

▪ Basic Research

Changes in living arrangements of older persons in Egypt 2000-2014

TB Fahmei¹, R Tanda², ZT Haile³, A Ruhil⁴, M Gartin⁵, Ice, GH^{3,6}

1. College of Nursing, Modern University for Technology and Information, Cairo, Egypt.
2. Nationwide Children's Hospital, Columbus, Ohio, USA
3. Social Medicine, Ohio University, Ohio, USA
4. School of Public Health, University of Alabama at Birmingham, Alabama, USA
5. Voinovich School of Leadership and Public Affairs, Ohio, USA
6. Global Health, Ohio University, Ohio, USA

Corresponding Author:

Tayser B Fahmei, PhD

College of Nursing, MTI, Cairo, Egypt

tayser.t@yahoo.com, +201283976437

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Abstract:

As the global population ages, there is increasing concern about the living arrangements of older adults, and in particular, whether they end up living on their own, in an institutional setting or in some other arrangement. In many low- and middle-income countries, there is a tradition of older persons living with their adult children, and very often in multigenerational households. However, as the number of older persons increases and populations become increasingly urbanized, it is likely that even in these countries more older persons are living alone. This raises a number of concerns regarding the well-being and care of the elderly. Following global trends, Egypt's population is also aging with 6.9 % over 60 in 2017 and a projected population of 60 of 9.2% by 2030 and 20.8% by 2050. Little is known about living arrangements of older persons in Egypt. Using Demographic Health Survey data, this study examines the changes in living arrangements in Egypt's governorates from 2000-2014. We find the

proportion of older persons living alone is increasing in many governorates. For example, in 2000, the highest rate of living alone was in New Valley, with 11% households containing older persons living by 2014, Alexandria had the highest rate of households with only older persons (19% of all households). In 2000, the Red Sea governorate had the lowest rate of elder-only households, while Souhag, South Sinai, Behera and Fayoum had about 3% of their households containing elders living alone; all of these governorates experienced a tripling of the proportion of elder-only households by 2014. These demographic shifts correspond with migration patterns and changes in economic base within different governorates.

Introduction:

As the global population ages, living arrangements of older adults are changing with important implications for caregiving and quality of life. Globally, increases in longevity and concomitant decreases in fertility rate have led to an increasingly aged population. In 2015, 12.5% of the population was over 60 years of age; this is projected to increase to 17% by 2050 (1). As the demographics shift, an increasing percentage of older persons are also likely to be living alone, raising concerns for policy makers (2).

Living arrangements of older persons have the potential to impact all domains of quality of life for older persons (2). The living arrangements of older persons can influence social networks and availability of informal care and, consequently, the wellbeing and wellness of older persons (3). Social networks and family relationships are among the core foundations for providing assistance to older adults around the world including the provision of emotional and instrumental support. Intergenerational relationships may have a positive impact on the psychological wellbeing among older adults and enhance happiness, improve appetite and decrease sleep disorders (4). On other hand, older adults who live alone show early signs of cognitive disturbances such as forgetfulness, social withdrawal, inability to keep up with activities daily living, instrumental activities of daily living and nutritional problems such as malnutrition (5).

In line with global trends, Egypt's population is also aging with 6.9 % of the population over 60 years of age in 2017, and this age group projected to be

9.2% by 2030 and 20.8% by 2050 (6). Life expectancy is projected to reach 73.0 years for women and 68.2 years for men (7). Approximately 20 million Egyptians will be categorized as older adults by 2050 (8). As the population ages and the old-age dependency ratio increases, economics, health resources and community welfare may be stretched. Egypt policy role to cope with increasing number of older adults. Egyptian Ministry of Social Solidarity offers various economic, social and recreational activities for elders to maintain highest degree of health and welfare among them (9).

Living arrangements in Egypt are likely affected by geographical location, socioeconomic status and regional cultural context. Egypt is classified geographically into two portions: Upper Egypt in the south and Lower Egypt in the north. The portions are titled this way according to the Nile passing from south to north. Southern Egypt's landscape contains low mountains and desert. Northern Egypt has wide valleys near the Nile and desert to the east and west. North of Cairo, the capital, is the sprawling, triangular Nile River Delta. This fertile land is completely covered with farms. Egypt's population is increasing rapidly; this places pressure on resources, since most people live in a narrow strip of land along the Nile River. About 95% of the country's 97 million people live along the banks of the Nile and in the Nile Delta, which fans out north of Cairo; and along the Suez Canal. In terms of demographic transitions, approximately 43.3% of the Egyptian population lives in the urban areas of the country (10).

