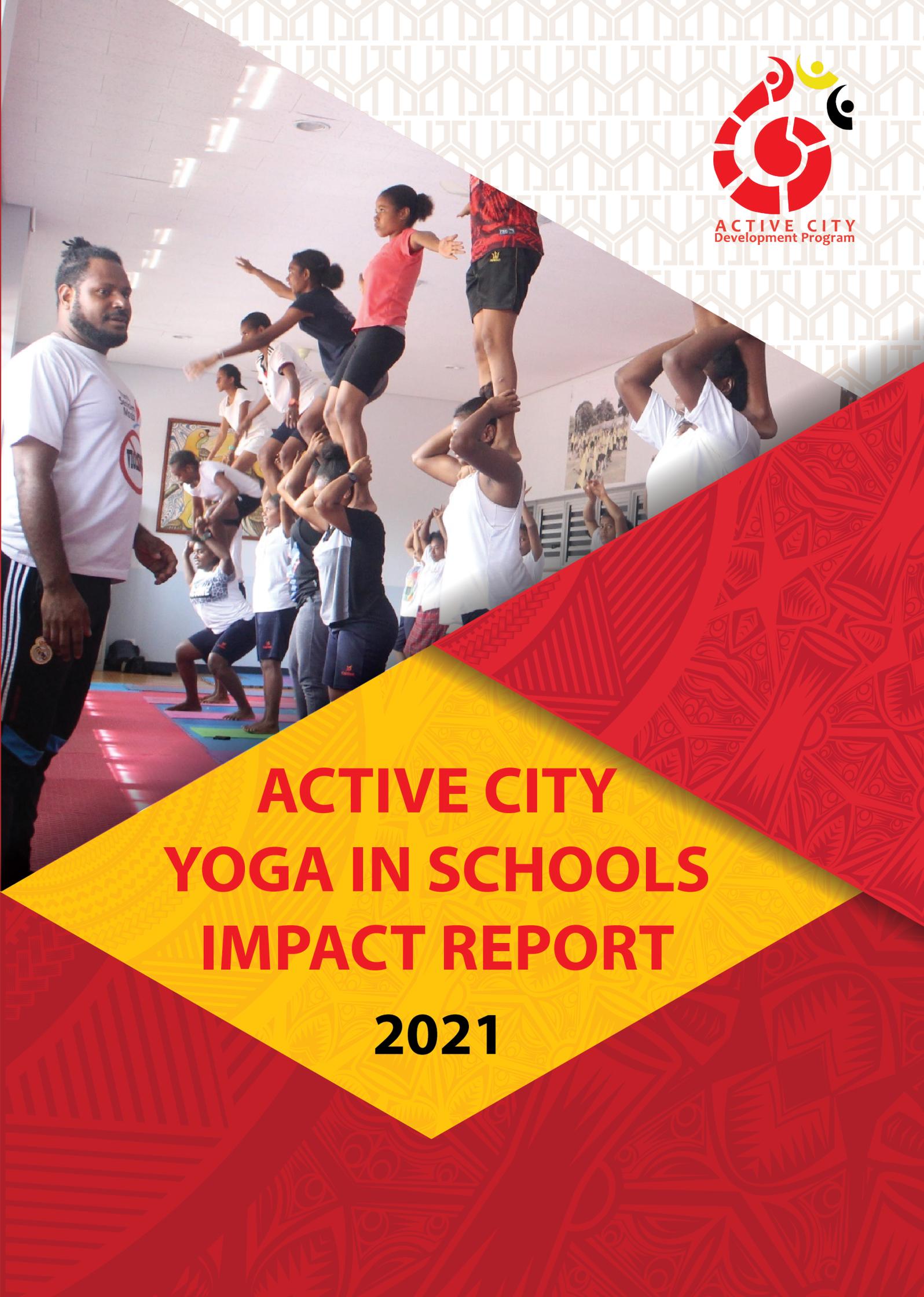




ACTIVE CITY  
Development Program



# ACTIVE CITY YOGA IN SCHOOLS IMPACT REPORT

2021



## ACKNOWLEDGEMENTS

The Yoga in Schools Impact Survey, conducted by the Active City Development Program (ACDP) in Port Moresby, Papua New Guinea has seen the engagement of 250 students from Caritas Technical Secondary School in grades 7, 9 and 11 over a period of 6 months. Student participants in this study gave their views on the impact of the ACDP yoga class on their physical, social and mental well-being. ACDP teachers taught the weekly yoga classes as well as passed out the surveys to the student participants. The ACDP teachers also collected the surveys after the students completed it. We would like to convey our appreciation to all the participants who took part in the Yoga in Schools Impact Survey. We thank the Directress of Caritas School, Sr. Mazzarello Choi, as well as the principal, Mrs. Wilmah Kalimet. We would also like to thank the many teachers who were so gracious to let us into their classroom space to teach yoga as well as conduct the study. We would also like to thank our ACDP yoga teachers; Henry Mekere and Nadia Evi for their commitment and professionalism in conducting weekly yoga classes with students during the study. We would also like to thank Ezra Adino, manager of the Yu Yet Yoga programme for his overall leadership during the duration of the study. Furthermore, we would like to acknowledge the efforts of the local evaluation team. A huge thank you to Pierre Dobunaba for his contribution to the general oversight and coordination of fieldwork as well as for his help in understanding the context. Thanks to our Director of Dance and Education, Dr. Joanne Ball-Burgess for her editing, compiling and writing of the complete report. Thanks also to our committed team of enumerators who played such a crucial role in collecting and entering data in a timely manner. A special thank you to ACDP Founder and Trainer, Ms Fazilah Bazari and Programme managers for helping the evaluation team to have access to all the necessary information to complete this review.

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## INTRODUCTION

This uncontrolled, correlated pilot study was carried out to examine the effects of a curriculum based yoga program in the following areas:

1. Mental well-being (Relaxation, Concentration, Calmness, Self Confidence, Joy and Happiness)
2. Social well-being (Ability to get along with others, Listening skills)
3. Physical well-being (Postures, Sleep, fatigue, eating and diet)
4. Positive behaviors (Responsibility, behavioral changes)





# PROBLEM STATEMENT OF YOGA IN SCHOOLS IMPACT STUDY

Papua New Guinea is in a state of transition, where traditional cultural values and practices are being challenged by the process of urbanization and influences of western culture. The PNG National Youth and Adolescent Health policy states that data from a variety of sources show that youth and adolescents are strongly affected by these changes, and are more vulnerable to certain health risks and problems compared with children and older adults.

The current health status of adolescents in Papua New Guinea, especially those in high school are quite astounding, and causes great concern for both parents and teachers. The National Youth and Adolescent Health Policy was created in 2014, highlighting various issues that affect youths in Papua New Guinea, listing youths and adolescents as very vulnerable people in the society, prone to various health, emotional and physical health issues (YAHP, 2014).

Childhood and Adolescence pose more and more stressors in today's society, especially when the demands of a situation exceed an individual's ability to cope with and resolve the problem, resulting in emotional, behavioral and cognitive disturbances that can adversely affect a person's physical and mental wellbeing (McCance, Forshee, & Shelby, 2006). Under stress, many young people resort to unhealthy ways of coping such as overeating and the use of drugs, resulting in a health crisis (Kottler & Chen, 2011).

## **PHYSICAL EDUCATION**

Lack of regular physical activity is believed to contribute to childhood obesity, which is associated with premature mortality rates (U.S Department of Health and Human Services, 2000; Zimmerman et. Al, 2013). Lack of Physical activity causes many other health issues such as increased stress, poor sleep, and decline in mental health. (McPhie & Rawana, 2012).

Because students spend more hours at school in a week than any other place, school based programs are essential to reverse these negative health trends. In fact, Physical education programs in schools are the ideal settings to begin early promotion of health, and to emphasize the importance of physical activities (U.S Department of Health and Human Services, 2000). While the benefits of traditional physical activity are still evident, more and more educators are resorting to non-traditional and mindfulness as a means of holistic effects on the health of children (Burke, 2010). The Papua New Guinea National Youth and Adolescent Health Policy, when discussing various health issues affecting adolescents and youth, recommends the use of holistic approaches; which simplified, is what yoga largely is.

## WHY YOGA?

Yoga, an ancient system of exercise has been used by people of all ages to promote overall health and fitness. People all over the world are using yoga as a mind-body complementary and alternative medicine to improve a variety of specific physical and mental health conditions.

Yoga has been recommended as a great supplement to current physical activities in schools, because it emphasizes individual abilities instead of competition, which is attractive for children, especially those with physical limitations lack of involvement in organized sports.

Because Yoga has attracted attention as a mindfulness exercise (Burke, 2010), it enhances one's self-awareness, breathing, posture, diet, behaviors and has the potential to influence a whole person (physically, mentally, spiritually, and emotionally). The effects of Yoga on children has had great benefits to cardiovascular health, physical functioning and behavior (Gelantino et. al, 2008), and also improved attention and emotional control (Jensen & Kenny, 2004).

