Connection between sensitivity and intelligence: Do Sensitive People Have Higher IQs than Others?

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Abstract:
In this article, we have discussed the basic knowledge of measuring sensitivity and intelligence. We have recognized the latent factors while analyzing the participants' behavior. We have compared and contrasted research cases to find out if there is a noticeable correlation between them. We have provided how to analyze the participants' performance using these results. Evaluations are brought as an idea of how the studies can be improved. This article also discusses the connection between high intelligence and anxiety through the connection between stress and sensitivity. Finally, it was found that some factors indicate that people with high IQs will be more anxious and that people with high IQs will be more sensitive.
Keywords: sensitivity, intelligence, latent factors, noticeable correlation, behavior, performance

1. Introduction

Latent psychology studies like personality and intelligence, which are unobservable to the eye, give us a clue about how we perceive the world. There are chances that how well people behave in intellectual aspects and our sensibility levels are related to each other. There are reasons to believe there is a correlation between intelligence and sensitivity, and there are also contradictory explanations.

Intelligence can be interpreted differently. Alfred Binet believes in unitary intelligence, known as "g"-general intelligence (Varon & Edith J., 1936). Alfred and Theodore Simon came up with the "First Ability Test" in the early 1900s, which enabled the concept of a "classification concerning a hierarchy of intellectual qualities" (Joel Michell, 2012). Later, in 1993, John Carrol later found that "g-intelligence" exists and proved Alfred's theory true. He introduced the hierarchical structure of general intelligence as fluid intelligence, crystallized intelligence, visual perception, and processing speed… William Stern was the first to propose the "IQ," short for "Intelligence Quotient," in which IQ= (Mental age/Chronological age) * 100 and was expressed as a percentage (In W. Dennis (Ed.)).

One standard intelligence quotient test measures participants' reaction time to a question. It allows judgment free from cultural differences, making the experiment easy to handle. Laboratory research lacked mundane realism since it was a unique situation one would not ordinarily encounter. The results are not representative of the real behavior of participants.

Sensitivity is 'A personality trait that is 'highly alert to external information, easy to obtain clues, and has a higher ability to perceive subtle changes.' (Meng Li, Binxia Fu, Jing Ma, Hanlu Yu & Liying Bai, 2020). Our proprioceptive senses protect us (Uwe Proske & Simon C Gandevia, 2012). In other words, sensitivity is the speed and accuracy of our response to a stimulus. Senses include visual, auditory, and neural senses. Humans vary in their level of sensitivity to genetic means and environmental factors.

Sensitive traits have been proven to protect humans from danger. People with greater observing powers are comparatively more aware of the environment around them, giving responses much more quickly.

2. Correlation Between Sensitivity and IQ

Patients with "savant syndrome" may score very low on their IQ tests while "demonstrating exceptional skills or brilliance in specific areas," such as "rapid calculation, art, memory, or musical ability." (Wikipedia, 2018) This could be a case of showing that a person with low intelligence happens to have a high sensitivity.

It might suggest a hypothetical inverse relationship between intelligence and sensitivity level.

Studies of the covariance between intelligence and interpersonal sensitivity have a long historical background. They started when the field of social psychology existed. A few studies showed some overlap areas between intelligence and interpersonal sensitivity. For example, "Vocal expressions of emotional meaning" with r=0.37 (Davitz, 1964). Verbal ability, measured by the "Extended Range Vocabulary Test," correlated strongly with the IS data measured using the Interpersonal Competence

Instrument, abbreviated "ICI." These studies lead to the possibility that the two variables are inextricably intertwined.

On the contrary, some research concluded minimal association between interpersonal sensitivity and intelligence. The PONS- the Profile of Nonverbal Sensitivity (Rosenthal, Hall, DiMatteo, Rogers, &Archer, 1979), for example, is a widely used "audiovisual test of accuracy in judging the meanings of face, body, and voice tone cues." The test reported a "weak relationship between the PONS and general intelligence level" of the participants, with the correlations ranging from -0.02 to 0.18, with mean r=0.11. A few years later, an extensively verified "emotion-recognition test" called the Diagnostic Analysis of Nonverbal Accuracy, DANVA (Nowicki&Duke, 1994) reported that "there were no significant correlations" between the "DANVA receptive scores and IQ; the exact correlations were not reported.

