

ANNUAL REPORT 2020



**Water and Environment Development Organisation
(WEDO), NGO, Kozhikode, Kerala, India**

January 2021

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Name of the NGO: Water and Environment Development Organization (WEDO)

Address: 28 / 566, Poornima, Ayyappa Nagar, Chevayur, Kozhikode - 673 017 Kerala State, India

Details of Registration: Reg. No. KKD / CA / 1074 / 2015 Dated 15-12-2015 of the Registrar of Society, Dept. of Registration, Kozhikode, Kerala. Renewed during the period 2016-2020.

Office Bearers

President: Dr. K. Madhava Chandran

Vice President: Sri. T. Valsan

Secretary: Sreevallabhan, S.

Joint Secretary: Sri. V. Aravindakshan

Treasurer: Sri. V. Radhakrishnan

Executive Members:

Sri. E. Balakrishnan Nair

Sri. Jayaprasaad. K. M.

Sri. V. Sundararajan

Objectives

The main objectives of WEDO are to promote water conservation, development and management programs for ensuring adequate water of good quality for people. Awareness programs, rain water harvesting, water management for domestic / agricultural purposes, water purification, establishment and maintenance of water storage / conveyance structures, providing water literacy for children, skill development training on water resources development / management etc. are envisaged for realizing this objective

Other objectives include promotion of sustainable organic farming, scientific environment friendly natural resources management, forestry development, scientific waste management, generation of data bank on water and other natural resources, promotion of physical and mental development of children, providing assistance to poor for treatment of chronic ailments, promoting voluntary blood donation, women empowerment programs, development of public consciousness on social evils like drug abuse, alcoholism, AIDS etc., promotion of HRD and institution building programs, provision of health awareness programs, promotion of Yoga, Meditation, Art of living and other mind-body relaxation techniques etc.

Activities undertaken

The following activities were undertaken by WEDO during 2020:

1. Punjab and Sind bank funded project on Demonstration of artificial well recharge in water scarce panchayaths of Ernakulam District

Under this project, visited various locations and selected four plots in Ernakulam District for establishing the artificial well recharge technique (through rooftop rainwater harvesting and recharge through a filter into wells).

2. Research project on Uncertainty Experienced by People during the COVID-19 pandemic

The COVID-19 pandemic could have resulted in uncertainty in the society over the economy, employment, finances, relationship, physical and mental health. It is in this context that the study was carried out by WEDO to analyze the uncertainty developed among people and relate it with their anxiety due to the pandemic. Data was collected on-line using a questionnaire from 320 people using the snow ball non probability sampling technique. A 16 item Psychological Tool was used to measure uncertainty, which was scored using the Likert equal interval method. The sum of scores of the items was considered as the Total Uncertainty Score of the respondent. A higher score indicates less of uncertainty due to the pandemic. The responses to anxiety due to the COVID 19 pandemic, and the anxiety experienced during the six months period before the pandemic were elicited through six-point responses ranging from very high to no anxiety. The data was analysed as frequency tables and through statistical techniques

namely, Descriptive statistics, t test, Quarter Method and Random Forest Technique. Results showed that majority of the respondents either Agree or Strongly Agree to twelve out of the 16 items when expressed as "I am sure". 70.3 % of respondents have Uncertainty Score equal to 62.5 % to 78.1 % of the maximum possible score, indicating less uncertainty. Majority of the respondents reporting no anxiety, very less/ less anxiety and moderate anxiety due to the pandemic agree to the items depicting certainty, while no one reporting very high anxiety agrees to them. There exists statistically significant difference between the proportions of respondents having certainty under different anxiety levels. The results of the Random Forest Model show that six items highly influence the reduction of uncertainty (or creation of certainty) of the respondents. They are the ones, which indicate their positive outlook with respect to aspects such as not getting worried, not feeling sick, ability to decide on what should be done under the pandemic, their mental state not becoming worse, ability to recover from a negative mental state and overcome difficulties created by the pandemic. Factors such as the perceptions of the respondents on the information available from Govt. and other sources about COVID 19, the feeling of sufficiency / correctness / existence of multiple meanings of the information have not contributed significantly to uncertainty. This implies that they do not have much negative opinion with respect to the measures 2 adopted by Govt. and other establishments to contain the pandemic and its consequences, which is a positive trend. Even though the anxiety of the respondents has gone up after the COVID 19 pandemic, when compared to the six months period before it, majority of them report only low to moderate pandemic induced anxiety. In short, most of the respondents have low to medium uncertainty only due to the COVID 19 pandemic. Even though the anxiety of the respondents has increased after the COVID 19 pandemic, when compared to the pre-pandemic stage, majority of them report low to moderate pandemic induced anxiety only. The items, which highly influence the reduction of uncertainty (or creation of certainty) of the respondents are found to be those which depict their positive outlook with respect to various aspects related to the pandemic. They respondents also do not have much negative perceptions on the measures adopted by Govt. and other establishments to contain the pandemic. However, if the pandemic continues longer and increases in its severity, the future might throw up unforeseen situations, which people may not be prepared to face, making them more uncertain, anxious and mentally /physically affected.

