Active Ageing Index in India- Is the approach used in European counties applicable to Developing Countries?

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Abstract

One of the questions the chapter asked is whether the AAI (Active Ageing Index), a widely popular policy tool in Europe, can be applied in India. We conclude that the AAI will help to understand the contribution of older adults in India, by including social and economic components. We believe that one of the strengths is the critical evaluation of employment and social engagement domains. In India, employment in later life could not always be interpreted as an active engagement, due to lack of formal support and prevailing ageism in the labour market. Despite poor scoring in the employment domain, India has similar scores to the EU due to higher social participation rate. We recommend that in-depth analysis has to be carried out to draw policy conclusions based on AAI in developing countries.

1.0 Introduction

The last decade of the twentieth century experienced the emergence of a new paradigm in gerontology which presented a positive perspective towards ageing, evidenced by approaches such as 'Active Ageing' (WHO, 2002; Walker, 2002), 'Healthy Ageing' (WHO, 1990), 'Successful Ageing' (Rowe and Kahn, 1987; Baltes and Baltes, 1990, Rowe and Kahn, 1997) and 'Productive Ageing' (Butler and Gleason, 1985). For Instance, Successful Aging, a multidimensional concept, focuses on prevention of disease and disability, continuous preservation of cognitive and physical capacity and an active social engagement in later life (Rowe and Kahn, 1997). Similarly, Active Ageing, is defined by the World Health Organisation (WHO), as the process of enhancing health opportunities and participation in society in order to improve quality of life in old age (WHO, 2002).

These approaches describe various experiences of ageing using a multidimensional perspective on health status, economic situation, social engagement, and capacity to live independently in

later life. When these concepts emerged, they were mostly popular as conceptual tools. However, in recent years these conceptual tools have been transformed into functional tools to enhance their measurement, standardisation and application for policy purposes. For instance, the Active Ageing Concept has recently been converted into an index by Zaidi et al., (2013). The recently created index is widely accepted, applied and interpreted in Europe (less so in Asia, Latin America and Africa). Hence, the main aim of this paper is to construct the Active Ageing Index for India, the world's second most populous country, using micro-level data.

As argued by Fernández-Ballesteros et al. (2013) an individual is an agent of his or her ageing process affected by decisions taken during the life course in addition to behavioural characteristics, making the ageing process a non-random phenomenon. In addition to the impact of decisions taken across life course, the ageing process in developing countries such as India, extensively depends on the support provided by family due to weaker formal state support compared to European countries. Due to the severely limited formal state supports, Indian older people, especially women, rely on family support for their financial, social and emotional domains of well-being (Rajan, 1999, 2007). Given this background of weak social policies, a meagre state pension support and a poor public health system, a significant proportion of Indian older people face three disadvantages in the form of avoidable disability, deprivation and dependency, making them more vulnerable in later life as compared to most of the elderly people in developed parts of the world. Such vulnerabilities could result in an irreversible decline in health impacting both quality and duration of life. Hence, this chapter intends to summarize the relevant issues and capture the quality of later life information for older adults in India using the Active Ageing Index. One of the objectives of this chapter is to critically evaluate the applicability of this particular index tool in policy making for developing countries such as India.

The following section (section 2) describes ageing in India followed by a discussion of the emergence of the Active Ageing approach and the recent Active Ageing Index (AAI hereafter). Section 3 highlights the emergence of AAI and critically evaluates the Index. Section 4 describes our data and methodology, and section 5 interprets and discusses our findings, followed by a conclusion.

2.0 Background and context of ageing in India

2.1 Ageing and Ageism in India

India in recent years has been experiencing several fast-paced emerging and conflicting phenomena, such as a growing economy, a rapidly increasing overall population, declining fertility rates in southern states, and a high prevalence of diabetes. The economic growth that has occurred has not resulted in an improvement in social security and health for the older people. In fact, the economic growth that has fuelled urbanisation has resulted in widening inequalities (Datt et al., 2016). In addition, economic growth in India is based on urban growth, which has resulted in an influx of migrants to urban areas from rural areas. This has caused a further weakening of informal care available to older people. In particular, between 1951 and 2011, the urban population in India increased from 62 million (17% of the total population) to 377 million (31% of population) (GOI, 2011). This proportion continues to increase, due to lack of employment opportunities in rural India. This has resulted in declining formal supports available to older people residing in rural areas, as the majority of migrants leaving their families tend to be younger.

Despite the very restricted formal state support and health care, life expectancy has increased in India, due to cheaper medicines and an expansion of the private health care system. The percentage of elderly Indians aged 60 and above has increased from 5.3% to 5.7% between 1971 and 1981, and from 6.0% to 8.6% between 1991 and 2011 (GOI, 2011), which is due to declining fertility rates as well as an increase in life expectancy. The number of older people among India's 1.2 billion residents is 103.8 million as per the 2011 census (GOI,2011), which is not dissimilar to the elderly population of the entire European Union (EU-28) aged 60 and above, which is approximately 127 million out of 500 million people (compiled from Global Age Watch Index data, 2015). Moreover, one-in-two older Indians have at least one chronic disease such as hypertension, angina, arthritis or diabetes (Chatterji et al. 2008), and due to weaker formal health care support, the majority of older people pay for their health care out of pocket resulting in a socio-economic gradient in health in later life.

