Effects of Anapana Meditation Technique in School Children

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Abstract
Ānāpāna is a type of meditation in which the incoming and departing natural breaths are used as meditation objects. S.N. Goenka, a vipassana teacher from the Ledi Sayadaw lineage, has created a special meditation course for schoolchildren called 'npnaĀnāpāna,' which has a good impact on their academic and behavioral outcomes. This article seeks to examine the influence of Ānāpāna techniques among practitioners using primary and secondary data. To assess the effect of ānāpāna, a structured questionnaire set was designed to seek first-hand information from 240 students from two secondary schools of Kathmandu Valley. Students who have already taken ānāpāna courses and continued their practice are chosen for the study. Analyzing the effects of ānāpāna in nine different clusters, the chi-square test is applied at a five per cent level of significance to justify the result. The study showed that the ānāpāna technique helps improve students' study habits and academic performance. In addition to that, regular ānāpāna practice would be helpful to improve physical as well as mental health, reduce anger, improve relationships with friends, family members, and their relatives. The Chi-square test result also showed a significant association with regular ānāpāna practice in all nine variables.

Keywords: Ānāpāna, vipassana, meditation, technique, school children

1. INTRODUCTION
Ānāpāna is the first step for vipassanā meditation. S.N. Goenka, who is known as vipassanā teacher of Ledi Sayadaw lineage, brought the vipassanā technique from Myanmar to India in 1969. He had designed ten days vipassanā courses for ordinary householders. Vipassanā meditation is generally taught after 18 years. Emphasizing on school children, he has designed ānāpāna courses which could be easily taught even outside the vipassanā centre. In ānāpāna, natural breath is taken as meditation objects. 'Ana' means breathing in, and 'apana' means breathing out. When Goenka was conducting a ten-day course in Mumbai, a 15-year girl
completed the course with her parents, and she had requested him to design an ‘only for children’ course (Savla, 1991:198). In the meantime, Vinobha Bhave had also encouraged him to teach vipassanā to children. Then Goenka designed a specialized ānāpāna course for school children, and it was first conducted at Jamnabai Narsee School, Mumbai on 17 April 1986, a residential four-day course where 88 children participated (Shah, 1997:82). Later two days, three days residential ānāpāna course and one-day non-residential course are designed and conducted in various locations of India. Later, in India, ānāpāna courses are widely popular in Nepal and western countries like Australia, New Zealand, North America, the UK, France Germany (Kirk and Brown, 1997:85). Moreover, it is taken to reduce behavioural problems like attention deficiency disorders and develop good moral character among the children in the west.

It could also be taken as an entry point into vipassanā. S.N. Goenka first taught ānāpāna practice during the first three days in 10-day vipassanā course. As mentioned in ānāpānasati sutta ānāpāna itself is sufficient for practice if it can go through four types of satipathana: kayanupassana, vedananupassana, chittanupassana and dhammanupassana (Bhikkhu Bodhi, 1995:941-948). The ānāpāna course is designed for practising incoming and outgoing natural breath.

1.1 Objectives and Methodology
The paper evaluates the effects of the ānāpāna technique among school children. Both primary and secondary data have been used for the study. Related books, research articles, dissertations and study reports are taken as secondary sources of information. For the primary data, information was collected from the ānāpāna practitioner students in two higher secondary schools in Kathmandu valley. Based on the research question ‘what are the changes were commonly seen in academic performance, behavioural aspects and a family relation of the meditator students after they had been practising this technique, a set of structured questionnaires were prepared and distributed. Altogether 240 students who have already taken the ānāpāna course were randomly selected for the study. A sample of 169 students from DAV Sushil Kedia Vishwa Bharati Higher Secondary School, Jawalakhel, Lalitpur, 66 students from Jagat Sundar Bwonekuthi Secondary school, Bishnumati Road Kathmandu and five from other schools were selected for the study. The reason for selecting these two schools is that they emphasized practising ānāpāna courses among the students. DEV school publicly exhibited that ānāpāna meditation is practised daily in the school during assembly time, similarly, according to Ms Sunita Manandhar, teachers of Jagat Sunder School try to practice ānāpāna meditation every day before the classes start.

1 In the school website, they further highlighted that ‘this meditation technique helps the students to introspect, sharpen intellect and develop memory power, restless students and students with poor concentration power are especially advised to attend ānāpāna meditation on a regular basis’ See more from the website web: devnepal.com/Vipassanā accessed on 26 Jan 2020.

