

Post-Covid Health Effects and Comorbidities Among Adult Survivors in Urban Coimbatore: A Descriptive Study

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Abstract: ***Background:** The long-term health effects of COVID-19, often referred to as post-COVID syndrome or long COVID, have become a significant public health concern. These conditions may affect various body systems and differing severity and duration. **Aim:** To assess the post-COVID health effects and associated co morbidities among adult survivors residing in selected urban areas of Coimbatore. **Methods:** A descriptive survey was conducted with 110 adult COVID-19 survivors from Peelamedu, Coimbatore, selected using purposive sampling. Data were collected using a structured questionnaire covering demographic details, COVID-19 history, comorbidities, and 35 post-COVID health symptoms. Ethical approval and informed consent were obtained. Data analysis included descriptive and inferential statistics. **Results:** Among participants, 80% were obese, 30% had hypertension, and 24% had diabetes. Post-COVID symptoms were mild in 17%, moderate in 57%, and severe in 26% of participants. The most common symptoms reported were fatigue, joint pain, memory disturbances, and anxiety. A significant association was found between BMI and the severity of post-COVID health effects ($p < 0.05$). **Conclusion:** Post-COVID syndrome shows multi-system involvement, with obesity playing a key role in symptom severity. Tailored rehabilitation programs and continuous follow-up are essential to manage long-term sequelae among survivors.*

Keywords: Post-COVID syndrome, Long COVID, Health effects, BMI, Comorbidities, Adult survivors

1.Introduction

COVID-19, caused by SARS-CoV-2, first emerged in late 2019 and quickly escalated into a global pandemic. The disease primarily affects the respiratory system, but its impact extends to multiple organ systems. Although many individuals recover fully, a significant number continue to experience persistent or emerging symptoms beyond the acute phase, termed post-COVID syndrome or long COVID. This study holds significance in contributing to localized data on long COVID, thereby guiding public health policies, informing community rehabilitation programs and supporting healthcare practitioners in tailoring follow-up care for survivors.

Acute COVID-19 symptoms typically resolve within four weeks of infection. However, post-COVID symptoms may continue for more than three months, particularly among individuals with severe initial illness requiring hospitalization, intensive care, or ventilator support. Understanding these long-term effects is vital for planning healthcare services and implementing effective rehabilitation programs.

Objectives

- 1)To identify the comorbid conditions among post-COVID adult survivors.
- 2)To assess the post-COVID health effects among adult survivors.
- 3)To associate selected demographic variables with post-COVID health effects among adult survivors.

Hypotheses

H1: There will be a significant association between selected demographic variables and post-COVID health effects among adult survivors.

H0: There will be no significant association between selected demographic variables and post-COVID health effects among adult survivors.

2.Methodology

Research Design: A descriptive survey design was adopted for the study.

Setting: The study was conducted in selected urban localities of Peelamedu, Coimbatore.

Population and Sample: The study population comprised adult COVID-19 survivors from the target area. A total of 110 participants were included using purposive sampling. Purposive sampling limits generalizability but allows focused insight within the selected population.

Inclusion Criteria:

- Adults aged 21–59 years
- Individuals with confirmed past COVID-19 infection
- Residents of Peelamedu urban locality
- Willing to participate and provide informed consent

Data Collection Instrument: A structured questionnaire with four sections:

Section A: Demographic variables (age, gender, education, occupation, etc.)

Section B: History of COVID-19 infection

Section C: Comorbid conditions

Section D: Post-COVID health effects checklist (35 symptoms across various body systems)

Ethical Considerations: Approval obtained from the Institutional Ethics Committee. Informed consent secured from all participants. Confidentiality and anonymity were maintained throughout the study.

Statistical Analysis: Descriptive statistics (frequency and percentage) were used for demographic data, COVID-19 history, and comorbidities. Chi-square test was used to find associations between demographic variables and post-COVID health effects.

3.Results

Table 1: Frequency and Percentage Distribution of Demographic Variables (n=110)

Variable	Frequency (f)	Percentage (%)
21–30 years	35	32
31–40 years	33	30
41–50 years	24	22
51–59 years	18	16
Male	57	52
Female	53	48
Normal BMI	17	16
Overweight	43	39
Obese Class I	27	25
Obese Class II	16	15
Obese Class III	2	1

The largest age group (32%) was 21–30 years, and 80% of participants were classified as obese.

Table 2: Distribution of Post-COVID Health Effects (n=110)

Post-COVID Health Effects	Frequency (f)	Percentage (%)
Mild	19	17
Moderate	63	57
Severe	28	26

A majority of participants (57%) reported moderate post-COVID health effects. BMI showed a significant association with post-COVID health effects ($p < 0.05$).

4.Discussion

The study revealed that obesity was a significant factor influencing the severity of post-COVID health effects, consistent with global literature highlighting obesity as a predictor of poor outcomes in COVID-19 survivors. The most commonly reported symptoms-fatigue, joint pain, memory issues, and anxiety-align with findings from similar studies conducted internationally. Since most participants were moderately affected, structured rehabilitation programs including physical therapy,

psychological support and nutritional counseling are essential.

Implications

For Nursing Practice: Develop rehabilitation protocols and strengthen community-based follow-up care for post-COVID patients.

For Education: Integrate post-COVID management content into nursing curricula.

For Research: Conduct longitudinal studies to explore long-term trends in post-COVID health outcomes.

For Policy Making: Formulate guidelines for screening and rehabilitating COVID-19 survivors at the community level.

Recommendations

- 1) Establish dedicated post-COVID care clinics.
- 2) Implement awareness campaigns focusing on weight management and lifestyle modifications.
- 3) Create tele-health services for follow-up and counseling.
- 4) Conduct further research with larger and more diverse populations.

5.Conclusion

Post-COVID syndrome significantly affects multiple body systems, with varying severity among individuals. Obesity emerged as a key factor influencing symptom burden. A comprehensive, multidisciplinary approach is required to manage and mitigate these long-term health effects.

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