Title of the project:

Peace of mind of yoga practitioners and people who do walking exercise

Implementing institution:

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Introduction

Yoga teaches you to live in the moment and be honest with yourself and your body. Once you start practicing yoga, stress doesn't necessarily cease entering your life, but your perception of stress and drama definitely change. You become much more conscious of how you react to things, and you begin to accept things for what they are. The calm that a yoga practice brings helps rid the chaos, frustration and exhaustion that commonly fills the mind. Ridding the body and mind of stress is something that will help you and spread to the people around you. (Source: https://www.elitedaily.com/life/yoga-new-cardio-5-reasons-find-zen/898272-accessed on 7th July 2018)

Exercise is associated with weight loss or building muscles, but the mental benefits may far outweigh the physical. In our high stress society, exercise can help us not only de-stress and feel happy, but can also help us with social anxieties. Exercise helps to relieve stress, improves self-confidence, reduces anxiety, makes one happy and makes us more social and outgoing (Source: https://www.peacefuldumpling.com/5-mental-benefits-exercise- accessed on 7th July 2018)

Considering the probable influence of yoga and walking exercise on the state of mind of the practitioners, a research project was carried out by Patanjali Yoga Research Centre, Kozhikode, Kerala, India to compare the effect of yoga and walking exercise on peace of mind of the practitioners.

Methodology

The study was conducted using a questionnaire containing the measure of Peace of Mind (as reported by Yi-Chen Lee et al, 2012). There were five responses to the items in the peace of mind scale, starting from "all the time" to "not at all" for the positive state of mind items and from "all the time" to "always feels mentally settled" for the negative items.

The sample consisted of 50 people who do walking exercise, 50 people who practice yoga under Patanjali Yoga Research Centre, Kozhikode, Kerala, India and 50 people who do not undertake walking / any other exercise / yoga. The results have been presented as percentages. Statistical *t* test was carried out to compare the difference between yoga practitioners, people who do walking exercise and people who do not do any exercise / yoga with respect to the percentage of people giving various responses for the state of mind items.

Results and Discussion

On an average, 35 % of the people undertaking walking exercise report experiencing the four positive states of mind "all the time" (Table 1). However, with regard to the people who do not do any exercise or yoga, only 14 % report experiencing these states of mind "all the time" (Table 3). There also exists statistically significant difference in the proportion of respondents between these two categories (Table 4). As far as people practicing yoga are concerned, Table 2 reveals that an average of 22 % yoga practitioners experience these positive states of mind "all the time".

Research Team Patanjali Yoga Center

Hence, these results indicate that walking exercise contributes more to the experience of positive states of mind "all the time", when compared to yoga or no exercise / yoga. With regard to experiencing the positive states of mind "sometimes only", even though there is no statistically significant difference, there exists variation in the mean percentage reporting this with respect to people who do walking exercise (15%), people practicing yoga (12.5%) and people who do not exercise / do not practice yoga (22 %) (Table 1, Table 2 and table 3). This indicates that more people who do not exercise / do not practice yoga experience the positive states of mind sometimes only.

Table 1. State of peace of mind of people doing walking exercise

| | Respondents (%) | | | | | |
|----------------|-----------------|------------------|-------|----------------|------------|-------|
| State of mind | All the time | Most of the time | Often | Sometimes only | Not at all | Total |
| My mind is | | | | | | |
| free and at | | | | | | |
| ease | 38.0 | 38.0 | Nil | 24.0 | Nil | 100 |
| I feel content | | | | | | |
| and | | | | | | 100 |
| comfortable | 50.0 | 26.0 | 12.0 | 12.0 | Nil | |
| | | | | | | |
| I have peace | | | | | | |
| and mind | | | | | | |
| stability | 26.0 | 62.0 | Nil | 12.0 | Nil | 100 |
| | | | | | | |
| I have peace | | | | | | |
| and harmony | 26.0 | 50.0 | 12.0 | 12.0 | Nil | 100 |