Though Yoga can appear to be just a simple stretching activity, the variety and sequencing of postures, coupled with the practice of deep breathing creates an extremely diverse and effective method of enhancing a range of health-related fitness skills. In fact, enabling teachers to teach yoga as a part of physical education has been trialed in various parts of the world, proving success. Research proves that delivering yoga with physical activity curricula could be an economic solution to a daunting health crisis faced by the nation's youngsters (Sherman, Tran, & Alves, 2010).

Considering the stress children and adolescents face at school on a daily basis (Kotter & Chen, 2011), yoga can serve as a great remedy for reducing negative effect, distress and raise self-awareness of the body and mind, ultimately contributing to improved health of adolescents in high school.

## THE SCOPE AND OBJECTIVES OF THE STUDY

The scope of the study evolved around the benefits of yoga for students, especially in the area of mental focus. Several experts have expounded on this severally.

Abadi, et.al, (2008) did a study on the effects of yoga on children with Attention Deficit - Hyperactivity Disorder, for which the results were quite astounding. Harrison et.al, (2004) had their research published after doing studies on Sahaja Yoga Meditation being used as a family treatment program for children with Attention Deficit-Hyperactive Disorder. Their studies noted yoga as a great holistic improvement and remedy, highlighting the importance of attentional focus in adolescents. Peck et.al, (2005) conducted a study under their Psychology School doing research for Yoga as an intervention for children with attention problems, citing adolescent attentional focus and concentration as vital aspects of their educational progress.

All these studies found out that yoga on children should increase concentration and attentional focus. These two attributes should contribute to academic improvement and hence will be a major scope of this program.

The scope of the study also centralized around the benefits of yoga for students; specifically, with regard to their emotional health. Researchers have emphasized the need for emotional stability amongst youth in several studies.

The emotional health of adolescents is quite astounding, as they are faced with a myriad of stressful scenarios on a daily basis at school (Kottler & Chen, 2011). Yoga for adolescents in schools help in reducing anxiety and enhancing positive effect (Gloecckner & Stuck, 2005; Platania-Solazzo et.al., 1992) and can serve as a great remedy for reducing negative affect and distress.

These studies indicate increase in self-confidence, level of joy, self-esteem. These emotional indicators suggest that students who practice yoga may feel less stressed and more resilient when confronted with stressful situations, therefore, the benefits of yoga on emotional health will also be a major parameter for the scope of this program.

Finally, the scope of this study also revolves around the benefits of yoga with regard to students' physical wellbeing.

As part of a literature review on studying the therapeutic effects of yoga on children, Gelantino, et.al., (2008), published in the Pediatric Physical Therapy Journal, citing that yoga has had great success in improving and enhancing various physical abilities. Chen & Pauwels (2014) did a study of yoga in schools, which has results that indicated improvement and enhancement of physical abilities of adolescents and children.

The benefits of yoga on physical abilities will be a given output, because the practice has proved this all over the world, and more so as witnessed through youths who take part in the Youth Empowerment and Transformation Program at the Taurama Aquatic Centre. Therefore, benefits of yoga on physical ability will be the third and final parameter.

The three scopes / parameters contributed to informing this pilot study. It is hoped that the results of this study will correlate yoga practice with social, emotional and physical well-being as well as increased positive behaviours in students.

## OBJECTIVES OF THE STUDY

It was against the background presented that ACDP conducted the Yoga in Schools Impact Study.

A six-month study was conducted in Port Moresby to determine if there was any positive correlation between students who practiced yoga regularly and their physical, social and mental well-being. This study also observed whether there were any positive behavioral changes as a result of the yoga class engagement.

## METHODOLOGY

The methodology for the Yoga in Schools Impact Study was conducted as follows:

ACDP conducted a before and after survey at the school in March and September 2020.

In both surveys, a total of 18 questions divided into 4 different categories were asked.

The survey categories include: mental well-being, social well-being, physical well-being and positive behaviors.

In both surveys, the same questions were asked to establish a before and after status of students who participated in the yoga classes.

Survey forms were given to students at the commencement of the study as well as at the conclusion of the study to gain a deeper understanding of the student's status.

Students who did not manage to fill the forms at school took the forms with them, and returned them once completed. The survey forms were later collected and the data was analyzed.

### **Participants:**

A sample size of 250 students from grades 7, 9 and 11 participated in both surveys.

Letters drafted by the program and approved by the school were sent to each parent, explaining the program, as well as the study. A release form was signed by both parents and students who agreed to take part in the yoga curriculum. Parents or students that declined did not participate in the yoga program.

*Participants did not receive compensation, nor did students/teachers given a penalty for not participating. Students were not graded for this subject either*

### **Procedure**

Yoga classes carried out during physical education classes.

Classes carried out by trained yoga teachers certified by Yu Yet PNG Limited.

Each class was an hour and twenty minutes in duration.

Classes were structured – 5 minutes breathing, 60 minutes' yoga postures/exercises, 10 minutes' relaxation and closing, 5 minutes themed discussion.

- **Themed discussions focused on yoga-related topics such as breathing techniques, peace and non-violence, self-care, moderation, non-coveting, etc.... (Yama and Niyama).**
- **Breathing exercises were focused on calming and integrating breathing techniques.**
- **Listening to one's body, and respecting one's own abilities. (E.g. not doing something a posture they cannot do).**
- **Relaxation involved lying flat on the back for a period of about five minutes while lying still.**

## Questionnaire

The 5 point Likert Scale was used as the research tool for the questionnaire. The Likert Scale is a psychometric response scale that is used to allow individuals to express how much they agree or disagree with a particular statement, typically in a 5 points. It assumes the strength/intensity of an attitude, to measure Agreement (Strongly Agree/Strongly Disagree), Frequency (Always/Never), Quality (Excellent/Very Poor), Importance (Very Important/Unimportant) and likelihood (Definitely/Probably Not).

The importance of the Likert Scale is that it doesn't expect a simple Yes or No answer from the respondent, but rather allows for a degree of opinion and even no opinion at all.



# EVALUATION AND FEEDBACK FOR ASSESSMENT OF DATA



The initial plan was to collect feedback from students, parents and teachers. During the actual study, however, feedback was solely collected from students for this pilot study. The additional categories are listed as an indication of intent and for follow-up study in the future. The specific questions for each category are listed in the Annex section of this report.

## 1. Students

Peer Pressure, social influence, and the learning environment in schools have great influence on a child's development or progress. Who better to know these, then the student? Therefore, a questionnaire was given to students at the end of the year as part of the evaluation of this program.

## 2. Parents

Parental influence and pressure also has a large impact on their children. Students who get support from their parents for participating in beneficial activities produce positive changes in their lives.

## 3. Teachers

The learning environment in schools greatly play a part in the student development intellectually, physically or mentally.

The Annex section contains the datasheet that was used to collect feedback from the students as well as the proposed datasheet for the parent and teacher categories for future use. The student feedback was used to assess whether there was any positive correlation between the participants. engagement in weekly yoga classes and their physical, mental and social well-being.

These questions were designed to determine the student's perception on the benefits that they have received from the yoga sessions. The students were assessed 6 months on the following:

- Mental well-being (Relaxation, Concentration, Calmness, Self Confidence, Joy and Happiness)
- Social well-being (Ability to get along with others, Listening skills)
- Physical well-being (Postures, Sleep, fatigue, eating and diet)
- Positive behaviors (Responsibility, behavioral changes)

**DATASHEET FOR STUDENTS SELF SURVEY QUESTIONS (Please refer to ANNEX for further information)**

The questions were designed to determine the student's perception on the benefits that they have received from the yoga sessions. The students were assessed after 6 months on the following;

- Mental well-being (Relaxation, Concentration, Calmness, Self Confidence, Joy and Happiness)
- Social well-being (Ability to get along with others, Listening skills)
- Physical well-being (Postures, Sleep, fatigue, eating and diet)
- Positive behaviors (Responsibility, behavioral changes)

## DATA FINDINGS

The collected data from the before and after student self-surveys was compared. The analyzed data was then presented in bar graphs to show the correlation between the students and the four categories on which the survey questionnaire was based. The categories that were observed in the survey were as follows: mental well-being, social well-being and physical well-being. 18 questions in total were asked during the self-survey that the students took at the commencement and conclusion of the study. Out of the 46 questions, 18 of the questions were analyzed based on their contextualization to the study. The 18 questions were specific to shedding light on the concepts of the study.

### POSITIVE CORRELATION BETWEEN STUDENTS' MENTAL WELL-BEING AND YOGA ENGAGEMENT

In this sub-section the study was aimed at determining whether there was any indication of a positive correlation between students' mental well-being and their engagement in weekly yoga classes. The questions in the study were aimed at assessing how the student participants felt about their own well-being before the commencement of the study and after the study. The before and after results were compared to determine if there was any change in the dependent variable noted.

### Question 1. On a daily basis, how relaxed are you?

The results of the study indicated a positive correlation between the students' responses to the feeling of relaxation and their continual engagement in yoga classes once per week. It was noted that students who practiced yoga once a week for six months indicated a 24% increase in feeling relaxed on the survey.



