Poison is a substance that causes damage/injury to the body or death due to its chemical action.\(^1,\, 2\) Poisoning may be caused by a variety of agents including agrochemicals, drugs, poisonous household products or environmental agents.\(^2-9\) Acute poisoning is a medical emergency caused by exposure to poisoning substances through ingestion, inhalation, or through dermal contact.\(^10\) Poisoning has been causing significant mortality and morbidity worldwide.\(^2-9\) According to an estimation, about half a million people die worldwide due to poisoning.\(^11,\, 12\) The World Health Organization (WHO) conservatively estimated that the incidence of pesticide poisoning, which is high in developing countries, has doubled during the past 10 years to more than 50% of the total cases worldwide.\(^12,\, 13\) Further, it has emerged as one of the major health problems worldwide.\(^10,\, 14-17\) The cause for poisoning can be accidental (e.g., snake bite, scorpion sting, accidental consumption/exposure of pesticides, household products or drugs, food poisoning, occupational exposure to toxic substances) or intentional (suicidal).\(^2,\, 4,\, 7,\, 10,\, 16,\, 18-63\)

Poisoning related deaths and morbidity rate are on the rise in India.\(^3,\, 10,\, 32,\, 43,\, 47,\, 49,\, 57,\, 58,\, 64-78\) Approximately nine million synthetic and natural chemicals are available.\(^79-82\) The common agents that are responsible for poisoning in India include: a) pesticides, b) medicines, c) poisonous household products, and d) environmental substances.\(^3,\, 10,\, 32,\, 43,\, 47,\, 49,\, 52,\, 57,\, 58,\, 64-90\). The cause for poisoning in India has been linked to both intentional (self-harm behavior) and accidental exposure. Self-harm behavior has been causing a significant mortality and morbidity.\(^1,\, 2,\, 6,\, 24,\, 29,\, 32,\, 52,\, 57,\, 64,\, 90-93\) Deliberate self-harm is an intentional self-induced harming of one’s own
body resulting in relevant tissue and vital organs damage. Deliberate self-harm behavior may occur both in clinical and nonclinical samples. (29, 52, 55, 57, 64, 90, 91, 94) Individuals who indulge in self-harm are diagnostically heterogeneous and may be indicative of psychological disorders including: alcohol and substance abuse; eating disorders; dissociative; somatoform; or body dysmorphic disorders, depression and anxiety disorders, posttraumatic stress disorder, or several personality disorders and schizophrenia. (29, 52, 55, 57, 64, 90, 91, 94) Socio-economic disadvantages have been found to have direct effects on a person’s level of self-esteem, feelings of hopelessness, and self-harm behaviors. (21) Families that go through multiple and severe stresses without a supportive environment may respond to stress poorly, impulsively, and in extreme cases, with suicidal behavior. (21, 50) Therefore, appropriate studies were required to understand the trend of this type of poisoning, upon which preventive measures can be undertaken in the future to address this concern.

Agriculture is a major source of income in India for low and middle socio-economic class population. (6, 20, 24, 67) Numerous hazardous chemicals/products including pesticides are easily available for their use at a low cost. Pesticides have been responsible for significant accidental and intentional poisoning incidences across India. (2, 3, 6, 10, 24, 29, 32, 69, 94) Intentional poisoning with organophosphorous (OP) compounds has resulted in greater mortality rate, particularly among farmers. (1, 6, 10, 24, 52, 67, 74, 90, 94) The key factors that are contributing to high mortality in pesticide self-poisoning are: the widespread availability and easy access to highly toxic pesticides, different agricultural practices; regulation laxity concerning the sales of such substances;
inadequate knowledge about safe use and storage of agricultural chemicals; and poor and insufficient medical care in developing nations in contrast to developed countries.(1-3, 6, 10, 18, 20, 24, 29, 32, 43, 47, 49, 52, 55, 57, 58, 64-88, 90-104) Appropriate preventive measures are required to reduce the incidences caused by accidental or intentional exposure to pesticides.