Research Team Patanjali Yoga Center

| Mean % | | | | | | |
|-----------------|--------------|------------------|-------|----------------|--------------|-------|
| reporting the | | | | | | |
| above four | | | | | | 100 |
| positive states | | | | | | |
| of mind | 35.0 | 44.0 | 6.0 | 15.0 | Nil | |
| | | | | | | |
| | | | | | Always feels | |
| State of mind | | | | | mentally | |
| | All the time | Most of the time | Often | Sometimes only | settled | Total |
| Difficult to | | | | | | |
| feel mentally | | | | | | |
| settled | Nil | Nil | 12.0 | 62.0 | 26.0 | 100 |
| Feels anxious | | | | | | |
| and uneasy in | | | | | | |
| mind | Nil | Nil | 14.0 | 74.0 | 12.0 | 100 |
| Mean % | |) / | | | | |
| reporting the | | | | , , | | |
| above two | | | | | | |
| negative | | | | | | |
| states of mind | Nil | Nil | 13.0 | 68.0 | 19.0 | 100 |

Table 2. State of peace of mind of people practicing yoga

| | | Respondents (%) | | | | |
|-----------------|--------------|-----------------|-------|-----------|------------|-------|
| State of mind | | Most of | | Sometimes | | |
| | All the time | the time | Often | only | Not at all | Total |
| My mind is free | | | | | | |
| and at ease | 24.0 | 42.0 | 20.0 | 14.0 | Nil | 100 |

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Research Team Patanjali Yoga Center

| I feel content | | | | | | |
|--|--------------|------------------|---------------|----------------|-------------------------------|-------|
| and | | | | | | |
| comfortable | 34.0 | 40.0 | 16.0 | 8.0 | 2.0 | 100 |
| I have peace | | | | | | |
| and mind | | | | | | |
| stability | 18.0 | 58.0 | 12.0 | 12.0 | Nil | 100 |
| I have peace | | | | | | |
| and harmony | 16.0 | 56.0 | 12.0 | 16.0 | Nil | 100 |
| | | | | | | |
| Mean % | | | | | | |
| reporting the | | | | | | |
| above four | | | | | | |
| positive states | | | | | | |
| of mind | 22.0 | 49.0 | 16.0 | 12.5 | 0.5 | 100 |
| | | | | | | |
| | | Most of | | Sometimes | Always feels | |
| State of mind | All the time | Most of the time | Often | Sometimes only | Always feels mentally settled | Total |
| State of mind Difficult to feel | All the time | | Often | | | Total |
| | All the time | | Often | | | Total |
| Difficult to feel | All the time | | Often 18.0 | | | Total |
| Difficult to feel mentally | 7 | the time | | only | mentally settled | |
| Difficult to feel mentally settled | 7 | the time | | only | mentally settled | |
| Difficult to feel mentally settled Feels anxious | 7 | the time | | only | mentally settled | |
| Difficult to feel mentally settled Feels anxious and uneasy in | 2.0 | the time | 18.0 | only 48.0 | mentally settled 20.0 | 100 |
| Difficult to feel mentally settled Feels anxious and uneasy in mind | 2.0 | the time | 18.0 | only 48.0 | mentally settled 20.0 | 100 |
| Difficult to feel mentally settled Feels anxious and uneasy in mind Mean % | 2.0 | the time | 18.0 | only 48.0 | mentally settled 20.0 | 100 |
| Difficult to feel mentally settled Feels anxious and uneasy in mind Mean % reporting the | 2.0 Nil | 12.0 12.0 | 30.0 | 48.0 44.0 | 20.0 | 100 |

