Some of the relatives of Farmer1 and 2 are from surrounding villages. They are very upset and begin attacking each other

Farmer 2 relatives collect many weapons and attack Farmer1 relatives who also are ready with weapons. Many are killed or injured.

The fighting continues and spreads as more people are killed. Two armies are formed. There is now war in the whole district.

REVIEW

Ask the students if they can see how arguments and conflict can start and end up very serious consequences unless those involved take a peaceful approach.

HOMEWORK

Look for evidence from history where small argument shave resulted in war. Could they have done something different?

KOBS 36

OBJECTIVE: To further develop an understanding of positive human qualities and how useful they can be.

ACTIVITY 1

10 -15 minutes

Write the following table on the board. Explain what each of the positive qualities are you can give examples to the students or put them into context by explaining a situation involving the utilisation of these qualities. Now ask the students to copy it and write the opposite negative qualities on the right hand column. If they have difficulties give them some help.

Positive Quality	Opposite negative quality
Hope	
Determination	
Faith	
Honesty	
Friendship	
Self belief	
Love	
Cooperation	
Problem solving	
Tolerance	
Patience	

ACTIVITY 2

20 minutes

Tell the students that half of them are going to write a short story where the characters are showing positive qualities. The other half of the class will be writing a short story where the characters are showing negative qualities.

Ask the students to get into pairs to discuss and create ideas for the story. Now assign half the students the 'positive quality' story. And the other half the 'negative quality' story.

Tell the students the story can be about anything as long as their examples of some of the above negative or positive qualities in their stories.

You can read them the following examples:

Anna's Story (Positive qualities)

Anna was determined to get good exam results this year. Her hope was to be able to get to university and study Architecture as she liked looking at buildings. Four days before her exam she fell ill with malaria. Her head was aching and she had trouble reading. She called her friend Christine and Christine came around with her workbooks. '*I know how to get around this problem*' said Christine. '*You can lie down and relax and I will read your lesson notes and we can learn together'*. Christine had to read slowly and repeat a lot of what she was saying because Anna was not feeling well but Christine was very patient with Anna. Both girls knew that they could overcome this challenge and kept trying to help each other. After a few days when she had taken the malaria medicine she was feeling better and ready to take her exams. She thanked Christine for her help. Christine was true friend. They both did very well in their exam.

Explain to the students that the following qualities were shown by Anna and Christine.

Determination. Hope. Friendliness. Self belief.
Cooperation.Love. Tolerance. Problem solving. Patience.

Michaels's Story (Negative qualities)

Michael loved football. He took his ball out and played with the children near his home nearly every night after school. One day the ball burst and Michael was so upset that he went in his house and wouldn't come out to play again. He couldn't see why he should play anything anymore now that his ball was broken. Even when he went outside many of the children didn't want to play with him because he no longer had a ball. They went off to play other games without inviting Michael. Michael's father suggested that he should ask some

of the other footballers to provide 500 shillings each to pay for a new ball for everyone to share but Michael didn't like that idea. Michael's sister said that he should think of some other activity that would help develop football skills which he could invite other children could do that would help their balance and speed. But Michael didn't like that idea either and told her to stop making stupid ideas. Michael was unhappy and couldn't think of anything to help him with his problem.

Explain to the students that the following negative qualities were shown by Michael.

Lack of determination intolerance problem creating Hopelessness
Lack of self belief Uncooperativeness unfriendliness

Now ask the students to begin their stories

When they have finished ask them to read some out and explain what negative or positive qualities are being described.

REVIEW

Ask the students if they are aware of how important it is to try to use positive approaches / attitudes / qualities in their lives?

HOMEWORK

Tell the students to use their positive qualities as much as possible and see the effect this can have on themselves and those around them. If they haven't finished their stories they can do so at home.

Appendix 3. KOBS program lesson titles

Year 1

Theme 1. Self-esteem and friendship building

1. To be able to identify what makes a good friend.

2. To be able to talk to others about what we think about friendship and develop an awareness of others views on friendship

3. To become more aware of my interests and share these with others

4. To be able to identify our own and others personal qualities

Theme 2. Thinking feelings and behaviour

5. To understand that thoughts affect feelings and those feelings will affect my behaviour.: *thoughts = feelings (emotions) = behaviour*

6. To know I can have some control over my feelings

7. To understand how feelings might affect our body sensations our body language and our voice

Theme 3. Conflict avoidance and conflict resolution

8. To understand what conflict means and when how and where it can occur

9. To identify the different ways people react to conflict situations

10. To be able to find a good way of solving problems and conflicts

Theme 4. Motivation and goal setting

11. To know what motivation is and what motivates me

12. To identify what motivates us.

13. To understand what human qualities are needed to overcome bad events in our lives

Theme 5. Understanding ourselves and others

14. To be able to recognize and talk about the things which are important to us in our lives (our values). Also, to be able to listen to others values

15. To understand what makes other people feel happy, Sad, angry or fearful.

16. To understand that we often have different feelings about the same situation. Also, I will understand that people might behave differently to each other even if they have the same feelings.

Theme 6. Dealing with bullying

17. To be able to recognize when you are insulted or bullied/put down and have some strategies to deal with it.

18. To know what bullying is and why some people bully

Theme 7. Dealing with worries and stress

19. To know what to do if I have a worry

20. To know I can have some control over my worries and to be able to offer advice to someone with a worry.

21. Recognizing when to balance your worries with nice thoughts

22. To be able to tell when I am having a negative thought which could be bad for me and change it, so it is not so bad

Year 2

Theme 1. Self-esteem and Friendship building

23. To recognise when I should feel pleased and proud of myself.

24. To know the reasons why people make friends and how this can happen.

25. To identify our interests and skills so that we can make good choices about the future

Theme 2. Thinking feelings and behaviour

26. To understand that the thoughts you carry around in your head affect your mood

27. To be able to identify what triggers emotional upset and what can help calm us down

28. To become aware of things which will help us improve our mental health and well being

Theme 3. Conflict avoidance and conflict resolution

29. To be able to identify conflict situations and develop skills to prevent conflict from starting

30. To understand more about the causes and prevention of violence

31. To be able to discuss the causes of violence and understand how to create peaceful solutions to problems

Theme 4. Motivation and goal setting

32. To know what our human needs are and to identify the ability we have to satisfy them

33. To identify which human social and emotional needs you have and how to make positive changes to these

34. To understand what helps us become better learners

35. To know what success means to different people

Theme 5. Understanding ourselves and others

36. To further develop an understanding of positive human qualities and how useful they can be.

37. To understand what personality is and what personality traits we have

38. To develop an understanding that different personalities need to find a way to work together successfully

39. To be able to analyse what personality types are dominant in people by listening to what they say do and think

Theme 6. Dealing with bullying

40. To know what a stereotype is and what might affect a person's view of another person.

41. To understand why a person might have a prejudiced attitude towards a person and behave in a way that discriminates against them

42. To be able to write about what prejudice is and discuss it with others.

Theme 7. Dealing with worries and stress

43. To be able to think of a nice activity to do when you are feeling sad or worried.

44. To be able to create a picture to communicate how we can help stop ourselves from worrying too much

45. To be able to recognize when you are physically and emotionally safe or unsafe

Appendix 4. KOBS Evaluation Questionnaire

KOBS STUDENTS QUESTIONNAIRE

NAME OF STUDENT	
SCHOOL	
AGE	
DATE OF BIRTH	
CLASS	
	MALE ☐ FEMALE ☐

Please answer the following questions honestly. This is not a test and your answers will not be discussed with anyone else.

INSTRUCTIONS

After each question you write in a letter, the letter you write down depends on your answer. The following will help explain

I **ALWAYS** feel/know/do this	A
I **OFTEN** feel/know/do this	B
I SOMETIMES feel/know/do this	C
I RARELY feel/know/do this	D
I **NEVER** feel/know/do this	E

1. Do you feel that other people like you?	
2. Do you feel you are good at understanding other people's views and opinions?	
3. Are you a person who likes meeting new people or making new friends?	
4. Do you know how to relax and enjoy yourself?	
5. Do you feel happy in your life?	
6. Do you feel scared to try new things in case something bad happens?	
7. Do you worry about what other people think of you?	