Investigating the macroeconomics of India as this relates to the older adults highlights apparently contradictory results. Even though India continues to enjoy a large working age population that further fuels the economic growth, the old age dependency ratio has increased from 122 in 1991 to 142 in 2011 (GOI, 2011) with bigger states like Kerala, Punjab, Himachal Pradesh and Tamil Nadu topping the chart. This is a rather crude demographically driven economic indicator that particularly undermines the economic contribution of older people in informal and agriculturally dependent economies like India. As informal economy refers to income generation from activities that are not regulated by government, the income flow and

job security would ne erratic especially for older workers. Besides, contribution of older people in informal economy would be excluded from the tax system and pension records underestimating the contribution of older people to the economy. The majority of older people, especially from marginalised and poorer sections of Indian societies, contribute to the economy by working after retirement age, as they have little formal support available. However, a significant proportion of the work could be unpaid or paid in the form of food and shelter provision. Older people, mostly women, also contribute to the economy by taking care of grandchildren, to help their children in paid employment. One would anticipate that, an increase in life expectancy at birth (eg. In India from 49.7 in 1970 to 69.6 in 2011) would have resulted in an increased direct economic contribution of older people that enjoyed better health. But this fast paced increase in life expectancy in India also has resulted in four generation families, and multiple generation families, if successful, provide informal support to older people in return for childcare and economic contribution. However, such families can result in conflicts that are either economic and/or social.

For a country racing to shed off its less developed country image and aspiring to emerge as a global economic player, the question is no longer whether ageing is an issue for India, but how big the issue is. The severity of this issue is relevant given the heterogeneity in the speed of ageing and the number of older people. Low fertility southern states also have the highest share of older people, with Kerala topping the list of ageing states (12.6%). The majority of northern states have the lowest share of older adults, with Delhi reporting only 5.4% of older people (GOI, 2011). In terms of gender composition, like European countries, India has a higher proportion of older females compared to males. The proportion of females aged 60 and above is higher than rest of the states in all of the bigger states, except five north and north-eastern states namely Assam, Bihar, Himachal Pradesh, Jammu & Kashmir and Jharkhand.

2.2 Ageism in India

Ageing in India is a socially constructed phenomenon (Jamuna and Ramamurti, 2011) and occurrence of ageism in India is similar to global ageism to a certain extent. For instance, age specific distinctions, stratifications, judgements and behaviours are incorporated into our pattern of thinking (Macnicol, 2006). Ageism is typically expressed in the form of stereotyping individuals based on their age that could result in discrimination. This social construction of ageing amalgamated with cultural diversity and gender norms in India intensifies ageism. For example, older women from marginalised communities might experience ageism, as well as

sexism combined with other forms of discrimination stemming from social marginalisation due to factors such as class and ethnicity.

Ageist perspectives of theories such as the disengagement theory (Cumming and Henry, 1961) have advocated that humans become inactive over time and with increasing age older adults tend to disengage from society on their own. In the case of India, such disengagement is imposed on older people forcefully by society due to a lack of formal support, support that is even weaker for an increasing proportion of older people due to increasing urbanisation and migration. In other instances, older people are forced to engage economically despite their poor health, to 'make ends meet'. In absence of any formal state support, many older people are not left with much option but to work in under atrocious conditions marked by things such as ageism, and highly low income. Despite the social, health, and economic insecurities of South Asian older people (Hassan, 20007), they continue to contribute to their societies in several ways. For example, using positive frameworks such as active ageing, it is possible to take into consideration social engagement, economic activity and other positive contributions of older people. The positive framework challenges negative attitudes in emerging countries like India, by showing the heterogeneity among older people and by reinforcing their valuable contributions to the society.

Recent evidence shows that employers discriminate older employees due to the projected ageist characteristics such as forgetfulness, frequent sickness, weakness, wrinkles, baldness, grey hair, constipation, and falling tendency, (Selveraj, *et.al.* 2011; HelpAge India, 2013). Older people are also viewed as needy, worthless, lethargic and excessively spiritual or religious making them unfit for modern life. Not surprisingly these stereotypes and beliefs have been associated with the exclusion and marginalisation of the aged (Jamuna and Ramamurti, 2011). Furthermore, such redundant subjective negative images of older people in India portray elder adults in a reductionist and pessimistic way.

By constructing active ageing of elderly people in India, we attempt to breakthrough this stereotyping of older people and highlight the contributions of older people in India. Besides, we aim to show evidence that several older people in India are ageing actively in different aspect of life such as health, education, employment, social participation and other dimensions of life including provision of informal support. Where older people are not actively engaged, we would like to identify the policy gaps, and also question the reductionist ageist perspective

using the AAI index. We believe that the active ageing index is the most comprehensive measure to date to measure positive ageing using reliable micro-data.

