Background and aims Health-related quality of life (HRQoL) among systemic lupus erythematosus (SLE) patients is reduced, and fibromyalgia contribute to the decreased HRQoL. The objective of the present study is to evaluate the contributing factors for reduced HRQoL in female SLE patients regarding the presence of fibromyalgia.

Methods The HRQoL measurement was made using the SF-36 and Euroqol EQ-5D. Sleep quality, fatigue severity, fibromyalgia severity, and SLE disease associated variables were measured.

Results The scores of HRQoL, including overall scores as well as the physical component summary (PCS) and mental component summary (MCS), were lower in female SLE patients with fibromyalgia (n=41), than in those without fibromyalgia (n=111). SLE patients with fibromyalgia showed higher SLE disease activity, and more severe fatigue score, depressive mood and deteriorated sleep quality, compared with patients without fibromyalgia. In SLE patients with fibromyalgia, education level, SLE organ damage, fatigue severity, sleep quality and fibromyalgia severity were significantly correlated with EQ-5D, whereas age, income, SLE disease activity, steroid dose, and disease duration were not correlated with EQ-5D. On the other hand, education level did not show significant correlation with EQ-5D in SLE patients without fibromyalgia. Multivariate logistic regression analysis revealed that depressive mood is only independent contributing factors for deteriorated HRQoL in female SLE patients with fibromyalgia. Interestingly, in SLE patients without fibromyalgia also showed same result.

Conclusions The quality of life in SLE patients can be improved by managing depressive mood both in patients with fibromyalgia and in those without fibromyalgia.