8. Do you keep your problems a secret?	
9. Do you feel unhappy about yourself as a person?	
10. Do you feel that your life is without hope?	
11. Do you feel that other boys/girls have better friendships than you?	
12. Do you feel you have some good qualities as a person?	
13. Do you behave badly?	
14. Do you know what you can to do if you are feeling very sad?	
15. If you are worried about something do you know what to do to help you?	
16. Do you know what you can do to help you if you are feeling very angry?	
17. Do you know how to avoid fights or arguments from starting?	
18. If someone is treating you badly or saying bad things about you, do you know what to do to make the situation better?	
19. Do you know what strengths a person needs to help them if they have a difficult time in their lives?	
20. Do you know what others value in a friend?	
21. Do you know why people behave differently to one another?	
22. Do you know why some people are bullies?	
23. Do you know what to do if you are bullied?	
24. Do you know what you can do to help you if you are feeling very bored?	
25. Do you know how to help someone who is worried?	
26. Do you ever feel pleased and proud of yourself?	
27. Do you have many interests and skills?	
28. Do you know what situations can cause conflict/fighting?	
29. Do you know what people can do or say to help prevent conflict /fighting?	
30. Do you know what to do to prevent unhappiness?	

31. Do you know what helps you become a better learner?	
32. Do you know what successes you have had in your life?	
33. Do you like to help people with their problems?	
34. Do you know why people sometimes treat others unfairly?	
35. Do you know what situations can be unsafe for you?	
36. Do you often find it difficult to get to sleep or frequently have disturbed sleep?	
37. Do you often feel tired during the day so that it gets in the way of your listening and learning in school?	
38. Do you have panic attacks (a lot of fear, heart pounding, breathing fast, and stomach churning)?	
39. Do you feel like things will never get better for you?	
40. Do you like yourself?	
41. Do you like your life?	
42. Do you have images or memories of past upsetting events which you can't stop thinking about?	
43. Do you have powerful memories of past upsetting events which make you feel unwell, scared or angry?	
44. Do you feel sad most days?	
45. Do you feel worried/scared for long periods of time?	

Thank you very much for completing this questionnaire

Appendix 5. Semi structured interview

1. Did you like or dislike doing the KOBS lessons?

2. What did you like about them?

3. What did you dislike about them?

4. Have you or haven't you gained anything from doing the KOBS? If so what?

5. Are KOBS lessons different from your other lessons such as Maths, Science and English- if yes how?

6. Have you thought about the KOBS lessons and what you have studied outside lesson time?

7. Do you think KOBS has changed the way you think about thinks?

8. Are you aware that KOBS has changed your behaviour or the way you react to situations? If yes, any examples?

9. What do you think other people in the class have felt about doing KOBS?

10. Is there anything you would like to change about KOBS, for example extra lessons on a particular subject or something you felt was not useful and should be reduced or removed?

    Any other things you would like to say?

    Thank you

Appendix 5a. Thesis proposal

Stevan Radoja. Post Qualification DEdPsy

THESIS PROPOSAL

1. **Title**

Can a school based programme of lessons involving activities devised around established psychological theories positively impact on the mental health and emotional intelligence of young people affected by war including ex child soldiers in Northern Uganda?

2. **Main aims**

To determine whether a whole class 'lesson' based approach to teaching skills/knowledge associated with emotional intelligence and positive mental health in a population which has been subjected to long term adversity associated with living in a war zone can have a positive impact. Studies of youth in this population and accounts from teachers and other adults working with this population indicate high levels of anxiety, post-traumatic stress symptoms and poor mental health generally. The aim is to determine whether an intervention of this nature is effective or not and to what degree.

Method of investigation

In the past 12 months a group of approximately 20 teachers in Northern Uganda have been teaching a program called KOBS (Knowledge Of Behaviour and Self) to approximately 500 students across 10 secondary schools. The program was devised and written by the author of this thesis proposal over a period of 2 years whilst originally living in, and later as a visitor to the region.

This investigation will involve collecting a pre KOBS exposure measure of the student's mental health and emotional intelligence using a questionnaire. This will be collected from a new cohort of students who will be embarking on the 2-year KOBS program in February 2012. Following two years of receiving one lesson per week during term time (approx. 45 minutes) students will then be asked to complete the same questionnaire with the aim of identifying differences/changes in their responses.

A control group of students not undertaking the KOBS program who attend schools in the vicinity will be asked to complete the questionnaire at the same times as the participant group. They will then be asked to complete the same questionnaire 2 years later.

In addition to the questionnaire a sample group of students will be asked to take part in a semi structured interview to ascertain their views and perspectives on a range of issues associated with the same themes but also to include attitudes towards the pedagogical approach prescribed by the KOBS curriculum. This will take place at the end of the 2-year period involving students taught KOBS but not the control group.

The questionnaire has been developed by the author. It has questions widely accepted as being valid measures of mental health and emotional literacy which are often found in standardised questionnaires.

The wording of the questions has been designed to suit the age range of students and consideration has been given to the English language proficiency of the local student population in Uganda.

3. Participants required

4.1 Approximately 10 schools will be involved. The organisation 'Invisible Children' an NGO with a field office in the region will provide logistical support. The Ministry of Education in Uganda's Department of Guidance and counseling has also been supporting this project and will continue to monitor its roll out.

4.2 Secondary schools will be involved. The organisation 'Invisible Children.Inc.' are based in San Diego USA. Their mission is to enhance educational provision in Northern Uganda through school building and providing funding for school fees for the poorest and most vulnerable children. A comprehensive mentoring program for these children is also a major feature of their work.

4.3 The target group are students in year 1 and 2 at secondary school. The age range of students starting year 1 is between 12 and 18 years of age. The age range varies due to missed schooling as a result of either a lack of school fees, being 'kept down' due to a failure to pass exams or as a result of being out of school due to the circumstances of the conflict.

3.4 Five classes in each of the participating schools and the control group schools will be involved. The current average class size is 80.

4.5.1 In each of the participating schools a group of approximately 20 students from each class will be asked to complete the questionnaire and will be selected randomly. The remainder of the whole class will still be taught the KOBS lessons but will not be asked to complete the questionnaire. 20 students (4 from each of the KOBS schools) will be selected randomly and invited to a semi structured interview at the end of the 2 years period.

4.5.2 When asked to fill out the questionnaire the students doing so will remain in class whist the remainder will engage in study time in the library.

4.5.3 Pupils will not be seen on an individual basis when asked to complete the questionnaire at the beginning of the KOBS program. At the end of the two years only those randomly selected to participate in the semi structured interview will be seen on an individual basis. A total of approximately 20 students will be asked on a voluntary basis to take part in the interview. This group will be chosen randomly but will comprise of an equal number of males and females. The interview will be done in a quiet place within the school grounds.

4.6 Total number of participants will be between 200 +/- 20

4.6.1 Pupils participating will be 200 +/- 20

4.6.2 No teachers participating

4.6.3 No parents participating

4.6.4 A School Guidance counselor from each of the 10 schools

4. **(a**) Participating pupils for the questionnaire will stay in class and fill in the questionnaire as part of a normal allocated time slot for a KOBS lesson. Those who don't will be asked to leave the room and engage in study time in the library.

(b/c) For the semi structured interview I will see the participants individually during a free period.

5. Test Material requirements

The questionnaires used are non-standardized and have been developed by the author with advice from Ugandan staff at Invisible Children. The reason I chose to create my own is that when looking for a standardized measure of mental health and emotional intelligence, I was unable to find one which didn't have references to western culture. Also, the English language needed to be changed to be accessible to the participants. I required a questionnaire which would indicate change associated with the input the students were receiving from exposure to the curriculum. The questionnaire contains questions on constructs widely accepted as being components of both emotional literacy and mental health.

With the semi structured interview, I will be looking for a qualitative indicator of the impact the KOBS curriculum has had on the students. Analysis of free responses not confined to a multiple choice options approach will provide information relating to the aim of the study. They may also be useful in applying the outcomes of this study to future usage of the curriculum.

