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ALLEVIATING WORRY AND ENHANCING SAVORING USING POSITIVE PSYCHOLOGY TECHNIQUES- AN INTERVENTION STUDY AMONG SIBLINGS DURING **COVID 19**

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Abstract

The objective of the present study "Alleviating worry and enhancing savoring using Positive Psychology techniques among siblings during COVID 19" is to explore the influence of positive psychology techniques in reducing worry and increasing savoring. The study was conducted among siblings (N=36), who were from in and around Tamil Nadu and Kerala (18 male and 18 females in the age range from 16 to 28) and were chosen by snowball samplingtechnique. The participants were briefed about the study and their willingness to participate was asked. Then the basic information was collected using socio demographic status profile, which was followed by Penn State Worry Questionnaire (PSWQ) and Savoring Beliefs Inventory to assess worry and savoring respectively. The study adopted a pretest posttest control group experimental design, where the interventions were given to the experimental group. The data was analyzed using statistical tools such as Karl Pearson Coefficient of correlation and T-Test. The results were as follows: there is no significant difference in worry and savoring between pretest and posttest of the control group and experimental group respectively. There is no significant relationship between worry and savoring in the pretest and posttest of the experimental group respectively.

Key words: Worry, Savoring, Positive Psychology Interventions, Siblings, COVID 19

INTRODUCTION

Worry

Once considered synonymous with the cognitive components of anxiety (Mathews, 1990; O'Neill, 1985), worry has emerged as a more specific construct that can not only be distinguished from a larger subset of cognitive aspects of anxiety, but also studied in its own right (Davey, 1993; Davey, Hampton, Farrell & Davidson, 1992; Zebb & Beck, 1998).

"Worry is a chain of thoughts and images, negatively affect-laden and relatively uncontrollable; it represents an attempt to engage in mental problem-solving on an issue whose outcome is uncertain but contains the possibility of one or more negative outcomes; consequently, worry relates closely to the fear process." (Borkovec, Robinson, Pruzinsky, and DePree ,1983, p. 10). More recent formulations have extended this definition of worry, describing it as an anxious apprehension for future, negative events (Barlow, 2002) that involves "a predominance of negatively valanced verbal thought activity" and minimal levels of imagery (Borkovec, Ray & Stober, 1998, p. 562). These definitions have been largely derived from participants' reports regarding what they do when they worry. Worry is a common mental activity in both clinical and non-clinical populations.

Consequences of Worry

Worry has been linked to several negative consequences. Experimental inductions of worry have been shown to produce short-term increments in negative intrusive thoughts (e.g., York, Borkovec, Vasey & Stern, 1987). Furthermore, worrying briefly about a self-selected concern leads to increases in both anxiety and depression in non-clinical samples (Andrews & Borkovec, 1988). Wells and Papageorgiou (1995) examined the effects of worry on negative intrusive images following exposure to laboratory induced stress (i.e., a brief film of an industrial accident). Worry is known to interfere with various cognitive processes that contribute to effective task performance (Zeidner, 1998). Excessive worry is also a common feature of various anxiety disorders, especially Generalized Anxiety Disorder (GAD: Wells, 2000). Indirect effects of worry relate to the unintended consequences of directing mental effort, attentional resources and/or working memory to processing personal concerns, rather than the task at hand. The deleterious effects of such cognitive interference are well-known (see, e.g., Zeidner, 1998; Zeidner & Matthews, 2005), Given that worry has a preparatory function (Eysenck, 1992), it might be expected that worry has some beneficial effects also. Indeed, Luu, Tucker and Derryberry (1998) assert that anxiety and worry about task performance may be linked to success in occupations requiring well planned and regulated behavior. "Direct" consequences of worry stem from its functional role in supporting threat



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preparation. Positive effects of worry may reflect somewhat idiosyncratic metacognitive beliefs about worry as a motivating force. "Indirect" consequences of worry are a consequence of the drain on available attentional resources and working memory resulting from self-referent executive processing.

Savoring

The concept of savoring (Bryant, 1989, 2003; Bryant, Chadwick, & Kluwe, 2011; Bryant, Ericksen, & DeHoek, 2008; Bryant & Veroff, 2007) refers to processes through which people regulate their positive feelings by attending to: memories of past positive experiences (through reminiscence), ongoing positive experiences in the present (by savoring the moment) or future positive experiences (through anticipation).

