This study aims to explore the effects of a supportive care program in sleep quality of heart failure patients.

Methods
An experimental, longitudinal research design was used. Eighty-four patients with heart failure were randomly assigned to the intervention group or the control group. The intervention group received a 12-week supportive care program including education on sleep hygiene, coaching self-care, emotional support and home visit monthly. The control group received regular nursing care. Data were collected at 4 time points: baseline, 4th week, 8th week, and 12th week after intervention. Instruments included Pittsburgh Sleep Quality Index, Epworth Sleepiness Scale, Symptom Distress Scale, Hospital Anxiety and Depression Scale, Social Support Scale. Data analysis included descriptive statistics, independent t-test, chi-square, repeated measures ANOVA, and generalized estimating equation (GEE).

Results
1. The intervention group had significant improvement on level of sleep quality and sleepiness after 12 weeks of supportive nursing care program, while those in the control group showed no significant differences.
2. Anxiety and depression scores were increased significantly in the control group at 12th week (p < .001). However, the intervention group remained unchanged in anxiety and depression scores after 12 weeks of supportive nursing care program (p > .05).
3. Compared with the control group, the intervention group had significantly better improvement on sleep quality (β = -2.22, p < .001), sleepiness (β = -4.23, p < .001), anxiety (β = -1.94, p < .001), depression (β = -3.05, p < .001), and symptom distress (β = -9.49, p < .001) after 12 weeks intervention.

Conclusion
This study confirmed that the supportive nursing care program could effectively improve sleep quality and psychological distress in patients with heart failure. We suggested that this supportive nursing care program could be applied to clinical practice of cardiovascular nursing.

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