3.0 The Active Ageing framework and Index

3.1 The WHO active ageing framework and the emergence of AAI

The WHO Active Ageing framework (introduced in 2002) is based on three pillars: participation, health, and security (see Figure 1), and it encompasses six groups of determinants. These six determinants (and the associated further aspects) include:

- Health and social services (including prevention, health promotion, hospital admissions, long and short-term care and mental healthcare);
- Behavioural determinants (individual behavioural factors including smoking, physical activity, dietary patterns and alcohol consumption);
- Personal determinants (individual personal factors and environmental determinants including biological and genetic factors that are non-modifiable as well as psychological factors);
- Physical environment (including housing, safety and pollution);
- Social determinants (including available social support, abuse and violence and education); and
- Economic determinants (including both macro and micro factors such as wages, work and social security).

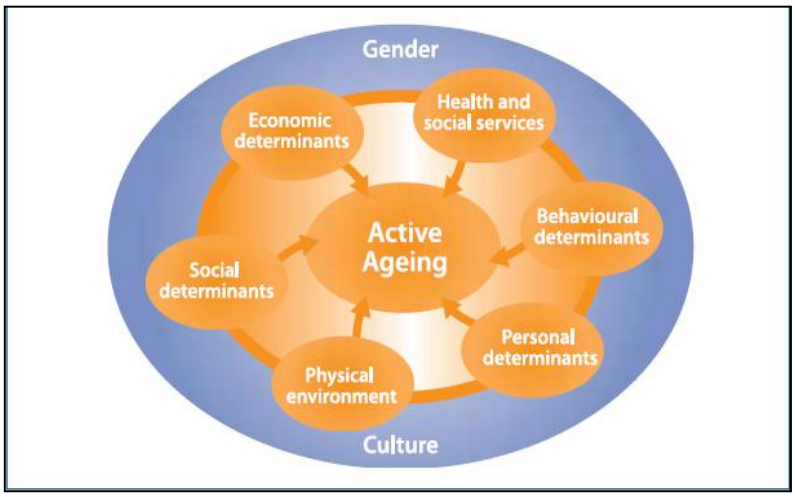

Figure 1: The determinants of active aging (WHO, 2002)

No attempt was made to create an index using the framework until the creation of the AAI supported by the UNECE and European Commission. In 2013, a solution to the problem of measuring active ageing has been provided by the Active Ageing Index (AAI) proposed by

Zaidi et al. (2013) at the European Centre for Social Welfare Policy and Research, Vienna. AAI is designed to provide reliable quantitative measures of the untapped potential of older people for active and healthy ageing across European countries. AAI has been viewed as an emerging policy tool internationally and has been applied successfully to quantify active life in the EU. The AAI also projects the potential of older people by measuring the participation of elderly in income and non-income generating activities in addition to promoting active and independent later life.

AAI is a multidimensional tool measuring four domains of life; participation in productive employment, participation in society, independent, healthy and secure living, and age-friendly environment (Zaidi et al., 2013; Zaidi 2014a). Each of these domains captures a crucial dimension of health and successful ageing. To date, AAI has not been utilised by policy makers in developing and emerging countries including India, mostly due to lack of quantitative information required to calculate the index. A study from Bangladesh, with a similar social and economic context to India, attempted to measure active ageing and found that urban male elderly are not only more educated but also more active in all aspects of life and have longer healthy life expectancy. Based on these findings Tareque, *et.al.* (2012) suggest that steps should be taken to promote life-long learning and also pragmatic education with motivation of being active in every aspect of life. The study also suggests positive community participation, providing urban recreational facilities in rural areas for elderly and promotion of self-management of physical and economic stability among elderly through more mass media exposure (Tareque, *et.al.* 2012). The aim of the paper is to develop the AAI for India using micro-level data including the recently released UNFPA Ageing in India data.

3.2 Domains of Active Ageing Index in Indian context

Several studies have highlighted that gainful employment, social participation, independent living and health status are crucial aspects of active ageing. However, workforce participation of older people continues to be a neglected area in India and there is very limited data on employment of older people. With a limited number of studies on India, a study by Selveraj et al., (2011) stated that the overall workforce participation rate declines significantly from the age 58 and above as 58 or 60 years of age is the stipulated retirement age for most states of India. However, this decline depends on the size of the informal sector where the concept of retirement is irrelevant. In addition, the post retirement workforce participation rate significantly varies between the more populated age groups of 60-64, followed by 65-69 and

finally 70+. A significant finding is that a substantial proportion of the oldest old (defined as people aged 70 and above in India) are economically active and are mostly employed in informal sector, characterised by job insecurity, insufficient wage, passive physical stress, and discriminatory working atmosphere (Selveraj, *et.al.* 2011). Based on this evidence on the employment of older people in India, we feel that employment in later life is not viewed as a positive aspect due to early retirement policies. This is a concern in countries like India where there is inadequate formal economic support and weak public pension system. Older people might be forced to work irrespective of their health status in an ageist informal working atmosphere and negative policy environment.