Between 2004 and 2009, the percentage of Egyptians living at or below the World Bank's poverty line of US\$2 per day increased from 19.6 percent to 21.8 percent (11). The unemployment rate in Egypt reached 11.9 percent in 2017 (10). Poverty rate is generally high in the Upper Egypt governorates, particularly Assuit, Quena, Sohag and Aswan, but relatively low in Cairo and Alexandria (12).

Changes and gains achieved from the last decades of the twentieth century, as well as differences in life expectancy in later life, are the results of policy action in health and social domains. At the same time, trends in life expectancy at birth, as well as life expectancy in old ages, drive to important changes at the individual level in both family structures and relationships between family

members and between generations. Changes in living arrangements induced by differences in labor market opportunities have resulted in significant differences in psychological well-being among the older persons. In other word, older persons may live alone because the economic situation is driving the youth and adult children to migrate to urbanized area or foreign countries (13).

In the Arabic culture, the extended family is traditionally regarded as the basic unit. Children are highly valued in Egypt, especially in rural areas where they help on family farms. Children are also expected to look after their parents in their old age as the concept of intergenerational relation living arrangement in Egypt which involve the meaning and value between the generations (14). The family is the foundational and basic social unit that consolidates the sense of security, settlement, well-being and sustainability of society. The quality of family relationships shapes and influences the social, psychological, and biological development and functioning of its members.

Limited research has been conducted in living arrangements of older adults in Egypt and Middle East in general (15). This study uses the data from DHS Egypt 2000 and 2014 to examine regional differences in the living arrangements among adults aged 50 years and older and how they have changed over the time in Egypt. This research seeks to examine the changes in living arrangements of older persons in Egypt over time.

Subjects & Methods:

Data source:

This study used two household data from Egypt Demographic and Health Surveys (DHS) conducted in 2000 and 2014. A detailed description of the study design and methodology involved in the Egypt DHS is available elsewhere. In brief, the (DHS) data are collected in over 90 countries to assess the health and wellbeing of populations (16, 17). Since their inception in 1988, a total of eight DHS surveys have been conducted in Egypt. Data were collected using two-stage clustered stratified samples. Given availability of DHS data for Egypt, we selected a 14-year time span to allow comparison to regional trends. Demographic and Health Survey (DHS) Egypt is funded and supported by United States Agency for International Development (USAID)

Subjects:

The 2000 and 2014 Egypt DHS sample included 16957 and 28175 households respectively. The household level questionnaire included covers household composition including information on age, sex, marital status, relationship to the head of the household for each member of the household. In the current study, presence of a 50+ years old household member was used to identify households with older person. The main variable of interest was living arrangement for households with older adults. These were defined based on whether or not older person live with spouse, adult child or grandchild and were divided into the following categories, living alone, skip generation (living with young children only), two generation (living with adult children), and multigeneration (living with at least 3 generations).

Statistical analysis:

Frequencies and proportions of living arrangements were calculated for each survey separately as living alone skip generation, two generation and multigeneration and every map was divided for each Egypt's governorates according to the previous mentioned living arrangement from 2000-2014.

Results:

Figure 1 depicts the percentage of households with older persons living alone by governorate in 2000 and 2014. In 2000, New Valley had the highest rate of older persons living alone, with 11% of households with older persons living alone in 2000; in 2014, this was surpassed by Alexandria, with 19% of households occupied by older persons living alone. In 2000, the governorate with the lowest rates of older persons living alone was Red Sea. Souhag, South Sinai, Behera and Fayoum had about 3% of households occupied by older persons living alone in 2000, all of which experienced a tripling of the proportion of elder only households in 2014. Similarly, Cairo and Port Said experienced a doubling of portion of older alone households from 2000 to 2014.

