

THE PREVALANCE AND INCIDENCE OF TEENAGE PREGNANCIES AMONG URBAN SLUM DWELLERS IN THE COLOMBO CITY

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INTRODUCTION

A wide spectrum of literature with cross-cultural comparisons on Teenage Pregnancy (TP) illustrates that numerous issues are embedded in TP. TP is also one of the prime health concerns as its consequences are still the leading causes of death, disease and disability among young women in some countries (Sarkar 2009). Therefore, TP has become an important public health concern both in developed and developing countries. In comparison with other developing countries in the region, TP is reported to be less common in Sri Lanka. However, TP rate is increasing in Sri Lanka, especially among socio-economically disadvantaged populations, such as, internally displaced people (IDP) (Tambiah 2004), urban slums dwellers, and estate and rural disadvantaged communities (Dissanayake 2008) resulting in overwhelming medical, psychosocial and socio-economic challenges that encompass during their pregnancy and offspring (Palihawadana *et al.* 2008). Hence, TP has become an issue in certain population subgroups in Sri Lanka. However, there is lack of research on TP in the Lankan social context despite its escalating nature. Most studies on TP in the Lankan context deals with adverse health outcome of TP (Goonawardena and Waduge 2005). The previous studies have mostly been hospital based studies focusing on the TP, aiming to examine the health risks and the factors associated with TP (Goonawardena and Waduge 2005; Linganathan 2006; Herath 2007) and there is hardly any community based study on the teenagers who are from disadvantaged urban slums. Against this background, the primary research problem addressed in this paper is, what are the trends in the occurrence of TP among urban slum dwellers in the Colombo Municipal Council Area (CMC), where the largest number of slums in the country are located and from where a constantly higher prevalence of TP is reported over several years (SLDHS 2009, ARFH 2005/06/07/09). It is noteworthy that the proportion of TP in the CMC falls among the most deprived districts affected by several factors such as poverty, natural disasters and ethnic conflict. Therefore, this situation is suggestive of an in-depth analysis of the extent of the issue of TP particularly in the CMC area. However, there is hardly any macro or micro level analysis to understand the dimensions of TP in the CMC area. Therefore, an analysis of the occurrences and reasons for the variations in the occurrences of TP in the CMC area is of prime importance. Accordingly, this paper intends to describe prevalence and incidence trends of TP in the CMC area.

METHODOLOGY

Having obtained the ethical approval from the Ethical Review Committee in the Faculty of Medicine, University of Kelaniya and the managerial clearance from the relevant authorities in the CMC area, this study was conducted during 2010-2011. The study is based on the secondary data collected from the Management Information System (MIS) related to Maternal and Child Health (MCH) in the CMC area, maintained by the Maternal and Child Health Unit of Public Health Department of the CMC. The data were gathered by the principal investigator, covering the period starting from 2004-2009 using a data extraction form.

Thus derived data were compared in order to discuss the prevalence, incidence and trends of TP in the CMC and its specific attributes. The prevalence of TP was calculated based on the data

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extracted from the report on Maternal and Child Health Return (RH-MIS 509) during the years 2004-2006. Although there was a need to analyze data of at least ten years in order to establish trends in TP prevalence in the CMC, the time line was restricted to 2004-2006 due to three major reasons. Firstly, the records prior to year 2004 were not available in the record room in the Medical Officer of Maternal and Child Health unit (CMOCH). Secondly, the data collection format (RH-MIS 509) had been revised in the year 2006 and implemented from 2007 onwards. This revision of the MIS in 2007 has led to a difference in TP related information. Until 2006, the target women '*under care*' were reported. Nevertheless, from 2007 onwards, the '*newly registered cases*' were reported. Thirdly, until 2006, a female aged 19 or less than 19 years (≤ 19 years) being pregnant was considered as TP where as from 2007 onwards a female aged 20 or less than 20 years (≤ 20 years) being pregnant was considered as TP. Hence, assuming that, these differences would affect the uniformity of data analysis, the data has been separately analysed for the period before and after MIS revision in 2007. Since the number of newly registered and the existing PTs was reported during the year 2004-2006, the prevalence (P) of TP was calculated and analyzed for this period. Likewise, the number of newly registered TPs was available in the revised MIS-RH formats from year 2007 to 2009. Hence, the incidence (I) of TP was calculated and analyzed for this period. Accordingly, the TP in the CMC is discussed using prevalence of TP during 2004–2006 and incidence of TP during 2007 - 2009. Data were analyzed using a software package called SPSS (SPSS -16.0 for Windows, 2007).

