**ABSTRACT**

**Background:** Medication waste may contain hazardous and toxic materials that pollute the environment when not handled properly. Most medicine disposal is coming from household, therefore a housewife plays an important role in the drug disposal process. This study aimed to identify the knowledge, attitudes, and practices of housewives regarding disposal of unwanted medications and investigate the correlation between variables.

**Method:** This research was designed as a cross-sectional study with involved housewives in Surabaya as study participants. Participants were chosen purposively based on the inclusion criteria. The data were collected using a validated questionnaire that was developed based on the literatures. About 128 housewives in Surabaya agreed to participate in this study.

**Results:** The results showed that the majority of participants had sufficient knowledge (50.8%), had a good attitude (84.4%) and had quite good practices (41.4%). The correlation analysis showed that there was a significant correlation between attitude with practice variables (p<0.05). No significant correlations were found between demographic characteristics (age, levels of education and occupation) and knowledge, attitude, and practices variables.

**Conclusion:** The medication use among households in Surabaya is relatively high. Although the majority of housewives in Surabaya had good knowledge, attitude and practice about drug disposal, more research is needed about the condition in other demographic areas in Indonesia.

**Keywords:** Attitude, drug disposal, housewives, unwanted medications, knowledge, practices

**BACKGROUND**

Medication waste in Indonesia is a household waste containing hazardous and toxic materials, called SBS-RT (Anonymous, 2012). Although medication waste is considered hazardous, the disposal management in some countries remains low. A survey conducted in Tomsk, Russia showed 25% of antibiotics in the water they had (Kolpin et al., 2002). As a result, it causes antibiotic resistance or drug pharmacokinetics changes in the body (Lai et al., 2002). Indonesia's situation showed that more than 70% of respondents in Yogyakarta disposed of their medication waste, together with the household waste in the same place without any prior handling (Kristina et al., 2018). Housewives play an essential role in handling the drug disposal process (Zoraida, 2012). In Indonesia, housewives' role in managing the family's health is found in posyandu. Therefore, this study aimed to identify the knowledge, attitudes, and practices of housewives regarding the disposal of unwanted medications and investigate the correlation between variables.

**METHODS**

This research was a cross-sectional study with non-random sampling, which was accidental sampling housewives in Surabaya chosen purposively based on the inclusion criteria as the research sample. The inclusion criteria were housewives, able to read, understand Indonesian, and willing to be respondents. The data were collected using a validated questionnaire arranged by the researchers based on the Indonesian government's drug disposal guidelines and other related literature. A pilot study was carried out on 31 housewives in the southern Surabaya. The data collected from 128 housewives from the east, west, south, and central areas of Surabaya.

**RESULTS**

The respondents' demographic shows that the majority of participants are adult-age housewives. The level of education of most respondents are in high school, with 55 (43%) respondents. Occupational status shows that housewives and only focused on taking care of their household. The questionnaire results that were filled by the respondents showed that 65 (50.8%) housewives had sufficient knowledge disposal of unwanted medications. Knowledge of the removal of unwanted medicines is fundamental because it may be harmful, such as ophthalmic preparations used after a month of opening are at risk of contaminating the eyes and causing infection (Vironi, Rezi, & Rizky, 2016). The majority of drug disposal practices carried out by 53 (41.4%) respondents were sufficient. This condition is almost the same as some respondents in Riyadh who disposed of medicine waste without any prior treatment (Al-Shareef et al., 2016). Furthermore, there is no significant correlation between demographic characteristics; age, level of education, occupation, behavioral variables. This result is probably due to the lack of information regarding drug disposal. Different results are shown by correlation analysis between attitude variables. A significant correlation found in the attitude with practice variables. Before filling out the questionnaire, many respondents were not familiar with medication waste disposal. However, after filling out the questionnaire and explaining, most respondents understood the importance of medication waste disposal.

**CONCLUSION**

The research on the disposal of unwanted medications in housewives showed that 65 (50.8%) respondents had sufficient knowledge of drug disposal. 108 (84.4%) respondents had a good attitude and 53 (41.4%) respondents had a quite good practices on disposing drug. There was no significant correlation between the demographic characteristics and the respondent's behavioral variables. However, there was a significant correlation between the attitudes variables and practice variables of drug disposal.

**REFERENCES**


