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PSYCHOLOGICAL WELL-BEING AND RESILIENCE ON DIABETES PATIENTS

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ABSTRACT

With the global rise in diabetes, understanding its psychological aspects is essential for tailored interventions and improved patient well-being. This study examined the impact of psychological well-being and resilience in 128 adults with diabetes, aged 18 to 60, using a descriptive correlational design. The Ryff Psychological Well-Being Scale and the Nicholson McBride Resilience Scale were employed. The study measured diabetes distress, psychological well-being, resilience, and explored differences between type 1 and type 2 diabetes, as well as gender differences. Results showed a positive correlation between resilience and autonomy, personal growth, purpose in life, and self-acceptance in both types of diabetes. However, no significant gender differences were found in environmental mastery, positive relations, or purpose in life. Differences in resilience and other well-being indicators were observed between type 1 and type 2 diabetes patients. These findings highlight the importance of resilience and psychological well-being in diabetes management, suggesting the need for targeted interventions to enhance patient outcomes and quality of life.

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INTRODUCTION

Diabetes, a global health concern affecting approximately 9.2% of the population, presents not only metabolic challenges but also significant psychological implications. In 2020, 463 million people worldwide had diabetes, with 77 million cases in Southeast Asia. Many remain undiagnosed, increasing the risk of severe complications such as heart attacks, strokes, and kidney disease. In India, states like Goa, Pondicherry, and Kerala report the highest prevalence, with rising cases in Uttar Pradesh, Madhya Pradesh, Bihar, and Arunachal Pradesh. Diabetes is classified into Type 1, an autoimmune disorder, and Type 2, often associated with lifestyle factors like obesity.

The present research study attempts to explore the relationship between psychological well-being and resilience on diabetes patients.

DIABETES

Diabetes is a chronic condition characterized by elevated blood glucose levels due to insufficient insulin production or ineffective cellular response to insulin. This leads to hyperglycaemia, which, if unmanaged, increases the risk of complications involving the eyes, kidneys, nerves, heart, and certain cancers. Effective management of diabetes is crucial in mitigating these risks.

The condition is formally known as diabetes mellitus. Another condition, diabetes insipidus, shares similar symptoms such as excessive thirst and frequent urination but is less common and distinct from diabetes mellitus.

A 2012 study in Tirana, Albania, reported a diabetes prevalence of 11.5%, with higher rates observed among less-educated adults. Upon diagnosis, individuals frequently experience

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psychological responses, including emotional distress, anger, and depression. Diabetes distress, specifically linked to the challenges of managing blood glucose levels, differs from general depression and has been associated with an increased risk of disease progression. Effective management of psychological factors is, therefore, important in improving health outcomes for individuals with diabetes.

TYPES OF DIABETES

Type 1 Diabetes (T1D)

- Pathophysiology: Autoimmune destruction of insulin-producing β-cells in the pancreas.
- Characteristics: Insulin deficiency, typically manifests in childhood or adolescence, but can occur at any age.
- Management: Lifelong insulin therapy is required.
- Research Focus: Genetics, autoimmune mechanisms, and complications (such as ketoacidosis).

Type 2 Diabetes (T2D)

- Pathophysiology: Insulin resistance and a relative lack of insulin.
- Characteristics: Typically develops in adulthood, but increasingly seen in younger individuals due to obesity and lifestyle factors.
- Management: Managed through lifestyle changes, oral medications, and sometimes insulin.
- Research Focus: Risk factors like obesity, physical inactivity, and metabolic syndrome; comorbidities such as cardiovascular disease.

Gestational Diabetes (GDM)

- Pathophysiology: Develops during pregnancy and usually resolves after childbirth.

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- Characteristics: Associated with insulin resistance and an increased risk of developing T2D later in life.
- Management: Dietary control, exercise, and sometimes insulin or oral medication during pregnancy.
- Research Focus: Maternal-fetal health, long-term effects on both mother and child, prevention of subsequent diabetes.

Monogenic Diabetes (e.g., MODY - Maturity Onset Diabetes of the Young)

- Pathophysiology: Caused by mutations in a single gene affecting β-cell function.
- Characteristics: Early-onset, often misdiagnosed as Type 1 or Type 2.
- Management: Varies depending on the mutation, but often doesn't require insulin.
- Research Focus: Genetic causes, precise diagnosis, and personalized treatment.

