

# DEPRESSION AND ANXIETY AMONG DIABETIC AND HYPERTENSIVE PRIMARY HEALTH CARE PATIENTS IN KANNIYAKUMARI DISTRICT

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## Abstract

**INTRODUCTION :** To determine if depression or anxiety among the patient of non communicable diseases play a role in control of their diseases.

**METHODOLOGY :** Secondary data analysis of the study conducted by J-PAL. All the data collected by the primary study has been included without any inclusion or exclusion criteria.

**RESULTS :** Data of 1097 participants enrolled in the primary study was analysed. Out of the 1097 participants, 672 were females and 425 were males. The median age of the participants was 57 years with an IQR of 16. Out of the participants who were suggestive to have anxiety on the PHQ4 questionnaire, 15% and 20% had uncontrolled hypertension and uncontrolled diabetes respectively. Out of the participants who were suggestive to have depression, 20% had uncontrolled hypertension and 8% had uncontrolled diabetes.

**CONCLUSION :** This secondary analysis reinforces the idea that mental health plays a vital role in the control of non communicable diseases. Further comprehensive studies are warranted to cement the findings of this analysis.

**KEYWORDS :** Mental health, hypertension, diabetes

## INTRODUCTION

Depression and anxiety are now being recognized as emerging non-communicable disease states across entire populations.<sup>1</sup> This heightened awareness has come to the forefront following the COVID-19 outbreak. The disaster has illuminated the often overlooked issue of mental health, particularly among the elderly and working-class populations. Shortly after the onset of the COVID-19 pandemic, reports began to surface emphasizing the significance of mental health disorders, particularly depression.<sup>2</sup>

The COVID-19 pandemic acted as a catalyst, bringing mental health into sharper focus as individuals grappled with unprecedented challenges such as isolation, fear of illness, economic instability, and grief. These stressors exacerbated pre-existing mental health conditions and triggered new cases of depression and anxiety. Moreover, the pandemic highlighted disparities in access to mental health resources, further underscoring the urgent need for comprehensive mental health support systems.

Among the most affected demographics were the elderly, who faced heightened vulnerability due to increased social isolation and greater susceptibility to severe illness from the virus.<sup>3</sup> Additionally, the working-class population bore the brunt of economic hardships, job insecurity, and

the pressure to adapt to remote work environments, all of which contributed to heightened levels of stress and anxiety. In response to these challenges, governments, healthcare organizations, and advocacy groups have intensified efforts to raise awareness about mental health issues and expand access to mental health services.

Telemedicine and online support groups have emerged as crucial resources for individuals seeking assistance during periods of social distancing and lockdowns. Moving forward, it is imperative to prioritize mental health as an integral component of public health initiatives.

Long-term strategies should focus on destigmatizing mental illness, integrating mental health services into primary healthcare systems, and fostering resilience and coping mechanisms within communities.<sup>4</sup> By addressing mental health concerns holistically, societies can better support individuals in navigating the complex challenges of the modern world, pandemic or otherwise.



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The Sustainable Development Goal (SDG) target 3.4 sets a clear agenda: "By 2030, reduce by one third premature mortality from non-communicable diseases through prevention, treatment, and promotion of mental health and well-being."<sup>5</sup> This objective underscores the recognition among policymakers of the integral link between mental well-being and overall physical health within the population.

There's a growing acknowledgment that addressing mental health issues isn't just about improving individual lives; it's also about bolstering public health outcomes and reducing healthcare costs in the long term. By integrating mental health considerations into existing policies and programs, policymakers can effect significant savings on healthcare expenditures by preventing the escalation of mental health conditions and their associated physical health complications.

Small adjustments to existing policies and programs can yield substantial benefits.<sup>6</sup> For instance, incorporating mental health screenings into routine healthcare check-ups can facilitate early detection and intervention for individuals at risk of developing mental health disorders. Additionally, ensuring access to affordable mental health services and promoting mental health literacy within communities can help destigmatize seeking treatment and encourage proactive management of mental well-being.

Investing in preventive measures and early intervention not only improves individual outcomes but also alleviates the strain on healthcare systems and reduces the economic burden associated with treating advanced stages of mental illness. Moreover, prioritizing mental health promotion aligns with broader public health goals, fostering resilient and thriving communities.

By aligning policy decisions with the objectives outlined in SDG target 3.4, governments can cultivate a more holistic approach to healthcare that recognizes the interconnectedness of mental and physical well-being. Through strategic investments in mental health promotion and early intervention, policymakers can pave the way for healthier, happier populations while simultaneously achieving significant cost savings in healthcare expenditures.

Non-communicable diseases (NCDs) present a unique challenge due to their requirement for long-term drug therapy and strict adherence to treatment regimens. However, the prolonged use of medications, coupled with the frequency of dosing, can have detrimental effects on the mental well-being of patients.<sup>7</sup> This negative impact on mental health often translates into decreased medication compliance, exacerbating the control of the underlying NCD.

As adherence to treatment dwindles, the management of the NCD becomes increasingly challenging, necessitating escalation of treatment strategies. This escalation not only intensifies the burden of managing the disease but also contributes to heightened levels of stress and depression among patients. Consequently, a vicious cycle ensues, wherein depression further compromises treatment adherence and disease control, leading to a downward spiral of deteriorating health outcomes.

