Review

Environmental And Personality Factors and Strategies on Happiness Enhancement: A Meta-Analysis Study

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Abstract

Background: During the last decades, investigation in the field of happiness and its emerging and effective factors has been extended significantly. Therefore, examination and combination of effective internal and external factors are considered as the subject of this study. This study aims to measure the combinational impact of investigations performed in the field of environmental and personality factors related to happiness.

Method: The method used in this research is Meta analysis. Author takes advantage of 56 studies with 109 measures. Statistical population of this study is selected among studies stored in State's databases. Sample was purposefully selected based on input and output factors. CMA2 software was used for statistical analysi. Funnel chart, safety index from destruction, Kendall rank correlation and regression y-intercept were used to examine the pubilcation deviation. The combinational measures were calculated based on two fixed and random models. Q index and the square of I were used to analyze the heterogeneity.

Result: According to results, the combinational effect of studied researches in random and fixed models was obtained 0.29 and 0.31 respectively. Based on Cohen index, this measure is considered as an average effect. Based on the heterogeneity results, the existence of moderating variables was confirmed. The results show that, in various researches regarding happiness, certain factors other than environmental and personalities are effective.

Conclusion: Based on findings, environmental factors and personality characteristics are related to happiness from different aspects.

Keywords: Meta analysis, Happiness, Environmental strategy, Personality Strategy

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Introduction

Based on his instinctive creation, human beings are looking for physical and mental health. Mental health is influenced by various factors, causing happiness. Feeling of happiness and enthusiasm is considered as one of the most necessary instinctive demands and humans' mental health. It has also a great importance, due to its main impacts on cultural and social spirits. Happiness is deemed as one of the main indices of society's mental caring. As an individual evaluation of human being and his life, happiness consists of certain concepts such as life satisfaction, positive emotions, lack of depression and anxiety symptoms.

In theories called final aim, it is believed that happiness is achieved when individuals realize their aims based on values and their needs. Individuals considering their objectives and their achievement probability more important would experience more happiness and enthusiasm. By contrast, individuals with less feeling of happiness, would feel lack of impartiality and unfairness in their objectives [1]. Happiness is brought about by human's judgment and arbitration regarding their way of life. This kind of judgment is not imposed externally to an individual, but is an internal state influenced by positive excitation. Based on this concept, happiness focuses on individual's perception and vision, implying a state which is desirable, originating from positive excitation an life satisfaction [2].

Pollock et al (2016) define happiness based on three correlated components: minimum negative emotions, maximum positive emotions and high level of life satisfaction. Positive emotion, negative emotions and life satisfaction are considered as contextual structure indices, however, usually only one component has close correlation with happiness [3]. By emerging positive psychology movement, certain components such as happiness, enthusiasm, hope, optimism and … have gained importance, causing researches oriented towards positive psychology components.

Happiness is important due to its empirical relation with individual, social, psychological, physical and behavioral consequences [4].

Therefore, not only happiness is a valuable objective, but also impacts on life's main aspects [2]. One of the factors related with happiness is personality characteristics. Personality is deemed as an organized and unique set consisting of relatively constant and permanent characteristics distinguishing an individual from others. In fact, individuals with different personality characteristics seek gaining and creating happiness. In addition to personality characteristics, environmental and external factors are considered important in emerging happiness and mental and spiritual serenity. These factors point out family, social and cultural aspects. It is noteworthy that the simultaneous examination of effective personal and environmental factors on happiness is rare.

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In this case, the necessity of happiness examination influenced by various factors is felt. This research tries to consider different factors combining with previous researches results using a systematic or Meta analysis. It also estimates the overall and individual impact of factors influencing happiness.