2 In the Interview, on 26 Jun 2019, in School Premises
Among 240 students, out of the 136 (57 percent) were male, and 104 (43 percent) were female who had already taken ānāpāna meditation course. Among them, 155 (65 percent) participated in the ānāpāna course once, 53 (22 percent) took it twice, and 32 (13 percent) took it more than two times. Similarly, 169 (70 percent) participants answered they were currently practising ānāpāna 10-20 minutes per sitting, 41 (17 percent) were practising 20-30 minutes per sitting, and 24 (10 percent) were practising about an hour or more per sitting. Analyzing regular practice at home, 21 (about 9 percent) students practice ānāpāna daily, 45 (19 percent) respondents answered they had practised less than three times a week, 147 (61 percent) practised sometimes, and 22 (9 percent) students answered that they had only participated the course however never practised this technique at home after they join the course. In addition to demographic information, there are nine questions directly associated with ānāpāna practice. These nine specific variables (questions) mainly were related to study behaviour, academic performance, physical and mental health, family and social relation. Respondents were asked to remark the effects of ānāpāna practice in all variables: a lot, a little, do not know, and none. Decoding answers as 0 for 'none', 1 for 'do not know, 2 for 'a little' and 3 for 'a lot' to interpret the response. All nine variables are taken as dependent variables, whereas regular ānāpāna practice, respondent gender and time per sitting are independent variables. The Chi-square test is applied whether the statistical results are significant or not at a five percent level of significance. SPSS software was used for processing sample data.

1.2 LITERATURE REVIEW

Various studies were conducted on vipassanā meditation where they also included ānāpāna as an entry point of vipassanā meditation. Some of the studies focus on ānāpāna meditation specifically. Most of them show positive effects on children's behaviour. Savla (1991:198–200) highlighted the multiple benefits of ānāpāna among children. It helps to develop concentration which further helps to increase memory power, and it ultimately supports academic performance as well as extra-curricular activities. This technique also helps to purify the children's minds; students become more peaceful, harmonious and respectful in school and their home as well as society. Dhar (1994:16–22) found that regular practice of vipassanā helps for gradual reduction of negative traits like rashness, intolerance and aggressive behaviour and further improve the student-teacher relationship. Wagmare (2019: 41-45) evaluates the effect of large scale ānāpāna program, which was implemented by the Maharasthra Government as 'MITRA Upakrm Program' in which government encourage school teachers to participate in vipassanā course and conducted ānāpāna course in schools as school reform program in 2011. Almost 25 million school children were benefited from this program. He found that this program helps students develop solid moral foundations at an early age. Ānāpāna practice "improves social behaviour, reduces disruptive behaviour, increases helpfulness, cleanliness, self-confidence, and concentration on students, which further supports increasing memory power and ultimately helps to improve academic performance"(ibid, p.42). Shinde and Dongare (2012:1-4) found a positive effect of ānāpāna meditation on the personality development of college students. He found that the personality factors like neuroticism,
openness, agreeableness, conscientiousness exceptional to extraversion were increased after imparting the ānāpāna meditation intervention program. Radhi (2002: 95-99) found that Vipassanā meditation has helped adolescents to reduce disruptive classroom behaviour (or reduction in disobedience). After the meditation practice, they changed their behaviour to become calmer, more focused on their studies, and less violent and angry. Waltore and Kurane (2017: 124-125) also found a similar result. Vipassanā meditation helps to reduce academic stress among adolescents. They showed that there is a significant effect of Vipassanā meditation to decrease academic frustration, academic conflict, academic pressure and academic anxiety. Adaviyappa (1994: 25) evaluates the changing behaviour of the students after ānāpāna practice. The follow-up study found that "(i) an increase in qualities like discipline, honesty, cooperativeness, attentiveness, cleanliness and concentration (ii) a decrease in irritability, quarrelling, use of abusive language and feelings of inferiority" (ibid). Modak (1994: 11-15) also emphasized that many students who practise vipassanā regularly keep reporting that their concentration, memory and ability to grasp the material they read has improved tremendously.

Saha and Katakam (1994: 29) also mentioned the effects of the ānāpāna course for school children in a school in Hyderabad, India. Where school children practice the ānāpāna technique for five minutes in the morning after assembly and five minutes before they leave school daily, it changes students' behaviour positively, and they behave better than before. The Principle and the school teachers were highly impressed with students' behaviour, and they have sent questionnaires to class teachers and parents to evaluate students' behaviour and academic achievement. Then they found that children improved social behaviour while bad habits like quarrelsomeness, using harsh words, distributive classroom behaviour decreased. Students develop positive qualities like helpfulness and self-confidence. They further reported improved memory power, concentration and better exam result after they regularly practised the ānāpāna technique.