Table 3. State of peace of mind of people who do not undertake walking / other exercises / yoga

| | | Respondents (%) | | | | |
|-------------------|--------------|-----------------|-------|-----------|------------------|-------|
| State of mind | | Most of the | | Sometimes | | Total |
| | All the time | time | Often | only | Not at all | |
| My mind is free | | | | | | |
| and at ease | 20.0 | 48.0 | 12.0 | 16.0 | 4.0 | 100 |
| I feel content | | | | | | |
| and | | | | | | |
| comfortable | 20.0 | 30.0 | 24.0 | 24.0 | 2.0 | 100 |
| I have peace | | | | | | |
| and mind | | | QEEP. | | | |
| stability | 6.0 | 56.0 | 12.0 | 24.0 | 2.0 | 100 |
| I have peace | | | | | | |
| and harmony | 10.0 | 56.0 | 10.0 | 24.0 | Nil | 100 |
| Mean % | | | | | | |
| reporting the | | | | | | |
| above four | | | | | | |
| positive states | 1 | | | | | |
| of mind | 14.0 | 47.5 | 14.5 | 22.0 | 2.0 | 100 |
| | | Most of the | | Sometimes | Always feels | |
| State of mind | All the time | time | Often | only | mentally settled | Total |
| Difficult to feel | | | | | | |
| mentally settled | 6.0 | 4.0 | 28.0 | 40.0 | 22.0 | 100 |

Research Team Patanjali Yoga Center

| Feels anxious | | | | | | |
|-----------------|-----|-----|------|------|------|-----|
| and uneasy in | | | | | | |
| mind | 8.0 | 6.0 | 40.0 | 38.0 | 8.0 | 100 |
| Mean % | | | | | | |
| reporting the | | | | | | |
| above two | | | | | | |
| negative states | | | | | | |
| of mind | 7.0 | 5.0 | 34.0 | 39.0 | 15.0 | 100 |

It may be made out from Table 4 that, with respect to the positive states of mind, higher proportion of people who walk (39.5 %) experience this either "all the time" or "most of the time" than people not doing walking / any other exercise / yoga (30.8 %). However, with respect to the yoga practitioners, there is not much difference in the proportion of people experiencing the positive states of mind either "all the time" or "most of the time" (36 %), when compared to people who do walking (Table 4).

From this, it may be inferred that both walking as an exercise and practice of yoga are able to provide favorable experience to the practitioners with respect to realization of the following positive states of mind, namely, mind being free and at ease, feeling content and comfortable, having peace and stability of mind and having peace and harmony.

Table 4. Proportion of people experiencing positive states of mind either "all the time" or "most of the time" among those who walk, who do yoga, and who do not exercise / do not do yoga

| | | Mean % of resp | ondents |
|---|------------------|----------------|--------------------------------|
| Particulars | People doing | People doing | People not doing walking / any |
| | walking exercise | yoga | other exercise / yoga |
| Four positive states of mind* are experienced either "all the time" or "most of the time" | 39.5 | 36.0 | 30.8 |

^{*}My mind is free and at ease, I feel content and comfortable, I have peace and mind stability, I have peace and harmony

The proportion of non-exercising / non yoga practicing people reporting a feeling of "always mentally settled" is less than that of yoga practitioners and people who walk (Table 5). However, the percentage of respondents reporting this does not vary significantly between yoga practitioners, people who walk or people who do not exercise / who do not do yoga, and is less than 20 % of the sample studied under all the three categories of respondents (Table 5). This indicates that even doing exercise or practice of yoga is not able to make significant number of people totally free from worries / tension. This condition need not be expected. The reduction in tension / worries through yoga or exercises should be the motive of the practitioners.

Table 5. Proportion of people feeling "always mentally settled" among those who walk, who do yoga, and who do not exercise / do not do yoga

| | Mean % of respondents | | |
|-------------------|-------------------------------|-------------------|--------------------------------|
| Particulars | People doing walking exercise | People doing yoga | People not doing walking / any |
| | | | other exercise / yoga |
| Feels "always | | | |
| mentally settled" | 18.8 | 17.1 | 15.0 |

It can be made out from Table 6 that the proportion of people experiencing negative states of mind "sometimes only" is very much high for people doing walking exercise (68.8%), when compared to yoga practitioners (46.4%). However, for people, who do not exercise / who do not do yoga, only a less proportion (39%) report that such negative feelings are experienced sometimes only in their lives. Similarly, comparatively less number of people who walk experience negative states of mind "often" than people who do not undertake any exercise / who do not do yoga (Refer Table 11).

