

**A School based study of the applications of yoga and mindfulness for  
adolescent girls aged 16 to 18.**

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## **Abstract:**

The period of adolescence is often marked by a number of challenges, from developmental shortcomings, to difficult peer relationships, to academic pressure, all of which can result in considerable amounts of stress. In that teenagers spend a majority of their time in school, many of their challenges are rooted in the school environment, or made worse by academic pressures put on them. In that many schools place a higher importance on academic achievement than the wellbeing of their students, there is a need to implement a strategy to better support students in a way that is accepted by school authorities. A small number of schools have begun to look to yoga and mindfulness programs as a method to support student's wellbeing and help them to deal with academic pressure. The practices of yoga and mindfulness have been studied for their varied therapeutic and preventative applications for adults and young people. To date, few studies have been conducted with adolescents, and none have specifically looked at 16 to 18 year old females. In that this demographic represents a unique set of challenges, there is a need to understand how those challenges can be supported by a yoga and mindfulness practice. Therefore, a qualitative research design combining a review of the literature with small-scale research was conducted. This included semi-structured interviews with six teenage girls between the ages of 16 and 18 who had participated in a yoga and mindfulness program in a West London secondary school. The findings of this study supported that middle class, academically focused teenagers are under extreme levels of stress and need to be offered effective coping mechanisms. For the students interviewed, a yoga and mindfulness class was able to achieve these aims. The class also offered a space for the students to tune into their own wants and needs, which highlighted a potential for self-acceptance, identity formation, and appropriate decision making. These findings are specifically applicable to the demographic in the study, but also suggest the

potential for broader applications. Therefore, recommendations for future research, policy, and practice are explored based on these findings.

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## **Introduction:**

This dissertation serves to present the findings on the impact of yoga and mindfulness on adolescent females. Specifically, it asks how girls between the ages of 16 and 18 are affected by participating in a school based yoga and mindfulness program. A small-scale qualitative study was used to address this question. The rationale for this study was a determined gap in the literature on the specific applications of yoga and mindfulness to the demographic in question. Previous studies have examined applications for adults, teenagers with specific health concerns, and mixed-gender groups of teenagers. In that teenage girls encounter a number of issues that are both age and gender specific, it is necessary to gain a better understanding of any specific effects that they experience from yoga and mindfulness.

Adolescence is a time that can present a number of challenges and concerns, including negative body image, disordered eating, cognitive development which can effect decision making skills, risk taking, moral development, developing a sense of identity, self-esteem issues, a shift from family to peer focus, and balancing school, work, hobbies, and other responsibilities (American Psychological Association, 2002: Head, 1997: Compass et al.: McAnarney, 2008). They can experience pressure from teachers, parents, peers, and the media, which can cause anxiety, depression, eating disorders, and general stress (Bridges and Madlem, 2007). As compared to their male peers, female adolescents are more prone to depression, body image issues, and eating disorders, and can face complications from fluctuating hormones (Steinberg, 2001: Zarrett and Eccles, 2006: Anrsten and Shansky, 2004: Santrock, 2001). Therefore it is necessary to consider these gender specific challenges when studying female adolescents.

Given that adolescence is a time of considerable stress and changes both internally and externally, there is a necessity to provide teenagers with appropriate activities for managing and improving these experiences (Durlack et al, 20011: Broderick and Metz, 2009: Head, 1997). Without appropriate tools to deal with challenges, teenagers can face larger academic, mental/emotional, and social issues (Zarrett and Eccles, 2006, pg. 17: McAnarney, 2008, pg. 323, Durlack 2011, pg. 406). As teenagers spend the majority of their times in school, schools should be particularly concerned with how to support students (Durlack et al, 20011: Broderick and Metz, 2009: Head, 1997). In that yoga and mindfulness have shown to provide a number of benefits, many of which are particularly related to adolescence, they can be considered as a method to do so.

A basic understanding of what is meant by yoga and mindfulness is essential to this study. Yoga is the practice of moving one's body through a series of poses while focusing on breathing and the mind. It is a non-religious practice but has roots in Indian philosophy and encourages the union of physical and spiritual components to achieve overall wellbeing (Smith, 2008, pg. 5). A typical yoga class is made up of a series of poses, known as asanas (Smith, 2008, pg. 8), and will end with a period of relaxation which can include breathing, imagery, and muscle relaxation techniques depending on the type of class and teacher (Kaley-Isley et al. 2010) Today, yoga is prevalent in mainstream culture as a fitness routine as well as a therapeutic method to deal with stress, as well as more serious health issues (Kaley-Isley et al. 2010, pg. 20).

Mindfulness is the practice of becoming aware of the present moment through purposeful attention. Expert in the field, Jon Kabat-Zinn says that the working definition of mindfulness is “the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experiences moment by moment,” (2003, pg. 144). The practice has roots in Buddhism, but is different from

meditation in that the goal is not to completely quiet the mind, but rather to increase awareness of the present moment. Mindfulness techniques have been used as a form of therapy to treat stress, anxiety, depression, and eating disorders (Kabat-Zinn, 2003: Hooker and Fodor, 2008).

Mindfulness can be taught in a number of ways. One application, called Mindfulness-based Stress Reduction (MBSR), was established in 1979 by Kabat-Zinn and was developed to combine mindful meditation with mindful yoga to improve health and wellbeing (Brantley, 2005 pg. 132). MBSR aims to serve as a secular, practical way to help people cope with individual problems or stressors, and the MBSR model has been widely used in workplaces, schools, prisons, and health centres (Kabat-Zinn, 2003, pg. 149). The curriculum includes formal practices such as body scanning, sitting and moving meditations, and the practice of bringing focused attention to everyday tasks, as well as providing information on stress, coping mechanisms, and health enhancement (Burke, 2009).

Some of the widely accepted benefits of yoga have been determined as: kinaesthetic awareness, positive mood, well-being, self-acceptance, self-actualization, social adjustment, decrease in anxiety, depression and hostility, lower mood disturbance, decreased tension and anxiety, improved levels of anger-hostility, and reduced fatigue (Martinus, 2012; Bridges and Madlem, 2007). Mindfulness techniques have been used as a form of therapy to treat stress, anxiety, depression, and eating disorders, and improve focus and concentration (Kabat-Zinn, 2003: Hooker and Fodor, 2008). In that these benefits directly relate to the challenges of adolescence illuminates a potential for yoga and mindfulness to aid these challenges.

To draw on all possible effects of yoga and mindfulness on adolescent girls, it is necessary to develop a deeper understanding of the general experience of the age group. This includes developmental changes, emotional issues, causes of stress, as well as social and academic experience. Then, an analysis of the currently held views on the benefits of yoga and mindfulness will help determine which are especially relevant to this demographic. This will include an analysis of studies previously conducted with young people. By doing so, it will also become clear where gaps in the research exist, and thus the rationale for conducting this study. At that time, the findings from the qualitative research will be presented. Those findings will then be assessed and new knowledge identified. Finally, larger conclusions will be drawn about the potential applications of this study for future research, policy, and practice. The overall aims of this study are:

- To understand the common challenges of adolescence, specifically for girls between the ages of 16 and 18.
- To determine how participating in a yoga and mindfulness program can have an effect on said challenges.
- To draw new conclusions on the potential applications for yoga and mindfulness programs with female adolescents.

## **Chapter One: Literature Review**

### **1.1 The Challenges of Adolescence:**

While this research is not attempting to depict all teens as distressed and in need of help, the majority of literature on adolescence focuses on the negative aspects and dysfunction, rather than normative adolescent development (Steinberg, 2001, pg. 86). It is because these challenges exist that it is necessary to develop strategies to support teenagers. To do so, it is necessary to understand the most common issues that teenagers experience.

#### *1.1.2 Social Life, Peer Pressure and Brain Development:*

For teenagers, school is a central pillar of life. School is not solely marked by academic pursuits, but is also the hub for a teenager's social life. Adolescence is often marked by gaining independence from family and relying more on friends (Head, 1997, pg. 11). This can result in strained relationships with parents (Head, pg. 11; Steinberg, 2001, 88). Increased reliance on peers can be a cause for both positive and negative development. Good peer relations are thought to be necessary for normal social development and can contribute to positive mental health. A lack of friends or negative peer relations can lead to a number of problems such as delinquency and depression (Santrock, 2001, pg. 185).

Peer pressure is a well-known term in the study of adolescence and it is the negative influence and pressure from friends that has been known to lead teenagers to experiment with alcohol, drugs, and other risk-taking behaviours (Sanrock, pg. 185).

Adolescent girls are more likely to form deeper and more intimate relationships with their friends than their male peers, which in turn makes them more likely to be influenced by that person (Gullotta et al. 1999, pg. 107). Some argue that teens do not make decisions based on peer pressure, but rather as a result of admiration of peers, in that teens choose friends with similar behaviours, attitudes, and identities (Steinberg, 2001, pg. 93).

This quest for personal identity peaks during adolescence (Magen, 1998; Head, 1997). Head says, “The principle psychological task for the adolescent is to achieve a sense of personal identity,” (1997, pg. 8). Magen says that while striving to form this sense of identity through determining personal needs, desires and goals, adolescents subsequently need to determine what makes them happy or unhappy (pg. 11).

The ability to resist peer pressure and make appropriate decisions is made more difficult by a still-developing brain. At age 16, a peak in grey matter around the superior temporal cortex of the brain occurs, which reflects synaptic reorganization (Choudhury et al., 2006, pg. 166). This increase in grey matter is thought to have an effect on cognitive functioning, which controls the coordination of thought and behaviour. Additionally, the prefrontal cortex, the area responsible for regulating judgment, caution, decision-making and appropriate behaviour matures in late adolescence (McAnarney, 2008, pg. 322; Kelley et al. 2004, pg. 29). This supports the claim that by the ages of 16-18 teenagers becomes more capable of decision-making independent from peers and parents (Sanrock, pg. 187).

A teenager may lack the capacity to make decisions and act appropriately until his or her brain is fully developed. This, in conjunction with the influence of peers, can lead to risky behaviour and the inability to make appropriate decisions. As their brains develop, and as teenagers gain a better understanding of their personal identity and the

characteristics that they value in friendships and in themselves, they will begin to select friends who mirror their own personal values, and make decisions based on their own, newly forged sense of identity. While these issues seem to be lessened between 16 and 18, when the capacity exists to make decisions and choose like-minded friends, it is still necessary to support teenagers to make these decisions positive ones.

### *1.1.3 Biological Changes/ Developmental Changes and Potential Problems:*

The likelihood for any teenager to experience depression rises from roughly 5% to 20% from early to late adolescence (Thapar, et al. 2012). However, female adolescents are even more likely to experience depression than males (Steinberg, 2001, pg. 87). For females, chronic stress can suppress reproductive hormones, and can cause depression and anxiety (Cameron, 2004, pg. 113). Increase in estrogen can impair a teenage female's ability to deal with stress and make her more sensitive to stressful situations than her male peers (Anrsten and Shansky, 2004, pg. 145).

Feelings about their body as a result of puberty and subsequent changes can have a huge impact on a teenager's life. While it was once believed that hormonal fluctuations during puberty caused negative feelings, there is little research to support that claim. Steinberg argues that it is actually the physical bodily changes and the conceptions of their appearance that cause adolescent girls to develop depression and disordered eating (2001, pg. 91). There is an observed relationship between eating disorders, negative body image, and weight dissatisfaction with anxiety and depression (Carei et al. 2010, pg. 346: Fulkerson et al. 2004, pg. 886).

As compared to boys, adolescent girls tend to experience a greater decline in self-esteem during adolescence (Santrock, 2001, pg. 345). Physical appearance is the most influential factor in self-esteem for female teenagers, who have likely experienced a dramatic change in the shape of their body during early adolescence (Steinberg, 2001, pg. 92; Zarrett and Eccles, 2006, pg. 13). Dissatisfaction with one's body typically starts after a girl gets her first period, the time when the body can change shape and weight. Studies have also found that females tend to have greater dissatisfaction with their bodies as compared with males, driven by socio-cultural concepts of physical attractiveness and the glorification of thinness (Jones and Crawford, 2005, pg. 257). As a result, peak incidence of anorexia is between 14-18 and between 18-25 for bulimia. In total, 1-5% of female adolescents are affected by eating disorders, including anorexia, bulimia or an eating disorder not otherwise specified (Carei et al. 2010, pg. 346).

#### *1.1.4 Stress During Adolescence:*

Stress is something that all humans experience, not just teenagers. It is a reaction from both the mind and body to a condition or event that manifests itself by fatiguing the body systems. If it is not dealt with effectively, stress can lead to long-term physical and mental ailments (Girdano et al. 1993, pg. 7). This is particularly true when one's level of demand exceeds the capacity to comply. These demands include time pressures, excessive responsibility or accountability, lack of support, and excessive expectations from yourself and those around you (Girando et al. 1993, pg. 91). This is directly applicable to the late teenage years and the culminating pressures from school, family, and peers.

