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Editorial

Climate Change and perinatal health

There is no denying that the earth is heating up; evidence to this effect has been shown for the last couple of decades. Climate Change (CC) and global warming is an issue involving both rich and poor nations; although contributed to most by the industrialized countries, its effects are mostly felt by the poorer nations, who are also less equipped to mitigate or adapt to it. Sri Lanka is no exception to this fact.

According to the 2021 Common Country Analysis (CCA) of the United Nations, Sri Lanka is highly vulnerable to effects of Climate Change and the pace of CC is outstripping the change of adaptation in the country[1]. The university of Notre Dame's ND-GAIN Index (which highlights the readiness of a country to CC adaptations), ranks Sri Lanka as 103 out of 181 countries in the world, in this contxt.[2] It is predicted that the impact of this change will be felt most severely in Sri Lanka, out of the countries in the South Asian Region[3].

Annual average temperatures in the island are projected to increase by1.0^{0}C to 1.5^{0}C by 2050(3). The most recent heat wave that was felt in the country is forewarning evidence of this.
Extreme weather has a deleterious effect on both humans and the environment. The negative effects of extreme heat on human health has been proven beyond doubt; its impact is even more far reaching where perinatal health is concerned. It has been shown that extreme heat has a multitude of effects, both direct and indirect on the mother, foetus and the newborn child.

The direct effects of extreme heat to humans are well documented; dehydration, heat stress and heat stroke are some of these. At ambient temperatures above 39^{0}C, human organ function deteriorates, leading to cardiac complications and even sudden death. Recently in Sri Lanka, newspapers reported several deaths in healthy males, after prolonged exposure to high environmental heat while working outdoors.

Ambient temperatures beyond 39.5^{0}C have shown to be teratogenic to the foetus[4]. Even at lesser temperatures, there is a higher risk to pregnant mothers, since their ability to thermoregulate is limited[4]. Heat stress related complications during pregnancy include placental insufficiency, still birth, preterm labour and low birth weight[5].

Not only the pregnant mother, but the newborn infant is also affected by extreme heat. Studies in Ahmadabad, India showed that during a heat wave in 2010, when ambient temperatures were above 42^{0}C, admissions to the local hospital NICU due to heat related issues, were increased[6]. A meta analysis done in 2020 in USA, found that for every 5.6^{0}C increase in ambient temperature, there was an average increase in the preterm delivery rate of 11.6%, and for every 1.0^{0}C rise in environmental temperature, there was an increase in the still birth rate by 6%[7]. The effects were more prominently seen in Black American mothers.

The indirect effects of extreme weather on health include diminishing food supplies leading to malnutrition, lack of water leading to poor sanitation and its effect on communicable diseases. It also leads to social and economic issues such as loss of livelihood leading to mass migration and scarce resources leading to conflict in communities However, its long term impact

in areas such as mental health and emotional development of children are lesser known and discussed issues.

Although the effects CC has been debated for decades, there is relatively sparse evidence of its effects on maternal and newborn health. At least now, it is pertinent that the global community is waking up to this void in information. This vital topic fortunately, has been addressed in global fora in the recent past[8].

Since CC is a reality, it is vital for us to focus on how it affects our vulnerable communities, including pregnant mothers and their newborns. Researchers should work in haste to find out local data and policy planners should take heed on this vulnerable group and start acting without further delay.

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