Figures 2 through 4 show the percentages of older persons living in the households with different generations. The percentages of households with older persons living in skip generation (older persons and children) by governorate in 2000 and 2014 are

shown in Figure 2. Skip generation households are uncommon across Egypt, with the highest rates in Menya (2% in 2000, 1.65% in 2014). On the other hand, the majority of households were of the two-generation type both in 2000 and 2014 (Figure 3). In 2000, the highest rate of two-generation households was in South Sinai (63.7%). In 2014, Fayoum had the highest rate at 66.4%. In 2000, the lowest rates were in Matroh (40.6%); in 2014, the lowest rates were in Port Said and Souhag (approximately 53%). Finally, the percentages of households with older adults living in multiple generation households by governorate in 2000 and 2014 are shown in Figure 4. Overall, rates of multiple generation households declined over the time period. In 2000, the lowest rate of living in multiple generation households was in Cairo, with 24.4% households containing older persons living in multiple generation households in 2000; in 2014, this was surpassed by Red governorate, with 12.8% of households containing older adults with multiple generations. While the highest rate in 2000 was in Souhag (44%) and in 2014 Luxor had the highest 30.3% of households containing older persons in multiple generation.

Figure 3: maps of households with older persons in two generation by governorate in 2000 and 2014.

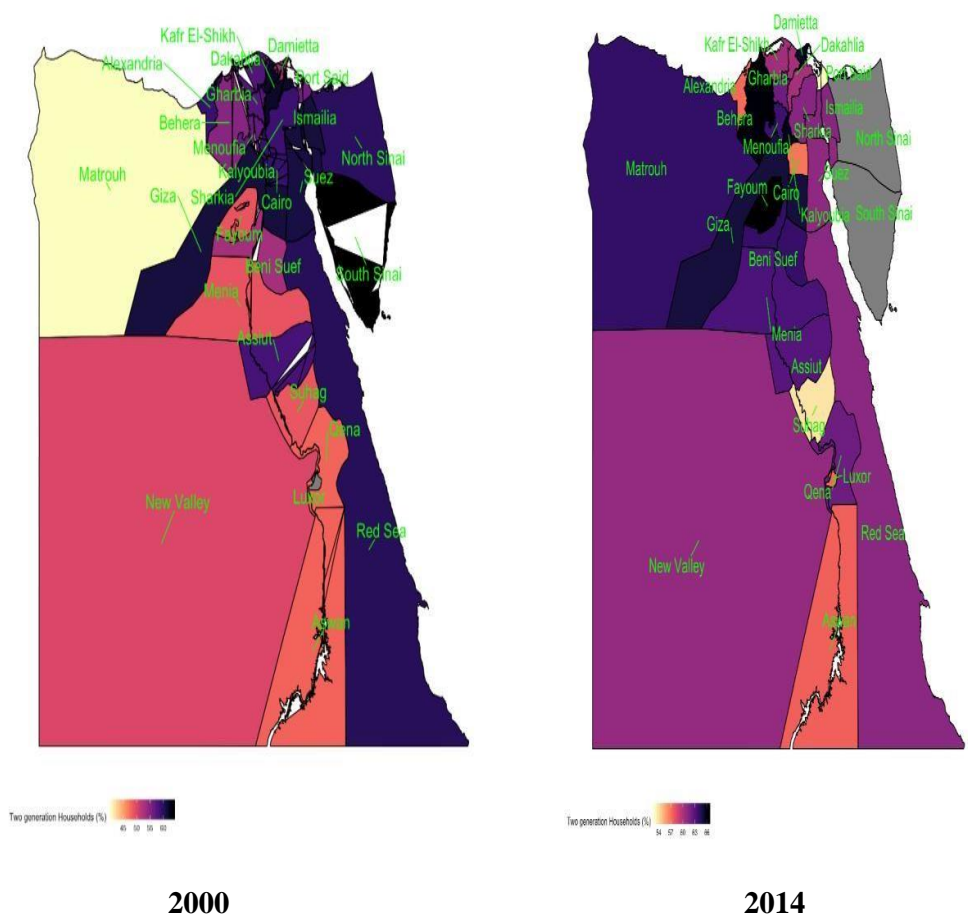
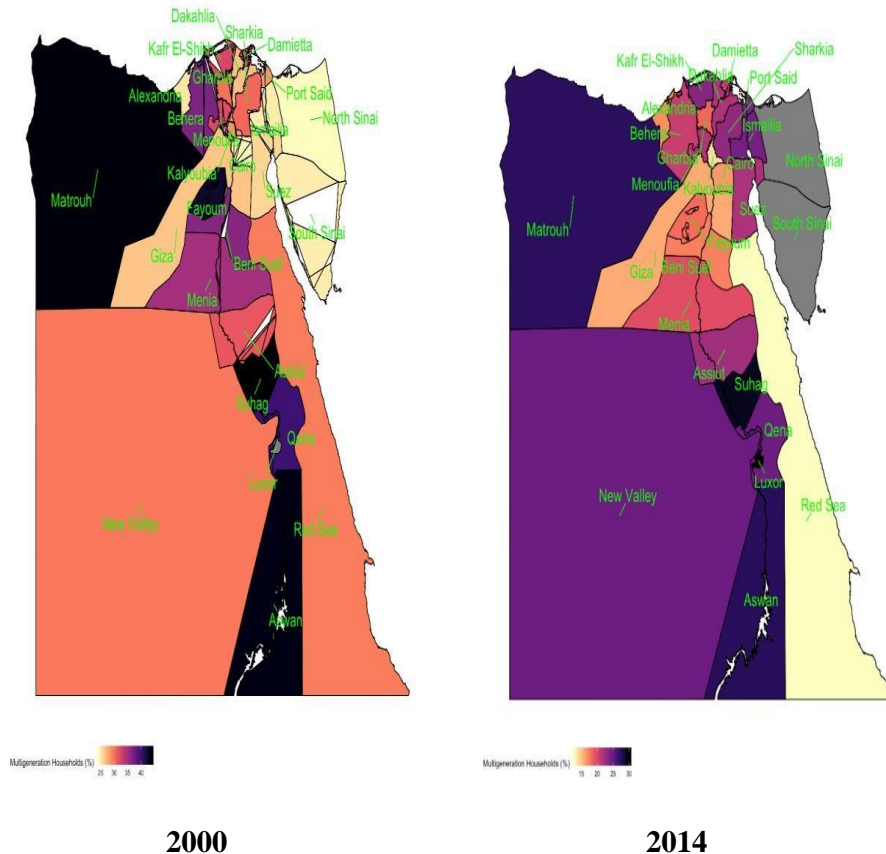