The school environment is considered to be a cause for considerable, counterproductive stress for adolescents, which can cause anxiety. High levels of anxiety have been shown to have a negative impact on students' academic performance (Kiselica, et al. 1994, pg. 335). At age 16, UK teens take the General Certificate of Secondary Education (GCSE) exams in English, Mathematics, and science, and must pass in order to progress in their secondary education (Gregory and Clarke, 2010, pg. 67). These exams often require teens to make decisions about future studies or career choices (Head, 1997, pg. 7) and are observed to be cause for considerable stress for teenagers (Acres, 1995: Morris, 2009).

Thus it is clear that there are a number of unique challenges that can take place during adolescence. For females, some challenges are even more prominent. It is necessary to understand what factors affect the likelihood that a teenager will experience any of these challenges, and to consider mechanisms to prevent or support their occurrence.

## **1.2 The role of Schools:**

An inability to deal with the numerous biological and social changes occurring during adolescence can lead to academic problems, while better social-emotional competencies have been reputedly determined to improve academic performance (Zarrett and Eccles, 2006, pg. 16: Durlack 2011, pg. 406). Scholars agree that schools are responsible not just for fostering academic success, but also for supporting social and

emotional development to promote students' success in school and in life (Durlack et al, 20011: Broderick and Metz, 2009: Head, 1997).

Zarrett and Eccles suggest that in order for teenagers to be fully supported, schools need to foster confidence, good social skills, high self-esteem, and coping skills in their students (2006, pg. 17). Magen agrees that interventions with teenagers, such as programs offered by schools should be aimed at improving their quality of life, in order to promote their identity formation and overall happiness (1998, pg. 12). However, schools are not necessarily placing importance on student's social and emotional needs, or fostering an environment that supports their unique developmental needs. Instead, schools tend to place a higher importance on academic accomplishments, while wellbeing is overlooked (Bonell et al., 2014: Broderick and Metz, 2009).

This information has outlined the main issues of adolescents, namely: the common causes of stress, the school and social landscapes, the developmental changes experienced, the potential onset of depression, and the potential negative effects of these issues for females in late adolescence. The need for schools to provide an environment that supports students' overall wellbeing was also introduced. The characteristics for ideal interventions with teenagers and the role of schools should be kept in mind when analysing the potential benefits of yoga and mindfulness, and the capacity for these programs to meet the wellbeing needs of adolescents

### **1.3 Yoga**

Some of the widely accepted benefits of yoga for the general population have been determined as: kinesthetic awareness, positive mood, well-being, self-acceptance,

self-actualization, social adjustment, decrease in anxiety, depression and hostility, lower mood disturbance, decreased tension and anxiety, improved levels of anger-hostility, and reduced fatigue (Arpita, 1990; Kazufuni et al. 2011). In the United States, Yoga therapy is recognized as a form of alternative, “mind-body” medicine by the National Institutes of Health, and is defined as “the process of empowering individuals to progress toward improved health and well-being through the application of the philosophy and practice of yoga,” (Kaley-Isley et al. 2010, pg. 24). Yoga therapy can be used as a preventative method to improve strength, energy, and concentration, or as a therapeutic method to combat mental health and/or medical issues (Kaley,-Isley, pg. 24- 29).

The reported effects of yoga for children and teenagers include building self-awareness, increased self-confidence, improved decision-making skills, improved communication skills, reduced peer pressure, increased body image satisfaction, somatic and kinaesthetic awareness, positive mood, subject wellbeing, self-acceptance, self-actualization, social adjustment, decrease in anxiety and hostility, as well as physical benefits including strength and flexibility (Martinus, 2012; Bridges and Madlem, 2007). It is necessary to analyse studies that address these different issues to determine their accuracy and whether their conclusions are reliable, and which are applicable to 16-18 year old females.

### *1.3.1 Depression and Self-esteem:*

General physical activity has been identified as a crucial element for a teenager’s overall health for its ability to benefit psychological wellbeing. Participating in physical activity can reduce symptoms of depression and anxiety, enhance self-esteem, encourage social development, promote healthy body weight, and reduce chronic disease risk factors

(Biddle et al. 1998, pg. 5). Additional studies have confirmed that teenagers who take part in physical activity were better able to cope with stress and had more positive identities than their peers (Santrock, 2001. pg. 92). As a form of physical activity, yoga will fall into this category and likely provide similar benefits for teenagers' mental health, and a number of studies have focused on this area.

As the literature determined, self-esteem is a key issue for female adolescents, who are more prone to depression and eating disorders than their male peers. Yoga is often used as a treatment method for its ability to ease anxiety, depression, and general symptoms of eating disorders (Carei et al. 2010, pg. 347). Specifically, it is used to deflect the tendency for food preoccupation and obsessive thoughts by shifting the focus of attention to yoga (Carei et al. 2010, pg. 350). When combined with suggestions of mindful eating, participants are better able to respond to the needs of their body, including hunger, and gain acceptance of their physical body (Neumark-Sztainer, 2013, pg. 137-138). The literature determined acceptance of self-appearance is crucial to self-esteem, and thus this data can be used to draw a connection between yoga and overall self-esteem. This could be considered to be one of the larger effects of the mind-body connection that yoga encourages, and based on the evidence, it seems that both the physical practice of yoga, as well as the encouragement of mindfulness in relation to eating are beneficial, but follow-up studies are needed to analyze the long term effects of these interventions.

Other findings on improvements in self-esteem following participation in yoga yield inconclusive results. While most studies support improved self-esteem for teenagers who practice yoga (Martinus, 2012; Bridges and Madlem, 2007), one 2011 study determined that ninth grade (14-15 year old) students who participated in an ongoing yoga program experienced lower self-esteem as compared to a control group who participated in standard physical education classes (Kokinakis, 69). These results were

contradictory to the expectation and previous research and are thought to be due to the negative attitude of the yoga teacher (70). This study brings to light the many variables that constitute a yoga program, and the factors that affect the potential for teenagers to benefit.

This data confirms that yoga has been found to ease depression and improve self-esteem in some instances, which has been an effective method to treat eating disorders. However, there is conflicting data that encourages future studies to be mindful of how the yoga program is administered, and if the teacher is a qualified, positive role model to the students.

### *1.3.2 Stress:*

Yoga is used both as a way to combat existing stress and to help people learn how to avoid causes of stress. The physical exercises work to reduce tension and anxiety as well as training the body and to react differently to stressors, while the theoretical principles help people to focus on the present moment, and quiet the mind of stressful thoughts (Girando et al. pg. 190-195).

A 2009 American study aimed to "evaluate the psychological benefits of a yoga program conducted within the school curriculum for adolescents." 51 male and female students ages 16-18 were randomly assigned to a PE or yoga program. The class followed a secular program that included physical exercises and postures, breathing exercises, deep relaxation, and meditation techniques. The study concluded that mood, tension-anxiety, and negative affect improved following participation in yoga as opposed to the students who took traditional PE classes. There was no significant improvement in yoga students in levels of depression or stress (Noggle et al. 2012, pg. 194-197). The results of this study were based on self-reported data through questionnaires, which leaves room for

error and doesn't take into account students' personal, detailed accounts of their individual experience. Additionally, attendance to the yoga class fluctuated significantly, meaning that many students did not attend on a regular basis. Additionally, students reported that having mixed gender classes inhibited their willingness to participate and feel comfortable in the class.

A follow-up study addressed some of these concerns and by conducting semi-structured interviews with the group to “gain a deeper understanding of individual perspectives of students participating in the treatment arm of our yoga trial,” (Conboy et al. 2013, pg. 171). Students reported perceived benefits from the class including bodily awareness, mental health, stress reduction, and academic performance. Many of the participants noted that yoga had helped them to relax, breathe, and focus on something else when they felt stressed (2013 pg. 174).

The conflicting data to these studies, which were identically administered but used two different methods of data collection, helps point out one of the benefits of qualitative research. By giving students the opportunity to provide open-ended responses, they reported more benefits than they had with quantitative scales that measure stress, affect, and other factors. Whether or not the students were actually physically less stressed or had a better mood due to the yoga class is perhaps less important than the fact that they had the perception of these benefits.

Some studies that measure stress do so through measuring recognized physical symptoms. A study of college students, who were determined to have high levels of stress, compared their experience with a three-week daily yoga practice to other stress relieving activities. This study echoed the similar literature that the young people who participate in a yoga program show significant decreases in systolic blood pressure,

diastolic blood pressure, and heart rate, which were determined to be measures of stress level, after the 30-minute class (Rizzolo et al., 2009, pg. 81-88; Birdee et al. 2010). These findings support that beyond perceived improvements in stress, people who participate in yoga experience measurable, physical improvements in stress levels.

### *1.3.3 Peer Relationships:*

A distinction was made in the Conboy et al. study between male and female perceptions of changing social dynamics as a result of the yoga class. A number of females felt that the program had brought them closer to female peers, and noticed increased kindness between female students. The males however, noticed increased feelings of peer pressure rooted in the belief that boys should not enjoy yoga, and that this inhibited some boys' ability to enjoy the class and participate fully. The authors of this study go on to explain that the female participants favoured yoga to traditional PE classes, which they felt were geared to boys. Male students preferred the active nature of PE compared with the calm nature of yoga (Conboy et al, 2013, pg. 175-176).

These findings are consistent with studies of girls' and boys' concepts of feminine and masculine sports and differing athletic abilities, based on gender. In a review of the literature on physical fitness and youth, Biddle et al. found that girls tended to feel less self-satisfaction after playing sports than boys did, which was due in part to lower participation rates by girls (1998, pg. 56). One study suggested that girls can perceive themselves as less capable of succeeding in sports that they consider masculine (Klomsten et al. 2005), which could explain their lack of participation in such sports. While the physical benefits are largely the same across gender, it is the emotional reaction, and by extension the mental health benefits from sport, that differ by gender

(Biddle, et al. 1998, pg. 56). This does not mean that girls will categorically dislike sport, but instead should prompt the question of what type of physical activity is better suited for females.

These findings give light to the differing experiences of male and female adolescents with yoga programs and the considerations that should be made in offering yoga programs to them. Additionally, these findings relate to literature on peer relationships in late adolescents. The necessity of positive peer relationships is known to support teens in making positive choices, and a yoga class can help provide teenage girls with that supportive peer environment.

#### **1.4 Yoga in schools: Previous studies and results**

A number of studies have been conducted with students who participate in school-based yoga programs. This research is useful as schools around the world are beginning to implement or consider implementing yoga programs in their curriculum. Among the rationalizations for implementing yoga programs in schools are: to teach students to use focused breathing and attention to improve emotional regulation and attention skills, and to control stress (Kokinakis, 2011, pg. 62). Improvements in these areas are thought to have a positive affect on students' academic performance. However, the literature on the relationship between lower levels of stress and academic performance are inconclusive.

A study conducted with 800 teenagers aged 14-15 in Punjab found that low-stress students performed better on tests than high-stress students. After a seven-week yoga program, they found that students who participated performed better academically than those who did not (Kauts and Shama, 2009.) However, the researchers credit this

improvement to the meditation element of the yoga program, citing that long-term meditation practice had been found to lower stress and improve academic performance. The concrete data in this study is lacking, and on closer inspection, it is noted that the students participating in the yoga program only performed better on two of the four academic tests. Other studies have reported that while meditation practice lowers stress, it does not have a measurable effect on academic results (Kiselica et al., 1994, pg. 340).

In the qualitative study of high school students previously described, many students reported that while the yoga program may not have improved their grades, they did notice an improved ability to deal with academic pressure and improved attitude towards school. Specifically, they cited that they enlisted breathing strategies that they learned in the yoga class to help prepare for tests (Conboy et al. 2013, pg. 175). The concept that lower levels of stress can improve performance is repeated in other studies, and the effect on teenagers' academic performance is worth determining in future studies. Regardless of whether or not it improved academic performance, the literature largely supported the claim that yoga helps relieve stress. Although some studies did not report a significant improvement in stress based on previously determined scales, qualitative data and measures of physical symptoms typically revealed reduced stress levels.

### **1.5 Mindfulness: Accepted benefits and previous studies**

Studies with children and adolescents participating in mindfulness programs have shown improved working memory, attention, academic skills, social skills, emotional regulation and self-esteem, as well as decreases in anxiety, stress and fatigue (Meiklejohn et al. 2012, pg. 5). Studies conducted specifically with adolescents have concluded that participating in a mindfulness practice leads to evidence of increased well-being, lower

stress, lower depression scores, improved resilience and well-being, decreases in negative affect, and increases in calmness, relaxation, self-acceptance, emotional regulation, awareness and clarity (Kuyken et al, 2013: Broderick and Metz 2009: Hennelly, 2010).