Research Methodology

In Meta analysis, statistical findings of different researches are combined with each other. For this purpose, these findings should be converted to common measure (Effect size). Effect size indicates the results of each research in the form standard marks (z), which is an index of effect intensity or differences among groups. As the objective of current study is to examine the happiness, Meta analysis method is used. On this basis, the statistical population of this research is the articles published in credential research- scientific journals (Research articles in computers database) from 2007 till 2020. The information banks consist of Academic center for education, culture and research (ACECR)' database, private website of Iran magazines bank (Magiran) and Noor Special journals database (Noormags) dealing with happiness factors. Certain input and output factors were considered from preliminary researches in order to select samples. Factors regarding the selection of input and output of studies in order to perform Meta analysis are as follow: Input measures: Published articles and researches in which one of the main keywords of the research has been mentioned; Researches dealing with happiness using acknowledged research method; articles offering general findings for the purpose of measuring effect size; researches are published in the form of complete article in renown journals; articles are prepared by master and PHD students; researches are performed in Iran and in line with current study.

Output measures: Researches examining only one of the main variables; similar articles published in various journals with different titles; researches not reporting necessary information and findings in order to calculate the effect size; researches examining the partial symptoms of happiness. In Meta analysis, keywords related to the research subject are determined in information banks for the purpose of selecting the preliminary researches. In order to perform this Meta analysis, keywords are used for independent variable. If the extracted researches have research main variables based on keywords, they have necessary requirements in order to be used in Meta analysis.

In current study, checklist related to research schemes characteristics is used to collect required information [5]. Information collected using this method consists of bibliography information, methodology information and information required for measuring effect size. Based on input and output measures, 56 studies having required conditions and measures to be used in Meta analysis are used in this investigation.

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In this Meta analysis, graphical method (Funnel diagram) and a statistical index (Safety from destruction) are used. As the Meta analysis is based on two statistical models (fixed and random effect), heterogeneity analysis is used to ensure the existence of moderator variables. In this Meta analysis, Cochran indices and the square of (I) are used. The existence of moderating variables is proved in happiness treatment by examining the both heterogeneity indices. For this reason, random model is selected as the Meta analysis model. CMA2 software is used to measure the separate and combinational effect size with fixed and random models.

Result

Extensive research is performed to find and select the relevant studies, using determined keywords. Applying input and output factors, 56 studies are eventually chosen to be used in Meta analysis, out of which 109 initial effect size are extracted used in subsequent analysis. A summary of researches and extracted effect size are provided in table below.

Table2. Combinational effect sizes of fixed and random models related to environmental and personality factors with happiness before sensitivity analysis. As it can be seen, the size of combinational effect of relation between environmental and personality with happiness is fixed and random model are 0.39 and 0.31 respectively, both of which are statistically significant (P≤0.001)

One of the main parts in Meta analysis is examination the publication bias. In order to understand this issue, sensitivity analysis (SA) is used in Meta analysis. Sensitivity analysis could be performed using “funnel diagram” and statistical index of “safety from destruction “.

Figures 1 and 2 indicate pre and post analysis funnel diagrams regarding initial effects. In funnel diagram, the horizontal axis represents the initial researches effect size and vertical axis shows their measures’ error. The asymmetry existed in funnel diagram suggests publication bias. The asymmetry of effect size is evident in figure 1. Therefore, figure 2 is obtained removing unconventional effect sizes (12 effect sizes) being more symmetric and balanced comparing to figure 1.

The (NF-S) after sensitivity analysis is 3621. This statistic suggests that the calculated effect size will be insignificant following the entering of 3621 insignificant studies to the analysis process.

Table 3 indicates the combinational effect sizes of fixed and random model regarding the relation between environmental and personality factors with happiness following the sensitivity analysis. As it can be seen, the combinational effect sizes in fixed and random models are 0.33 and 0.29 respectively, both of which are statistically significant. As it can be observed in tables 2 and 3, the combinational effect sizes of studies are provided in two fixed and random models, out of which a final model

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should be considered as the final conclusion. As the square of (I) is high in this study (considered as a heterogeneity index), the random effects model is regarded as the final model. It is also possible to relate the observed heterogeneity to moderator variables influencing the relation between environmental and personality with happiness which can be used in other investigations.