Figure 2 Feeling of Relaxation Before and After Yoga

### Question 2. How focused are you in school?

The results of the study indicated a positive correlation between the students' responses to feeling more focused in school and their engagement in weekly yoga classes. It was noted that students who practiced yoga once a week for six months indicated a 12% increase in feeling more focused in school.

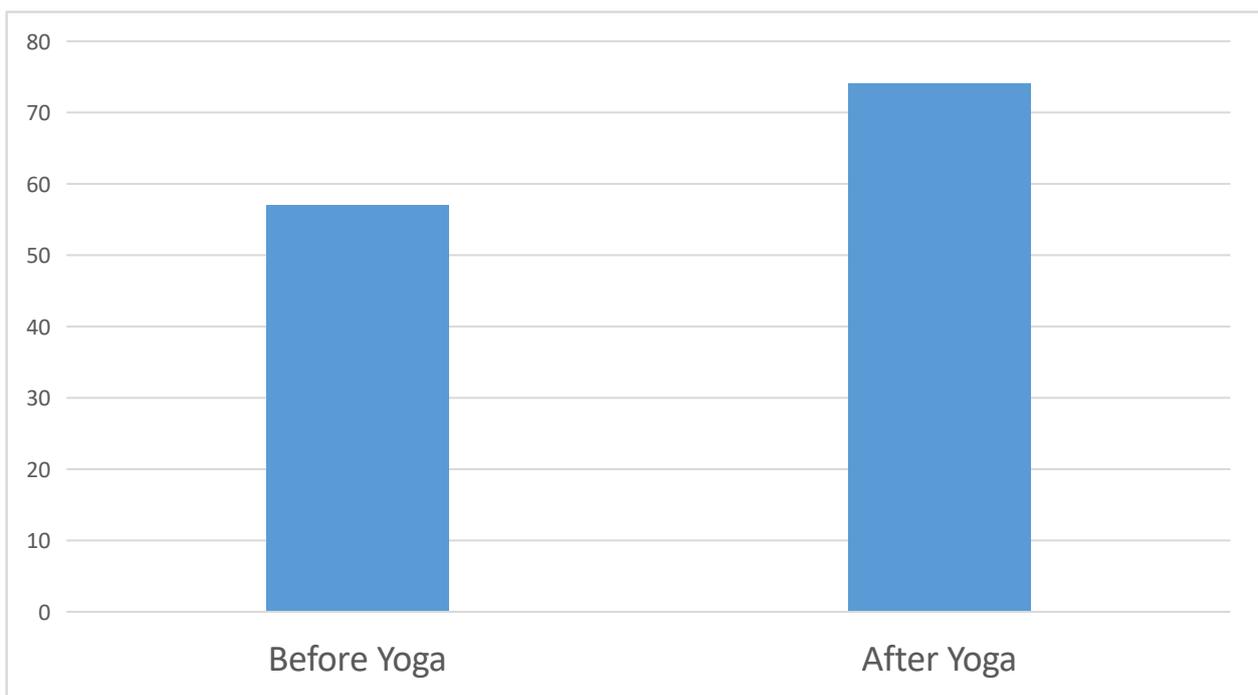


Figure 3 Mental Well-Being and Focus Before and After Yoga

### Question 3. How confident are you?

The results of the study indicated a positive correlation between the students' responses to feeling more confident in school and their engagement in weekly yoga classes. It was noted that students who practiced yoga once a week for 6 months indicated a 27% increase in confidence levels during the self-survey.

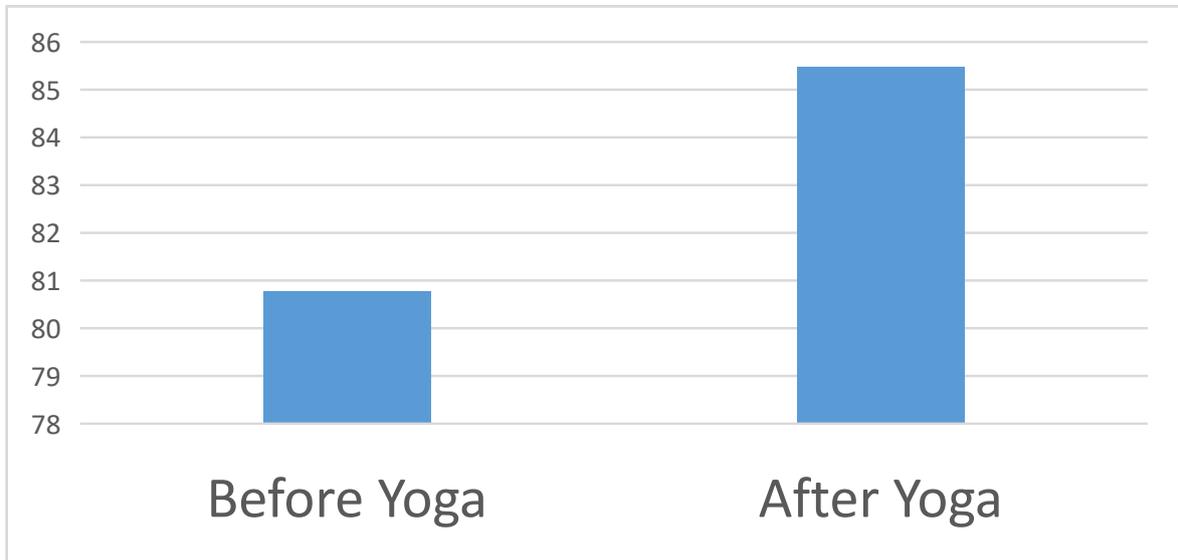


Figure 4 Confidence Levels Before and After Yoga

### Question 4. Are you a happy person and laugh often?

The results of the study indicated a positive correlation between the students' responses to feeling happy and laughing often and their weekly engagement in yoga classes. The study indicated an 18% increase in happiness and laughter from students after 6 months of practicing yoga once a week.

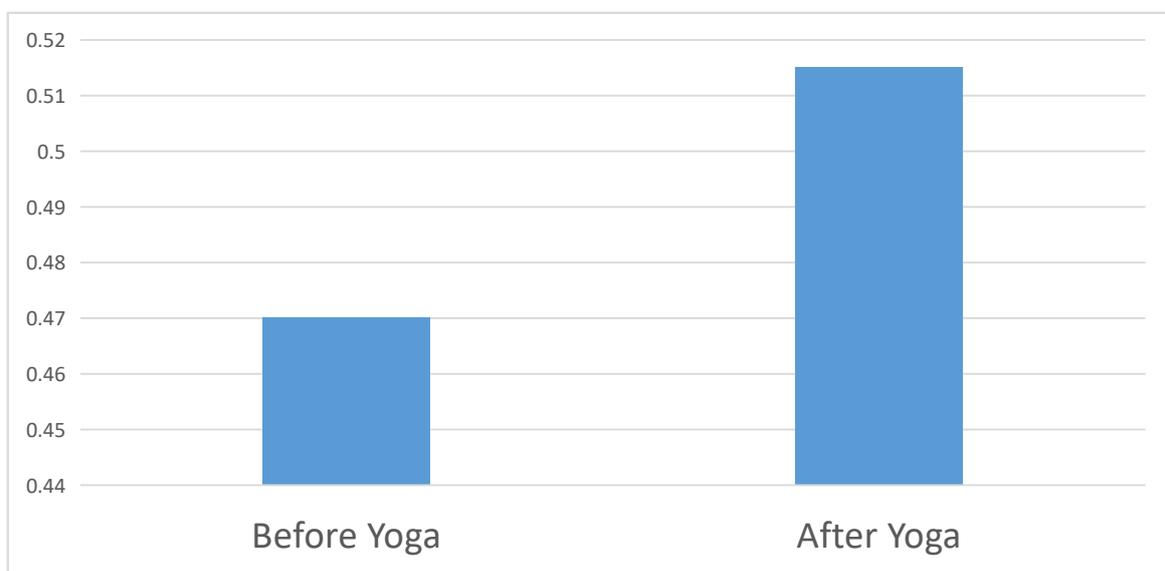


Figure 5 Happiness Factor Before and After Yoga

### Question 5. How much do you enjoy school work and sports?

The results of the study indicated a positive correlation between the students' responses to feeling enjoyment towards school work and sports and their weekly engagement in yoga classes. The data displayed a 7% increase in school work and sports enjoyment in students who practiced yoga once a week for 6 months.