#### *1.5.1 Biological benefits:*

Preliminary brain scans of adult participants who had taken an eight-week MBSR course showed changes in the hippocampus region of the brain. The hippocampus has been previously determined to differ for people who meditate and those who don't (Kabat-Zinn, 2003: Holzel 2011). For people who meditate, increased grey matter in the hippocampus signals improved emotional response and regulation, memory, self-reflection, and empathy (Holzel, 2011, pg. 40: Meiklejohn, 2012, pg. 5). Participants in that study also reported improvements in stress levels, a known benefit of mindfulness. Their reports correlated with decreased grey matter in the amygdala, an area of the brain associated with the human stress response (Meiklejohn, 2012, pg. 5). People who practice mindfulness also present increases in activation of the left-side of the anterior regions of the brain, areas associated with positive affect, and not the right side which signals negative emotional expression, anxiety and depression (Kabat-Zinn, 2003, pg. 152).

In that we have determined adolescence as a time when the brain is still developing, it would be useful to conduct a similar study with teenagers to determine how mindfulness affects brain developments, and if it has the same benefits for teens.

## **1.6 Mindfulness Programs in Schools: Previous studies and results**

While mindfulness is often an element incorporated into a yoga class, it can also be taught as a separate program. Mindfulness programs in schools have started to become more popular in the past few years. It is useful to see how and why schools have decided to implement these programs and how students have benefitted. Mindfulness has been credited with helping students with stress-reduction, test-anxiety, improved focus, and overall wellbeing (Hennelly, 2011 pg. 15). This information can then be used to rationalize why mindfulness is a crucial element to yoga programs for teenagers, and how the two can be used together.

There are many different school based mindfulness programs. The Mindfulness in Schools Program (MiSP), a UK based organization, involves 9 scripted lessons taught by a trained teacher. The lessons are based on existing programs like Mindfulness-based Stress Reduction, but with shortened and adapted components to suit young people using a range of age-appropriate resources such as booklets, mp3s and CDs, to bring mindfulness to life (Kuyken et al, pg. 2). A similar program in the United States, called Mindful Schools, trains teachers of students from ages 5-18 to deliver in-class mindfulness programs (Miekljohn, 2012, pg. 12).

In addition to the organizations and that train teachers, or offer trained mindfulness educators to carry out curriculums, some schools have run independent pilot programs. The Learning to Breathe program was a pilot trial of mindfulness curriculum based on MBSR, carried out at a private high school for girls for three years. The goals of the program were to help students understand thoughts and feelings, learn mindfulness tools for managing negative emotions, and provide opportunities to practice skills in a group setting. This was done through body awareness, understanding and working with

thoughts and feelings, integrating awareness of thoughts, feelings and bodily sensations, reducing harmful self-judgments, and integrating mindful awareness into daily life. These practices took into account adolescent development and aimed to help teenagers in constructing identity and developing autonomy from adults, improve their ability to understand and manage emotions, improve a capacity for introspection, and manage ideas of social conformity and social comparison. The results of the study reflected decreases in negative affect, and increases in calm, relaxation, self-acceptance, emotional regulation, awareness, and clarity (Broderick and Metz, 2009. pg. 38).

Other studies in schools have seen mindfulness to help in the development of cognitive and performance skills, by helping young people to pay attention and focus (Weare, 2012, pg. 5). This capacity for mindfulness is particularly noted in adolescent students with learning disabilities, who tend to have higher levels of anxiety and trouble focusing (Beauchemin, et al. 2008). A 2008 study conducted with 34 13-18 year olds with learning disabilities found that students experienced decreased anxiety following a 5-week mindfulness program. Their teachers also reported improvements in their academic performance (Beauchemin et al., 2008, pg. 42). Another study of adolescent students with ADHD reported significant improvements in self-reported symptoms following participation in an 8-week mindfulness program (Burke, 2009). These studies of teenagers with learning disabilities and additional studies conducted with younger students, typically age 12 and under, reflect improvements in attention and behavioural issues (Meiklejohn, 2012, pg. 9).

Many studies measuring the effects of mindfulness programs do consistently find that participants report maintained improvements in follow-up studies (Burke 2009: Broderick and Metz, 2009). Unlike some of the short-term improvements that participants experienced with yoga programs, one study found that 80% of the 256 students in a

school-based mindfulness program kept using mindfulness practices on varying levels for 2-3 months after the program ended. 80% focused on breathing, 44% used meditation, 52% walked a short distance or ate mindfully, and 60% noticed where in the body they were feeling stress (Kuyken et al, p. 3). Additionally, of the students participating in the Learning to Breathe program, half reported that their most useful skill was learning how to deal better with stressful thoughts and feelings. 64.6% indicated participating in mindfulness outside of class (Broderick and Metz, 2009, ph. 41).

The potential for mindfulness techniques to resonate with students and continue to influence them beyond the time of the study is useful to justify the importance of the mindfulness element in a yoga class. As with yoga, data on whether or not mindfulness programs have the potential to improve student's academic performance is still inconclusive. However, the data does support that these programs help students manage stress and anxiety, which in turn improves their feelings about schoolwork, and overall wellbeing. While these studies were conducted with small groups and over short periods of time, a longitudinal study would be useful to analyze students' academic performance and improve the conclusions of the study.

## **1.7 Conclusions:**

It is important to understand what may be limiting adolescents' ability to live optimal lives. Of course individual hindrances will vary, but based on the research conducted issues fall under a few broad categories. Late adolescence is a crucial time for identity formation, which is impacted by internal factors, including a still developing brain, and external factors, such as the influence of peers. Developmental changes during adolescence are generally universal, but can pose challenges for some. For girls, changing

body shapes can lead to decreased self-esteem or possibly eating disorders. School life potentially poses challenges academically and socially. Additionally, individuals can be dealing with mental or physical health issues.

Together, yoga and mindfulness offer benefits for physical and mental health that are particularly important during the period of adolescence. For girls in late adolescence, yoga and mindfulness programs provide an alternative to traditional PE classes by promoting self-esteem, supportive friendships, and mechanisms for coping with stress. Additionally, yoga and mindfulness programs can support the unique hormonal and biological changes that these teenage girls are experiencing. While the yoga class is independently beneficial it seems that it is the mindfulness practices that promote long-term benefits for stress relief, emotional regulation and concentration. Mindfulness is particularly useful for teenagers to deal with academic pressures like test-taking.

### **1.8 Links to Methodology:**

There are a number of gaps in the existing literature due to both methodological issues and focus of the studies. These studies have yet to analyze a group of 16 to 18 year old girls without the influence of their male peers, or without focusing on a group with a pre-existing ailment. Studies of a more general population typically focus on both males and females and don't consider gender differences in the perceived benefits. Additionally, there is a need to conduct additional qualitative studies to move findings beyond pre-determined scales to better understand teenager's individual feelings about participating in yoga and mindfulness programs. The evidence suggests that doing so allows for more accurate and authentic conclusions to be drawn about their experiences. This study attempts to fill that gap, by building on previous research and conducting a new,

qualitative study with a group of six 16-18 year old females who attend a co-ed comprehensive school in London. The group has no particular mental, physical or learning issues; instead the aim is to represent an average, middle class demographic.

Therefore the research questions are:

1. Which challenges of adolescence are identified by the interviewed students?
2. What affects did the students observe as a result of taking part in the yoga and mindfulness class?
3. How do these findings support the literature on the topic or provide new findings?
4. Are these findings applicable to the larger population, and if so what implications does this have to future research and implementation of programs in schools?

## **Chapter Two: Methodology**

The goal of conducting this study was to answer the questions derived from the literature, to determine if the findings support those concepts, as well as to draw new conclusions, which can then be used to make suggestions for future research or implications for the larger female teenage population. In order to reach the intended objectives of this research, a small-scale qualitative study was used. This was useful for this study in that the goal was to understand a group of teenage girl's reactions to a yoga and mindfulness program. Additionally, the study aimed to paint a larger picture of the experience of being a teenage girl, in order to explore the breadth of applications of yoga and mindfulness practice with this demographic. To do so, the researcher needed to compare the sample group with widely held views of adolescence, as well as provide an opportunity for new concepts to emerge.

### **2.1 Research Method:**

#### *2.1.1 Qualitative Research:*

Qualitative research was determined to be the optimal method to gain an understanding of teenager's individual attitudes and reactions to a yoga and mindfulness program. It would allow for data that provided an authentic insight into the teenagers' experiences, as opposed to variable-based conclusions of quantitative studies (Silverman, 2001, pg. 18 and 87; Arksey and Knight, 1999, pg. 6). It was determined that the unique perspectives of the research group would be useful in exploring a previously unrepresented sample in the study of yoga and mindfulness and adolescence.

There are limitations to using qualitative research including difficulty in categorizing and organizing large amounts of data, which in turn can prove difficult to draw concrete or reliable conclusions (Arksey and Knight, 1999, pg. 8). Additionally,

qualitative research can be open to subjective interpretation by the researcher, perhaps decreasing its value as use for concrete, reliable data (Silverman, 2001, pg. 34). For these reasons, this method of research can be limited in terms of the application of findings to a larger population (Arksey and Knight, 1999, pg. 6).

### *2.1.2 Semi-structured interviews:*

Semi-structured interviews were chosen as the most appropriate method for gathering data. Unlike written questionnaires, interviews allow for adaptability, follow up questions, and the opportunity to interpret the respondent's tone, facial expressions, and mood (Bell, 2010, 161). All of these characteristics were advantageous to this project in that one of the objectives was to understand each individual's experience and to allow for unanticipated reactions and attitudes. Additionally, this method was important to provide privacy to the respondents, which would not have been possible through other methods, such as focus groups. Privacy was important given the nature of the conversations, and in consideration for the age group, when peer influence is a concern. If interviews were conducted in a group setting, some respondents may have felt pressure to answer in a certain way, or some respondents may not have been as likely to involve themselves in the discussion. It was also important for the respondents and interviewer to establish a feeling of trust and safety, which was achievable given the less formal nature of the semi-structured interviews.

In preparation for the semi-structured interviews, an interview schedule was created to guide the conversation (Appendix D). The goal was to provide uniform questions for each respondent, but also allow time and flexibility for follow up questions

based on responses, which is beneficial to ensure clarity of questions for the respondents and of the responses for the researcher (Arksey and Knight, 1999, pg. 7).

Previous studies have drawn conclusions about the favourability of using an interview approach for gaining insights from student participants in a yoga program. After administering questionnaires and conducting interviews, Compass et al. determined interviews to be a more useful tool for eliciting authentic responses (2013). Students admitted that they “probably did not give honest answers because of how quickly they went through the questionnaire,” and that they preferred in-person interviews for clarity of questions and the opportunity to express their true feelings (Compass et al. 2013, p. 177).

### *2.1.3 Limitations and bias:*

Using semi-structured interviews does present some challenges, one being researcher bias and ambiguity of interpretation. It is a highly subjective research method and analysis is dependent on the researcher (Bell, 161). This interpretation can be further clouded when transcribing audio recordings from interviews. In doing so, consideration for non-verbal communication and the implications of pauses, body language, and the like can be ignored or subjectively interpreted (Silverman, 2001, pg. 32). Additionally, because interviews are time consuming, it means that the sample is typically small (Bell, 161). This means that the attitudes of the respondents and the conclusions drawn may not be accurate and representative of the larger population. The researcher took note of these limitations and made every effort to employ appropriate strategies of analysis to assist in providing reliable data.

## **2.2 The Study**

### *2.2.1 Ethical considerations:*

Before conducting this research project, ethical approval was granted by Kings College (Appendix A). The project was determined to be low risk in that it was not investigating a vulnerable population. Careful consideration was made to ensure that interview questions would not press into the state of the teenagers' mental health or other sensitive issues. Every effort was made to stay away from asking leading questions that could result in sharing sensitive information. In the event that any sensitive information was shared, a member of staff was identified as the appropriate person to relay information to.

*Participants:* Initially, interviews were to be conducted in two London secondary schools where female students had been participating in a yoga and mindfulness class for two months. However one of the schools would not grant permission to conduct interviews. Therefore, the research is based on interviews with six teenage girls between the ages of 16 and 18 who attend a secondary school in West London. The co-ed school where the study took place is in a middle-class borough and 77% of the student body is Muslim. The inclusion criteria for this study were solely based on age and gender, although all participants in the class met these criteria. Participation in the study was voluntary and no incentive was offered.

*Permissions:* Prior to conducting interviews, a letter explaining the study and asking for permission was sent to the school (Appendix B). There were two gate-keepers for this project. The first, Veronika Kloucek, is the yoga and mindfulness teacher, and a personal

contact of the researcher. Veronika used her existing connection with the school to gain initial contact. She put the researcher in touch with Carrie McDonough, the school teacher who implemented the yoga program, and who served as the primary point of contact to arrange interviews. All students were previously involved in the yoga class before being recruited for the study. It was McDonough who approached the students with the option to participate in the study, and arranged the time and place that the interviews would take place.