A prominent number of research outcomes have implied that people with higher sensitivity are not likely to have a higher IQ score than others. However, the exact correlation coefficient is still unknown. There is no clear pattern in their relationship. However, the discussion has the risk of reductionism when concluding social data. Human behavior involves undoubtedly complex processes that can be difficult to understand and study without first breaking them down into smaller and simpler components to explain them. The experiment must have used a larger sample of participants to ensure the findings could be generalized to others.

On the other hand, significance testing can be strongly influenced by the sample size. Given that statistics with lower significance levels may suffer from their group number, the proportion one variable performs depending on the other variable would not be accurate.

3. Discussion

Koch, E., Eye, B., Ellison, G., & Gourley, B. (2016) researched the sensitivity and anxiety factors, and they found that anxiety could be equal to sensitivity (shown in Figure 1). Also, they found several factors, such as cognitive factors, physical factors, and social factors, that affect anxiety and sensitivity.

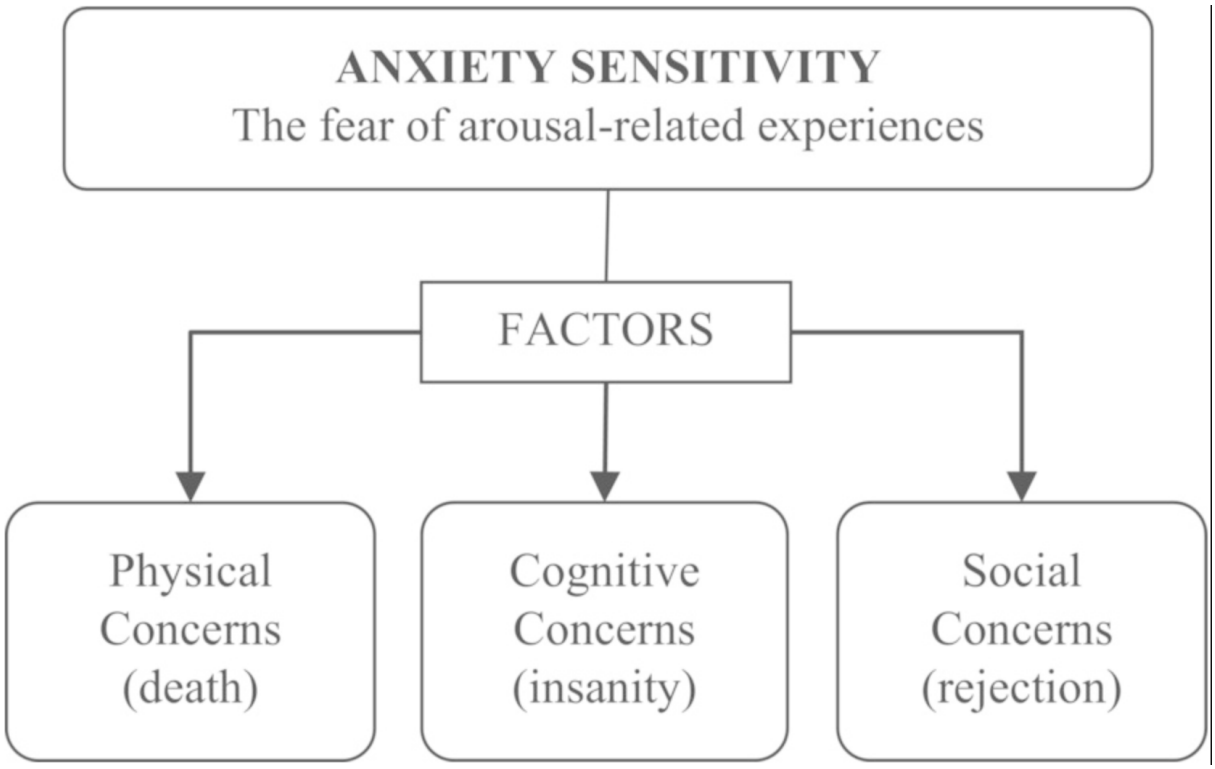

Figure 1. Anxiety sensitivity Factors

Since anxiety could result from sensitivity, we can find the correlation between IQ, anxiety, and sensitivity. Although there is not much research on this topic, we can hypothesize about the factors that a higher IQ can trigger anxiety and sensitivity.