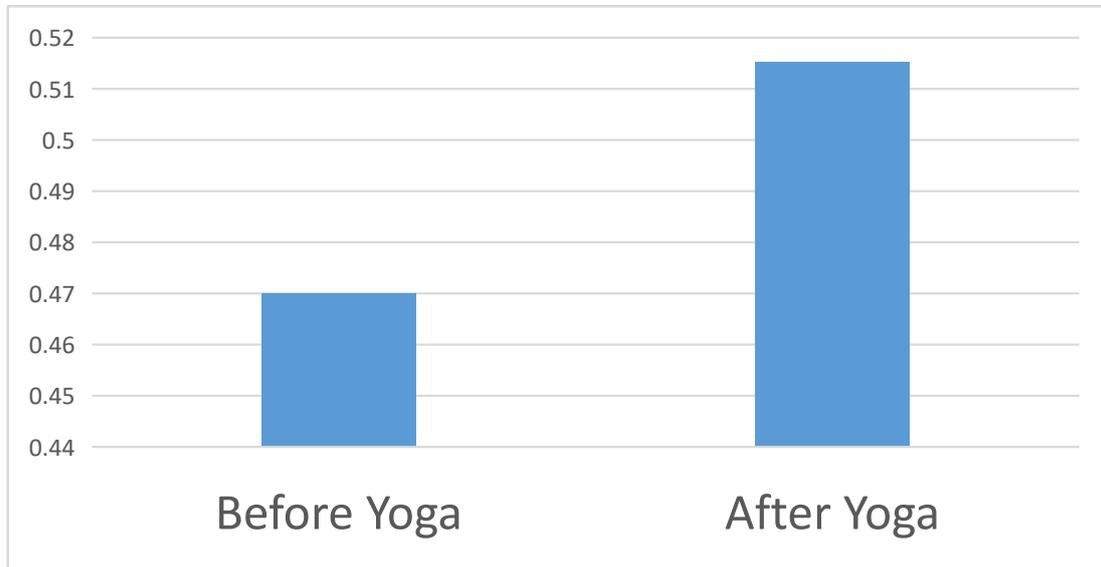


Figure 6 School Work and Sports Enjoyment After Yoga

### Question 6. How much do you like yourself?

The study indicated a positive correlation between the students' responses to their self-perception and their weekly engagement in yoga. The data findings displayed a 7% increase in positive self-perception among participants who practiced yoga once a week for 6 months.

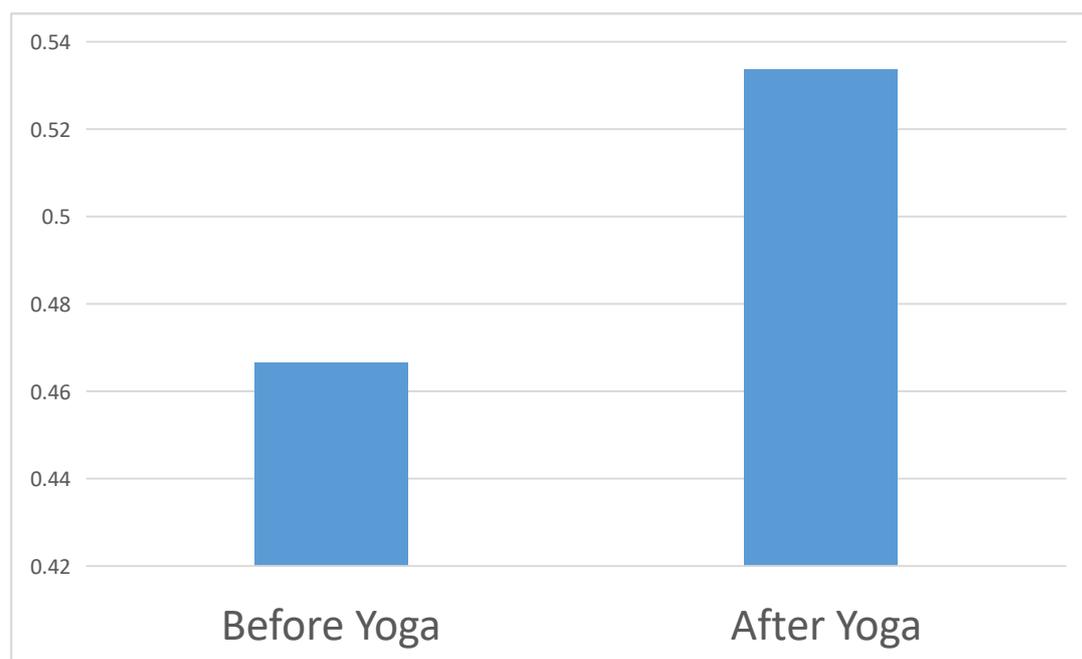
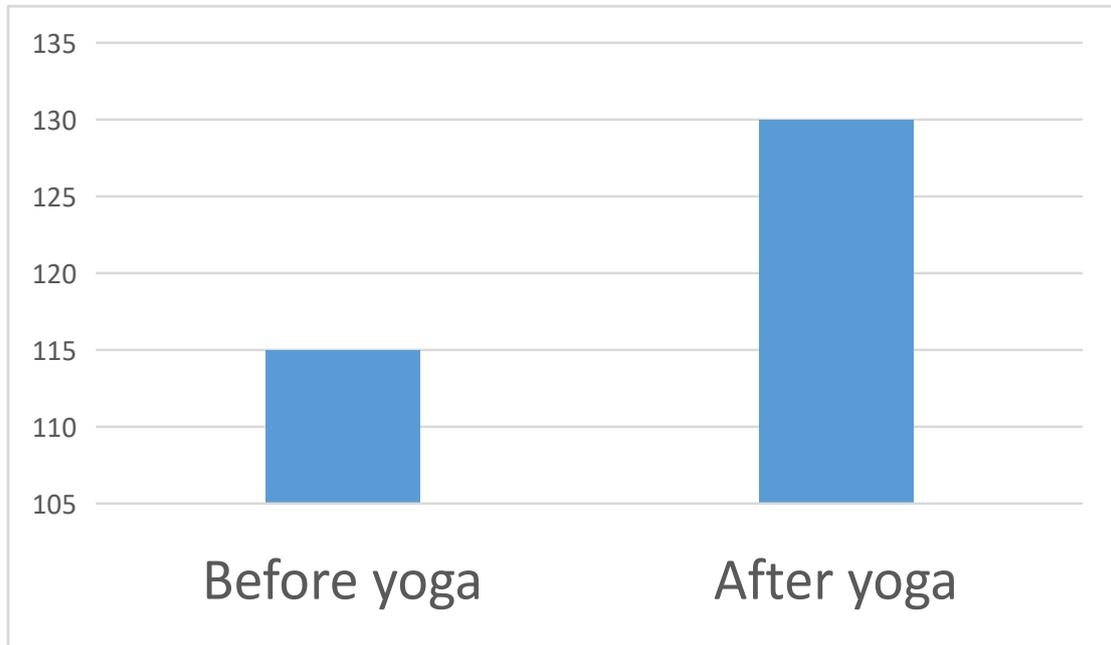


Figure 7 Self-Love Factor Before and After Yoga

**Question 7. Do you get along better with your family and friends?**

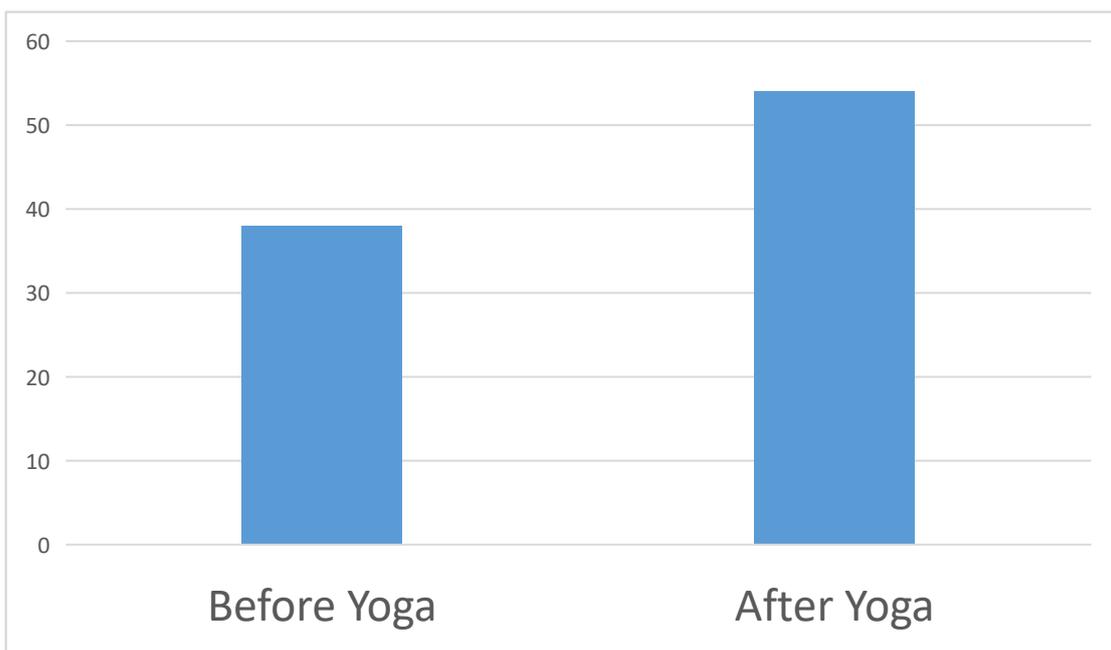
The study indicated a small positive correlation between students’ responses to their interactions with their family and friends and their weekly yoga classes. The data displayed a 6% increase in positive family and friend interactions amongst students who practiced yoga once a week for 6 months.



