An Analysis of Happiness Measurement Methods

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Abstract: Studying the measurement of happiness can help people find a way to estimate and level their happiness. So, this article will briefly discuss happiness and the methods people use to measure happiness based on existing literature and data. It will mainly talk about the three measurements: self-report, brain activities, and human facial expressions. Self-reporting can include people's various opinions and is more comprehensive at organizing data. But it can have bias due to individual differences. Brain activity is more specific and precise; it seldom makes mistakes. However, the complexity of the human brain makes it difficult to get clear and full-scale information. Third, human behaviors in situations when they are feeling happy are almost universal and widely-accepted. But the link between facial or body expressions and emotions is vague, not to mention the expressions will have slight differences in diverse cultures. In conclusion, happiness can be measured using proper methods, but there will still be issues that need to be solved with further studies.

Keywords: happiness, measure, brain activity, self-report, facial expressions

1.   Introduction

Scientists and psychologists nowadays have done a great deal of research about happiness in a broad range of areas, such as how to define happiness and what can make people happy. In Courtney e. ackerman's study, he discussed the meaning of happiness in positive psychology, the psychology behind human happiness, and the importance of happiness in a happy life [1]. Also, in Kendra Cherry's research, she talks about the factors that can cultivate happiness (pursue intrinsic goals, enjoy the moment, or reframe negative thoughts) and how to become a happier person [2]. But research about ways to measure happiness is still limited and inconsistent. There are now three basic ways that happiness can be measured: by giving questionnaires to random people in order to let them rate their own life satisfaction and happiness, such as the Panas Scale, the Oxford Happiness Inventory, and the Subjective Happiness Scale. Next, study Bioindicator (urine samples or brain scans) that reflect brain or physical activity. Finally, observe people's behaviors that show positive emotional expression and level, such as laughter and smile. But each of the measures has methodological issues, which make the results of the measures inaccurate. As a result, the essay will take a closer look at the methods of measuring happiness and study the advantages or disadvantages of the methods based on existing literature and data. In this way, the research can draw conclusions from the collected information in order to come up with solutions to help people's mental health.

2. Definition of Happiness

When mentioning happiness, it means "the state of feeling or showing pleasure or contentment". Further, it can be defined in two ways. First, it is a fleeting, changeable subjective emotional state characterized by feelings of joy, satisfaction, and fulfillment, which can be both external and internal, and often includes positive and intense feelings that can be recognized by scanning brain activities or observing behaviors. Second, individuals often describe happiness as a general sense of how happy they feel about life with their current situations, which is life satisfaction. Aristotle once defined life satisfaction as the ability to keep pursuing one's aspirations while maintaining a moral and normal lifestyle. He pointed out that people can get satisfied when fulfilling their passionate aspirations, getting what they want, and having no excessive desire for money, which included four main points: desire for itself, not for anything else, having no evil or excessive desire, and being stable. To summarize, he thinks happiness is a state of moral goodness in the middle, without excess or deficiency [3].

3. Measurement Methods

The topic of measuring happiness is important within psychology because if people know how to measure happiness and the correlates of happiness, they can try using the data to improve their emotional and life satisfaction experiences by manipulating some of the conditions that we know often lead to increasing happiness. In this way, it can help with overall well-being and mental health. Typically, nowadays there are three main ways of measuring happiness: self-report, brain studies and observing facial expressions. The paper will discuss the three measurements and their good points or bad points.

First, interviewing random people about their opinions about their life satisfaction has to create valid and reliable questions that address clear research objectives about happiness. The questionnaire must be cost-effective, easy to be understood among different groups of people, without quality or proportion restrictions, anonymous and suitable for analyzing data, including both open and close-ended questions, with a number of 20-50 so that the questionnaires won't be too short (cannot receive enough information) or too long (hard to organize and may make participants bored). The response rates the paper received from participants can create a clear conclusion about happiness and thus provide your following research with a strong base.

Second, studying brain activities means using specific techniques and machines to examine how people's brains react when they have positive emotions. People's brains may send out electrical signals that form thoughts and feelings from different parts, like when the pituitary gland and nerves communicate with each other and combine to form brainwaves. By examining and studying brainwaves, researchers can measure action potentials and study the common patterns of brain activity when reacting to positive feelings. As a result, researchers can study people's happiness.

Third, observing behaviors that people do when they are feeling pleasant can be an effective way to measure people's happiness. It saves time and can be recognized easily by looking at people's manifestations. People often have different behaviors when experiencing different emotions that can be recognized and discriminated against effectively, such as laughing when feeling happy, crying when feeling sad. Observing these behaviors can help researchers draw a clear conclusion about how happy people feel.

4. The Advantages and Disadvantages of the Measurements

4.1. Self-report

First, the self-report of subjective intensity usually involves participants' life satisfaction, how they think of happiness as an emotion, their likert scale, and their past or present experiences. Self-report can collect massive amounts of information from a wide range of people, which can be very comprehensive and full-scale. When divided, close-ended questions can get direct answers and will be convenient to organize and summarize, while open-ended questions provide participants with opportunities to express their opinions freely, which will give researchers more detailed information and more clear reasons of the answers. Also, participants can express their thoughts more objectively when answering questionnaires anonymously. The questionnaires will be persuasive and convincing when they are unified.