*Confidentiality and withdrawing from the study:* Once permission was granted, an information sheet was provided for school officials and each respondent was which explained the reason for and goals of the study (Appendixes C and D). Participants were also supplied with a consent form (Appendix E). In terms of confidentiality, respondents were able to select how they would be identified in the study, and were ensured that their responses would remain protected under the UK Data Protection Act of 1998. While all participants agreed that their names could be used, the researcher did not find it necessary to use names in the presentation of the findings. The researcher also made it clear to the respondents that they had the freedom to opt out of answering any questions that made them feel uncomfortable or that would lead to them to divulge private or sensitive information. Additionally, all participants provided their consent to have the interviews recorded on the researcher's personal computer. Respondents were informed that they had the right to withdraw from the study up to one month after the interview took place. The researcher was sure to keep the recordings and interview transcriptions in a secure location and disposed of them appropriately after analysis.

### *2.2.2 Limitations and Bias:*

The sample population used for this study created initial limitations. Conducting research with a group of middle class, high-achieving students will limit the data in terms of applicability to a larger population. However, it is nevertheless useful to understand the findings with this population in that it expands on the current research and serves as a platform for future research.

While conducting the interviews, Carrie McDonough divulged that she had selected the participants based on maturity levels. She explained that these students typically received high marks, and she believed they would be able to uphold the commitment of attending class each week. The level of maturity of these students could be a limitation to the study in that it may not be reflective of the whole group.

While conducting the research it became clear that the school environment was unique. Students described an overwhelmingly accepting environment where no obvious bullying or discrimination took place. This atmosphere is likely not representative of secondary schools on the whole. This was reflected in the yoga class, where all students felt comfortable and supported. Additionally, the students in the class represented a unique population within the school. These factors were not intended nor anticipated, but are important to note in assessing the data.

It is also necessary to state that the researcher held an internship with Teen Yoga and Mindfulness, the company responsible for teaching the yoga and mindfulness class used in the study. However, the researcher had not met or worked with the students prior to conducting interviews with them.

### **2.3 The Interviews:**

The interviews were conducted in a classroom at the school on three different occasions. Four were conducted directly following yoga classes; two were conducted on a different afternoon. For the first two interviews, Carrie McDonough was present in the classroom. For the remainder of the interviews, she sat in a separate room. The interviews lasted between 30 and 45 minutes. The respondents were asked a series of questions, and engaged in organic discussions based on their answers.

Questions were both focused on their individual experience in the yoga and mindfulness class, as well as their thoughts about the general experience of being a teenage girl. When considering the challenges of adolescence, they were asked both to draw on their own experiences, and what they observed in their peers. The aim of this method was to allow for relevant issues to emerge without asking the respondents to share sensitive information about themselves.

### **4. Analyzing the data:**

In analyzing the collected data, a thematic analysis approach was used. This approach uses transcriptions of interview sessions to identify themes and patterns that emerged. After data is collected and transcribed, overarching patterns are identified. Once all relevant data is organized and placed under the corresponding pattern, those groups of data can be assessed for sub-themes. The goal here is for the researcher to pull together threads of information, some of which may seem unrelated, to create a cohesive tapestry of information (Aronson, 1994). The patterns reflect the phases of discussion during the interview, while the themes explore the respondent's feelings, ideas, and

experiences. Themes can also correspond with the concepts that emerged during prior research on the topic.

In the case of this study, the thematic analysis took place as follows. First, audio recordings of the interviews were transcribed into a word document. Each interview was assigned a unique font colour. The researcher then organized the data into four groups based on the overarching patterns of discussion. The patterns were also reflective of the major areas of concern identified in the research. Then, within each group, data was arranged in terms of themes that emerged. Having the data color-coded was useful to determine if ideas and concepts that were discussed by some, a few, or all students. An effective coding method is essential to understand the differences in data from each individual, as well as to understand where similarities occur (Fereday, 2006, pg. 89).

Once the larger patterns and themes were determined, the researcher was able to compile the data into coherent and useful conclusions. Those conclusions will be discussed in the following chapter.

## **Chapter Three: Data Analysis**

### **3.1 Overview of findings: Themes emerged**

Upon transcribing and analyzing the results of the semi-structured interviews, a number of key patterns and themes emerged. The patterns mirror the research questions and highlight the areas that yield further investigation. Those patterns can be broken down into sub-themes as follows:

*Challenges of adolescence:* Reoccurring themes emerged that addressed the challenges of adolescence. These challenges were expressed independently from questions about the yoga and mindfulness class, as well as rationale for wanting to take the class. These challenges include: 1) peer relations and identity formation 2) developmental issues 3) existing health issues and 4) stress.

*Gender relations:* While never explicitly asked about the topic, many students made reference to their relationship with the males in their school. These conversations lead to conclusions about the role that gender played in the yoga class and raised questions about the role of gender in PE classes and sport. The emergent themes fell into two categories: 1) Why it was important for the class to be female only and 2) how yoga provided an alternative PE activity for girls.

*Perceived benefits of yoga and mindfulness:* The improvements noted by the students following their participation in the yoga class were: 1) physical 2) mental/emotional 3) mind-body connection 4) long term benefits.

### **3.2 Challenges of adolescence:**

Over the course of the semi-structured interviews, students identified the challenges in their lives. These included: relationships with peers; challenges of development, including hormonal changes; health issues, both physical and mental; and stress. Understanding these areas addresses how this population reflects the literature on adolescence, and consequently serves to represent female adolescents as a whole. These challenges were identified in two ways. The first came from direct answers to questions about personal challenges in their lives. Challenges were also presented when the students explained their rationale for taking part in the yoga and mindfulness class. In doing so, they suggested areas of concern in their life that they wanted to improve. Their responses are indicative of the needs of this specific population, and included the desire to improve concentration skills, to improve body strength, to relieve stress, to improve flexibility, to improve mental health, and to relax.

#### *3.2.1 Peer Relations:*

A few of the students discussed their changing friend groups and relationships with their peers, both male and female. In doing so, some expressed changing personal values and interests, which suggests the development of personal identities, a key facet of late adolescence.

*“The thing as a teenager, you change friendship groups. You have a person that you feel is your other half and then you kind of slowly start to like, separate yourself from them, not consciously but just happens and everything they do becomes annoying. And then you can’t stand being with them and remove yourself from the situation. I think that it’s a good thing, though it means that if you’re changing the people that you have around you, you’re changing as a person and you’re not just having the same influence. I used to be friends with people a few years ago and now I think there was nothing beneficial about that. I got nothing out of that friendship, and I’m happy. You start to feel tied down and pressured into doing things.”*

*“Growing up, that sounds so general, but like you meet so many different people and they change, and you change yourself, and friends, like when we left in year 11, we had this nice tight friendship group and now everyone’s literally, like spread out. I got really upset about it the other day, because people who you’re close with you’re not close with them anymore.”*

These accounts reflect a desire to develop independent identities and interests, while feeling a connection to peers. The teenagers explained the difficulty in maintaining friendships, but also satisfaction when they felt that their friends shared similar values and mutual understanding. As determined by the literature review, the ages of 16-18 are a time when a teenager’s identity formation becomes more concrete and this was supported by interview subjects.

### 3.2.2 Developmental Issues:

As explored in the literature, the challenges of adolescence can derive from, or be made worse by developmental issues, such as changing bodies and hormonal changes. Some of the teenagers talked indirectly about developmental changes that they were experiencing, and difficulty in dealing with those changes. A few expressed that they felt very emotional at times, and didn't know how to deal with their feelings.

*“Sometimes I’m overly emotional, and just crying and over emotional.”*

*“It’s natural to get a bit hormonal every month, and when you flip out the boys ask why you are so hormonal; are you getting your period? Can you not understand that I’m not doing this on purpose? I can’t control it. It’s really stressful.”*

### 3.2.3 Existing health issues:

Some of the students were prompted to take part in the yoga and mindfulness class because of mental and physical health concerns. Their desire to take the class illustrates a wish to improve overall well being. Expected outcomes for improved health included increased flexibility, improved upper body strength, relief from headaches, improved posture, and improved energy.

While only two respondents made a direct connection to feelings of dissatisfaction with her physical appearance, others indirectly referenced how the yoga class could improve their body, or feelings about it.

When asked directly what one of the challenges of adolescence was, students responded:

*“Self insecurities, as in waking up and being like, oh crap this is what you look like, I forgot.”*

*“Body image, and kind of like disappointment.”*

The latter remark was made by a student who also discussed her struggle with depression, and her hope that the yoga class would help. She explained that she had done yoga previously, but said she found it hard to motivate herself to attend classes when her depression worsened. Dissatisfaction with her body could potentially be the cause of her depression, as the literature supports a direct correlation between the two issues. The researcher did not press this issue in order to maintain the comfort of the interview. However, it is worth noting that one of the participants was struggling with a common challenge of adolescence. Her response to the yoga and mindfulness class will be addressed as a means to analyze a potential benefit of participation in class.

#### *3.2.4 Stress:*

Stress was the most commonly discussed issue in the interviews. For those students who did not have specific health concerns, many had the desire to be calmer and more relaxed, in light of stresses they were experiencing. However, stress was not just discussed in relation to the class, but also as a fact of life, and something that was caused by a number of different sources. Among the causes of stress identified were: school

work, exams, applying to sixth form, extra-curricular activities, friends, boys, comparing themselves with others, and expectations from adults. There was also the idea that there was a lack of time to manage their responsibilities and maintain a social life.

*“We have loads of exams, I just got my timetable today. This is the hardest year of school we’ve ever had in our lives because this is the year that your exams stay with you, and we were applying to colleges.”*

*“The sixth form process is going on right now. I’ve been quite stressed out ‘cause not many have responded yet.”*

*“Mainly because of exams, it stresses me out, like all the work and stuff.”*

When asked to identify the sources of the most pressure, students said:

*“School, they always want you to study. Like today, we were waiting for yoga to start and the deputy headmaster came down and was like: ‘Why are you lot standing here? Go do some work or go home.’ And I’m like, we’re waiting for yoga to start.”*

*“I think it’s the pressure and expectation, ‘cause it’s everywhere. It’s like the adults expect you to be this kind of super woman. I can’t juggle everything, and then like, your teachers expect you to revise 24/7 and to work like a robot all the time.”*

Some students expected the yoga class to help them deal with the stress in their lives by helping them to relax:

*“I wanted to take it because I’ve heard a lot about yoga, and people generally have positive things to say about it, and say how relaxing it is and how it’s just peaceful, and you kind of calm down for a bit, and I think that’s the experience of it.”*

It was clear in the conversations that the teenagers were under a great amount of stress. This supports the research, specifically the principle of overload, whereby the demands put on them appear to outweigh their capacity to complete them all successfully.

Exploring the challenges that this group of adolescents faces helps to identify the context of this study. Most of the challenges of adolescence identified in the literature were echoed in the interviews. This is useful for interpreting the benefits that they experienced as a result of the yoga and mindfulness class, so that those benefits can be assumed valid for a larger population.

### **3.3 Gender relations:**

While never directly asked about boys, all of the students discussed their relationship to the opposite gender. Specifically, many of the girls were displeased with the boys’ attitudes that they were inferior in terms of ability to play sport. They also talked about a feeling of inequality in their school in terms of sport. One student explained that the boys were given access to a high quality playing field that girls were not. They also said that they often felt self-conscious when playing sports with boys if

they could play at the same level. They said that this probably would have been the case if boys had been in the yoga class.

*“It would have not have been the same. Like we have the boys who are like: ‘Oh, we’re gonna come and watch you guys at yoga. And we’re like, no you’re not. They’d be so immature about it.”*

*“I think now as teenagers, I think the boys wouldn’t take it seriously, and I think it would have upset some of the girls because I think they have no filter.”*

Also included in this conversation, the girls explained why they thought that girls were better suited for yoga and why they didn’t think that boys would have enjoyed it.

*“The guys I know, they’re just so like aggressive, and like up themselves. They just wanna go on the pitch and play football.”*

*“Boys my age, definitely, they don’t understand what yoga is. They think it’s just stretching and it’s not a real form of fitness. And they think it’s quite stupid to be honest with you.”*

This information is useful to consider the role that gender played in this specific school environment and yoga class and will be useful to draw conclusions about the potential benefits and applications for similar programs.

The girls also explained why the yoga and mindfulness class was a welcome alternative to traditional PE classes. The findings suggest that having a non-competitive environment was more conducive to their feelings of confidence and the ability to reap benefits from the class.

*“[I would suggest yoga to] less confident people. People who are not usually overly confident or people who don’t like pressured physical exercise things where they feel the need to be good. It’s not competitive at all, so I think that’s good.”*

These factors are important to consider when thinking about what affected to the findings of this study. Additionally, they will be revisited when making suggestions about opportunities for future applications and research.