These findings indicate that the practice of walking as an exercise is able to reduce negative feelings of mind more than the practice of yoga as well as no exercise or no yoga. It has also been already observed in this study that walking exercise contributes more to the experience of positive states of mind "all the time", when compared to yoga and no exercise / no yoga (Data presented in Table 1, Table 2 and Table 3).

Table 6. Proportion of people experiencing negative states of mind "sometimes only" among those who walk, who do yoga, and who do not exercise / do not do yoga

| | | Mean % of resp | oondents |
|----------------------------------|------------------|----------------------------------|-----------------------|
| Particulars | People doing | People doing People not doing wa | |
| | walking exercise | People doing yoga | other exercise / yoga |
| Two negative states of mind* are | | | |
| experienced "sometimes only" | 68.8 | 46.4 | 39.0 |

*Difficulty in feeling mentally settled, and feeling uneasy and anxious

Statistical significance of the difference in proportion of people experiencing different states of mind between the three categories studied is shown in Table 7 to Table 14.

Statistically significant difference is observed between people who do walking exercise and those who do not do walking /any other exercise / yoga with respect to the proportion reporting that the four positive states of peace of mind (my mind is free and at ease, I feel content and comfortable, I have peace and mind stability, I have peace and harmony) are experienced "all the time". While 35 % of the people doing walking exercise experience these positive feelings "all the time", only 14 % of people not doing walking / any other exercise / yoga report this (Table 7).

Table 7. Statistical significance of the proportion of walking and non-exercise / non-yoga respondents experiencing positive states of mind "all the time"

| | Mean % of respondents | | | |
|-----------------------------------|-------------------------------|--------------------------------|--|--|
| Particulars | People doing walking exercise | People not doing walking / any | | |
| | | other exercise / yoga | | |
| Four positive states of mind* are | 35.0 | 14.0 | | |
| experienced "all the time" | t s | at= 2.92 | | |
| | Significant a | t 0.05 probability | | |

^{*}My mind is free and at ease, I feel content and comfortable, I have peace and mind stability, I have peace and harmony

Similarly, Table 8 shows that statistically significant difference exists between the proportions of people undertaking walking exercise and those who do not do walking / any other exercise / yoga with respect "not at all" experiencing the four positive peace of mind feelings. While none of the people who walk are reporting this, 2 % of the people not doing any exercise / yoga do not experience these positive states of mind at all (Table 8).

Table 8. Statistical significance of the proportion of walking and non-exercise / non-yoga respondents "not at all" experiencing positive states of mind

| | | Mean % of respondents | | |
|-----------------------------|---------------------------------|---|--|--|
| Particulars | People doing walking | People not doing walking / any other exercise | | |
| | exercise | / yoga | | |
| Four positive states of mir | nd* Nil | 2.0 | | |
| are "not at all" experienc | ed | t stat= - 2.44 | | |
| | Significant at 0.05 probability | | | |

*My mind is free and at ease, I feel content and comfortable, I have peace and mind stability, I have peace and harmony

Hence, the results indicate that even for people who do not exercise / do yoga, positive states of mind are being experienced, even though not up to the level of people who walk or do yoga. A condition of not at all experiencing positive mind set by people, who do not exercise or who do not practice relaxation techniques like yoga, would have led to a good majority in our society facing high levels of mental stress. However, it is not so. According to NIMHANS, Bangalore, only about 14 % of the general population in the country is projected to be suffering from some form of mental illness. (Source: https://timesofindia.indiatimes.com- October 2016 - accessed on 7th July 2018).

However, the trend of people exercising in our country is not favorable. India may not rank high among countries with obese population, but Indians are trailing the world in terms of working out and fitness. That is something that could have a long-term effect on risk through diabetes and obesity. Some 30 percent of India's 18-47 year-olds do not get any form of physical exercise or activity, a survey by Future Generally India found, ahead of World Health Day 2016. The survey tested 1,082 subjects and found that walking was the preferred form of exercise for those who actually managed some workouts, while a minor subsection also went to the gym daily. In the age group of 18-25 years, 33% do not exercise at all, while in the 26-46 years age group, around 40% of the people are not involved in any form of exercise. What India might have to worry about in the coming decades is about the problem of an exercise-less population increasing. The answer is to get people enter the most friction-less workout program which doesn't require huge cost expenditure,

Research Team Patanjali Yoga Center

or infrastructure, and can be done independent of an expert present. (Source: https://www.mobiefit.com/.../world-health-day-indian-youth-middle-aged-lack-exercis..- accessed on 7th July 2018). This highlights the importance of motivating people in our country to do physical exercises such as walking, jogging, athletics etc. and even yoga, which has a physical exercise component in "Asanas".