I will be producing my own copies of the questionnaire and the semi structured interview. The semi structured interview will not require a written response from the participants as I will record the sessions on a hand-held voice recorder. I will write out the interview at a later point for analysis.

6. Request for approval from the schools Ethics committee.

This is attached with this proposal

7. Other Matters

None

Appendix 5b. Further information for ethics committee

BOX B - further information for ethics committee

i. Title of project

Can a school based programme of lessons involving activities devised around established psychological theories positively impact on the mental health and emotional intelligence of young people affected by war including ex child soldiers in Northern Uganda?

ii. Purpose of project and its academic rationale

The purpose is to determine whether prescribed lessons using a curriculum developed for the purpose of improving mental health and emotional literacy skills is effective. The academic rationale behind this study is to examine whether the application of psychological theory and therapeutic process born out of those theories can be applied via a curriculum based approach to affect change. The curriculum content is based on a mixture of social learning, constructivist, behaviorist and motivational theory utilising thinking and techniques from established therapeutic approaches including CBT and Solution Focused Brief Therapy.

The context is a unique one in that the participants have lived in an area of conflict for all of their lives. The majority of them will have been affected directly by the conflict in a way which has likely had a negative impact on their general well-being. Studies commissioned by aid agencies using random samples has identified these experiences have had a negative impact on the mental health of many these young people. A sizable proportion present with symptoms associated with post-traumatic stress disorder.

iii. Brief description of methods and measurements

The students will be taught a curriculum called KOBS (Knowledge of Behaviour and Self) for one 45-minute lesson per week for a two-year period (academic years). This curriculum has already been written by the author of this proposal with the cooperation of teachers, students and ministry of education personnel in Uganda over the past 2-3 years. Teachers who will be teaching the curriculum will have received training beforehand. All of the lessons have previously been piloted in Uganda. The program was taught to a number of students in the last academic year. (February to December)

A cohort of students who will be taught KOBS for the 2-year period will have had no previous exposure to KOBS. They will be asked to fill in a questionnaire pre- exposure to KOBS. The aim of the questionnaire is to ask them a number of questions associated with emotional literacy competencies and their mental health.

After approximately 2 years the students will be asked again to fill in the same questionnaire. An evaluation of the differences will then be made between the two sets of data. A similar process will be undertaken with a control group of students who will have no exposure to KOBS using the same questionnaire. A comparison will be made between the two groups i.e. the post KOBS exposure group versus the non KOBS exposure control group.

In addition to the questionnaire a random group of 20 students will be invited to a semi structured interview. This will take place at the end of the two-year period and will only involve students from the KOBS exposure group. Their responses to a range of questions and prompts will be evaluated.

iv. **Participants: recruitment methods, number, age, gender, exclusion/inclusion criteria**.

The participants will be from the first and second years of secondary school. They will be between 12 to 18 years of age. The age range varies due to missed schooling as a result of either a lack of school fees, being 'kept down' due to a failure to pass exams or as a result of being out of school due to the circumstances of the conflict.

It is highly likely some of the participants will have been abducted and forced into combat duties or other activities by their former captors (Lord's Resistance Army). Most of the others will have been displaced and have lived or continue to live in refugee camps. The students will be both male and female. They will be asked to participate in the study as a result of being taught the curriculum in their school. A control group will be used from children in nearby schools but not taught the curriculum.

v. Consent and participant information arrangements, debriefing.

The KOBS curriculum has already been introduced as part of the school's guidance and counseling program for students. It therefore does not need the consent of the students to participate in the lessons. The consent of the head teachers in KOBS and control schools will be sought to conduct this research in the schools.

This research will require the consent of the participants. As some of the participants will be under 16 years of age a signed consent form will need to be signed by a parent/guardian.

These will be given to student to take home for signing and returned to the school. Before they are asked to fill in the questionnaire or participate in the semi structured interview they will be given a consent form which each participant will be asked to sign if they wish to take part. After filling in the questionnaire or taking part in the interview the students will be given the opportunity to ask questions and discuss their thoughts and feeling about the process. This will be done in collaboration with the school counselor who will assist in the administration of the questionnaire. The school counselor will continue to be available to the students to discuss any issues/questions at a later point. KOBS students and control students will be provided with debriefing information after both the questionnaires. Students will be provided with debriefing information following the semi structured interview. Head teachers with be provided with debriefing information at the end of the study. Parents will be provided with debriefing at the end of the study.

vi. **A clear but concise statement of the ethical considerations raised by the project and how you intend to deal with them.**

- Requirement of students to answer questions which may arouse unpleasant memories from the past.

I will avoid specific questions about personal experiences in the questionnaire and semi structured interview. However, if the student does make reference to an incident or a problem they are having, I will make anonymous these comments. If they wish I can refer them on to the school counselor for further discussion.

- Participants', school staff and parents' awareness of the rationale and purpose of the curriculum and the reasons for researching the impact of the curriculum.

I will explain why I am using the questionnaire and interview to gather information. I will do this via a consent form and offer the participants an opportunity to choose whether they want to take part or not. In order not to jeopardize the internal validity of the study I will not let the participants know that I am looking for an effect following their 2 years of studying KOBS. This may result in them altering their answers when asked to fill in the questionnaire and their responses in the semi structured interview. Debriefing forms will be given to students, parents and school staff.

vii. **Estimated start date and duration of project.**

Start date will be after the beginning of the new academic year for Uganda in Feb 2012. This is when the first set of questionnaires will be completed by the participants. The final date for the collection of research data will be at the end of the academic year late November 2013.

Appendix 6. Ugandan Ministry of Education approval

Ministry of Education & Sports
For the Republic of Uganda

15 th April 2011

To Cardiff University, School of Psychology, Ethics Committee

REF: Support for guidance and counselling programme in Northern Uganda

I have been in discussions with Mr Stevan Radoja over the past 5 years as he developed a much needed program to support emotional literacy and mental health in our youth in the northern districts of Uganda. I am now pleased to hear he is undertaking an evaluation and look forward to receiving the progress report being made by the youth who have experienced the KOBS programme. I hope you can assist him with this project.

Appendix 7. Example headteacher's supporting letter

ST. JOSEPH'S COLLEGE LAYIBI

Tel: 0772 611086

P.O. Box 123 Gulu, Uganda

Our Ref: SJ/ADM/1.

06th April, 2011.

The Management,
Cardiff University,
School of Psychology

Dear Esquire,

RE: MR. STEVAN RADOJA

The above named person who is a student at your university has been permitted to carry out research for his doctorate degree in Educational Psychology at St. Joseph College Layibi – Gulu.

Already, Steven under the auspices of an NGO – Invisible Children Uganda is running a programme called **KOBS (Knowledge of Behaviour and Self)** in our school amongst others; and he is doing well in that discourse.

We are ready to assist him accordingly in his undertaking.

Yours faithfully,

Otim Tom
HEADTEACHER

HEADTEACHER
ST. JOSEPH'S COLLEGE LAYIBI

Appendix 8. Head teachers' consent forms for IG schools.

School of Psychology, Cardiff University. Wales UK

Consent Form

From Stevan Radoja. Cardiff University.

Dear Head teacher

I am conducting some research into the impact of KOBS which is being taught at your school. This research is intended to help me fulfil the requirements of the Doctorate in Educational Psychology I am undertaking at Cardiff University. In order to do this, I would like to do the following;

- Ask 20 students (male and female) to fill out a questionnaire (attached is a copy). These students will be chosen randomly. As each class has approximately 80 students in it I will assign everyone a number. I will then select 20 numbers randomly of those wishing to volunteer. I will seek to get equal numbers of boys and girls.
- In 2 year's time ask the same 20 students to fill out the same questionnaire. I will then be able to compare their responses following exposure to KOBS.
- I will randomly select 4 of those students to participate in an interview with me at the end of the two-year period (attached is a copy of the questions).
- The completed questionnaires will be kept by me confidentially. This means that without the permission of the student no one else will be able to see the completed form as it will have the name of the student on the front. I will store them in a safe place in the University of Cardiff School of Psychology.
- I will be seeking permission from the parents of those students who are under 16 years of age. (attached is a copy)
- I will be asking the students if they would like to participate (attached is a copy)
- When the study is complete I will provide you and your staff feedback regarding the results of the study.
- In order to study the impact of KOBS I will be comparing students doing KOBS with students not doing KOBS in other local schools.
- If students indicate that they intend to harm themselves this information will be passed to you and the school counsellor

I, _____ of _____ allow Stevan Radoja (the researcher) to conduct his research as stated above under the supervision of *Dr*.Griffey from Cardiff University. Contact details are below. You can contact Munduga Patrick who will contact me if he is unable to answer any questions.