### **3.4 Perceived Benefits:**

In the interviews, the teenagers were asked if they credited any physical and/or mental and emotional changes that they noticed within themselves to be a result of taking part in the class. Many did report changes, most being mental and emotional, and few being physical. The most common benefit reported was the ability to manage and find relief from stress. In this section, the individual benefits of yoga and mindfulness reported by the teenagers will be addressed.

#### *3.4.1 Physical:*

Only one student mentioned a positive change in her physical appearance, citing that she felt that her arms were more toned. Another noted that she commonly dealt with

headaches, but that the incidence had dramatically improved since taking part in the class. A few mentioned specific improvements from the yoga class in terms of their ability to balance, stretch, and achieve harder poses. One student noted that the yoga class had inspired her to make other changes in her life to improve her physical health.

*“I can get out of bed really quickly now. I don’t lounge around. I don’t know, I feel more active and it sounds sort of weird. Yoga has kind of inspired me to start eating healthily so I’ve just cleansed my body. I’ve been drinking like a liter or two of water a day. I’ve really taken it on board.”*

These conversations support that beyond providing a form of physical activity, yoga also helps to improve physical health in a way that contributes to overall wellbeing.

#### *3.4.1 Mental/ Emotional:*

In terms of mental and emotional benefits experienced, many of the students referred to a feeling of calm directly following the class, and an ability to stay calm in situations where they previously felt worked up or overwhelmed.

The student who suffered from depression stated that the yoga and mindfulness class was helping to ease her symptoms. She found it more helpful than other treatment methods she had tried, such as therapy.

*“It’s like the best therapy I think you could ever have. It’s not like you have someone sitting there asking you: ‘Ok what happened this day?’ ‘Cause you know those are the times you like to be by yourself and you like to shut off. But it’s not*

*like you're by yourself and you're like being harsh on yourself and saying, 'Oh you did this wrong.' It's like were gonna get over it kind of thing."*

Of the six students interviewed, all made mention of stress that they were currently experiencing, and how the yoga class helped them to either relieve or cope with that stress. All of the teenagers expressed gratitude for an opportunity to relax at school, and the effect that this had on their overall mental state.

*"Just like relaxation, it kind of clears my head, and I like the fact that it's at the end of the week and you go into the weekend nice and chilled. You know, like the first class we had when she was like, just lie down and relax, and it was like, oh my God, I'm allowed to relax? And at that part I always fall asleep, and it's the best part."*

Additionally, all students mentioned improvements in their level of stress.

*"I find it's so calming, especially because Thursdays, they're the most intense days for me. I have like a full time table and I usually have loads of essays due the next day. And I always leave it until the night before, and I'm just like 'ahhh.' I always feel better once I've done yoga 'cause I just know I can face it."*

*"And the people who do it, we're all the ones who are doing exams in the school. And we said it relieves your stress cause after the end bit of the lesson, you go*

*home really relaxed, like if you have an essay to write you're more relaxed than you were at the start of the session."*

Some even noted that the relaxation and stress relieving effect had carried into long-term benefits. They made note of situations or experiences where they felt like their yoga experience had helped improve some aspect of their life.

*"I tend, well I used to get like really worked up about everything. It just gets on top of me, but now it's just like I just breathe. I'll just stare at the wall and then I'll be fine in like five minutes. I'll even do yoga. I'll just do a few poses and then go to sleep."*

*"I'm happier, I know it sounds so strange but I actually am. It's definitely left me just like refreshed, like I can approach a tough situation a lot easier. Like I'm not stressed all the time, especially that I can now like look forward to Thursday afternoons, that really keeps me going."*

It is important to mention that the teens did possess knowledge of how to deal with stress before participating in the yoga class. They made reference to how they would deal with stress in the past. Their methods included going to Starbucks with friends, watching TV, and talking to friends. However, it was clear that they believed that the class had given them new tools to deal with stress, and served as a specified time each week that allowed them the opportunity to calm down, relax, and de-stress. This was perhaps something that reinforced tactics they already had, giving them the time and opportunity to use them. The fact that they credit the class with these improvements

suggests that they had not been offered a useful coping mechanism for stress and other challenges prior to taking part in the yoga class. That being said, it is also worth considering the amount of pressure put on teens, specifically in England with the high-stakes exams, and how this impacts teens' mental and physical health.

### *3.4.3 Mind-body connection:*

Some of the benefits mentioned blurred the lines between physical and mental/emotional improvements. This is reflective of the connection between the mind and body that a yoga and mindfulness practice is meant to promote. The students discussed how this connection translated to an acceptance of their physical body, improved confidence, and improved overall mindset.

A few students made note of feeling more connected to and accepting of their bodies, which would reflect improved self-acceptance and improved confidence.

*"It's made me appreciate my body, like even though I might not be perfect in my eyes, I'm still a living, breathing, organism which has no major health problems and like, I'm OK. I'm decent I guess, and it's made me like, come to terms with that."*

*"I focus on myself more, because before I would worry about things going on around me, and now I'm like worried about myself, my health, and just me. Just being relaxed and not letting things stress me out to the point where I'll become ill or something."*

*“You feel a lot more calm. You just have a while to just feel yourself, which sounds weird but it’s something I guess you don’t do a lot because you’re always moving. You’re always thinking and never really taking a second to experience everything as it’s happening in the second, so I think that was good. And to be really in touch with yourself and your body and just everything that’s going on.”*

*“I feel like if you have a time in your day when you can just be quiet and be just focused on one thing and just concentrate all your effort, your whole body is going towards that one move or one stretch. And you get to have that time just with yourself. You kind of pull yourself away from everything that’s going on at that time, or your phone or your computer or the drama, if you have drama in your life, you just get that time. And once you realize that that time is really actually nice to have, you kind of want more of it, and you completely pull yourself out of anything that’s negative, or not having time for yourself.”*

With the connection to body and self-acceptance also came improved confidence.

*“ I don’t know how, but it kind of builds your confidence. I haven’t worked out yet how it does that.”*

Improved confidence could be related to the connection to their bodies as well as to achievement of challenging postures. Because the students were able to achieve things physically that they did not think or know they could do, it might have contributed to this improved self-confidence. For example, one student said:

*“I can do a handstand, and I didn’t know I could do that. I was literally just like ‘What?! I can do this!’ [It felt] amazing, literally, I was just like ‘I literally have enough strength in my core and my arms to hold myself up!’ And that kind of took me back.”*

The teenagers also discussed how the class helped to gain a clearer and more positive mindset, which in turn helped them to navigate challenging situations.

*“I would definitely tell other people about the class ‘cause I think even if you’re not stressed out, just so you can start out with a calm mindset and be positive and stuff.”*

*“[The class helped me learn] just to approach any tough situation with a positive state of mind. Don’t quickly rush into conclusions. Just ‘cause it might not be necessarily good for you doesn’t mean you can’t overcome it with a good strategy.”*

The teenagers’ accounts of tuning into their bodies and minds suggests the importance of providing a space for teenagers to remove themselves from the pressures of daily life. The capacity for yoga and mindfulness to encourage thoughtfulness and

positive thinking suggests that there might be potential for it to help guide teenagers to making more thoughtful and positive choices. Analyzing these findings can lead to further conclusions about the potential for a stronger connection to self to improve self-acceptance, foster improved decision making, and support identity construction.

#### *3.4.4 Long-term benefits:*

When students talked about slowing down and connecting to their bodies, they were specifically referring to the mindfulness portion of the class. These were the concepts that they were applying in daily life, suggesting that they would be more likely to provide long term benefits. Many students made note of the breathing exercises and how they were incorporating these concepts into their daily life.

*“Breathing. Veronika says to breathe all the time and focus on your breath so when I feel like I’m getting worked up or just overstressed, I will focus on my breath and that will bring it back to a calmer state of mind. It sounds weird to focus on how you breathe cause it’s such a natural thing.”*

*“This week has been a tough week for me, and I can’t click my fingers and feel better now, but it’s like, OK, this is what’s happening. It’s gonna be fine, just breathe, relax and just take a minute.”*

In assessing the potential applications for yoga and mindfulness practices, it is important to think about the long-term benefits, and if the students would continue to apply the concepts they learned after the class ended. The research suggested that mindfulness practices were more likely to have long-term benefits than yoga alone. This

was somewhat supported in the findings. Overall, the stress relief techniques that the teens used outside the classroom were based on mindfulness. Other concepts, including appreciation of the body, and resulting improved confidence were likely a result of work in yoga postures. It is not possible to say how confidence would change following completion of the program. Therefore, conclusions about the long-term benefits of yoga are inconclusive. However, as most yoga classes incorporate an element of mindfulness, it is difficult to analyze the two elements independently.

Overall, the benefits discussed by the participating teenagers suggest improvements in well-being following the yoga and mindfulness class. Some benefits were explicitly discussed, such as flexibility, stress relief, concentration, and positive mindset, while others were inadvertently explored such as self-acceptance. The implications of these improvements will be further investigated.

### 3.5 Summary of benefits:

<b>Physical</b>	<b>Mental/Emotional</b>	<b>Mind-body Connection</b>
Flexibility	Stress relief	Connection to body
Balance	Relief from Depression	Self-awareness
Toned arms	Improved Happiness	Self-acceptance
Relief from headache	Improved concentration and focus	Improved Confidence
Improved Posture	Feelings of calm and relaxation	Positive mindset
Improved Energy levels		

These findings will now be appraised in order to consider the larger implications. This will lead to an understanding of how accurate the findings are, and the potential for future applications of this study.

## **Chapter Four: Discussion**

The findings of this study largely support the literature in terms of the common challenges of adolescence, as well as the potential benefits of yoga and mindfulness. As none of the existing studies on the topic of yoga and mindfulness looked directly at 16-18 year old teenage girls, this study served to present new findings on this age group. From those findings, conclusions can be drawn about the specific needs of adolescent girls, and how yoga and mindfulness can be used as a strategy to help meet those needs. Additionally, it is necessary to think about how well this study represents the larger population and any limitations that make it difficult to make larger conclusions.

### **4.1 Benefits reported as compared to the literature**

Of the six students interviewed, all reported benefits as a result of taking part in the yoga and mindfulness class. Benefits included improvements to the physical body, improved ability to deal with stress, improved ability to relax, and benefits resulting from connections between the body and mind. Largely, this study supported the previously determined benefits of yoga and mindfulness, but was also able to determine which of those benefits are most applicable to adolescent girls. The most widely recognized benefit among the interviewed students was stress relief. This element of the yoga and mindfulness class was particularly relevant given the impending pressure from exams and school work. The class provided a welcome break to their weekly schedules. It was even suggested that having the opportunity to relax resulted in improved focus and performance in school work.

#### *4.1.1 Stress:*

Largely, this study found that the demographic being studied was under a great deal of stress. The stress was predominately a result of intense academic pressure. Specifically, preparing for exams, applying to sixth forms, and applying to university while keeping up with course work was the root of most stress.

The literature supports that exams are of particular importance for teenagers in the UK (Gregory and Clarke, 2010). The students in the study recognized that the exams held great importance for their future academic life. These stressors may be of more or less importance to different demographics, but seemed to be a great cause for concern for this particular group. This experience might not be universal to all adolescent girls, but is likely representative of middle-class, academically focused groups.

#### *4.1.2 Academic Results:*

While stress relief alone is an important benefit in that prolonged stress can lead to a number of subsequent health issues (Girdano et al. 1993), it is also important to think about how improved stress levels affect other aspects of teenagers' lives. For example, the stress relieving effect of yoga and mindfulness has been assessed as a means to improve academic performance (Kiselica et al., 1994: Kauts and Shama, 2009: Conboy et al. 2013). While this was not one of the specific research questions, it is worth discussing given the context of the study, and the importance of academic performance for the participants.

Of course, it is not possible to determine how participation in the yoga and mindfulness class in this study translated to academic results. However, perhaps more important than results is the students' ability to approach their course work in a stress-free

manner. The sense that they could manage the number of tasks presented to them was of great importance to the interviewed teenagers. Many expressed that they found it easier to focus on their course work directly following the yoga class and that the relaxation techniques they had learned were useful while taking exams. This supports findings that while yoga and mindfulness might not have the capacity to improve academic results, there is a potential to improve attitudes towards schoolwork and the ability to deal with academic pressures (Conboy et al. 2013). In that high levels of anxiety can impart on academic performance (Kiselica, et al. 1994, pg. 335), one could assume that improved anxiety levels could result in improved academic performance. Given that the students interviewed reported an improved ability to focus on school work and manage stressful exams, yoga and mindfulness could be used as an effective measure to improve that anxiety.

When asked if they would continue to do yoga on their own time outside of school, many students said that there wasn't time in their schedule, or that they would after exams finished. This suggests that the students felt it more important to use their time to pursue academics than to continue to reap the benefits of the yoga and mindfulness practice. This leads to questions about whether or not they felt the program would improve their academics. It would be worth determining if this attitude is perhaps reflective of a larger idea that academics should be placed at higher importance than general well being.