3.3 Critical Evaluation of the Construction of the Active Ageing Index

Development of a valid and accurate active ageing index is a challenge as several researchers have shown that lay definitions of active ageing, successful ageing and quality of life show have considerable overlap (Bowling, 2009). Furthermore, any slight modification in the dimensions of an active ageing index could result in significant changes in outcomes. Although it is well established that physical health and functioning, social engagement, mental health should be integrated into active ageing, majority of research quantifying the active ageing framework focused on one indicators only.

For example, several researchers on active ageing tend to focus only on the economic activities of older people even for the countries with excellent formal support. Such policies, by default provide limited focus on enhancement of quality of life (Bowling, 2009). In contrast to the previously constructed active ageing measures, the AAI happens to be the only index that captures the three pillars of active ageing framework introduced by the WHO (refer to the Figure 1). The AAI, like other contemporary research, sheds positive light on employment of older people as supported by Boudiny (2012). In addition, unlike other uni-dimensional research focusing on health or economic domains, AAI is a holistic measure that clearly distinguishes between the economic and non-economic concepts. Such inclusion of non-economic indicators in the construction of active ageing index is extremely important from a policy perspective and layman's perspective.

4.0 Data source and methodology

As mentioned, the AAI capture the four domain of active ageing i.e. participation in productive employment, participation is society, independent, healthy and secure living and friendly environment for active ageing. The basic criteria for choosing these domains were to reflect actual experiences of active ageing and capacity for it. The first three domains reflect the experiences of older people while fourth domain captures the enabling macro environment.

Our analysis could not follow the AAI UNECE methodology completely due to lack of data for a couple of sub-domains (refer to the Table 1). In these cases, proxies were used which resulted in a slightly modified version of AAI index. In the domain of participation in society, due lack of data on elderly taking care of adults that sub-domain was dropped and the remaining three sub-domains were given equal weight. Also, due to unreliable source of data on income in India, relative median monthly expenditure is taken as a proxy. Moreover, the sub-domain of physical exercises included practicing yoga as yoga is commonly practiced by Indian older people compared to jogging, swimming or visiting a gym. In addition, we included spirituality and religion as we felt that in India they play an important role in active ageing.

We also had to exclude sub-domains like lifelong learning, use of ICT, share of healthy life-expectancy due to lack of data, and weighting has been equally distributed among the other sub-components of each domain. Most of the analysis is restricted to age 60 taking into consideration lower life-expectancy in India compared to the EU. Besides, our analysis did not include oldest old due to lack of reliable source of data. This raised a few concerns on the applicability of such a complex index in developing countries where data on older people is limited. However, we felt that we should construct the AAI using every possible reliable source and proxies where required rather than shelving the index calculation. By highlighting the data issues, we can make a case for additional surveys on Indian older people that can help us to create a positive policy environment.

The paper computed AAI for India and seven major states having higher proportion of older people. Most of the analysis included UNFPA Ageing data (UNFPA, 2012), which was conducted to develop a knowledge base with regard to the demographic, social and economic conditions, health needs and living arrangements and entitlements. For sampling purposes, data is collected from household of states with higher proportion of elderly in Kerala, Tamil Nadu, Maharashtra, Himachal Pradesh, Punjab, Orissa and West Bengal. The sampling frame of the survey ensures that the data is representative at the state level. In addition to the UNFPA data, Sample Registration System data from Registrar General of India 2011 and National Sample

Survey 66th round data (2010) were used in this study to calculate domains of capacity building, health, and secure living. Using the individual level data, overall and domain specific AAI was constructed by gender and state.

5.0 Results and discussion

5.1. Overall and domain specific AAI by state and age

Table 2 provides overall AAI by state and sex. The results show regional and gender inequality. Kerala, a south Indian state, Maharashtra, a west Indian state and Himachal Pradesh, a north Indian state performed well. Tamil Nadu scored the lowest AAI score and also had the lowest gender gap. High performing states had the higher gender gap. To study the contribution of the domains to the overall index, domain specific scores by state and sex were calculated (Tables 3,4,5 and 6). These domain specific analysis show that certain states in India performed well on participation in society domain but performed poorly on the domains of labour force participation and independent living. This is due to lower proportion of older people with financial security and employment. While Maharashtra state that includes the financial capital Mumbai ranks highest in the labour force participation in later life (81%), Kerala ranked the lowest for male labour force participation despite being the state with highest education and lowest inequality. In participation domain of AII, all states performed very well with Himachal Pradesh ranking highest and Tamil Nadu ranking the lowest. These regional differences could be attributed to migration pattern and development of states. Though Kerala, West Bengal and Orissa have high migration rate in younger ages, their socio-economic conditions and patterns of migration differ. Himachal Pradesh, Kerala and Maharashtra ranked above the national overall AAI score. Tamil Nadu, a south Indian state with high education and moderately high GDP, has performed poorly, which was unexpected.