Signed:

Date:

Stevan Radoja	**Name of supervisor**
Educational Psychologist doing a Doctorate in Educational Psychology. Call Munduga Patrick 0772535422 who will assist you.	Dr. Simon Griffey
School of Psychology	School of Psychology
Cardiff University	Cardiff University
Tower Building	Tower Building
Park Place	Park Place
Cardiff	Cardiff
CF10 3AT United Kingdom	CF10 3AT United Kingdom

Appendix 8a. Consent form for headteachers of CG schools.

School of Psychology, Cardiff University. Wales UK

Consent Form

From Stevan Radoja. Cardiff University.

Dear Headteacher

I am conducting some research into the impact of KOBS which is a program being taught at some local schools. KOBS is a program to support guidance and counselling in schools. This research is intended to help me fulfil the requirements of the Doctorate in Educational Psychology I am undertaking at Cardiff University. I would like your school's students to be the control group for the study.

In order to do this, I would like to do the following;

- Ask 20 students (male and female) to fill out a questionnaire (attached is a copy). These will be chosen randomly. As each class has approximately 80 students in it I will assign everyone a number. I will then select 20 numbers randomly. I will seek to get equal numbers of boys and girls.
- In 2 years time ask the same 20 students to fill out the same questionnaire. I will then be able to compare their responses.
- The completed questionnaires will be kept by me confidentially. This means that without the permission of the student no one else will be able to see the completed form as it will have the name of the student on the front. I will store them in a safe place in the School of Psychology at Cardiff University.
- I will be seeking permission from the parents of those students who are under 16 years of age. (attached is a copy)
- I will be asking the students if they would like to participate (attached is a copy)
- When the study is complete I will provide you and your staff feedback regarding the results of the study.
- In order to study the impact of KOBS I will be comparing your students' responses with students doing KOBS in other local schools.
- If any student indicates that he/she is likely to harm themselves this information will be passed on to you and the school counsellor

I, _____ of _____ allow Stevan Radoja (the researcher) to conduct his research as stated above under the supervision of *Dr*.Griffey from Cardiff University. You can contact Munduga Patrick who will contact me if he is unable to answer any questions.

Appendix 9. Participants consent form

School of Psychology, Cardiff University

Consent Form - Confidential data

I understand that I am going to be filling out a questionnaire. I will then be filling out the same questionnaire again in about 2 year's time. The questions are about some of the topics I will be studying in the KOBS curriculum which is part of the guidance and counselling program I will be learning in my school. The questionnaire will be about things such as friendships, dealing with worries, bullying, dealing with problems, how I am feeling about myself and my future. The questionnaire will take about 20 minutes of my time.

- I understand that if I don't want to fill out the questionnaire then that is fine. I will not be reprimanded or reported about in a negative way.
- I understand that nobody will blame me or take marks away from me if I do not fill it in.
- If I am part of the way through answering the questionnaire and do not wish to continue then, that is also fine. It will be accepted by my teachers and school without any questions or reprimands.
- If I want, I do not have to hand in the questionnaire when I have finished that is also fine. It will be accepted by my teachers and school without any questions or reprimands.
- I understand that I am free to ask any questions at any time. I am free to withdraw or discuss my concerns with *.....name of teacher and school counsellor and/or Mr Radoja*
- I understand that the questionnaire filled in by me by me will be kept confidential- this means only Mr Radoja will be able to look at the information. He will not share it with anyone unless I allow it. I understand that the information will be kept safely in the school of Psychology at Cardiff University- place where no one else can find it. The questionnaire will be saved for about 2 years then it will be destroyed. I understand that I can ask for the questionnaire to be destroyed at any time and I can ask to see the questionnaire that I filled but this could take a few days for it to be sent to me.
- I also understand that at the end of the study I will be given information about what the study has shown
- I understand that if indicate that I am likely to harm myself this information will be passed on to the school counsellor and head teacher.

I, _____(NAME) agree to participate in the study conducted by Mr Radoja, School of Psychology, Cardiff University with the supervision of *Dr*.Griffey who is from the University. You can contact Munduga Patrick who will contact me if he is unable to answer any questions.

Signed:

Appendix 10. Participants interview consent form

School of Psychology, Cardiff University

Consent Form - Confidential data

I understand that I am going to be having an interview with Mr Radoja about KOBS. Mr.... will also be present who will translate English to Luo if needed. I will be doing this with 3 other students in my class. The questions are about some of the topics I was studying in the KOBS curriculum. The talk will take about 20 minutes of my time. I am aware that Mr Radoja will be using a recording machine to record our talk. He will then be able to write it down afterwards. I understand that he will then rub out the recording. He will keep the written record with my name on it for about 2 weeks until he has a chance to put it together with the two questionnaires I filled out. He will then remove my name from the written record. Also:

- I understand that if I don't want to take part then that is fine. I will not be reprimanded or reported about in a negative way.
- I understand that nobody will blame me or take marks away from me if I do not take part.
- If I am part of the way through the interview and do not wish to continue then, that is also fine. It will be accepted by my teachers and school without any questions or reprimands.
- If I want, I can ask Mr Radoja to not keep the recording if I am not happy with it at the end our talk.
- If I want to I can ask Mr Radoja to record over or rub out bits of the recording of our talk if I want and this is fine to ask for this.
- I understand that I am free to ask any questions at any time. I am free to withdraw or discuss my concerns with *.....name of t school counsellor and/or Mr Radoja*
- I understand that the record will be kept confidential- this means only Mr Radoja will be able to look at the information. He will not share it with anyone unless I allow it. I understand that the information will be kept safely in the school of Psychology at Cardiff University- a place where no one else can find it. I understand that I can ask for the record to be destroyed at any time in the next two weeks before my name is removed from it.
- I also understand that at the end of the study I will be given information about what the study has shown
- I understand that if I indicate I am likely to harm myself this information will be passed on to the school counsellor and head teacher.

I, _____ (my name) agree to participate in the talk about KOBS with Mr Radoja, School of Psychology, Cardiff University with the supervision of *Dr*.Griffey who is from the University. You can contact Munduga Patrick who will contact me if he is unable to answer any questions.

Appendix 11. Participants parents consent form.

School of Psychology, Cardiff University. Wales UK

Consent Form - Confidential data

From Stevan Radoja. Cardiff University.

Dear Parent/guardian

I would like your permission for ..... (child name) to fill out a questionnaire for me. The questionnaire will be about things such as friendships, dealing with worries, bullying, dealing with problems, how they are feeling about themselves and their future. The questionnaire will take about 20 minutes of their time.

I am doing a study in order to see how well a program called KOBS is working; this is being used at the school. KOBS has 50 lessons. The lessons are divided into seven themes. The themes are as follows:

- Self esteem and friendship building
- Thinking feeling and behaviour
- Conflict avoidance and conflict resolution
- Motivation and goal setting
- Understanding ourselves and others
- Dealing with bullying
- Dealing with worries and stress

I am doing my study at Cardiff University in the United Kingdom as part of a doctorate in Educational Psychology. I am also helping Invisible Children with their school development programs. If you would like to see the contents of the programs lessons, please ask.....(KOBS teachers name) who will be able to assist you.

When .....has filled in the questionnaire I will keep it. The information is only going to be seen by me. I will keep it for about 2 years and then destroy it.

I, _____(parent/guardians name) allow

_____(Your Childs Name) to fill in the questionnaire for Mr Radoja from the School of Psychology, Cardiff University with the supervision of *Dr*.Griffey. You can contact Munduga Patrick who will contact me if he is unable to answer any questions.

