

PERSONALITY CHARACTERISTICS AS PREDICTORS OF PSYCHOLOGICAL RESILIENCE AMONG HYPERTENSION AND DIABETICS.

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ABSTRACT Diagnosis of a health condition such as hypertension and diabetes can be very stressful and leave patients with a roller coaster of emotions. Moving past the initial shock of diagnosis, there is a need to learn to manage and adjust to the pressures that come with it, validating the need for resilience, which refers to the ability of individuals to cope with challenges and successfully adapt to adverse situations. This study seeks to examine personality characteristics as a predictor of psychological resilience among diabetes and hypertensive patients. The sample comprised of people with hypertension and diabetes, purposive sampling method was used in the selection of participants. One hundred and sixty six (166) patients were selected with age ranging from eighteen (18) years to ninety two (92) years, sixty five (65) males and one hundred and one (101) females, sixty two (62) were diabetic, seventy six (76) were hypertensive, twelve (12) were diabetic and hypertensive. The sample population consisted of patients who have been receiving treatment for at least 3 months prior to this study. The result shows that extraversion ($t = -.48$ $p < .05$) does not predict psychological resilience, agreeableness ($t = -1.18$ $p < .01$). Also, conscientiousness ($t = -.74$ $p > .05$) does not significantly predict psychological resilience, neuroticism does not significantly predict psychological resilience ($t = -.96$ $p > .05$), openness to experience ($t = 2.12$ $p < .05$) significantly predicts psychological resilience. Openness to experience and agreeableness were the only predictors of psychological resilience in the study. This work contributes to the study of resilience and related factors by attempting to understand the role of personality characteristics on psychological resilience and its implication on chronic diseases.

KEYWORDS: Psychological resilience, Big Five personality traits, Chronic diseases, Hypertension, Diabetes.

I. INTRODUCTION

Hypertension and diabetes are chronic diseases that adversely affect every aspect of a patient's life, ranging from physical to mental to social (Swathi, Manjusha, Vadakkiniath, & Gururaj, 2023; Akif et al., 2004; WHO, 2023). Furthermore, these diseases are long-term, incurable, and could become life-threatening if proper medical treatment coupled with psychological interventions is not given to them (Eggenberger et al. 2011). These chronic diseases are undeniable stressors as they pose a threat to financial stability, physical integrity, and future plans and undermine the ability to fulfill family, professional, and social roles (Okediji et al., 2017, Liveh & Antonak 2005, Beatty 2012). This could further have a negative effect on the psychological well-being of the patients. In addition, psychological variables such as personality factors have been found to be potential risk factors for adverse health outcomes (Derollet 2005; Afkhami et al. 2013). Personality plays a fundamental role in the way individuals deal with diseases, influencing the way they face and adapt to diseases, thereby influencing well-being. It's a strong determinant for several health-related behaviors, such as sleep habits, eating habits, adherence to medication, alcohol consumption, sleep habits, and physical exercise, which could influence disease management and resilience. (O'Carroll et al. 2009, Elliott et al. 2024).

The risk of developing these diseases is related to various physiological, behavioral, and psychological factors. Given the impacts of psychological factors such as personality variables on the health outcomes of patients with chronic diseases, adequate attention should be given to psychological variables, especially supporting variables. One of the psychological components that plays an important supporting role is resilience; it has been identified as an important trigger for behavior excitement and motivation. Psychological resilience is a factor that enables an individual to adapt successfully to adversity and the environment despite threatening conditions (Sisto et al. 2019, Stephens 2017). Furthermore, resilience enhances an individual's ability to effectively deal with diseases and their complications (Tarsitani et al. 2022, Tugede 2004); it could also impact the quality of life of patients and psychosocial functioning (Chuang, Wu, & Wang, 2023). Depending on individual personality features, personality traits are relevant in adapting to stressful situations (Powell 2015). Research has shown a relationship between personality, psychological resilience, and adjustment to chronic diseases. However, not all of these traits can be conceptualized as resilience; of all the Big Five psychological traits, conscientiousness (a resilience component) and neuroticism (a vulnerability factor) have been found to have the strongest associations with chronic disease adjustment (Lawson et al. 2010, Rassart et al. 2014). This study intends to assess the influence of personality factors on psychological resilience among hypertensive and diabetic patients. This is necessary; there is a continuous increase in chronic diseases worldwide. This study will help understand the personality traits that boost resilience, thereby helping with improvement in the strategies used in managing chronic diseases for better health outcomes.