Figure 4: maps of households with older persons in multiple generation by governorate in 2000 and 2014.



Discussion:

As populations are rapidly ageing, living arrangements of older persons have become a concern for the health and wellbeing of older persons. Living arrangements are affected by social and economic factors over the time (18). Such trends may have dramatic policy implications. To date demographic shifts associated an ageing population have received limited attention and it is still understudied in the MENA countries (19) and there is lack of knowledge about the living arrangements and socioeconomic conditions of aged people. Topics regarding household structure and support for older persons in developing countries are becoming increasingly important as population ageing starts to influence many

of these societies (20, 21) and the Egyptian population aged 60 years and older is expected to grow from 5.1 million in 2000 to 23.0 million in 2050 (15). The present study examined the changes in living arrangements in Egypt's governorates.

The present study revealed that in 2000, the highest rate of living alone was in the New Valley, with 11% households containing only older persons living alone; in 2014, this was surpassed by Alexandria, with 19% of households containing only elders (as shown in figure1). Similarly, **Angeli (2015)** (13) reported an increase in smaller households, particularly solitary living, in the urban context from the three surveys carried on Egypt in 1998, 2006 and 2012. Between 2006 and 2012, there was a 31% increase in persons living alone in urban households (13). Additionally, **Yount and Khadr (2008)** (22) reported that 3.1 percent of Egyptian men and 12.3 percent of women lived alone in 2000.

Similarly, there has been an increase of living alone among older person in Lebanon (23, 24), Data of the „Pan Arab Project for Family Health“ in 2004 found that women were four times as likely to live alone than men (23, 24). Economic development in Arab countries is driving family living arrangements to change from primarily extended family to urban-based nuclear families, in which wives are gainfully employed (25). The increase number of older persons living alone in Egypt may also be related to the rapid decline in fertility in Egypt (26).