The gender specific analysis did not align with typical gender inequalities shown using indicators such as overall sex ratio and financial stability in later life. Despite poor performance of females in employment, independent living and capacity for active ageing, the overall Index for males and females resulted in a similar score due to higher social participation rates among older females in India compared to older males. This complex mismatch in dimensions and results has also been observed in earlier studies that have used other measures of active ageing. Paul et al., (2012), highlighted the complexity in the concept of active ageing due to its multidimensional nature. Since AAI is a more composite version of the WHO concept it is observed that more dominant role is being played by functional health and crude economic

participation compared to other quality based dimensions. Based on the results, we believe that AAI is an effective tool to capture the inter-state differences and gender differences in India. However, we strongly recommend to look at the sub-domains to understand their contribution to the overall AAI.

5.2 Comparison of AAI Indian score with European scores

After the construction the AAI for Indian states, we compared the Indian AAI with the EU indices. Table 7 shows the EU countries by their AAI rank in ascending order (Zaidi 2014b). Such comparison not only acts as a validation tool but also provides in-depth information on comparability of the AAI sub-domains. The overall AAI for India is closer to the values of Hungary, Greece and Slovakia. The Western state of Maharashtra has score similar to Bulgaria, Latvia and Greece while Northern state of Himachal Pradesh and Punjab are performing closer to the German level. Southern state of Kerala has similar performance like Cyprus. However, the AAI values for East Indian state of West Bengal and Southern State of Tamil Nadu is closer to the AAI of Poland. This raises a conceptual question: if older people in Cyprus and Kerala have similar scores, can we interpret that participation and contribution are similar? The domain specific analysis shows that the overall scores of Cyprus and Kerala vary a lot. We observed that results differed drastically when we compare domain specific scores of Indian states with domain specific scores of the EU.

We feel that these index specific similarities and domain specific differences stem from socio-cultural differences, lack of formal support in India and the nature of variable used in calculating the AAI where employment domain includes employment rate in various age groups. For example, the employment domain score ranges between 17.8 and 41.0 for EU countries despite including oldest old, whereas for Indian states the score ranges between 4.8 and 5.4. Besides, India performed poorly in the domain of independent living and capacity for active ageing compared to the EU. However, for the social participation domain of AAI, Indian states score high (between 39 and 66) compared to the EU (between 12 and 25). Despite this domain specific divergence between the EU nations and Indian states, the overall AAI score converged.

Therefore, we recommend that domain specific investigation has to be carried out while engaging in a cross-cultural comparison. Based on the overall and disaggregated analysis, we

believe that AAI is indeed a dynamic index that identifies the regional variation within a country to some extent. We caution that the application of this index to a complex and diverse country like India has to take into consideration the context of the county and the formal support available. As overall index score can suppress the expression of domain specific differences that are very relevant for policy purposes, we recommend that policy makers have to focus on domain specific indicators rather than basing their policy recommendations using the overall index.

5.3 Applicability of AAI in Indian setting

We feel that some of the sub-domain indicators might not be applicable to India as the ageing experience is structurally different from those of Western countries. A very poignant argument in this context is that the sex-ratio in older age is more in favour of males compared to even many developing nations of Eastern Europe and Central Asia. Furthermore, a huge state-wise variation exists. As per the latest 2012 report of UNFPA survey, there are 1021 females per 1000 males but there are bigger states like Punjab where it is as low as 910 females per 1000 males. While as per the 2011 Census, only the state of Kerala shows a favourable sex ratio for females (UNFPA, 2012). Moreover, the domain participation measured as voluntary activities by older people and care provided to grandchildren by older people differ between Indian states and EU states. Thus, additional analyses are needed to study the labour market of older people, intergenerational solidarity and health status of older people in India, three main factors relevant for the AAI index.

5.3.1 Employment in later life in India and its contribution to AAI

When calculating the AAI, we have taken into consideration only those that worked more than three months in a year and were paid. This has resulted in poor performance of economic domain of older people. However, when we look at all forms of employment (including seasonal and short-term employment) and all kinds of payment (including cash, kind or no payment), majority of older people work in India. Table 8 reveals intra-state differences with working proportion ranging between 81% in Maharashtra to 53% in West Bengal. As mentioned in the previous sections, the vast majority of older people in India receive no pension, and formal pensions when provided are meagre. The UNFPA report (2012) showed that 72% of male and 94% of female elderly did not receive any retirement or pension benefits

in India. Old age and widow pensions were received only by 13.7% of males and 22.4% of female pensioners. Due to unavoidable dependency on agriculture and the informal sector, vulnerable older people are likely to have higher participation rates in the work force. Putting differently older people in India, in the absence of formal and informal support have to rely on work, with or without good health. Older men are likely to work outside the home, whereas older women are likely to play an important role in informal care.

South and West Indian states such as Maharashtra, Tamil Nadu and Kerala that have higher literacy, employment rates and economic growth exhibit a higher proportion of older working people and this proportion decreases with increase in age in all states. This is a well understood phenomenon due to progression of fragility and disability with age The majority of older people in Tamil Nadu (51%) and Maharashtra (40%) rely on the informal sector, whereas a higher proportion of older people in Kerala rely on the public sector (15%). This may be mostly attributed to higher literacy among elderly in the state of Kerala and a positive social policy environment. The results clearly portray the variations and the complexity of work in later life reflecting the lack of formal and informal support. Moreover, inclusion of all forms of employment would have improved the AAI score. Further qualitative and quantitative data are required to study the role of work in active ageing in India.