Savoring is distinct from pleasure or enjoyment in the sense that savoring is a mindful process of attending to pleasurable feelings and either amplifying or dampening them, prolonging or curtailing them, although savoring requires focused attention on or "meta-awareness" of pleasurable feelings, pleasure alone does not necessarily produce savoring (Smith, Harrison, & Bryant, in press). The tendency to savor has also been linked to higher levels of happiness, life satisfaction, and perceived control in adolescents (Meehan, Durlak, & Bryant, 1993), college students, and older adults (Bryant, 2003).

Savoring process

According to Fred Bryant (2005), who is the psychologist that coined this term and who has produced the major theory and research on it, savoring can take three temporal forms: Anticipation, or the enjoyment of a forthcoming positive event, being in the moment, or thinking and doing things to intensify and perhaps prolong a positive event as it occurs, reminiscing, or looking back at a positive event to rekindle the favorable feelings or thoughts

Bryant and Veroff (2007) propose that savoring can be done in terms of three-time orientations, four processes and 10 strategies. How people decide to savor is entirely up to them. In terms of time orientation, people can engage in savoring through the past (reminiscing), the present (savoring the moment) or the future (anticipating). Bryant and Veroff propose four savoring processes including: thanksgiving (gratitude); basking (pride); marveling (awe); and luxuriating (physical pleasure).

Positive Psychology

The person regarded as being responsible for the creation of the positive psychology movement is Martin E. P. Seligman, a professor at the University of Pennsylvania. (Abraham Maslow actually coined the term positive psychology when he used it as a chapter title in his 1954 book, Motivation and Personality.)

The aim of positive psychology is to catalyze a change in psychology from a preoccupation only with repairing the worst things in life to also building the best qualities in life. The field of positive psychology at the subjective level is about positive subjective experience: well-being and satisfaction (past); flow, joy, the sensual pleasures, and happiness (present); and constructive cognitions about the future—optimism, hope, and faith. At the individual level it is aboutpositive personal traits—the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, high talent, and wisdom. At the group level it is about the civic virtues and the institutions that move individuals toward better citizenship: responsibility, nurturance, altruism, civility, moderation, tolerance, and work ethic (Gillham & Seligman, 1999; Seligman & Csikszentmihalyi, 2000).

Positive psychology interventions

Michael Fordyce (1977) was one of the pioneers in implementing positive psychological intervention programs. In fact, he piloted several experimental conditions over several years, on hundreds of college students, to create his program, 14 Basic Happiness Principles (Fordyce, 1981, 1983). The theoretical underpinning of the program is that, if people can try and enhance these 14 characteristics found in very happy people; they too will become happy.

Validated Interventions

The following is a list of those interventions/theories that have underpinned the positive psychology research discipline and shown promising results. These interventions have been applied in many researches and it has proven to be very useful to the respective aims of the research.

Gratitude is the underlying concept for many positive psychology interventions as it promotesthe savoring of positive events and may counteract hedonic adaptation. Recent findings propose that adolescents and children that are low in positive affect will benefit most from this type of intervention (Froh, Kashdan, Ozimkowski, and Miller, 2009).

Savoring and positive reminiscence. It is defined as the capacity to attend to, appreciate and enhance the positive experiences in one's life. There are many savoring techniques that helps to increase positive affectivity.

Expressive writing paradigms: optimism and insight: The expressive writing interventions stem from the results of trauma research where scientists found that trauma survivors were able to find meaning through expressive writing (Pennebaker, 1997, 2004). Even though a particular reason for its working is yet to be found, one reason proposed is the catharsis hypothesis, which dictates that the exercise allows people to write freely without judgement or restraint on paper, and can help organize thoughts and emotions.

Random acts of kindness: Random act of kindness asks participants to engage in kind acts towards others (for example, holding the door open for a stranger, doing room-mates' dishes). These interventions are thought to bolster self-regard, positive social interactions, and charitable feelings towards others. The importance of this



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exercise is to vary the types of acts that you do and to do them all on the same day. Overall, these kindness interventions and many others (for example, Otake et al., 2006) suggest that happiness can be boosted by behavioral intentional activities and that the timing and variety of performing such intentional activities significantly impacts the intervention's effectiveness.

