



Diabetes and Personality Traits

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Abstract:

Nowadays, Diabetes is very common disease. This is chronic too. This disease has physiological and psychological and of course behavioural aspects. Diabetes is incurable. Very disciplined lifestyle is needed to control it. The present study investigates the relationship between glycaemic control in patients with type II diabetes and personality traits. The present study was conducted on 79 patients with type II diabetes selected from various 3 hospitals from Nashik, Maharashtra. Participants completed the NEO Personality Inventory after that they underwent a blood sampling for the assessment of HbA1C levels. After data analysis it is found that there is a negative relationship between extraversion and HbA1C level ($r = -0.29$ and $P < 0.01$) as well as negative relationship between conscientiousness and HbA1C level ($r = -0.17$ and $P < 0.01$). On the other hand, neuroticism has a significant and positive relationship with HbA1C levels ($r = 0.16$ and $P < 0.05$). Openness to experience and agreeableness have no relationship with HbA1C level.

Keywords: Personality Traits, Hba1c Level

Introduction:

In this progressed innovative time, every single individual has encounters anxiety. This pressure causes numerous issues and ailments in wellbeing. Diabetes is one of them. This is most normal

incessant malady. Lately, way of life changes and the developing commonness of heftiness seem to have prompted an expanded pervasiveness of diabetes. As a way of life subordinate assortment, type II diabetes represents 90–95% of a wide range of diabetes. The treatment of diabetes is centered around the control of glycosylated hemoglobin (HbA1C) and keeping it at typical levels as a significant pointer of diabetes control.

Given the constant idea of diabetes, accomplishing treatment objectives for the malady depends for the most part on the patient's consistence with restorative guidelines and self-care exercises; be that as it may, the patient's consistence is influenced by a few factors too. George Engel's profile psychosocial model of incessant ailments and his contention that these maladies must be seen all the more exhaustively have brought the job that mental variables play in wellbeing and disease into consideration.

The present examination endeavors to address the major mental elements of individuals that influence glycemic control. Type I and II diabetes are distinctive in numerous angles. Type I is progressively essential and thus organic components appear to have increasingly critical job in patterns of infections. Type II diabetes, then again, generally accure in later ages and it appears way of life and subsequently mental components assume significant job in that adjacent to organic probability. Thinking about this issue, we concentrated in this investigation on type II patients.

Given the job of mental elements, the diabetic personality was first proposed in 1930. This thought expect that diabetic personality traits change and worsen the illness and confuse it by inclining the patient to transform mental strains into physical responses. Path et al. led an examination on 105 patients with type II diabetes and discovered glycemic control to have an immediate pessimistic association with neuroticism and an immediate constructive association with the selflessness of an extravert personality. In an investigation led by Wheeler et al. on 28 patients with type I diabetes, insulin acknowledgment was accounted for to have an immediate negative association with neuroticism and an immediate positive one with good faith.

The present investigation was directed because of the requirement for a multidimensional point of view on restorative issues and the absence of concentrates on the mental variables

engaged with diabetes. Albeit a few investigations have managed the subject, just a predetermined number have explicitly tended to the connection between personality traits and the advancement and treatment of diabetes. This examination in this manner tries to look at glycemic control in patients with type II diabetes and its association with personality traits. To react to the inquiry, "Is there a critical connection between glycemic control in patients with diabetes and personality traits."

Method:**Objective:**

To examine the relationship between glycemic control in patients with diabetes and personality traits.

Hypothesis:

There would be no significant relationship between glycemic control in patients with diabetes and personality traits.

Sample:

The present study is cross-sectional study. It was conducted on a study population of 35 to 60 years year-old men and women with type II diabetes (N=79). Convenient sampling method was used. There are three hospitals were considered for selection of patients. After their pathological examination they have been distributed NEO-FFI with appropriate suggestions. Researcher briefed participants on the study objectives and methods. Requested them to complete the test according to suggestions and return promptly.

Data collection tools

Participants were assessed using the five-factor NEO Personality Inventory and a blood test:

The five-factor NEO Personality Inventory – short form: The revised short form of the NEO contains 60 items measuring the five dimensions of personality, including neuroticism

(emotional stability), extraversion (introversion), openness to experience (secretiveness), agreeableness (argumentativeness) and conscientiousness (irresponsibility), which are scored based on a Likert scale. McGray & Costa reported the compatibility of the short and long forms with a correlation above 68%, also Egan et al. reported different Cronbach's alpha values for the inventory, ranging from 72% for openness to experience to 87% for neuroticism and the validity and reliability of the Persian version of the inventory have also been confirmed [8].

Statistical analysis

The descriptive indicators of participants' personality traits and test results were reported using the mean and standard deviation. The Pearson Correlation Coefficient was used to assess the relationship between participants' HbA1C levels and their scores on the different personality traits.

Table: Shows the relationship between five personality traits and glycemic level.

