The demographic transition theory stresses the conditions under which fertility levels change and hypothesizes that social structures proxied by modernization and mortality levels, provides the context under which family formation and childbearing occurs. This gives credence to the need to investigate both the individual and structural determinants of fertility in the region because individuals are socialised as members of specific communities in which they learn norms of appropriate behaviour and face the collective constraints and opportunities in specific settings (Hirschman and Young, 2000). Thus, anthropological explanations of demographic outcomes have emphasized the need to understand how community structures contribute to those outcomes. While demographers have continued to examine the effect of community variables on mortality and health, similar studies on fertility outcome have been minimal or non-existent. This paper examines how community characteristics can contribute to our understanding of fertility patterns in Africa. Of particular interest in this discourse is the effect of community in which a woman lives on her fertility behaviour, either current or past. This stems from the fact that although the community is essentially integral to understanding her fertility behaviour, existing studies in Africa have neglected this aspect.

Data used for this study are taken from the most recent demographic and health surveys from the five countries representing each of the five regions in Africa. These are Nigeria [West Africa], Kenya [East Africa], Egypt [North Africa], Cameroun [Central Africa] and Zimbabwe [Southern Africa]. The method of analysis is multilevel modelling which involves fitting variables measured at the individual and community levels to obtain random effects with a view to assessing the extent to which community effects have not been captured by the fixed explanatory variables. The micro-level aspect of the study specifies that the socioeconomic characteristics of individuals, e.g., women’s education, type of childhood place, affect their fertility behaviour. The macro or community model specifies that particular kinds of contextual characteristics such as community level of development; availability of family planning, can affect the micro-level relationships between socioeconomic characteristics and fertility (Entwisle and Mason, 1985; Adedini et al, 2012).

We focussed on two cohorts of women aged 35-39 and those aged 40-44 in the five countries. We chose these cohorts because we do not want to select cohorts too old or too young to have been influenced by socioeconomic programmes. The dependent variable is children ever born by these cohorts. The independent variables are respondents’ education, place of residence, the community variables include: community socio-economic status; community diversity. We applied multilevel analysis of fertility change using three basic equations which include (i) model examining the contextual variables; (ii) model examining individual and community variables and (iii) the model examining individual, household and community variables effects on children ever born. Findings show that contextual variables and changes thereof are more important than individual changes in explaining fertility patterns in these countries, although we also found important direct effects of individual variables. We also found that changes in contextual community variables do have significant effect on fertility change in
the region while changes in individual characteristics play no role. Our study highlights the critical importance of using community structures to explain the emerging form of fertility change in Africa.