The project Completion Report was prepared. (WEDO, 2020. Influence of COVID-19 Pandemic in Creating Uncertainty among People. *Project Completion Report*, September 2020. Water and Environment Development Organisation, Kozhikode, Kerala. 34p.)

The following research paper was published based on the study:

Madhava Chandran, K., Valsan, T., Naveena, K. and Krishnakumar, K (2020). Analysis of the uncertainty among people due to the COVID-19 Pandemic. *International Journal of Indian Psychology*, 8(3), 961-966. DIP:18.01.196/20200803, DOI:10.25215/0803.196

3. Research project on the Influence of Meditation on Psychological Stress

This project was undertaken by WEDO in collaboration with Satyananda Yoga Research Centre (SYRC), Kozhikode, Kerala.

In the fast and competitive pace of life, psychological stress has become a serious concern for many people. Meditation is a non-invasive technique for reducing stress and making people happier and healthy. It is in this background that this study was carried out. Breath awareness meditation training was given to the respondents in this study by Dr. N. Vijayaraghavan, Yogacharya, Kozhikode for a period of two weeks, with follow up every month for three months.

Data was collected from a random sample of 90 respondents using a questionnaire on their stress level before and after three 1 months of meditation imparted, and the level of happiness due to the practice of meditation. The questionnaire contained the psychological tools to quantify Stress (Kessler et al, 2003) and Happiness (Hills and Argyle, 2002). Data was analysed and interpreted as frequencies and scores using t test and correlation.

The results showed that, when compared to before the meditation practice, more respondents experience low stress after meditation for three months. Maximum proportion of respondents are experiencing low to medium stress only after meditation.

Statistically significant difference exists between the mean stress score of males and females after meditation, with females experiencing comparatively more stress than males. Meditators having low stress are experiencing the maximum level of happiness, followed by those having medium stress, while the lowest level of happiness is experienced by the meditators having high stress. No statistically significant difference was observed between the mean happiness score of males and females after meditation. Statistically significant difference in the mean happiness score is observed between the low and medium stress score categories of meditators as well as between the low and high stress score categories. The relationship between stress and happiness of the meditators is also established by the statistically significant high correlation value of 0.72 observed between these parameters. Hence, this study establishes the influence of meditation in reducing the stress level of the practitioners, with maximum number of people experiencing low to medium stress only after meditation for three months, and males having less stress than females. The influence of reduced stress due to meditation in improving the happiness of meditators is also evident from the study

The project Completion Report was prepared. (WEDO, 2020. Influence of Meditation on Psychological Stress. *Project Completion Report*, October 2020. Water and Environment Development Organisation, Kozhikode, Kerala. 12p.)

Based on the study, the following research paper was published:

Vijayaraghavan N., Madhava Chandran K., Radhakrishnan N. P. and Sreekumaran C. (2020). Influence of meditation in reducing stress of the practitioners. *International Journal of Indian Psychology*, 8(4): 155-159. DIP:18.01.021/20200804, DOI:10.25215/0804.021

4. Research project on the Effect of Yoga Practice on Anxiety of People during the COVID-19 Pandemic

The objective of this study undertaken by WEDO was to analyse the effect of yoga practice on anxiety experienced by people during the COVID - 19 pandemic period. It was conducted among 220 randomly selected yoga practitioners having minimum of six months yoga practice from Kozhikode District of Kerala, India through a

questionnaire containing the GAD-7 anxiety scale (Spitzer *et al*, 2006). Data was analysed as frequencies and scores using statistical techniques. The results revealed that even though anxiety has increased during the COVID-19 pandemic period when compared to before its occurrence, yoga has helped the practitioners in managing it. In the previous month of yoga practice, which is during the pandemic period, a total of 67.8 % male and 55.6 % of female yoga practitioners report either anxiety less than half of the time or no anxiety at all. Sex and the level of anxiety of the yoga practitioners before the pandemic significantly influence the anxiety experienced by them during the pandemic period. The results of the study indicate the usefulness of yoga practice to reduce the anxiety of people during the pandemic period, which may otherwise lead to psycho-somatic disorders, if the pandemic continues and increases in severity in the days to come.

The following research paper was published under the project:

Madhava Chandran, K., Valsan, T., Vijayaraghavan, N. and Sangeeth, B (2020). Analysis of the effect of yoga practice on anxiety during the COVID-19 pandemic. *International Journal of Yoga, Physiotherapy and Physical Education*. Volume 5; Issue 6: 12-14. www.sportsjournal.in