II. METHODOLOGY

This study is a cross-sectional survey research design; the dependent variable is psychological resilience, while the independent variable is the big five personality. It involved the administration of questionnaires to the subjects incorporating the psychological test and some demographic information. This research was carried out at the University of Medical Science Teaching Hospital, Akure, Ondo State. The pluralistic and viable nature of Ondo State informed the choice of the health care institution. As part of the research design, 5 hypotheses were formulated. These hypotheses are as follows;

- a) Openness to experience will significantly predict psychological resilience among diabetics and hypertensive patients.
- b) Agreeableness will significantly predict psychological resilience among diabetics and hypertensive patients.
- c) Conscientiousness will significantly predict psychological resilience among diabetics and hypertensive patients.
- d) Extraversion will significantly predict psychological resilience among diabetics and hypertensive patients.
- e) Neuroticism will significantly predict psychological resilience among diabetics and hypertensive patients.

PARTICIPANTS

The research population included people with hypertension and diabetes. The purposeful sampling method was used in the selection of participants. A total of one hundred and sixty-six (166) patients were selected, with ages ranging from eighteen (18) years to ninety-two (92) years. Of the sixty-five (65) males and one hundred and one (101) females, sixty-two (62) were diabetic, seventy-six (76) were hypertensive, and twelve (12) were diabetic and hypertensive. The sample population consisted of patients who had been receiving treatment for at least 3 months prior to this study.

INSTRUMENT

The instruments used contained 3 sections. Section A consisted of the bio-data information of the participants, which included gender (male and female), religion, marital status, and age. Section B and C included two standard psychological instruments: The Big Five Personality Inventory (BFI) and the Resilience Scale for Adults and Adolescents (RSA).

The Big Five Personality Inventory was used to measure personality, developed by Coasta & Macrae (1992), to measure personality traits; it contained five subscales, which are openness, conscientiousness, extraversion, agreeableness, and neuroticism. It contains 44 items; the responses are coded as 1 = disagree, 2 = disagree-a-little, 3 = neither agree nor disagree, 4 = agree-a-little, and 5 = agree strongly. Internal consistency for subscales in the validation sample: Extraversion: Cronbach's alpha =.53; agreeableness: Cronbach's alpha =.37; conscientiousness: Cronbach's alpha =.38; neuroticism: Cronbach's alpha =.15; openness: Cronbach's alpha =.49.

The Resilience Scale for Adults (RSA) consists of 33 items; it is unidirectional with no reverse questions; Respondent ratings are given on a 3-point Likert scale. The scale provides six subscales, namely, personal strength/perception of self and personal strength/perception of the future. Structures include style, social competence, family cohesion, and social resources. It is a reliable (Cronbach's α from .67 to .81 and total score .88) and stable (test-retest, Pearson r from .73 to .80, and total score .84). The highest that can be scored on the resilience scale for adults is 39, while the lowest is 13, 30 and above, which indicates high resilience; 20.0–29.5 indicates average resilience; and 19.5 and below indicates low resilience. Permission and ethical approval were sought from the medical outpatient department, and the respondents were adequately informed about the nature of the study. Confidentiality and anonymity were assured. Multiple regression analysis was used, and some demographic variables were codified. For example, gender was coded as male 0, female 1. All analysis was conducted using the SPSS 20.0 wizard.