5.3.2 Intergenerational support in India

Table 9 focuses on intergenerational living arrangement in India, which is actually a key indicator of solidarity among generations. Contrary to the work domain in India, the intergenerational support domain received very high scores for most of the Indian states. This is due to the higher weights provided to caring of grandchildren in the participation domain of active ageing. The joint family system is a popular practice in India that encourages intergenerational exchange in care and support. The joint family model, defined as a group of people who generally live under one roof, share food cooked at one hearth, hold property in common, participate in common family worship and are related to each other, is portrayed as a golden model that meets care requirements of older people in countries where formal support is limited. Mandelbaum (1957) argued that the joint family is more of a rural phenomenon than urban and with increasing urbanisations these concerns seem to grow. The recently conducted UNFPA study supports this evidence by showing that that almost 70 percent of elders both in rural and urban area reside with their spouse and children in the older ages (UNFPA, 2012). In rural areas 41% of rural older couples lived in joint families, whereas in urban areas only 39%

of older couples lived in joint families. However, more urban solo older people are likely to live with their children and grandchildren (33%) compared to rural areas (30%). Due to the joint family system and living together, intergenerational domain of AAI has scored higher which resulted in a EU level AAI score.

Given the importance of the intergenerational support domain, further analysis was carried out to critically evaluate the engagement aspect. The proportion of households where solo or couple older people reside with at least one young person (individual below 15 years) was calculated by their poverty status (Table 9). Poor people are defined as the bottom two quintiles of wealth whereas the top three wealth quintiles are classified as non-poor. This analysis used as a proxy to show the quality of intergenerational solidarity and not just mere prevalence in Indian context. A critical outcome of the analysis is that, higher proportions of households where elderly and children are residing together are poor (i.e. around 67 percent) compared to households where they are not residing together (i.e. around 54 percent). This raises questions on how the domain of intergenerational solidarity should be captured especially in context of India. For instance, in several cases, provision of care to grandchildren might be obligatory for poor older people due to a lack of formal support and hence it cannot be interpreted as a contributory factor to active ageing. Moreover, it is likely that such care could increase health vulnerability among older people if they are the sole care providers.

5.3.3 Unmet need for health care in later life

Additional analysis on unmet need for health care (Table 10) shows that almost 17 percent of older people report unmet health care. In the UNFPA survey, the reason for not getting treatment for twenty various disease conditions were questioned. Unmet need includes responses related to affordability, accessibility and availability of health care. Further analysis by sex and marital status show that a significant proportion of older females and a high proportion of currently single (i.e. widowed, never married or separated elderly) suffer from unmet health care needs. Interestingly socio-economically backward state like Orissa has lower unmet need among female elderly or currently single elderly (majorly female) as compared to a developed state like Kerala or Tamil Nadu. This inverse association stems from the lack of awareness about health and cultural setup in elderly women. It is likely that women in poorer states might be unaware of health care needs and might report low levels of unmet need for

health care. This enormous unmet need for health care clearly shows that the health domain of the AAI in countries like India require further investigation.

6.0 Summary and conclusion

The AAI index quantifies the contributions of older people in different facets of their lives such as their participation in social, economic and political domains of society. One of the questions the paper asked was the applicability of this widely popular European policy tool in the context of developing countries. The AAI index though accepted in Europe has not yet managed to move beyond applied policy circles and would benefit from mainstream policy recognition. As Ney (2005) argues, the majority of policy discussion related to the inclusion of older people is mere rhetorical and requires more applied perspective. Similarly, the active ageing agenda could become more rhetorical and could be ignored by mainstream policy makers in India. It is also likely that the between-nation differences in the endorsement of the AAI could result in further uncertainty in endorsement of this index by non-EU nations. Coming to India, where policies that support health and well-being of older people are virtually non-existent, any endorsement of positive approaches to ageing could be simply rhetorical. Despite these challenges, emerging economies and developing countries might benefit from positive indices such as AAI that are not only multi-dimensional but also look at ageing in a positive way. Hence, the contribution of AAI would make significant impact on policy making in India by further enhancing the positive perspective.

Based our results, we conclude that the AAI will help understand the contribution of older adults in India by including several relevant dimensions including economic and social contribution. We hope this study will make a strong case for encouraging more positive approaches of ageing research in India. Our study shows state and gender level economic and social disparities in participation in India. We believe that one of the strengths is the critical evaluation of employment and social engagement domains. We feel that in developing countries like India, employment in later life could not always be interpreted as an active engagement due to lack of formal support and prevailing ageism in the labour market. We also stress that the social engagement is not necessarily positive as older people might be forced to participate in informal care.