This study endeavors to illuminate the effects of mental health on the control rates of hypertension and diabetes. By understanding the interplay between mental health and disease management, healthcare providers can develop targeted interventions aimed at improving medication adherence and enhancing the overall quality of life for patients with chronic diseases.

Exploring avenues for intervention within this cycle offers an opportunity to implement holistic approaches to patient care that address both the physical and psychological dimensions of chronic disease management. By breaking the cycle of depression and poor disease control, healthcare professionals can empower patients to regain control over their health and well-being, ultimately fostering improved health outcomes and enhanced quality of life.

Type 2 Diabetes Mellitus and Hypertension remain at the forefront of non-communicable diseases, as evidenced by data from the National Family Health Survey – 5. In Tamil Nadu, 20.7% of women and 22.1% of men exhibit elevated blood sugar levels or require medication for control. Similarly, 24.8% of females and 30.2% of males struggle with poorly managed blood pressure or rely on medication.<sup>8</sup>

A study titled 'Depression Increases the Risk for Uncontrolled Hypertension' reveals a striking relative risk of 15.5 for uncontrolled hypertension among depressed individuals.<sup>9</sup> The research also uncovers a significant correlation between depression and both systolic and diastolic blood pressure values. The authors advocate for the screening of depression in hypertensive patients, citing its simplicity and cost-effectiveness as potential tools for improving outcomes.

## METHODS

This secondary study analyzes data derived from a larger primary investigation, which was conducted with after ethical clearance. The primary study (JAPL-ML) employed random sampling techniques across various blocks within the Kanniyakumari district from 19 July 2023 to 23 September 2023, selecting four blocks at random. Subsequently, one

primary health center per block was chosen randomly, and patients attending routine outpatient clinics were recruited as study participants after providing informed consent in the local vernacular language. All consecutive patients attending the general outpatient department were included in the primary study. This secondary data analysis utilizes the entirety of the data collected during the primary study, without any additional inclusions or exclusions.

## RESULTS

Table 1 : Sex distribution of the study participants

Parameter	Frequency	Percentage
Females	672	61
Males	425	39
Total	1097	100

The median age of the study participants was 57 years with an interquartile range of 16 years. There was a total of 798 hypertensive patients and 510 diabetic patients. 14 new hypertensive patients and 7 new diabetic patients were diagnosed at the time of the study.

Out of the 798 hypertensive patients 450 (56.4%) had uncontrolled blood pressure values (systolic more than or equal to 130 or diastolic more than or equal to 90). Out of the 510 diabetic patient 288 (56.5%) had uncontrolled glycosylated hemoglobin values (>7). 15% of the participants who were suggestive of having anxiety on the PHQ4 questionnaire had poorer control of hypertension and 20% of participants who were suggestive of having anxiety on the PHQ4 questionnaire had poorer control of their blood sugar values. Of the participants with uncontrolled glycosylated hemoglobin values, 8% were suggestive of having depression on the PHQ4 questionnaire. Among participants with uncontrolled blood pressure values, 11% were suggestive of having depression on the PHQ4 questionnaire.

Table 1 : Sex distribution of the study participants

	Anxiety	Depression
Uncontrolled Hypertension	15% (66/450)	11% (51/450)
Uncontrolled Diabetes	20% (59/288)	8% (22/288)

The number of participants who had either uncontrolled hypertension or uncontrolled diabetes who were suspected of having either anxiety or depression was 23%.

## DISCUSSION

In Kanniyakumari district, primary health centers witness an average daily attendance of approximately 20 non-communicable disease patients, with 13 being females and 7 males. Conversely, mental health clinics register a significantly lower average daily attendance of around 3 patients, underscoring the prevalent stigma surrounding mental health disorders, particularly in rural areas.

The correlation between depression or anxiety and the management of hypertension and diabetes mellitus has been well-documented in prior studies(10, 11, 12, 13). This secondary data analysis reinforces the notion that the presence of anxiety or depression can affect the control rates of non-communicable diseases within communities. It underscores the need for further research in this area, which could delve deeper into the tangible effects of mental health interventions on the management of non-communicable diseases. Exploring the interplay between mental health and the control of chronic conditions such as hypertension and diabetes opens avenues for more targeted interventions aimed at improving overall health outcomes. By elucidating the mechanisms through which anxiety and depression affect disease management, future research can inform the development of tailored interventions that address both the physical and psychological aspects of patient care. Moreover, investigating the effectiveness of mental health interventions in enhancing disease control can provide valuable insights into potential strategies for integrated healthcare delivery. By integrating mental health screening and intervention into primary care settings, healthcare providers can offer comprehensive support to individuals managing chronic conditions, thereby improving both their physical and mental well-being.

## CONCLUSION

In conclusion, while existing research highlights the association between mental health and the control of non-communicable diseases, further exploration is needed to elucidate the specific pathways and potential interventions. By prioritizing research in this area, healthcare professionals can advance our understanding of how mental health influences disease management and develop innovative approaches to improve health outcomes for individuals with chronic conditions.

**CONFLICT OF INTEREST** No conflict of interest

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