Effectiveness of self-instructional module on skilled birth attendance for reduce maternal mortality rate (MMR) and infant mortality rate (IMR) among mothers

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Abstract
The continuing sub stand maternal and child health situation in developing countries has been a cause of concern for public health research and policy makers. The high maternal and infant mortality rates, low uptake of antenatal and postnatal care, have been a topic for researcher in the field of medicine, public health, anthropology and sociology. World wide data show that, by choice or cut of necessity, 60 percent of births in the developing world occur outside a health facility, with 47 percent assisted by traditional birth attendants (TBA), family members. The present study aim is to assess the effectiveness of self-instructional module on skilled birth attendance for reduce maternal mortality rate (MMR) and Infant mortality rate (IMR) among mothers at mappedu village. A quasi experimental research design was used for study. A total 60 samples. The pretest and posttest design were collected among 60 samples by using a random sampling technique. Data were gathered using self-structured questionnaire. It shows the significant association with the demographic variable of mappedu village regarding mothers age, types of family, education, occupation, family income per month.

Keywords: Knowledge, self-instructional module, Infant mortality rate, maternal mortality rate, mothers

Introduction
The continuing sub stand maternal and child health situation in developing countries. The high maternal and infant mortality rates, and low uptake of antenatal and postnatal care, have been a topic for researchers in the field of medicine, Public health, anthropology and sociology. World wide data show that, by choice or cut of necessity, 60 percent of births in the developing world occur outside a health facility, with 47 percent assisted by traditional birth attendants (TBA) family members.[4-5].

TBAs provide maternal and infant health care services for the women and families they assisted during delivery, provide useful ongoing community care, and continue practices which are beneficiary’s health and wellbeing and culturally accepted such as upright birthing position adopted by TBAs during such as delays in the referral of excessive postpartum bleeding and engaging in unhygienic practice during their conduct of delivery that can cause serious harm to babies [4-5].

Childbirth is one of the most meaningful, unique and exciting times for the laboring women and her partner. child birth is the culmination of human pregnancy or gestational period with the birth of a baby from women womb many people can accompany and great the women from either side but she has to face it by herself most women describe pregnancy as an exciting time in their life but the development of an unexpected complication can suddenly change this description dramatically. It is an inherently dangerous and risky activity which may subject to many complications. When complication arise during labour both risk for maternal as well as fetal mortality increases [5-6].

Complication during pregnancy and childbirth account for the majority of maternal deaths. The priority list includes medicines to treat severe bleeding (postpartum hemorrhage). High blood pressure (pre-eclampsia and eclampsia) and maternal infection (sepsis) also include are the treatment for sexually transmitted infections and prevention of preterm birth [6-7].

Most complications occur at children and the presence of a professional nurse, midwife or doctor is crucial to take urgent lifesaving action.
women attended by professional are less likely to have serious complication and receive treatment early. When the situation be controlled [7-8]. The burden of maternal death is not uniformly distributed throughout the world. Obstetric risk is by far the highest in sub-Saharan Africa. In 2015, the MMR for sub-Saharan Africa was estimated to be nearly 546 per 100,000 LB (80% CI: 511-652), three times higher than that of South Asia (182 per 100,000 LB), eight times higher than in Latin America and the Caribbean (68 per 100,000 LB), and more than 30 times higher than in industrialized countries (16 per 100,000 LB) [14]. This differential in maternal mortality has long been cited as the “largest discrepancy between the developing and developed world of all public health statistics” [9].

Maternal mortality is one of the most revealing indicators of health system status. The level of maternal mortality tells us about the risk attributable to pregnancy and childbirth as well as the performance of health systems in terms of access to health care and the quality of care provided. Reduction of maternal mortality is a globally prioritized agenda. Consequently, there have been substantial maternal mortality reductions globally [10].

Infant mortality is one of the important indicators of a country’s general medical and public health conditions, and consequently, the country’s level of socio-economic development. Its decline is therefore not only desirable but also indicative of an improvement in general living standards. The history of childhood as a modern concept is embedded in the narrative of the modern, welfare state, and childhood as a protected and prolonged period of life owes its recognition to popular struggles for welfare waged by the working classes in the context of the sweeping changes brought into their lives by the industrial revolution during the 18th and 19th centuries. The infant mortality rate (IMR) probability of dying before one year of age expressed per 1000 live births and under five mortality rate (U5MR) probability of dying between birth and age 5 expressed per 1000 live births have been used as measures of children’s well being for many years. The International Conference on Primary Health Care held in Alma Ata in 1978 was the first global forum to consider how child mortality could be reduced by systematic development of a primary health care system. Since then, the United Nations has been actively involved in reducing IMR and U5MR in developing countries. To this end, the plan of action adopted at the International Conference on Population and Development (ICPD) held in Cairo (1994) incorporates the reduction of maternal and child mortality [11].