Secondary Diabetes

- Pathophysiology: Occurs due to other medical conditions or treatments, such as pancreatitis, Cushing's syndrome, or glucocorticoid therapy.
- Research Focus: The relationship between the underlying condition and glucose metabolism.

SYMPTOMS OF DIABETES

- ***Common Symptoms***

- Frequent urination (Polyuria)
- Excessive thirst (Polydipsia)
- Increased hunger (Polyphagia)
- Unexplained weight loss
- Fatigue

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- Blurred vision
- Slow healing of wounds
- Frequent infections (e.g., skin, urinary tract)
- Tingling or numbness in hands or feet (Neuropathy)

- ***Symptoms Specific to Type 1 Diabetes***

- Sudden onset of symptoms
- Diabetic ketoacidosis (DKA):
- Nausea, vomiting, abdominal pain
- Fruity-smelling breath
- Confusion

- ***Symptoms Specific to Type 2 Diabetes***

- Gradual onset of symptoms
- Darkened skin (Acanthosis Nigricans) in areas like the neck or armpits

- ***Gestational Diabetes Symptoms***

- Often asymptomatic (detected through routine screening)
- Possible signs include excessive thirst, frequent urination, and fatigue.

PSYCHOLOGICAL WELL-BEING

Psychological well-being, also referred to as mental well-being, represents a state of optimal mental health and functioning, encompassing emotional, cognitive, and social dimensions. It extends beyond the mere absence of mental illness, encompassing positive mental health characterized by constructive emotions, rational thinking, resilience, and a sense of life satisfaction and purpose.

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Burns (2017) defines psychological well-being "as the inter- and intra-individual levels of positive functioning, including one's relationships with others and self-referential attitudes such as a sense of mastery and personal growth."

Trojanowski et al. (2021) conducted a systematic review to explore how parenting practices influence the psychological well-being of youth with type 1 diabetes, focusing on internalizing and externalizing symptoms as well as demographic factors. Following PRISMA guidelines, they identified 40 relevant studies. The results indicated that family conflict, critical parenting, support, parental involvement, and relationship quality significantly affected psychological health outcomes, with variations based on parental and child gender and demographics. The review emphasizes the need for supportive parenting and reducing family conflict to improve psychological well-being. However, it also highlights gaps in the literature, including limited research on fathers and secondary caregivers, a lack of sample diversity, and insufficient attention to demographic influences and anxiety. The authors conclude with recommendations for future research and clinical practice.

PSYCHOLOGICAL RESILIENCE

Resilience, derived from the Latin term *'resilire,'* meaning "to rebound," refers to the ability to adapt and recover from adversity, trauma, or significant stress. It involves bouncing back and thriving despite challenges or setbacks. Resilient individuals maintain equilibrium and function effectively in difficult situations, demonstrating traits such as flexibility, perseverance, and optimism while employing various coping strategies.

Psychological resilience specifically pertains to the capacity to handle and recover from crises both mentally and emotionally, allowing individuals to quickly regain their previous state. This concept gained prominence through the research of psychologist Emmy Werner in the 1970s and 1980s, who studied children from disadvantaged backgrounds. According to the

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American Psychological Association (APA), psychological resilience is "the process of adapting well in the face of adversity, trauma, tragedy, threats, or significant sources of stress." Masten and Obradović (2006) further define resilience as the ability to cope with stress and adversity while adapting positively to challenging life experiences.

PURPOSE

The purpose of the present study is to investigate the impact of psychological well-being and resilience on diabetes patients.

HYPOTHESIS

- There will be a negative relation between the resilience and psychological well-being in type 1 diabetes patients.
- There will be a positive relation between the resilience and psychological well-being in type 2 diabetes patients.
- There will be a significant difference between males and females of both between type 1 and 2 diabetes.
- There will be a significant difference between the type1 and type 2 diabetes patients.

METHOD

SAMPLE

A total sample of 128 adults aged between 18 to 60 years, without any geographical limitations were involved.

MEASURES

The Ryff Psychological Well-Being Scale (RPWBS), developed by Ryff (1989), is grounded in Aristotle's concept of eudaimonia and theoretical frameworks that describe

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positive functioning in humanistic, existential, developmental, social, and clinical psychology. This scale comprises six subscales: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. The RPWBS is a self-report questionnaire consisting of 42 items, with items 3, 5, 10, 13-19, 23, 26-27, 30-32, 34, 36, and 39-41 assessed negatively, while the remaining items are evaluated positively. Overall assessment is calculated by summing the degrees of agreement across the six dimensions. Respondents rate each item on a 6-point scale, ranging from 1 (strongly disagree) to 6 (strongly agree).