RESULTS AND DISCUSSION

The available data source related to TP is the RH-509 in which the number of pregnant mothers under 20 years is registered with an area PHM. In the RH-509 during 2004-2006, the TP under care and the total number of registered pregnancies were recorded. Hence, there was a possibility to calculate the proportion of TP under care to the number of registered pregnancy for the period 2004–2006. Accordingly calculated proportion of TP in the CMC area during the year 2004 – 2006 showed that there is sustenance in the occurrences of TP in the CMC. A regression analysis was performed to see the prevalence trend of TP. The analysis showed a trend of the total registered pregnancies (TRP) and TP under care (TPUC) in the CMC area during the period of 2004 January to 2006 June. Accordingly, two separate linear regression lines are shown with the respective trend curves. The relevant coefficients of determinants (R^2) are also shown. Although, a slight reduction in both parameters (TRP and TPUC) could be observable, the R^2 are very less ($R^2_{TRP} = 0.0829$, $R^2_{TPUC} = 0.1644$). Hence, the analysis with regard to the prevalence of TP reveals a constantly stable occurrence of TPs in the CMC area.

Incidence of TP in the CMC area was calculated using the data documented in the revised format of MIS-RH-524 from 2007-2009. Accordingly, Cumulative Incidence Rate (CIR) of TP in the CMC area is 8.5%. The CMC is divided in to six health districts. District wise analysis of TP incidence showed that, two districts in the CMC have reported CIR higher than that of the CMC (8.5%). The highest CIR is reported from the District 2A (10.5%) while the lowest CIR of TP is reported from D-4 (6.2%). Reporting of highest CIR of TP from D-2A can be attributable to various factors. It was revealed that, larger the population, higher the incidences of TP tend to be. Even though there is a natural trend towards increasing the incidence of TP proportionate to the population in some districts, some extreme cases could be observed in the CMC area. The unequal distribution of PHMM in the districts of CMC may have been a contributory factor. Although PHM per population ratio is considered to be 1:3000 in the country, the situation in the CMC is deviant from the national ratio and it is 1:7632.

Hence, non-availability of adequate number PHMM may have affected the health care service provision and health programme implementation to a certain extent in the CMC. Next, the CIR

was calculated in terms of antenatal clinics (ANC) under which 96 public health midwife (PHM) areas in the CMC are clustered. Accordingly, the highest percentage of TP (11.5%) is reported from the ANC that covers PHM areas which are pre-dominantly occupied by Muslim dwellers. Accordingly, the incidence of TP can be partly attributed to the ethnic factor. The other distinct characteristic in the areas where the higher CIR of TP is reported from is that, the noticeable extent of low-income neighborhoods distribution. Hence, it is observable that the improvised living arrangements influence on the occurrence of TP in these areas. It is observable that the majority of low-income neighborhoods is concentrated in the districts such as D-2A, D-2B from where the highest incidences of TP were reported.

CONCLUSIONS/RECOMMENDATIONS

An extensive analysis of both prevalence and incidence rates of TP in the CMC revealed that the highest TP rates are reported from areas which are predominantly low-income settlement areas. Thus, a clear spatial effect on the TP within the CMC could be observed. Further, the highest TP rates are reported from resident areas which are predominated by Muslim dwellers and hence, the high incidence of TP can be partly attributable to the ethnic factor. Moreover, there was a disparity in the PHM per population ratio in the CMC compared to the national level ratio. The PHM areas where a huge disparity in the PHM per population ratios were prevalent, reported high prevalence of TP. Hence, large population size, discrepancy in PHM per population ratio and shortage of PHMM along with the distribution of low-income neighborhoods may have made cumulative effect on the incidence of TP in the CMC area. This study suggests that future studies could attempt to determine the factors associated with the differences in the prevalence and incidence of TP among districts in the CMC area. In the presence study, ethnic factor emerged as one of the key potential factors associated with teenage pregnancy. Hence, further in-depth studies could attempt to determine the association between the ethnic factor and prevalence of teenage pregnancy.

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