Active constructive responding: It requires a person to respond with genuine excitement, outwardly displaying their excitement and capitalizing on the other person's success (prolonging discussion of the good news, telling people about it, suggesting celebratory activities). relationships in which each member engages in active constructive responding tend to flourish as opposed to the other relationships where individuals employ passive constructive, active destructive and passive destructive methods of response (Gable et al. 2004).

Promoting Forgiveness: Forgiveness interventions are useful for three purposes: promoting healing, preventing problems, and promoting flourishing. Forgiveness benefits physical health (Worthington, Witvliet, Pietrini, & Miller, 2007), mental health (Toussaint & Webb, 2005), relationships (Fehr, Gelfand, & Nag, 2010), and spirituality (for a meta-analysis, see Davis, Worthington, & Hook, 2013). Societal benefits have also been claimed, but less has been done to establish the empirical basis of such claims (Fincham & Beach, 2001; Worthington & Berry, 2004). To date, the interventions have been designed to promote physical health (Luskin, Ginzberg, & Thoresen, 2005), mental health (Enright & Fitzgibbons, 2000), and relational (Worthington, 2006) and spiritual benefits (Rye et al., 2005). But most have been aimed at mental health benefits

Mindfulness meditation: Mindfulness creates conditions for contentment to develop. Individuals are instructed to practice focusing their attention on the present moment, observing the world and their own thoughts and feelings in a patient, non-judgmental way, without getting caught up in the past or future, or any single line of thinking or preconceived notion (Langer, 2009).

METHODOLOGY

Objectives

To study whether positive psychology interventions influence in any way to alleviate worry and enhance savoring among siblings and to understand the relationship between worry and savoring.

Hypothesis

There is no significant difference in the pretest and posttest measures of the control group in Worry among siblings.

There is no significant difference in the pretest and posttest measures of the control group in Savoring among siblings.

There is no significant difference in the pretest and posttest measures of the experimental group in Worry among siblings.

There is no significant difference in the pretest and posttest measures of the experimental group in Savoring among siblings.

There is no significant relationship between Worry and Savoring for the experimental group in the pretest among siblings.

There is no significant relationship between Worry and Savoring for the experimental group in the posttest among siblings.

Research Design

This qualitative study has adopted a "pretest posttest control group experimental design",

Area

The study was carried out among siblings from in and around Tamil Nadu and Kerala. The reason for choosing this area for the study was due to

Sample

The participants chosen for the study were siblings, where each sibling pair were biologically related to each other. There were totally 18 pairs of siblings (N=36), where 18 were male and 18 were female. Everyone was from the age range between 16 to 28 using the snowball sampling technique. It is atype of purposive sampling where existing participants recruit future subjects from among their acquaintances.

Instruments used

Penn State Worry Questionnaire (PSWQ): was authored by T.J. Meyer, M.L. Miller, R.L. Metzger and T.D. Borkovec. The PSWQ is a self-administered 16-item instrument which is a measure for the assessment of worry as well as a good device for tracking changes in worry because of clinical treatment. Items are rated on a five-point scale: 1-Not at all typical of me to 5-Very typical of me. The PSWQ is easily scored by reverse scoring items 1, 3, 8, 10 and 11, then summing the individual items for the total score. Higher scores suggest a stronger tendency to worry. Possible range of scores is 16-80 with the algorithm of Total scores:16-39 Low Worry, 40-59 Moderate Worry, and 60-80 High Worry.

Savoring Beliefs Inventory (SBI): Savoring Beliefs Questionnaire was authored by Fred Bryant (2003), To measure individual's beliefs about their capacity to savor positive experiences through anticipation, present enjoyment, and reminiscence. SBI is a 24-item questionnaire that measures 3 facets of emotion regulation. Four scale-scores can be derived from the SBI namely Anticipating subscale score, Savoring the Moment subscale score,





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Reminiscing subscale score, and SBI Total score. The scale is a 7-point Likert scale, where 1 is strongly agree to 7 is strongly disagree. subscale can range from -24 to +24; and SBI total scores can range from -72 to +72.

Procedure

The consent and willingness to participate in the study was obtained from the participants. Then the siblings were randomly picked out to be placed in control group and experimental group, where one of the siblings of each pair will be in one group and respectively for the other sibling. Then both the control and experimental group were sent google form containing the socio demographic profile and the items of both the questionnaires. Followed by that, the experimental group was given positive psychology interventions for about 12 days. Then the posttest was conducted just like the pretest for both control and experimental group. Then the responses were scored according to the norms of the questionnaire and was carried on with statistical analysis to know the results.