	Neuroticism	Extraversion	Openness To Experience	Agreeableness	Conscientiousness
HbA1C level	0.16*	-0.29*	0.03 (NS)	0.08 (NS)	-0.17*

*** sig. 0.01**

Results

For this study, total 79 patients were selected. All are male patients. Hence, there is no gender discrimination is considered. All are married and educated. The mean HbA1C level as an indicator of glycemic control was $7 \pm 1.8\%$, ranging from a minimum of 6.2% to a maximum of 10.6%, indicating a close to optimal control in participants. Examining the correlation between the different personality traits and the blood test indicators showed a significant positive correlation with neuroticism ($r = 0.16$ and $P < 0.05$) and significant negative correlations with extraversion ($r = -0.29$ and $P < 0.01$) and conscientiousness ($r = -0.17$ and $P < 0.01$). Openness to experience and agreeableness have no relationship with HbA1C level.

Discussion:

In the treatment of diabetics, the psychological viewpoint is important in light of the fact that this is totally life style disease. The present cross-sectional examination was led to determine the relationship between glycemic control in patients with type II diabetes and personality traits. The outcomes obtained uncovered significant relationships between a portion of the more routine personality traits and glycemic control in diabetic patients.

A negative relationship was found between extraversion as a personality trait and HbA1C levels; that is, the more extravert was a patient, the lower were his HbA1C levels or the better was his glycemic control. This relationship might be explained by the six dimensions that exist to this personality trait, including warmth in relationships, sociability, assertiveness, activeness, excitement seeking and positive emotions. The positive attitude inherent to this personality trait can explain the better acknowledgment of diabetes and adaptation to it through self-care behaviors. The propensity toward sociability supports patients with this personality trait to establish relationships with different diabetics and to more readily acknowledge their disease. Additionally, sociability fortifies the desire to be a piece of social activities like games settings, which assists with a superior glycemic control. The findings of the present investigation are consistent with the outcomes obtained by Wheeler et al. about patients with type I diabetes, which demonstrated a significant positive relationship among extraversion and physical activity and exercise (an indicator of adherence to treatment).

A significant negative relationship was found among conscientiousness and HbA1C levels; that is, higher scores in this parameter were associated with a superior glycemic control. The six dimensions of conscientiousness include having ability and being systematic, responsible, hardworking, efficient, intensive, exact and vigilant. Glycemic control and individual diabetes the board require stringent adherence to one's medical regimen and compliance with the specialist's advice. Individuals with a conscientiousness personality trait have sufficient motivation for an appropriate glycemic control because of the considerable number of attributes they have; also, their self-efficacy regarding these attributes encourages with their endeavors to achieve their wellbeing objectives. Being systematic and vigilant improves their motivation for accepting their treatment.

The outcomes obtained regarding this personality trait are consistent with the outcomes obtained by Brickman et al., Booth-Kewley and Vickers and Christensen and Smith. Wheeler et al. discovered a significant relationship between scoring high on this personality trait and having a superior insulin acknowledgment and diet adherence. Insulin acknowledgment was particularly dictated independent from anyone else efficacy and being precise and vigilant, while diet adherence was particularly dictated by being deliberate and vigilant. The investigation likewise demonstrated a significant relationship between the neuroticism personality trait and HbA1C levels. The dimensions of this personality trait include anxiety, outrage and aggression, depression, reluctance, impulsivity and vulnerability; the majority of these attributes are accompanied with negative emotions. Impulsivity prompts vulnerability in these individuals and diminishes their resistance of difficult situations, especially complicated diabetes treatment regimens, and increases their risk of treatment termination following any issues that may arise. These outcomes are consistent with the outcomes obtained by Brickman et al.

Limitations:

1. For the present study include the selection of participants from only three clinics from Nashik city.
2. Socioeconomic status of participants is one limitation, because all patients were from high SES, the results may not be easily extended to all diabetics; we can't assess any aspect of causality.
3. The sample size is small to capture the range of personality types.

Suggestions:

1. Future studies are recommended to be population-based and to be conducted on a more public level with greater sample size.
2. Other aspects of diabetes control such as self-care behaviors (self-monitoring of blood glucose, diabetes medication compliance, smoking status, etc.) can be important as dependent variables which we suggest to consider in further studies.

3. Future studies are also recommended to account for the variable of age and to examine factors affecting treatment follow-up with respect to this variable.

Implications:

The results of the present study showed that investigating personality traits can be useful for identifying patients predisposed to improper glycemic control. These results can also be used in the design of educational programs for newly diagnosed diabetic patients. The assessment of personality traits can have a substantial role in the proper treatment of diabetics. Although personality traits are generally considered innate constructs that are resistant to change, more effective steps should be focused on making patients aware of their personality traits and its effects on good or bad trends of their illness and try to modify them through constant psychological interventions beside medical therapies.

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