III. RESULTS AND DISCUSSION

Table 1: Regression Analysis Table Showing the Influence of Personality as Predictors and Psychological Resilience

Variables	Mean	t	β	R	R ²	F
Extraversion	22.30	-0.05	-0.48			
Agreeableness	29.70	0.12	1.18*			
Conscientiousness	27.40	-0.07	-0.74	0.31	0.09	2.04*
Neuroticism	24.80	-0.09	-0.96			
Openness	34.50	0.18	2.15*			

Note * = $p < .05$, ** = $p < .01$

The result shows that extraversion ($t = -.48$ $p < .05$) does not predict psychological resilience, agreeableness ($t = -1.18$ $p < .01$). Also, conscientiousness ($t = -.74$ $p > .05$) does not significantly predict psychological resilience, neuroticism does not significantly predict psychological resilience ($t = -.96$ $p > .05$), openness to experience ($t = 2.12$ $p < .05$) significantly predicts psychological resilience.

This study investigated personality as a predictor of psychological resilience. Considering the complexity of the construct of resilience, which is made up of constitutional variables that enhance overcoming adversity, this study posited that personality characteristics (openness to experience, agreeableness, conscientiousness, extraversion, and neuroticism) will significantly predict psychological resilience among hypertensive and diabetic patients. Based on the findings of this study, openness to experience and agreeableness significantly predict psychological resilience, while conscientiousness, extraversion, and neuroticism do not significantly predict psychological resilience.

There is a significant positive relationship between agreeableness and psychological resilience. Individuals who scored highly on the agreeableness trait reported having an optimistic view of life; they are full of hope and confident in the successful outcomes of their actions and future. This result is consistent with Grazino et al. (2007), Burtaverde et al. (2021), Grace (2010), and Mohammed et al. (2015). Furthermore, agreeableness is associated with traits such as positive interpersonal relationships, cooperation, and empathy. Agreeable individuals tend to handle stress by seeking social support, thereby making it easy to navigate health challenges effectively and adapt to lifestyle changes. As expected, our result revealed that openness to experience significantly predicted psychological resilience. The reason for this could be that openness to experience serves as a foundation for resilience among patients (Oshio et al. 2018). Individuals with an openness to experience trait approach challenging situations with an adaptable and flexible mindset; this correlates with the willingness to explore and learn different aspects of life, including coping strategies (Chen et al., 2022), thus allowing them to navigate the complexities of these chronic diseases effectively, thereby fostering psychological resilience in the face of adversity (Burke et al., 2006).

Contrary to what was expected, extraversion does not significantly predict psychological resilience (Kocjan et al., 2021). Extraversion is characterized by traits such as outgoingness and sociability and is often associated with adaptability (Oshio et al., 2018). However, individual differences could play a major role considering past experiences and personal beliefs, coupled with the fact that chronic diseases present challenges such as emotional burdens and lifestyle adjustments, thereby overshadowing their potential benefits for resilience. Neuroticism does not predict psychological resilience, as substantiated by Osio et al. (2018). Reasons for this could be that individuals with high levels of neuroticism tend to approach situations and experiences unfavorably; they also tend to express negative emotions more often (Kocjan et al., 2021; Mohammed et al., 2015; Fatoyinbo, 2010).

Conscientiousness does not significantly predict psychological resilience among hypertensive and diabetic patients. This result presents a substantial departure from the results of most studies examining the relationship between conscientiousness and resilience. This could be attributed to the uniqueness of the study samples used for this study and methodological differences. Findings from previous literature suggest that conscientiousness is a significant predictor of psychological resilience; this implies that individuals with chronic diseases who are high on the conscientiousness trait were able to adapt and cope better in the face of adversity (Chowdhury & Mukherjee, 2024; Burtaverde et al. 2021; Fayombo, 2010). However, avenues are being opened for further research to be done in exploring moderators predicting psychological resilience.

IV. CONCLUSION

In conclusion, this study investigated the influence of personality on psychological resilience among hypertensive and diabetic patients. More research has to be done in this area to help discover other factors that help boost psychological resilience among patients with chronic diseases; understanding resilience is a starting point as it improves health outcomes. The government, public health organizations, and NGOs should invest more in providing effective psychological and counseling services, as these will help patients navigate the complexities of their illness and enhance psychological resilience.