Considering the two negative peace of mind states of mind studied under this project (difficulty in feeling mentally settled, and feeling uneasy and anxious), it can be made out from Table 9 that there exists statistically significant difference in the proportion of walkers and non-exercising / non-yoga people experiencing these feelings "all the time". While 7 % of people who do not exercise / do not do yoga experience them "all the time", none of the people who do walking exercise are experiencing these negative feelings "all the time" (Table 9).

Table 9. Statistical significance of the proportion of walking and non-exercise / non-yoga respondents experiencing negative states of mind "all the time"

| | Mean % of respondents | | |
|------------------------|---------------------------------|---|--|
| Particulars | People doing walking | People not doing walking / any other exercise / | |
| | exercise | yoga | |
| Two negative states of | Nil | 7.0 | |
| mind* are experienced | t stat= - 7.00 | | |
| "all the time" | Significant at 0.01 probability | | |

^{*}Difficulty in feeling mentally settled, and feeling uneasy and anxious

A more or less similar and statistically significant trend is observed with respect to the proportion of people in the above mentioned two categories experiencing the negative peace of mind feelings "most of the time" also (Table 10).

Table 10. Statistical significance of the proportion of walking and non-exercise / non-yoga respondents experiencing negative states of mind "most of the time"

| | Mean % of respondents | | | |
|----------------------------------|-----------------------|----------|--------------------------------------|-----------|
| Particulars | People doing walking | | People not doing walking / any other | |
| | exercise | | exerci | se / yoga |
| Two negative states of mind* are | Nil | | | 5.0 |
| experienced "most of the time" | | | t stat= - 5.00 | |
| | S | ignifica | nt at 0.05 probability | |

*Difficulty in feeling mentally settled, and feeling uneasy and anxious

Table 11 shows that while 34 % of people who do not do walking / any other exercise / yoga are experiencing the negative states of mind "often", it is only 12.5 % in the case of people who do walking exercise. The difference in proportion reporting under the two categories is also statistically significant (Table 11).

This result reveals the profound influence of exercises such as walking in reducing negative emotions significantly.

Table 11. Statistical significance of the proportion of walking and non-exercise / non-yoga respondents experiencing negative states of mind "often"

| , | | Mean % of respondents | |
|------------------------------|--|---------------------------------|--------------------------------------|
| Particulars | | People doing walking | People not doing walking / any other |
| | | exercise | exercise / yoga |
| Two negative states of mind* | | 12.5 | 34.0 |
| are experienced "often" | | t stat= - 3.58 | |
| | | Significant at 0.05 probability | |

^{*}Difficulty in feeling mentally settled, and feeling uneasy and anxious

Research Team Patanjali Yoga Center

It may be made out from Table 12 that a higher proportion of people who do walking exercise (about 69 %) experience the negative states of mind "sometimes only", when compared to only 39 % reporting this way in the case of people who do not exercise / do not practice yoga.

This finding once again highlights that walking as an exercise has helped many people to reduce the problem of experiencing negative states of mind very much. This can contribute to better peace of mind.

Table 12. Statistical significance of the proportion of walking and non-exercise / non-yoga respondents experiencing negative states of mind "sometimes only"

| | Mean % of respondents | | |
|------------------------------|---------------------------------|--------------------------------------|--|
| Particulars | People doing walking | People not doing walking / any other | |
| | exercise | exercise / yoga | |
| Two negative states of mind* | 68.8 | 39.0 | |
| are experienced "sometimes | t stat= 4.70 | | |
| only" | Significant at 0.05 probability | | |

^{*}Difficulty in feeling mentally settled, and feeling uneasy and anxious

Comparison of the conditions of state of mind between yoga practitioners and people doing walking exercise are given in the next two tables.