Certain psychological susceptibility factors, such as traumatic experiences in childhood and insecure attachment relationships, may become susceptibility factors for future GAD development. Individuals who experience a sense of loss of control and insecurity during childhood, such as losing a parent experiencing violence or sexual abuse, are more likely to develop generalized

anxiety disorder. Pathological worry: Borkovec et al. established a conceptual model of "pathological worry" to explore the psychological factors affecting generalized anxiety disorder. Borkovec believes that GAD patients are characterized by experiencing severe negative emotions and a sense of loss of control, accompanied by pathological worries. Pathological worry refers to a cognitive (conceptual, verbal, or linguistic) effort to avoid aversive negative concepts and images. This pathological worry is associated with some unreasonable cognitions, such as the world being threatened, people not being able to control the occurrence of dangers, etc. Worry makes people busy thinking, thereby temporarily avoiding dangerous situations and physical activities and temporarily relieving pain and troubles. This benefit strengthens the patient's pathological worry. Therefore, this pathological worry gradually persists in GAD patients and becomes a way to solve problems.

Research has found that although this kind of worry hinders emotional processing and reduces anxiety levels, individuals may experience stronger negative emotions and cognitive intrusions in the future.

Personality factors: GAD patients will show some shortcomings in personality: ① It is easy to be hurt by criticism or disapproval from others; ② Apart from close relatives, they have no good friends or close friends; ③ Unless they are sure that they are popular, they are usually always Unwilling to get involved in other people's affairs; ④ behavioral withdrawal, always trying to avoid social activities or work that require interpersonal relationships; ⑤ psychological inferiority, always silent in social situations, afraid of making people laugh, and afraid of not being able to answer questions; ⑥ Sensitive and shy, afraid of being embarrassed in front of others; ⑦ Always exaggerating potential difficulties, dangers or possible risks when doing things that are ordinary but not within one's routine. If you are deeply troubled by anxiety, you should undergo a professional examination in time to avoid the development of anxiety disorder and relieve it under professional guidance.

4. Treatment Approach

Self-rating Symptom Scale (SCL-90): It contains a wide range of psychiatric symptomatology content, ranging from feelings, emotions, thinking, consciousness, and behavior to living habits, interpersonal relationships, diet, etc., and can accurately describe the symptoms of psychosis. The subjective symptoms of the test can better reflect the subject's problems, severity, and changes. It is currently the most commonly used self-evaluation scale among psychological Counseling clinics, neurosis research, or inpatients in general hospitals. It is used in educational institutions And is widely used by security agencies during mental health assessments.

Exposure therapy: In psychology, exposure therapy is a treatment method commonly used for phobia. However, this treatment method can also be used in treatment plans to help treat susceptible people. Because for phobia patients, exposure therapy can help them continue to 'desensitize,' while for unsuspecting people if they are constantly exposed to a sensitive environment, they will slowly desensitize and become less sensitive.

5. Conclusion

In conclusion, research illustrated a substantial relationship between intelligence and interpersonal sensitivity. Sensitivity requires a certain level of comprehensive sophistication to assess a situation. At the same time, many factors can cause people with high IQs to be more prone to anxiety, which means that people with high IQs may be more sensitive. Future research could examine the link between anxiety sensitivity and high IQ because few people in current psychological research pay attention to the connection between the three. If it is found that there is a causal relationship between anxiety and high IQ, it means that people with high IQ are indeed more likely to be more sensitive to some extent.

An interesting fact is that current brain science research on IQ mainly points out that high IQ is closely associated with brain volume, especially the importance of gray matter, and is associated with the level of neurons synapses. In addition, people with high IQs are less likely to suffer from obsessive-compulsive disorder and PTSD, and some studies show that people with high IQs are less likely to suffer from PTSD, especially those with high verbal intelligence (Saltzman, 2006). Obsessive-compulsive disorder and PTSD are considered to be mental illnesses that are easily sustained by "sensitive" people. Therefore, why people with high IQs are not prone to PTSD and obsessive-compulsive disorder is also a fascinating topic; future research can also start to discuss this aspect.

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