2. RESULT AND DISCUSSION
As is discussed in earlier sections, the study focused on the nine questions which are related to student study behaviour, academic performance, physical and mental health, personal as well as family life and other fields. The summary of the response is listed in table 1.

Table 1  Effect of ānāpāna practice in percentage term
(Figures in parenthesis are in percentage terms)

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Questions</th>
<th>A lot</th>
<th>A little</th>
<th>Do not know</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Improvement in learning habit</td>
<td>63</td>
<td>161</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(26.5)</td>
<td>(67.6)</td>
<td>(5.5)</td>
<td>(0.4)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Enhanced memory power</td>
<td>83</td>
<td>133</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>(34.6)</td>
<td>(55.6)</td>
<td>(8.8)</td>
<td>(0.8)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Improvement in study</td>
<td>66</td>
<td>129</td>
<td>30</td>
<td>12</td>
</tr>
</tbody>
</table>
Besides percentage analysis chi-square test is applied at a 5 percent level of significance. All nine questions are taken as dependent variables and regular ānāpāna practice, respondents' gender and time per ānāpāna sitting are taken as an independent variable. The summary of the p-value from SPSS software is listed in table 2.

Table 2 Effect of ānāpāna technique: Chi-square test results

<table>
<thead>
<tr>
<th>Description</th>
<th>Chi-square test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Figure in Parenthesis are p-value)</td>
</tr>
<tr>
<td>S.N.</td>
<td>Questions</td>
</tr>
<tr>
<td>1</td>
<td>Improvement in learning habit</td>
</tr>
<tr>
<td>2</td>
<td>Enhanced memory power</td>
</tr>
<tr>
<td>3</td>
<td>Improvement in study</td>
</tr>
<tr>
<td>4</td>
<td>Improvement in exam result</td>
</tr>
<tr>
<td>5</td>
<td>Better family relation</td>
</tr>
<tr>
<td>6</td>
<td>Improvement in friendship</td>
</tr>
<tr>
<td>7</td>
<td>Enhancement in physical health</td>
</tr>
<tr>
<td>8</td>
<td>Enhancement in mental health</td>
</tr>
<tr>
<td>9</td>
<td>Reduced anger</td>
</tr>
</tbody>
</table>

Improvement in learning habits:
About 27 percent of subjects responded that the ānāpāna technique helps a lot for improvement in learning habits, and 68 percent answered that it helps a little to improve their learning habit. Altogether 95 percent believed that it helps to improve their learning habit. As per seen p-value =0<0.05, the result is significant at a 5 percent level of significance, which means the regular practice of the ānāpāna technique could help the student to improve their learning habit. In addition, the relationship with time per sitting is also significant (p-value=0.010<0.05), which means that as students increase their practising hours, it affects their learning habits more. No difference is found with another variable- gender and at a 5 percent level of significance.

**Enhanced memory power:**
About 35 percent of subjects answered that this technique enhanced their memory a lot compared to 56 percent who saw a slight improvement in their memory power. Altogether 91 percent feels that the technique is helpful to enhance their memory power. Statistical tests also showed a significant relationship between regular practice and memory power (p-value =0.00<0.05), which means the regular practice of this technique helps to enhance memory power. Not only this, female participants seems to have enhanced their memory power more than male participants; p-value =0.00<0.05 result is significant. Similarly, there is a positive association between practising hours and increase in memory power, p-value 0.00<0.05, the result is significant, which means as student increase their ānāpāna regular practising hours, it helps to increase memory power.

**Improvement in studies:**
About 28 percent answered that this technique helped a lot for improving their study, whereas 54 believed it helps a little bit; altogether, more than three fourth agreed that it helps to improve their study. Statistical test also showed (p value= 0.00<0.05) the result is significant. This means regular ānāpāna practice improves eagerness in studies. Similarly, association with gender p value= 0.00<0.05, which is significant. This means that among the participants, by practising ānāpāna, girls can improve their studies more than boys.

**Improvement in exam result:**
About 25 percent of subjects responded that the technique helps a lot to improve exam results, and 58 percent saw a little bit of improvement in their results. The relationship with regular practice p value= 0.00<0.05 which is significant. This means regular ānāpāna practice would help to improve students' exam results. No difference has been observed between the relationship with gender and the relationship with practising hours per day. This result is based on the information provided by the students through a questionnaire but not verified in school administration. However, few school teachers and their parents also agreed on this matter.

**Better family relations:**
More than half number of participants (56 percent) responded that much positive change was seen in their family relationships after regular practice of this technique, and about 29 percent responded with a bit of bit improvement; altogether, more than two-thirds felt better family
relations after they have practised this technique. Statistical tests also validate the result p value=0.01<0.05, which is significant. This means the regular practice of ānāpāna meditation could help to improve their family relationships. No difference is found in the relationship between gender and regular practising hours.