While we are unable to assess living arrangement preference in this study, some studies have shown that older persons prefer to live alone to maintain privacy and freedom (27-29). **Spanish Foundation for Science and Technology (FECYT, 2018)** (27), **Visschedijk (2014)** (28) and **Panula (2010)** (29) reported that older people prefer to live alone seeking for privacy and freedom. When older persons share a household with families, they may feel that they are a burden for the family. Moreover, some elders fear that daily cohabitation would eventually and inevitably generate discomfort, arguments and conflicts (27). In contrast, **Shah M et al., (2002)** (30) reported that very only 0.3 percent of older men and 1.9 percent of older women lived alone in 2000. Older women had twice the odds than men of living without their children and three times as likely to live alone compared to men.

The present study found that skip generation households are uncommon across Egypt, with the highest rates in Menya (2% in 2000, 1.65% in 2014) (as shown in **Figure 2**). While we were unable to assess why this was not a common living arrangement, this is in contrast with studies of sub-Saharan Africa were this

arrangement is much more common (20). Other study reported that living with descendants (with a child and/or grandchild) represents the most diffused living arrangement in late life in all the countries, but it presents different percentages for men and women and among the countries here considered. Older men (head of the household or not) live with children and grandchildren more often than older women do, but the percentage is decreasing from Jordan to Egypt and to Tunisia (15).

The majority of households in Egypt had two generations in both 2000 and 2014. In 2000, the highest rate of two generation households was in South Sinai (63.7%). In 2014, Fayoum had the highest rate at 66.4%. In 2000, the lowest rates were in Matroh (40.6%); in 2014, the lowest rates were in Port Said and Souhag (approximately 53%) (as shown in figure 3). Two generation households may be common as they allow for cost sharing and provide an opportunity for social support. Similarly, **Angeli and Novelli (2017)** (15) noted that the cultural ideal in both Egypt and Jordan is for adult children to live with their parents. There is a sense of obligation to support elders. In contrast, co-residence is not a preferred living arrangement in Tunisia. In addition, **Angeli and Novelli (2017)** (15) noted that in most countries of the region, co-habitation with at least one generation is more common among rural vs. urban households. In addition, this result is in line with other study by **Muenning et al., (2014)** (31) who reported that older persons living in multiple generation households commonly share resources such as food, child care, heat and electricity lead to decrease money expenditure and allow older persons to be closer to loved ones. However, other study noticed that living in multiple generational may not necessarily have positive influence to health and longevity of older persons as the older persons seek for autonomy, freedom and avoid interpersonal conflict (32).

Despite the fact that a majority of older persons live in multigenerational households, the present study findings revealed that overall rates of multigenerational households in Egypt have declined over the 2000-2014 period. The present study reported that in 2000, the lowest rate of living in multiple generations was in Cairo, with 24.4% households containing older persons living in multiple generations in 2000; in 2014, this was surpassed by Red sea Governorate, with 12.8% of households containing older persons with multiple generations. While the highest rate in 2000 was in Souhag (44%) and in 2014 Luxor had the

highest 30.3% of households containing older persons in multiple generation. **Angeli (2015)** ⁽¹³⁾ also reported that multigenerational households declined in Egypt from 1998-2012 and that decline was greater among urban areas in comparison to rural regions. While multigenerational households remain most common in Egypt, Jordan and Tunisia, these countries have all experienced a decline in this household arrangement, likely driven by demographic trends ⁽¹⁵⁾.

Strengths and limitations:

There are several strengths and limitations in this study. The large and nationally representative sample provides a picture of the statue of living arrangements of older persons in Egypt, which has previously not been reported. The focus of DHS survey, however, is more on the health and wellbeing of women and children, therefore, we know little beyond the household composition. We are unable to assess the reasons for or the impact of the various living arrangements of older persons from this sample.

Conclusions and future study:

Demographic and Health Survey Data (DHS) Egypt, the present study revealed that living arrangements structural in Egypt various in every governorate from 2000 – 2014. The proportion of older persons living alone is increasing in many governorates. While we are unable to determine the cause of the changes, it is likely that living arrangements are affected by social, cultural contexts and labor market in Egypt.

For future study we need to understand the dynamic linkages between Egypt older person's socio-demographic characteristics, such as level of education, monthly income their living arrangements. The relationship between older persons living arrangements, and health and well-being remain unknown.

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