*Figure 8 Social Well-Being With Family and Friends Before and After Yoga*

**Question 8. Are you a better listener?**

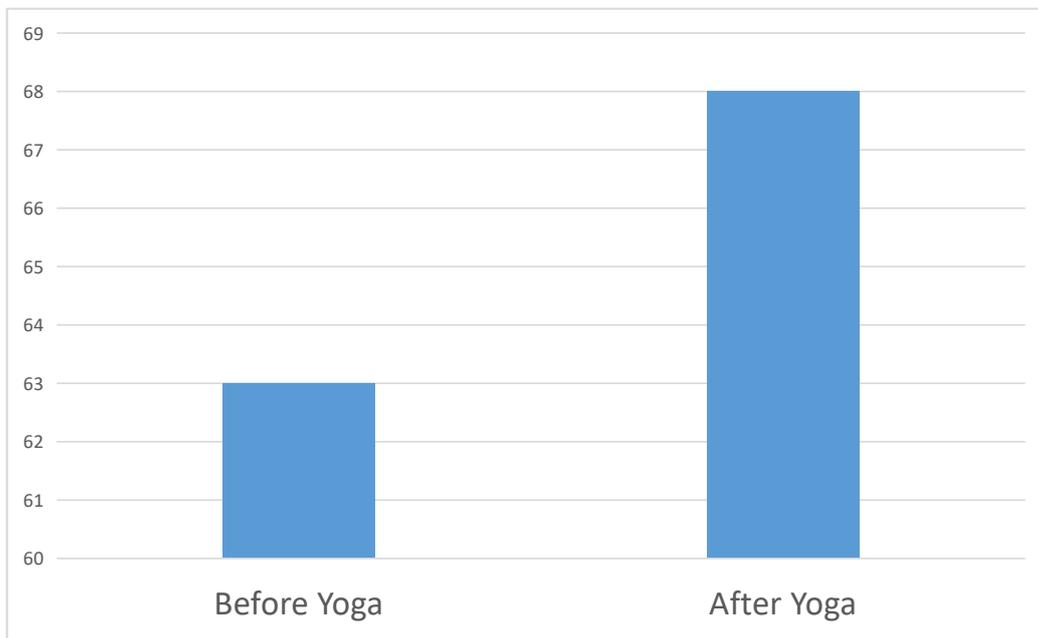
The study indicated a positive correlation between students’ responses to how they felt regarding their listening skills and their weekly yoga class engagement. Participants in the study felt that they had become better listeners after 6 months of regular yoga practice. The data indicated a 17% increase in this area.



*Figure 9 Listening Skills Before and After Yoga*

**Question 9. I can calm down more quickly once I feel upset.**

The study indicated a small positive correlation between students’ responses to how they felt regarding their ability to manage their emotions. The data indicated a 4% Increase in students having the ability to calm down more quickly once upset after practicing yoga once a week for 6 months.



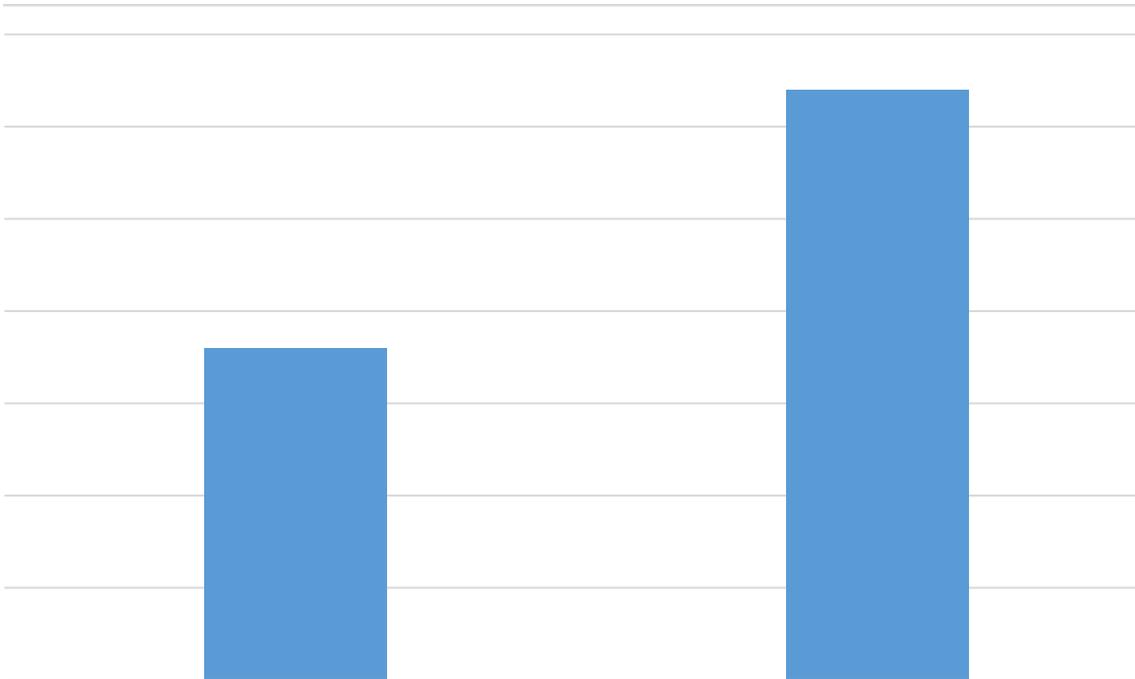
*Figure 10 Managing Emotions Before and After Yoga*

**POSITIVE CORRELATION BETWEEN STUDENTS’ PHYSICAL WELL-BEING AND YOGA ENGAGEMENT**

In this sub-section the study was aimed at determining whether there was any indication of a positive correlation between students’ physical well-being and their engagement in weekly yoga classes. The questions in the study were aimed at assessing how the student participants felt about their own well-being before the commencement of the study and after the study. The before and after results were compared to determine if there was any change in the dependent variable being observed.

**Question 10. How well do you sleep at night?**

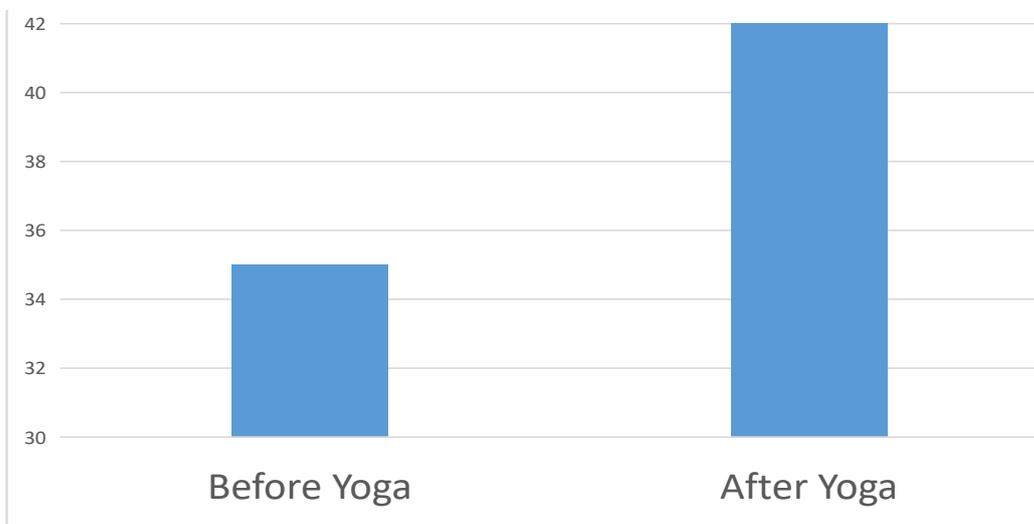
There was a positive correlation between students’ responses to being asked about how well they sleep at night and their continued engagement in yoga. The data indicated a 28% increase in regular sleeping patterns amongst students who practiced yoga once a week for 6 months.



*Figure 11 Good Sleep Patters Before and After Yoga*

**Question 11. How energetic of a person are you after yoga classes?**

There was a positive correlation observed between the students’ responses to being asked about their energy levels after participating in a yoga class. The data indicated that there was a 9% increase in energy in students who practiced yoga once a week for 6 months.



*Figure 12 Energy Levels Before and After Yoga*

**Question 12. How aware are you about what you eat?**

There was a small positive correlation between the students’ responses to being asked about their awareness to what they eat and their engagement in weekly yoga classes. The data indicated that there was a 5% increase in eating habits/diet awareness amongst students who practiced yoga once a week for 6 months.



Figure 13 Food Choice Awareness Before and After Yoga

**Question 13. Do you have a fairly good knowledge about nutrition?**

There was a small positive correlation between the students’ responses to being asked about their level of nutritional knowledge before and after the survey. The data indicated an 8% increase in nutrition knowledge in students who practiced yoga once a week for 6 months.

