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## “Knowledge, attitudes and practices and its association with glycemic control among type 2 diabetes mellitus patients in a tertiary hospital in Davao City”

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**Introduction:** Patient education is the cornerstone of diabetes care. This study was conducted to determine the knowledge, attitudes and practices (KAP) among patients with type 2 diabetes mellitus and find out if these factors are associated with glycemic control.

**Objectives:** This cross-sectional analytic study aims to identify the demographic profile of the subjects and assess their level of Knowledge, Attitude and Practices (KAP) towards diabetes mellitus (DM). It also aims to determine the association between the patients' KAP and glycemic control of DM among patients in a diabetic clinic.

**Methods:** Type 2 DM patients were recruited using the convenient sampling method from a diabetes clinic. KAP were assessed using a 54-item structured KAP questionnaire and control of DM was evaluated from the most recent HbA1C levels.

**Results:** A total of one-hundred sixty-eight patients (168) with T2DM participated. In this study, we found out that the level of knowledge, attitude and practices among patients following up in a managed diabetes center in a tertiary hospital is adequate achieving 56%, 66% and 91%, Good KAP is found in majority of females, above 60 year old, overweight, high waist-to-hip ratio, at least high school level, unemployed, with family history of DM, less than 10 years diabetic, those who attended DM classes, and without smoking history. However, these results were found not be statistically significant except for educational attainment for knowledge domain, female gender for attitude domain and unemployment status for the practice domain. There was a strong association between knowledge and attitude, but not with knowledge and practice ( $P > 0.05$ ). No significant association was noted between good KAP and glycemic control. Other plausible factors like socioeconomic constraints and lack of resources to facilitate medication adherence must also be identified and addressed to achieve better disease control. This study also emphasizes that providing patient education through diabetes classes and the presence of an integrated multidisciplinary team is important for enhancing patient KAP.

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## Antidiabetic effect of *Ruta montana* L. in streptozotocin-induced diabetic rats

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The effect of an aerial part aqueous extract (APAE) of *Ruta montana* (L.) (RM) at a dose of 5 mg/kg on blood glucose levels was investigated in normal and streptozotocin (STZ) diabetic rats. In this study, histopathological changes were also evaluated in liver and pancreas both in normal and STZ rats. Additionally, the effect of this aqueous extract on glucose tolerance in normal rats was demonstrated. Furthermore, the relative organs weight (R.O.W) of liver, kidney, pancreas and brown adipose tissue were evaluated after 15 days of daily oral administration of the aqueous extract. Both a single and repeated oral of the APAE aqueous extract (5 mg/kg) produced a significant decrease on blood glucose levels in normal and STZ rats. According to the oral glucose tolerance test, the aqueous extract of RM APAE (5 mg/kg) was shown able to improve the increase on blood glucose levels in normal treated rats 30<sup>th</sup> min ( $p < 0.01$ ) and 90<sup>th</sup> min ( $p < 0.001$ ) after administration of 3 g/kg of glucose. We conclude that RM aqueous extract exhibits a potent hypoglycemic effect in normal rats and anti-diabetic effect in STZ rats. This finding supports the use of this plant in the traditional Moroccan use for diabetes management.

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