The analysis also shows that it is important to look at sub-domain scores of AAI before making policy recommendations. This stems from the fact that despite poor scoring in employment,

independent living and capacity for active ageing; India has similar scores like the EU due to higher social participation rate among the elderly. A similar bias was also noted when performing gender disaggregated analysis. We recommend that in-depth analysis has to be carried out to draw policy conclusions based on AAI in developing countries including India. We conclude that older people play a vital role in India evidenced by the AAI application in India. Older Indians contribute to economic, political and social domains of emerging India although they are ignored by the mainstream policies. By further filling the policy gaps, it is possible to further enhance the active engagement of older Indians.

Tables

Table 1: Illustration of the AAI calculation for India

Employment	**Participation in society**	**Independent, healthy and Secure Living**	**Capacity and enabling environment for active ageing**
Employment rate 55-59*	Voluntary activities*	Physical exercise (Includes mainly Yoga)*	Remaining life expectancy at age 55 Sample Registration System#
Employment rate 60-64*	Care to children and grandchildren*	Access to health and dental services*	Share of healthy life expectancy at age 55 excluded due to lack of data
Employment rate 65-69*	Care to older adults excluded due to lack of data*	Independent living*	Mental well-being*
Employment rate 70-74*	Political participation*	Financial security (Three indicators) Relative median monthly expenditure rather than median income+	Use of ICT excluded due to lack of data
		No Poverty Risk+	Social Connectedness*
		No Material Deprivation (at age 60)*	Educational attainment*
		Physical safety excluded due to lack of data	
		Life-long learning excluded due to lack of data	
Weights Employment rate 55-59 (25) Employment rate 60-64- (25)	Weights Voluntary activities (35) Care to children and grandchildren (35)	Weights Physical exercise (10) Access to health services (30) Independent living (30)	Weights Remaining life expectancy at age 55- (41) Mental well-being (24)

Employment rate 65-69 (25) Employment rate 70-74(25)	Political participation (30)	Relative median monthly expenditure (10) No Poverty Risk (10) No Material Deprivation (10)	Social Connectedness-(21) Educational attainment (14)

Source:Authors

The symbol * in the table shows that the data is taken from the UNFPA 2011 data
+ represents NSS, 2010
# represents RGI 2011

Table 2: Estimate of Active Ageing Index by States

Active Ageing Index (Over All)	Total		Male		Female	
States	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**
Himachal Pradesh	36.40	1	40.12	1	31.69	1
Maharashtra	35.60	2	38.65	2	30.71	2
Kerala	34.72	3	37.51	3	28.80	3
Punjab	33.07	4	34.89	4	27.19	4
Orissa	28.86	5	31.53	5	25.16	5
West Bengal	27.44	6	30.77	6	23.30	6
Tamil Nadu	25.35	7	26.10	7	22.78	7
India	31.60		32.69		28.04	

Source: Author's calculations using UNFPA, 2012, NSS 2010 and SRS 2011.

Table 3: Estimate of Workforce Participation Index by States

Workforce Participation	Total		Male		Female	
States	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**
Himachal Pradesh	4.78	7	8.58	5	0.86	7
Punjab	5.31	6	9.71	4	1.24	6
West Bengal	5.94	4	10.12	3	2.30	3
Orissa	6.47	2	10.71	2	2.30	3
Maharashtra	8.95	1	12.04	1	6.17	1
Kerala	5.98	3	6.00	7	1.88	5
Tamil Nadu	5.40	5	6.61	6	3.78	2
India	5.75		4.89		2.65	

Source: Author's calculations using UNFPA, 2012.

Table 4: Estimate of Social Participation Index by States

Participation in Society	Total		Male		Female	
States	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**
Himachal Pradesh	66.07	1	68.88	1	63.17	1
Punjab	56.36	4	56.71	4	56.03	4
West Bengal	49.77	6	53.79	5	46.22	6
Orissa	51.00	5	52.67	7	49.32	5
Maharashtra	62.44	2	66.84	2	58.47	2
Kerala	59.69	3	64.44	3	56.31	3
Tamil Nadu	38.48	7	37.92	6	38.96	7
India	54.89		57.37		52.65	

Source: Author's calculations from UNFPA, 2012.

Table 5: Estimate of Independent Living Index by States

Independent Living	Total	Male	Female

States	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**
Himachal Pradesh	46.79	3	47.70	1	27.62	3
Punjab	45.94	4	43.59	5	30.10	2
West Bengal	41.85	7	40.15	7	27.26	4
Orissa	44.41	6	43.38	6	24.59	7
Maharashtra	46.97	2	45.95	3	26.52	6
Kerala	44.78	5	44.29	4	27.21	5
Tamil Nadu	47.28	1	46.54	2	30.67	1
India	45.69		44.76		28.24	

Source: Author's calculations from UNFPA, 2012 and NSS 2010

Table 6: Estimate of Capacity Index by States

Capacity	Total		Male		Female	
States	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**
Himachal Pradesh	34.62	2	41.18	2	32.59	1
Punjab	34.44	3	36.43	3	20.68	6
West Bengal	18.77	7	21.93	7	17.97	7
Orissa	21.56	6	25.06	6	23.19	5
Maharashtra	29.55	4	32.22	4	27.16	3
Kerala	36.31	1	42.15	1	28.57	2
Tamil Nadu	26.33	5	29.31	5	23.76	4
India	29.03		32.10		29.31	