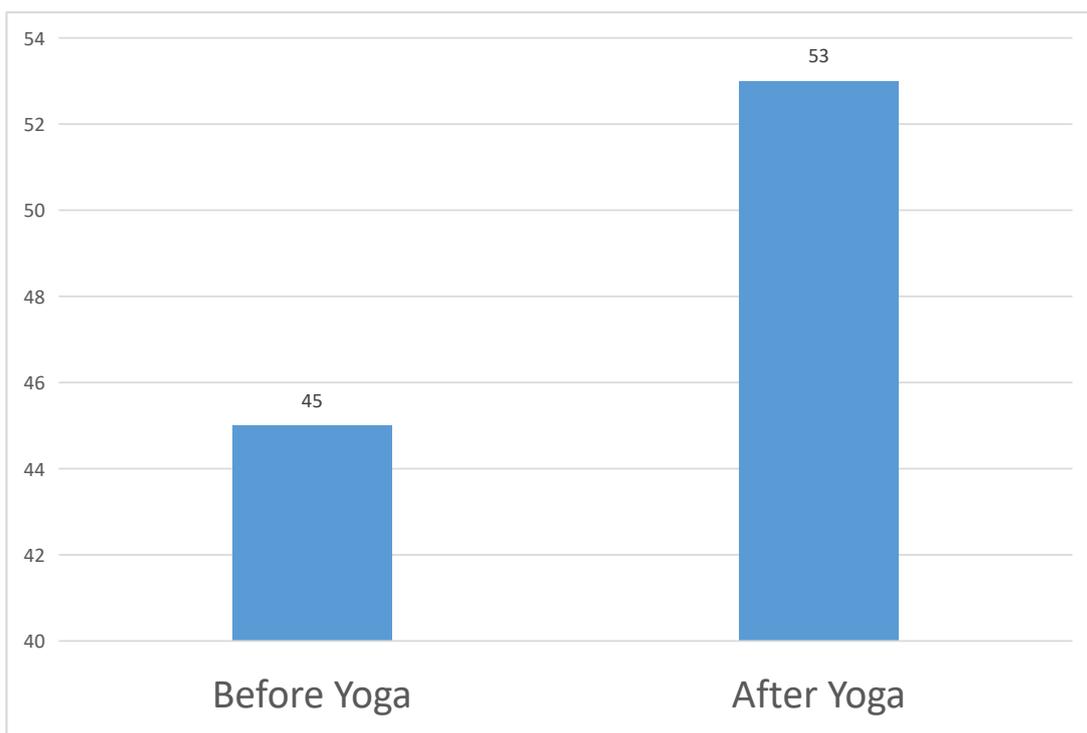


Figure 14 Nutrition Awareness Before and After Yoga

**Question 14. Do you know about your body’s capabilities and limits?**

There was a positive correlation between the students’ responses to being asked about their body’s capabilities and limits and their regular engagement in a consistent yoga practice. The data indicated a 27% increase in body/self-awareness in students who practiced yoga once a week for 6 months.



Figure 15 Body Awareness of Capabilities and Limits Before and After Yoga

**Question 15. Do you have good body posture in general?**

There was a positive correlation between the students’ responses to being asked how they felt about their body posture and their engagement in regular yoga classes. The data from the self-survey indicated an 18% increase in students feeling good about their body posture amongst students who practiced yoga once a week for 6 months.

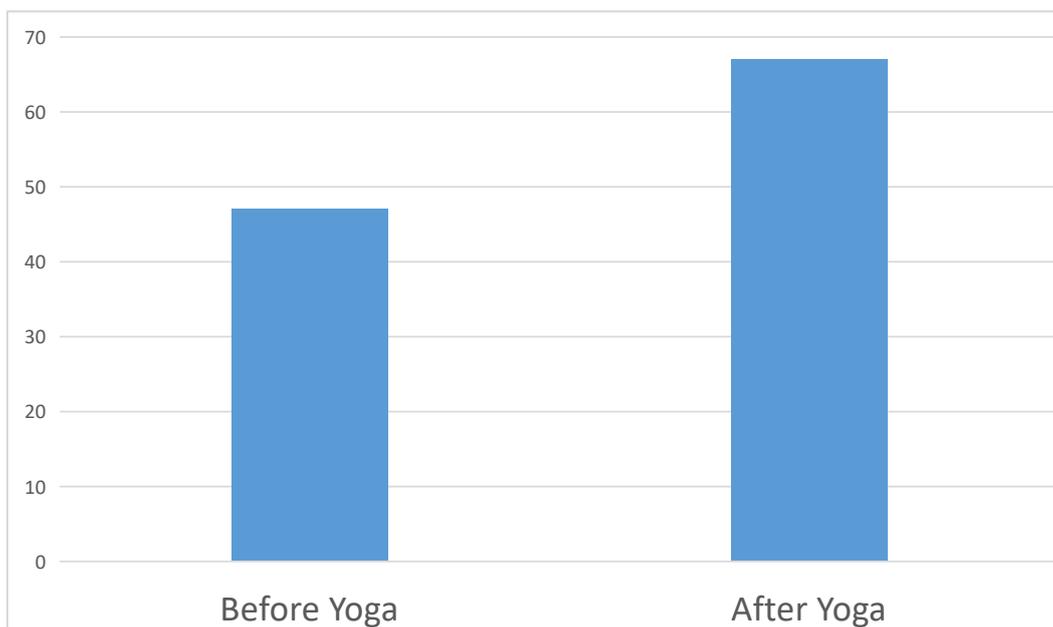


Figure 16 Body Posture Awareness Before and After Yoga

POSITIVE CORRELATION BETWEEN POSITIVE BEHAVIOURS AT SCHOOL AND YOGA ENGAGEMENT WHILE ENGAGEMENT IN YOGA INDICATES NEGATIVE CORRELATION TO BEHAVIOUR PROBLEMS IN SCHOOL

In this sub-section the study was aimed at determining whether there was any indication of a positive correlation between positive behaviors in students and their engagement in weekly yoga classes. The questions in the study were aimed at assessing how the student participants felt about their own well-being before the commencement of the study and after the study. The before and after results were compared to determine if there was any change in the dependent variable being observed.

**Question 16. How often do you have behavior problems at school?**

There was a negative correlation between behavior problems at school and continued engagement in yoga. The students were asked, before the commencement of the study and at the end of the study with regard to having behavior problems at school. The study indicated that there was a -24% decrease in behavior problems at school in students who practiced yoga once a week for 6 months.



Figure 17 Behaviour Problems Before and After Yoga

**Question 17. Are you more responsible in managing your daily tasks?**

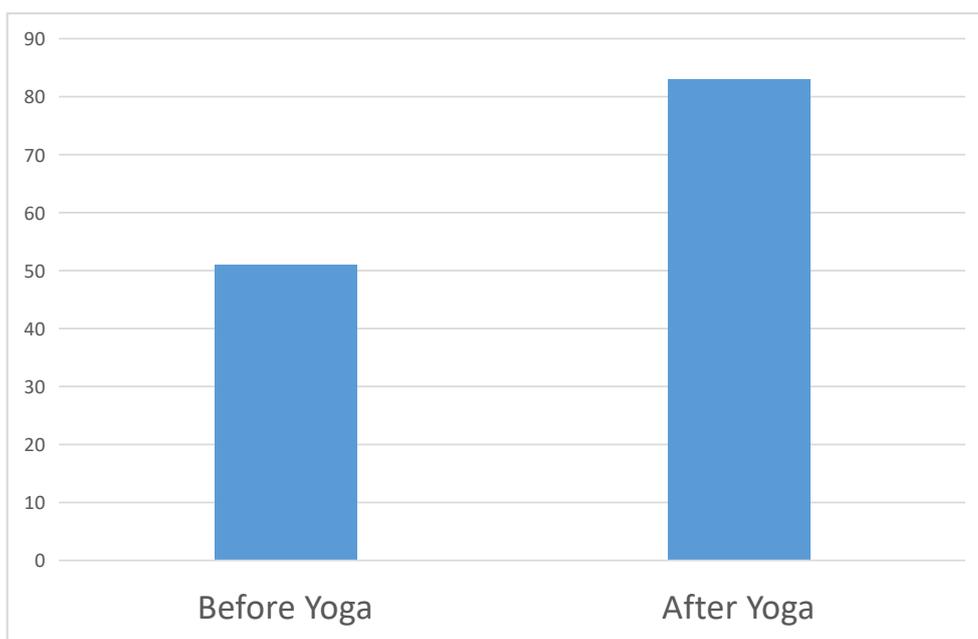
There was a positive correlation between how students felt about their ability to manage their daily tasks and their continued engagement in yoga. The data indicated a 13% increase in responsibility in managing daily tasks amongst students who practiced yoga once a week for 6 months.



*Figure 18 Responsibility in Managing Daily Tasks Before and After Yoga*

**Question 18. Do you currently practice a healthy diet?**

There was a positive correlation between how students felt about their food choices and their continued engagement in yoga. The data indicated that there was a 24% increase in healthy diet practices amongst students who practiced yoga once a week for 6 months according to the self-survey.



