

The Effects of Maternal and Child Health Handbook Utilization in West Sumatra, Indonesia

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Besides of its achievement during the last decades, Indonesia still faces many health problems indicated by high infant and maternal deaths. This condition is rooted to various problems at both the supply and demand sides. The Maternal and Child Health (MCH) Handbook has a potency to empower both sides. Pilot projects and several studies have shown some advantages of its use in Indonesia. This study was carried out to obtain scientifically-sound evidence on the advantages of the MCH Handbook utilization. This evidence is needed for advocacy efforts for the utilization of the handbook in the whole country.

This study was carried out in West Sumatera Province. Padang Pariaman District was selected as an intervention area and Tanah Datar District as a control area. Repeated cross sectional design was applied. Samples were selected by multistage random sampling. The final sample size taken during the three surveys were 303, 304, and 318 in Tanah Datar and 308, 317 and 312 in Padang Pariaman. Data were collected primarily using a pre-tested structured questionnaire.

Along the study period, the ownership rate of the home-based maternal health record increased, but not the child health record. The mothers' habit in bringing maternal health record when visiting health facilities was increased, but not in bringing child health record. The proportion of grass-root level health providers who used home-based health record when providing health information to mothers was not increased. At the end of the study 40% of mothers in Tanah Datar and 57% of those in Padang Pariaman had never read or had read only a little part of the handbook. Among mothers who had read the handbook, 22.4% in Tanah Datar and 27% in Padang Pariaman stated difficult to understand the handbook.

Maternal literacy and husband's occupation were found to have little influence to the main outcomes. Higher education was found associated with higher chance to have a better knowledge about MCH matters, a better practice in MCH care, and a better utilization of MCH services. Parity (number of pregnancy) was found as a significant predictor of the mother's behavior in MCH. Smaller family size was significantly associated with better compliance to eat more food during pregnancy and to weigh the underfives regularly.

This study revealed that home visitation had significant positive association with better maternal knowledge and better maternal behavior in MCH care and

utilization of MCH services. Unfortunately, only one fifth to one fourth of mothers was home-visited during pregnancy, while neonatal visit covered about only 15% to 30% of the newborns.

Along the study period there was no obvious change of maternal knowledge at the district level. At the individual level, having a habit to bring the home-based MCH record and receiving health education by using the home-based MCH record were associated to better knowledge about MCH matters. Active usage of the MCH Handbook by the mothers was found as a strong influencing factor to maternal knowledge. Being able to understand the handbook easily was found associated with higher chance to have good knowledge on MCH matters.

Descriptive data showed that at the district level there were some improvements of maternal self-care behaviors. There was also improvement in the utilization of MCH services. At the individual level, owning MCH Handbook, having a habit to bring the home-based MCH health record, receiving health education by using the home-based MCH health record, having read the MCH Handbook and being able to understand the MCH Handbook easily was found associated with higher compliance to good MCH care and higher utilization of MCH services.

The study concludes that (1) utilization of the MCH Handbook in the study area is still limited to passive usage by the mothers and utilization by the health personnel is still under the expectation; (2) maternal education, parity, maternal knowledge, family size and home visitation are found as important determinants of maternal behaviors; (3) at the district level utilization of MCH Handbook is found unable to improve maternal knowledge but it has some potency to improve maternal behavior; (4) independent from other influencing factors, utilization of MCH Handbook has positive direct and indirect effects on maternal behavior and (5) to gain maximal benefit from the MCH Handbook, it should be used actively by mothers and health personnel.

Based on this study's findings, it is recommended to (1) review and revise the MCH Handbook to ensure the mothers' easiness to understand it; (2) improve utilization of the MCH Handbook from passive utilization to active utilization; (3)



improve home visitation and implement Mother Class to provide support for mothers; (4) ensure adequate inputs for sustainable and improved utilization of the handbook; and (5) apply effective leadership and advocacy to ensure multi-sectoral support and participation in developing maternal and child health.