**Background:** Despite an overwhelming disease burden, nursing shortages are evident in Sub-Saharan Africa, with the potential for significant healthcare crises. Nurses face increased work demands and chronic stress due to a skilled personnel shortage, which may lead to stress. The present study aimed to examine chronic stress and its correlates among nurses in central Uganda.

**Methods:** The 12-item Short Form Survey (SF-12) for the assessment of chronic stress among nurses, a validated and standardized tool, was used in this cross-sectional study in 2022. For explanatory analysis, the items were combined with dichotomous variables reflecting predictors of chronic stress. These items were used to create dichotomous variables denoting frequent and demanding challenges for exploratory analysis. The relationship between the variables and high levels of chronic stress was investigated using a multivariate logistic regression model.

**Results:** Based on the findings, the majority, 485 (76.0%), had chronic stress. The results indicate that the correlates of chronic stress among participants were widowhood (AOR: 0.040; 95% CI: 0.013-0.127; P <0.001), being worried about looming deadlines (aOR: 0.003; 95% CI: 0.001-0.023; P = <0.001), long working hours (AOR: 0.283; 95% CI: 0.159-0.504; P=<0.001), insufficient job control (AOR: 0.304; 95% CI: 0.127-0.727; P = 0.007), and inadequate rewards (AOR: 2.554; 95% CI: 1.170-5.574; P = 0.019).

**Conclusion:** According to our findings, three in four nurses in central Uganda suffer from chronic stress. This can exert a negative impact on their overall well-being and caring behaviors. Chronic stress was associated with widowhood, a looming deadline, long working hours, insufficient job control, and inadequate rewards. It is critical to adapt interventions, such as hiring additional nurses, to reduce workload and ensure adequate rest periods.