



Review Article

Social Autopsy: A Tool for Maternal and Perinatal Death Surveillance and Response (MPDSR) Reporting in Pakistan

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ABSTRACT

Social autopsy is a relatively new technique to report non-biological causes of death along with biological causes, which accounts for 12/15 maternal deaths in Pakistan, through direct interaction with the community. Pakistan had a highest neonatal mortality in the entire world. A significant number of unreported cases contributed to the high prevalence of neonatal and maternal mortality. Pakistan is one of the top 10 nations that contribute to 60% of maternal and perinatal deaths worldwide which demands social autopsy adoption in Pakistan. Information acquired by social autopsy will therefore be useful in developing any efforts to stop or treat causes linked with death. Social autopsy is a way of health promotion as it encourages individual and communal behavioral change and contributes in achieving United Nations Sustainable Development Goal (SDG) 3.1 by reducing maternal and perinatal death mortality by 2030 and 2035 respectively. In discussion with the family of a woman and community, health workers examine the social reasons of death and pinpoint reforms that are required. In Bangladesh, Brazil, Tanzania, India and Nigeria, maternal and perinatal deaths have been lowered due to adoption of social autopsy. Pakistan has embraced verbal autopsy, but it is an ineffective technique which just deals with the medical cause of death. Maternal and perinatal deaths are not just because of medical causes, it is also the result of interactions between several social, cultural and economic factors. Government of Pakistan is just spending 0.8% of its GDP on health. Standard of primary maternity care is generally unsatisfactory. Only 25% basic health units have qualified staff. Government of Pakistan should create a provincial MPDSR committee, strengthen the health care network and pilot social autopsy in Pakistan to meet SGD goal 3.

INTRODUCTION

The better knowledge of the social process, the timing and nature of care-seeking attitudes, and pre-death treatments are essential to identify the changeable traits that are addressed through new legislation or better resource planning can go. In this study, we propose combining these techniques under a single, standardized heading called social autopsy (SA). Social autopsy, which asks a variety of extra sociocultural and behavioral question [1]. In addition to verbal autopsy questions, aims to ascertain the social, behavioral, and health systemic factors that result in deaths. Utilized to avoid deaths from injuries like traffic accidents, drownings, and infectious diseases as well as deaths from other types of injuries [2]. Social autopsy is a crucial primary healthcare strategy that

is focused on the community and plays a significant part in tackling the socioeconomic determinants of mortality which are the root of 12/15 maternal deaths. Social autopsy of maternal and neonatal deaths is an intervention platform for discussion and interaction between the community government health workers [3]. Pakistan is one of the nations with high rates of child mortality and one of the highest rates of newborn mortality with an estimated 42 newborn fatalities for every 1,000 live births. Pakistan has one of the highest neonatal mortality rate in the entire world [2]. 186 deaths are recorded for every 100,000 live births nowadays. According to Pakistan Demographic and Health Survey (PDHS) 2017–2018, there were 42 neonatal deaths for every 1000 live births. Additionally, a significant

number of unregistered patients contributed to the high prevalence of neonatal and maternal mortality [4]. Pakistan is one of the top 10 nations that account for 60% of maternal deaths worldwide, ranking 53rd on the list of countries with the highest maternal mortality rates [4]. Nigeria has also high mortality rate, it has also facing one of the highest rates of under-five mortality in the world [5]. Child mortality rates are too high, with Northern Nigeria reporting some of the highest rates in the world [6]. There are some countries in the world which have high mortality rates than Pakistan in starting but after adopting Social Autopsy mortality rate successfully decreased, for example, Brazil is one such nation that is successful in decreasing the rate of maternal and perinatal mortality through social autopsy[7]

