



TEMPORAL TRENDS OF DIABETES AND ASSOCIATED CARDIOVASCULAR RISK FACTORS IN A RURAL AREA OF BALOCHISTAN; THE MOST DEPRIVED PROVINCE OF PAKISTAN FROM 2002 TO 2017

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ABSTRACT

OBJECTIVE: To ascertain the temporal trends for the prevalence of diabetes, pre-diabetes and its associated selected risk factors among adults in rural areas of Balochistan.

METHODS: This observational study used the data from three health surveys conducted in the rural areas of Balochistan, a province of Pakistan in the years 2001-02, 2009-10, and 2016-17. Non-pregnant adults aged ≥ 20 years and permanent residents of Pakistan were included. A well-trained team included doctors, health visitors, lab technicians, and volunteers who were involved in all surveys. Fasting plasma glucose samples were used for the diagnosis of diabetes as per World Health Organization criteria. The ethical approval of all the surveys was obtained and written informed consent was taken from all the participants.

RESULTS: A total of 2515, 1377, and 358 participants were included in the years 2002-03, 2009-10, 2016-17, respectively. The weighted prevalence of diabetes was 4.2%, 7.8%, and 31.9% in respective survey years, along with the overall percent point change of diabetes up to 27% (P-value < 0.0001). Moreover, rapid prevalence increases from the year 2002 - 2017 were also observed in hypertension (3.7% to 32.7%), obesity (15.7% to 88.1%), and dyslipidemia (82.2% to 95.3%), respectively (P-value < 0.0001). However, multivariable logistic regression found a significant association between diabetes, pre-diabetes, hypertension, obesity, and dyslipidemia (P-value < 0.05).

CONCLUSION: The most significant rise in prevalence of diabetes, prediabetes, hypertension in the young population, and dyslipidemia, obesity, and central obesity in all age groups need urgent, targeted socially acceptable but complex interventions to prevent poor cardiovascular disease outcomes.

KEYWORDS: Temporal (Non-MeSH); NDSP (Non-MeSH); Noncommunicable Diseases (MeSH); Cardiometabolic Risk Factors (MeSH); Balochistan (Non-MeSH); Pakistan (MeSH); Diabetes Mellitus (MeSH); Prediabetic State (MeSH); Hypertension (MeSH); Obesity (MeSH); Dyslipidemias (MeSH).

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CONFLICT OF INTEREST

Authors declared no conflict of interest

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