Table 1. Research background

Preliminary research code	Authors (year)	Factors	Samples	Number of Samples
A1	Keshavarz et al (2007)	View- Mental health-relations-educational and economic situation	Yazd citizen	453
A2	Anasori (2007)	Physical function-Social function-Lack of anxiety	University students	100
A3	Khosh konesh et al (2008)	Life satisfaction-Optimism- Physical symptoms	University students	569
A4	Mirzayi et al (2010)	Personality characteristics	University students	700
A5	Esmailifar et al (2011)	Self efficacy dimensions	Students	200
A6	Ahadi et al (2012)	Psychological-family and environmental factors	University students	364
A7	Emami kaleh sar et al (2017)	Relation documents	Tehran citizens	384
A8	Taheri et al (2013)	Psychology and identity styles	Students	545
A9	Kajbaf et al (2015)	Self efficacy dimensions	Isfahan teachers	100

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A10	Bahadori Khosroshahi et al (2012)	Identity styles	Students	200
A11	Keshavarz et al (2008)	Life environment	Citizen	160
A12	ALiakbari et al (2014)	Personality	Students	324
A13	Almasi et al (2014)	Social-cultural factors	Old-aged	370
A14	Alipour et al (2011)	Personality factor	Teacher	240
A15	Rastgar et al (2013)	Social Factor	Students	200
A16	Saffari et al (2014)	Personality factor	Students	180
A17	Sepehrian et al (2016)	Personality	Medical students	150
A18	Kiamarsi et al (2013)	Environmental and social factors	Students	405
A19	Azim Zadeh parsi et al (2011)	Personality factor	Students	380
A20	Niazazari et al (2011	Personality characteristics	Students	1770
A21	Tamanayi far et al (2012)	Social factor	Students	150
A22	Sobhi et al (2012)	Personality factor	Students	350
A23	Rasti et al (2012)	Personality characteristics	Pregnant women	92
A24	Ranjbar et al (2014)	Personality factor	University employees	230
A25	Tavan et al (2014)	Personality factor	Students	200
A26	Maleki et al (2013)	Personality attributes	Students	140

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A27	Farikhi et al (2015)	Relation factors	Students	270
A28	Mousavi et al (2020)	Individual life and personality factors	Married Women	283
A29	Samadi et al (2018)	Social factor	Married	110
A30	Tooyari et al (2020)	Social factor	Parents	234
A31	Khatib et al (2016)	Personality factors	University employees	150
A32	Rashidi koochi et al (2016)	Family factor	Students	290
A33	Navabi nezhad et al (2009)	Personality factors	Employed married	257
A34	Bahadori khosroshahi (2017)	Social factor	Students	353
A35	Kamalzadeh et al (2018)	Social and cultural factors	Elementary school teachers	194
A36	Gheitanchi et al (2016)	Personality patterns	Old-aged	200

Table2. Combinational effect size of relation between environmental and personality factors and happiness

Model	Effect size number	Combinational effect size	Minimum	Maximum	Z	P
Fixed	109	0.39	0.23	0.42	19.74	0.0001
Random	109	0.31	0.27	0.38	5.72	0.0001

In table 3, the combinational effect size of relation between environmental and personality factors with happiness are presented based on gender. Based on the results of combinational effect size regarding the relation between happiness and personality-environmental factors based on gender, it is found out that the effect size related to both genders is statistically significant. Moreover, t test was used to examine the significant difference between men and women regarding measured effect sizes. Results show that there is no difference between two genders regarding effect sizes. Therefore, there is a difference