Interventions

Three positive psychology interventions were given to the experimental group, where each intervention was given for 4 days. Totally, the experimental group received interventions for about 12 days. The three interventions are as follows:

Self-congratulation: the participants are made to congratulate themselves even for a smallest accomplishment. Be in the moment, cherish the moment and its importance and congratulate oneself for doing so (Savoring).

Three good things or what went well: the participant is asked to sit and write about 3 good things that went well for them on that day, before going to bed. It is a positively focused gratitude exercise, that increases happiness (Gratitude).

Life summary technique (Seligman, Rashid and Parks,2006), here the participants are made to sit and write a life summary where they assume that they are happy and prosperous in their lives. The summary focuses on the participant's strengths, achievements, and all the fruitful aspects of their lives so far. (Optimism). At the end of each day, the participant was asked to report on how they feel after doing the technique. This was also made to be sure that they have done the technique.

RESULT AND DISCUSSION

The data obtained was analyzed using statistical tools such as T-Test and Karl Pearson Coefficient of correlation. The results are tabulated and discussed here.

Table 1: difference between the pretest and posttest of the control group in worry

variable	Test	N	Mean	St. Deviation	df	t	Significance
Worry	Pretest	18	45.666	10.797	17	.994	.358
	Posttest	18	47.667	11.847			

Table 1 shows that there is no significant difference between the pretest and posttest of the control group in worry, as the t value is -.994 and the significance is found to be .358 (p>0.05), which is greater than the standard significant value of 0.05. thus, the hypothesis "there is no significant difference in the pretest and posttest scores of the control group in Worry among siblings." is accepted. The mean value in the pretest is 45.66 and the mean in the posttest is 47.667, where there is not much of a difference. Siblings in the control group did not receive any intervention like the experimental group and this can be inferred as a reason as to why there was no difference in the pretest and posttest scores in the control group for worry. The control group stays the same after the pretest and before the posttest, when it comes to the variable of Worry as they are not given any intervention to either increase nor decrease the Worry in any manner, and thus the chances of it changing seems to be less.

Table 2: difference between the pretest and posttest of the control group in Savoring

Table 2 shows that there is no significant difference between the pretest and posttest of the control group in

variable	test	N	Mean	St. Deviation	df	t	Significance
savoring	Pretest	18	5.094	.91430	17 .58	.588	.565
	Posttest	18	4.972	.85868		.500	.303

Savoring, as the t value is .588 and the significance is found to be .565 (p>0.05), which is greater than the standard significant value of 0.05. thus, the hypothesis "there is no significant difference in the pretest and posttest scores of the control group in Savoring among siblings." is accepted. The mean value in the pretest is 45.66 and the mean in the posttest is 47.667, where there is not much of a difference. Siblings in the control group did not receive any intervention like the experimental group and this can be inferred as a reason as to why there was no difference in the pretest and posttest scores in the control group for worry. The control group stays the same after the pretest and before the posttest, when it comes to the variable of savoring as they are not given any intervention to either increase nor decrease the savoring in any manner, and thus the chances of it changing seems to be less.





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Table 3: difference between the pretest and posttest of the experimental group in worry

Table 3 shows that there is no significant difference between the pretest and posttest of the experimental group in Worry, as the t value is .609 and the significance is found to be .551 (p>0.05), which is greater than the standard significant value of 0.05. thus, the hypothesis "there is no significant difference in the pretest and posttest scores of the experimental group in Worry among siblings." is accepted. The mean value in the pretest is 42.500 and the mean in the post- test is 41.388, where there is not much of a difference. "A metanalysis of positive psychology

variable	test	N	Mean	St. Deviation	df	t	Significance
worry	Pretest	18	42.500	9.413	17 .609	.551	
	Posttest	18	41.388	10.041			

interventions" by Linda Boiler et al., (2013) states that positive psychology interventions were more effective if it were given for longer duration, and if the interventions were delivered on a individual basis. In this study, even though the positive psychology interventions were given on a individual basis, it was not given for a long period of time and that might be the reason as to the absence of difference between the pretest and posttest in the experimental group in worry.