REFERENCES

- [1] Afkhami A. M., Zare, H., Alipor, A., Poursharifi, H., Arab, S. K. (2013). Correlation between self efficacy, type D personality and health locus of control with control of blood sugar in patients with diabetes type II (Persian)]. *Journal of Shahid Sadoughi University of Medical sciences*. 20(6):805-13.
- [2] Akif, A., Qusar, M. M. A. S., & Islam, M. R. (2024). The impact of chronic diseases on mental health: An overview and recommendations for care programs. *Current Psychiatry Reports*, 26(7). <https://doi.org/10.1007/s11920-024-01510-7>
- [3] Beatty, J. E. (2012). Career barriers experienced by people with chronic illness: A U.S. study. *Employee Responsibilities and Rights Journal*, 24(2), 91–110. <https://doi.org/10.1007/s10672-011-9177-z>
- [4] Burke, K. J., Finch, J. S., Paton, D. & Ryan, M. (2006). Characterizing the Resilient Officer: Individual Attributes at Point of Entry to Policing. *Traumatology* Vol (12),. 178- 188.
- [5] Burtaverde, V., Ene, C., Chiriac, E., Avram, E., (2021). Decoding the link between personality traits and resilience. Self-determination is the key. *Current Issues Personal Psychology*. 9(3):195-204. <https://doi.org/10.5114/cipp.2021.107337>
- [6] Chen, L., Qu, L., & Hong, R. Y. (2022). Pathways Linking the Big Five to Psychological Distress: Exploring the Mediating Roles of Stress Mindset and Coping Flexibility. *Journal of clinical medicine*, 11(9), 2272.
- [7] Chowdhury, J. R., & Mukherjee, P. (2024). To what extent personality traits and psychological resilience affect subjective wellbeing? A study on young Adults of Tripura. *Educational Administration: Theory and Practice*, 30(5), 7172-7178. <https://doi.org/10.53555/kuey.v30i5.4109>
- [8] Chuang, S. P., Wu, J., & Wang, C. (2023). Resilience and quality of life in people with mental illness: A systematic review and meta-analysis. *Neuropsychiatric Disease and Treatment*, 19, 507-514. <https://doi.org/10.2147/NDT.S392332>
- [9] Denollet J. (2005). DS14: standard assessment of negative affectivity, social inhibition, and Type D personality. *Psychosom Med*. 2005;67(1):89–97.
- [10] Elliott, T. R., Perrin, P. B., Powers, M. B., Duffeck, D., & Warren, A. M. (2024). Resilience and distress among individuals with chronic health conditions during the initial wave of the COVID-19 pandemic. *Journal of Affective Disorders Reports*, 15, 100710. <https://doi.org/10.1016/j.jadr.2023.100710>
- [11] Fayombo G. (2010). The relationship between personality traits and psychological resilience among the Caribbean adolescents. *International Journal of Psychological Studies*.2:105–116.
- [12] Graziano, W. G., Habashi, M. M., Sheese, B. E., Tobin, R. M. (2007). Agreeableness, empathy, and helping: a person x situation perspective. *Journal Personality & Social Psychology*. 93(4):583-99
- [13] Grace, F. (2010). The Relationship between Personality Traits and Psychological Resilience among the Caribbean Adolescents. *International Journal of Psychological Studies* Vol. 2, No. 2; 105-116.
- [14] Kocjan, G. Z., Kavcic, T., & Avsec, A. (2021). Resilience matters: Explaining the association between personality and psychological functioning during the COVID-19 pandemic. *International Journal of Clinical and Health Psychology*. 21(1).
- [15] Lawson, V. L., Bundy, C., Belcher, J., & Harvey, J. N. (2010). Mediation by illness perceptions of the effect of personality and health threat communication on coping with the diagnosis of diabetes. *Br. J. Health Psychol*. 15:623–42
- [16] Tarsitani, L., Pinucci, I., Tedeschi, F., Patanè, M., Papola, D., Palantza, C., Acarturk, C., Björkenstam, E., Bryant, R., Burchert, S., DAVISSE-Paturet, C., Díaz-García, A., Farrel, R., Fuhr, D. C., Hall, B. J., Huizink, A. C., Lam, A. I. F., Kurt, G., Leijen, I., Mittendorfer-Rutz, E., ... Barbui, C. (2022). Resilience of people with chronic medical conditions during the COVID-19 pandemic: a 1-year longitudinal prospective survey. *BMC psychiatry*, 22(1), 633. <https://doi.org/10.1186/s12888-022-04265-8>
- [17] Mohammed, A. A., & Mostafa, A. A. (2015). Five Factor Personality Traits and Psychological Resilience Among Secondary School Students in Egypt. *Psycho-Educational Research Reviews*, 4(2), 3–9.
- [18] Okediji, P. T., Ojo, A. O., Ojo, A. I., Ojo, A. S., Ojo, O. E., & Abioye-Kuteyi, E. A. (2017). The Economic Impacts of Chronic Illness on Households of Patients in Ile-Ife, South-Western Nigeria. *Cureus*, 9(10), e1756. <https://doi.org/10.7759/cureus.1756>
- [19] Oshio, A., Taku, K., Hirano, M., & Saeed, G. (2018). Resilience and Big Five personality traits: a meta-analysis. *Personality and Individual Differences*, 127, 54–60.