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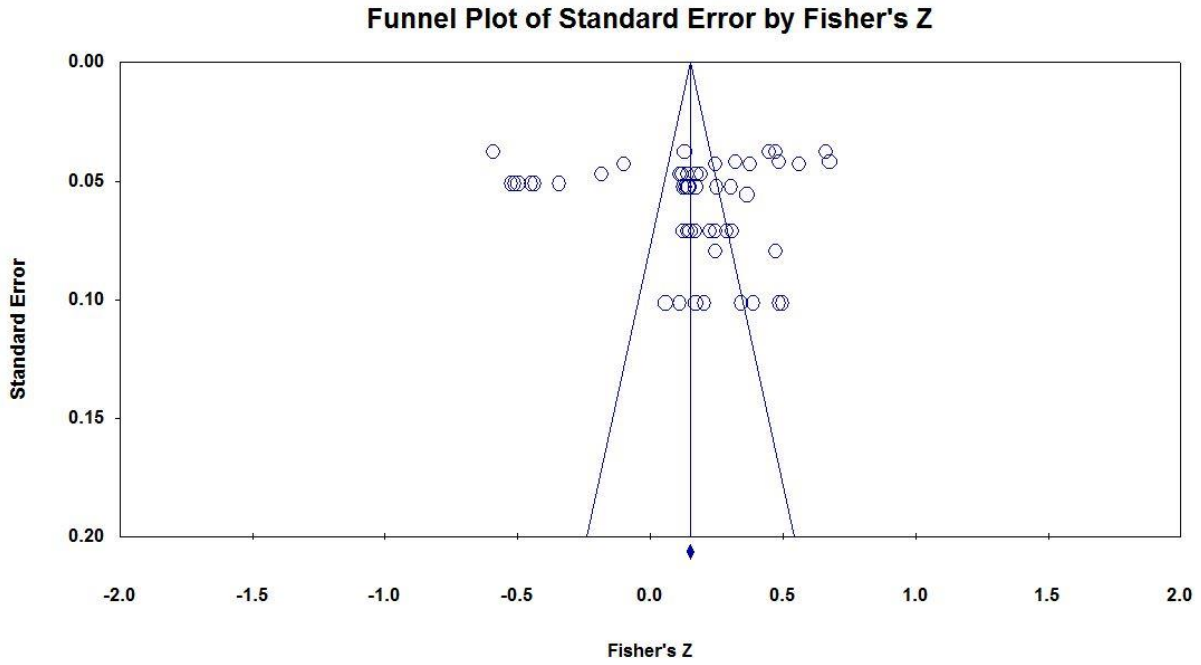
between men and women in terms of the relation between environmental and personality factors and happiness.

Table3. Combinational effect size of relation between environmental and personality factors and happiness (After sensitivity analysis)

Model	Effect size number	Combinational effect size	Minimum	Maximum	Z	P
Fixed	109	0.33	0.28	0.37	13.73	0.0001
Random	109	0.29	0.22	0.36	4.12	0.0001

Table4. Combinational effect size of relation between environmental and personality factors and happiness based on gender

Gender	Number	Combinational effect size	Measure error	Minimum	Maximum	Z	P
Male	25	0.32	0.308	0/28	0/37	4.58	0.0001
Female	16	0.23	0.145	0.19	0.29	6.49	0.0001



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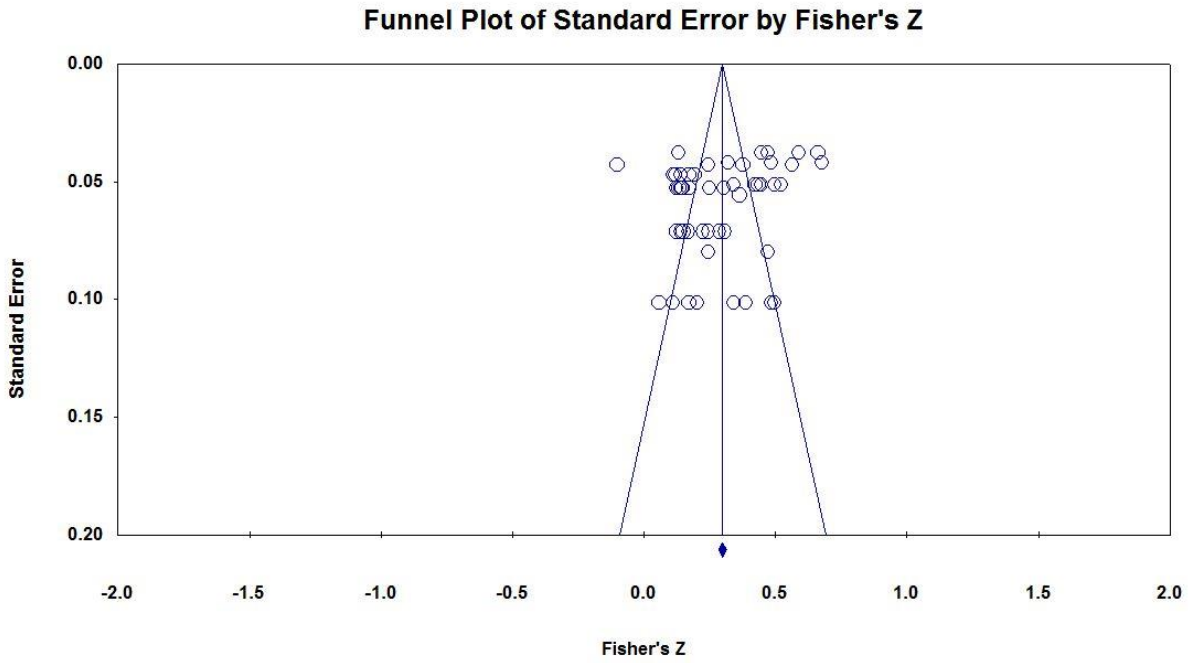