The study "internet delivered psychological interventions: Annual review of clinical psychology" by Gerard Anderson (2016) aims to know the efficacy of internet delivered psychological interventions. The study states that internet via interventions are not yet disseminated to most places, and these internet based interventions should be used as a compliment to other services, even though there will always be clients for whom face to face treatment is the best option. In the present study, since the positive psychology interventions were delivered via internet, it might have served as an hinderance for the experimental group from showing difference in the posttest.

Table 4: difference between the pretest and posttest of the experimental group in Savoring

variable	test	N	Mean	St. Deviation	df	t	Significance
savoring	Pretest	18	5.162	.853	17	.261	.797
Savoring	Posttest	18	5.113	.853	.201	., , ,	

Table 4 shows that there is no significant difference between the pretest and posttest of the experimental group in Savoring, as the t value is .261 and the significance is found to be .797 (p>0.05), which is greater than the standard significant value of 0.05. thus, the hypothesis "there is a significant difference in the pretest and posttest scores of the experimental group in Savoring among siblings." is accepted. The mean value in the pretest is 5.162 and the mean in the posttest is 5.113, where there is not much of a difference. A study by quoidbach et al., (2010), states that multiple positive psychology strategies are needed for enhancing savoring. The present study carried on with only 3 positive psychology techniques and that might be the reason for the lack of difference in the posttest of the experimental group in savoring.

A study "design for engagement of online positive psychology interventions" (2019) by Saskia M Kelders aims to know how positive psychology interventions can be provided through an online platform. It concludes saying that for online positive psychology interventions to be effective, participants need to use them for a longer period and need to practice the content in their daily lives. this means that the participant needs to feel engaged with the intervention in a certain way.

Table 5:correlation between worry and savoring for the experimental group in the pretest.

Variable	Sample (N)	Pearson correlation	significance
Worry	18		
savoring	18	.148	.558

Table 5 shows that there is no significant relationship between worry and savoring for the experimental group in the pretest, as the correlation value is .148 between worry and savoring where the significance is found to be .558 (p>0.05), which is greater than the standard significant value of 0.05. thus, the hypothesis "there is no significant relationship between Savoring and Worry for the experimental group in the pretest among siblings." is accepted. There is a positive correlation between worry and savoring in the experimental group before they received the interventions, which means when worry increased, savoring also increased. Even though a relationship between the 2 variables have been established they are not as significant as it is to be expected in a research study thus making the established relationship not that reliable.





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Table 6: correlation between worry and savoring for the experimental group in the posttest.

Variable	Sample (N)	Pearson correlation	significance
Worry	18	-221	.378
savoring	18	-221	.370

Table 6 shows that there is no significant relationship between worry and savoring for the experimental group in the posttest, as the correlation value is -.221 and the significance is found to be .378 (p>0.05), which is greater than the standard significant value of 0.05. thus, the hypothesis "there is a significant relationship between worry and savoring for the experimental group in the posttest among siblings." is accepted. According to the values in the table 4.6, it is inferred that there is a negative correlation between worry and savoring, meaning when worry increases, savoring decreases and vice versa but the values are not significant, and so the relationship cannot be considered as valid from a research point of view.

SUMMARY AND CONCLUSION

There was no significant difference found between the pretest and posttest of the control group in worry. Thus, the first hypothesis "There is no significant difference in the pretest and posttest scores of the control group in Worry among siblings." is accepted.

There was no significant difference to be found between the pretest and posttest of the control group in Savoring. Hence the second hypothesis "There is no significant difference in the pretest and posttest scores of the control group in Savoring among siblings." is accepted.

There was no significant difference present between the pretest and posttest of the experimental group in Worry and so the third hypothesis "There is no significant difference in the pretest and posttest scores of the experimental group in Worryamong siblings." is accepted.

There seemed to be no significant difference between the pretest and posttest of the experimental group in Savoring. So the fourth hypothesis "There is no significant difference in the pretest and posttest scores of the experimental group in Savoring among siblings." is accepted.

The correlation between worry and savoring for the experimental group in the pretest was found to be not significant. Hence the fifth hypothesis "There is no significant relationship between worry and savoring for the experimental group in the pretestamong siblings." is accepted.

The correlation between worry and savoring for the experimental group in the posttest was found to be not significant. Thus, the final and sixth hypothesis "There is no significant relationship between worry and savoring for the experimental group in the posttest among siblings." is accepted.