*Figure 19 Healthy Diet Choices Before and After Yoga*

## STUDENT IMPROVEMENT AFTER SIX MONTHS OF CONTINUED YOGA PRACTICE

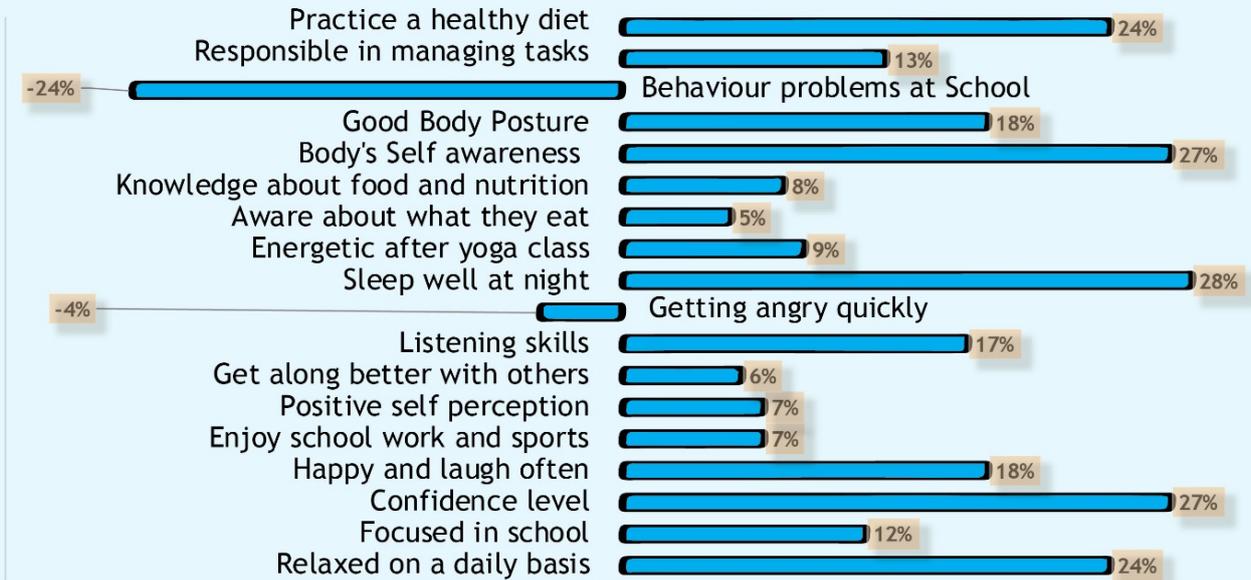
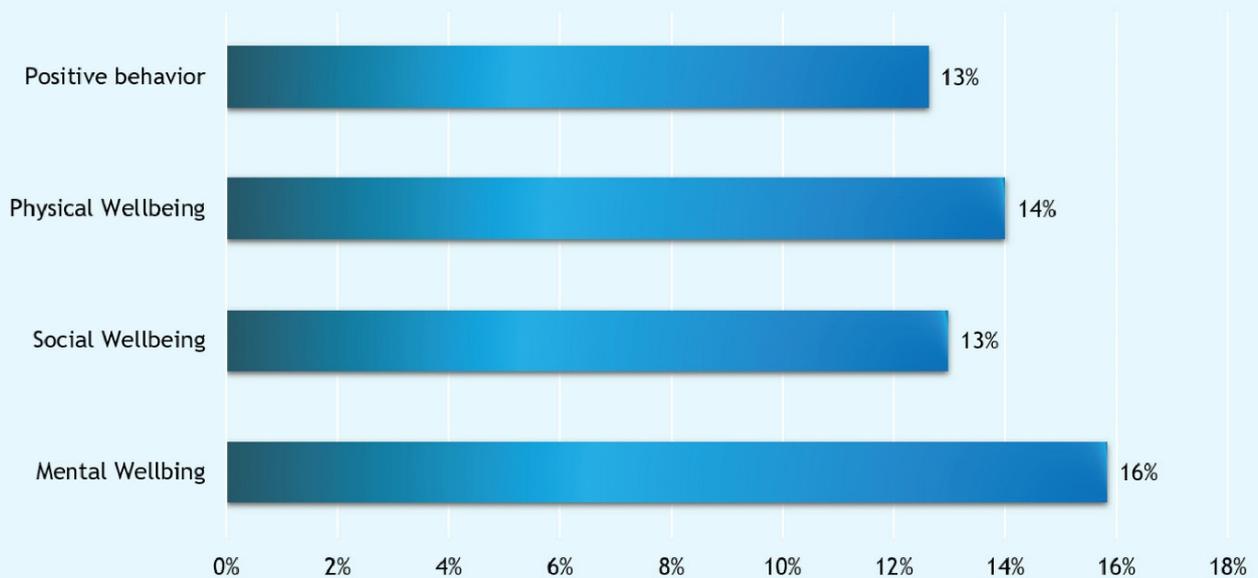


Figure 20 Collective Student Improvement After Continued Yoga Practice

## STUDENT IMPROVEMENT AFTER SIX MONTHS OF YOGA PRACTICE BY CATERGORY



## DATA ANALYSIS AND CONCLUSION



All of the data findings displayed a positive correlation between student, continued engagement in weekly yoga classes and their mental, physical and social well-being. The data also displayed positive correlations to increased positive behaviours in students and their continued engagement in weekly yoga classes. Where the data indicated a negative correlation was between negative behavior patterns and engagement in yoga classes amongst the student participants. All of the data collected and analyzed was based on a before and after self-survey that the student participants filled out at the start of the study and at the end. The data was compared for correlation.

It was noted that the survey questions were the highest in the area of physical and mental well-being. It was also noted in the survey that the least amount of questions in the survey were in the category of social well-being. The findings are grouped below for ease as reference as follows:

The data indicated a 24% increase in relaxation amongst students who practiced yoga once a week for six months.

- The data indicated a 12% increase in focus amongst participants who practiced yoga once a week for 6 months.
- The data indicated a 27% increase in confidence levels amongst students who practiced yoga once a week for 6 months.
- The data indicated an 18% increase in happiness and laughter from students after 6 months of practicing yoga once a week.
- The data indicated a 7% increase in school work and sports enjoyment in students who practiced yoga once a week for 6 months.
- The data indicated a 7% increase in positive self-perception among participants who practiced yoga once a week for 6 months.

- The data indicated a 6% increase in social well-being was observed amongst students who practiced yoga once a week for 6 months.
- The data indicated a 17% increase in listening skills amongst students who practiced yoga once a week for 6 months.
- The data indicated a 4% increase in the number of students who got upset or angry quickly after practicing yoga once a week for 6 months.
- The data indicated a 28% increase in regular sleeping patterns amongst students who practiced yoga once a week for 6 months.
- The data indicated a 9% increase in energy in students who practiced yoga once a week for 6 months.
- The data indicated a 5% increase in eating habits/diet awareness amongst students who practiced yoga once a week for 6 months.
- The data indicated an 8% increase in nutrition knowledge in students who practiced yoga once a week for 6 months.
- The data indicated a 27% increase in body/self-awareness in students who practiced yoga once a week for 6 months.
- The data indicated a 4% Increase in students having the ability to calm down more quickly once upset after practicing yoga once a week for 6 months.
- The data indicated an 18% increase in body posture awareness amongst students who practiced yoga once a week for 6 months.
- The data indicated a -24% decrease in behavior problems at school in students who practiced yoga once a week for 6 months.
- The data indicated a 13% increase in responsibility in managing daily tasks amongst students who practiced yoga once a week for 6 months.
- The data indicated a 24% increase in healthy diet practices amongst students who practiced yoga once a week for 6 months.



## RECOMMENDATIONS

For the study itself, it is recommended that the study be repeated with a larger sample size, over a longer period of time, with additional days for yoga engagement to determine whether the results displayed in this study can be generalized to a larger population for validity. It is also recommended that the repeated study be done with a control group to compare before and after results with student participants who do not have engaged in yoga during the study or who have engaged in another activity during the study's duration. For now, the sample size has assisted the study to help the researchers to estimate regarding a large population size. At present it can be assumed that a repeated study would display confidence intervals.

It is also recommended for further study that the original scope of the study; which included both parent and teacher surveys to be included in the study for data collection and analysis. It is also recommended that a medical doctor checkup be conducted at the commencement and conclusion of the study. Including these factors will help to determine whether the student responses to the dependent variables in the self-survey are verified by additional and documented sources.

For continued further study, collecting student testimonials provides a wider dimension to the scope of a study, beyond merely data and graphs. It is recommended that if this study were to be repeated, that student testimonials be collected. In this way the testimonials provide a central base that is closer to the human experience; thereby expanding the scope of the study.

It was recommended, based on the results of the study, that yoga be practiced in schools more regularly

for increased student support in mental, physical and social well-being. From the data analysis it can be concluded that there is a positive correlation between student’s engagement in yoga once a week for 6 months and their overall mental, physical and social health. It is also recommended that yoga become a part of the physical education curriculum in schools as well as be used during times of increased stress in school; such as during exams. Overall, the findings and analysis that were displayed in this report display qualitative findings that provide empirical results that speak to the benefits of yoga for students, beyond the surface level and should be taken into consideration by school leaders, principals, parents and teachers with regards to the next steps of implementing such a programme into schools on a regular basis.



# ABOUT ACTIVE CITY DEVELOPMENT PROGRAM

The Port Moresby Active City Development Program (ACDP) is a non-profit organization dedicated to create a healthy, clean and a more peaceful city using the power of sports. Programs and activities are free of charge and open to everyone to have access to organized sport programs.