There will be issues like social desirability bias (a form of response bias in which people prefer to answer questions about how their responses will be interpreted by others rather than reply truthfully) and subjective opinions due to individual differences [3]. Because when participants are exposed to a situation where they have to answer controversial questions, they may lie in order to avoid embarrassment, uneasiness, and distress. They may feel afraid of what their answers will reveal about them, so to gain social approval, they will choose to answer the questions differently than their true attitude. External complex Interpretations like participants' moods, weather, and interviewers will also affect reports' results. Not to mention participants may have diverse understanding methods towards the same question; their opinions may be based on their own acknowledgment of the question, which may cause misunderstanding [4].

But subjectivity may not always represent something bad; interviewers can get more comprehensive and detailed information because they can collect various personal samples. Also, these issues can be overcome. For example, the questionnaires can include elaborate and transparent information that help each participant to fully understand; researchers can design the questionnaires more carefully, or they can repeat the questionnaires several times and widen the range of experimental subjects.

4.2. Studying Brain Activities

Second, biological brain areas, such as heritability, that are linked to emotions, a genetic link to happiness, include many things like Functional Magnetic Resonance Imaging (brain activity and localization of emotions), twin studies (monozygotic vs. dizygotic concordance rates), smart watches measuring physiological activity related to happiness, and sto2 (skeleton muscle tissue oxygen saturation, which has been proposed as a noninvasive system for monitoring regional circulation), a measure of happiness. Studying brain activities can make research more accurate because brain activities will seldom lie. The advanced technology can help people do the research, which will make the results more convincing and persuasive.

On the other hand, the brain activities contain complexity, and researchers' present knowledge about human's brains still lacks ecological validity. Also, in twin studies, the results can be biased with volunteer samples. Brian Palmer critiques the problems about twin studies by isolating the genetic underpinnings of human behavior, noted that even though people strongly believe genes make twins look similar, think and act identically, that assumption did not involve twins' individuality, and human's genetic structure is so complex that scientist have little knowledge about it, so the scientists displays a reductive attitude towards it [5]. In this way, the evidence of saying there is a link between twins' similarity and their brain activities has never been proven. Yet it still have useful information even if not perfectly valid and conclusive. Technology is advanced nowadays and will keep

developing. scientist are gaining more and more information about human's brain activities and gene structures, so it is a good starting point for future studying.

4.3. Facial Expressions

Researchers can observe people's facial expressions and behavior when linked to happiness, especially when the experiment of measuring happiness is among those who cannot answer self-report, such as people with autism and animals. About facial expressions and behaviors , it includes a large scope, like employment, income, health, education and marriage that are all linked to happiness. Charles Darwin once said facial expressions served an evolutionary function and are controlled by our central nervous system so they are objective and globally found [6]. The issue is that the complicated link between behaviors and their true happiness is not clear enough to draw a valid conclusion. Paul Ekman, a psychologist studying facial expressions of emotions, said it was a distinct theory of emotion and universal emotions, including movements when they feel enjoyment. He discovered that the universality of some facial expressions of emotion may appear different across cultures due to context. For example, the experience sample scientists collect suggests school activities are linked to lower happiness, while socializing is linked to higher happiness [7].

Scientists have not clarified which conditions could affect the recognition and comprehension of facial expressions. When encountering someone who expresses an emotion, individuals tend to mimic that facial expression automatically. This phenomenon is an aspect of emotional contagion, which is related to multiple processes implied in sharing emotional states between two or more persons [8]. In this case, the information they collect may have bias and cannot be used as professional evidence. To overcome that, the paper should know that bias may not be that common, and that people can overcome manipulation of facial expressions such as with the STO2 measure, so future research can continue since they find ways to make it more accurate.

5. Discussion

The main factors that influence happiness include life satisfaction, desires, and interaction with others. Among the three different measurements, self-report is more widely used because of its simplicity and the fact that it makes few mistakes. A brain activity scan is used more frequently in labs because of its precision and authority. Also, observing facial expressions is widely accepted in our daily lives because it is almost universal. There will be challenges during the research. For example, when studying the brain activities of humans, the documents involve some very complicated technical terms. As a consequence, it will take much time to build up a comprehensive understanding of how humans brain structure works when having positive emotions. Also, the documents and experiments on measuring happiness are still limited; there is not too much evidence in this field, which makes the research process harder. Whether happiness can be measured is a very complex and big topic that contains so many components and derives from many other small branches. Even until now, happiness hasn't had a clear definition. The fluctuation, level, and changes of this emotion are abstract and cannot be detected completely by humans. So the measurements of happiness will definitely continue to be investigated in further studies.

6. Conclusion

In conclusion, happiness can be measured using the three methods mentioned above: self-report, brain studies, and facial expressions. The methods of measuring happiness have their own advantages and disadvantages. Self-reporting is more comprehensive, including different people's various views. Brain activities can be very specific and precise. Also, human behaviors are nearly universal, so people can easily recognize the link between facial expressions and their emotions. But each of them

has methodological issues. When they self-report, people may have subjective opinions and biases due to their individual differences. Second, human's brains are complex. Because of the limited brain knowledge, it will be difficult to draw conclusions from studying brain activities. Third, there is an unclear link between human behaviors and happiness, so it cannot provide reliable and valid enough information for observation. There are also some shortcomings. For example, it hasn't included all the methods for measuring happiness, so the results may not be comprehensive. Future studies can focus on improving the measurements in order to make them better and more perfect, so that the results will be more authoritative and trustworthy.

Acknowledgment

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