SCOPE

The study would serve as a initial measure of influence of positive psychology interventions in two variables namely worry and savoring. The study would allow others to know how to administer the positive psychology interventions via online mode or through internet. The study is done at a time like COVID 19, thus giving a hope that psychological interventions can be used even at a time like a pandemic.

LIMITATIONS

The sample size is small. The study is done only in blood related biological siblings The interventions were given only for a short period of time.

FUTURE RECOMMENDATIONS FOR RESEARCH

Positive psychology Interventions can be given for a long period (more than 3 days) and it can be of face-to-face type administration. The study can be carried on in different populations to know the full extent of the applicability of the positive psychology interventions. It can be administered for clinically distressed populations.

REFERENCES

- [1] Anderson, G. (2016). *Internet delivered psychological treatments*. Retrieved from link springer.com: https://www.googlescholar.com
- [2] Bryant, F. B. (2003). Savoring Beliefs Inventory (SBI): A scale for measuring beliefs about savoring. journal of mental health, 175-196.
- [3] Boiler, L., et al. (2013). *Positive Psychology interventions: a meta-Analysis of randomized controlled studies.* Retrieved from link bmcpublichealth, biomedcentral.com



OF FORENSICS AND BEHAVIOURAL SCIENCES

(ISSN - 2582-8177)



Globally peer-reviewed and open access journal.

- [4] Bryant, F. B. (2003). Savoring beliefs inventory (SBI): A scale for measuring beliefs about savoring. *Journal of Mental Health*, 12(2), 175196. https://doi.org/10.1080/0963823031000103489
- [5] Carr, A. (2004). positive psychology: the science of happiness and human strengths. New York, United States of America: Brunner-Routledge.
- [6] Corey L.M. Keyes, J. H. (2003). *Flourishing: positive psychology and the life well lived.* Washington, DC: American Psychological Association.
- [7] CR Snyder, S. J. (2007). *Positive Psychology: the scientific and practical explorations of human strengths.* United States of America: Sage publications.
- [8] Elham Aghaie, R. R. (2016, November 30). *Factor Analysis and Psychometric Characteristics of the Savoring Belief Inventory (SBI)*. neuro physio psychology. doi:10.5812/ajnpp.58678
- [9] Felicia A Huppert, C. L. (Ed.). (2014). *interventions and policies to enhance wellbeing* (Vol. VI). West Sussex: John Wiley & sons Ltd.
- [10] Franklin, S. S. (2010). *The psychology of happiness: A good human life.* Cambridge, UK: Cambridge University Press.
- [11] Graham C Davey, A. W. (2006). *Worry and its Psychological Disorders: Theory, assessment and Treatment* (1 ed.). United States of America: John Wiley & sons Ltd.
- [12] Kate Hefferson, I.B. (2011). *Positive psychology: Theory, Research and Applications*. New York: open university press.
- [13] Kelders, S. M. (2020, February 22). *Design for engagement of online positive psychology interventions.* Retrieved from link springer.com: https://www.googlescholar.com
- [14] Kevin Corcoran, j. f. (2004). *Measures for clinical practice: A source book* (3 ed., Vol.2). New York, united states of America: the free press.
- [15] Lopez, S. J. (2008). *Positive Psychology: Exploring the best in people* (Vol. I). United States of America: Praeger Publications.
- [16] Meyer TJ, Miller ML, Metzger RL, Borkovec TD (1990). *Development and validation of the Penn State Worry Questionnaire*. Behavior Research and Therapy, 28, 487-495.
- [17] Michael Eid, R. J. (2008). the science of subjective wellbeing. New York: Guildford press.
- [18] P Alex Linley, S. J. (2004). Positive Psychology in Practice. New Jersey: John Wiley & Sons ltd.
- [19] Peter Y Chen, C. L. (2014). Work and Wellbeing (Vol. III). West Sussex: John Wiley & sons ltd.
- [20] Robert A Emmons, M. E. (2004). *The psychology of gratitude*. (P. E. Richard J Davidson, Ed.) New York, United States of America: Oxford University press.
- [21] Statistic Solutions: Advancement through clarity. (2021, March 20). Retrieved from Paired samples t test: https/: www.statisticssolutions.com
- [22] Steve Baumgardner, m. c. (2014). *positive psychology* (1 ed.). United States of America: Pearson education limited.