- [20] O'Carroll, R. E., et al. (2009). Five-Factor Model personality factors moderated the effects of an intervention. *Journal of Behavioral Medicine*, 32(4), 386-397. Retrieved from <https://pmc.ncbi.nlm.nih.gov/articles/PMC2745728/>
- [21] Pedersen SS, Denollet J. (2003) Type D personality, cardiac events, and impaired quality of life: A review. *European Journal of Cardiovascular Prevention & Rehabilitation*. 10(4):241-8.
- [22] Powell, T. J., Enright, S. J., (2015). *Anxiety and stress management*. London: Routledge.
- [23] Rassart, J., Luyckx, K., Klimstra, T. A., Moons, P., Groven, C., & Weets, I. (2014). Personality and illness adaptation in adults with type 1 diabetes: the intervening role of illness coping and perceptions. *J. Clin. Psychol. Med. Settings* 21:41–55
- [24] Stephens, T. M., Smith, P., & Cherry C.(2017). Promoting resilience in new perioperative nurses. *AORN Journal*; 105(3):276-84.
- [25] Swathi, M., Manjusha, S., Vadakkiniath, I. J., & Gururaj, A. (2023). Prevalence and correlates of stress, anxiety, and depression in patients with chronic diseases: A cross-sectional study. *Middle East Current Psychiatry*, 30, 66. <https://doi.org/10.1186/s43045-023-00075-w>
- [26] Sisto, A., Vicinanza, F., Campanozzi, L. L., Ricci, G., Tartaglini, D., & Tambone, V. (2019). Towards a Transversal Definition of Psychological Resilience: A Literature Review. *Medicina (Kaunas, Lithuania)*, 55(11), 745. <https://doi.org/10.3390/medicina55110745>
- [27] Tugade, M. M., Fredrickson, B. L., & Feldman, B. L. (2004). Psychological resilience and positive emotional granularity: Examining the benefits of positive emotions on coping and health. *Journal of Personality*. 72(6):1161-90.
- [28] Van Dooren, F. E., Denollet, J., Verhey, F. R., Stehouwer, C. D., Sep, S. J., Henry, R. M., et al. (2016). Psychological and personality factors in type 2 diabetes mellitus, presenting the rationale and exploratory results from the maastricht study, a population-based cohort study. *BMC Psychiatry*. 16(1):17.
- [29] World Health Organization. (2023). The impact of chronic diseases on quality of life. WHO. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/chronic-diseases>
- [30] Zager, K. G., Kavčič, T., & Avsec, A. (2021). Resilience matters: Explaining the association between personality and psychological functioning during the COVID-19 pandemic. *International journal of clinical and health psychology: IJCHP*, 21(1),