**Improvement in friendship:**
About 48 percent of subjects believed that regular ānāpāna practice helps a lot in the improvement of their friendship, and 37 percent believed that it is a little bit helpful. Altogether 85 percent of subjects felt improvement in their friendship after they practised this technique. Statistical tests also showed a significant relationship with regular practice (p value=0.019<0.05). This means regular ānāpāna practice contributes to improvement in friendship.

**Enhancement in physical health:**
About 36 percent of participants answered that this technique helps a lot to enhance their physical health and about 52 percent answered as it helps a little bit. Altogether 88 percent of subjects answered it helps to enhance their physical health. Relationship with regular practice p value=0.005<0.05, which is significant. This means regular ānāpāna practice could help to improve the physical health of the participants.

**Enhancement in mental health:**
About 30 percent of subjects responded that this technique helps a lot for improvement in their mental health, and 54 percent of them responded that this technique helps a little to enhance their mental health. Statistical test also supports this agreement p value=0.015<0.05, which is significant. Furthermore, relationship with gender is also seen significant (p value=0.00<0.05). No difference is seen in relationship with practicing hours per day. This means the ānāpāna technique is helpful to improve students' mental well-being. Moreover, girls feel much improvement in mental health than boys.

**Reduced anger:**
About 38 percent of subjects reported that it helps to reduce anger a lot, 39 percent reported that it helps to reduce anger a little bit. Altogether 66 percent of subjects believed it reduced anger. The statistical test result also justified this fact p value= 0.007<0.05, which is significant. This means regular ānāpāna practice could help to reduce students' anger significantly.

**Subjective Remarks from children:**
In the last parts of the questionnaire, participants were requested whether they wanted to share their memorable experiences achievements from the course practices or any suggestions. Most of the students have mentioned that after regular ānāpāna practice, they feel more calm, relaxed and stress-free, develop concentration and positive attitude, increase memory power than before. Some of the students expressed that after ānāpāna practice develop positive thinking,
improve their physical and mental health and improve relationships with their friends, relatives as well as family members.

**Verification from Teachers:**
During the study, four school teachers and one children ānāpāna course teacher is interviewed. Mostly teachers were asked whether they found any changes among the students after the ānāpāna course. Mr Sujan Khadgi, DEV Susil Kedia school, Anagarika Nayanawati Guruma, Bhasara School, Lalitpur, Ms Sunita Manandhar, Jagat Sundar School Kathmandu, Ms Shakuntala Pradhan of Paropakar Adarsha High School in Kathmandu expressed similar experiences that they found many changes among the students who took part in the ānāpāna course and continued their practices. Teachers have shared their unique experiences that guardians of the students were highly impressed from the ānāpāna program and they expressed their gratitude to the school management for running the ānāpāna course in the school. They found improvement in children’s learning behaviour, study result, family relation, reduction in anger and other positive changes after they practised the ānāpāna technique. Mr Sohitvirsing Kansakar said that he had already trained many students as ānāpāna course teachers. Some of the students came to repeat the course. The parents who came with their children expressed that the course was highly beneficial to their children. Even the students themselves expressed positive effects of the course. They recommended their friends to try the course, and some of them came with other friends for the course. He also confirmed that this technique helped to bring positive changes in students' behaviour, better relationships with family members and friends, improve their learning habits, and reduce anger. Shy natured students also built their confidence after the course.

**3. CONCLUSION**
This study has focused on the effect of ānāpāna meditation on school children. By using primary as well as secondary data, the study concludes positive effects on ānāpāna practitioners' day to day life. Not only academic performance but also improves their physical and mental health, helps to develop a good relation with friends family members and relatives, reduced anger and peaceful life. In the case study altogether, nine questions were asked among the respondents. Individually, in all questions, percentage analysis as well as a statistical test also justified the results. Clustering nine questions in four categories, it can be readily agreed that this technique is beneficial for the well-being of school children. Firstly, the survey result shows that this technique would be helpful to improve students' study behaviour as well as exam result. Secondly, respondent students agreed that this technique was helpful to improve their physical as well as mental health. Thirdly, this technique seems to be helpful to reduce anger and improve friendship as well as a family relations. Moreover, in the subjective written

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3 Mr. Sujan Khadgi, DEV Susil Kedia school, Anagarika Nayanawati Guruma, Bhasara School, Lalitpur, Ms. Sunita Manandhar, Jagat Sundar School Kathmandu, Ms. Shakuntala Pradhan of Paropakar Adarsha High School Taku Kathmandu, Mr. Swahit Bir Singh Kansakar, anapana course teacher.
expressions, most students highlighted that the ānāpāna technique helps them to refresh their minds daily. They felt it more accessible to concentrate than before, developed self-control, developed a positive attitude and positive thinking, and became much more tolerable than before. Hence the overall effect of ānāpāna techniques on school children is beneficial to enhance academic performance, improve physical and mental health, harmonious relations with friends, family members and their relatives.