Discussion and Conclusion

This study generally aims to examine the relation between environmental and personality factors with happiness and estimate the effectiveness in the form general effect size. In Meta analysis study, a comparison is performed with other studies so that the effect size of each factors is obtained, achieving an exact and precise effect size. Cohen (1988) offers a general classification for relative effect sizes in (d) effect sizes, achieving 0.30, 0.50 and 0.80 for small, average and big relation intensiveness respectively [6].

Based on 109 effect sizes from 56 studies, the combinational random effect size shows an amount which Cohen (1988) considers it an average effect size. In current research, it is indicated that moderator variables are influential in various factors role on happiness. The happiness of different groups is impacted by different demographic variables. It has been noted that, various factors such as family, environmental, social, and cultural and personality have influence on happiness. Happiness is achieved, when individuals' life activities have the most convergence with their deep values, ability and productivity throughout different aspects. In addition, individuals should be committed to these values and abilities. The feeling of enthusiasm and confidence emerge in such situation. Watermann has introduced this state as the individual "expressiveness", and there is a high correlation between this concept and happiness measures.

Regarding the effect of personality on happiness, it can be stated that happiness has close relation with extroversion leading to accept collectivism and audience. Happiness has also close relation with positive emotions and successful content production skills. Moreover, it is also related and correlated with innovation, socialism and courage to enter into communities. Each of those components could

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be useful in happiness creation; Researchers could analyze extroversion in relation with happiness and find out that extroversion mainly aims to feel happiness, achieve enthusiasm and take advantage of life opportunities [7]. Therefore, happiness achievement depends on individuals personality from different aspects and individuals have crucial role in adjusting events around themselves towards happiness. In line with individuals personality, the environment along with its own aspects and facing individuals with various events could lead to enhance or deteriorate their spiritual and mental states.

References

[1]. Hedayat, Faezeh, Sadegh zadeh, Soghra (2020)/ Meta analysis regarding the relation between spiritual intelligence and happiness. A novel approach in Educational sciences. 2nd edition, No1, pages 60-68.

[2]. Sayadian, Seyed Hossein, Ghomrani, Amir, Yaghoobina, Fatemeh (2013). Meta analysis regarding the effectiveness of psychological interventions on Iranian society happiness. Evolutionism psychology: Iranian psychologists. 10th year, No 37, Pages 61-69.

[3]. Pollock, N.C., Noser, A.E., Holden, C.J. et al. Do Orientations to Happiness Mediate the Associations Between Personality Traits and Subjective Well-Being?. Journal of Happiness Studies, 2016, volume 17, 713–729.

[4]. Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective well-being contributes to health and longevity. Applied Psychology: Health and Well-Being, 3(1), 1–43. https://doi.org/10.1111/j.1758-0854.2010.01045.x

[5]. mesrabadi, javad. 2011, Examining the validity and reliability of concept map-based tests scoring methods, Volume 2, Issue 5, Winter 2011, Pages 1-24.

[6]. Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

[7]. Haghighi, Khosh Konesh, Abolghasem, ShekarKan, Hossein, Shahni Yeylagh, Manizheh ba Nisa, Abdol Kazem (2007). Relation of five-components personality with happiness in Bachelor student of Shahid Chamran University. Educational and psychology sciences journal of Ahwaz Shahid Chamran University. 3rd period, 13th year, No.3, Pages 163-188 .

[DOR: 20.1001.1.23222913.2021.10.1.12.6]