Appendix 12. Control group parent consent form

School of Psychology, Cardiff University. Wales UK

Consent Form - Confidential data

From Stevan Radoja. Cardiff University

Dear Parent/guardian

I would like your permission for .....(Child's name) to fill out a questionnaire for me. The questionnaire will be about things such as friendships, dealing with worries, bullying, dealing with problems, how they are feeling about themselves and their future. The questionnaire will take about 20 minutes of their time.

I am doing a study on how well a new program called KOBS is working; this is being used some other schools in the district. In order to see how well it is going I need to compare it with schools not doing KOBS which is why I am seeking your permission for ..... to fill out this questionnaire. KOBS has a number of themes. The themes are as follows:

- Self-esteem and friendship building
- Thinking feeling and behaviour
- Conflict avoidance and conflict resolution
- Motivation and goal setting
- Understanding ourselves and others
- Dealing with bullying
- Dealing with worries and stress

I am doing my study at Cardiff University in the United Kingdom as part of a Doctorate in Educational Psychology. I am also helping Invisible Children with their school development programs.When .....has filled in the questionnaire I will keep it. The information is only going to be seen by me, I will keep it for about 2 years at Cardiff University and then destroy it.

I, _____ (parents name) allow

_____Childs Name

to fill in the questionnaire for Mr Radoja from the School of Psychology, Cardiff University with the supervision of *Dr*. Griffey. You can contact Munduga Patrick who will contact me if he is unable to answer any questions

Appendix 12a. Consent form for parents of IG students taking part in the semi structured interview

School of Psychology, Cardiff University. Wales UK

Consent Form - Confidential data

From Stevan Radoja. Cardiff University.

Dear Parent/guardian

I would like your permission for ..... (Child name) to take part in a talk (interview) with me. The aim is to ask your child to give their thoughts on the KOBS program they have been studying in school.

The questions are about some of the topics your child was studying in the KOBS curriculum. The talk will take about 20 minutes. I will be using a recording machine to record the talk. I will then be able to write it down afterwards. I will then rub out (erase) the recording. I will keep the written record with your child's name on it for about 2 weeks until I have a chance to put it together with the two questionnaires they filled out. I will then remove your child's name from the written record.

I, _____ (parents name) allow

_____ Childs Name

to take part in an interview with Mr Radoja from the School of Psychology, Cardiff University with the supervision of *Dr*. Griffey. You can contact Munduga Patrick who will contact me if he is unable to answer any of your questions

Signed:

Date:

Appendix 13. Debriefing form for intervention group students

School of Psychology, Cardiff University. Wales UK.

Debriefing form for participating students (to be handed out then read out by S. Radoja)

Thank you for participating in this study. As you will have seen from completing the questionnaire I am trying to find out what you are thinking and feeling about a number of things. As I told you before you gave your consent to take part in this study, your questionnaires will not be shown to anyone. If you want to take away (withdraw) your questionnaire then you can do this by contacting me or the other people on the bottom of this form, you do not have to give a reason why you have chosen to do this. After two years your names will be removed from the questionnaire so I will no longer be able to match your questionnaire with you. After I have removed your name from the questionnaire you will not then be able to ask for it back or for it to be destroyed. If you have any questions to ask please ask me now..... If you have any further questions after I have left you can ask the person responsible for guidance and counselling in your school you can also seek advice and support from them if you feel necessary to do so. This is ..... (person's name). You can also contact me at the address below or through Invisible Children. I have also included the contact details of my supervisor for this study.

Stevan Radoja

Appendix 14. Debriefing form for control group

School of Psychology, Cardiff University. Wales UK.

Debriefing form for students (to be handed out then read out by S. Radoja)

Thank you for participating in this study. As you will have seen from completing the questionnaire I am trying to find out what you are thinking and feeling about a number of things. As I told you before you gave your consent to take part in this study, your questionnaires will not be shown to anyone. If you want to take away (withdraw) your questionnaire then you can do this by contacting me or the other people on the bottom of this form, you do not have to give a reason why you have chosen to do this. After two years your names will be removed from the questionnaire so I will no longer be able to match your questionnaire with you. After I have removed your name from the questionnaire you will not then be able to ask for it back or for it to be destroyed. If you have any questions to ask please ask me now..... If you have any further questions after I have left you can ask the person responsible for guidance and counselling in your school you can also seek advice and support from them if you feel necessary to do so. This is ..... (person's name). You can also contact me at the address below or through Invisible Children. You can also contact Munduga Patrick who will contact me if he is unable to answer any questions.

Stevan Radoja

Appendix 15. Debriefing form following questionnaire at second time point for IG

School of Psychology, Cardiff University. Wales UK.

Debriefing form for participating students (to be handed out then read out by S. Radoja)

Thank you for participating in this study.

As you will have seen from completing the questionnaire it is the same questionnaire I gave you before you started the KOBS program. The reason for asking you the same questions is to see if you have changed your answers. I will compare these with students' responses in other schools. Your participation in the study is very important and may help inform the school and ministry on the future direction of guidance and counselling programs for students in yours and other schools. I didn't tell you the full purpose of the questionnaire and the study 2 years ago because this may have affected how you responded on the questionnaires. For example, some students may have given false answers because they wanted to please me, Cardiff University, Invisible Children or the school. The purpose was to see if KOBS lessons have impacted on students' responses in the schools where KOBS is being taught. To answer the question can KOBS improve mental health and emotional literacy?

The purpose of doing this is to see if KOBS has helped you with some of the knowledge, skills and abilities which improve mental health and emotional intelligence. Now you have completed KOBS you will know what emotional intelligence and mental health is. If you remember, I told you before you gave your consent to take part in this study, your questionnaires will not be shown to anyone. The only reason I asked you to put your names on the questionnaires is so I can compare your answers from before you started KOBS to your answers you have given today. If you want to take away (withdraw) your questionnaire from today or the first one you can do this by letting me know before I leave today or by contacting me or the other people on the bottom of this form, you do not have to give a reason why you have chosen to do this. In 2 weeks time I will remove your names from the front of the forms so you cannot ask for them after I have done this as I will no longer be able to match you with your form.

As part of this study I also asked some students from other school nearby who didn't do KOBS to fill in the questionnaire as well. Although they didn't do KOBS I was interested to find out if there is a difference in their answers compared with yours -this is what is called a control group.

I asked some of your class colleagues to an 'interview' with me. The purpose of this was to get a deeper understanding of what KOBS was like for them and what their views are on KOBS. When I finish writing up this study and have some results I will return to share these with you.

If you have any questions to ask please ask me now..... If you have any further questions after I have left you can ask the person responsible for guidance and counselling in your school you can also seek advice and support from them if you feel necessary to do so. This is ..... (person's name). You can also contact me at the address below or you can also contact Munduga Patrick who will contact me if he is unable to answer any questions.

Appendix 16. Debriefing form following questionnaire at second time point for CG

School of Psychology, Cardiff University. Wales UK.

Debriefing form for participating students (to be handed out then read out by S. Radoja)

Thank you for participating in this study.

As you will have seen from completing the questionnaire it is the same questionnaire I gave you 2 years ago. The reason for asking you the same questions is to see if you have changed your answers. I will compare these with students' responses in other schools. Your participation in the study is very important and may help inform the school and ministry on the future direction of guidance and counselling programs for students in yours and other schools. I didn't tell you the full purpose of the questionnaire and the study 2 years ago because this may have affected how you responded on the questionnaires. For example, some students may have given false answers because they wanted to please me, Cardiff University, Invisible Children or the school.

If you remember, I told you before you gave your consent to take part in this study, your questionnaires will not be shown to anyone. The only reason I asked you to put your names on the questionnaires was so I can compare your answers from 2 years ago until now. If you want to take away (withdraw) your questionnaire from today or the first one you can do this by letting me know before I leave today or by contacting me or the other people on the bottom of this form, you do not have to give a reason why you have chosen to do this. In 2 weeks' time I will remove your names from the front of the forms so you cannot ask for them after I have done this as I will no longer be able to match you with your form.