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Conflicts of interest: None

REFERENCES


Online source:

4. APPENDIX

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Name</th>
<th>Address</th>
<th>Interview Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mr. Sujan Khadki</td>
<td>DEV Susil Kedia school, Lalitpur</td>
<td>26 Jan 2020</td>
</tr>
<tr>
<td>2</td>
<td>Ms Anagarika Nayanawati Guruma</td>
<td>Bhasara School, Lalitpur</td>
<td>02 Jan 2019</td>
</tr>
<tr>
<td>3</td>
<td>Ms Sunita Manandhar</td>
<td>Jagat Sundar School Kathmandu</td>
<td>26 June 2019</td>
</tr>
<tr>
<td>4</td>
<td>Ms Sakuntala Pradhan</td>
<td>Paropakar Adarsha High School, Taku Kathmandu</td>
<td>12 Aug 2019</td>
</tr>
<tr>
<td>5</td>
<td>Mr. Swahit Bir Singh Kansakar</td>
<td>Anapana course teacher Dharmasringha</td>
<td>11 Aug 2019</td>
</tr>
</tbody>
</table>

Sample Questionnaire

To be filled in ONLY IF you have attended at least one Anapana or Vipassana course already. All the information given is confidential and will only be used for research purposes. Answer all the questions by choosing any one of the given response categories by marking tick (✓) on the answer which represents your best feelings.
Section I
General information
1. Name (optional)___________________ 2. Age in years: _____ 3. Class: ____
4. Courses attained (a) Anapana _____times (b) Vipassana ___________times
5. Gender: ☐ Female  ☐ Male. 6. Resident City: ____________
7. Do you have any physical sickness: ☐ Yes ☐ No
If Yes, please specify: ________________________________________________
8. Do you have any mental ailment: ☐ Yes ☐ No
If Yes, please specify: ________________________________________________
9. How did you know about the Vipassana/Anapana course:
   (a) by friends (b) by parents (c) by school teachers (d) if others (Specify) ___
10. How often you practice Anapana/Vipassana:
    (a) Daily  (b) Less than 3 times a week  (c) Sometimes  (d) Never
11. Hours/minutes per sitting:
    (a) 10-20 minutes  (b) 20-30 minutes  (c) About one hour  (d) More than one hour
12. If not practicing regularly, please indicate the constraints or reasons:
    (a) Time  (b) Place  (c) Health  (d) If any other, please specify: _______
13. Beside your home, have you ever practice meditation in group sitting
    (a) Sometimes  (b) Most often  (c) Never
14. Did you feel any difference in group sitting
    (a) More effective than home (b) A little difference (c) Don’t know
15. If you have attended more than one course, please explain the differences?

Section II
Effects of the Meditation practice
Please mention what changes you have experienced by practicing Anapana/ Vipassana meditation:
16. Improvement in Learning habits:
    (a) A lot  (b) A little  (c) Don’t know  (d) None
17. Enhanced memory power:
    (a) A lot  (b) A little  (c) Don’t know  (d) None
18. Improve my eagerness in studies:
    (a) A lot  (b) A little  (c) Don’t know  (d) None
19. Improvement in exam result/score
    (a) A lot  (b) A little  (c) Don’t know  (d) None
20. Better family relations:
    (a) A lot  (b) A little  (c) Don’t know  (d) None
21. Improvement in friendship:
    (a) A lot  (b) A little  (c) Don’t know  (d) None
22. Enhancement in Physical Well-being (Health):
(a) A lot  (b) A little  (c) Don't know  (d) None

23. Enhancement in Mental Well-being (Health):
(a) A lot  (b) A little  (c) Don't know  (d) None

24. Reduced anger
(a) A lot  (b) A little  (c) Don't know  (d) None

25. Will suggest your friend and relatives to learn Anapana /Vipassana?
(a) Yes  (b) No  (c) Leave it to them

26. What do you expect before joining this course and how much are you satisfied after completion of the course?
(a) Highly satisfied  (b) Satisfied to some extent  (c) None

27. If any special remarks: (your experiences, achievements, suggestions) _______________