With an infant mortality rate (IMR) of 24 per 1,000 live births in 2010, Tamil Nadu has crossed the millennium development target five years in advance, according to the union ministry of women and child development. “The state can proudly say that it has crossed the millennium development target of 28 per 1,000 live births by 2015”, Union Ministry of women and child Development, Food and Nutrition Board (2013). Maternal Mortality Rate (MMR) figures of the state stands at 97 per 1,00,000 live births, according to the 2010 data India is among the countries with the highest prevalence of anemia in the world, with 75 percent of kids under five years, 52 percent of women between 15 and 49 years and 87 percent pregnant women anemic. In Tamandu, 62.7 percent of children fewer than five years and 69 percent of pregnant women are anemic. Government of Tamil Nadu is committed to building a healthy society, not only by making available quality Medicare facilities to everyone in the State, but also by providing medical facilities of the highest order, keeping pace with rapid technological developments in the field of medicine. Government of Tamil Nadu provides preventive and curative care to all through various Hospitals, Dispensaries, and Institutions. The current Infant Mortality Rate of the State is 21 (Sample Registration System 2012), which is well below the national target of 30 per 1000 live births. Against the national target of 100 per lakh live births for the Maternal Mortality Ratio, the State had 12 already achieved a Maternal Mortality Ratio of 90 as per Sample Registration System 2010-2012. Now, as per the State Health Management Information System data collected in 2013-2014, this has gone down further to 68 per lakh live births. The State has also achieved replacement level and the current Total Fertility Rate is 1.7 which is the lowest in the country. The Union Planning Commission and many independent review missions have commended the performance of the State in the Health sector. Public Health and Preventive Medicine Department was formed during 1923 in Tamil Nadu and is engaged in protecting and promoting the health of the people by immunization, health education, application of hygiene and sanitary measures and monitoring of drinking water quality and environmental hazards thereby reducing the burden of morbidity, mortality and disability in the State [12].

Methods and Materials
A quantitative approach with experimental research design was used to select to assess effectiveness of self-instructional module regarding skilled birth attendance for reduce maternal mortality rate (MMR) and infant mortality rate (IMR) among mothers. The study was conducted in Mappedu village. After obtaining permission, the investigator selected 30 sample by using random sampling technique. The sample who met the inclusion criteria for the sampling are who are all know to read and write in Tamil and are available at the time of data collection. The exclusion criteria are who are all have other disease conditions. The investigator introduced and explained the purpose of the study to the samples and obtains the written informed consent. The demography data was collected using structured questions and bio-physiological method will be used to assess the maternal mortality rate and infant mortality rate among mothers. The sample characteristics were described using frequency and percentage.

The tools consisted of
Section A: Demographic variables of mother. It contains its, age, education, religion, occupation, type of family, type of marriage.
Section B: This section consists of structured questionnaire to assess knowledge regarding skilled birth attendance for reduce MMR and IMR among mothers.
Results and Discussion

Table 1: Frequency and percentage distribution of level of knowledge regarding skilled birth attendance for reduce MMR and IMR among mothers. n = 30

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Poor (0 – 5)</th>
<th>Average (6 – 13)</th>
<th>Good (14 – 20)</th>
<th>Excellent (21 – 25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>7</td>
<td>23.33</td>
<td>23</td>
<td>76.67</td>
</tr>
<tr>
<td>Post Test</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The above table 1 shows that in the pretest, 23(76.67%) had average knowledge and 7(23.33%) had poor knowledge. Whereas in the post test, 25(83.33%) had good knowledge regarding skilled birth attendance for reduce MMR and IMR among mothers.

![Fig 1: Percentage distribution of level of knowledge regarding skilled birth attendance for reduce MMR and IMR among mothers.](image)

Table 2: Comparison of pretest and post test level of knowledge regarding skilled birth attendance for reduce MMR and IMR among mothers n = 30

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Mean</th>
<th>S.D</th>
<th>Paired ‘t’ test Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>8.17</td>
<td>2.36</td>
<td>t = 28.397</td>
</tr>
<tr>
<td>Post Test</td>
<td>23.33</td>
<td>2.19</td>
<td>p = 0.0001</td>
</tr>
</tbody>
</table>

Note: ***p<0.001, S – Significant

The table 2 depicts that the pretest mean score of knowledge was 8.17 with standard deviation 2.36 and the post test mean score of knowledge was 23.33 with standard deviation 2.19. The calculated paired ‘t’ test value of t = 28.397 was found to be statistically highly significant at p<0.001 level. This clearly infers that self-instructional module on knowledge on skilled birth attendance administered to mothers was found to be effective in significantly improving the posttest level of knowledge among mothers.

Conclusion

The findings revealed that knowledge regarding skilled birth attendance reduce for MMR and IMR among mothers was adequate and there is a need to improve the knowledge about skilled birth attendance for MMR and IMR through pamphlet distribution and create awareness by conducting health education programs.

Reference