If you have any questions to ask please ask me now..... If you have any further questions after I have left you can ask the person responsible for guidance and counselling in your school you can also seek advice and support from them if you feel necessary to do so. This is ..... (person's name). You can also contact me at the address below or you can also contact Munduga Patrick who will contact me if he is unable to answer any questions.

Stevan Radoja

Appendix 17. Debriefing form for IG who did the semi structured interview

School of Psychology, Cardiff University. Wales UK

Debriefing form for students participating in the semi structured interview

(to be handed out then read out by S. Radoja to each student individually)

Thank you for participating in this study.

The questions I asked you today were to help me see if by doing KOBS you have made changes in your mental health and emotional literacy. You will have done some activities as part of KOBS which were designed to help you improve in these areas. In order for me to find out if KOBS worked I need to do this study, ask you these questions and ask you and the others to fill in the questionnaires. I didn't tell you the full purpose of the questionnaire and the study 2 years ago because this may have affected how you responded on the questionnaires. For example, some students may have given false answers because they wanted to please me, Cardiff University, Invisible Children or the school. The purpose was to see if KOBS lessons have impacted on students' responses in the schools where KOBS is being taught. To answer the question can KOBS improve mental health and emotional literacy?

I told before you gave your consent to take part in this study, your recording which I will write out will not be shown to anyone. After today I will match up your questionnaires with the record of this interview. If you want to take away (withdraw) your recording from today you can do this by letting me know before I leave today or by contacting me or the other people on the bottom of this form. You do not have to give a reason why you have chosen to do this. In 2 weeks time I will remove your name from the front of the recording record and questionnaire which means you cannot ask for them after I have done this as I will no longer be able to match you with your form.

If you have any questions to ask please ask me now..... If you have any further questions after I have left you can ask the person responsible for guidance and counselling in your school you can also seek advice and support from them if you feel necessary to do so. This is..... (person's name). You can also contact me at the address below, you can also contact Munduga Patrick who will contact me if he is unable to answer any questions.

Stevan Radoja

Appendix 18. Debriefing form for head teachers and teachers of IG schools

School of Psychology, Cardiff University. Wales UK

Debriefing form for head teacher and involved teachers (to be handed out at the end of the study)

Thank you for allowing the students in your school in this study. The study's aim is to see if KOBS (Knowledge Of Behaviour and Self) has had a positive impact on students' mental health and emotional literacy.

By looking at how the students answered the questions before they did the KOBS lessons and again after they did the lessons I can see if they have made improvements. The small group who took part in the interview provided more in-depth information which will be useful in the study. In the future I will share the study's findings with the district education officer and the ministry of education. I will also share these with you. I will not discuss individual findings about students

The information from the questionnaires will be kept by me until I have finished the study. In two weeks I will remove the names of the students from the questionnaires after I have matched their two questionnaires together by name. If you have any questions about this study please let me know. You can also contact me or you can also contact Munduga Patrick who will contact me if he is unable to answer any questions.

Stevan Radoja

Appendix 19. Debriefing form for head teachers and teachers of CG schools

School of Psychology, Cardiff University. Wales UK

Debriefing form for head teacher and involved teachers (controls)-to be handed out at the end of the study

Thank you for allowing the students in your school to participate in this study. The study's aim is to see if a program called KOBS (Knowledge Of Behaviour and Self) has a positive impact on students' mental health and emotional literacy. The KOBS program has been taught in some local schools.

By looking at how the students answered the questions before they did the KOBS lessons and again after they did the lessons I can see if they have made improvements. The students at your school have provided the study with a control group which is an essential and valuable part of the process. In the future I will share the study's findings with the district education officer and the ministry of education. I will also share these with you. I will not discuss individual findings about students.

The information from the questionnaires will be kept by me until I have finished the study. I will now be able to remove the names of the students from the questionnaires as I do not need to match their two questionnaires together by name. If you have any questions about this study, please let me know. You can also contact Munduga Patrick to ask any further questions. He will contact me if he is not able to assist you.

Stevan Radoja

Appendix 20. Debriefing form for teachers of who did the teacher questionnaire schools

School of Psychology, Cardiff University. Wales UK

Debriefing form for teachers who did the teacher questionnaire at the end of the study

Thank you for answering the questionnaire. I was interested in finding out what you thought about various aspects of teaching the KOBS program and how you think the students responded and what difference (if any) it may have made to them. Your impressions will be a valuable part of the findings from this study. I will not be discussing or analysing individual's questionnaires but looking at them as a whole.

The information from the questionnaires will be kept by me until I have finished the study. If you have any questions about this study please let me know. You can also contact Munduga Patrick to ask any further questions. He will contact me if he is not able to assist you.

Stevan Radoja

Appendix 21. Debriefing form for parents of IG at end of study

School of Psychology, Cardiff University. Wales UK

Debriefing form for IG parents (to be handed out at the end of the study)

Thank you for allowing your child to take part in this study.

The study aim is to see if the program called KOBS (Knowledge Of Behaviour and Self) has had a positive impact on students' mental health and skills such as dealing with problems, communicating well with other, understanding what values are and why we have them and motivation for achieving success.

By looking at how the students answered the questions before they did the KOBS lessons and again after they did the lessons I can see if they have made improvements. I will share this information with the school the district education officer and the ministry of education. I will ask them to share it with the parents also.

The information from the questionnaires will be kept by me until I have finished the study. I will now be able to remove the names of the students from the questionnaires as I do not need to match their two questionnaires together by name.

If you have any questions about this study please ask ..... who is the person responsible for guidance and counselling in the school, your child can also seek advice and support from them if you/your child feel necessary to do so. You can also contact Munduga Patrick to ask any further questions. He will contact me if he is not able to assist you.

Stevan Radoja

Appendix 22. Debriefing form for parents of controls at end of study

School of Psychology, Cardiff University. Wales UK

Debriefing form for parents (to be handed out at the end of the study)

Thank you for allowing your child to take part in this study. The study aim is to see if a program called KOBS (Knowledge of Behaviour and Self) had a positive impact on students' mental health and skills such as dealing with problems, communicating well with others, understanding what vales are and why we have them, motivation for achieving success. When I have finished this study, I will share this information with other school the district education officer and the ministry of education. Invisible Children may then continue to support schools with KOBS.

The information from the questionnaires will be kept by me until I have finished the study. In two weeks time after I have matched up the information from the questionnaire your child did two years ago to the one they did recently I will be able to remove the names of your child from the questionnaires.

If you have any questions about this study, please let the school and they will be able to answer. You can ask the head teacher or ..... who is the person responsible for guidance and counselling in the school your child can also seek advice and support from them if you/they feel necessary to do so. You can also contact Munduga Patrick to ask any further questions. He will contact me if he is not able to assist you.

Stevan Radoja

Appendix 23. Teacher evaluation of KOBS questionnaire

KOBS TEACHERS EVALUATION QUESTIONNAIRE

Name..... **School**.....

Dear Teacher, please be honest, you are not being evaluated by the answers you give

1. How did you find teaching KOBS?

Very easy to teach medium difficulty very difficult

0 1 2 3 4 5 6 7 8 9 10

2. Do you think the students enjoyed being taught KOBS?

No not at all sometimes always enjoyed it

0 1 2 3 4 5 6 7 8 9 10

3. Do you think the students respected you more/developed a more positive attitude towards you as a result of you teaching them the KOBS lessons?

No they did not yes a little yes very much so

0 1 2 3 4 5 6 7 8 9 10

4. Do you think the students gained a lot from the lessons?

No not at all yes a little a great deal

0 1 2 3 4 5 6 7 8 9 10

5. Do you think it has had a positive impact on those students behaviour?

No not at all yes a little a great deal

0 1 2 3 4 5 6 7 8 9 10

6. Do you think it has helped the students form better friendships with each other?

No not at all yes a little a great deal

0 1 2 3 4 5 6 7 8 9 10

Appendix 24. Emotional Literacy Student Checklist

Emotional Literacy Student Checklist

Ages 11 to 16

First name ..... **Surname** .....