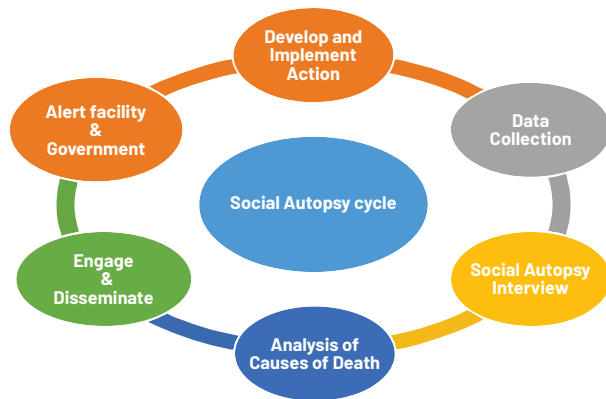


Figure 1: Cycle of Social Autopsy

Social Autopsy: a way of health promotion & SDG 3

Maternal mortality in low-income nations is still too high, despite major worldwide improvements. Social autopsy is a potential benefit for promoting health. It makes easier to identify modifiable social and cultural elements that reduce the rate maternal mortality and promotes "community self-diagnosis" [8]. The global maternal mortality ratio must be brought down to 70 per 100,000 live births. This is the focus of Sustainable Development Goal 3.1. (140 per 100,000), so in this context, tracking accurate and timely maternal mortality data is essential [9]. Pakistan wants to decrease maternal and perinatal fatalities [10]. By 2030, these goals call for a stillbirth rate of no more than ten per 1,000 live births [11]. SDGs stress equity in health across populations to further reduce maternal mortality by focusing on their motto, "leave no one behind". The two complementary goals of social autopsy are to raise public awareness of maternal and infant mortality in order to engage communities in health programs and increase their responsiveness and accountability, as well as to provide extensive population-level data to support advocacy and the acquisition of the resources required to address these issues[12].

Success stories of social autopsy

Bangladesh: Bangladesh has experience with Social autopsy as a community-based intervention to prevent deaths from injuries including traffic accidents, drowning, and also deaths from infectious diseases. In light of previous experiences, Social autopsy was implemented in 2010. The Social autopsy program was first tested in Thakurgaon to reduce maternal, neonatal, and stillbirth mortality. The Government of Bangladesh expanded it to other districts during the 2011-2012 periods after seeing the program's success in lowering stillbirths, maternal, and neonatal mortality. Positive outcomes provided a framework and platform for the system to be expanded to 10 districts in Bangladesh from 2013 to 2015, and then to 14 districts in Bangladesh in 2015. The newly renamed "Maternal and Perinatal Death Surveillance and Response" (MPDSR) program has now been expanded by the government to 22 districts, with ambitions to eventually include all districts in Bangladesh. In order to reduce preventable maternal and newborn mortality and help Bangladesh meet the SDG's, Social autopsy has been introduced into the MPDSR system[13].

Brazil

Brazil is one of the nations that are successful in lowering the rate of maternal and fetal mortality through social autopsy [14]. There is rapid decrease in maternal deaths in Brazil since 1990. In Brazil, hypertensive pregnancy disorders were the leading cause of maternal deaths between 1990 and 2000, with a discernible shift to mortality owing to indirect causes, which include a variety of conditions ranging from diabetes to infectious infections. After the adoption of SA, Brazil has become successful to decrease the average maternal mortality rate by 10% from 1997-2000 (58.92/100,000) to 2001-2004 (52.77/100,000). Early and late neonatal mortality rates decreased by 33% (to 7.36/1000) and 21% (to 2.29/1000) between 1997 and 2012, respectively[15].

Gap analysis in Pakistan to achieve Social Autopsy

Non-registration system and maternal and perinatal deaths

The nation lacks information on crucial factors that affect child mortality. The systems for civil and vital registrations are inadequate [16]. Both the health management information system and the civil registration management system in Pakistan are ineffective. This is because of a number of factors. The first reason is that there are many child deaths here that take place outside of medical facilities and that are not associated with any medical records (including death certificates). Nearly two-thirds of deliveries in Pakistan still take place at home on a communal basis [17]. When the majority of low-income citizens die at home in absence of any health care personal, then their deaths are not frequently documented, and their

causes of death aren't always determined [18]. Second, even data on deaths that happened inside medical facilities lacks information on the cause of death and its contributing factors, or if it does, its veracity is always questioned. In low- and middle-income nations, the governmental health authorities do not keep track of maternal and perinatal death [19]. Health professionals confirm less than a third of the 7600 000 child fatalities and 350 000 maternal deaths that occur each year around the globe [20]. Thirdly, there is no reliable system in place to collect data on deaths that take place outside of medical institutions, particularly those that happen in remote places or even in urban slums, and the vital registration system is inadequate. As a result, a significant portion of child fatalities are not reported nor certified as to the cause of death. Less than 30% of births and nearly no fatalities are recorded by Pakistan's vital registration systems, and the majority of newborn deaths take place outside of the country's established healthcare infrastructure [21].