ACDP has many components and uses various activities to achieve the outcomes and goals.

The activities include Walking, Yoga, Acrobatics, Dance – traditional, contemporary, fusion & break dancing, Drama, Brass Band, Kick-Boxing, Karate, Shows, Events, Festivals, Competitions and more.

These activities not only provide social inclusion for the unemployed and at risk youth in the settlement communities but also work in partnership with local SME's and industries, government and private sector agencies, non-governmental organizations and international collaborators.

The program has advanced into other areas of development such as education, health, environmental issues which are components that are needed to function together to create sustainable cities.

The program also organizes shows, events and festivals that are inclusive and offers an opportunity for program participants to showcase their talents and earn an income through arts and performances especially during major celebrations like Easter, Independence and Christmas celebrations in a safe, inclusive and peaceful way.

We believe through a more action orientated, participatory and active engagements through our activities with city residents, we will eventually address the many issues that will ultimately build a rapidly developing city.

## **1 - Youth Empowerment and Transformation Program**

Activities offered are: Yoga, Drama/theater, kickboxing, brass band, dance - modern, traditional and contemporary, acrobatics, karate and circus performance training. Regular participants can undergo further training in any of the components and will be certified as a Youth of Change after 12 months. This program has had the greatest outreach, currently averaging over 400 participants per week.

## **2. Community Classes in the communities and suburbs:**

These community classes are run by Yu-Yet youth of change that have been trained and certified as teachers. They offer free yoga sessions, kickboxing, acrobatics, and dance classes in the communities in the informal settlements and suburbs of Port Moresby.

## **3 - Community Yoga Class**

A free yoga class for the general public and working class people on Saturday mornings. A vegetarian meal is shared after every class to instil the message of having a healthy diet from local produce, while also giving an opportunity for participants to practice yoga and socialize in a healthy, friendly and supportive environment.

#### **4 – Walk and Yoga for Life**

Sunday early morning walk for the general public, aimed at providing a fun, socially interactive non-competitive activity to improve health, wellness and fitness of city residents against lifestyle diseases. This is a 8km walk, that ends off with yoga stretches and performances at the finishing arena. It is also a time where positive messages are re-enforced weekly and is participated by many senior public servants and leaders, including the Governor of Port Moresby.

#### **5 - Community Walk For Life – Various suburbs in NCD**

This is a replicate of the Sunday walk but in a smaller scale at the community level during weekdays. Here, community leaders have taken ownership and initiated their own Walk and Yoga for Life to keep their communities healthy and happy.

#### **6 - Bomana Prison Yoga Project**

Active City Development Program also reaches out to the youth in prison, especially the Juvenile inmates to share the joys of sports through service. Prisoners can practice yoga, acrobatics and other creative movements.

#### **7 - Youth of Change Yoga Teacher Training**

Every Year, selected participants who have been attending the Youth Empowerment and Transformation Program for 12 months can undergo the Intensive Youth Of Change Teacher Training Program for those who choose to have a career in yoga teaching or to just be community champions. They are trained by Fazilah Bazari, Certified Yoga Teacher, Master Life Coach and NLP Trainer.

#### **8. Yoga in Schools Program**

Schools all over the world are now using yoga as a holistic approach to physical education that stimulates mental, physical and cognitive progress. Yoga is now a part of the physical education with participating schools at Caritas Secondary and Technical School

#### **9. Yoga in Safe Houses**

Apart from legal, medical and accommodation support given to victims or survivors of family and sexual violence, there is limited assistance to assist victims and survivors to recover mentally and emotionally from their traumatic experiences. Having yoga classes, meditation and breathing exercises available for survivors and victims will go a long way in assisting them to heal, forgive and recover which they can really practice on their own at any time. Yoga will help remove or overcome their trauma, fears and stress and help in their recovery process.

#### **Active City Development Program (ACDP)**

When the success of Walk and Yoga for Life in Port Moresby reached international recognition, the International Olympics Committee (IOC) selected Port Moresby as one of the 10 Active Cities globally, and hence the formation of the Active City Development Program was established in 2016 to attain that endorsement as an active city.

The goal of the program is to change society's bad attitude and behaviors through the introduction of a more holistic and innovative approach, one that is action based, participatory, inclusive, accessible, and sustainable for the youth and communities in Port Moresby.

At ACDP, we recognise that to create a city that is safe, peaceful, healthy, clean and active, we need to engage the people so they can take ownership and assist in the daunting task that is needed to steer and shape the city's development goals and vision.

This is a driving factor of ACDP's mission and vision. All programs of ACDP are essential components of NCDC's commitment to develop a safer and a more peaceful city, healthier and clean towards creating an Amazing Capital City, Port Moresby.

**VISION**

To elevate, empower, educate and employ men, women, youth, and children of Port Moresby

**MISSION**

Our mission is to use physical activity to bring change –both behavior and mindset – in individuals and communities through engaging in various kinds of non-competitive sports and creative movements. The main targets are young people who are marginalized and at risks and general communities as a whole, including all adults, regardless of age, color, status and tribe.

Our aim is to empower all residents of Port Moresby with responsible healthy lifestyle habits and to live positively in a clean, peaceful, safe and healthy environment.



# ANNEX

## ACTIVE CITY DEVELOPMENT PROGRAM

### YOUTH EMPOWERMENT AND TRANSFORMATION PROGRAM

#### Yoga in Schools Program

#### SELF SURVEY QUESTIONS

Please answer the questions accordingly as per given key.

#### KEY

1 = Strongly DISAGREE

2 = DISAGREE

3 = NORMAL

4 = AGREE

5 = STRONGLY AGREE

QUESTION	ANSWER
	(1, 2, 3, 4 or 5)
I have become more relaxed in daily living	
I have had fewer or no behavior problems at school	
I have become more responsible in managing my daily tasks	
I am more focused on school work	
I can sleep better	
I am more energetic after practicing yoga	
I am more aware of what I eat	
I have gained more knowledge about nutrition	
I start to eat more healthy foods	
I am getting along more better with my family and friends	
I am a better listener now	
I can calm down more quickly once I feel upset	
I know more about my body	
I have better body postures	
I feel more confident in myself	
I am happier and laugh more often	
I enjoy school work and sports more than before	
I like myself more	

**DATASHEET FOR PARENTS FOR FUTURE STUDY**

The parent questionnaire was based on the same questionnaire as the students. This was to ensure that parents who have many opportunities to assess their children would have similar observations of the changes in their children’s behaviors and well-being. It is recommended that this questionnaire be utilized in follow-up studies.

**ACTIVE CITY DEVELOPMENT PROGRAM**

**YOUTH EMPOWERMENT AND TRANSFORMATION PROGRAM**

**Yoga in Schools Program**

**PARENTS’ SURVEY QUESTIONS**

Please answer the questions about your child accordingly, as per given key.

**KEY**

- 1 = Strongly DISAGREE
- 2 = DISAGREE
- 3 = NORMAL
- 4 = AGREE
- 5 = STRONGLY AGREE

<b>QUESTION</b>	<b>ANSWER</b> <b>(1, 2, 3, 4 or 5)</b>
My child has become more relaxed in daily living	
My child has had fewer or no behavior problems at school	
My child has become more responsible in managing daily tasks	
My child is more focused on school work	
My child sleeps better	
My child is more energetic	
My child is more aware of what he/she eats	
My child has gained more knowledge about nutrition	
My child is starting to eat more healthy foods	
My child gets along more better with family and friends	
My child is a better listener now	
My child can calm down more quickly once he/she feels upset	
My child knows more about his/her body	
My child has better body postures	
My child is more confident now	
My child is much happier and laughs more often	
My child does more school work and sports more than before	
My child likes him/herself more than before	

## DATA SHEET FOR TEACHERS TO ASSESS STUDENT’S PERFORMANCE FOR FUTURE STUDY

Teacher assessment feedback was designed to observe individual student improvement in emotional, mental, and physical well-being. It was determined that at the end of the study, the class teacher would include the following as part of the student’s report, which will be collected for assessment. This item was not included as a part of the pilot study however it is recommended that this feedback be collected from teachers for any follow-up studies deemed necessary.

### ACTIVE CITY DEVELOPMENT PROGRAM

### YOUTH EMPOWERMENT AND TRANSFORMATION PROGRAM

### Yoga in Schools Program

### TEACHER SURVEY QUESTIONS

This form is to be filed out and attached to the School’s copy of the student’s report card.

STUDENT NAME: \_\_\_\_\_

CLASS: \_\_\_\_\_

Please answer the questions about the student accordingly to the key given.

#### KEY

1 = Strongly DISAGREE

2 = DISAGREE

3 = NORMAL

4 = AGREE

5 = STRONGLY AGREE

QUESTION	ANSWER (1, 2, 3, 4 or 5)
Student has shown improved concentration and attention in class	
Student focuses better on important tasks at hand	
Student’s social skills has improved	
Student has had improvement in emotional maturity	
Student self-esteem has improved	
Student has reduced or limited behavioral problems	
Students have become better in caring for themselves	
Student attendance to class has improved (Low absenteeism)	
Student’s overall academic performance has improved	
Student has potential to do better in future	

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