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# Adolescents and type 1 diabetes: A grounded theory on adolescents' experiences of adaptation to type 1 diabetes

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#### ABSTRACT

*Purpose*: Type 1 diabetes influences adolescents' health status and therapeutic management. Adaptation for adolescents with type 1 diabetes is considered a significant issue for this cohort group and is based on many factors, including availability of resources, and family and community support. Thus, this study aimed to explore Palestinian adolescents' experiences of adaptation to type 1 diabetes in the West Bank.

*Design and methods:* A qualitative grounded theory approach was adopted. The purposive sample consisted of fourteen adolescents aged from 12 to 18 years and diagnosed with type 1 diabetes. The data were collected using semi-structured and face-to-face individual interviews during the period from March to June 2023. A constant comparative method was used to analyze data.

*Findings:* The core category had emerged with categories and subcategories. There were three categories and ten subcategories including difficulties in the management of type 1 diabetes, for example, "insulin injections, dietary management, and control of HbA1c levels", burdens of type1 diabetes, for example, "burden regarding follow-up treatment, the burden of interaction and communication, emotional burden, and economic burden", and fears and worries of unexpected future life, for example, "worries about disease complications, worries regarding social relationships, and worries about marriage and parenthood".

*Conclusion:* Adolescents diagnosed with type 1 diabetes suffer from difficult experiences influencing their adaptation to this disease.

*Practice implications:* Counseling programs concerning self-care management for those adolescents need to be developed in addition to support programs. Health education programs are needed to develop their adaptation and coping skills to these experiences.

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### Introduction

Type 1 diabetes mellitus (T1DM) is a chronic disease characterized by the destruction of insulin-producing  $\beta$ -cells in the pancreas. The current paradigm in this disease's etiopathogenesis points toward the interplay of genetic and environmental factors (Khdair et al., 2022). Among the environmental variables, dietary factors, intestinal microbiota, toxins, and psychological stress have been implicated in disease onset (Sharif et al., 2018). It is an increasing worldwide health problem (Shojaeian & Mehri-Ghahfarrokhi, 2018). It affects 1,211,900 children and adolescents under 20 years worldwide, with 108,200 diagnosed annually (Magliano et al., 2021).

\* Corresponding author at: Community Health Nursing, Faculty of Nursing, A-Zaytoonah University of Jordan, Amman-Jordan, P.O. Box: 130, Amman 11733, Jordan. *E-mail address*: malakeh.m@zuj.edu.jo (M.Z. Malak) T1DM is an incurable, lifelong condition that affects patients' daily living, and requires frequent review and adjustment of insulin therapy (Pallayova & Taheri, 2014). It involves developing attributes like acceptance, coping, self-management, integration, and adjustment, resulting in various ways of living depending on their functioning (Ambrosio et al., 2015).

Despite advances in treatments and high-quality care, patients still require lifelong commitment and personal responsibility for their health and behaviors, despite the complexity of the condition (Pallayova & Taheri, 2014). Type 1 diabetes-related distress develops over time, especially in adults diagnosed since childhood (Van Duinkerken et al., 2020). Symptoms may worsen with disease progress, affecting therapy selection (Pallayova & Taheri, 2014). Factors affecting psychological reactions include resources, family support, and awareness, which can vary among children and parents (Adams et al., 2022).

Adolescents with T1DM suffer from other stressors correlated with the constant demand for self-care management (Cho & Kim, 2021),

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