Medicines are also causing a great majority of acute poisoning both in developing and developed countries.(105) Drugs acting on Central Nervous System (CNS) are the commonest medicines used for self-harm.(40, 106, 107) (19) (108) (109) (19, 110) However, the pattern of poisoning with medicines is changing according to their availability and development of safer derivatives of potential drugs.(111, 112) Drugs that were used 10 years ago for suicidal poisoning are no longer used because of the variation in drug prescribing patterns. Geographical and risk factors are also contributing to the medicine-related poisoning patterns.(36, 111, 112) For example, poisoning with medicines has been observed in urban population.(41) Its prominence in rural population have been replaced by pesticides.(12) The cause for medicine-related poisoning can be attributed to sale of medicines without medical supervision or prescription. Therefore, determination of current pattern of medicines-related poisoning would also lay the foundation for future preventive measures. In India, toxic household products are usually stored in unsafe places or non-child-proof containers. This practice has been influencing accidental poisoning among young children.(3, 56, 58, 61, 74, 77) Efforts are required to improve people’s knowledge, attitude and practice.
Among the factors that govern the clinical outcome of poisoning, the degree to which the poison’s toxicity and patient’s severity is understood immediately plays a critical role in the management of poisoning. Severe morbidity and high mortality rate associated with poisoning is often related to a delay in diagnosis or an improper management. (23, 54, 113-116) Traditionally, plasma and urine samples are collected and analyzed to determine the severity and mortality rate. (23, 113-115, 117, 118) Unfortunately, laboratory methods are unavailable in all the Indian hospitals. (23, 113, 119, 120) Therefore, there is a significant demand for simple, quick and effective methods to assess the severity of poisoning, so that more intense monitoring and treatment can be provided. Descriptive and prognostic evaluation scales (scoring systems) are alternative approaches to predict the severity and clinical outcome of poisoning. (23, 113-115, 117-123) The feasibility of such scoring systems to predict the severity and clinical outcome in Mysore region is not yet studied.

Since the trends of poisoning in India vary according to time, region, age group, sex, risk factors and socio-economic status, (3, 10, 32, 43, 47, 49, 52, 57, 58, 64-90) multiple approaches are required to reduce mortality and morbidity associated with poisoning. The important and effective approaches include: a) creating awareness among general public about poisoning; b) educating general public on safe storage and use of toxic substances; c) provision of critical and timely poisoning-related information to both general public and health-care professionals; d) use of clinical indices to prospectively predict the severity and mortality of poisoning; and e) ensure the quality and effectiveness of preventive measures.
Mysore district is located in the southern part of the state of Karnataka, India and is surrounded by four districts (Mandya, Chamrajanagar, Kodagu and Hassan). Agriculture is the backbone of the economy of this district as it is with the rest of India. According to the 2011 census, Mysore district has a population of about 30,00000. Jagadguru Sri Shivarathreeshwara (JSS) hospital, Mysore is one of the major healthcare providers in this region. The hospital is a 1200-bed medical teaching hospital providing primary and specialized healthcare facilities to people in and around the Mysore district. There are about 140 admissions per day in this hospital. A retrospective assessment was initially conducted at JSS hospital to find out the magnitude of poisoning cases reported to this hospital. It was found that 382 poisoning cases had been reported in a single year (2008), among them 28 deaths occurred due to poisoning. This statistics does not include government and other private hospitals located in Mysore city, indicating that overall magnitude of poisoning in Mysore is greater and it is a matter of huge concern. These facts clearly signify the necessity of a specialized centre in this region to provide poisoning related services to both general public and health-care professionals.

Poison information centre (PIC) or poison control centre (PCC) is a specialized unit that provides information on early diagnosis, treatment, management and prevention of poisoning, and management of hazards through well trained specialists. There are only five WHO recognized centres in India. In addition, there are few other centres that offer the poison information through clinical pharmacy service. Considering the magnitude of poisoning cases both in and around Mysore as well as other parts of India, more centres
are needed to meet the demand for poison information. Establishment of new PIC and appropriate service and preventive measures through PIC is critical not only during the management of crisis but also to prevent its occurrence.

A new PIC was established at Department of Clinical Pharmacy, JSS hospital. The main objective of this initiation was to provide critical information to both general public and health-care professionals in a timely and efficient manner. Creating awareness on poisoning, preventive measures and handling of crisis among general public were also part of the main goal. The quality of service was evaluated periodically by a team of healthcare professionals to ensure that the service is provided in a timely and efficient manner. Additionally, the potential of different clinical indices to prospectively predict the severity and mortality during the management of crisis was also investigated. Successful use of clinical indices is likely to be useful in places that lack the appropriate analytical facilities to determine the severity.