Date ..... **Year group** ☐ **Male** ◯ **Female** ◯

Here are some questions about you. Please try to answer them as honestly as you can. Read each question and then put a tick in one of the boxes. Make sure you do each question.

Here is an example of how to answer the questions. If you do not think you are good at many things, you would tick the box 'not like me at all'.

	Very like me	*Quite like me*	*Only a bit like me*	*Not like me at all*
I am good at many things.				✔

Now please answer the rest of the questions.

		Very like me	*Quite like me*	*Only a bit like me*	*Not like me at all*
1	I try to listen to other people's views even when I think they are wrong.				
2	I often forget what I should be doing.				
3	I am aware of my own strengths and weaknesses.				
4	I often lose my temper.				
5	A lot of people seem to like me.				
6	I know when people are starting to get upset.				
7	I tend to leave things to the last minute.				
8	When I'm sad, I usually know the reason why.				
9	I get upset if I do badly at something.				
10	I can make new friends easily.				
11	I get annoyed when other people get things wrong.				

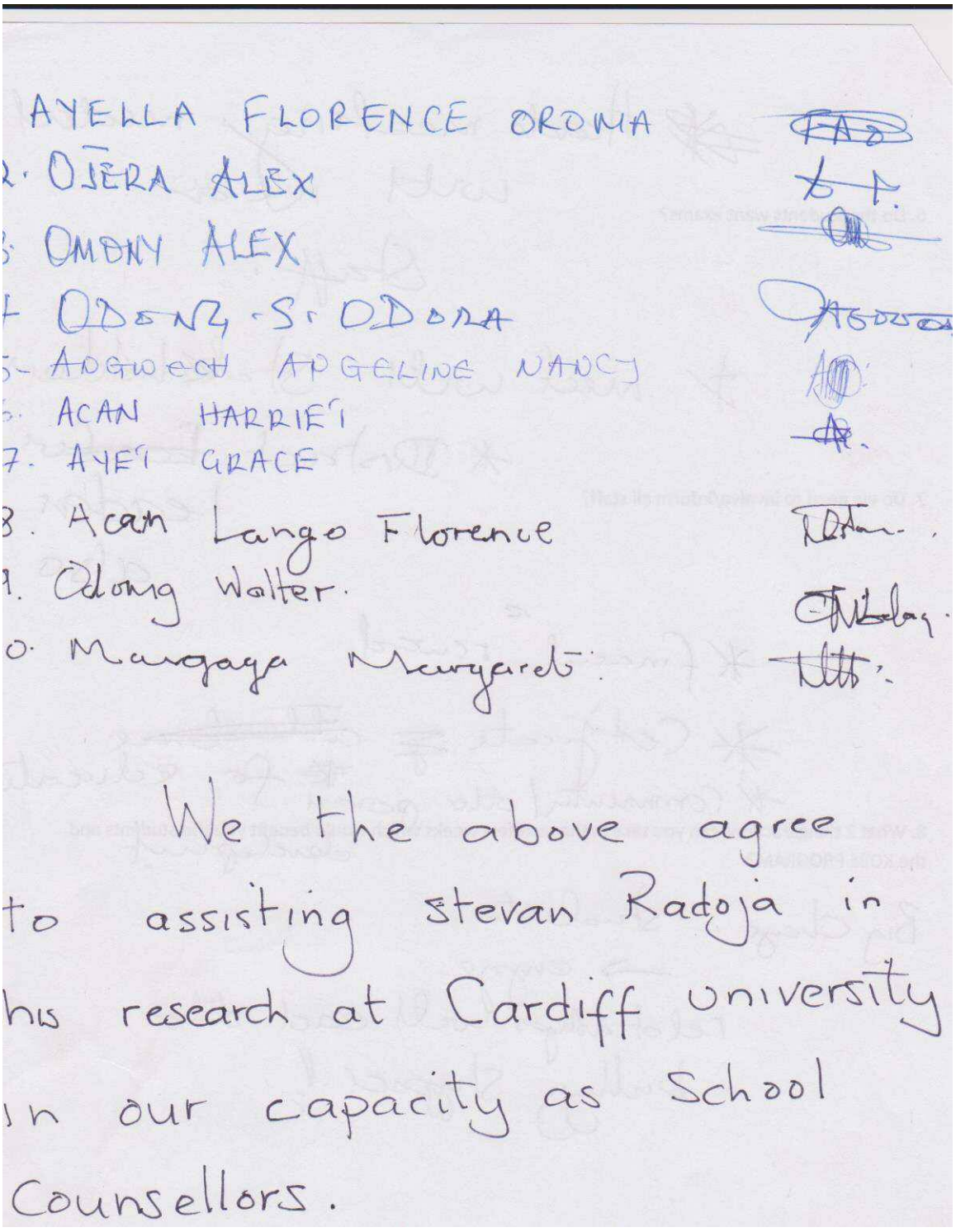
Please turn over

GL assessment
the measure of potential

		Very like me	Quite like me	Only a bit like me	Not like me at all
12	I carry on trying even if I find the work difficult.				
13	I am easily hurt by what others say about me.				
14	I calm down quickly after I have got upset.				
15	I am rather a shy person.				
16	When I notice people getting upset, I try to help them feel better.				
17	I make a good effort with most of my school work.				
18	I tend to put myself down even when I have done something well.				
19	I am usually a calm person.				
20	I spend too much time alone.				
21	I try to help someone who is being bullied.				
22	I get distracted easily from what I'm supposed to be doing.				
23	I worry a lot about the things I'm not good at.				
24	I can wait patiently for my turn.				
25	I can make friends again after a row.				

Thank you for filling in this checklist.

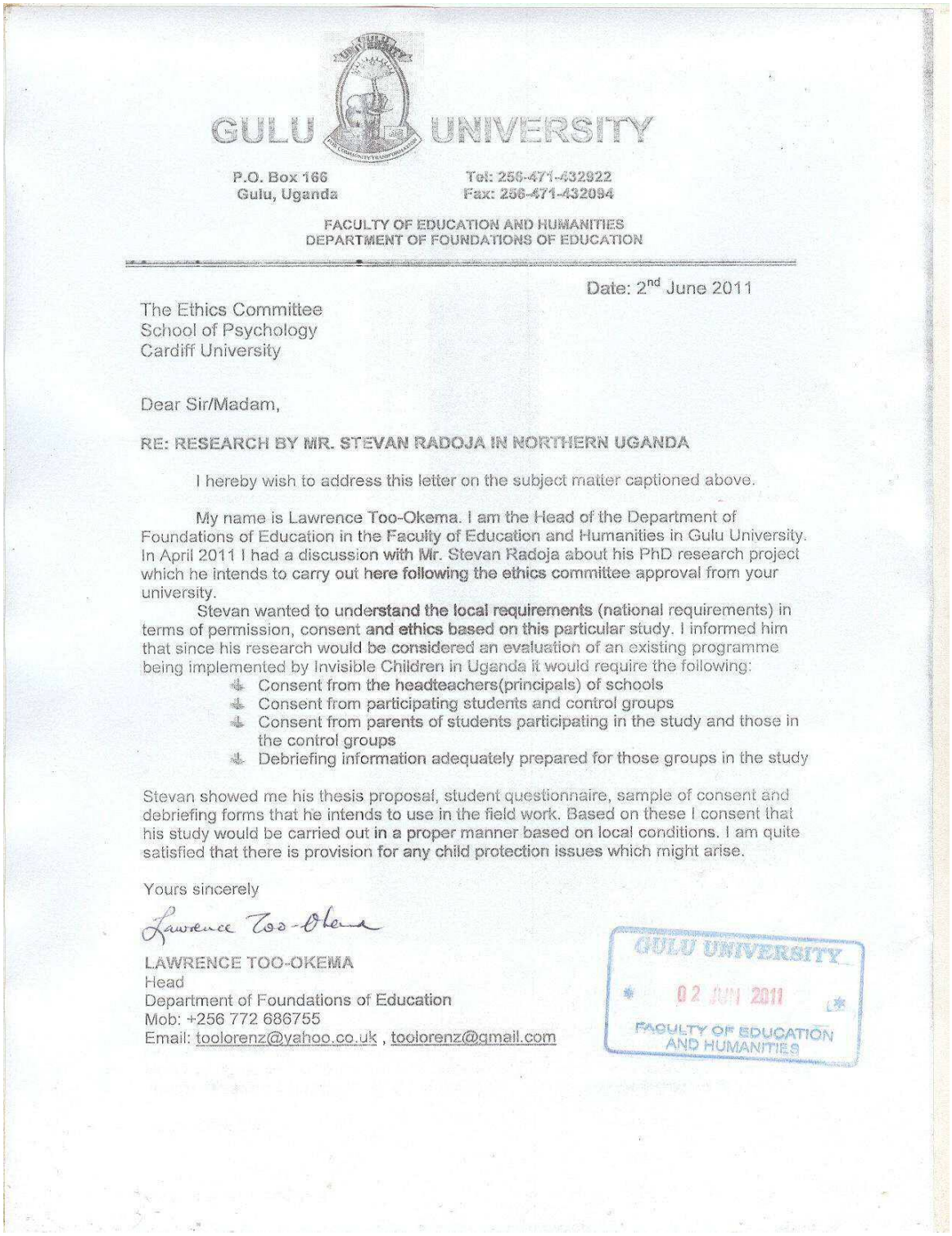
Appendix 25. School counselor participant agreement signatures