#### **4.2 Additional Benefits and New Conclusions:**

A number of the reported benefits in the study are suggestive of larger concepts in terms of the known challenges of adolescence. As the research explained, the teenage

brain is not fully developed (McAnarney, 2008, pg. 322; Kelley et al. 2004), which inhibits teens from making appropriate decisions. Additionally, teenagers are still forming their identity and defining personal needs and values (Head, 1997; Magen, 1998).

Connection to personal values is important when choosing friends; failure to do so may result in being more susceptible to negative influences from peers (Steinberg, 2001).

Findings from the study suggest ways that yoga and mindfulness can tackle these barriers, thus suggesting specific benefits for the female adolescent population.

Largely, the students in this study valued the yoga and mindfulness class for the opportunity to find stillness and calm to reflect on their own needs, rather than the influence of others, and to help them deal with difficult situations. In describing this capacity for the class, they were unknowingly reflecting on identity formation and appropriate decision-making.

Their gratitude for the class in giving them this space suggests that it was difficult for them to achieve otherwise. This was particularly illustrated in the mention of freedom from technology and suggests that this could be a factor in the challenge for teenagers to separate themselves from the constant influence of peers. Having this time to connect to themselves was useful in a number of ways. First, it provided time for the teenagers to connect with themselves and think about what was important to them. This creates a better understanding of personal needs and values, which are essential to identity formation. If teenagers are better able to articulate their own values, they may be less susceptible to negative peer pressure, and more likely to form positive friendships. Secondly, the students suggested that the class helped to form a more positive mindset, which led to being able to cope with difficult situations. This may also have an influence on making appropriate and rational decisions. Thus, this study outlines a potential application of yoga and mindfulness to help teenagers understand their own values and

form their identity, to make appropriate decisions, and by extension create positive friendships.

#### **4.3 Limitations:**

In making larger conclusions based on this study, it is necessary to consider how the sample group represents adolescent girls as a whole population. The goal of this study was not to analyze yoga and mindfulness as a method for helping teenagers that were in any way at risk or vulnerable. This categorically created a unique group who might reflect unique benefits. However, it is important to keep in mind the demographic being assessed and how the pressures they experience might be unique to a middle-class, academically focused group. Understanding this helps to assess the scope of this study.

Specifically, one of the limitations of this study was the uniqueness of the school environment, which was reflected in the yoga class, and could be a crucial factor in the reported benefits. The class atmosphere was described as positive by all the students. They were comfortable to explore the yoga class and try new things without feeling self-conscious in the group. This will certainly not be the case for all yoga classes involving teens, and could have contributed to some of the findings. One could speculate that the positive environment contributed to the students overall experience with and the benefits they gained from it.

By conducting this study with a highly academic group, new conclusions were drawn about the usefulness of a yoga and mindfulness program for this demographic. The primary challenge identified by the students in the study was academic related stress. However, they were dealing with the same challenges that the literature discussed,

suggesting that they too are prone to difficulties during adolescence. While their needs might seem trivial in comparison to deprived teenagers around the world, it can be argued that the demographic in question is equally as important to assess. Additionally, the findings explored the potential for yoga and mindfulness to support identity formation and appropriate decision-making. This capacity is applicable to a wide range of demographics, and reflects an application of this study beyond the scope of middle-class, academically focused teenagers.

## **Chapter Five: Conclusions - Implications for Policy, Practice, and Research**

In that this study took place in a school context, many of the conclusions made are specific to that environment. This study suggests that teenagers, specifically females in middle-class academically focused demographics, need help coping with stress. The need for schools to provide supportive environments to encourage the wellbeing of their students was introduced in the literature review and supported by the interviewee's accounts of their school. This suggests that there is a need for schools to better support adolescents to improve their ability to cope with stress and other challenges. If these issues are not addressed, they could affect teenagers' ability to prepare for their futures, and potentially lead to physical and mental health issues. Given this information, it is necessary to think about what schools are asking of students, and whether or not they are providing them with the framework to meet those needs. Additionally, given the reported benefits of yoga and mindfulness, both in the literature and in this study, conclusions can be drawn about the potential for schools to implement yoga and mindfulness as an effective intervention to support female adolescent students.

The necessity for improvement in terms of supporting not just adolescents but all students' wellbeing in the UK is apparent. A 2009 study, *Doing Better for Children*, found that when ranked with 30 comparative countries, the UK ranked 22<sup>nd</sup> for educational wellbeing (Watson et al. 2012, pg. 43). England is indeed taking note of this shortcoming and many initiatives to improve overall wellbeing and happiness in schools have emerged in recent years (Evans, 2011; Watson et al. 2012). This was largely the result of two prominent documents on the topic, the 2003 *Every Child Matters* agenda and the 2005 *National Healthy School Standard Promoting Emotional Health and Wellbeing*. Independent agencies, non-profit organizations, local authorities, and independent schools have subsequently developed programs to both build positive skills

like confidence and self-esteem, and/or to reduce negative experiences like mental health, depression, and anxiety (Watson et al. 2012, pg. 57). In 2003, an umbrella for these types of programs, *Social, Emotional, Aspects of Learning* (SEAL), was adopted in 70% of England's secondary schools (Watson et al., 2012, pg. 57).

SEAL education is one facet of the larger *Personal, Social, Health, and Economic Education* program (Evans, 2011), which aims to help young people “acquire knowledge, understanding and skills they need to manage their lives,” (PSHE Association). However, as is the case with SEAL, having a formal PSHE curriculum is not mandatory for all UK secondary schools. Schools are required to “promote spiritual, moral, cultural, mental, and physical development,” and to “prepare pupils for opportunities, responsibilities and experiences later in life.” However, implementation is at the discretion of the individual school, and is assessed by The Office for Standards in Education, Children's Services and Skills (Ofsted) inspections (Hayman, 2013).

The most recent Ofsted review of PSHE programs in UK schools was in 2013. They concluded that PHSE education was good in 60% of schools, and inadequate in 40%. In their survey of 178 11-18 year olds, one-third reported that they would like to learn methods for dealing with mental health issues including stress and eating disorders. Another major finding was that teachers who administered PSHE subjects were either untrained to do so, or not appropriately evaluated to determine if they were achieving the aims of the program (Ofsted, 2012). While the goals of SEAL and PSHE education attempt to meet the wellbeing needs of students, it is clear from recent reports that not all schools are implementing these programs, and of those that are, many are not doing so effectively. The tendency for schools to opt out of teaching these programs is likely due to time restrictions and a high importance placed on meeting academic goals (Bonell et al., 2014).

Based on the interviews used in this study it was clear that prior to taking part in the yoga and mindfulness class, the students were not taught stress-relieving exercises or tools in their school. Rather, they discussed feeling immense pressure from their school to dedicate the majority of their time to academic pursuits. This did include extra-curricular activities like music lessons or sport, but the goal seemed to be largely school-related. For example, some mentioned taking part in activities to put on their CV or university applications. A few students expressed their surprise when they were allowed to relax at the end of the yoga class and not focus on anything in particular, further suggesting that their school placed higher importance on academic achievement than students' overall wellbeing. It is important to state that the interviewer did not ask the students about the state of SEAL or PSHE education in their school. However, when asked about their previously held strategies for managing stress, there was no mention of school-based tools.

The literature suggests that it is not just the case in the school studied. Broderick and Metz assert that many schools are increasingly putting pressure on students through high stakes testing, while managing students social and emotional wellness is overlooked (2009, pg. 80). Anthony Seldon, a head teacher at a fee-paying school in Manchester, is a proponent of SEAL education in UK schools. He stated that “wellbeing classes are an important part of moving British education beyond its “toxic obsession” with exams and tests, towards a more holistic idea of education that gives young people the cognitive skills they need to cope with the ups and downs that they will inevitably face in life.” His school administers a wellbeing program based on positive psychology, which utilizes principles of mindfulness and Buddhism (Evans, 2011).

In the past year, more schools in the UK have considered implementing mindfulness programs as a way to help students cope with “increasingly frantic pressure,

depression, and anxiety,” (Huffington Post, 2014). This is encouraging, given what this study revealed about the amount of stress students are under. Proponents of Mindfulness programs in schools support this as an ideal way to maintain UK national objectives to reduce mental health problems in students (Burnett, 2009, pg. 6). Mark Burnett, a Religious Studies and PSHE teacher who implements mindfulness into his classes, suggests that year 11, when students are facing pressure of GCSE’s, is an ideal time to introduce mindfulness as a way to improve concentration during revision (2009, pg. 13). He also argues that providing students with the concepts of stress reduction, managing negative emotions, and creating a sense of calm can benefit them later in life when they meet bigger challenges (pg. 29). The willingness to accept mindfulness as a useful strategy in UK schools is promising. However, it is likely far from becoming universal in light of the unwillingness of schools to implement SEAL and PSHE education.

In a response to the difficulty in making PSHE a mandatory subject, it could be suggested that yoga and mindfulness may be better approached as a PE subject. Burnett addressed one of the challenges of implementing mindfulness in schools as presenting it as an appropriate use of time in an already strictly scheduled school day (pg. 12), much like the challenge of getting all schools to implement PSHE. As yoga is a form of physical exercise, the case could be made that schools should offer yoga as a PE option, which might be more readily accepted than adding mindfulness to other lessons. Additionally, studies showed that when students were given tools for stress-relief, they were less anxious about schoolwork. While there is no conclusive evidence on the effect this has on academic results, it may be appealing to schools that students are better able to cope with the pressures of school when participating in a yoga and mindfulness class.

Additionally, this study maintains that the yoga element of the class was crucial to the female participants. It was this portion of the class that seemed to build confidence

and encourage self-acceptance, two very important issues for teenage girls. Additionally, it provided the girls with an alternative to traditional PE classes.

The capacity to engage female students in physical activity could be appealing to UK schools given recent reports on the comparative inactivity of females as compared to their male peers (Elliot and Hoyle, 2014; Sebire et al., 2012). Recent data reflects that only 15% of secondary school girls meet the recommended physical activity guidelines of 60 minutes a day (Elliot and Hoyle, 2014, pg. 2; Sebire et al. 2012, pg. 111). While PE is a compulsory subject in UK schools, there are barriers to female student's willingness to participate. Namely, research supports that girls don't enjoy the activities provided, dislike the competitive nature, or feel self-conscious taking part in sport (Elliot and Hoyle, 2014; Conboy et al. 2013; Klomsten et al. 2005). Students in the study reported that they favoured yoga as compared with other PE classes because of the non-competitive nature. They also reported feeling less self-conscious, due in part to the absence of their male peers. Therefore, the suggestion is being made that yoga and mindfulness classes should be considered as an alternative PE option for female students. Doing so will achieve the physical activity recommendations while simultaneously providing the social and emotional support that teenagers require.

On that note, this study was able to make suggestions for the effective implementation of yoga and mindfulness classes. One of the most important findings was that students should feel comfortable with the other students in the classroom as well as with the teacher. As determined by previous studies, an uncomfortable class environment, either at the fault of the teacher or the students, imparts on the capacity for students to reap benefits (Conboy et al. 2013; Kokinakis, 2011). This requires a teacher who is qualified both as a yoga teacher, and as a teacher who can address the specific needs of

female teenagers. Creating a supportive and non-judgemental environment should be one of the main goals of the teacher. This may mean separating male and female students.

This study is not suggesting that all teenage boys would dislike taking part in a yoga class or would not benefit from it. In fact, some male students in previous studies expressed that they enjoyed the class but were afraid to express that to their male peers (Conboy et al, 2013). This information is presented only to suggest that it is worth considering separating male and female teenage students in yoga classes to ensure that the female students are comfortable, and able to reap the benefits.

Previous studies did not look at the potential for benefits in a yoga and mindfulness class to be dependent on the gender of the students, or the combination of genders in the classroom. It is not within the scope of this study to conclude whether having males present in the class would have affected the outcomes of the study, nor whether the results would be the same in all schools. Therefore, future studies could investigate the differences in the benefits reaped for girls in mixed gender versus female-only yoga classes.

Based on the research and interviews conducted, yoga and mindfulness could be used as an effective intervention to allow female teenagers the space to connect with themselves and better understand their personal interests and values, as well as to deal with difficult situations and cope with stress, allowing them to better prepare for the future. The capacity for yoga and mindfulness to improve stress levels and overall wellbeing is of particular importance to the school setting. The recommendations for strategies to help teenagers presented by scholars and the SEAL education goals were reflected in the outcomes of the yoga and mindfulness class in the study. Therefore, similar classes could be considered as a strategy for reaching said goals. Future studies

could assess how these benefits apply to a larger population, resulting in an acceptance of these classes as a method for improving the overall wellbeing of students, an issue of obvious importance in the UK.

