ABSTRACT

The IGD of the Jombang Regency Hospital provides health services with a workforce that works full-time 24 hours a day. The scheduling of nurses in the emergency room at the Jombang District Hospital is done manually by the head of the room using Excel software and has not considered some of the rules that have been set. This becomes an obstacle for the head of the room when scheduling nurses to achieve an equal number of working days and optimal results. To overcome this, a study was conducted using the Nurse Scheduling Problem (NSP) with the Goal Programming method. The purpose of this study was to minimize deviations from the ideal total working day for each nurse, minimize deviations in the night shift for a maximum of eight days in one month, and minimize deviations in isolated work patterns (Off-In-Off Pattern) for each nurse. The optimal solution search was carried out using LINGO 18.0 software. The results showed that this nurse scheduling model fulfilled the four characteristics of the Nurse Scheduling Problem (NSP). Aspects of adequacy of the minimum needs of nurses for each shift have been fulfilled; aspects of quality get the total number of working days nurses get an average of 23 working days; aspects of stability are achieved with 100% no deviations; as well as aspects of flexibility, both manual scheduling and scheduling optimal results have the same but are not flexible because it is a cyclical form of scheduling.

Keywords: Nurse Scheduling, Emergency Room, Goal Programming Method, Nurse Scheduling Problem, LINGO Software