Source: Author's calculations from UNFPA, 2012 and SRS 2011

Table 7: Rank of EU Countries as per AAI Scores

Country	Value	Rank
Sweden	44.01	1
Denmark	40.18	2
Ireland	39.37	3
United Kingdom	39.26	4
Netherlands	38.93	5
Finland	38.84	6
Cyprus	36.32	7
Luxembourg	35.07	8
Germany	34.96	9
Austria	34.90	10
Czech Republic	34.29	11
France	34.20	12
Portugal	34.18	13
Belgium	33.48	14
Italy	33.28	15
Estonia	33.13	16
Spain	32.50	17
Lithuania	31.57	18
Malta	30.98	19
Romania	30.91	20
Slovenia	30.61	21
Latvia	30.19	22
Bulgaria	29.96	23
Greece	29.34	24
Hungary	28.23	25
Slovakia	27.73	26
Poland	27.32	27

Source: Zaidi, 2014b

Table 8: Distribution of Elderly by Type of Work for Age-Group and States

	Type of Current Work/ Main Occupation				
States	**Not Working**	**Public Sector**	**Private Sector**	**Informal**	**Total**
Himachal Pradesh					
60-64	37.8	30.6	21.9	9.8	471
65-69	44.2	27.4	17.4	11.0	373
70-74	47.7	23.3	18.4	10.5	266
80+	46.2	17.7	23.1	12.9	372
Total	43.3	25.2	20.5	11.0	1,482
Punjab					
60-64	46.9	11.2	15.6	26.3	437
65-69	47.5	11.7	14.0	26.9	394
70-74	44.0	12.5	17.9	25.7	257
80+	48.2	9.9	18.4	23.4	282
Total	46.8	11.3	16.1	25.8	1,370
West Bengal					
60-64	40.0	11.7	17.2	31.1	453
65-69	46.0	10.0	18.2	25.8	341
70-74	44.7	9.8	17.5	28.1	235
80+	48.8	8.5	20.7	22.0	246
Total	44.2	10.3	18.2	27.4	1,275
Orissa					
60-64	45.3	7.8	19.1	27.9	477
65-69	41.0	10.0	17.7	31.3	451
70-74	43.7	9.5	18.0	28.9	284
80+	41.3	9.3	17.8	31.6	269
Total	42.9	9.1	18.2	29.8	1,481
Maharashtra					
60-64	21.4	5.6	31.6	41.4	519
65-69	17.9	5.8	38.7	37.6	452
70-74	15.7	5.0	38.4	40.9	242
80+	17.6	7.2	34.7	40.5	222
Total	18.8	5.8	35.5	40.0	1,435
Kerala					
60-64	32.6	17.1	26.0	24.3	469
65-69	34.0	15.4	17.7	32.9	344
70-74	31.3	16.4	23.6	28.9	208
80+	35.8	12.5	21.2	30.5	344
Total	33.6	15.4	22.3	28.7	1,365
Tamil Nadu					
60-64	31.7	2.1	23.1	43.1	707
65-69	21.1	4.8	16.2	57.8	351
70-74	19.6	5.4	13.2	61.8	204
80+	21.4	6.6	12.6	59.3	182
Total	26.1	3.8	18.7	51.4	1,444

Source: Author's calculations from UNFPA, 2012.

Table 9: Distribution of Household by Intergenerational Living Arrangement and Wealth Status by age group

Wealth Status of Elderly and Children Living Together						
	Elderly households without children			Elderly households with children		
Age Groups	**Poor**	**Non-Poor**	**Total**	**Poor**	**Non-Poor**	**Total**
60-64	56.73	43.27	1,992	67.52	32.48	1,804
65-69	51.2	48.82	1,356	65.2	34.76	1,565
70-79	52.5	47.55	1,327	66.4	33.65	1,453
80+	58.4	41.61	1,327	68.9	31	498
Total	54.4	45.61	5,247	66.7	33.35	5,320

Source: Author's calculations from UNFPA, 2012.

Table 10: State wise distribution of Elderly's Unmet Need of Health Care

	Age Groups				Sex		Marital Status		
States	**60-64**	**65-69**	**70-79**	**80+**	**Male**	**Female**	**Currently Married**	**Currently Single**	**Total**
Himachal Pradesh	23.3	24.5	32	20.2	44.7	55.3	54.6	45.5	253
Punjab	25.4	22.8	35.1	16.7	41.0	59.1	62.1	37.9	359
West Bengal	26.2	23.8	35.3	14.7	47.2	52.8	51.6	48.4	252
Orissa	25.1	27.3	33.5	14.1	51.5	48.5	66.5	33.5	227
Maharashtra	24.3	25.4	29.5	20.8	43.4	56.7	48.6	51.5	173
Kerala	24.4	19.9	36.6	19.1	41.5	58.5	50	50	246
Tamil Nadu	31	27.8	26.7	14.4	43.3	56.7	43.3	56.7	187

Source: Author's calculations from UNFPA, 2012.

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