Finally, this study sheds light on larger issues that may be plaguing many UK teenagers. The pressure to perform academically and the weight placed on results for securing future success has teenagers stressed out. While schools are not putting equal weight on ensuring that students have the emotional and social support to meet these needs, students are at a severe disadvantage. While yoga and mindfulness may provide that support for female students, there are certainly other methods that can be employed to support students. A much larger question could be asked about the value of high stakes testing, and how well they prepare students for their futures. However, regardless of how students are assessed in school, they should possess the knowledge of how to manage and cope with stress, which they are certain to encounter, regardless of their future career path.

## References

- American Psychological Association. (2002). A reference for professionals: developing adolescents. Washington, DC.
- Arnsten, A. and Shansky, R. (2004) Adolescence: vulnerable period for stress-induced prefrontal cortical function? *Adolescent Brain Development*, 1021.
- Aronson, J. (1994). A pragmatic view of thematic analysis. *The Qualitative Report*, 2, (1).
- Arpita. (1990). Physiological and psychological effects of hatha yoga: A review of literature. *The Journal of the International Association of Yoga Therapist*, 1, 1-28.
- Arksey, H. and Knight, P. (1999) Interviewing for social scientists. Sage Publications. London.
- Beauchemin, J., Hutchins, T. & Patterson, F. (2008) Mindfulness meditation may lessen anxiety, promote social skills, and improve academic performance among adolescents with learning disabilities. *Complementary Health Practice Review*, 13, (34), 34-45
- Bell, Judith. (2010) Doing your research project 5th edition. McGraw-Hill Education. New York.
- Biddle, S. Sallis, J & Cavill, N. (1998) Young and active? Young people and health-enhancing physical activity- evidence and implications. Health Education Authority. London.

- Birdee, G., Yeh, G., Wayne, P., Phillips, R., Davis, R. & Gardiner, P. (2010). Clinical application of yoga for the pediatric population: a systematic review. *Academic Pediatrics*, 9 (4), 212-220.
- Bonell, C., Humphrey N., Fletcher A., Moore, L., Anderson, R. & Campbell, R., (2014) Why schools should promote students' health and wellbeing. *BMJ*. 348
- Brantley, J. (2005). Mindfulness-Based Stress Reduction. *Acceptance and Mindfulness-Based Approaches to Anxiety*. 131-145.
- Bridges, K and Madlem, M (2007). Yoga, physical education, and self-esteem: off the court and onto the mat for mental health. *California Journal of Health Promotion*, 5, (2) 13-17.
- Broderick, P., & Metz, S. (2009). Learning to BREATHE: A pilot trial of a mindfulness curriculum for adolescents. *Advances in School Mental Health Promotion*, 2, (1), 35- 45.
- Burke, C. (2009) Mindfulness-Based approaches with children and adolescents: a preliminary review of current research in an emergent field. *Journal of Child and Family Studies*.
- Burnett, R. (2009). Mindfulness in schools: learning lessons from the adults- secular and Buddhist. *The Buddhist Studies Review*, 28.1, 79-120.
- Cameron, J. (2004). Interrelationship between hormones, behaviour, and affect during adolescence. *Adolescent Brain Development*. 1021.

- Carei, T., Fyfe-Johnson, A., Breuner, C. & Brown, M. (2010) Randomized controlled clinical trial of yoga in the treatment of eating disorders. *Journal of Adolescent Health*. 46, (4), 346-351.
- Compas, B., Orosan, P. & Grant, K. (1993). Adolescent stress and coping: implications for psychopathology during adolescence. *Journal of Adolescence*, 16, 331-349.
- Conboy, L., Noggle, J., Frey, J., Ravi, K. & Khalsa, S. (2013) Qualitative evaluation of high school yoga program: feasibility and perceived benefits. *Explore*. 9, (3), 171-180
- Chiundhury, S., Blakemore, S. & Charman, T. (2006) Social cognitive development during adolescence. *Social Cognitive and Affective Neuroscience*, 1, 165-174.
- Durlak, J., Dymnicki, A., Taylor, R., Weissberg, R. & Schellinger, K. (2011). The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions. *Child development*. 82, (1), 405-432.
- Elliot, D and Hoyle, K. (2014) An examination of barriers to physical education for Christian and Muslim girls attending comprehensive secondary schools in the UK. *European Physical Education Review*, 1-18.
- Evans, J. (2001) Teaching emotional resilience. *Philosophy for Life*. Retrieved from <http://philosophyforlife.org/teaching-emotional-resilience/> on 18 August 2014.
- Evans, M. (2011). Teaching happiness- a brave new world?. *The Psychologist*. 24, 334-347.

- Faulkerson, J., Sherwood, N.Perry, C., Neunmark-Sztainer, D. & Story, M. Depressive symptoms and adolescent eating and health behaviours: a multifaceted view in a population-based sample. *Preventative Medicine*. 38, 865-875.
- Fereday, J. (2006) Demonstrating rigor using thematic analysis: a hybrid approach of inductive and deductive coding and theme development. *International institute for Qualitative Methodology*. 5, (1), 80-92.
- Granath, J., Ingvarsson, S., Thiele, U. & Lundberg, U. (2006) Stress management: a randomized study of cognitive behavioural therapy and yoga. *Cognitive Behaviour Therapy*, 35, (1), 3-10.
- Girando, D., Everly, G. & Dusek, D. (1993). Controlling stress and tension, a holistic approach. Prentice Hall. New Jersey.
- Gregory, K. and Clarke, M. (2003) High-Stakes Assessment in England and Singapore. *Theory Into Practice*, 42:1, 66-74
- Gullotta, T., Adams, G., Markstrom, C. (1999) The Adolescent Experience, Fourth Edition. Academic Press. San Diego.
- Hayman, J. (2013). Update for members following announcement of DfE PSHE review outcome. PSHE Association.
- Head, J. (1997). Working with adolescents: constructing identity. Master Class in Education Series. Falmer Press. London.
- Hennelly, S. (2010). The immediate and sustained effects of the .b mindfulness programme on adolescents' social and emotional well-being and academic

functioning. *Thesis submitted for Master of Research in Psychology, Oxford Brookes University (unpublished).*

Hooker, K., and Fordor, I. (2008). Teaching mindfulness to children. *Gestalt Review*, 12, (1), 75-91.

Hozel, Britta., Carmody, J., Vangel, M., Congleton, C., Yerramsetti, S., Gard, T, & Lazar, S. (2011) Mindfulness practice leads to increases in regional brain gray matter density. *Psychiatry Research*. 191, (1), 36-43.

Jones, D. and Crawford, J. (2005) The peer appearance culture during adolescence: Gender and Body Mass Variations. *Journal of Youth and Adolescence*, 2, 257-269.

Kabat-Zinn, J. (2003) Mindfulness-Based Interventions in context: past, present, and future. *Clinical Psychology: Science and Practice*. 144-156.

Kazufumi, Y., Tetsuya, H., Nobuyuki, S. & Kubo, C. (2011) Profile of mood states and stress-related biochemical indices in long-term yoga practitioners. *BioPsychoSocial Medicine*, 5, (6).

Kaley-Isley, L; Peterson, J; Fischer, C. & Peterson, E. (2010). Yoga as a complementary therapy for children and adolescents: a guide for clinicians. *Psychiatry Edgemont*, 7, (8), 20-32

Kauts, A. and Shama, N. (2009). Effect of yoga on academic performance in relation to stress. *International Journal of Yoga*, 21, (1), 39-43.

Kelley, A., Schochet, T., Landry, C. (2004). Risk taking and novelty seeking in adolescence. *Adolescent Brain Development*, 1021.

- Kiselica, M., Baker, S., Thomas, R., & Reedy, S. (1994). Effects of stress inoculation training on anxiety, stress, and academic performance among adolescents. *Journal of Counselling Psychology*. 41,(3), 335-342.
- Klomsten, A., Marsh, H. & Skaalvik, E. (2005) Adolescents' perceptions of masculine and feminine values in sport and physical education: a study of gender differences. *Sex Roles*. 52, 625-636.
- Kokinakis, L. (2011). Yoga and adolescents: what do we know? The effects of yoga on adolescents' cognition and social-emotional development. (Unpublished doctoral dissertation). *University of Michigan, USA*.
- Kuyken, W., Eeare, K., Ukoumunne, O., Vicary R., Motton, N., Burnett, R., Cullen, C., Hennelly, S., & Huppert, F. (2013). Effectiveness of the mindfulness in schools programme: non-randomised controlled feasibility study. *The British Journal of Psychiatry*, 1-6.
- Magan, Z. (1998). Exploring adolescent happiness: commitment, purpose, and fulfilment. Sage Publications. London.
- Martinus, Charlotta. (2012). Wellbeing in adolescents in the UK as defined by neural correlates and identification and its relationship to yoga, mindfulness and meditation. (Unpublished essay).
- McAnarney, E. R.(2008) Adolescent Brain Development; Forging New Links? *Journal of Adolescent Health*, 42, (4), 321-323.
- Meiklejohn, J., Phillips, C., Freedman, M., Griffin, M., Biegel, G., Roach, A., Frank, J., Burke, G., Pinger, L., Soloway, G., Isberg, R., Sibinga, E., Grossman, L. &

- Saltzman, A. (2012). Integrating mindfulness training into k-12 education: fostering the resilience of teachers and students. *Mindfulness*, 1, (1), 1-19.
- Miners, R. (2008) Collected and Connected: Mindfulness and the early Adolescent. Dissertations Abstracts International: Section B. *The Sciences and Engineering*, (68), 9.
- Morris, I. (2009) Teaching Happiness and Well-Being in Schools. Continuum International. London.
- Neumark-Sztainer, D. (2013). Yoga and eating disorders: is there a place for yoga in the prevention and treatment of eating disorders and disordered eating behaviours? *Advances in Eating Disorders: Theory, Research and Practice*. 2, (2), 136-145.
- Noggle, J., Steiner, N., Minami, T., and Khallsa, S. (2012). Benefits of yoga for psychosocial well-being in a US high school curriculum: a preliminary randomized controlled trial. *Journal of Developmental Behavior Pediatrics*, 33 9, (3), 193-201.
- Ofsted. (2013). Not yet good enough: personal, social, health and economic education in schools.
- Pfeifer, J., Masten, C., Moore, W., Oswald, T., Mazziotta, J., Iacoboni, M. & Dapretto, M. (2011). Entering Adolescence: resistance to peer influence, behavior, and neural changes in emotion reactivity. *Neuron*, 69, 1029-1036.
- Rizzolo, D., Zipp, G., Stiskal, D. & Simpkins, S. (2009) Stress management strategies for students: the immediate effects of yoga, humor, and reading on stress. *Journal of College Teaching and Learning*. 6, (8) 79-88.

- Santrock, J. (2001). *Adolescence*. McGraw Hill. New York.
- Sebire, S., McNeil, J. Pool, L., Haase, A., Powell, J. & Russell, J. (2012). Designing extra-curricular dance programs: UK physical education and dance teachers' perspectives. *Open Journal of Preventative Medicine*, 3, (1), 111-117.
- Silverman, D. (2001). *Interpreting qualitative data*, 2nd edition. Sage Publications. London
- Smith, C., Hancock, H., Blake-Mortimer, J., Eckert, K. (2007). A randomised comparative trial of yoga and relaxation to reduce stress and anxiety. *Complementary Therapies in Medicine*, 15, 77-83.
- Steinberg, L. (2001) Adolescent Development. *Annual Review Psychology*, 52, 83-110.
- The Huffington Post. (2014). Mindfulness classes could be introduced in schools, says David Laws. The Huffington Post: Politics. Retrieved from: [http://www.huffingtonpost.co.uk/2014/03/12/mindfulness-schools-david-laws\\_n\\_4948965.html](http://www.huffingtonpost.co.uk/2014/03/12/mindfulness-schools-david-laws_n_4948965.html) on June 4, 14.
- Thapar, A., Collishaw, S., Pine, D.& Thapar, A. (2012). Depression in adolescence. *The Lancet*. 379, (9820), 17-23.
- Watson, D., Emery, C. & Bayliss, P. (2012). *Children's social and emotional wellbeing in schools*. The Policy Press. Bristol
- Weare, K. (2012). Evidence for the impact of mindfulness on children and young people. The Mindfulness in Schools Program. University of Exeter: Mood Disorders Centre. 1-12.

Zarrett, N. and Eccles, J. (2006). Preparing youth for the crossing. *New Directions for Youth Development*, 11, 13-28.



