

Knowledge on insulin self-administration, its adherence and associated factors among patients with diabetes mellitus attending diabetic clinics at selected teaching hospitals in Colombo District, Sri Lanka

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Diabetes Mellitus (DM) is a growing global health concern and the second leading cause of death in Sri Lanka. Achieving effective glycaemic control is crucial to prevent complications and relies mainly on proper insulin self-administration and adherence. Adequate knowledge on insulin self-administration enables patients to actively manage their disease condition, resulting in better glycaemic control, and enhancing the quality of life. The aim of this study was to assess the knowledge on insulin self-administration, its adherence and associated factors among patients with DM attending diabetic clinics at selected Teaching Hospitals in the Colombo District, Sri Lanka. A descriptive cross-sectional study was conducted among 422 patients with DM who had been self-administering insulin for more than six months. Data were collected by using a validated and pre-tested interviewer-administered questionnaire. The knowledge score was calculated out of 40 and categorized as Good (76–100%), Adequate (50–75%), and Poor (0–49%). Adherence was assessed using the 4-item Morisky Medication Adherence Scale and classified as High (0), Medium (1–2), and Low (≥ 3) adherence. Descriptive and inferential analyses, including independent samples t-test, one-way ANOVA was performed to check the mean score differences, and chi-square test was performed to identify the associated factors with level of adherence to insulin self-administration using SPSS. A p value < 0.05 was considered significant at all levels. Among the participants, 54.8% were aged between 61 and 80 years, 65.8% were females, and nearly 60% had been diagnosed with DM for more than 10 years. Only 12.5% of the participants scored a good level of knowledge regarding insulin self-administration. In addition, only 23% had high adherence towards insulin self-administration. Hospital that they attended, occupation, monthly income, diagnosis duration, family history, presence of other chronic diseases, medication duration, medication form, clinic attendance and source of insulin were significantly associated with the level of adherence to insulin self-administration ($p < 0.05$). Only a small proportion of patients had good knowledge and high adherence to insulin self-administration. It is recommended to implement targeted intervention that enhance adherence and address the factors associated with adherence to insulin self-administration to improve the glycaemic control and reduce the diabetes-related complications.

Keywords: *Diabetes Mellitus, Insulin self-administration, Knowledge, Adherence, Associated factors*