AYELLA FLORENCE OROMA
2. OJERA ALEX
3. OMONY ALEX
4 ODONG-S. ODORA
5- ADGWECH ANGELINE NANCY
6. ACAN HARRIET
7. AYET GRACE
8. Acan Lango Florence
9. Odong Walter.
10. Margaga Margaret.

We the above agree to assisting Stevan Radoja in his research at Cardiff University in our capacity as School Counsellors.

Appendix 26. Letter confirming adherence to local research ethical procedures



GULU UNIVERSITY

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FACULTY OF EDUCATION AND HUMANITIES
DEPARTMENT OF FOUNDATIONS OF EDUCATION

Date: 2nd June 2011

The Ethics Committee
School of Psychology
Cardiff University

Dear Sir/Madam,

RE: RESEARCH BY MR. STEVAN RADOJA IN NORTHERN UGANDA

I hereby wish to address this letter on the subject matter captioned above.

My name is Lawrence Too-Okema. I am the Head of the Department of Foundations of Education in the Faculty of Education and Humanities in Gulu University. In April 2011 I had a discussion with Mr. Stevan Radoja about his PhD research project which he intends to carry out here following the ethics committee approval from your university.

Stevan wanted to understand the local requirements (national requirements) in terms of permission, consent and ethics based on this particular study. I informed him that since his research would be considered an evaluation of an existing programme being implemented by Invisible Children in Uganda it would require the following:

- Consent from the headteachers(principals) of schools
- Consent from participating students and control groups
- Consent from parents of students participating in the study and those in the control groups
- Debriefing information adequately prepared for those groups in the study

Stevan showed me his thesis proposal, student questionnaire, sample of consent and debriefing forms that he intends to use in the field work. Based on these I consent that his study would be carried out in a proper manner based on local conditions. I am quite satisfied that there is provision for any child protection issues which might arise.

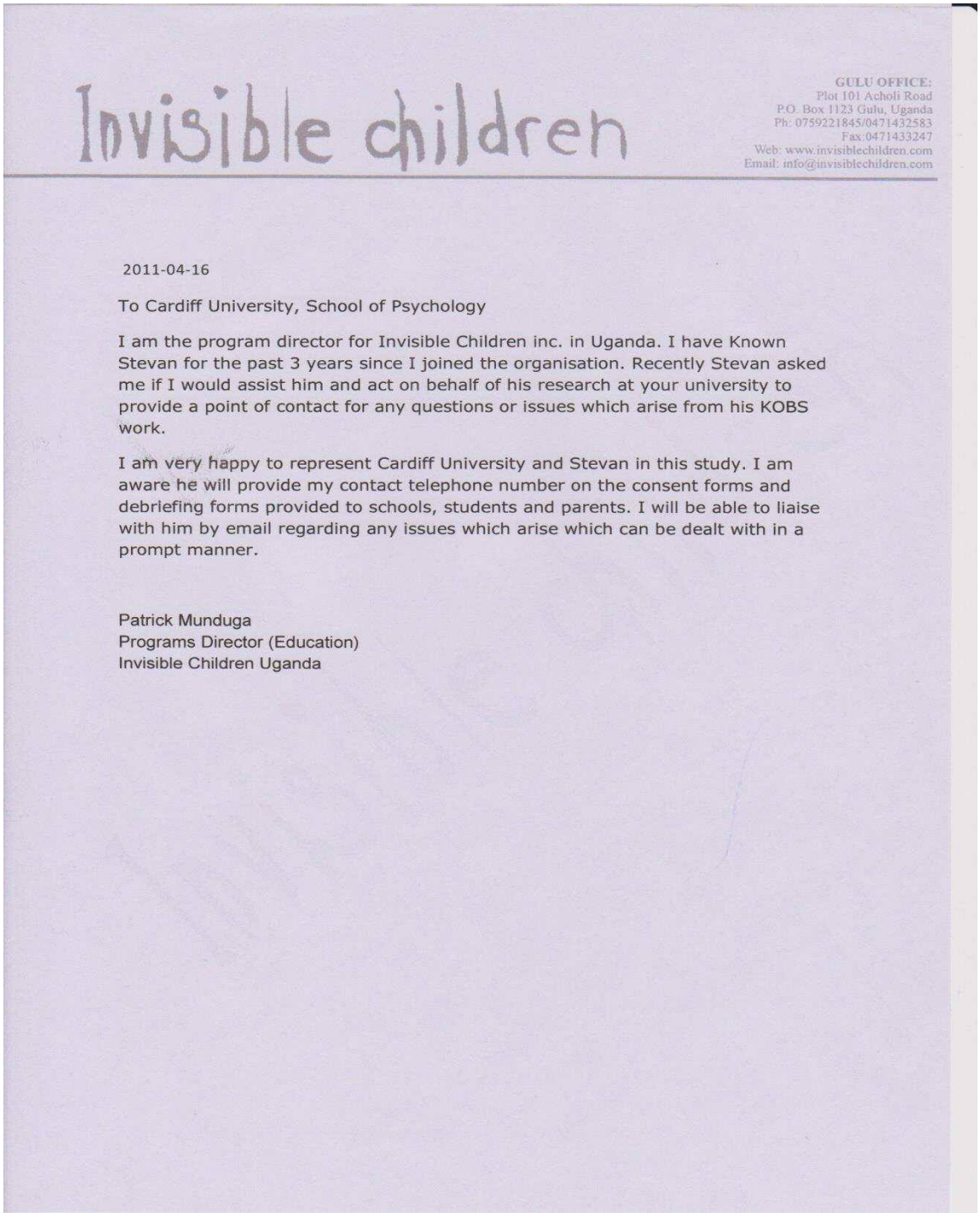
Yours sincerely

Lawrence Too-Okema

LAWRENCE TOO-OKEMA
Head
Department of Foundations of Education
Mob: +256 772 686755
Email: toolorenz@yahoo.co.uk , toolorenz@gmail.com

GULU UNIVERSITY
02 JUN 2011
FACULTY OF EDUCATION AND HUMANITIES

Appendix 27. Letter confirming field work assistance



Invisible children

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2011-04-16

To Cardiff University, School of Psychology

I am the program director for Invisible Children inc. in Uganda. I have Known Stevan for the past 3 years since I joined the organisation. Recently Stevan asked me if I would assist him and act on behalf of his research at your university to provide a point of contact for any questions or issues which arise from his KOBS work.

I am very happy to represent Cardiff University and Stevan in this study. I am aware he will provide my contact telephone number on the consent forms and debriefing forms provided to schools, students and parents. I will be able to liaise with him by email regarding any issues which arise which can be dealt with in a prompt manner.

Patrick Munduga
Programs Director (Education)
Invisible Children Uganda