Research Ethics Office  
King's College London  
Rm 5.2 FWB (Waterloo Bridge Wing)  
Stamford Street  
London SE1 9NH

**23<sup>rd</sup> January 2014**

TO: Camille Dodson

SUBJECT: Approval of ethics application

Dear Camille,

**KCL/13/14-137 - The Effects of Yoga and Mindfulness on Teen Girls aged 16-18**

I am pleased to inform you that full approval for your project has been granted by the **E&M** Research Ethics Panel. Any specific conditions of approval are laid out at the end of this letter which should be followed in addition to the standard terms and conditions of approval, to be overseen by your Supervisor:

- Ethical approval is granted for a period of **one year** from **23<sup>rd</sup> January 2014**. You will not receive a reminder that your approval is about to lapse so it is your responsibility to apply for an extension prior to the project lapsing if you need one (see below for instructions).
- You should report any untoward events or unforeseen ethical problems arising from the project to the panel Chairman within a week of the occurrence. Information about the panel may be accessed at: <http://www.kcl.ac.uk/innovation/research/support/ethics/committees/ssh/rebs/index.aspx>
- If you wish to change your project or request an extension of approval, please complete the Modification Proforma. A signed hard copy of this should be submitted to the Research Ethics Office, along with an electronic version to [crec-](#)

[lowrisk@kcl.ac.uk](mailto:lowrisk@kcl.ac.uk) . Please be sure to quote your low risk reference number on all correspondence. Details of how to fill a modification request can be found at:

<http://www.kcl.ac.uk/innovation/research/support/ethics/applications/modifications.aspx>

- All research should be conducted in accordance with the King’s College London *Guidelines on Good Practice in Academic Research* available at:  
<http://www.kcl.ac.uk/iop/research/office/help/Assets/good20practice20Sept200920FINAL.pdf>

If you require signed confirmation of your approval please email [crec-lowrisk@kcl.ac.uk](mailto:crec-lowrisk@kcl.ac.uk) indicating why it is required and the address you would like it to be sent to.

Please would you also note that we may, for the purposes of audit, contact you from time to time to ascertain the status of your research.

We wish you every success with this work.

With best wishes

Annah Whyton – Research Support Assistant

**On behalf of**  
E&M REP Reviewer

APPROVED
a. Primary Comments:
<p><b><u>IMPORTANT: Please discuss the following comment with your supervisor:</u></b></p> <p>It is unclear why the yoga teacher will be approaching the students for participation (as described in section 5.2). Was a more independent method of approaching students considered (such as the researcher being allowed to contact / approach students after obtaining approval from the schools)? This is preferable because students might feel coerced into participation by being approached by their teacher.</p>

b. Further Amendments to Application (please identify the relevant section number before each comment):

-

c. Amendments to Information Sheet and Consent Form:

a) In the information sheet for participants:

1. Alter the phrase 'If you decide to take part you are still free to withdraw at any time and without giving a reason' to include the specific date beyond which the interview participants will be unable to withdraw their data / one month after the date of the interview as specified.

b) In the consent form for interview participants:

1. Please delete the following phrases as they do not seem pertinent to the proposed research:

'I agree that the research team may use my data for future research and understand that any such use of identifiable data would be reviewed and approved by a research ethics committee. (In such cases, as with this project, data would/would not be identifiable in any report)'

'I understand that my information may be subject to review by responsible individuals from the College for monitoring and audit purposes'.

## Appendix B: Letter to Schools

Dear (Head teacher),

My name is Camille Dodson and I am a Masters student at Kings College London in the International Child Studies program. I am currently working on a dissertation that will study the effects of yoga and mindfulness on teen girls aged 16-18. As part of my research, I am hoping to conduct short interviews with teens who are already involved in a yoga and mindfulness practice.

I am currently working with Veronika Kloucek and know that she has taught the yoga program in your school. It is my hope that you will allow me to conduct my study in your school. I hope that this research will not only benefit my study, but also be useful for you as well. As the study is affiliated with Kings College, it is an opportunity to highlight the success of your school from a highly respected source.

I have attached an information sheet outlining the details of my study, as well as a similar sheet that would be administered to potential participants. I have also included the consent forms that each participant would be asked to sign. I hope that these documents will answer any questions you may have, but if not, I am happy to set up a time to speak with you and discuss the details.

I'm passionate about this study both from an academic and a professional point of view. I am a firm believer that sharing the teachings of yoga and mindfulness with teens can have extraordinary benefits on their daily lives and overall experience of being a teen. I would greatly appreciate the chance to conduct my research and further develop my ideas.

Thank you very much for your time in considering my study, and I very much hope to hear from you soon!

Best wishes,

Camille

**INFORMATION SHEET FOR SCHOOLS**



*REC Reference Number: KCL/13/14-137*

**To whom it may concern:**

My name is Camille Dodson, and I am a postgraduate student at King's College.

As part of my postgraduate course in Child Studies, I am writing a dissertation to determine how yoga and mindfulness can be beneficial for teen girls between the ages of 16 and 18. I am currently undertaking an internship with Veronkia Kloucek, who owns Teen Yoga and Mindfulness, and it is my goal to work in the field of teaching yoga to teens after graduating from King's College. I want to conduct this research to prove why teens should participate in yoga and mindfulness, and why it is a good idea for schools to offer yoga classes to their students. The research aims to highlight the positive effects of a yoga and mindfulness practice for teen girls, and will therefore serve to highlight your school as creating this environment for it's students.

Because yoga is known to have wonderful benefits for all participants, I am curious to find out which benefits are specifically important for teen girls. My main goals for this project are:

- To determine to what extent a yoga and mindfulness practice improves aspects of the teens life
- To gain an understanding of the teen's feeling towards taking part in a yoga and mindfulness practice
- To understand which benefits of yoga and mindfulness are most prominent in teen girls

To conduct my research, I will be recruiting teen girls between the ages of 16 and 18 who have taken part in a yoga and mindfulness practice in their school, with Veronkia Kloucek, for at least two months. Each participant will be asked to take part in a 30-60 minute interview where they will be questioned about their

experience.

I will give each teen the option to be named in the study, or to remain anonymous. All disclosed information will be kept private, and student's anonymity will be protected (if that is their choice). Teens will be encouraged not to disclose private and sensitive information, but instead to respond to questions in the broader sense and to reflect on their experience as largely positive or negative. My aim is not to find out any sensitive underlying issues that a teen may have, and I will not press for private information. For example, I will ask how or if the yoga and mindfulness practice has helped in dealing with stress, but I will not ask for details about the causes of stress.

All interviews will take place at the school, and will be held in an approved location that ensures the safety of the students. It is my hope that there will not be a teacher present during the interviews, because I don't want the students' previous relationship with a teacher to affect their answers. However, I will ask that a member of staff be in close proximity to the interview room, to ensure that the student feel safe and comfortable.

The interviews will be recorded and the information will be transcribed into a written document as a part of a larger research project. Upon completing this process, the information will be destroyed. If it is their wish, student's names will not be used, nor will any information that would identify an individual. After completing an interview, a student has one month to choose to opt out of the study, and their data will not be used.

This research could potentially be published as a scholarly article and used a document to help in my personal development and business ventures.

If you have any questions or require more information about this study, please contact the researcher using the following contact details: Camille Dodson: [Camille.dodson@kcl.ac.uk](mailto:Camille.dodson@kcl.ac.uk)

**If you agree for your school to take part in this study, all potential participants will be supplied with a similar information sheet and a consent form.**

## INFORMATION SHEET FOR PARTICIPANTS

*REC Reference Number: KCL/13/14-137*



### YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET

Title of Research: The Effects of Yoga and Mindfulness on Teen Girls aged 16-18

We would like to invite you to participate in this postgraduate research project. You should only participate if you want to; choosing not to take part will not disadvantage you in any way. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

As part of my postgraduate course in Child Studies, I am writing a dissertation to determine what affects yoga and mindfulness have on teen girls between the ages of 16 and 18. I am currently undertaking an internship with Veronika Kloucek, who owns Teen Yoga and Mindfulness, and it is my goal to work in the field of teaching yoga to teens after graduating from King's College.

My main goals for this project are:

- To determine to what extent a yoga and mindfulness practice impacts aspects of the teens life.
- To gain an understanding of the teen's feeling towards taking part in a yoga and mindfulness practice.
- To understand which benefits (if any) of yoga and mindfulness are most prominent in teen girls.

I would really appreciate your help in conducting this study. I am hoping to have 4-6 girls from your school participate in this study. If you are between the ages of

16 and 18 and have taken part in a yoga and mindfulness practice with Veronkia Kloucek for at least two months, you are eligible for the study. If you chose to be involved, you will be asked to take part in a 30-60 minute interview where you will be questioned about your experience in the yoga and mindfulness class.

If you take part, you can chose to have your name included in the study, or to remain anonymous. All of the information I collect from you will be kept private. I will not ask you to share any private information with me. I am interested in finding out how the yoga class benefited you, but I will not ask you to share any specific issues that it may have helped with. For example, I will ask how or if the yoga and mindfulness practice has helped in dealing with stress, but I will not ask for details about the causes of stress.

All interviews will take place at the school, and will be held in an approved location that ensures your safety. I will ask that a member of staff be in close proximity to the interview room, to ensure that you feel safe and comfortable.

The interviews will be recorded and the information will be transcribed into a written document as a part of a larger research project. Upon completing this process, the information will be destroyed. After completing an interview, you will have **one month** to choose to opt out of the study, and your data will not be used.

This research could potentially be published as a scholarly article and used a personal document to help in my personal development and business ventures.

**It is up to you to decide whether to take part or not.** If you decide to take part you are still free to withdraw from the study up to one month after the interview.

If you have any questions or require more information about this study, please contact the researcher using the following contact details: Camille Dodson:  
Camille.dodson@kcl.ac.uk

If this study has harmed you in any way, you can contact King's College London using the details below for further advice and information: Hayley Davies:  
Hayley.Davies@kcl.ac.uk

**CONSENT FORM FOR PARTICIPANTS IN RESEARCH STUDIES**

**Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.**



**Title of Study:** The Effects of Yoga and Mindfulness on Teen Girls aged 16-18

**King's College Research Ethics Committee Ref:** KCL/13/14-137

Thank you for considering taking part in this research. The person organising the research must explain the project to you before you agree to take part. If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

**I confirm that I understand that by ticking/initialling each box I am consenting to this element of the study. I understand that it will be assumed that unticked/initialled boxes mean that I DO NOT consent to that part of the study. I understand that by not giving consent for any one element I may be deemed ineligible for the study.**

Please tick or initial

Please tick or initial

- 1. \*I confirm that I have read and understood the information sheet dated [2012/2013/1] for the above study. I have had the opportunity to consider the information and asked questions which have been answered satisfactorily.**
- 2. \*I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. Furthermore, I understand that I will be able to withdraw my data up to ONE MONTH AFTER THE INTERVIEW**

3. \*I consent to the processing of my personal information for the purposes explained to me. I understand that such information will be handled in accordance with the terms of the UK Data Protection Act 1998.
4. Anonymity is optional for this research. Please select from the following 3 options:
- a. I agree to be fully identified
  - b. I agree to be partially identified
  - c. I wish to remain anonymous
5. I understand that the information I have submitted will be published as a report and I wish to receive a copy of it.
6. I consent to my interview being audio/video recorded.
7. I understand that I must not take part if I fall under the exclusion criteria as detailed in the information sheet and explained to me by the researcher.
- 

\_\_\_\_\_  
**Name of Participant**                      **Date**                      **Signature**

\_\_\_\_\_  
**Name of Researcher**                      **Date**                      **Signature**

## Appendix D: Topic Guide and Tentative Interview Schedule

### **TOPIC GUIDE AND POSSIBLE QUESTIONS FOR SEMI-STRUCTURED INTERVIEWS:**

Includes questions in bold and possible follow up questions and prompts to encourage responses.

**Can you tell me about your experience in the yoga and mindfulness class with Veronika, starting with your first class and explaining how your thoughts and feelings have changed since then?**

Why did you want to take the class?

What did you hope to gain from it?

Were you surprised about anything you learned/ did in class?

Did you have a favorite class, and if so, why?

**Can you tell me about what benefits you think you've gained from the class?**

Do you believe it has had any physical benefits?

Do you believe it has had any emotional benefits?

Do you believe it has had any mental benefits?

What are the benefits that you think other girls your age might gain?

If you were to do yoga at home, what would be your reason for doing it?

What group/ groups of people do you think can benefit the most from doing yoga?

**Can you talk to me about what principles you've learned in the yoga class and how/when/if you've used them outside of the class?**

Has there been a time when you found yourself thinking about something you learned in yoga class, and used it to help solve a problem?

If someone you know was going through a hard time, would you have any advice that you learned from the yoga class?

**What do you think might be the most challenging parts about being a teen girl your age?**

How do you think you can deal with those issues?

If you could give your peers advice about dealing with the challenges of being a teen, what would it be?

**Now that you've been taking the class for at least two months, how would you describe it to someone who has never done yoga or learned about mindfulness?**

What are your favorite or least favorite parts of the class?

Was there something you wish you had done in class that you didn't?

Is there any thing you wish the teacher had done or done more of?

What does mindfulness mean to you?

Would you recommend it to others?

Will you continue with yoga yourself?