

Abstract #94810

Sigma's 30th International Nursing Research Congress

Predictors of Quality of Life in Insulin-Treated Patients: A 9-Month Prospective Study

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Purpose: Quality of life (QoL) of insulin-treated patients with type 2 diabetes (T2DM) was found to worsen than those treated by oral drug-treated patients. Understanding predictors of subsequent QoL will help design effective interventions to improve QoL in insulin-treated patients. This study aims to understand predictors of QoL across 9 months.

Methods: This study adopted a 9-month observational study design. Overall, 183 insulin-treated patients with T2DM were recruited from two endocrinology clinics in Taiwan by convenience sampling. At baseline, a self-reported questionnaire was used to collect demographic and disease characteristics, regimen adherence factors (adherence in frequency of insulin injection and self-monitoring blood glucose), and psychosocial factors (decisional balance for insulin injection, health literacy, self-efficacy for insulin injection, diabetes distress, empowerment perceptions), and QoL. HbA1c levels at baseline were collected from medical records. QoL was measured at baseline and 9 months later.

Results: The mean age of participants was 55.52 (SD=11.1). Most participants were male (n=114, 62.3%). In bivariate correlation analysis, baseline age ($r=0.209$, $p=0.002$), duration of diabetes ($r=0.171$, $p=0.010$), adherence in frequency of insulin injection ($r=-0.180$, $p=0.007$), decisional balance for insulin injection ($r=0.235$, $p=0.001$), self-efficacy ($r=0.287$, $p<0.001$), and diabetes distress ($r=-0.528$, $p<0.001$) were significantly correlated with 9-month QoL. Gender ($r=0.027$, $p=0.359$), HbA1c levels ($r=-0.082$, $p=0.134$), duration of insulin injection ($r=0.062$, $p=0.201$), adherence in self-monitoring blood glucose ($r=-0.029$, $p=0.350$), health literacy ($r=0.055$, $p=0.228$), empowerment perception ($r=0.084$, $p=0.128$) were not significantly correlated with 9-month QoL. After adjusting baseline QoL, multiple regression indicated that age ($\beta=0.189$, $p=0.012$), adherence in frequency of insulin injection ($\beta=-0.133$, $p=0.04$), diabetes distress ($\beta=-0.286$, $p=0.004$) were important predictors of 9-month QoL and explained 34.0% variance of 9-month QoL.

Conclusion: Results supported that patients with younger age should be considered a risk group for developing poor QoL. The higher the diabetes distress at baseline, the poorer the QoL 9 months later. Regularly assessing diabetes distress and providing early intervention is necessary for insulin-treated patients. Insulin-treated patients who more adhere to established frequencies of insulin injection might perceive high stress because of more interruption of daily activities; finally, leading to developing poor QoL. Therefore, healthcare providers should educate insulin-treated patients how to balance the schedules of insulin injections in their daily lives.

Title:

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Abstract Describes:

Ongoing Work/Project

Preferred Presentation Format:

Poster

Applicable category:

Researchers

Keywords:

insulin-treated patients, predictors and quality of life

References:

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Abstract Summary:

This study provides information regarding predictors of QoL in insulin-treated patients across 9 months. Participants who are interested in caring for insulin-treated patients are welcome to participate.

Content Outline:

I. Introduction:

Quality of life (QoL) of insulin-treated patients with type 2 diabetes (T2DM) was found to worsen than those treated by oral drug-treated patients. Understanding predictors of subsequent QoL will help design effective interventions to improve QoL in insulin-treated patients.

II. Body:

Age ($\beta=0.189$, $p=0.012$), adherence in frequency of insulin injection ($\beta=-0.133$, $p=0.04$), diabetes distress ($\beta=-0.286$, $p=0.004$) were important predictors of 9-month QoL and explained 34.0% variance of 9-month QoL.

III. Conclusion:

1. Younger age should be considered a risk group for developing poor QoL.
2. Regularly assessing diabetes distress and providing early intervention is necessary for insulin-treated patients.
3. Healthcare providers should educate insulin-treated patients how to balance the schedules of insulin injections in their daily lives.