Comparing people doing yoga with people who do walking exercise, it can be made out from Table 13 that more than double the number of yoga practitioners is experiencing the positive states of mind "often" than people who do walking. The difference in proportion reporting this between the two categories is also statistically significant. However, it should be noted that the proportion of people

Research Team Patanjali Yoga Center

reporting in this manner is only about 15 % in the case of yoga practitioners and only about 6 % in the case of people who do walking exercise (Table 13.).

However, 68.8 % of people who do walking exercise are experiencing negative states of mind "sometimes only", when compared to 46.4 % of yoga practitioners. Here also, statistically significant difference is evident in the percentage of people reporting (Table 14).

Table 13. Statistical significance of the proportion of yoga and walking respondents experiencing positive states of mind "often"

| | Mean % of respondents | | |
|-----------------------------------|---------------------------------|-------------------------------|--|
| Particulars | People doing yoga | People doing walking exercise | |
| Four positive states of mind* are | 15.2 | 6.3 | |
| experienced "often" | t stat= 2.22 | | |
| | Significant at 0.10 probability | | |

^{*}My mind is free and at ease, I feel content and comfortable, I have peace and mind stability, I have peace and harmony

Table 14. Statistical significance of the proportion of yoga and walking respondents experiencing negative states of mind "sometimes only"

| | Mean % of respondents | | |
|----------------------------------|---------------------------------|-------------------------------|--|
| Particulars | People doing yoga | People doing walking exercise | |
| Two negative states of mind* are | 46.4 | 68.8 | |
| experienced "sometimes only" | t stat= - 3.33 | | |
| | Significant at 0.10 probability | | |

^{*}Difficulty in feeling mentally settled, and feeling uneasy and anxious

Conclusions

- 1. Both walking exercise and practice of yoga are able to provide favorable experience to the practitioners with respect to the realization of the positive states of mind, namely, mind being free and at ease, feeling content and comfortable, having peace and stability of mind, and having peace and harmony
- 2. However, walking is found to contribute more to the experience of positive states of mind "all the time" for people, when compared to yoga, and no exercise / no yoga. This can lead to comparatively more peace of mind for people who do walking exercise
- 3. Similarly, the practice of walking is able to reduce the negative states of mind (difficulty in feeling mentally settled, and feeling uneasy and anxious) more, when compared to the practice of yoga, and no exercise / no yoga, which can also contribute to comparatively better peace of mind for people, who undertake walking for exercise
- 4. More number of people, who do not exercise / do not practice yoga, experiences the positive states of mind "sometimes only "
- 5. However, even walking exercise or practice of yoga is not able to make significant number of people totally free from worries / tension. It is also not easy to achieve such an extremely favorable condition of the mind, especially in today's fast and hectic life

6. The results of this study show that even for people, who do not exercise or do yoga, positive states of mind are being experienced, even though not up to the level of people who do walking exercise and people who practice yoga. A condition of not at all experiencing positive mind set by people, who do not exercise or who do not practice relaxation techniques like yoga, would have led to a good majority in our society facing high levels of mental stress. However, it is not so. This is supported by the data of NIMHANS, Bangalore published in an Indian newspaper in 2016, which shows that only about 14 % of the general population in the country is projected to be suffering from some form of mental illness

However, this study has shown that higher levels of peace of mind can be achieved through practices such as walking exercise and yoga, when compared to not doing them

It will be very useful if information generated from such types of studies is exchanged through social media such as Face Book, WhatsApp etc., which are nowadays used by lots of people, in addition to its dissemination through seminars / awareness programs etc. organized by different institutions working for health improvement in our society.

Reference

Yi-Chen Lee, Yi-Cheng Lin, Chin-Lan Huang and Barbara L. Fredrickson (2012). The Construct and Measurement of Peace of Mind. *Journal of Happiness Studies*. DOI 10.1007/s10902-012-9343-5 - accessed on 12th May 2018