Lack of government's efforts

There are no organized data on routine health outcomes in rural Pakistan. The standard of primary maternity care is generally unsatisfactory. The goal of Lady Health Workers at primary health centers is to provide primary health including services for maternity and pediatric health. Their education is only 10 years of schooling, the women lack any medical degree or master's in nursing [22]. Only 25% of Basic Health Units have qualified female medical staff. These basic level health facilities are usually situated far from the population and have limited operating hours. Only one in twenty women who experience pregnancy or labor problems find an institution that offers emergency obstetrical treatment. A Pakistani woman's lifetime chance of dying from pregnancy-related causes is 1 in 80, compared to 1 in 61 for underdeveloped countries overall and 1 in 4,085 for industrialized nations [23]. These issues highlight the flaws of the public healthcare system [24].

MPDSR journey in Pakistan

A credible source for identifying, quantifying, and preventing maternal and perinatal mortality is the Maternal and Perinatal Death Surveillance System. MPDSR encourages routine detection and prompt notification of maternal and perinatal deaths and functions as a type of ongoing surveillance connecting local to national health information systems and processes for quality improvement. The MPDSR will help to enhance vital registration, count maternal and perinatal mortality more accurately, and give better information for taking action and tracking advancements in maternal and newborn health [25]. The idea was developed during the Millennium Development Goals (MDG) era and has gained widespread acceptance throughout the world, particularly with the

release of comprehensive technical guidelines in 2013. Guidelines for M/PDSR have been developed by international organizations like the WHO, and they are urging low middle income countries to begin implementing them. Even though MPDSR is a relatively recent methodology, its constituent parts have been developed over many years. The main function of the system, maternal death reviews (MDR), gave rise to the MDSR. Due to the MDSR's young development and the lack of regular data collecting, comprehensive information regarding the scope and caliber of implementation in each country has been mostly unavailable. Despite the fact that many nations have approved the national MPDSR principles, only a small number of countries worldwide have robust MPDSR systems [26]. In Pakistan, MPDSR began in 2015 at the local level in the province of Punjab through female health professionals (LHWs). However, in Baluchistan, it started in 2017. Punjab began the ongoing MPDSR process at the community level in a few districts in 2015 with assistance from UNFPA [27]. To enhance mother and child health, the Pakistani government and numerous international donors have launched a number of initiatives and policies [28].

- The supply of a chlorhexidine kit for preventing cord infections and Kangaroo Care to the infant are two examples of preventative interventions and programs that have been recognized as being concentrated in this area [28].
- 2000s: Decentralized management and the renovation of the healthcare infrastructure were attempts to enhance the healthcare delivery system [29].
- Improve emergency obstetric care with the WRLH project in 2000–2004 by the donation of Bill and Melinda Gates Foundation of 1.6 Million dollars [30].
- National program for maternal and neonatal health puts in place a variety of maternity and neonatal care services which started in 2007 and still ongoing. This program was initiated by collaboration of Government of Pakistan and Department for International Development. This project costs 300 million dollars [31].
- With a proposed allocation of Rs. 19.994 billion, the UN joint program component on maternity, neonatal, and child health envisions boosting the execution of the National MNCH program (2007–12) [32].
- WHO has developed national guidelines on MPDSR in 2018 [33].
- Ministry of National Health services regulation and coordination has launched a mobile application on MPDSR in 2022 [34].

CONCLUSIONS

Current study concluded that it is crucial to pinpoint the social factors that contribute to women dying during pregnancy and after giving birth. In Pakistan, the Social Autopsy (SA) approach is not used in its true letter and spirit. To better understand the socioeconomic factors that contribute to child mortality, the social autopsy should be piloted in Pakistan. Social autopsy is an opportunity to stop preventable maternal and newborn deaths by utilizing community contact and a participatory decision-making process. By holding a social autopsy, the society may admit its mistakes and act to stop similar tragedies from happening again. This strong commitment has the potential to affect and spread the essence of good practice across the communities nearby.

Conflicts of Interest

The authors declare no conflict of interest

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