The Nicholson McBride Resilience Questionnaire (NMRQ) is a self-report instrument designed to measure psychological resilience. It consists of 12 items rated on a 5-point Likert scale, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). Total scores are summed and classified as follows: scores from 0 to 37 indicate a developing level of resilience, 38 to 43 signify an established level, 44 to 48 represent a strong level, and 49 to 60 denote an exceptional level of resilience.

PROCEDURE

The participants were informed about the purpose of research and the questionnaire were filled through both online and offline means. Each participant was thanked for their cooperation and their kind help. Standardised psychological tests were administered to the participants.

ANALYSIS OF DATA

Mean, Standard Deviation, Correlation and T ratio were worked out to find out the relation between all the variables.

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Table 1: *Descriptive Statistics of Variables*

	GROUP	N	MEAN	SD
RESILIENCE	Type 1 Diabetes	65	37.8	5.70
	Type 2 Diabetes	63	41.1	5.14
AUTONOMY	Type 1 Diabetes	65	24.7	4.32
	Type 2 Diabetes	63	26.9	4.98
ENVIRONMENTAL MASTERY	Type 1 Diabetes	65	27.6	4.09
	Type 2 Diabetes	63	29.6	3.37
PERSONAL GROWTH	Type 1 Diabetes	65	24.2	5.86
	Type 2 Diabetes	63	25.0	5.87
POSITIVE RELATIONS	Type 1 Diabetes	65	29.8	4.95
	Type 2 Diabetes	63	33.5	3.39
PURPOSE IN LIFE	Type 1 Diabetes	65	25.6	4.22
	Type 2 Diabetes	63	28.6	5.62
SELF ACCEPTANCE	Type 1 Diabetes	65	24.3	3.66
	Type 2 Diabetes	63	28.1	4.00

Table 2: *Correlation Table of Type 1 diabetes*

Variables	Resilience	Autonomy	Environmental Mastery	Personal Growth	Positive Relations	Purpose in Life	Self-acceptance
Resilience	1	0.584**	0.236	0.506**	0.169	0.394**	0.375**

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Autonomy		1	0.188	0.405**	0.200	0.445**	0.175
Environmental Mastery			1	0.078	0.486**	0.346**	0.333**
Personal Growth				1	0.004	0.422**	0.287*
Positive Relations					1	0.371**	0.049
Purpose in Life						1	0.132
Self-acceptance							1

Table 3: Correlation *Table of Type 2 diabetes*

Variables	Resilience	Autonomy	Environmental Mastery	Personal Growth	Positive Relations	Purpose in Life	Self-acceptance
Resilience	1	0.525**	0.352**	0.288*	0.425**	0.257*	0.515**
Autonomy		1	0.101	0.153	0.189	0.061	0.497**
Environmental Mastery			1	0.241	0.386**	0.284*	0.539**

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Personal Growth				1	0.029	0.621**	0.457**
Positive Relations					1	0.179	0.330**
Purpose in Life						1	0.367**
Self-acceptance							1

Table 4: T-*ratio among the males and females*

	T-ratio	**df**	**Significance (2- tailed)**
Resilience	3.673	126	< 0.001*
Autonomy	3.831	126	< 0.001*
Environmental Mastery	1.183	126	0.239
Personal Growth	2.590	126	0.011*
Positive Relations	0.958	126	0.340
Purpose in Life	1.200	126	0.233
Self-acceptance	3.142	126	0.002*

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DISCUSSION OF RESULT

The correlation analysis for type 1 diabetes patients revealed a significant positive relationship between resilience and autonomy (r = 0.584), personal growth (r = 0.506), purpose in life (r = 0.394), and self-acceptance (r = 0.375). Non-significant positive correlations were found between resilience and environmental mastery (r = 0.236) as well as resilience and positive relations (r = 0.169). The correlation analysis for type 2 diabetes patients showed significant positive relationships between resilience and autonomy (r=0.525**), environmental mastery (r = 0.352*), personal growth (r = 0.288*), positive relations (r = 0.425**), purpose in life (r = 0.257*), and self-acceptance (r = 0.515**). The T-test results showed no significant differences between the variables in type 1 and type 2 diabetes patients, as well as between males and females across the variables in diabetes patients.

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